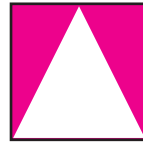


KAPLAN & SADOCK'S

Study Guide and Self-Examination Review in Psychiatry

Ninth



Edition

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EDITION

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Preface

This ninth edition of *Study Guide and Self-Examination Review in Psychiatry* stands alone as a separate textbook. In the form of questions and answers, it can serve as a guide to the entire field of psychiatry and the behavioral sciences. Questions are designed to examine the etiology, diagnosis, and treatment of every known psychiatric disorder. A thorough discussion covers not only correct answers but also wrong answers. By carefully studying both questions and answers, the reader will gain a thorough understanding of material useful to prepare for examinations of all types.

This book was written to meet the needs of medical students, psychiatric physicians, and mental health professionals from all fields. It is designed especially to help those preparing for the United States Medical Licensing Examination (USMLE) and the American Board of Psychiatry and Neurology (ABPN); it will also prove of value to all who want to test their knowledge in psychiatry as part of their continuing medical education.

The authors have added new and different questions to each edition of *Study Guide* and modified and updated material from earlier editions. This *Study Guide* contains more than 1,500 questions, more than any other book of its kind, and the format of each question is standardized to follow that used by the USMLE and ABPN. In addition, the allocation of topics is carefully weighted with attention to both clinical and theoretical issues.

The authors of the last edition of *Study Guide* are particularly pleased that Pedro Ruiz, M.D., a close personal and professional associate and outstanding academician, has joined them as third author. Dr. Ruiz is Professor and Executive Vice Chairman of the Department of Psychiatry and Behavioral Sciences at the University of Miami Miller School Of Medicine. He was past-president of the American Psychiatric Association and is the current president of the World Psychiatric Association. His contributions to this edition of *Study Guide* are immeasurable.

COMPREHENSIVE TEACHING SYSTEM

Study Guide forms one part of a comprehensive system developed by the authors to facilitate the teaching of psychiatry and the behavioral sciences. At the head of the system is the *Comprehensive Textbook of Psychiatry*, which is global in depth and scope; it is designed for and used by psychiatrists, behavioral scientists, and all other workers in the mental health field. *Kaplan & Sadock's Synopsis of Psychiatry* is a relatively brief, highly modified, original, and current version useful for medical students, psychiatric residents, practicing psychiatrists, and other mental health professionals. A special edition of *Synopsis*, *Concise Textbook of*

Clinical Psychiatry covers just the diagnosis and treatment of all psychiatric disorders. Other parts of the system are the pocket handbooks: *Pocket Handbook of Clinical Psychiatry*, *Pocket Handbook of Psychiatric Drug Treatment*, *Pocket Handbook of Emergency Psychiatric Medicine*, and *Pocket Handbook of Primary Care Psychiatry*. These books cover the diagnosis and the treatment of mental disorders, psychopharmacology, psychiatric emergencies, and primary care psychiatry, respectively, and are compactly designed and concisely written to be carried in the pocket by clinical clerks and practicing physicians, whatever their specialty, to provide a quick reference. Finally, *Comprehensive Glossary of Psychiatry and Psychology* provides simply written definitions for psychiatrists and other physicians, psychologists, students, and other mental health professionals. Together, these books create a multiple approach to teaching, studying, and learning of psychiatry.

HOW TO USE THIS BOOK

Each chapter begins with an introduction that emphasizes areas of special significance about which the student should be aware. The authors have also prepared lists of helpful hints that present key terms and concepts essential to a basic knowledge of psychiatry. Students should be able to define and discuss each of the terms in depth as preparation for examinations.

The section *Objective Examinations in Psychiatry* provides the student with helpful hints on how to take the examinations. If the student understands how questions are constructed, his or her chances of answering correctly are greatly improved. This book defines distracters (wrong answers) as well as correct answers in each discussion.

To use this book most effectively, the student should attempt to answer all the questions in a particular chapter. By allowing about 1 minute for each answer, the student can approximate the time constraints of an actual written examination. The answers should be verified by referring to the corresponding answer section in each chapter. Pay particular attention to the discussion of the wrong answers, a feature unique to this book. If further information is needed, the reader is referred to the current editions of either the *Synopsis of Psychiatry* or the *Comprehensive Textbook of Psychiatry*.

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We especially acknowledge James Sadock, M.D., and Victoria Gregg, M.D., for their help in their areas of expertise, emergency adult and emergency pediatric medicine, respectively.

We also thank Ze'ev Levin, M.D. for his contributions to the previous edition of this book. We also want to thank Rana Zahiri and Mainek Patel who served as assistants to the editors and who made valuable contributions to the text in both content and organization.

Finally, we want to express our deep thanks to Charles Marmor, M.D., Chairman of Psychiatry at New York University School of Medicine for his leadership of the Department and for his commitment to academic excellence.

B.J.S.

V.A.S.

P.R.



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Neural Sciences

The human brain is responsible for cognitive abilities, emotions, and behaviors. During the “decade of the brain” in the 1990s, major advances in neural sciences took place, and the brain was finally recognized as the biological substrate for all normal and abnormal mental functions. It is possible to conceive a biologically based diagnostic system for psychiatric disorders. This approach will also permit and advance brain oriented investigational efforts to produce better psychiatric treatments and, thus, improve the quality of care of psychiatric patients. In most fields of medicine, diagnoses are based on physical signs, symptoms, a comprehensive medical history, and laboratory, radiological, and other relevant tests and procedures. In psychiatry, however, the diagnoses are based primarily on the clinical impression of the patient’s interpretation of his or her thoughts and feelings.

If the brain is the site of focus for psychiatric disorders, one should attempt to develop a classification system on the understanding of biological factors rather than primarily patient’s symptoms. Neural sciences focus primarily on brain biology. It is, therefore, essential that one start to focus more intensively on the functions of the brain from a mental illness viewpoint. Besides understanding the functions and dysfunctions of lobal regions, basal ganglia, limbic structures, hypothalamus, and other relevant areas of the brain, one should understand the ultra structure of individual brain cells. Of further importance are the synaptic connectivity and the functional organization of the brain, as well as the behavioral consequences of pathological processes that take place in the central nervous system (CNS). At the same

time, the role of genetics is very relevant in this regard; particularly, insofar as psychiatric disorders are concerned. Thus, knowledge about gene expression, DNA replication, messenger RNA synthesis and translation into protein, as well as the outcomes of mutations at each of these stages are quite relevant in this context.

Knowledge of clinical psychopharmacology is essential, including neurotransmitters, brain location of the biogenic amine neurotransmitter nuclei, and the distribution of the axonal projections. The roles of glutamate, γ -aminobutyric acid (GABA), monoamine neurotransmitters, such as serotonin, dopamine, norepinephrine, epinephrine, histamine, and acetylcholine, as well as the peptide neurotransmitters such as endorphins and enkephalins, are all crucial to the understanding of the use of psychopharmacological agents.

Also of crucial importance is the knowledge of the major neuroimaging techniques, as well as the clinical limitations of these neuroimaging techniques. They include magnetic resonance imaging (MRI), computed tomography (CT), magnetic resonance spectroscopy (MRS), single photon emission computed tomography (SPECT), proton emission tomography (PET), electroencephalography (EEG), and magnetoencephalography (MEG), as well as others.

Without question, medical students and psychiatric physicians need to be familiar and have knowledge about the field of neuroscience. The following questions and answers will permit them to assess their knowledge in this regard.

HELPFUL HINTS

The student should know the following terms, theoreticians, and concepts.

- | | | | |
|--------------------------------|---|----------------------------------|---|
| ▶ Acetylcholine | ▶ Dopamine | ▶ Histamine | ▶ Receptors |
| ▶ Animacy | ▶ Electroconvulsive therapy (ECT) | ▶ Limbic system | ▶ REM and NREM sleep |
| ▶ Apoptosis | ▶ Endophenotypes | ▶ Locus ceruleus | ▶ Repetitive transcranial magnetic stimulation (RTMS) |
| ▶ Ascending pathways | ▶ Epigenetics | ▶ Metabolic syndrome | ▶ Seasonal affective disorder and circadian rhythm |
| ▶ Broca’s area | ▶ Genetic factors in cognition, temperament and personality | ▶ Neuropeptides | ▶ Self |
| ▶ Catecholamines | ▶ Genome | ▶ Neurotropic factors | ▶ Serotonin |
| ▶ Caudate nucleus | ▶ Globus pallidus | ▶ Nitric Oxide | ▶ Substantia Nigra |
| ▶ Chronobiology | ▶ Glutamic acid | ▶ Norepinephrine and Epinephrine | |
| ▶ Circadian Rhythm | | ▶ Population genetics | |
| ▶ Decoding emotions | | ▶ Putamen | |
| ▶ Deep brain stimulation (DBS) | | | |

- | | | |
|-----------------------|---------------------------------|--------------------------------------|
| ▶ Subthalamic nucleus | ▶ Transporters | ▶ Wakefulness |
| ▶ Syndromes of pain | ▶ Vagal nerve stimulation (VNS) | ▶ γ -aminobutyric acid (GABA) |
| ▶ Transcriptome | | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 1.1.** The nature of an endophenotype is biologically defined on which of the following?
- Neuropsychological
 - Cognitive
 - Neurophysiological
 - Biochemical
 - All of the above
- 1.2.** Which of the following morphological regions is a part of the neuron?
- Cell body
 - Dendrites
 - Axon
 - Axon terminals
 - All of the above
- 1.3.** A reduced density of interneurons in layer 2 of the prefrontal cortex has been observed among patients with
- Bipolar disorder
 - Major depression
 - Obsessive-compulsive disorder
 - Schizophrenia
 - Panic disorder
- 1.4.** The cell bodies of the serotonergic neurons are located in what region of the brain?
- Midline raphe nuclei of the brainstem
 - Midbrain substantia nigra and ventral tegmental area
 - Locus ceruleus and the lateral tegmental noradrenergic nuclei
 - The tuberomammillary nucleus of the posterior hypothalamus
 - The basal forebrain complex and the mesopontine complex
- 1.5.** The primary inhibitory neurotransmitter, γ -aminobutyric acid (GABA), in the brain is notably depleted in which of the following neuropsychiatric disorders?
- Pick's disease
 - Vascular dementia
 - Creutzfeldt-Jakob disease
 - Huntington's disease
 - Normal pressure hydrocephalus
- 1.6.** The neuropeptides are primarily related to which of the following central nervous systems?
- Serotonin neurotransmitter system
 - Norepinephrine and Epinephrine system
 - Acetylcholine system
 - Hypothalamic regulation system
 - Catecholamines system
- 1.7.** The strongest evidence for a role for neurotrophins in psychiatric diseases has come from the pathophysiology of which of the following psychiatric disorders?
- Schizophrenia
 - Panic disorder
 - Major depressive disorder
 - Obsessive-compulsive disorder
 - Antisocial personality disorder
- 1.8.** Manipulation of one of the novel neurotransmitters, nitric oxide, is thought to have a therapeutic effect in which of the following psychiatric conditions?
- Mood disorders
 - Addictive disorders
 - Anxiety disorders
 - Personality disorders
 - Dissociative disorders
- 1.9.** The potential role of homeostatic neuronal plasticity as a therapeutic mechanism in certain psychiatric disorders is currently explored with the use of which of the following treatments?
- Electroconvulsive therapy (ECT)
 - Vagal nerve stimulation (VNS)
 - Repetitive transcranial magnetic stimulation (RTMS)
 - Deep brain stimulation (DBS)
 - All of the above
- 1.10.** Deoxyribonucleic acid (DNA) is composed of which of the following nucleic acids (nucleotides)?
- Adenine
 - Cytosine
 - Guanine
 - Thymine
 - All of the above
- 1.11.** Risk factors associated with the metabolic syndrome include
- hyperglycemia
 - visceral obesity
 - hypertension
 - hyperlipidemia
 - all of the above

- 1.12.** The neuropsychiatric disorder that has been best characterized in terms of the influence of the brain on the immune system and vice versa is which one of the following?
- A. Somatization disorder
 - B. Hypochondriasis
 - C. Factitious disorder
 - D. Major depressive disorder
 - E. Depersonalization disorder
- 1.13.** Circadian rhythms include
- A. sleep
 - B. temperature
 - C. hormone levels
 - D. eating
 - E. all of the above
- 1.14.** Research efforts have demonstrated that there are no electroencephalographic (EEG) abnormalities associated with the use of which psychopharmacological agent?
- A. Olanzapine
 - B. Clozapine
 - C. Risperidone
 - D. Pherphenazine
 - E. Quetiapine
- 1.15.** Structural MRI findings associated with schizophrenia include all of the following *except*
- A. reductions in cortical gray matter
 - B. reductions in cortical white matter
 - C. risk genes influencing MRI findings
 - D. progressive deviation of regional cortical volumes in childhood onset cases
 - E. decreased striatum volume
- 1.16.** Recent research has provided a basis for clinical indications of PET and SPECT radiotracer imaging for the diagnosis and management of several neuropsychiatric disorders. Among them, we found all of the following *except*
- A. movement disorders
 - B. schizophrenia
 - C. mood disorders
 - D. anxiety disorders
 - E. antisocial personality disorder
- 1.17.** Populations genetics encompasses all of the following *except*
- A. quantitative genetics
 - B. genetic epidemiology
 - C. genetic demography
 - D. molecular genetics
 - E. evolutionary genetics
- 1.18.** The most successful application of gene-mapping strategies relates to which of the following psychiatric disorders?
- A. Alzheimer's disease
 - B. Bipolar disorder
 - C. Schizophrenia
 - D. Panic disorder
 - E. Obsessive-compulsive disorder
- 1.19.** Animal models in psychiatric research have proven to be useful in which one of the following disorders?
- A. Anxiety disorders
 - B. Depressive disorders
 - C. Substance abuse disorders
 - D. Eating disorders
 - E. All of the above
- 1.20.** Which of the following conditions combines symptoms of pain and psychiatric signs and symptoms?
- A. Fibromyalgia
 - B. Migraine
 - C. Irritable bowel syndrome
 - D. Chronic fatigue syndrome
 - E. All of the above
- 1.21.** The concept that animacy is a primary milestone of social perception can be demonstrated by which of the following observations?
- A. At birth, infants preferentially track moving human faces.
 - B. At 3 months, infants smile and vocalize more to people than objects.
 - C. At 3 months, infants show preferential attention to self-propelled motion.
 - D. At 9 months, infants understand that animate beings, not objects, have goal-directed action.
 - E. All of the above
- 1.22.** The Self as a subject (the I-Self) includes all of the following *except*
- A. self-awareness
 - B. self-continuity
 - C. self-coherence
 - D. me-self
 - E. sense of ownership
- 1.23.** Cells that decrease their firing during NREM sleep and cease firing altogether during REM sleep are
- A. nonadrenergic cells
 - B. cholinergic cells
 - C. histaminergic cells
 - D. dopaminergic cells
 - E. all of the above
- 1.24.** Adequate stimuli for the identification of food and initiation of eating in adults include which of the following?
- A. Olfactory stimuli
 - B. Temporal stimuli

- C. Cognitive stimuli
- D. Social stimuli
- E. All of the above

1.25. Primary reinforcement by drugs of abuse engages a widespread network of the brain's motivational pathways, which include all of the following *except*

- A. amygdala
- B. hippocampus
- C. hypothalamus
- D. prefrontal cortex
- E. occipital cortex

Directions

Each group of questions consists of lettered headings followed by a list of numbered statements. For each numbered phrase or statement, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 1.26–1.31

- A. Computed Tomography Scan (CT)
- B. Functional Magnetic Resonance Imaging (fMRI)
- C. Magnetic Resonance Imaging Scan (MRI)
- D. Magnetic Resonance Spectroscopy (MRS)
- E. Positron Emission Tomography Scan (PET)
- F. Single Photon Emission Computed Scan (SPECT)

- 1.26.** Used to study levels of lithium concentration in the brain
- 1.27.** Cannot be used in patients with pacemakers or ferromagnetic metals
- 1.28.** Radioactive compounds are used to study dopamine and serotonin receptors
- 1.29.** Detects neuronal activity by measuring brain blood flow using a glucose analog
- 1.30.** Uses fluorine-18 to study brain structures and to detect neuropsychiatric disorders
- 1.31.** Certain tumors may be invisible because they absorb as much radiation as the surrounding brain

ANSWERS

1.1. The answer is E (all)

The nature of an endophenotype is biologically defined on the basis of *neuropsychological, cognitive, neurophysiological, neuroanatomical, biochemical, and brain data*. Endophenotype is an internal phenotype, which is a set of objective characteristics of an individual that are not visible to the unaided eye. A given phenotype would not be limited to a patient with a particular diagnosis; for instance, schizophrenia might also be found in patients with other diagnoses, such as depression or bipolar disorder.

1.2. The answer is E (all)

The human brain contains approximately 100 billion nerve cells or neurons. In general, neurons are composed of four morpho-

logically identified regions: (1) the *cell body* or soma, which contains the nucleus and can be considered the metabolic center of the neuron; (2) the *dendrites*, which are processes that arise from the cell body, branch extensively, and serve as the major recipient zones of input from other neurons; (3) the *axon*, which is a single process that arises from a specialized portion of the cell body (the axon hillock) and conveys information to other neurons; and (4) the *axon terminals*, which are fine branches near the end of the axon and that form contacts (synapses) generally with the dendrites or the cell bodies of other neurons, release neurotransmitters, and provide a mechanism for interneuronal communication. Most neurons in the human brain are considered to be multipolar in that they give rise to a single axon and several dendritic processes.

1.3. The answer is D

Research has shown that in a significant number of patients with *schizophrenia*, the prefrontal cortex exhibits a reduced density of interneurons in layer 2. Additionally, these patients show an upregulation of GABA_A receptor binding, a potential functional compensation, as well as a relative deficiency of nitric oxide synthase (NOS)-expressing neurons. These observations have led to the hypothesis that schizophrenia is due to reduced GABAergic activity. The origin of GABA interneurons from the ganglionic eminences and their association with specific patterning genes raises new genetic models of disease causation and possible strategies for disease intervention.

1.4. The answer is A

The cell bodies of the serotonergic neurons are located in the *midline raphe nuclei of the brainstem*. The dopamine neurons are located in the midbrain substantia nigra and the ventral tegmental areas as well as in the periaqueductal gray, hypothalamus, olfactory bulb, retina, and kidney. The norepinephrine and epinephrine producing neurons are found in the pons and medulla in two major clusters: the *locus ceruleus and the lateral tegmental noradrenergic nuclei*. These neurons are also found in the adrenal medulla. Histaminergic cell bodies are located within the region of the *posterior hypothalamus* termed the *tuberomammillary nucleus*.

1.5. The answer is D

This degeneration characteristically results in a depletion of GABA, the brain's major inhibitory neurotransmitter, and acetylcholine. *Huntington's disease* is an autosomal-dominant neurodegenerative disorder characterized by cognitive and physical decline. Its etiology involves an abnormal expansion of a trinucleotide repeat on chromosome 4. MRI classically reveals bilateral atrophy of the caudate nucleus and putamen of the basal ganglia. CT scan further reveals a prominence of the lateral ventricles as a result of surrounding atrophy. Huntington's disease has a gradual onset between the ages of 30 to 50 years. Key features of the disease include progressive subcortical dementia, chorea (rapid, involuntary, dance-like movements), depression, and psychosis. Dysfunction of GABAergic neurotransmission has further been implicated in anxiety disorders, schizophrenia, alcohol dependence, and seizure disorders. *Pick's disease* is due to an accumulation of tau proteins, which lead to degeneration

of the frontal and temporal lobes. Onset of Pick's disease is between the ages of 40 to 60 years and initial signs include personality change, language impairment, and memory loss. Vascular or multi-infarct dementia presents acutely with cognitive decline following a cerebrovascular event and has a stepwise progression. *Creutzfeldt-Jakob disease* is a rare spongiform encephalopathy accompanied by rapidly progressive dementia and hallucinations. It is caused by an accumulation of prions leading to nerve cell death. *Normal-pressure hydrocephalus* clinically presents with the triad of dementia, incontinence, and gait disturbance. It is due to poor reabsorption of CSF and characterized by widening of the lateral ventricles.

1.6. The answer is D

Neuropeptides represent the most diverse class of signaling molecules in the CNS. They have a role in the *hypothalamic regulation* of pituitary hormone secretion. They also have an array of direct or neuromodulatory effects, ranging from modulating neurotransmitter release and neuronal firing patterns to the regulation of emotionality and complex behavior. More than 100 unique biologically active neuropeptides have been identified in the brain, a subset of which is presented in Table 1.1.



Table 1.1
Selected Neuropeptide Transmitters

Adrenocorticotropin hormone (ACTH)
Angiotensin
Atrial natriuretic peptide
Bombesin
Calcitonin
Calcitonin gene-related peptide (CGRP)
Cocaine and amphetamine regulated transcript (CART)
Cholecystokinin (CCK)
Corticotropin-releasing factor (CRF)
Dynorphin
β -Endorphin
Leu-enkephalin
Met-enkephalin
Galanin
Gastrin
Gonadotropin-releasing hormone (GnRH)
Growth hormone
Growth hormone-releasing hormone (GHRH; GRF)
Insulin
Motilin
Neuropeptide S
Neuropeptide Y (NPY)
Neurotensin
Neuromedin N
Orphanin FQ/Nociceptin
Orexin
Oxytocin
Pancreatic polypeptide
Prolactin
Secretin
Somatostatin (SS; SRIF)
Substance K
Substance P
Thyrotropin-releasing hormone (TRH)
Urocortin (1, 2, and 3)
Vasoactive intestinal polypeptide (VIP)
Vasopressin (AVP; ADH)

1.7. The answer is C

The strongest evidence for a role for neurotrophins among psychiatric disorders has come from the pathophysiology of *depression*, especially depression associated with stress. For depression, it is believed that there is a fundamental dysregulation of synaptic plasticity and neuronal survival in regions of the brain, such as the hippocampus. In animal models, restraint stress leads to a decreased expression of the brain-derived neurotrophic factor (BDNF) in the hippocampus. In addition, chronic physical or psychosocial stress leads to atrophy and death of hippocampus neurons, especially in the CA3 region in rodents and primates. Also, MRI studies have shown that patients with depressive or post-traumatic stress disorders exhibit a small decrease in hippocampal volume. It is unclear though, whether the atrophy and/or death of these neurons is directly related to the decreased availability of BDNF.

1.8. The answer is A

Recently, it was discovered that gases can function as neurotransmitters. In this context, it was found that Nitric Oxide has a neurotransmitter property vis-à-vis a few psychiatric disorders. *Mood Disorders* is one of the groups of psychiatric illnesses in which Nitric Oxide has a positive role as a neurotransmitter. NOS-expressing neurons are well represented in areas implicated in depression, including the dorsal raphe nucleus and prefrontal cortex. A role for Nitric Oxide has been suggested in antidepressant response as selective serotonin reuptake inhibitor (SSRI) antidepressants can directly inhibit NOS activity.

1.9. The answer is E (all)

In recent years, there has been increasing interest in the use of brain stimulation methods as treatment for psychiatric and neurological disorders. These methods include *electroconvulsive therapy (ECT)*, *Vagal Nerve Stimulation (VNS)*, *repetitive transcranial magnetic stimulation (RTMS)*, and *deep brain stimulation (DBS)*. The development of optimal stimulation parameters for these treatments requires knowledge about the effects of electrical stimulation on neuronal function. With respect to ECT, a major advance has been the recognition that electrical stimulation parameters play a key role in determining therapeutic and adverse effects. There is compelling evidence that the degree to which electrical doses exceed the seizure threshold is of substantial importance. For bilateral ECT, electrical doses just above threshold (approximately 1.5 times threshold) result in a highly effective form of treatment that minimizes cognitive impairment. For nondominant hemisphere (unilateral) ECT, electrical doses that are five to six times threshold are required to produce a significant benefit.

1.10. The answer is E (all)

DNA (deoxyribonucleic acid) is made of four nucleic acids, also known as nucleotides: *adenine*, *cytosine*, *guanine*, and *thymine*. A genome is defined as the total complement of DNA replicated in a living organism. A critical milestone was reached in 2001 with the completion of the first draft of the human genome. Currently, there are thousands of genomes sequenced. It is now evident that there are in total about 25,000 protein-coding genes in *Homo sapiens*.

1.11. The answer is E (all)

Metabolic syndrome is a disease characterized by a cluster of metabolic risk factors, which include *hyperglycemia*, *visceral obesity*, *hyperlipidemia*, and *hypertension*. Most notably, adverse effects of atypical antipsychotics, such as olanzapine (Zyprexa) and clozapine (Clozaril), include weight gain and hyperglycemia. However, aripiprazol (Abilify) and ziprasidone (Geodon) are atypical antipsychotics that have minimal effects in this regard. Schizophrenia patients may exhibit increased cortisol and epinephrine production even when not medicated; therefore, monitoring protocols for patients on atypical antipsychotics is of utmost importance. Of note, metabolic syndrome also leads to insulin resistance and complicates glycemic control in patients with preexisting diabetes.

1.12. The answer is D

The neuropsychiatric disorder that has been best characterized in terms of the influence of the brain on the immune system and vice versa is *major depressive disorder*. For many years, major depressive disorder was seen as a quintessential example of how stress-related disorders may decrease immunocompetence. More recently, however, it has become evident that stress also activates inflammatory pathways, even while suppressing measures of acquired immunity.

1.13. The answer is E (all)

The circadian clock drives many rhythms including behavior, core body *temperature*, *sleep*, *eating*, drinking, and *hormonal levels*. One such circadian-regulated hormone is the indolamine, melatonin. Melatonin synthesis is controlled through a multisynaptic pathway from the CNS to the pineal gland. Serum levels of melatonin become elevated at night and return to baseline during the day. Light suppresses elevated melatonin levels, immediately decreasing them to baseline levels. Light also shifts the phase of circadian rhythms of melatonin synthesis. Because melatonin can be assayed easily, it provides a convenient window into the state of the circadian pacemaker. Any perturbation of the clock is reflected in the melatonin profile; thus, melatonin offers an output that can be used to study the regulation of the central circadian pacemaker.

1.14. The answer is E

Electroencephalographic (EEG) abnormalities have been reported with the use of *clozapine* (47 percent), *olanzapine* (38.5 percent), trifluoperazine and mesoridazine (about 35 percent), *risperidone* (28 percent), fluphenazine and thiothixene (just above 20 percent), *pherphenazine*, chlorpromazine and thioridazine (just about 10 percent), and haloperidol (just below 10 percent). There were, however, no abnormalities observed with *quetiapine* or *loxapine*. The clinical significance of EEG abnormalities associated with psychopharmacological agents, particularly in the absence of any indications of seizures or encephalopathic effects, remain an open research question.

1.15. The answer is E

Structural MRI finding associated with schizophrenia do not include *decreased striatum volume*. Structural MRI has been useful

for characterizing features of the heritable risk for schizophrenia. Family members of individuals with schizophrenia show a pattern of *reductions in cortical gray and white matter volume* that resembles, but is milder than, that associated with schizophrenia. Among healthy individuals and patients diagnosed with schizophrenia, *risk genes appear to influence MRI findings*. Structural MRI has also provided some insights into the progressive course of this disorder and the impact of antipsychotic treatment. The most striking findings have been in childhood onset schizophrenia, where a series of neuroimaging studies using a variety of MRI approaches have clearly shown that the development and evolution of schizophrenia are associated with a progressive deviation of regional cortical volumes from those of healthy comparison populations.

1.16. The answer is E

Over the past two decades, radio tracer imaging with PET and SPECT have gained merit as tools to image brain functioning and neurochemistry in living humans and have provided the foundation necessary to begin to identify the neurochemical signatures and neuropsychiatric disorders that result from abnormal brain chemistry. Radio tracer imaging can also help to assess the relationship between occupancy of specific various receptors in the brain and clinical efficacies of various psychotropic drugs. For instance, imaging of dopamine D₂ receptors provides critical information for the differential diagnosis of *movement disorders* and *schizophrenia*, and also for the assessment of receptor occupancy by neuroleptic drugs. Imaging of serotonin receptors and the serotonin transporter is useful in the diagnosis of *mood* and *anxiety disorders*, as well as the assessment of antidepressant efficacy. Imaging of nicotinic acetylcholine receptors and acetylcholinesterase may serve as markers of cognitive and memory impairment.

1.17. The answer is D

Population genetics, which deals with the mathematical properties of genetic transmission in families and populations, can be subdivided into the partially overlapping fields of *evolutionary genetics*, *genetic demography*, *quantitative genetics*, and *genetic epidemiology*. The primary goal of evolutionary genetics is to understand changes in gene frequency across generations. Genetic demography is primarily concerned with differential mortality and fertility in human populations, while genetic epidemiology deals with the distribution of disease-associated genes across human subpopulations. The goal of quantitative genetics is to partition the observed variation of phenotypes into its genetic and environmental components.

1.18. The answer is A

The most successful application of gene-mapping strategies applies to *Alzheimer's disease*, which is the most common form of dementia and is characterized by a progressive decline in memory, aphasia, apraxia, agnosia, and diminished excessive functioning. Abnormal deposition of beta-amyloid protein and neurofibrillary tangles are the major pathophysiological characteristics of Alzheimer's disease. Associated genes include autosomal dominant forms of the *APOE4* allele on chromosomes 1,

14, 19, and a mutation of the *P-App* gene (amyloid precursor protein gene) on chromosome 21. Genetic alterations may be responsible for up to 10 percent of cases of early onset forms of the disease, often diagnosed between the ages of 30 to 60 years. Genetic testing for *APOE* is currently available to assess whether an individual carries such a risk factor, but cannot predict definitive development of the disease.

1.19. The answer is E (all)

Animal models provide insight into biological mechanisms underlying psychiatric disease pathophysiology and treatment. The susceptibility to psychiatric disorders is recognized to result from highly complex interactions between genetic endowment and the cumulative effects of innumerable environmental influences. The elucidation of the human genome provides unprecedented opportunities to understand genetic determinants of behavioral traits and psychiatric disease susceptibility. However, the behavioral impact of genetic manipulations cannot be systematically studied in humans, nor can the effects of many types of environmental stimuli and stressors.

1.20. The answer is E (all)

Fibromyalgia, migraine, irritable bowel syndrome, and chronic fatigue syndrome are some of the most commonly recognized conditions in which pain is associated with psychiatric symptoms. Fibromyalgia is a chronic nonprogressive disease in which patients will present with at least 11 musculoskeletal tender points. Depression and anxiety are frequently diagnosed in patients suffering from fibromyalgia. Migraines are severe unilateral headaches that often present with throbbing, nausea, vomiting, and photophobia. The prodromal phase of a migraine may include depression, hypersomnia, irritability, and fatigue. Irritable bowel syndrome is an idiopathic gastrointestinal tract disorder in which symptoms of alternating diarrhea and constipation are commonly preceded by anxiety and depression. Chronic fatigue syndrome is a condition in which patients present with 6 months or more of fatigue not alleviated by rest, compromise of short-term memory and concentration, insomnia, depression, and musculoskeletal pain.

1.21. The answer is E (all)

Animacy is the inability of the brain to quickly and efficiently differentiate animate from inanimate objects. The first thing a brain must do in any healthy social interaction is detect animacy. Psychophysical research has shown that our attentional and perceptual systems are uniquely tuned for detecting animate things versus other object types. Time-consuming mental calculations would be wasted attempting to predict the thoughts, feelings, and actions of objects that could not think, feel, or act.

1.22. The answer is D

William James made a distinction between two separable but intimately interrelated aspects of the “self.” The “self” as a subject is known as the I-Self and “self” as object is known as the *Me-Self*. He also identified subcomponents within them. Components of the I-Self include Self-agency (*sense of ownership*), *self-awareness*, *self-continuity*, and *self-coherence*. The

Me-Self included “material me,” “social me,” and “spiritual me.”

1.23. The answer is A

Noradrenergic cells from the locus coeruleus project directly throughout the forebrain and cortex and show their highest discharge rates during wakefulness. These cells decrease their firing during NREM sleep and cease firing altogether during REM sleep.

1.24. The answer is E (all)

Adequate stimuli for the identification of food and initiation of eating in adults comprise a bewildering farrago of *olfactory*, visual, auditory, *temporal*, circadian, metabolic, *cognitive*, and *social stimuli*. Most of them are conditioned stimuli whose potency depends on individual experience from infancy onward.

1.25. The answer is E

While the mesolimbic dopamine pathway is critical, it must be noted that primary reinforcement of drugs of abuse engages a widespread network of the brain’s motivational pathways, including cortical regions and limbic structures such as the *prefrontal cortex, amygdala, hippocampus, and hypothalamus*.

Answers 1.26–1.31

1.26. The answer is D

1.27. The answer is C

1.28. The answer is F

1.29. The answer is B

1.30. The answer is E

1.31. The answer is A

Computed tomography (CT) scanners are currently the most widely available and convenient imaging tools available in clinical practice. They effectively take a series of head X-ray pictures from all vantage points, 360 degrees around a patient’s head. CT scanners allow assessment of structural brain lesions such as tumors or strokes. However, since CT images are determined only by the degree to which tissues absorb X-irradiation, *certain tumors may be invisible on CT because they absorb as much radiation as the surrounding brain*.

Magnetic resonance imaging (MRI) scans, however, do not rely on the absorption of X-rays. MRI is based on nuclear magnetic resonance (NMR). MRI scanners collect the emissions of individual, realigning nuclei and use computer analysis to generate a series of two-dimensional images that represent the brain. MRI scans *cannot be used for patients with pacemakers or implants of ferromagnetic metals* due to the strong magnetic fields created during the MRI. The resolution of brain tissue of even the lowest power MRI scan exceeds that of CT scanning (Figure 1.1).

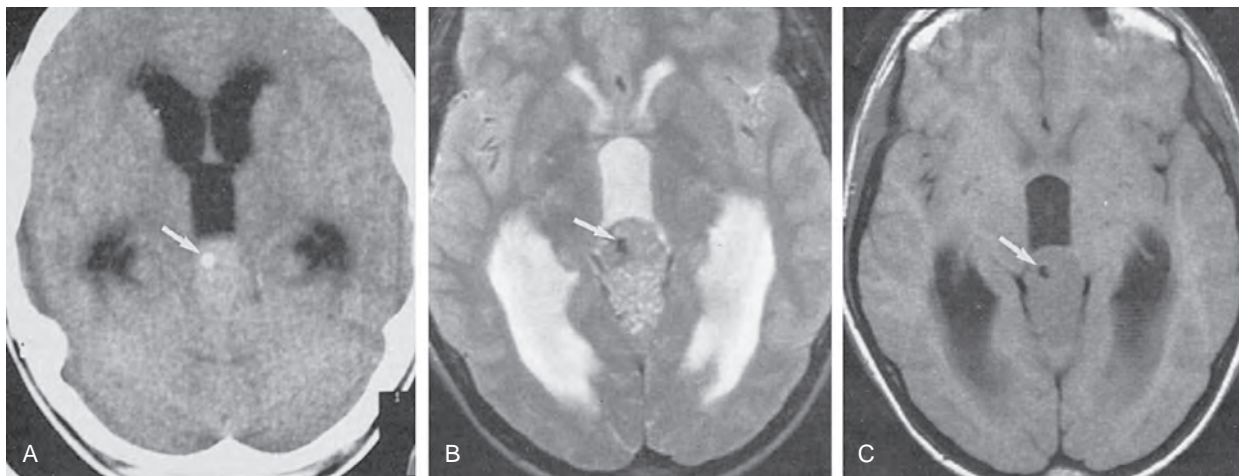


FIGURE 1.1

Comparison of CT and MRI. **A.** Computed tomography (CT) scan in the axial plane at the level of the third ventricle. The cerebrospinal fluid (CSF) within the ventricle appears black, the brain tissue appears gray, and the skull appears white. There is very poor discrimination between the gray and white matter of the brain. The arrow indicates a small calcified lesion in a tumor of the pineal gland. Detection of calcification is one role in which CT is superior to magnetic resonance imaging (MRI). **B.** T2-weighted image of the same patient at roughly the same level. With T2, the CSF appears white, the gray matter appears gray, the white matter is clearly distinguished from the gray matter; the skull and indicated calcification appear black. Much more detail of the brain is visible than with the CT. **C.** T1-weighted image of the same patient at roughly the same level. With T1, the CSF appears dark, the brain appears more uniformly gray, and the skull and indicated calcification appear black. T1 MRI images are the most similar to CT images. (Reprinted with permission from Grossman CB. *Magnetic Resonance Imaging and Computed Tomography of the Head and Spine*. 2nd ed. Baltimore: Williams & Wilkins; 1996:101.)

Whereas routine MRI detects hydrogen nuclei to determine brain structure, *magnetic resonance spectroscopy (MRS)* can detect several odd-number nuclei. The ability of MRS to detect a wide range of biologically important nuclei permits the use of the technique to study many metabolic processes. MRS can be used to measure concentrations for psychotherapeutic drugs in the brain. One study used MRS to measure *lithium concentrations* in the brains of patients with bipolar disorder and found that lithium concentrations in the brain were half those in the plasma during depressed and euthymic periods but exceeded those in the plasma during manic episodes.

Functional magnetic resonance imaging (fMRI) detects neuronal activity by measuring brain blood flow using a glucose analog. Neuronal activity within the brain causes a local increase in blood flow, which in turn increases the local hemoglobin concentration. Functional MRI is useful to localize neuronal activity to a particular lobe or subcortical nucleus and has even been able to localize activity to a single gyrus. Functional MRI is widely used to study brain abnormality related to cognitive dysfunction.

Single photon emission computed tomography (SPECT) scans also provide information on the cerebral blood flow, but unlike fMRIs, they do not measure neuronal metabolism directly. In SPECT, manufactured radioactive compounds are used to study

regional difference in cerebral blood flow within the brain. It records the pattern of photon emission from the bloodstream according to the level of perfusion in different regions of the brain. SPECT uses compounds labeled with single photon-emitting isotopes: iodine-123, technetium-99m, and xenon-133. In addition to these compounds used for measuring blood flow, iodine-123-labeled ligands for the muscarinic, *dopaminergic*, and *serotonergic* receptor can be used to study these receptors by SPECT.

The isotopes used in *positron emission tomography (PET)* decay by emitting positrons, antimatter particles that bind with and annihilate electrons, thereby giving off photons that travel in 180-degree opposite directions. Because detectors have twice as much signal from which to generate an image as SPECT scanners have, the resolution of the PET image is higher. A wide range of compounds can be used in PET studies, and the resolution of PET continues to be refined closer to its theoretical minimum of 3 mm, which is the distance positrons move before colliding with an electron. The most commonly used isotopes in PET are *fluorine-18*, *nitrogen-13*, and *oxygen-15*. These isotopes are usually linked to another molecule, except in the case of oxygen-15. PET has been used increasingly to study normal brain development. Relatively few PET scanners are available because they require an on-site cyclotron to make the isotopes.

Neuropsychiatry and Behavioral Neurology

Psychiatry discontinued the term “organic” from the official nomenclature a couple of decades ago, but its significance is still relevant today because the care of patients with identifiable, acquired brain disease (such as epilepsy, movement disorders, and traumatic brain injury) requires the physician to have expertise, knowledge base, and a familiarity with assessment and treatment methods not usually required for patients with primary psychiatric disorders. Patients with organic psychiatric syndromes are common in clinical practice and are often difficult to manage for most general psychiatrists, even with consultation from other specialists who may themselves not be experts in the mental and emotional phenomena, which often accompany brain disease.

Neuropsychiatry is the psychiatric subspecialty that deals with the psychological and behavioral manifestations of brain disorders. Neuropsychiatry is, therefore, closely allied with cognitive and behavioral neurology—that is, the neurological specialty that focuses on psychological phenomena present in patients with brain disorders. In many ways, neuropsychiatry can offer a distinctive perspective on idiopathic psychiatric disorders; its limitations in this respect must also be noted. The limitations include consideration of the multifactorial nature of many psychiatric diseases—namely, interaction between environmental and genetic factors. To date, no psychiatric disorder has been completely mapped. The unraveling of a biological basis for many psychiatric diseases is a novel aspect of the field, which is in its inception phase.

HELPFUL HINTS

The student should know the following terms, theoreticians, and concepts.

- | | | | |
|---------------------------|------------------------------|-------------------------|----------------------------|
| ▶ Broca’s area | ▶ Fibromyalgia | ▶ HIV-assisted dementia | ▶ Movement disorders |
| ▶ Brain Circuits | ▶ Hemispheric lateralization | ▶ Human prion diseases | ▶ Neurometabolic syndromes |
| ▶ Demyelinating disorders | | ▶ Limbic system | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses. Select the *one* that is *best* in each question.

- 2.1. Disinhibition is associated with which of the following brain areas or localizations?
- Left frontal lobe
 - Third frontal gyrus
 - Right frontal lobe
 - Left hemisphere
 - Left limbic area

- 2.2. The most common mental disorder associated with cerebrovascular disease is
- Mania
 - Anxiety
 - Psychosis
 - Alcoholism
 - Depression

- 2.3. The most common site of brain tumors is
- Frontal lobes
 - Occiput lobes
 - Diencephalic regions
 - Pituitary gland
 - Parietal lobes

- 2.4.** Epilepsy patients are prone to have which of the following psychiatric conditions?
- Psychosis
 - Depression
 - Personality Disorders
 - Hyposexuality
 - All of the above
- 2.5.** Which of the following is the single greatest risk factor for traumatic brain injury (TBI)?
- Male gender
 - Alcohol or drug abuse
 - African American ethnicity
 - Low socioeconomic status
 - None of the above
- 2.6.** Which of the following movement disorders is present in patients with tic disorders?
- Bradykinesia
 - Hyperkinesia
 - Hypokinesia
 - Akinesia
 - Ataxia
- 2.7.** Which of the following is the most common demyelinating disorder?
- Tay-Sachs disease
 - Hurler's syndrome
 - Acquired immunodeficiency syndrome (AIDS)
 - Multiple sclerosis
 - Adrenoleukodystrophy
- 2.8.** Which of the following infectious agents have been associated with the onset of obsessive-compulsive disorder (OCD)?
- Streptococcal infection
 - Borrelia Burgdorferi
 - Retrovirus
 - Influenza virus
 - Varicella zoster virus
- 2.9.** Which of the following are human prion diseases?
- Sporadic Creutzfeld-Jakob disease (ζ CJD)
 - Fatal familial insomnia (FFI)
 - Gerstmann-Straussler-Scheinker (GSS) disease
 - Kuru
 - All of the above
- 2.10.** The diagnosis of a primary headache disorder requires the exclusion of which condition?
- Vascular malformation
 - Bacterial meningitis
 - Diabetes mellitus
 - Pseudotumor cerebri
 - All of the above
- 2.11.** Psychopharmacological agents that appear to help patients with fibromyalgia include
- Pregabalin
 - Duloxetine
 - SSRIs
 - SNRIs
 - All of the above
- 2.12.** Prematurity is associated with which of the following psychiatric conditions?
- Anxiety
 - Aggression
 - Schizophrenia
 - Conduct disorder
 - All of the above
- 2.13.** A 32-year-old man presents to the emergency department after suffering a seizure earlier in the day. His history reveals 3 days of mild headache and fever, but is otherwise unremarkable. The patient's cerebral spinal fluid reveals 91 percent lymphocytes and elevated protein. CT of his head is unremarkable. What is the most likely diagnosis?
- Meningioma
 - Herpes simplex encephalitis
 - Subarachnoid hemorrhage
 - Intracerebral hemorrhage
 - Cryptococcal meningitis

ANSWERS

2.1. The answer is C

Although left lateralization of language and right lateralization of visuospatial function are widely recognized, lateral specialization in the prefrontal region is less obvious but still of clinical significance. Frontal lobe degeneration involving the *right* more than the *left frontal lobe* is particularly associated with disinhibition. Women tend to show less lateralization of language, so *left hemisphere* lesions are less likely to produce severe impairment.

2.2. The answer is E

Depressive disorders are probably the most common emotional disorder associated with cerebrovascular disease. The prevalence depends upon whether community based samples or hospitalized patients are examined or whether patients with acute stroke or those with chronic stroke are evaluated. *Mania* and generalized anxiety disorder (GAD) occur much less frequently than depression following stroke.

2.3. The answer is A

The most common sites of brain tumors are the *frontal* and *temporal lobes*. The least common sites are the *occipital lobes*, *diencephalic regions*, *pituitary gland*, and *parietal* and *infratentorial* areas. Brain tumors are slightly more common in men than in women.

2.4. The answer is E (all)

Epidemiological studies from communities, psychiatric hospitals, and epilepsy clinics report a 20 to 60 percent prevalence of psychiatric problems among epilepsy patients. Epilepsy patients are prone to *psychosis, depression, personality disorders, hyposexuality*, and other behavioral disorders. These problems are approximately equally divided between those that occur ictally or peri-ictally and those that occur interictally or are variably related to the ictus. The percentage of epilepsy patients in psychiatric hospitals was also higher than the general prevalence of epilepsy and ranged from 4.7 percent of all inpatients in a British psychiatric hospital to 9.7 percent in a U.S. Veterans Affairs psychiatric facility.

2.5. The answer is B

The single greatest risk for traumatic brain injury (TBI) is *alcohol and drug abuse*. Epidemiological studies have reported that close to one-third of brain injury patients had identifiable alcoholism before trauma. Of note, however, *males* are two to three times more likely to suffer traumatic brain injuries than females. *African Americans* also have higher rates of traumatic brain injuries, a finding that may be explained by increased firearms exposure. *Lower socioeconomic status*, especially unemployment, and lower levels of education also correlate with a higher incidence of TBI. The risk of experiencing a second brain injury is three times greater after a single previous brain injury.

2.6. The answer is B

Tics are repeated, uncontrolled, involuntary muscular contractions or vocalizations. They frequently occur in children and are more common in boys due to genetic predisposition. Motor tics result in stereotyped actions that can be voluntarily suppressed for brief periods of time. They are characterized by *hyperkinesia* or excessive motility. *Bradykinesia* is defined as slowed movement. *Hypokinesia* is a decrease in movement, while *akinesia* refers to an inability to initiate movement. Bradykinesia, hypokinesia, and akinesia are all features of Parkinson's disease. *Ataxia* refers to a lack in coordination during voluntary movement, a common feature of cerebellar and posterior column lesions. Of note, Tourette's syndrome is a disorder that includes both motor and vocal tics with an onset before the age of 18 years. Tics can also occur independently, as motor tic disorder or vocal tic disorder.

2.7. The answer is D

The etiology of the demyelinating disorders is diverse and largely conforms to the traditional, binary classification of etiology—congenital or acquired. Under the congenital disorders are included presumed genetic and chromosomal abnormalities. The chromosomal abnormalities include the ganglioside disorders, such as *Tay-Sachs disease*, which usually present in infancy or early childhood. Another group of congenital disorders includes the leukodystrophies, of which there are numerous subtypes, such as *metachromatic, globoid cell, adrenoleukodystrophy*, and *Hurler's syndrome*. The acquired demyelinating disorders include infectious disease, particularly *acquired immunodeficiency syndrome (AIDS)*; trauma, including open and, especially, closed brain trauma; vascular disorders, including the vascular demen-

tias; toxins, including alcohol and other solvents; and autoimmune disorders, the most prominent of which is *multiple sclerosis*. This list is certainly not inclusive, and many disease types may cause a demyelinating encephalopathy. By far, the most common of these disorders is multiple sclerosis.

2.8. The answer is A

Evidence links *streptococcal infections* with the onset of obsessive-compulsive disorder (OCD) as well as tic disorders in children. *Borrelia burgdorferi* is the spirochete that causes Lyme disease and may lead to psychosis and cognitive impairment in the late stage of infection. *Retroviruses* such as human immunodeficiency virus (HIV) may lead to a host of neuropsychiatric problems, most notably AIDS dementia, which begins with memory impairment and may progress to aphasia in the later stages. *Varicella zoster virus* may rarely progress to encephalitis, especially in immunocompromised patients. Studies have linked Influenza A and Influenza B to the onset of encephalitis (acute or postinfectious) with a basis in immune modulation.

2.9. The answer is E (all)

Transmissible spongiform encephalopathies (TSEs) are an unusual and uncommon group of infectious neurodegenerative disorders that are caused by conformational changes, misprocessing, and malfunction of the prion protein (P_RP). The human prion diseases are *sporadic Creutzfeldt-Jakob disease* (_sCJD), the variant Creutzfeldt-Jakob disease (_vCJD), the *introgenic Creutzfeldt-Jakob disease* (_iCJD), *fatal familial insomnia (FFI)*, *Gerstmann-Straussler-Scheinker (GSS) disease*, and *Kuru* (Table 2.1).

2.10. The answer is E (all)

The diagnosis of a primary headache disorder requires the exclusion of other conditions, which include structural lesions, *vascular malformations*, viral or *bacterial meningitis*, encephalitis, cerebral contusion, metabolic disorders, vasculitis, brain tumors, sinusitis, and *pseudotumor cerebri* (a condition of the brain that mimics a tumor but is caused by swelling or inflammation). Young, obese females are especially prone to pseudotumor cerebri, also known as idiopathic intracranial hypertension. One of the most important findings of the past decades is evidence pointing to an increased risk of ischemic stroke among young women with migraines. In children, arteriovenous malformations are a known cause of subarachnoid hemorrhage, which often present as "the worst headache" of one's life.

2.11. The answer is E (all)

There is a significant overlap and comorbidity between patients with symptoms of fibromyalgia and other psychiatric conditions, such as depression, panic and anxiety, and posttraumatic stress syndromes. The significance of this comorbidity is not understood in terms of understanding how the symptomatology arises, but these secondary psychiatric syndromes can provide therapeutic targets for psychopharmacology. There is also significant comorbidity between patients with fibromyalgia and rheumatologic arthritis, systemic lupus, and others. Despite this comorbidity, the acute symptomatology of fibromyalgia does not correlate well with disease activity of associated medical diseases. When



Table 2.1
Human and Animal Prion Diseases

Disease	Cause	Distribution/Incidence
Sporadic Creutzfeldt-Jakob disease (ζ CJD)	Unknown	Global
Variant Creutzfeldt-Jakob disease (ν CJD)	Exposure to bovine spongiform encephalopathy (BSE)	As of 2006, more than 150 cases of ν CJD have been recorded and all were associated with methionine homozygotic status at codon 129 of <i>PRNP</i> gene
Iatrogenic Creutzfeldt-Jakob disease (ι CJD)	Genetic	Accidental transmission of CJD to human hosts through various medical/surgical procedures, such as tissue transplantation
Fatal familial insomnia (FFI)	Familial	Rare
Gerstmann-Sträussler-Scheinker disease (GSS)	Genetic	Extremely rare
Kuru	Ritual cannibalism	Papua
Scrapie	Unknown	Europe, Iceland, United States, Canada
BSE (mad cow disease)	Animal feed with animal body parts, initially from sheep	Europe, United States
Chronic wasting disease (CWD)	Caged elk and deer	United States, Canada
Transmissible mink encephalopathy	Farm-raised	United States

From Dormont D. Prion disease: pathogenesis and public health concerns. *FEBS Lett.* 2002;529:17.

such diseases are present, however, varieties of psychotropic drugs are commonly prescribed for fibromyalgia, especially antidepressants. The antiepileptic agent *pregabalin* has recently been approved by the U.S. Food and Drug Administration (FDA) for the treatment of pain associated with fibromyalgia. A wide spectrum of analgesics is also prescribed for such patients. The *selective serotonin reuptake inhibitor (SSRI)* and *serotonin norepinephrine reuptake inhibitor (SNRI)* antidepressant, *duloxetine*, has been reported to be effective in treating patients with this disorder. However, experience suggests that benefits from such therapies are neither long lasting nor associated with return to employment.

2.12. The answer is E (all)

A large prospective cohort study of 2,032 adolescents found that those born premature with low birth weight were 11-fold more likely to develop a depressive disorder. Prematurity was also associated with elevated risk of *anxiety*, social isolation, *conduct disorder*, *aggression*, thought disorders, and *schizophrenia*.

2.13. The answer is B

Herpes Simplex virus type 1 (HSV-1) is the most common acute cause of fatal encephalitis in the United States. Lesions are seen in the temporal lobe area, as revealed by an MRI. EEG will demonstrate slow waves with high amplitudes. Polymerase chain reaction (PCR) analysis of the viral DNA is considered the definitive diagnostic tool and has replaced brain biopsies. Presentation of HSV-1 encephalitis can include seizures (as in the above case), altered mental status, hypomania, and amnesia. Kluver-Bucy syndrome, a constellation of hyperphagia, hypersexuality, hyperdocility, and hyperorality, may also result as a consequence of herpes encephalitis with bilateral amygdala lesions. *Cryptococcal meningitis* is more often seen in immunocompromised patients. *Meningiomas* will not result in an increase in lymphocytes and generally do not present acutely. *Subarachnoid* and *intracranial hemorrhages* are cerebrovascular lesions that do not match the CSF finding of lymphocytosis and elevated protein.



Contributions of the Psychosocial Sciences to Human Behavior

The psychosocial sciences integrate social sciences and psychology. *Psychology* is concerned with mental processes and behavior and can be broken down into several areas. *Clinical psychology* is concerned with the application of psychological principles to the prevention, treatment, and understanding of psychopathology. *Educational psychology* is concerned with the application of psychological theories to teaching. *Sociology* is the study of collective human behavior, including the developmental structure and interactions of their social institutions. *Anthropology* is the study of humans in relation to distribution, origin, classification, and relationship of races, physical characteristics, environmental relations, social relations, and culture. *Ethology* is the study of animal behavior and is often applied to human behavior. *Epidemiology* is the study of the incidence, prevalence, control, and distribution of disease within a particular population.

One of the major contributions to psychosocial sciences is the work of Jean Piaget (1896–1980), a widely renowned child (or developmental) psychologist. He is best known for his work in the understanding of the way children think and acquire knowledge. Piaget is also recognized for his famous theory of the four stages of cognitive development.

Over time, many other professionals have made contributions to our understanding of human behavior. Two of the major theories that have stemmed from such contributions are learning theory and attachment theory. Learning theory developed from the work of such behavioral researchers as Ivan Petrovich Pavlov (1849–1936), John B. Watson (1878–1958), and B.F. Skinner (1904–1990). Three different types of learning emerged: classic conditioning, operant conditioning, and social learning theory. Attachment theory originated in the work of John Bowlby (1907–1990) who pointed out that the mother–child attachment was an essential medium of human interaction that had important consequences for development and personality functioning. René Spitz (1887–1974) described anaclitic depression, or hospitalism, in which normal children who were separated for long periods from adequate caregiving failed to thrive and, therefore, became depressed and nonresponsive. Ethologists, such as Konrad Lorenz (1903–1989) and Harry Harlow (1905–1981), studied bonding and attachment behaviors in animals, and showed how studying animal behavior could help illuminate human behavior.

The questions and answers below will help students test their knowledge of the subjects highlighted.

HELPFUL HINTS

The student should know the following terms, theoreticians, and concepts.

- | | | | |
|--------------------------|--|---------------------------------------|------------------------------|
| ▶ abstract thinking | ▶ concrete operations | ▶ imprinting | ▶ respondent behavior |
| ▶ acculturation | ▶ cross-cultural studies and syndromes | ▶ inductive reasoning | ▶ segregation hypothesis |
| ▶ altruism | ▶ double-blind method | ▶ inhibition | ▶ sensory deprivation |
| ▶ <i>Aplysia</i> | ▶ drift hypothesis | ▶ learning theory | ▶ separation anxiety |
| ▶ assimilation | ▶ epigenesis | ▶ object permanence | ▶ social learning |
| ▶ attachment phases | ▶ escape and avoidance conditioning | ▶ operant and classical conditioning | ▶ stranger anxiety |
| ▶ attribution theory | ▶ ethology | ▶ positive and negative reinforcement | ▶ syllogistic reasoning |
| ▶ aversive stimuli | ▶ experimental neurosis | ▶ preattachment stage | ▶ systematic desensitization |
| ▶ behaviorism | ▶ extinction | ▶ preoperational stage | ▶ tension-reduction theory |
| ▶ biofeedback | ▶ flooding and implosion | ▶ reciprocal determinism | ▶ token economy |
| ▶ biostatistics | ▶ frustration–aggression hypothesis | ▶ reciprocal inhibition | ▶ trial-and-error learning |
| ▶ cognitive dissonance | | | ▶ vulnerability theory |
| ▶ cognitive organization | | | |
| ▶ cognitive triad | | | |

QUESTIONS

Directions

Each question or incomplete statement below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

3.1. The drift hypothesis states that

- A. one's experience as a member of a particular class leads to the development of individual differences in coping capacity
- B. women are disadvantaged relative to men because their adult roles expose them to chronic stress
- C. a mental illness results in a decline in one's social clan
- D. differential exposure to stress explains group differences in mental illness
- E. ethnic minorities and immigrants appear to have more effective coping skills over nonminorities

3.2. A young woman presents with a history of agoraphobia since adolescence. Her agoraphobia progressed over the subsequent decade until she was essentially housebound. She could only leave home accompanied by her mother or husband and, even in that circumstance, with considerable anxiety. Leaving home alone had, in the past, often precipitated a panic attack. She had been treated with various medications and with psychotherapy without significant improvement. She was admitted to a clinical research center as part of a study examining the use of social reinforcement in various phobic conditions. A therapist with whom she had developed a good relationship delivered reinforcement in the form of praise contingent on progress. In the baseline period, the patient was encouraged to walk as far away from the clinical research unit as she could. Reinforcement for staying outside the unit resulted in only a small increase in distance walked away from the unit. In the next phase, praise for progress was given on a shaping schedule. For example, if the patient had been reinforced at a criterion of 100-yards distance on one trial and walked 150 yards on the next trial, the criterion would become 125 yards. She would be praised on the next trial only if she walked 125 yards or more. In this phase, the distance walked began to increase. When reinforcement was stopped, distance walked increased dramatically and then decreased. Finally, when reinforcement was reintroduced, the patient was able to walk long distances away from the unit. This was then generalized to the patient's home environment. (Courtesy of W. Stewart Agras, M.D., and G. Terence Wilson, Ph.D.)

The therapy used in the above case is an example of

- A. Classic Conditioning
- B. Operant Conditioning
- C. Social Learning
- D. Cognitive Learning
- E. None of the above

3.3. American psychologist Edward L. Thorndike described

- A. drive reduction theory
- B. behaviorism
- C. trial-and-error learning
- D. respondent behavior
- E. operant behavior

3.4. Premack's principle states that

- A. people will attribute other people's behavior to stabilize their own personality traits
- B. high-frequency behaviors can be used to reinforce low-frequency behavior
- C. a person can learn by imitating the behavior of another person
- D. the more people feel capable of controlling a threatening event, the less anxious they will be
- E. people will attribute their own behavior to situational causes

3.5. The catharsis hypothesis is the belief that

- A. participation in activities such as kickboxing can reduce aggressive behavior
- B. aggression may be due to a lack of basic social skills
- C. punishment can be an effective deterrent to overt aggression
- D. exposure to signs of pain or discomfort on the victim's part inhibits further aggression
- E. humorous materials can often reduce anger

3.6. Attribution theory states that

- A. behavior results from the interplay between cognitive and environmental factors
- B. persons are likely to attribute their own behavior to situational causes
- C. a behavior engaged in with high frequency can be used to reinforce a low-frequency behavior
- D. an organism changes its behavior to avoid a painful stimulus
- E. an animal learns a response to get out of a place where it does not want to be

3.7. Which of the following chromosomal abnormalities has been implicated as having an influence on aggressive behavior?

- A. 45-XO
- B. 48-XXXY
- C. 47-XXY
- D. 47-XYY
- E. 47-XXX

3.8. Which of the following statistical procedures is used to evaluate the frequency of events in a population?

- A. Analysis of Variance (ANOVA)
- B. T-test

- C. Chi-squared test
- D. Discriminant analysis
- E. Z-score

- 3.9.** Attachment theory states that
- A. infants are generally polytropic in their attachments
 - B. attachment disorders may lead to a failure to thrive
 - C. attachment occurs instantaneously between the mother and the child
 - D. attachment is synonymous with bonding
 - E. separation anxiety is most common when an infant is 5 months old
- 3.10.** Which of the following statements regarding crossover studies is *true*?
- A. It eliminates selection bias.
 - B. They are a variation of the double-blind study.
 - C. They contain a treatment group and a control group.
 - D. They are a type of prospective study.
 - E. All of the above
- 3.11.** Prevalence is the
- A. risk of acquiring a condition at some point in time
 - B. ratio of people who acquire a disorder during a year's time
 - C. proportion of a population that has a condition at any given moment in time
 - D. standard deviation
 - E. rate of first admissions to a hospital for a disorder
- 3.12.** In which of the following age groups is the stage of pre-operational thought present?
- A. Birth to 2 years
 - B. 2 to 7 years
 - C. 7 to 11 years
 - D. 11 through the end of adolescence
 - E. None of the above
- 3.13.** Asian patients seem to achieve a clinical response comparable to those of non-Asian patients, even though they require a significantly lower dose of
- A. lithium
 - B. antipsychotics
 - C. tricyclics
 - D. benzodiazepines
 - E. All of the above
- 3.14.** The “choo-choo” phenomenon is associated with which of the following types of social deprivation in monkeys?
- A. Total-isolation–reared monkeys
 - B. Mother-only–reared monkeys
 - C. Peer-only–reared monkeys
 - D. Partial-isolation–reared monkeys
 - E. Separation-reared monkeys

Directions

Each set of lettered headings below is followed by a list of numbered phrases. For each numbered phrase, select

- A. if the item is associated with A only
- B. if the item is associated with B only
- C. if the item is associated with both A and B
- D. if the item is associated with neither A nor B

Questions 3.15–3.19

- A. Behavioral Model of learning
- B. Psychoanalytic Model of learning

- 3.15.** Childhood experiences are the focus of the analysis
- 3.16.** Theory is based on experimentation
- 3.17.** Subjective methods of interpretation
- 3.18.** Testable hypotheses that can be evaluated through experimentation
- 3.19.** Theory is predominantly based on case histories

Questions 3.20–3.25

- A. Classical conditioning
- B. Operant conditioning

- 3.20.** Ivan Petrovich Pavlov
- 3.21.** Instrumental conditioning
- 3.22.** B. F. Skinner
- 3.23.** Repeated pairing of a neutral stimulus with one that evokes a response
- 3.24.** Learning occurs as the consequence of action
- 3.25.** Learning takes place as a result of the co-occurrence of environmental events

Directions

Each group of questions below consists of lettered headings followed by a list of numbered words or phrases. For each numbered word or phrase, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 3.26–3.31

- A. Sigmund Freud's theory on aggression
- B. Konrad Lorenz's theory on aggression
- C. Albert Bandura's theory on aggression
- D. John Dollard's theory on aggression

- 3.26.** The root of human aggression is neither innate violence nor aggressive drive aroused by frustration.
- 3.27.** Aggression stems from the redirection of Thanatos away from the self and towards others.
- 3.28.** Aggression springs from a fighting instinct that humans share with other organisms.
- 3.29.** Aggression always stems from frustration.
- 3.30.** Aggression is a learned behavior that varies depending on culture and experience.

- 3.31. Aggression is a reaction to the blocking or thwarting of libido.

Questions 3.32–3.36

- A. Positive reinforcement
 - B. Negative reinforcement
 - C. Punishment
 - D. Classical conditioning
- 3.32. Anorexic woman begins eating and gaining weight in order to get out of the hospital
- 3.33. Dog begins salivating to the sound of a bell after learning food is coming soon after
- 3.34. A man begins leaving home earlier in the morning to avoid rush hour traffic
- 3.35. A woman gives her dog a treat every time he sits when told
- 3.36. Child has his favorite toy taken away every time he wets his bed

Questions 3.37–3.40

- A. Ivan Petrovich Pavlov
 - B. Eric Kandel
 - C. Konrad Lorenz
 - D. Harry Harlow
- 3.37. Imprinting
- 3.38. Surrogate mother
- 3.39. Experimental neurosis
- 3.40. *Aplysia*

Questions 3.41–3.44

- A. John Bowlby
 - B. Harry Harlow
 - C. Mary Ainsworth
 - D. René Spitz
- 3.41. “Secure base” effect
- 3.42. Protest, despair, detachment
- 3.43. First described anaclitic depression
- 3.44. Primarily associated with ethological studies

Questions 3.45–3.49

- A. Fixed-ratio schedule
 - B. Variable-ratio schedule
 - C. Fixed-interval schedule
 - D. Variable-interval schedule
- 3.45. Leads to the most rapid rate of response
- 3.46. Seen with the use of slot machines
- 3.47. Associated with scalloping
- 3.48. Generates an oscillating rate of response
- 3.49. Seen with the three-strike rule of baseball

ANSWERS

3.1. The answer is C

The drift hypothesis states that *a mental illness results in a decline in one’s social class*. Most of the evidence for the drift hypothesis comes from studies of major mental illnesses, primarily schizophrenia. Those studies show that the early onset of a disorder can reduce one’s chances of socioeconomic achievement, a fact that seems true for people who become ill before establishing a career.

A large part of sociological research on psychopathology has focused on structural correlates of psychiatric illness such as social class, race, ethnicity, sex, and age. The associations between these variables and the prevalence of psychiatric disorders are substantial. The most obvious hypothesis to test in examining such associations is that *differential exposure to stress explains group differences in mental illness*. It is now clear that this hypothesis can be rejected. Although it is true that people in comparatively disadvantaged positions in society are exposed to more stress than their advantaged counterparts, differential exposure cannot totally explain their higher rates of anxiety, depression, and nonspecific distress in general population samples.

Studies have shown that a class-linked vulnerability to stress accounts for the major part of the association between social class and depression and between social class and nonspecific distress. Another explanation is that *one’s experience as a member of a particular class leads to the development of more effective coping skills*.

A related area of research concerns racial and ethnic differences in mental illness. One intriguing and still only partially understood pattern is that *ethnic minority immigrants appear to have better coping skills over nonminorities* that disappear among second-generation and later-generation minorities.

Another area of sociological interest concerns gender differences in anxiety and mood disorders. There are several lines of research to pursue gender differences in nonspecific distress and affective disorders. The dominant perspective in sociology since the 1980s holds that *women are disadvantaged relative to men because their adult roles expose them to more chronic stress*.

3.2. The answer is B

The therapy used in the above case is an example of *operant conditioning*. Operant conditioning, developed by B. F. Skinner, is a form of learning in which behavior frequency is altered through the application of positive and negative consequences. The therapist uses positive reinforcement (praise) to help the patient overcome her agoraphobia. Positive reinforcement is the process by which certain consequences of a response increase the probability that the response will recur. *Classic conditioning* is a form of learning in which a neutral stimulus becomes a conditioned stimulus when presented with an unconditioned stimulus. Unlike operant conditioning, where learning occurs as a consequence of action, in classic conditioning, the examiner reinforces behavior. Ivan Petrovich Pavlov developed classic conditioning through his famous experiment conditioning a dog to salivate in response to a ringing bell.

Social learning theory relies on role modeling, identification, and human interactions. A person can learn by imitating behavior

of another person, but personal factors are involved. When a person dislikes the role model, imitative behavior is unlikely. Albert Bandura is a major proponent of the social learning school. According to Bandura, behavior results from the interplay between cognitive and environmental factors, a concept known as reciprocal determinism. *Cognitive learning theories* focus on the role of understanding: Cognition implies understanding the connection between cause and effect, between action and the consequences of action.

3.3. The answer is C

Operant conditioning is related to *trial-and-error learning*, as described by the American psychologist Edward L. Thorndike (1874–1949). In trial-and-error learning, a person or animal attempts to solve a problem by trying different actions until one proves successful. A freely moving organism behaves in a way that is instrumental in producing a reward. For example, a cat in the Thorndike puzzle box must learn to lift a latch to escape from the box. For this reason, operant conditioning is sometimes called instrumental conditioning. Thorndike's law of effect states that certain responses are reinforced by reward, and the organism learns from these experiences.

One of the first theorists to explore the neuropsychological aspect of learning was Clark L. Hull (1884–1952), who developed a *drive reduction theory of learning*. Hull postulated that neurophysiological connections established in the central nervous system reduce the level of a drive (e.g., obtaining food reduces hunger). An external stimulus stimulates an efferent system and elicits a motor impulse. The critical connection is between the stimulus and the motor response, which is a neurophysiological reaction that leads to what Hull called a habit.

American psychologist John B. Watson (1878–1958), the father of *behaviorism*, used Ivan Petrovich Pavlov's theory of classical conditioning to explain certain aspects of human behavior. In 1920, Watson described producing a phobia in an 11-month-old boy called Little Albert. At the same time that the boy was shown a white rat that he initially did not fear, he was exposed to a loud, frightening noise. After such pairings, Albert became fearful of the white rat, even when he heard no loud noise. Many theorists believe that this process accounts for the development of childhood phobias, which are considered learned responses based on classic conditioning.

B.F. Skinner described two types of behavior: *respondent behavior*, which results from known stimuli (e.g., the knee jerk reflex to patellar stimulation or the papillary constriction to light), and *operant behavior*, which is independent of a stimulus (e.g., the random movements of an infant).

3.4. The answer is B

A concept developed by David Premack states that a behavior engaged in with high frequency can be used to reinforce a low-frequency behavior. In one experiment, Premack observed that children spent more time playing with a pinball machine than eating candy when both were freely available. When he made playing with the pinball machine contingent on eating a certain amount of candy, the children increased the amount of candy they ate. In a therapeutic application of this principle, patients with schizophrenia were observed to spend more time in a rehabilitation center sitting down doing nothing than they did working

at a simple task. When being able to sit down for 5 minutes was made contingent on a certain amount of work, the work output was considerably increased, as was the skill acquisition. This principle is also known as Grandma's rule ("If you eat your spinach, you can have dessert").

The social learning theory relies on role modeling, identification, and human interactions. This theory states that a person can learn by imitating the behavior of another person, but personal factors are involved.

The attribution theory is a cognitive approach concerned with how a person perceives the causes of behavior. According to the attribution theory, people are likely to attribute their own behavior to situational causes but are likely to attribute other people's behavior to their own stable internal personality traits.

The self-efficacy theory predicts that the more people feel capable of predicting and controlling threatening events, the less vulnerable they are to anxiety and stress disorders in response to traumatic experiences.

3.5. The answer is A

The catharsis hypothesis is the belief that *participation in activities*, such as running or kickboxing, allows people to vent their anger and hostility and, therefore, *reduces aggressive behavior*. Some people, however, may become more aggressive as a result of the expressive behaviors. Catharsis, therefore, may not be effective for long-term reduction of aggression.

Punishment is sometimes an effective deterrent to overt aggression. Research findings indicate that the frequency or intensity of aggressive behavior can be reduced by even mild forms of punishment, such as social disapproval. However, punishment does not always, or even usually, produce such effects. The recipients of punishment often interpret it as an attack against them. To that extent, aggressors may respond even more aggressively. Strong punishment is more likely to provoke desires for revenge or retribution than to instill lasting restraints against violence. For these reasons, certain punishments may backfire and actually encourage, rather than inhibit, the dangerous actions they are designed to prevent.

A major reason why many people become involved in repeated aggressive encounters is their *lack of basic social skills*. These people do not know how to communicate effectively and thus adopt an abrasive style of self-expression. Their social deficits seem to ensure that they experience repeated frustration and frequently anger those with whom they have direct contact. A technique for reducing the frequency of such behavior involves providing these people with the social skills that they lack. The results are encouraging and indicate that training in appropriate social skills can offer a promising approach to the reduction of human violence.

When aggressors attack other people in face-to-face confrontations, the aggressors may block out, ignore, or deny signs of pain and suffering on the part of their victims. In several experiments, *exposure to signs of pain and discomfort on the victim's part has inhibited further aggression*. If aggressors are exposed to such feedback, they may feel empathy and subsequently reduce further aggression.

Informal observation indicates that anger can often be *reduced through exposure to humorous material*. Several types of

humor, presented in various formats, can induce reactions or emotions incompatible with aggression among the persons who observe the humor.

3.6. The answer is B

According to attribution theory, *persons are likely to attribute their own behavior to situational causes* but are likely to attribute others' behaviors to stable internal personality traits. In psychiatry, attribution theory may help explain why some persons attribute a change in behavior to an external event (situation) or to a change in internal state (disposition or ability).

Albert Bandura is a major proponent of the social learning school. According to Bandura, *behavior results from the interplay between cognitive and environmental factors*, a concept known as *reciprocal determinism*. People learn by observing others, intentionally or accidentally. This process is described as modeling or learning through imitation. A person's choice of model is influenced by a variety of factors such as age, sex, status, and similarity.

The Premack's principle is a concept developed by David Premack that states that *a behavior engaged in with high frequency can be used to reinforce a low-frequency behavior*. In one experiment, Premack observed that children spent more time playing with a pinball machine than eating candy when both were freely available. When he made playing with the pinball machine contingent on eating a certain amount of candy, the children increased the amount of candy they ate.

In adverse control or conditioning, *an organism changes its behavior to avoid a painful, noxious, or aversive stimulus*. Electric shocks are common aversive stimuli used in laboratory experiments. Any behavior that avoids an aversive stimulus is reinforced as a result.

Negative reinforcement is related to two types of learning, escape learning and avoidance learning. In escape learning, *an animal learns a response to get out of a place where it does not want to be* (e.g., an animal jumps off an electric grid whenever the grid is charged). Avoidance learning requires an additional response. The rat on the grid learns to avoid a shock if it quickly pushes a lever when a light signal goes on.

3.7. The answer is D

Behavior research involving the influence of chromosomes on aggressive behavior has concentrated primarily on abnormalities in X and Y chromosomes, particularly the *47-YYY syndrome*. Early studies indicate that people with the syndrome could be characterized as tall, with below-average intelligence, and likely to be apprehended and in prison for engaging in criminal behavior. Subsequent studies indicated, however, that, at most, the XYY syndrome contributes to aggressive behavior in only a small percentage of cases. Studies of the androgen and gonadotropin characteristics of persons with XYY syndrome have been inconclusive. However, *none of the other listed chromosomal abnormalities have been associated with increases in aggressive behavior*.

3.8. The answer is C

The *chi-square test* is used to evaluate the relative frequency or proportion of events in a population that falls into well-defined

categories. Research on whether parents who were abused as children are more likely to abuse their children could be tested using the chi-square test of association. A *t-test* is a statistical procedure designed to compare the means of two sets of observations. *Analysis of variance, or ANOVA*, is a set of statistical procedures designed to compare the means of two or more groups of observations. *Discriminant analysis* is a multivariate method for finding the relation between a single discrete outcome and a linear combination of two or more predictors. The *z-score* is the deviation of a score from its group mean expressed in standard deviations.

3.9. The answer is B

Attachment disorders are characterized by biopsychosocial pathology that results from maternal deprivation, a lack of care by, and interaction with, the infant's mother or caretaker. Psychosocial dwarfism, separation anxiety disorder, avoidant personality disorder, depressive disorders, delinquency, learning disorders, borderline intelligence, and *failure to thrive have been traced to negative attachment experiences*. Failure to thrive results in the infant being unable to maintain viability outside a hospital setting. When maternal care is deficient because the mother is mentally ill, because the child is institutionalized for a long time, or because the primary object of attachment dies, the child suffers emotional damage.

John Bowlby formulated a theory that states normal attachment is crucial to healthy development. According to Bowlby, attachment occurs when the infant has a warm, intimate, and continuous relationship with its mother, and both mother and infant find satisfaction and enjoyment. *Infants are generally monotropic, not polytropic, in their attachments*, but multiple attachments may also occur (i.e., attachment may be directed toward the father or a surrogate). *Attachment does not occur instantaneously between the mother and the child*; it is a gradually developing phenomenon. Attachment results in one person's wanting to be with a preferred person who is perceived as stronger, wiser, and able to reduce anxiety or distress. Attachment produces a feeling of security in the infant. It is a process that is facilitated by interaction between the mother and the infant. The amount of time together is less important than the quality of activity between the two.

Attachment is not synonymous with bonding; they are different phenomena. Bonding concerns the mother's feelings for her infant. It differs from attachment in that a mother does not normally rely on her infant as a source of security, a requirement of attachment behavior. A great deal of research on the bonding of a mother to her infant reveals that it occurs when they have skin-to-skin contact or other types of contact, such as voice and eye contact.

Separation from the attachment may or may not produce intense anxiety, depending on the child's developmental level and the current phase of attachment. Separation anxiety is expressed as tearfulness or irritability in a child who is isolated or separated from its mother or caretaker. *Separation anxiety is most common when an infant is 10 to 18 months of age (not 5 months)*, and it disappears generally by the end of the third year. Table 3.1 delineates aspects of normal attachment at different ages.



Table 3.1
Normal Attachment

Birth to 30 days
Reflexes at birth
Rooting
Head turning
Sucking
Swallowing
Hand–mouth
Grasp
Digital extension
Crying—signal for particular kind of distress
Responsiveness and orientation to mother’s face, eyes, and voice
4 days—anticipatory approach behavior at feeding
3 to 4 weeks—infant smiles preferentially to mother’s voice
Age 30 days through 3 months
Vocalization and gaze reciprocity further elaborated from 1 to 3 months; babbling at 2 months, more with the mother than with a stranger
Social smile
In strange situations, increased clinging response to mother
Age 4 through 6 months
Briefly soothed and comforted by sound of mother’s voice
Spontaneous, voluntary reaching for mother
Anticipatory posturing to be picked up
Differential preference for mother intensifies
Subtle integration of responses to mother
Age 7 through 9 months
Attachment behaviors further differentiated and focused specifically on mother
Separation distress, stranger distress, strange-place distress
Age 10 through 15 months
Crawls or walks toward mother
Subtle facial expressions (coyness, attentiveness)
Responsive dialogue with mother clearly established
Early imitation of mother (vocal inflections, facial expression)
More fully developed separation distress and mother preference
Pointing gesture
Walking to and from mother
Affectively positive reunion responses to mother after separation or, paradoxically, short-lived, active avoidance or delayed protest
Age 16 months through 2 years
Involvement in imitative jargon with mother (12 to 14 months)
Head-shaking “no” (15 to 16 months)
Transitional object used during the absence of mother
Separation anxiety diminishes
Mastery of strange situations and persons when mother is near
Evidence of delayed imitation
Object permanence
Microcosmic symbolic play
Age 25 months through 3 years
Able to tolerate separations from mother without distress when familiar with surroundings and given reassurances about mother’s return
Two- and three-word speech
Stranger anxiety much reduced
Object consistency achieved—maintains composure and psychosocial functioning without regression in absence of mother
Microcosmic play and social play; cooperation with others begins

Based on material by Justin Call, M.D.

3.10. The answer is E (all)

A crossover study is a variation of the double-blind study. The treatment group and the control or placebo group change places at some point so that the placebo group gets the treatment and the treatment group now receives the placebo. That procedure eliminates selection bias. If the treatment group improves in both instances and the placebo group does not, one can conclude that the makeup of the two groups was truly random. Each group serves as the control for the other.

3.11. The answer is C

Prevalence is the proportion of a population that has a condition at any given time. The ratio of people who acquire a disorder during a year’s time (new cases) is called the annual incidence. In a stable situation, the prevalence is approximately equal to the annual incidence times the average duration, measured in years, of the condition. The risk of acquiring a condition at some time in the future is the accumulation of age-specific annual incidence rates over a period of time.

Standard deviation (SD) is a statistical measure of variability within a set of values. For a normal distribution, about 68 percent of the values fall within one SD of the mean, and about 95 percent lie within two SDs of the mean. It is sometimes presented by Σ , the Greek letter sigma.

The rate of first admissions to a hospital for a disorder is the number of all first admissions to any hospital during a particular time.

3.12. The answer is B

The state of preoperational thought is present in children 2 to 7 years old. During this stage, children use symbols and language more extensively than in the sensorimotor stage. Thinking is intuitive; children learn without the use of reasoning. Preoperational thought is midway between socialized adult thought and the completely autistic Freudian unconscious.

Jean Piaget (1896–1980) used the term sensorimotor to describe the first stage, present from birth to 2 years of age. Infants begin to learn through sensory observation, and they gain control of their motor functions through activity, exploration, and manipulation of the environment. The stage of concrete operations is present in children from 7 to 11 years of age. The stage of concrete operations is so named because in this period, children operate and act on the real and perceivable world of objects and events. Egocentric thought is replaced by operational thought, which involves dealing with a wide array of information in the world outside of the child. Therefore, children can now see things from someone else’s perspective.

The formal operations stage is present from 11 years of age through the end of adolescence. This stage is named so because a young person’s thoughts operate in a formal, highly logical, systematic, and symbolic manner. This stage is characterized by the ability to think abstractly, to reason deductively, and to define concepts. It is also characterized by the emergence of skills for dealing with permutations and combinations; young people can grasp the concept of probabilities.

Table 3.2 lists Piaget’s stages of intellectual development.



Table 3.2
Stages of Intellectual Development Postulated by Piaget

Age (Yrs)	Period	Cognitive Developmental Characteristics
0–1.5 (to 2)	Sensorimotor	Divided into six stages, characterized by: 1. Inborn motor and sensory reflexes 2. Primary circular reaction 3. Secondary circular reaction 4. Use of familiar means to obtain ends 5. Tertiary circular reaction and discovery through active experimentation 6. Insight and object permanence
2–7	Preoperations subperiod ^a	Deferred imitation, symbolic play, graphic imagery (drawing), mental imagery, and language
7–11	Concrete operations	Conservation of quantity, weight, volume, length, and time based on reversibility by inversion or reciprocity; operations; class inclusion and seriation
11 through the end of adolescence	Formal operations	Combinatorial system, whereby variables are isolated and all possible combinations are examined; hypothetical-deductive thinking

^aThis subperiod is considered by some authors to be a separate developmental period. Printed with permission.

3.13. The answer is E (all)

Asian patients require lower dosages of dopamine receptor antagonist (typical antipsychotic) medications than comparable non-Asian patients to achieve a desirable clinical outcome. Also, when treated on a fixed-dosage schedule, Asians seem to develop significantly greater extrapyramidal adverse effects. One study found a 52 percent higher plasma concentration of haloperidol (Haldol) in Chinese schizophrenics living in China than in non-Asian schizophrenic patients residing in the United States when both groups received treatment on a fixed-dosage schedule. Another study demonstrated that Chinese schizophrenics residing in Taiwan and Taipei achieved haloperidol plasma concentrations comparable to those of white, African American, and Hispanic patients hospitalized in San Antonio while using significantly lower daily dosages of haloperidol.

As is the case with neuroleptics, studies with *tricyclic drugs* have shown that average dosages prescribed for Asians are significantly lower (up to 50 percent lower) than dosages prescribed in the United States for non-Asians. The reasons for this responsiveness have not been clearly established, although preliminary evidence suggests differential responsiveness of relevant receptors, differences in resulting plasma concentrations, or both.

Studies of prescription patterns as well as those comparing the pharmacokinetics and pharmacodynamics of benzodiazepines across ethnic groups have established the *enhanced sensitivity of Asians to the effects of benzodiazepines*. Typically prescribed doses are one-half to two-thirds those of similar non-minority populations. The ethnic differences in benzodiazepine metabolism are most often linked to polymorphisms in the (S)-mephenytoin phenotype, yielding a higher percentage of poor metabolizers in the Chinese ethnic group.

As with tricyclic drugs, antipsychotics, and benzodiazepines, *Asians seem to achieve clinical responses comparable to those of non-Asian patients using significantly lower dosages of lithium, 0.5 to 0.7 mEq/L versus the 0.8 to 1.2 mEq/L generally required by white populations.*

3.14. The answer is C

An area of animal research that has relevance to human behavior and psychopathology is the longitudinal study of nonhuman

primates. Monkeys have been observed from birth to maturity, not only in their natural habitats and laboratory facsimiles but also in laboratory settings that involve various degrees of social deprivation early in life. Socially isolated monkeys are raised in varying degrees of isolation and are not permitted to develop normal attachment bonds. Social isolation techniques illustrate the effects of an infant's early social environment on subsequent development and separation techniques, which illustrate the effects of loss of a significant attachment figure. The *choo-choo phenomenon is observed in peer-only-reared infant rhesus monkeys*. It is the actual physical alignment these monkeys have been observed to form (that of a "choo-choo train"), in addition to exhibiting behavior such as becoming easily frightened, clinging to each other, being reluctant to explore, and engaging in minimal play (Figure 3.1).

Answers 3.15–3.19

3.15. The answer is B

3.16. The answer is A

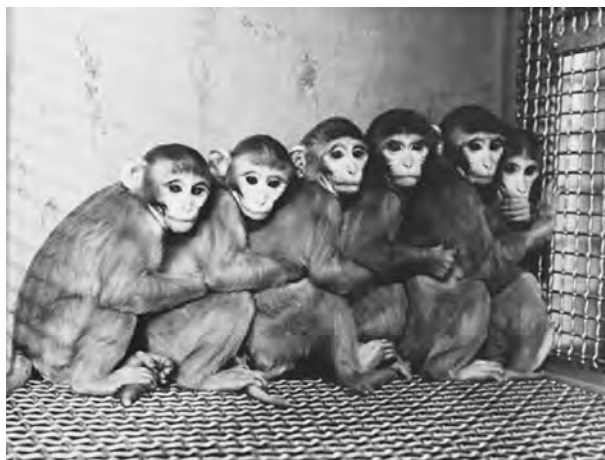


FIGURE 3.1

Choo-choo phenomenon in peer-only-reared infant rhesus monkeys.



Table 3.3
Behavioral and Psychoanalytic Models

Behavioral Model	Psychoanalytic Model
Behavior is determined by current contingencies, reinforcement history, and genetic endowment	Behavior is determined by intrapsychic processes
Problem behavior is the focus of study and treatment	Behavior is but a symbol of intrapsychic processes and a symptom of unconscious conflict; the underlying conflict is the focus of treatment
Contemporary variables, such as contingencies of reinforcement, are the focus of the analysis	Historical variables, such as childhood experiences, are the focus of the analysis
Treatment entails the application of the principles of operant or classical conditioning	Treatment consists of bringing unconscious conflicts into consciousness
Objective observation, measurement, and experimentation are the methods used; the focus is on observable behavior and environmental events (antecedents and consequences)	Subjective methods of interpretation of behavior and inference regarding unobservable events (e.g., intrapsychic processes) are used
Theory is based on experimentation	Theory is predominantly based on case histories
Tenets can be formulated into testable hypotheses and evaluated through experimentation	Many tenets cannot be formulated into testable hypotheses to be evaluated through experimentation

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3.17. The answer is B

3.18. The answer is A

3.19. The answer is B

Attempts have been made to reconcile behavioral theory and Freudian psychodynamics by stressing the commonalities between the two. In the tension-reduction theory of behavior, behavior is motivated by an organism's attempt to reduce tension produced by unsatisfied or unconscious drives. Similarly, Sigmund Freud's pleasure principle is a tension-reducing force and, consequently, a strong motivator. When a drive is repressed, anxiety occurs and acts as an acquired drive; a person's behavior may be motivated by an attempt to reduce that anxiety. Adults may avoid situations that are likely to stimulate anxiety, but they may be completely unaware of their avoidance patterns. Therapy, in part, is an unlearning process. The patient learns that certain behaviors can reduce anxiety, and avoidance patterns are replaced by approach patterns. Table 3.3 gives a comparison of the behavioral and psychoanalytic models.

Answers 3.20–3.25

3.20. The answer is A

3.21. The answer is B

3.22. The answer is B

3.23. The answer is A

3.24. The answer is B

3.25. The answer is A

Among the building blocks of learning theory are classical conditioning and operant conditioning. In *classical conditioning*, learning is thought to take place as a result of the *contiguity*

of environmental events. When events occur closely together in time, people will come to associate the two. In the case of *operant conditioning*, learning is thought to occur as a result of the *consequences of a person's actions* and the resultant effect on the environment. As *B. F. Skinner* (1904–1990) stated, “A person does not act upon the world, the world acts upon him.”

Classical or respondent conditioning results from the repeated pairing of a neutral (conditioned) stimulus with one that naturally evokes a response (unconditioned stimulus), such that the neutral stimulus eventually comes to evoke the response. The time relation between the presentation of the conditioned and unconditioned stimuli is important and varies for optimal learning from a fraction of a second to several seconds.

The Russian physiologist and Nobel prize winner, *Ivan Petrovich Pavlov* (1849–1936), observed in his work on gastric secretion that a dog salivated not only when food was placed in its mouth but also at the sound of the footsteps of the person coming to feed the dog, even though the dog could not see or smell the food. Pavlov analyzed these events and called the saliva flow that occurred with the sound of footsteps a *conditioned response* (CR)—a response elicited under certain conditions by a particular stimulus.

In a typical Pavlovian experiment, a *stimulus* (S) that had no capacity to evoke a particular response before training did so after consistent association with another stimulus. For example, under normal circumstances, a dog does not salivate at the sound of a bell, but when the bell sound is always followed by the presentation of food, the dog ultimately pairs the bell and the food. Eventually, the bell sound alone elicits salivation (CR).

Skinner's theory of learning and behavior is known as operant or *instrumental conditioning*. Whereas in classical conditioning an animal is passive or restrained and behavior is reinforced by the experimenter, in operant conditioning the animal is active and behaves in a way that produces a reward; thus, *learning occurs as a consequence of action*. For example, a rat receives a reinforcing stimulus (food) only when it responds correctly by pressing a lever. Food, approval, praise, good grades, or any



Table 3.4
Reinforcement Schedules in Operant Conditioning

Reinforcement Schedule	Example	Behavioral Effect
Fixed-ratio (FR) schedule	Reinforcement occurs after every 10 responses (10:1 ratio); 10 bar presses release a food pellet; workers are paid for every 10 items they make.	Rapid rate of response to obtain the greatest number of rewards. Animal knows that the next reinforcement depends on a certain number of responses being made.
Variable-ratio (VR) schedule	Variable reinforcement occurs (e.g., after the third, sixth, then second response, and so on).	Generates a fairly constant rate of response because the probability of reinforcement at any given time remains relatively stable.
Fixed-interval (FI) schedule	Reinforcement occurs at regular intervals (e.g., every 10 minutes or every third hour).	Animal keeps track of time. Rate of responding drops to near 0 after reinforcement and then increases at about the expected time of reward.
Variable-interval (VI) schedule	Reinforcement occurs after variable intervals (e.g., every 3, 6, and then 2 hours), similar to VR schedule.	Response rate does not change between reinforcements. Animal responds at a steady rate to get the reward when it is available; common in trout fishing, use of slot machines, checking mailbox.

other response that satisfies a need in an animal or a person can serve as a reward.

Operant conditioning is related to trial-and-error learning, as described by the American psychologist Edward L. Thorndike (1874–1949). In trial-and-error learning, a person or an animal attempts to solve a problem by trying different actions until one proves successful. In other words, a freely moving organism behaves in a way that is instrumental in producing a reward. For example, a cat in a Thorndike puzzle box must learn to lift a latch to escape from the box. For this reason, operant conditioning is sometimes called *instrumental conditioning*. Thorndike's law of effect states that certain responses are reinforced by reward and the organism learns from these experiences.

Four kinds of instrumental or operant conditioning are described in Table 3.4.

Answers 3.26–3.31

3.26. The answer is C

3.27. The answer is A

3.28. The answer is B

3.29. The answer is D

3.30. The answer is C

3.31. The answer is A

In his early writings, *Sigmund Freud* held that all human behavior stems either directly or indirectly from Eros—the life instinct—whose energy, or libido, is directed toward the enhancement or reproduction of life. In this framework, aggression was viewed simply as a reaction to the blocking or thwarting of libido and was neither an automatic nor an inevitable part of life. After the tragic events of World War I, Freud gradually came to adopt a gloomier position about the nature of human aggression. He proposed the existence of a second major instinct—*Thanatos*, the death force—whose energy is directed toward the destruction or termination of life. Because the death instinct, if unrestrained,

soon results in self-destruction, Freud hypothesized that through mechanisms, such as displacement, the energy of *Thanatos* is redirected outward and serves as the basis for aggression against others. Thus, in Freud's latter view, *aggression stems primarily from the redirection of the self-destructive death instinct (i.e., Thanatos) away from the self and towards others.*

According to *Konrad Lorenz*, aggression that causes physical harm to others *springs from a fighting instinct that humans share with other organisms*. The energy associated with this instinct is produced spontaneously in organisms at a more or less constant rate. The probability of aggression increases as a function of the amount of stored energy and the presence and strength of aggression-releasing stimuli. Aggression is inevitable, and, at times, spontaneous eruptions occur.

According to *Albert Bandura*, *neither innate urges towards violence nor aggressive drives aroused by frustration are the roots of human aggression*. Rather, persons acquire aggression, much like other forms of social behavior, through either personal experience or by observation of others. These *learned behaviors vary between cultures depending on experience*. At the same time, people also learn through experience which persons or groups, behaviors, and situations warrant aggression.

John Dollard's frustration–aggression hypothesis, in its original form, indicated that frustration always leads to a form of aggression and that *aggression always stems from frustration*. Frustrated persons, however, do not always respond with aggressive thoughts, words, or deeds. They may show a wide variety of reactions, ranging from resignation, depression, and despair to attempts to overcome the sources of their frustration. And not all aggression results from frustration. People (e.g., boxers and football players) act aggressively for many reasons and in response to many stimuli.

Answers 3.32–3.36

3.32. The answer is B

3.33. The answer is D

3.34. The answer is B

3.35. The answer is A**3.36. The answer is C**

In operant conditioning, learning is thought to occur as a result of the consequences of one's actions and the resultant effect on the environment. In *classical conditioning*, in contrast, learning is thought to take place as the result of the contiguity of environmental events; when events occur closely together in time, persons will probably come to associate the two. An example is Pavlov's salivating dogs experiment.

In operant conditioning, *positive reinforcement* is the process by which certain consequences of a response increase the probability that the response will occur again. Food, water, praise, and money, as well as substances such as opium, cocaine, and nicotine, all may serve as positive reinforcers.

Negative reinforcement is the process by which a response that leads to the removal of an aversive event increases that response. Any behavior that enables one to avoid or escape a punishing consequence is strengthened. Therefore, a patient with anorexia nervosa eating and gaining weight in order to get out of the hospital (presuming she prefers going home to a prolonged hospitalization), as well as getting up early to avoid traffic are examples of negative reinforcement.

Negative reinforcement is not punishment. *Punishment* is an aversive stimulus (for example, a slap on the face for bad behavior, or the removal of a desired object). It is presented explicitly to weaken or suppress an undesired response.

Answers 3.37–3.40**3.37. The answer is C****3.38. The answer is D****3.39. The answer is A****3.40. The answer is B**

Imprinting has been described as the process by which certain stimuli become capable of eliciting certain innate behavior patterns during a critical period of an animal's behavioral development. The phenomenon is associated with *Konrad Lorenz*, who in 1935 demonstrated that the first moving object (in that case, Lorenz himself) a duckling sees during a critical period shortly after hatching is regarded and reacted to thereafter as the mother duck.

Harry Harlow is associated with the concept of the *surrogate mother* from his experiments in the 1950s with Rhesus monkeys. Harlow designed a series of experiments in which infant monkeys were separated from their mothers during the earliest weeks of life. He found that the infant monkeys, if given the choice between a wire surrogate mother and a cloth-covered surrogate mother, chose the cloth-covered surrogates, even if the wire surrogates provided food.

Ivan Petrovich Pavlov coined the terms "*experimental neurosis*" to describe disorganized behavior that appears in the experimental subject (in Pavlov's case, dogs) in response to an inability to master the experimental situation. Pavlov described extremely agitated behavior in his dogs when they were unable

to discriminate between sounds of similar pitch or test objects of similar shapes.

Eric Kandel contributed to the knowledge of the neurophysiology of learning. He demonstrated in the study of the sea slug species *Aplysia* that synaptic connections are altered as a result of learning. His work earned him the Nobel Prize in Medicine in 2001.

Answers 3.41–3.44**3.41. The answer is C****3.42. The answer is A****3.43. The answer is D****3.44. The answer is B**

Attachment can be defined as the emotional tone between children and their caregivers and is evidenced by an infant's seeking and clinging to the caregiving person, usually the mother. By their first month, infants usually begin to show such behavior, which is designed to promote proximity to the desired person.

John Bowlby, a British psychoanalyst (1907–1990), formulated the theory that normal attachment in infancy is crucial to healthy development. Bowlby described a predictable set and sequence of behavior patterns in children who are separated from their mothers for long periods (more than 3 months): *protest*, in which the child protests against the separations by crying, calling out, and searching for the lost person; *despair*, in which the child appears to lose hope that the mother will return; and *detachment*, in which the child emotionally separates himself or herself from the mother. Bowlby believed that this sequence involves ambivalent feelings toward the mother; the child both wants her and is angry with her for her desertion.

Mary Ainsworth built on Bowlby's observations and found that the interaction between the mother and her baby during the attachment period influences the baby's current and future behavior significantly. Many observers believe that patterns of infant attachment affect future adult emotional relationships. Patterns of attachment vary among babies; for example, some babies signal or cry less than others. Sensitive responsiveness to infant signals, such as cuddling the baby when it cries, causes infants to cry less in later months. Close bodily contact with the mother when the baby signals for her is also associated with the growth of self-reliance, rather than with a clinging dependence, as the baby grows older. Unresponsive mothers produce anxious babies; these mothers often have lower intelligence quotients (IQs) and are emotionally more immature and tend to be younger than responsive mothers are.

Ainsworth also confirmed that attachment serves the purpose of reducing anxiety. What she called the *secure base effect* enables a child to move away from the attachment figures and to explore the environment. Inanimate objects, such as a teddy bear or a blanket (called the transitional object by Donald Winnicott), also serve as a secure base, one that often accompanies children as they navigate the world.

Harry Harlow's *ethological studies* with monkeys are relevant to attachment theory. Harlow demonstrated the emotional and behavioral effects of isolating monkeys from birth and keeping them from forming attachments. The isolates were withdrawn, unable to relate to peers, unable to mate, and incapable of caring for their offspring.

Anaclitic depression, also known as hospitalism, was first described by René Spitz in infants who had made normal attachments but were then separated suddenly from their mothers for varying times and placed in institutions or hospitals. The children became depressed, withdrawn, nonresponsive, and vulnerable to physical illness. However, they recovered when their mothers returned or when surrogate mothering became available.

Answers 3.45–3.49

3.45. The answer is A

3.46. The answer is D

3.47. The answer is C

3.48. The answer is C

3.49. The answer is A

Often given in the form of attention and praise contingent on certain behaviors, reinforcement is a basic ingredient of most therapists' repertoire. Much is known about various schedules of reinforcement, defined as the pattern or frequency with which a reward is delivered as a consequence of behavior. The most frequently used schedules are listed in Table 3.4. The fixed-ratio schedule leads to the *most rapid rate of response* and is seen in *baseball rules when a player is called out after three strikes*. The use of *slot machines* demonstrates a variable-interval schedule of reinforcement.

The fixed-interval schedule has an *oscillating rate of response* that increases near the expected time of reward, a concept known as *scalping*.

Clinical Neuropsychological Testing

The neuropsychological examination has a valuable place in diagnosing and treating behavioral syndromes that are associated with medical, psychological, and psychiatric conditions. Clinical neuropsychology is a specialty within psychology that examines the relationship between behavior and brain functioning in the realms of cognitive, motor, sensory, and emotional functioning. Neuropsychologists integrate the medical and psychosocial history with the chief complaint and pattern of performance on neuropsychological procedures. Such analysis determines whether results are consistent with a particular area of brain damage or a particular diagnosis.

The neuropsychological examination systematically assesses functioning in the realm of attention and concentration, memory, language, spatial skills, sensory and motor abilities, as well as executive functioning and emotional status. Assessment instruments are standardized against normal control subjects. This ensures that test administration and scoring are invariant across

time and examiners. Resulting data show whether the test is valid and reliable. The aim of neuropsychological tests is to achieve quantifiable and reproducible results that can be compared with the test scores of normal people of comparable age and demographic background.

There are two types of tests: objective and projective. *Objective tests* are typically pencil-and-paper tests based on specific items and questions. They yield numerical scores and profiles subject to mathematical and statistical analysis. *Projective tests* present stimuli whose meaning is not immediately obvious. Projective tests presumably have no right or wrong answers. Those being tested impute meanings to the stimulus, based on psychological and emotional factors.

The student should be familiar with the types of neuropsychological assessment tests that are available, how they are administered, and their indications for use.

HELPFUL HINTS

The student should know the following terms, theoreticians, and concepts.

- ▶ abstract reasoning
- ▶ accurate profile
- ▶ battery tests
- ▶ behavioral flexibility
- ▶ bell-shaped curve
- ▶ Bender Visual Motor Gestalt Test
- ▶ catastrophic reaction
- ▶ clang association
- ▶ classification of intelligence
- ▶ coping phase
- ▶ dressing apraxia
- ▶ dysgraphia
- ▶ dyslexia
- ▶ EEG abnormalities
- ▶ Eysenck personality inventory
- ▶ fluency
- ▶ Gestalt psychology
- ▶ Halstead-Reitan
- ▶ House-Tree-Person Test
- ▶ individual and group tests
- ▶ intelligence quotient (IQ)
- ▶ learning disability
- ▶ left versus right hemisphere disease
- ▶ Luria-Nebraska Neuropsychological Battery (LNNB)
- ▶ manual dexterity
- ▶ maturational levels
- ▶ memory: immediate, recent, recent past, remote
- ▶ mental age
- ▶ mental status cognitive tasks
- ▶ MMPI
- ▶ motivational aspects of behavior
- ▶ neuropsychiatric tests
- ▶ objective tests
- ▶ organic dysfunction
- ▶ performance subtests
- ▶ perseveration
- ▶ personality testing
- ▶ primary assets and weaknesses
- ▶ projective tests
- ▶ psychodynamic formulations
- ▶ Raven's Progressive Matrices
- ▶ reaction times
- ▶ recall phase
- ▶ response sets
- ▶ Rorschach Test
- ▶ scatter pattern
- ▶ Shipley Abstraction Test
- ▶ Stanford-Binet
- ▶ stimulus words
- ▶ TAT
- ▶ temporal orientation
- ▶ verbal subtests
- ▶ visual-object agnosia
- ▶ WAIS
- ▶ WISC
- ▶ word-association technique

QUESTIONS

Directions

Each question or incomplete statement below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 4.1.** For the general population, an intelligence quotient (IQ) of 100 corresponds to intellectual ability in the
- 20th percentile
 - 25th percentile
 - 40th percentile
 - 50th percentile
 - 65th percentile
- 4.2.** Neuropsychological deficits associated with left hemispheric damage include all of the following *except*
- limb apraxia
 - visuospatial deficits
 - finger agnosia
 - aphasia
 - right–left disorientation
- 4.3.** Neuropsychological referrals are made for
- establishing a baseline of performance
 - diagnostic purposes
 - ascertaining brain impairment
 - planning for rehabilitation
 - all of the above
- 4.4.** True statements about projective personality tests include
- They often focus on latent or unconscious aspects of personality.
 - The variety of responses is limited.
 - They tend to be more direct and structural than objective personality tests.
 - Instructions are usually specific.
 - None of the above
- 4.5.** After taking the Wechsler Adult Intelligence Scale (WAIS), a patient was found to have poor concentration and attention. Select the WAIS subtest that most likely screened the patient for these symptoms.
- block design
 - comprehension
 - arithmetic
 - digit symbol
 - picture completion
- 4.6.** The Bender Visual Motor Gestalt Test is administered to assess
- maturation levels in children
 - organic dysfunction
 - loss of function

- visual and motor coordination
- all of the above

- 4.7.** Which is *not* true of the Wisconsin Card Sorting Test?
- It assesses abstract reasoning
 - It assesses parietal lobe dysfunction
 - The patient is told during testing whether their responses are correct or incorrect
 - The examiner records the number of trials required to achieve ten consecutive correct responses
 - The examiner changes the principle of sorting when the task is mastered
- 4.8.** In the Wechsler Adult Intelligence Scale (WAIS),
- digit span is a subtest of the verbal component of the test
 - its latest revision is designed for persons aged 16 to 60
 - mental retardation corresponds to the lowest 1% of the population
 - the average range of IQ is 100 to 120
 - the verbal scale is more sensitive to normal aging
- 4.9.** An 8-year-old boy is referred for psychological testing by his mathematics instructor after failing a series of examinations since the beginning of the school year. The boy's mother states that he complains about not being able to read as well as the other students. He also complains of difficulty hearing the teacher.
- Which of the following tests of personality, intelligence, and achievement is most appropriate in assessing the boy's specific learning challenges?
- Rorschach Test
 - Wechsler Preschool and Primary Scale of Intelligence
 - Wechsler Intelligence Scale for Children
 - Wide-Range Achievement Test
 - Minnesota Multiphasic Personality Inventory

Directions

Each set of lettered headings below is followed by a list of numbered phrases. For each numbered phrase, select

- If the item is associated with A only
- If the item is associated with B only
- If the item is associated with both A and B
- If the item is associated with neither A nor B

Questions 4.10–4.13

- Rorschach Test
 - Thematic Apperception Test (TAT)
- 4.10.** Assesses patient's personality as a whole
- 4.11.** Henry Murray
- 4.12.** Is often included in a battery of tests for personality assessment
- 4.13.** John E. Exner's Comprehensive System

Questions 4.14–4.15

- A. Brief Psychiatric Rating Scale (BPRS)
 - B. Schedule for Affective Disorders and Schizophrenia (SADS)
- 4.14. Ratings are made on the basis of mental status interview and do not require that the examiner ask any specific questions
- 4.15. Highly structured interview

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading that is most associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 4.16–4.19

- A. Battery Approach
 - B. Hypothesis Testing Approach
 - C. Screening Approach
 - D. Mental Status Examination
- 4.16. Determines if a diagnosis can be made with less information
- 4.17. May help identify problems that were not mentioned by the patient
- 4.18. Is not considered part of neuropsychological testing
- 4.19. May overlook unexpected areas of deficits

Questions 4.20–4.24

- A. Intellectual functioning
 - B. Language
 - C. Executive functions
 - D. Memory
 - E. Visuospatial-constructional
- 4.20. California Verbal Learning Test II
- 4.21. Shipley Scale
- 4.22. Token Test
- 4.23. Wisconsin Card Sorting Test
- 4.24. Rey-Osterreith Complex Figure Test

Questions 4.25–4.29

- A. Rorschach test
 - B. Luria-Nebraska Neuropsychological Battery
 - C. Halstead-Reitan Battery of Neuropsychological Tests
 - D. Stanford-Binet Intelligence Scale
 - E. None of the above
- 4.25. Consists of ten tests, including the trail-making test and the critical flicker frequency test
- 4.26. Consists of 120 items, plus several alternative tests, applicable to ages 2 years to adulthood

- 4.27. A test of diffuse cerebral dysfunction to which normal children by the age of 7 years respond negatively
- 4.28. Furnishes a description of the dynamic forces of personality through an analysis of the person's responses
- 4.29. Is extremely sensitive in identifying discrete forms of brain damage, such as dyslexia

Questions 4.30–4.34

- A. Raven's Progressive Matrices
 - B. Sentence Completion Test
 - C. Shipley Abstraction Test
 - D. Thematic Apperception Test (TAT)
 - E. Wechsler Adult Intelligence Scale (WAIS)
- 4.30. A broad set of complex verbal and visuospatial tasks that are normatively summarized by three scales
- 4.31. Impaired performance is associated with posterior lesions of either cerebral hemisphere
- 4.32. Series of 20 black-and-white pictures depicting individuals of different ages and sexes involved in a variety of settings
- 4.33. More direct than most projective tests in soliciting responses from the patient
- 4.34. Requires the patient to complete logical sequences

Questions 4.35–4.39

- A. Frontal lobes
 - B. Dominant temporal lobe
 - C. Nondominant parietal lobe
 - D. Dominant parietal lobe
 - E. Occipital lobe
- 4.35. Patient not able to name common objects
- 4.36. Patient not able to name a camouflaged object but able to name it when it is not camouflaged
- 4.37. Any improper letter sequence in spelling "earth" backward
- 4.38. The loss of gestalt, loss of symmetry, and distortion of figures
- 4.39. Two or more errors or two or more 7-second delays in carrying out tasks of right-left orientation

Questions 4.40–4.43

- A. Short-term memory loss
 - B. Signs of organic dysfunction
 - C. Korsakoff's syndrome
 - D. Posterior right hemisphere lesion
 - E. Damage to frontal lobes or caudate
- 4.40. Bender Visual Motor Gestalt
- 4.41. Benton Visual Retention Test
- 4.42. Wechsler Memory Scale
- 4.43. Wisconsin Card Sorting Test

Questions 4.44–4.48

- A. Executive functions
- B. Attention and concentration

- C. Visuospatial–constructional
- D. Motor
- E. None of the above

- 4.44. Clock drawing and facial recognition
 4.45. Finger tapping
 4.46. Trail-making test
 4.47. Digit span
 4.48. Wisconsin Card Sorting Test

Questions 4.49–4.53

- A. Immediate memory
 - B. Episodic memory
 - C. Semantic memory
 - D. Recent past memory
 - E. Implicit memory
- 4.49. Memory for automatic skills, like speaking grammatically or driving a car
 4.50. Recall of perceived material within 30 seconds of presentation
 4.51. Memory for specific events, like a phone message
 4.52. Retention of information over the past few months, like current events
 4.53. Memory for knowledge and facts, like the first president of the United States

ANSWERS

4.1. The answer is D

An intelligence quotient (IQ) of 100 corresponds to the 50th percentile in intellectual ability for the general population. Modern psychological testing began in the first decade of the 20th century when Alfred Binet (1857–1911), a French psychologist, developed the first intelligence scale to identify mentally challenged youngsters. The Stanford-Binet Scale is a standardized intelligence test assessing both cognitive ability and intelligence from age 2 onward. It is useful for determining the presence of a learning disability, developmental delay, or brain damage in people with neurological insults. Its components include general intelligence, visuospatial processing, quantitative reasoning, fluid reasoning, knowledge, and memory.

4.2. The answer is B

Many functions are mediated by both the right and left cerebral hemispheres. However, important qualitative differences between the two hemispheres can be demonstrated by the presence of lateralized brain injury. Various cognitive skills that have been linked to the left or right hemisphere in right-handed people are listed in Table 4.1. Although language is the most obvious area that is largely controlled by the left hemisphere (with injuries leading to aphasias), the left hemisphere is also generally considered to be dominant for *limb praxis* (i.e., performing complex movements, such as brushing teeth, commanding, or imitation). The left hemisphere has been associated with a cluster of deficits identified as Gerstmann syndrome (i.e., *finger agnosia*, *dyscalculia*, *dysgraphia*, and *right–left disorientation*). In contrast, the



Table 4.1
Selected Neuropsychological Deficits Associated with Left or Right Hemisphere Damage

Left Hemisphere	Right Hemisphere
Aphasia	Visuospatial deficits
Right–left disorientation	Impaired visual perception
Finger agnosia	Neglect
Dysgraphia (aphasic)	Dysgraphia (spatial, neglect)
Dyscalculia (number alexia)	Dyscalculia (spatial)
Constructional apraxia (details)	Constructional apraxia (Gestalt)
Limb apraxia	Dressing apraxia
	Anosognosia

right hemisphere is thought to play a more important role in controlling *visuospatial abilities and hemispatial attention*, which are associated with the clinical presentations of constructional apraxia and neglect, respectively.

Although lateralized deficits such as these are typically characterized in terms of damage to the right or left hemisphere, it is important to keep in mind that the patient’s performance can also be characterized in terms of preserved brain functions. In other words, it is the intact brain tissue that drives many behavioral responses following injury to the brain.

4.3. The answer is E (all)

Most neuropsychological referrals are made for diagnostic purposes, to ascertain if brain impairment is present, or to differentiate among neurological or psychiatric disorders. Other important uses of testing include establishing a baseline of performance for assessing future change and planning for rehabilitation and management of behaviors affected by brain impairment. The specific methods of neuropsychological assessment reflect the individual’s unique presentation of symptoms and complaints, history and development, the perspective of the neuropsychologist, and the reason for referral.

A common referral issue involves documentation of level of functioning for a variety of purposes, including assessment of change or competence, especially in the presence of diagnoses such as dementia, stroke, and head injury.

4.4. The answer is A

Projective personality tests, in contrast to objective personality instruments, are more indirect and unstructured. Unlike objective tests, in which the patient may simply mark “true” or “false” to given questions, the variety of responses to projective personality tests is almost unlimited. Instructions are usually general, allowing the patient’s fantasies to be expressed. Patients generally do not know how their responses will be scored or analyzed, making it difficult to obtain a desired result. Projective tests typically do not measure one particular personality characteristic such as type A personality (i.e., narrow-band measurement) but instead are designed to assess a personality as a whole (i.e., broad-band measurement).

Projective tests often focus on latent or unconscious aspects of personality. Obviously, psychologists and others differ in the degree to which they rely on unconscious information. In many projective techniques, patients are simply shown a picture of

something and asked to tell what the picture reminds them of. Projective techniques assume that when presented with an ambiguous stimulus such as an inkblot, for which there are an almost unlimited number of responses, the patients' responses will reflect fundamental aspects of their personalities. The ambiguous stimulus is a sort of screen on which individuals project their own needs, thoughts, or conflicts. In particular, a schizophrenic patient's responses will often reflect a rather bizarre, idiosyncratic view of the world. Hundreds of different projective techniques have been developed—most of which are not used widely today.

4.5. The answer is C

The *arithmetic* subtest uses simple arithmetic tasks to assess attention and concentration. The *block design* subtest requires a subject to arrange a series of pictures to tell a story. This process tests performance and cognitive styles. The *digit symbol* subtest requires a subject to match digits and symbols in as little time as possible, as a test of performance. The *comprehension* subtest reveals a subject's ability to adhere to social consequences and to understand social judgments when the subject answers questions about how people should behave. On the *picture completion* subtest, a subject must complete a picture with a missing part. Visuospatial defects appear when errors are made on this picture completion procedure.

4.6. The answer is E (all)

The Bender Visual Motor Gestalt Test, devised by the American neuropsychiatrist Lauretta Bender in 1938, is a technique that consists of nine figures that are copied by the subject (Fig. 4.1). It is administered as a means of evaluating *maturation levels in children* and *organic dysfunction*. Its chief applications are to determine retardation, *loss of function*, and organic brain defects in children and adults. The designs are presented one at a time to the subject, who is asked to copy them onto a sheet of paper. The subject is then asked to copy the designs from memory (Figs. 4.2 and 4.3); thus, the Bender designs can be used as a test of both *visual and motor coordination* and immediate visual memory.

4.7. The answer is B

Persons with damage to the frontal lobes or to the caudate nucleus, and some patients with schizophrenia, give abnormal responses to the Wisconsin Card Sorting Test (WCST). *It does not address parietal lobe damage*. This test assesses *abstract reasoning* and flexibility in problem solving. Stimulus cards are presented to patients to sort into groups according to a principle established by the examiner but unknown to the patient. As the patient sorts the cards, *he or she is told whether the responses are correct or incorrect*. The number of trials required to achieve ten consecutive correct responses is recorded. When or if the patient has mastered the task, *the examiner changes the principle of sorting*, and the number of trials required to achieve correct sorting is again recorded.

4.8. The answer is A

The Wechsler Adult Intelligence Scale (WAIS) comprises 11 subtests made up of six verbal (information, comprehension,

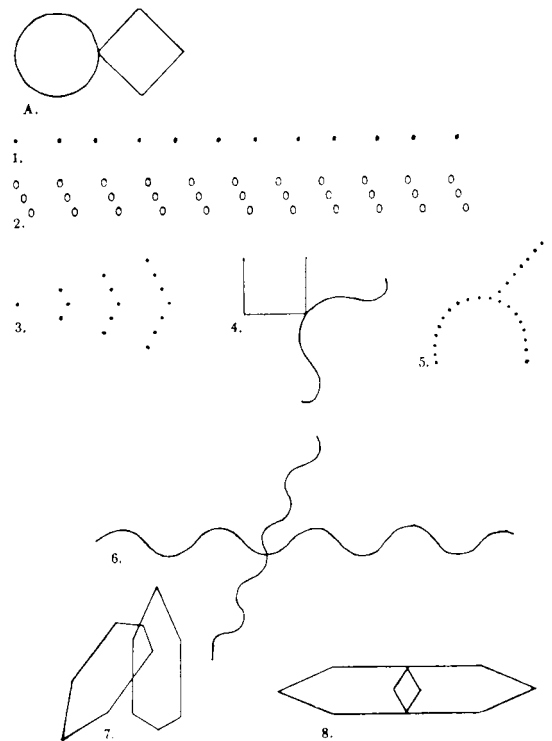


FIGURE 4.1

Test figures from the Bender Visual Motor Gestalt Test, adapted from Max Wertheimer. (Reprinted with permission from Bender L. *A Visual Motor Gestalt Test and Its Clinical Use*. New York: American Orthopsychiatric Association; 1938:33.)

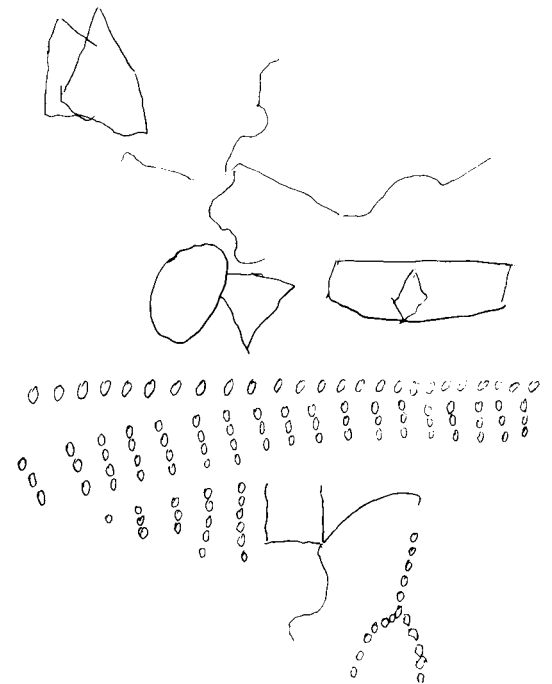


FIGURE 4.2

Bender Visual Motor Gestalt Test drawings of a 57-year-old brain-damaged woman.

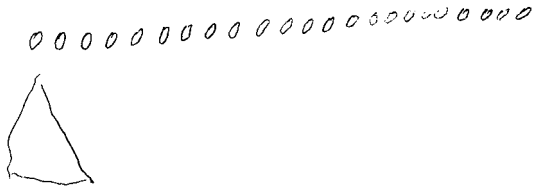


FIGURE 4.3

Bender Visual Motor Gesalt Test recall by the 57-year-old brain-damaged patient who drew Figure 4.2.

arithmetic, similarities, *digit span*, vocabulary), and five performance (picture completion, block design, picture arrangement, object assembly, digit symbol) subtests, which yield a verbal IQ, a performance IQ, and a combined full-scale IQ. *The latest edition, the WAIS-III, is designed for persons 16 to 89 years of age.* There are also scales for children ages 4 to 6.5 and 5 through 15. *The average or normal range of IQ is 90 to 110; IQ scores of at least 120 are considered superior. Mental retardation, defined as IQ below 70, corresponds to the lowest 2.2 percent of the population; 2 of every 100 people have IQ scores consistent with mental deficiency. The performance scale is more sensitive to normal aging than the verbal scale, which is more sensitive to education.*

4.9. The answer is D

The *Wide-Range Achievement Test* evaluates content-specific foundation in mathematics, spelling, reading, and sciences. It may test individuals ranging from ages 5 to 94 and is standardized to account for stratifications in gender, ethnicity, geographic region, and socioeconomic status. The *Rorschach Test* is a projective assessment test that requires interpretation of ink blots. It may be used to interpret defense mechanisms and thought disorders. The *Wechsler Preschool and Primary Scale of Intelligence* tests the ability to organize, process, and reason by way of picture completion, verbal comprehension, and block design. It may be completed without reading or writing and is designed for children between the ages of 4 and 6. The *Wechsler Intelligence Scale for Children* uses an identical approach for children and adolescents between the ages of 6 and 16. The *Minnesota Multiphasic Personality Inventory* is the most common objective personality test aimed at determining personality types, including pathologies and behavioral patterns.

Answers 4.10–4.13

4.10. The answer is C

4.11. The answer is B

4.12. The answer is C

4.13. The answer is A

Projective personality tests are indirect and unstructured. The variety of responses to projective personality tests are almost unlimited. Instructions are usually very general in nature, allowing the patient's fantasies to be expressed. The patient does not

know how his or her responses will be scored or analyzed. Consequently, trying to feign the test becomes difficult. Projective tests typically do not measure one particular personality characteristic but are instead designed to *assess one's personality as a whole*. Two of the most widely used projective personality tests are the *Rorschach Test* and the *Thematic Apperception Test (TAT)*. Many clinicians will include both of these tests in a *battery of tests for personality assessment*.

The Rorschach test was created by Herman Rorschach, a Swiss psychologist, around 1910. The Rorschach test is the most frequently used projective personality instrument. The test consists of ten ambiguous symmetrical inkblots. Using *John E. Exner's Comprehensive System*, the examiner gives the patient the following instructions: "You'll be given a series of inkblots. Look at each inkblot and tell me what you see." The examiner gives the patient each card and asks, "What might this be?" The examiner writes down verbatim what the patient says, along with the initial reaction times and total time spent on each card. After completion of what is called the free-association phase, the examiner conducts an inquiry phase to determine important aspects of each response that are crucial to scoring.

The TAT was designed by *Henry Murray* and Christina Morgan as part of a normal personality study conducted in the Harvard Psychological Clinic in 1943. The TAT consists of a series of 30 picture cards and a blank card. Typically, a patient is shown ten TAT cards and asked to make up stories about them. The patient is asked to tell what is going on in the picture, what was going on before the picture was taken, what the individuals in the picture are thinking and feeling, and what is likely to happen in the future.

Answers 4.14–4.15

4.14. The answer is A

4.15. The answer is B

One of the more commonly used interview rating scales is the Brief Psychiatric Rating Scale (BPRS). To use the BPRS, the psychologist or psychiatrist completes a mental status interview with the patient and then rates that patient on a series of 18 psychiatric symptoms such as motor retardation, blunted affect, conceptual disorganization, anxiety, and guilt. Expanded definitions of each of these terms are provided to the examiner. The interviewer rates each domain on a seven-point scale from "not present," the lowest rating, to "extremely severe," the highest rating. An experienced interviewer can complete the ratings in 2 or 3 minutes. The BPRS has been used extensively in drug outcome and other studies. The advantages of the BPRS are the reasonably high interrater reliability, the ease and speed of rating, and the well-defined symptom description. *The BPRS ratings are made on the basis of a mental status interview and do not require that the examiner ask any specific questions of the patient.*

The SADS is a *highly structured interview instrument*. The interviewer is required to ask each patient a series of prescribed questions to ensure that all relevant areas are addressed. For example, a patient is asked a question similar to the following: "Have you ever heard voices or other things that weren't there or

that other people couldn't hear or see?" Based on the patient's response, the examiner asks other detailed, prescribed follow-up questions concerning hallucinations, or if the response was negative, the interviewer moves on to the next question in a different area. This approach ensures that all areas are covered in a comprehensive fashion. The SADS is especially helpful for establishing a reliable diagnosis. The SADS can also be used as an index of behavioral severity. Behavioral changes can be determined by repeated administration.

The advantage of the SADS is that it is comprehensive and has reasonably good reliability. One disadvantage is its length; another is that in the structured interview the interviewer must read questions from a lengthy booklet, which makes it difficult to establish eye contact and rapport with the patient. The SADS has been used for both research and clinical purposes, probably more frequently for the former.

Answers 4.16–4.19

4.16. The answer is C

4.17. The answer is A

4.18. The answer is D

4.19. The answer is B

The *battery approach* to neuropsychological assessment typically includes a large variety of tests that measure most cognitive domains as well as sensory and motor skills. The battery approach has the advantage of *identifying problems that the patient might not have mentioned* and that the medical history may not necessarily predict. However, it has the disadvantage of being very time-consuming (i.e., 6 to 8 hour examination).

In the *screening approach*, the neuropsychologist utilizes a core set of screening procedures as a first step in determining whether a diagnosis can be made with *less information* or whether additional testing is necessary. Standardized screening approaches have the advantage of uniform normative reference groups, although many clinicians routinely use a set of tests drawn from many sources.

In some cases, usually involving an acute or severe cognitive impairment, it is simply not feasible to administer extensive cognitive examination procedures. The neuropsychologist might appropriately rely on bedside *mental status examinations* or very brief cognitive screening procedures to address the referral issues.

The qualitative *hypothesis testing approach* is characterized by detailed evaluation of areas of functioning that are related to the patient's complaints and predicted areas of impairment, with relatively less emphasis on aspects of functioning that are less likely to be impaired. The hypothesis testing approach has been particularly helpful in illuminating the different roles of the two brain hemispheres. This approach has the advantage of efficiently honing in on areas of impairment and producing a detailed description of the deficits from a cognitive standpoint, but it has the shortcoming of potentially *overlooking unexpected areas of deficits*.

Answers 4.20–4.24

4.20. The answer is D

4.21. The answer is A

4.22. The answer is B

4.23. The answer is C

4.24. The answer is E

A list of examples of common neuropsychological tests and techniques is provided in Table 4.2.

Answers 4.25–4.29

4.25. The answer is C

4.26. The answer is D

4.27. The answer is E

4.28. The answer is A

4.29. The answer is B

Various neuropsychiatric tests, including the Halstead-Reitan and the Luria-Nebraska batteries, are sometimes useful in bringing to light subtle organic dysfunctions that are undetected in standard psychiatric, psychological, and even neurological assessments. The *Halstead-Reitan Battery of Neuropsychological Tests* consists of ten tests, including the trail-making test and the critical flicker frequency test. It was developed in an attempt to improve the reliability of the criteria used to diagnose brain damage. Assessment data were gathered on a group of patients with left hemisphere injury, right hemisphere injury, and global involvement. The trail-making test is a test of visuomotor perception and motor speed, and the critical flicker frequency test (noting when a flicker light becomes steady) tests visual perception.

The *Luria-Nebraska Neuropsychological Battery (LNNB)* is extremely sensitive in identifying discrete forms of brain damage, such as dyslexia (an impairment in the ability to read) and dyscalculia (an inability to perform arithmetical operations), rather than global forms of damage.

The *Stanford-Binet Intelligence Scale* is one of the tests most frequently used in the individual examination of children. It consists of 120 items, plus several alternative tests, applicable to the ages between 2 years and adulthood. The tests have a variety of graded difficulties, both verbal and performance, designed to assess such functions as memory, free association, orientation, language comprehension, knowledge of common objects, abstract thinking, and the use of judgment and reasoning.

The *Rorschach Test* is a psychological test consisting of ten inkblots that the person is asked to look at and interpret. It furnishes a description of the dynamic forces of personality through an analysis of the person's responses.

The face-hand test, devised by Lauretta Bender, is a test of diffuse cerebral dysfunction to which normal children by the age of 7 years respond negatively. The person, whose eyes are



Table 4.2
Selected Tests of Neuropsychological Functioning

Area of Function	Comment
INTELLECTUAL FUNCTIONING	
Wechsler Intelligence Scales	Age-stratified normative references; appropriate for adults up to age 89, adolescents, and young children
Shipley Scale	Scale Brief (20 minute) paper and pencil measure of multiple choice vocabulary and open-ended verbal abstraction
ATTENTION AND CONCENTRATION	
Digit Span	Auditory–verbal measure of simple span of attention (<i>Digits Forward</i>) and cognitive manipulation of increasingly longer strings of digits (<i>Digits Backward</i>)
Visual Memory Span	Visual-spatial measure of ability to reproduce a spatial sequence in forward and reverse order
MEMORY	
Wechsler Memory Scale III	Comprehensive set of subtests measuring attention and encoding, retrieval, and recognition of various types of verbal and visual material with both immediate recall and delayed retention; excellent age-stratified normative comparisons for adults up to age 89 with intellectual data for direct comparison
California Verbal Learning Test II	Documents encoding, recognition, and both immediate and 30-minute recall; affords examination of possible learning strategies as well as susceptibility to semantic interference with alternate and short forms available
LANGUAGE	
Boston Diagnostic Aphasia Examination	Comprehensive assessment of expressive and receptive language functions
Boston Naming Test—Revised	Documents word finding difficulty in a visual confrontation format
Token Test	Systematically assesses comprehension of complex commands using standard token stimuli that vary in size, shape, and color
VISUOSPATIAL-CONSTRUCTIONAL	
Clock Drawing	Useful screening technique is sensitive to organization and planning as well as constructional ability
Rey-Osterreith Complex Figure Test	Ability to draw and later recall a complex geometric configuration; sensitive visual memory as well as executive deficits in development of strategies and planning
MOTOR	
Finger Tapping	Standard measure of simple motor speed; particularly useful for documenting lateralized motor impairment
Grooved Pegboard	Ability to rapidly place notched pegs in slotted holes; measures fine finger dexterity as well as eye–hand coordination
EXECUTIVE FUNCTIONS	
Wisconsin Card Sorting Test	Measure of problem-solving efficiency is particularly sensitive to executive deficits of perseveration and impaired ability to flexibly generate alternative strategies in response to feedback
Trail-Making Test	Requires rapid and efficient integration of attention, visual scanning, and cognitive sequencing
PSYCHOLOGICAL FACTORS	
Beck Depression Inventory	Brief (5 to 10 minutes) self-report measure that is sensitive to symptoms of depression; best for screening depression in adults up to late middle-age, who can be expected to frankly report symptoms; available in standard (21 four-choice items) or short (13-item) form
Minnesota Multiphasic Personality Inventory 2	This psychometrically developed self-report instrument remains highly useful for documenting quantitative levels of self-reported symptoms that can be objectively compared to known populations; drawbacks include administration time (567 true–false questions, requires about 1 to 1.5 hours or more) for frail individuals, and the emphasis on pathological features for persons who are generally psychologically healthy; advantages include well-developed validity scales and availability of many symptom-specific subscales that have been identified over the years

closed, is touched simultaneously on the cheek and the hand; retesting is done with the person's eyes open. The results are considered positive if the person fails consistently to identify both stimuli within ten trials.

Answers 4.30–4.34

4.30. The answer is E

4.31. The answer is A

4.32. The answer is D

4.33. The answer is B

4.34. The answer is C

Assessment of intellectual functioning serves as the cornerstone of the neuropsychological examination. The Wechsler Intelligence Scales, based on carefully developed normative standards, represent the traditional gold standard in intellectual assessment. The latest revision of this instrument is the Wechsler Memory

Scale III. In general, *the Wechsler intelligence scales use a broad set of complex verbal and visuospatial tasks that are normatively summarized as a Verbal IQ, Performance IQ, and Full Scale IQ.* In the context of a neuropsychological examination, the patient's performance across the procedures provides useful information regarding longstanding abilities as well as current functioning. Most neuropsychologists recognize that the summary IQ values provide only a ballpark range for characterizing an individual's general level of functioning. Therefore, it is usually more appropriate and meaningful to characterize an individual's intellectual functioning in terms of range of functioning (e.g., borderline, low average, average, high average, superior) represented by the IQ value rather than the specific value.

Raven's Progressive Matrices require the patient to complete a design by selecting the stimulus that completes a design in which a part is omitted from a multiple-choice pictorial display. *Impaired performance is associated with poor visuoconstructive ability and with posterior lesions of either cerebral hemisphere,* but receptive language deficit may contribute to poor performance in patients with dominant hemisphere damage.

The TAT consists of a series of 20 black-and-white pictures that depict individuals of both sexes and of different age groups involved in a variety of different settings. For example, on Card 1, a young boy is shown sitting at a table looking at a violin. Card 2 depicts a farm scene in which a young woman in the foreground is carrying books in her hands; a man is working in the fields nearby, and an older woman is seen in the background. Typically, a patient is shown ten TAT cards and asked to make up stories about them. The patient is asked to tell what is going on in the picture, what was going on before the picture was taken, what the individuals in the picture are thinking and feeling, and what is likely to happen in the future. The stories the patient make up concerning the pictures, according to the projective hypothesis, reflect the patient's own needs, thoughts, feelings, stresses, wishes, desires, and view of the future. An example of a TAT card is presented in Figure 4.4.

Although a projective instrument, the Sentence Completion Test is much more direct in soliciting responses from the patient. The patient is simply presented with a series of incomplete sentences and asked to complete each sentence stem with the first response that comes to mind. Examples of possible incomplete sentences are as follows:

My father seldom . . .

Most people don't know that I'm afraid of . . .

When I was a child, I . . .

When encountering frustration, I usually . . .

The purpose of the test is to elicit, somewhat indirectly, information about the patient that cannot be elicited by other measures. Since the patient responds in writing, the examiner's time is limited. The length of time it takes to complete this test varies greatly, depending on the number of incomplete sentences.

The Shipley Abstraction Test requires the patient to complete logical sequences; it assesses the patient's capacity to think abstractly. Because performance on a test of this type is related to educational background, an accompanying vocabulary test is also given to the patient, and a comparison is made between



FIGURE 4.4

Card 12F of the Thematic Apperception Test. (Reprinted with permission from Murray HA. *Thematic Apperception Test*, Cambridge, MA: Harvard University Press, Copyright ©1943 President and Fellows of Harvard College, © 1971 Henry A. Murray.)

the patient's performances on the two tests. A low abstraction score in relation to vocabulary level is interpreted as reflecting an impairment in conceptual thinking.

Answers 4.35–4.39

4.35. The answer is B

4.36. The answer is E

4.37. The answer is A

4.38. The answer is C

4.39. The answer is D

Numerous mental status cognitive tasks are available to test and localize various brain dysfunctions. Construction apraxia—*the loss of gestalt, loss of symmetry, and distortion of figures*—seen in the task of copying the outline of simple objects, is localized to the *nondominant parietal lobe*. Dysfunction of the *occipital lobes* is suggested when a *patient cannot name a camouflaged object but can name it when it is not camouflaged*. *Two or more errors or two or more 7-second delays in carrying out tasks of right–left orientation* (e.g., place left hand to right ear, right elbow to right knee) are localized to dysfunction of the *dominant parietal lobe*. A dysfunction in concentration is thought to be localized to the *frontal lobes* and can be tested by eliciting *any improper letter sequence in spelling “earth” backward*. In anomia, the *patient cannot name common objects* (e.g., watch and key); the impairment is localized to the *dominant temporal lobe*.

Answers 4.40–4.43**4.40. The answer is B****4.41. The answer is A****4.42. The answer is C****4.43. The answer is E**

The *Wechsler Memory Scale* screens for verbal and visual memory and yields a memory quotient. The results can reveal whether a subject has *amnestic Korsakoff's syndrome*. The *Wisconsin Card Sorting Test* assesses a person's abstract reasoning ability and flexibility in problem solving. The results can reveal whether a person has *damage to the frontal lobes or to the caudate*.

The *Benton Visual Retention Test* screens for *short-term memory loss*.

Signs of organic dysfunction may be screened for by the *Bender Visual Motor Gestalt Test*. *Posterior right hemisphere lesions* can be revealed through a facial recognition test.

Answers 4.44–4.48**4.44. The answer is C****4.45. The answer is D****4.46. The answer is A****4.47. The answer is B****4.48. The answer is A**

Digit Span is the auditory–verbal measure of simple span of attention (*Digits Forward*) and cognitive manipulation of increasingly longer strings of digits (*Digits Backward*). *Facial Recognition* assesses matching and discrimination of unfamiliar faces. *Clock Drawing* is a useful screening technique sensitive to organization and planning as well as constructional ability. *Finger Tapping* is the standard measure of simple motor speed, particularly useful for documenting lateralized motor impairment. The *Wisconsin Card Sorting Test* is a measure of problem-solving efficiency. It is particularly sensitive to executive deficits of perseveration and impaired ability to generate alternative strategies in response to feedback. The *Trail-Making Test* requires rapid and efficient integration of attention, visual scanning, and cognitive sequencing.

Answers 4.49–4.53**4.49. The answer is E****4.50. The answer is A****4.51. The answer is B****4.52. The answer is D****4.53. The answer is C**

Immediate (or short-term) memory may be defined as the *reproduction, recognition, or recall of perceived material within a period up to 30 seconds after presentation*. It is most often assessed by digit repetition, reversal (auditory), and memory-for-designs (visual) tests. Both an auditory–verbal task, such as digit span or memory for words or sentences and a nonverbal visual task, such as memory for designs or for objects or faces, should be given to assess a patient's immediate memory. Patients can also be asked to listen to a standardized story and then repeat it as accurately as possible. Patients with lesions of the right hemisphere are likely to show more severe defects on visual nonverbal tasks than on auditory–verbal tasks. Conversely, patients with left hemisphere disease, including those who are not aphasic, are likely to show severe deficits on the auditory–verbal tests, with variable performance on the visual nonverbal tasks.

Recent past memory concerns the retention of information over the past few months. Patients can be asked questions about current events.

Remote memory is the ability to remember events in the distant past. It is commonly believed that remote memory is well preserved in patients who show pronounced defects in recent memory, but the remote memory of senile and amnesic patients is usually significantly inferior to that of normal persons of comparable age and education. Even patients who appear to be able to recount their past fairly accurately show gaps and inconsistencies in their recitals on close examination.

Memory theorists have described three other types of memories: *episodic*, for specific events (e.g., a telephone message); *semantic*, for knowledge and facts (e.g., the first president of the United States); and *implicit*, for automatic skills (e.g., speaking grammatically or driving a car). Semantic and implicit memory do not decline with age, and persons continue to accumulate information over a lifetime. A minimal decline in episodic memory with aging may relate to impaired frontal lobe functioning.

Theories of Personality and Psychopathology

Psychoanalysis is one of the fundamental principles within psychiatry. It was developed by Sigmund Freud (1856–1939), and although it has advanced far beyond Freud, it can be said that his influence is still strong and pervasive. Psychoanalysis is the bedrock of psychodynamic understanding and forms the fundamental point of reference for a variety of types of therapeutic intervention. It embraces not only psychoanalysis itself but also various forms of psychoanalytically oriented psychotherapies and related therapies involving psychodynamic concepts.

All major psychological theories of personality involve the basic premise that a person's early psychosocial development shapes what comes later—that the impact of childhood events, beliefs, experiences, and fantasies continue, consciously or unconsciously, throughout life and account for adult behavior.

Freud's revolutionary contributions to the understanding of the human mind and psyche continue to stimulate, provoke, and challenge students of personality and psychopathology today.

His basic tenets of the unconscious mind, psychosexual development, and psychodynamics remain the bedrock of psychoanalytic theory even though many have disagreed with, modified, or expanded on his ideas. No matter how a particular theorist may feel about Freud's ideas, each must begin with a thorough knowledge of his contributions.

There have been many other psychoanalytic personality theorists with widely varying views on development. These include Alfred Adler (1870–1937), Erik Erikson (1902–1994), Karen Horney (1885–1952), Carl Gustav Jung (1875–1961), Melanie Klein (1882–1960), Harry Stack Sullivan (1892–1949), and Heinz Kohut (1913–1981). Schools of thought, encompassing a variety of different theories, include ego psychology, object relations, self-psychology, and interpersonal psychology, among others. Each approach has its own perspective on personality development and the development of psychopathology.

Students should study the questions and answers below to test their knowledge in this area.

HELPFUL HINTS

Students should know the various theorists, their schools of thought, and their theories.

- | | | | |
|-----------------------------|---------------------------------------|-----------------------------------|----------------------------------|
| ▶ Karl Abraham | ▶ free association | ▶ nocturnal sensory stimuli | ▶ reality principle |
| ▶ abreaction | ▶ Erich Fromm | ▶ object constancy | ▶ reality testing |
| ▶ Alfred Adler | ▶ fundamental rule | ▶ object relations | ▶ regression |
| ▶ Franz Alexander | ▶ Karen Horney | ▶ paraphrasias | ▶ Wilhelm Reich |
| ▶ Gordon Allport | ▶ hypnosis | ▶ preconscious system | ▶ repetition compulsion |
| ▶ analytical process | ▶ hysterical phenomena | ▶ pregenital | ▶ repression |
| ▶ attention cathexis | ▶ infantile sexuality | ▶ primary and secondary gains | ▶ resistance |
| ▶ birth trauma | ▶ instinctual drives | ▶ primary and secondary processes | ▶ secondary revision |
| ▶ Joseph Breuer | ▶ <i>The Interpretation of Dreams</i> | ▶ primary autonomous functions | ▶ signal anxiety |
| ▶ cathexis | ▶ Carl Gustav Jung | ▶ psychic determinism | ▶ <i>Studies on Hysteria</i> |
| ▶ conscious | ▶ latent and manifest dreams | ▶ psychoanalytic theory | ▶ Harry Stack Sullivan |
| ▶ defense mechanisms | ▶ libido and instinct theories | ▶ psychodynamic thinking | ▶ symbolic representation |
| ▶ displacement | ▶ Abraham Maslow | ▶ psychoneurosis | ▶ synthetic functions of the ego |
| ▶ dream work | ▶ Adolph Meyer | ▶ psychosexual development | ▶ topographic theory |
| ▶ <i>The Ego and the Id</i> | ▶ multiple self-organizations | ▶ Otto Rank | ▶ transference |
| ▶ ego functions | | | ▶ unconscious motivation |
| ▶ ego psychology | | | ▶ wish fulfillment |
| ▶ Erik Erikson | | | |
| ▶ Eros and Thanatos | | | |
| ▶ Anna Freud | | | |

QUESTIONS

Directions

Each question or incomplete statement below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 5.1.** Mr. A was a 26-year-old white man who had a history of bipolar I disorder. He was brought in for treatment after not completing the last required course for his advanced degree and being arrested for disturbing the peace. He had consistently lied to his family about where he stood with his coursework and about having skipped an examination that would have qualified him to use his professional degree. He had also not told them that he had been using marijuana almost daily for a number of years and occasionally used hallucinogens. His arrest for disorderly conduct was for swimming naked in an apartment complex in the middle of the night while under the influence of hallucinogens. Mr. A spent most of his time reading and trying to write but compared himself unfavorably with other famous writers, feeling himself to be inferior. (Adapted from Paul C. Mohl, MD, and Adam M. Brenner, MD.) How would Alfred Adler view Mr. A?
- Mr. A's problems are a failure of adaptation to his mental illness and adult life.
 - Mr. A's rebellion against conformity is a defense against his fear of being away from his mother's protection and domination.
 - Mr. A uses drugs and psychosis as escapes to maintain some degree of self-esteem.
 - Mr. A has been attempting to move from inferiority to mastery in fantasy rather than in realistic achievement.
 - Mr. A's process of self-realization has been blocked.
- 5.2.** Adolf Meyer would treat Mr. A by
- assisting Mr. A in integrating alien parts of himself into his ego complex
 - focusing on the adequate treatment of Mr. A's mental disorder
 - challenging Mr. A to develop attachments outside of the family
 - encouraging Mr. A to join a support and educational group to better understand and accept his mental illness
 - none of the above
- 5.3.** A young woman presents to you complaining of lack of energy, trouble sleeping, depression, and hopelessness that has been present for the past year. You diagnose her with major depressive disorder. Which of the following would have been Freud's explanation of this disorder?
- Her depression is actually internally directed anger.
 - Her internal good objects have been destroyed by aggression and greed.
 - She never mastered the trust versus mistrust stage of ego development.
 - She is being persecuted by a tormenting internal object.
 - She feels despair that her self-object needs will not be met by others.
- 5.4.** Lacanian theory
- places heavy emphasis on linguistics
 - has little place for biology or drives
 - postulates that an individual is embedded in political and societal structure
 - views the analytical process as an effort to recognize alienation from one's true self
 - all of the above
- 5.5.** The Oedipus complex as described by Freud involves all of the following *except*
- adult sexuality
 - rivalries
 - anal phase
 - intense love relationships
 - both mother and father
- 5.6.** The work of Anna Freud, daughter of Sigmund Freud, included all of the following *except*
- contributions to child psychoanalysis
 - development of modern ego psychology
 - studies on the function of the ego in personality development
 - contradictions to her father's claims about psychosexual development
 - expansion on individual defense mechanisms
- 5.7.** According to Freud, the Oedipus complex is resolved through
- the castration complex
 - the acting out of symbolic rivalries
 - moving on to the genital stage of development
 - the realization of one's gender identity
 - identification with the opposite-sex parent
- 5.8.** Erikson differs from Freud by his placing greater emphasis on
- interpersonal relationships
 - cultural factors in development
 - instinctual drives
 - psychosexual development
 - object relations
- 5.9.** You have a 72-year-old patient who has been very concerned with her appearance ever since you met her. She has had three facelifts, never leaves the house without makeup, and refuses to allow her grandchildren to call her "grandmother." Which of the following of Erikson's stages is this woman having difficulty mastering?
- Narcissistic
 - Generativity versus stagnation

- C. Egocentric
D. Identity versus role confusion
E. Integrity versus despair
- 5.10.** Which of the following about Melanie Klein is *false*?
- A. She denounced Freud's "death instinct."
B. She described the "depressive position."
C. She coined the term "persecutory anxiety."
D. She stressed the role of intrapsychic fantasy.
E. She was a child analyst.
- 5.11.** Which of the following statements regarding Freud's view of hypnosis is *not* true?
- A. Freud believed hypnosis encouraged the patient to please the hypnotist.
B. Freud believed no patient was completely refractory to hypnosis.
C. Freud eventually abandoned the use of hypnosis for the use of free association.
D. Freud believed hypnosis concealed aspects of transference.
E. None of the above
- 5.12.** According to Otto Rank, *death fear* is
- A. the fear of dying usually associated with a phobia
B. the fear of losing all ties in the process of becoming separate
C. the fear of dying "before one's time"
D. the fear of losing one's identity by fusing with another person
E. none of the above
- 5.13.** A patient of yours reports having recurrent dreams of snakes shedding their skins. According to Carl Gustav Jung, this image is an example of which of the following?
- A. Illusions
B. Phallic symbol
C. Archetypes
D. Manifest content
E. Primary process
- 5.14.** Which of the following theorists is considered the founder of the attachment theory?
- A. John Bowlby
B. Otto Kernberg
C. Melanie Klein
D. Heinz Kohut
E. Adolf Meyer
- 5.15.** Erik Erikson's epigenetic principle states
- A. the genetic component of personality must be explored to fully understand the ego
B. development spans the entire life cycle, from infancy through old age and senescence
C. each developmental stage must be completed but in no particular order
D. each sequential stage must be satisfactorily resolved for development to proceed smoothly
E. none of the above
- 5.16.** According to Erich Fromm, which of the following character types are typical of modern capitalist society?
- A. Exploitative
B. Hoarders
C. Marketers
D. Receptive
E. All of the above
- 5.17.** Separation and individuation
- A. have no associated anxiety
B. involve attaining a sense of object permanence
C. involve a "practicing" subphase
D. begins at approximately 8 or 9 months of age
E. is based on the work of Dan Stern, MD
- 5.18.** Which of the following is *not* considered a mature defense mechanism?
- A. Suppression
B. Somatization
C. Asceticism
D. Anticipation
E. Altruism
- 5.19.** According to Carl Gustav Jung, archetypes are
- A. instinctual patterns
B. expressed in mythological images
C. expressed in representational images
D. organizational units of the personality
E. all of the above
- 5.20.** All of the following statements concerning the concept of the preconscious are true *except*
- A. It is those mental events brought to consciousness by focusing attention.
B. It acts as a censor to unacceptable wishes and desires.
C. It is characterized by primary process thinking.
D. It interfaces with both the unconscious and the conscious.
E. It is part of the topographical model of the mind formulated by Freud.
- 5.21.** Freud declared the road to understanding the unconscious lies in which of the following?
- A. Instinct control
B. Repression of preconscious desires
C. Mastering the phases of ego development
D. Understanding infant sexuality
E. Interpretation of dreams

- 5.22.** A 64-year-old woman works as a seamstress in the garment factory of a clothing company. The factory is poorly lit, poorly ventilated, and overcrowded with employees. She works 16 hours per day, is allowed only one restroom break per day, and may not eat lunch. However, the seamstress continues to work at the factory because she believes her work to be meaningful and that it will someday make her wealthy. Her outlook pertains to which of the following theorists' beliefs?
- A. Gordon Allport
 - B. Abraham Maslow
 - C. George Kelly
 - D. Carl Rogers
 - E. Viktor Frankl

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading that is most associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 5.23–5.28

- A. Autistic phase
 - B. Symbiotic phase
 - C. Hatching
 - D. Practicing
 - E. Rapprochement
 - F. Object constancy
- 5.23.** The child gradually differentiates out of the symbiotic matrix
- 5.24.** The infant functions as though he and his mother were an omnipotent system
- 5.25.** The infant's ability to move physically away from the mother by locomotion
- 5.26.** A stage of absolute primary narcissism
- 5.27.** The crisis is separation anxiety
- 5.28.** The ability to maintain a relationship with one object whether or not needs are being satisfied

Questions 5.29–5.33

- A. Initiative versus guilt
 - B. Intimacy versus isolation
 - C. Trust versus mistrust
 - D. Industry versus inferiority
 - E. Generativity versus stagnation
- 5.29.** Competence
- 5.30.** Care
- 5.31.** Love
- 5.32.** Hope
- 5.33.** Purpose

Questions 5.34–5.38

- A. Basic trust versus mistrust
 - B. Integrity versus despair
 - C. Initiative versus guilt
 - D. Intimacy versus isolation
 - E. Identity versus role diffusion
- 5.34.** Late adulthood
- 5.35.** Early adulthood
- 5.36.** Puberty and adolescence
- 5.37.** Early childhood
- 5.38.** Infancy

Questions 5.39–5.43

- A. Erik Erikson
 - B. Anna Freud
 - C. Sigmund Freud
 - D. Melanie Klein
 - E. Harry Stack Sullivan
- 5.39.** *Childhood and Society*
- 5.40.** *Civilization and its Discontents*
- 5.41.** *Envy and Gratitude*
- 5.42.** *The Ego and the Mechanisms of Defense*
- 5.43.** *Schizophrenia as a Human Process*

Questions 5.44–5.47

- A. Manifest dream content
 - B. Latent dream content
 - C. Dream work
 - D. Secondary revision
- 5.44.** Unconscious thoughts and wishes
- 5.45.** What is recalled by the dreamer
- 5.46.** Mental operation of making the unconscious known
- 5.47.** Work of organizing aspects of a dream into less bizarre form

Questions 5.48–5.51

- A. Urethral stage
 - B. Genital stage
 - C. Latency stage
 - D. Anal stage
 - E. Phallic stage
- 5.48.** Further integration of oedipal identifications
- 5.49.** Striving for separation from dependence and control by parents
- 5.50.** Laying the foundation for gender identity
- 5.51.** The ultimate separation from dependence on and attachment to the parents

Questions 5.52–5.55

- A. Displacement
- B. Projection

- C. Reaction formation
- D. Repression
- E. Sublimation

- 5.52. A young woman gets into an argument with her boyfriend. Although very upset, she remains silent as he tells her she is worthless. When she gets home, the young woman picks a fight with her younger sister over nothing and begins yelling at her.
- 5.53. A young man is very envious of his best friend. Although it is difficult to admit, he believes his friend is more successful and better looking and is always the life of the party. To the contrary, this young man tells his family that his best friend is envious of him despite there being no evidence that this is so.
- 5.54. An 18-year-old young man lives alone with his mother and despises her. He is embarrassed that he has these feelings and compensates by hovering over her, attending to her every need.
- 5.55. A middle-aged man has had an unconscious desire to control others for as long as he can remember. To fulfill this need, he became a prison guard.

ANSWERS

5.1. The answer is D

Alfred Adler (1870–1937) posited striving for self-esteem through overcoming a sense of inferiority, which he saw as an inevitable force in the human condition as a result of its extended childhood. As seen from the Adlerian point of view, *Mr. A has been attempting to make the normal step of moving from inferiority to mastery in fantasy instead of through realistic achievement*. He maintains himself in fantasy as a writer while failing at the accomplishments that would enable him to become a writer.

Sandor Rado (1890–1972) theorized that cultural factors often cause excessive hedonic control by interfering with the organism's ability for self-regulation. Rado would have framed Mr. A's difficulties as *failures of adaptation to his mental illness and adult life* and as a regression to the hedonic level of adaptation in which pleasure is sought and pain avoided.

Wilhelm Reich (1897–1957) made major contributions to psychoanalysis in the area of character formation and character types. The term *character armor* refers to the personality's defenses that serve as resistance to self-understanding and change. Reich might see Mr. A's *rebellion against conformity as a defense against his fear of being away from his mother's protection and domination*. The more Mr. A rebels, the more tightly he binds himself to his mother.

Harry Stack Sullivan (1892–1949) would probably see Mr. A as arrested in childhood. His fear of displeasing his mother led him to give up healthy self-esteem strivings for independence, favoring a distant yet dependent position. *Mr. A uses drugs and psychosis as escapes to maintain some degree of self-esteem*.

Karen Horney (1885–1952) proposed three separate concepts of the self: the actual self (the sum total of a person's experience), the real self (the harmonious, healthy person), and the idealized

self (the neurotic expectation or glorified image that a person believes he or she should be). From the standpoint of Horney, *Mr. A's process of self-realization has been blocked* in all three directions. He has not developed the ability to love and trust; he expresses opposition in an unhealthy way, and he has made self-defeating moves toward independence.

5.2. The answer is B

Adolf Meyer (1866–1952) would *focus first on the adequate treatment of Mr. A's mental disorder*. Meyer emphasized the interrelationship of symptoms and individual psychological and biological functioning. Controlling biological forces at work to disrupt Mr. A's life is always a primary goal. Because Mr. A is still dependent on his parents, they are included in the treatment plan and might be seen separately by a social worker. Both Mr. A and his parents are told that failure to control the symptoms of his mental illness could cost him his life and any satisfaction that he might derive from it. Mr. A's mood swings are stabilized on an appropriate medication. Later, Mr. A would begin the distributive analysis phase of his treatment and would be asked to reflect on the impact of his bipolar I disorder and his avoidance of responsibility in his life.

5.3. The answer is A

Freud originally understood *depression* as *internally directed anger*. In his view, the self-reproaches and the loss of self-esteem commonly experienced by depressed patients are directed not at the self but rather at an ambivalently experienced introject. He noted that in some cases, the only way the ego can give up an object is to introject it, so the anger directed at the ambivalently held object takes on the clinical manifestation of the depression.

From the self-psychological point of view associated with Heinz Kohut, *depression is related to a sense of despair about getting one's self object needs met by people in the environment*. Melanie Klein suggested that depression is linked to a reactivation of the depressive position; depressed patients are convinced that they have *destroyed their internal good objects because of their own aggression and greed*. As a result, they feel persecuted by internal bad objects while longing for the lost love objects.

Erikson hypothesized that the depressed patient's experience of being empty and of being no good is an outgrowth of a *developmental derailment*. Depression therefore results from failing to develop a basic sense of trust or the virtue of hope. From an object relations perspective, many depressed patients unconsciously experience themselves to be at the mercy of a *tormenting internal object* that is unrelenting in its persecution of them. In cases of psychosis, that primitive forerunner of the superego may actually be hallucinated as a voice that is unrelentingly critical.

5.4. The answer is E (all)

The French psychoanalyst Jacques Lacan (1901–1981) made a lasting impression on French psychoanalysis as well as on literary and film criticism in academic departments throughout the world. *Lacan's reading of Freud relies heavily on linguistics*. The notion that human beings are constituted by language is one of three basic principles endorsed by Lacan. *The unconscious is*

structured like a language that consists only of signifiers; biology and drives have no place in his theory. Second, the ego does not exist as an autonomous structure. A third principle is that an individual is inevitably embedded in political and societal structures that cannot be transcended.

Lacan thrived on being unorthodox. He denied the significance of diagnoses, rules, or established schools of thought. He saw the analytical process as an effort to recognize the alienation from one's true self. Analysis was also designed to bring out underlying structures and contexts in the unconscious.

5.5. The answer is C

The phallic period (not anal phase), during which the Oedipus complex emerges, is a critical phase of development for the budding formation of the child's own sense of gender identity—as decisively male or female—based on the child's discovery and realization of the significance of anatomical sexual differences. Adult sexual adjustment is said to rely on the attachment to one parent and the identification with the other. The events associated with the phallic phase also set the stage for the developmental predisposition to later psychoneuroses. Freud used the term *Oedipus complex* to refer to the intense love relationships, together with their associated rivalries, hostilities, and emerging identifications, formed during this period between the child and parents.

5.6. The answer is D

Anna Freud (1895–1982) was not known to have contradicted her father's claims on psychosexual development. Anna Freud, the daughter of Sigmund Freud, ultimately made her own set of unique contributions to psychoanalysis. Whereas her father focused primarily on repression as the central defense mechanism, Anna Freud greatly elaborated on individual defense mechanisms, including reaction formation, undoing, introjection, identification, projection, turning against the self, reversal, and sublimation. She was also a key figure in the development of modern ego psychology in that she emphasized that there was “depth in the surface.” In other words, the defenses marshaled by the ego to avoid unacceptable wishes from the id were in and of themselves complex and worthy of attention. Up to that point, the primary focus had been on uncovering unconscious sexual and aggressive wishes. She also made seminal contributions to the field of child psychoanalysis and studied the function of the ego in personality development.

5.7. The answer is A

There is some differentiation between the sexes in the pattern of development. Freud explained the nature of this discrepancy in terms of genital differences. Under normal circumstances, he believed that, for boys, the Oedipal complex was resolved by the castration complex. Specifically, the boy had to give up his strivings for his mother because of the threat of castration—castration anxiety. In contrast, the Oedipus complex in girls was also evoked by reason of the castration complex. Unlike in boys, little girls are already castrated, and as a result, they turn to their fathers as bearers of the penis out of a sense of disappointment over their own lack of penises. Little girls are thus more threatened by a loss of love than by actual castration fears.

5.8. The answer is B

Erikson's work concentrated on the effects of social, cultural, and psychological factors in development. Although Erikson acknowledged the important role of sexuality, it was less central to his theory. The concepts of instinctual drives and psychosexual development are essential parts of Freud's theories, not Erikson's. Object relations, which refer not to interpersonal relationships but to the interactions of internalized constructs of external relationships, is the central idea in object relation psychology.

5.9. The answer is E

Erikson's theory of psychosocial development centers around eight stages of ego development. *Integrity versus despair* is the last of the stages and takes place between age 65 years and death. If this stage is successfully mastered, the individual arrives at a peaceful acceptance of his or her own mortality without losing interest in life. The patient in this case, however, is clearly having difficulties with this stage as she attempts to deny the passage of time and refuses to prepare for this endpoint of the life cycle. A person in a stage of despair is unconsciously fearful of death and lives in basic self-contempt.

Generativity versus stagnation is another of Erikson's stages that takes place from ages 40 to 65 years and is focused on raising children with nurturance and love and not living in isolation. The stage of *identity versus role confusion* occurs between age 11 years and the end of adolescence, during which the adolescent must begin to establish a future role in adult society.

5.10. The answer is A

Melanie Klein thought that Freud's concept of the “death instinct” was central to understanding aggression, hatred, sadism, and other forms of badness, which she viewed as derivatives of the death instinct. Her perspective grew largely from her psychoanalytic work with children. She became impressed with the role of unconscious intrapsychic fantasy and proposed that infants project derivatives of the death instinct onto the mother and then fear attack from the “bad mother;” a phenomenon referred to as *persecutory anxiety*. This anxiety is associated with Klein's paranoid-schizoid position. Through the integration of good and bad internal object relations, infants develop concern for the mother toward whom they have developed harmful fantasies. This concern results in repression and entering of the depressive position.

5.11. The answer is B

Freud's concept of transference was to become a cornerstone of psychoanalytic theory and technique, a discovery that eventually contributed to his abandonment of hypnosis as a tool. Freud first observed that many patients were simply refractory to hypnosis. When a patient could be hypnotized, he noted, after the discovery of transference, that hypnosis concealed aspects of the transference, so these aspects could not be investigated as part of the process. He also believed that hypnosis encouraged the patient to please the hypnotist instead of learning about the origins and the meanings of symptoms. By the late 1890s, Freud abandoned hypnosis. Instead, he had the patient lie on the couch and say whatever came to mind without censorship, which is the method

of *free association* that remains a central part of psychoanalytic technique today.

5.12. The answer is D

Death fear is the fear of losing one's identity by fusing with another person. The weaker one's personal identity, the stronger the death fear.

Life fear, by contrast, is fear of losing all ties in the process of becoming separate. Every person experiences the cycle of movement from union to separation and back again as part of the life process. This movement takes place at various levels, including family, societal, artistic, and spiritual. At each level, there is one or more movement toward union and rebirth. Each person, for example, usually yields to a love experience in which personal differences are set aside to experience unity with another, to experience self-worth and to be relieved of the sense of difference. The yielding to another ends when the will asserts its separateness, and a new affirmation of individuality occurs.

Fear of dying associated with a phobia or "before one's time" are not ideas associated with Otto Rank (1884–1939).

5.13. The answer is C

Carl Gustav (1875–1961) Jung believed *archetypes* to be instinctual patterns. Archetypes represent the basic motivations and drives that become organizational units of the personality. Snakes shedding their skins are usually interpreted as a symbol for change and renewal. *Primary processes, manifest content of dreams, and phallic representations* are Freudian concepts.

5.14. The answer is A

John Bowlby (1907–1990) is generally considered the founder of attachment theory. He formed his ideas about attachment in the 1950s while he was consulting with the World Health Organization (WHO) on the problems of homelessness in children. He stressed that the essence of attachment is proximity (i.e., the tendency of a child to stay close to the mother or caregiver). A basic sense of security and safety is derived from a continuous and close relationship with the caregiver, according to Bowlby. He believed that without this early proximity to the mother or caregiver, the child does not develop a secure base, which he considered a launching pad for independence. In the absence of a secure base, the child feels frightened or threatened, and development is severely compromised.

Otto Kernberg works as one of the most influential object relations theorists in the United States. *Melanie Klein* evolved a theory of internal object relations intimately likened to motivational drives. *Heinz Kohut* is best known for his writings on narcissism and the development of self-psychology. *Adolf Meyer* introduced the concept of common sense psychiatry, which focused on the ways a patient's current life situation could be realistically improved.

5.15. The answer is D

Erikson's formulations were based on the concept of *epigenesis*, a term borrowed from embryology. His *epigenetic principle* holds that development occurs in sequential, clearly defined stages and that each stage must be satisfactorily resolved for development to proceed smoothly. According to the epigenetic

model, if successful resolution of a particular stage does not occur, all subsequent stages reflect the failure in the form of physical, cognitive, social, or emotional maladjustment.

5.16. The answer is E (all)

As a social philosopher and critic, Fromm did not really develop a systematic theory of psychopathology. Rather, he identified three major mechanisms of retreat from individuation. Some individuals, he said, may seek an authoritarian solution, trying to live through someone or something external to themselves, relying on that for their sense of adequacy. Others may become destructive, attacking anything that confronts them with their separateness and loneliness. Most individuals develop a conformist attitude, warding off the anxiety of experiencing their own intentionality by accepting socially offered thoughts, roles, and attitudes.

These mechanisms result in four different unproductive orientations or characters typical of modern capitalist society: receptive, exploitative, hoarding, and marketing. The *receptive character* often appears to be cooperative and open; however, the primary agenda is to establish a passive relationship with a leader who solves problems magically. *Exploitative characters* are likewise interested in filling themselves up from the outside; however, they aggressively manipulate and usurp whatever reduces their terror. *Hoarders* collect, store, and close in on themselves, often being cold and aloof in their efforts to feel secure. *Marketers* treat themselves as a plastic commodity to be manipulated as needed to achieve externally validated success.

5.17. The answer is C

Margaret Mahler (1897–1985) has conceptualized the process of development in terms of phases of separation and individuation. The "practicing" subphase of this process follows the first or "hatching" subphase, which arises at approximately 4 or 5 months of age. The third subphase, "rapprochement" involves separation anxiety. The child's wishes to be separate from the mother are tempered by an increasing awareness of the need for and dependence on the mother. The fourth, and final phase, the subphase of "object constancy," involves consolidation of individuality and mature psychological involvement with others. *Object permanence*, the knowledge that objects in the external world have an existence independent of the child's actions on them or interactions with them, is a major accomplishment of Piaget's sensorimotor period of intellectual development. *Dan Stern*, a psychiatrist and psychoanalyst, who focused his work on infant observation, brought into clearer focus the intense affective and interactional matrix between mother and child and directed attention more specifically to the emergence of a sense of self.

5.18. The answer is B

Somatization is an immature defense mechanism. In it, psychic derivatives are converted into bodily symptoms, and patients react with somatic manifestations rather than psychic manifestations. All of the others are mature defenses. *Anticipation* is goal directed and involves realistic anticipation or planning for future inner discomfort. *Suppression* involves the conscious postponement of attention to a conscious impulse or conflict. *Altruism* uses constructive and instinctually satisfying service to others to undergo a vicarious experience. *Asceticism* involves the

assignment of value to specific pleasure and is directed against all base pleasures.

5.19. The answer is E (all)

Carl Gustav Jung believed archetypes to be *instinctual patterns*. He believed that all psychic energy is transmitted in forms of experience, behavior, and emotion, which are *expressed in representational or mythological images*. Thus, the archetypes represent the basic motivations and drives that become *organizational units of the personality*.

5.20. The answer is C

The unconscious system (not the preconscious) is characterized by primary process thinking. The publication of *The Interpretation of Dreams* in 1900 heralded the arrival of Freud's topographical model of the mind, in which he divided the mind into three regions: the conscious system, the preconscious system, and the unconscious system. The preconscious system comprises mental events, processes, and contents that can be *brought to conscious awareness by the act of focusing attention*. Although most persons are not consciously aware of the appearance of their first-grade teacher, they ordinarily can bring this image to mind by deliberately focusing attention on the memory. Conceptually, *the preconscious interfaces with both the unconscious and conscious regions of the mind*. To reach conscious awareness, contents of the unconscious must become linked with words and thus become preconscious. The preconscious also serves to maintain the repressive barrier and to *censor unacceptable wishes and desires*.

5.21. The answer is E

Freud became aware of the significance of dreams when he noted that patients frequently reported their dreams in the process of free association. Through their further associations to dream content, he learned that dreams were definitely meaningful even though meanings were often hidden or disguised. Most of all, Freud was struck by the intimate connection between dream content and unconscious memories or fantasies that were long repressed. This observation led Freud to declare that *the interpretation of dreams was the royal road to understanding the unconscious*.

5.22. The answer is E

Viktor Frankl (1905–1997), an Australian neurologist and philosopher, had a distinctive view of human nature. Having spent time in Nazi concentration camps, Frankl came to the conclusion that the most appalling circumstances could be tolerated if one found a way of making them meaningful. He also believed that those who fail to find meaning face alienation, despair, and existential neuroses. *Carl Rogers* (1902–1987) articulated a formal theory of personality holding that all organisms tend toward their own actualization. As such, he believed that mental health and personal growth are the natural conditions of human kind. Therefore, psychopathology would be a distortion of the actualization process. *Gordon Allport* (1897–1967) believed that man's behavior is proactive, reflecting internal, self-initiating characteristics. He believed personality to be rational and organized and influenced by goals, plans, and philosophies. *Abraham Maslow*

(1908–1970) interpreted personality in motivational terms. The individual's whole life, including perceptions, values, and goals, is focused on the satisfaction of a set of needs. Maslow believed needs were organized in a hierarchy. *George Kelly* (1905–1967) argued that human beings should be seen as scientists trying to make sense of their world. Kelly held that the basic unit for understanding personality is the personal construct, a schema for classifying and interpreting experiences.

Answers 5.23–5.28

5.23. The answer is C

5.24. The answer is B

5.25. The answer is D

5.26. The answer is A

5.27. The answer is E

5.28. The answer is F

The lettered choices above represent the phases of Margaret Mahler's separation-individuation process. The theory emphasizes the process of separation from the maternal orbit and the establishment of personal autonomy.

The first phase of Mahler's theory of development describes the *autistic phase*: "During the first few weeks of extrauterine life, a *stage of absolute primary narcissism*, marked by the infant's lack of awareness of a mothering agent prevails. . . . It is followed by a stage of dim awareness that need satisfaction cannot be provided by oneself, but comes from somewhere outside the self." The theory also articulates the origin of the initial differentiation of self and object, in which infants can be said to experience something outside themselves, to which they can relate, as satisfying their inner needs.

The second phase is the *ymbiotic phase* "in which the infant behaves and *functions as though he and his mother were an omnipotent system*—a dual unity within one common boundary." Boundaries become temporarily differentiated only in the state of "affect hunger" but disappear again when the need is gratified. Consequently, the object is recognized as separate from the self only at moments of need, so that when the need is satisfied, the object ceases to exist—from the infant's (subjective) point of view—until a need again arises.

During the *hatching* period, the child *gradually differentiates out of the symbiotic matrix*. The first behavioral signs of such differentiation seem to arise at about 4 to 5 months of age, at the high point of the symbiotic period. As "hatching" and separation from the mother gradually increase, there is a move to a second or *practicing* subphase of separation-individuation.

The crisis in the *rapprochement phase* is particularly that of *separation anxiety*. The child's wishes and desires to be separate, autonomous, and omnipotent are tempered by an increasing awareness of the need for and dependence on the mother. Thus, the mother's availability and the reassurance of her continuing love and support become all the more important. As the conflicts and crisis of *rapprochement* are gradually resolved, the child



Table 5.1
Erikson's Psychosocial Stages

Psychosocial Stage	Associated Virtue
Trust vs. mistrust (birth– Autonomy vs. shame and doubt (~18 months–)	Hope Will
Initiative vs. guilt (~3 years–) Industry vs. inferiority (~5 years–)	Purpose Competence
Identity vs. role confusion (~13 years–)	Fidelity
Intimacy vs. isolation (~20s–)	Love
Generativity vs. stagnation (~40s–)	Care
Integrity vs. despair (~60s–)	Wisdom

Adapted from Erikson E. *Insight and Responsibility*. New York: WW Norton; 1964; Erikson E. *Identity: Youth and Crisis*. New York: WW Norton: 1968.

enters the final phase of separation and individuation—namely, the phase of consolidation of individuality and the beginnings of emotional *object constancy*. Object constancy implies a capacity to differentiate among objects and to *maintain a meaningful relationship with one specific object, whether needs are being satisfied or not*.

Answers 5.29–5.33

5.29. The answer is D

5.30. The answer is E

5.31. The answer is B

5.32. The answer is C

5.33. The answer is A
See Table 5.1.

Answers 5.34–5.38

5.34. The answer is B

5.35. The answer is D

5.36. The answer is E

5.37. The answer is C

5.38. The answer is A

The first of Erik Erikson's developmental stages, *infancy* (birth to 1 year), is characterized by the first psychosocial crisis the infant must face, that of *basic trust versus basic mistrust*. The crisis takes place in the context of the intimate relationship between the infant and his or her mother. The infant's primary orientation to reality is erotic and centers on the mouth. The successful resolution of the stage includes a disposition to trust others, a basic trust in oneself, a capacity to entrust oneself, and a sense of self-confidence.

During *early childhood* (ages 3 to 5 years), the crisis addressed by the child is *initiative versus guilt*. As the child strug-

gles to resolve the oedipal struggle, guilt may grow because of aggressive thoughts or wishes. Initiative arises as the child begins to desire to mimic the adult world and as the child finds enjoyment in productive activity.

The stage of *puberty and adolescence* (age 11 years through the end of adolescence) is characterized by *identity versus role diffusion*, during which the adolescent must begin to establish a future role in adult society. During this psychosocial crisis, the adolescent is peculiarly vulnerable to social and cultural influences.

Early adulthood (ages 21 to 40 years) is characterized by *intimacy versus isolation*. The crisis is characterized by the need to establish the capacity to relate intimately and meaningfully with others in mutually satisfying and productive interactions. The failure to achieve a successful resolution of that crisis results in a sense of personal isolation. *Late adulthood* (age 65 years and older) is characterized by *integrity versus despair*. The crisis implies and depends on the successful resolution of all the preceding crises of psychosocial growth. It entails the acceptance of oneself and of all of the aspects of life and the integration of their elements into a stable pattern of living.

Answers 5.39–5.43

5.39. The answer is A

5.40. The answer is C

5.41. The answer is D

5.42. The answer is B

5.43. The answer is E

Anna Freud is probably best known for her book *The Ego and the Mechanisms of Defense*. In the book, she gives a particularly clear description of how the defenses work, including some special attention to adolescents' use of defenses. *Melanie Klein's Envy and Gratitude* introduces her theory of primary envy. In *Civilization and Its Discontents*, *Sigmund Freud* proposes that the conflict between sexual needs and societal mores is the source of mankind's propensity for dissatisfaction, aggression, hostility, and ultimately violence. *Erik Erikson, in Childhood and Society*, writes about the influence of society on culture and child development. He correlated personality growth with parental and societal values. *Harry Stack Sullivan, in Schizophrenia as a Human Process*, expounds the idea that schizophrenia developed as a result of the cultural forces that bore on the individual.

Answers 5.44–5.47

5.44. The answer is B

5.45. The answer is A

5.46. The answer is C

5.47. The answer is D

Freud distinguished between two layers of dream content. The *manifest content* refers to what is recalled by the dreamer; the *latent content* involves the unconscious thoughts and wishes that threaten to awaken the dreamer. Freud described the unconscious mental operations by which latent dream content is transformed into manifest dream content as the *dream work*. Repressed wishes and impulses must attach themselves to innocent or neutral images to pass the scrutiny of the dream censor. This process involves selection of apparently meaningless or trivial images from the dreamer's current experience, images that are dynamically associated with the latent images that they resemble in some respect. *Secondary revision* is the process by which primitive aspects of dreams are made into more coherent and less bizarre form.

Answers 5.48–5.51

5.48. The answer is C

5.49. The answer is D

5.50. The answer is E

5.51. The answer is B

The awareness of the external world of objects develops gradually in infants. Soon after birth, they are primarily aware of physical sensations, such as hunger, cold, and pain, which give rise to tension, and caregivers are regarded primarily as persons who relieve their tension or remove painful stimuli. Recent infant research, however, suggests that awareness of others begins much sooner than Freud originally thought. Table 5.2 provides a summary of the objectives for the stages of psychosexual development and the object relationships associated with each stage.

Answers 5.52–5.55

5.52. The answer is A

5.53. The answer is B

5.54. The answer is C

5.55. The answer is E

In Freudian psychoanalytic theory, defense mechanisms represent the ego's attempts to mediate between the pressure of the instinctual drives emerging from the id and the restrictions imposed by the societal rules from the superego. Defense mechanisms alleviate anxiety by maintaining conflict out of awareness.

Displacement is the shifting of unacceptable emotions or impulses to a more appropriate object. Although the woman is angry at her boyfriend, she waits until she gets home and displaces this anger on her younger sibling, a less dangerous outlet. *Projection*



Table 5.2
Stages of Psychosexual Development and Their Objectives

Stage	Objective
Oral	To establish a trusting dependence on nursing and sustaining objects, to establish comfortable expression and gratification of oral libidinal needs without excessive conflict or ambivalence from oral sadistic wishes.
Anal	The anal period is essentially a period of striving for independence and separation from the dependence on and control by the parent. The objectives of sphincter control without overcontrol (fecal retention) or loss of control (messing) are matched by the child's attempts to achieve autonomy and independence without excessive shame or self-doubt from loss of control.
Urethral	Issues of control and urethral performance and loss of control. It is not clear whether or to what extent the objectives of urethral functioning differ from those of the anal period.
Phallic	The objective of this phase is to focus erotic interest in the genital area and genital functions. This focusing lays the foundation for gender identity and serves to integrate the residues of previous stages of psychosexual development into a predominantly genital–sexual orientation.
Latency	The primary objective in this period is the further integration of oedipal identifications and a consolidation of sex-role identity and sex roles. The relative quiescence and control of instinctual impulses allow for the development of ego apparatuses and mastery skills.
Genital	The primary objectives of this period are on the ultimate separation from dependence on and attachment to the parents and the establishment of mature, nonincestuous object relations. Related to this are the achievement of a mature sense of personal identity and acceptance and the integration of a set of adult roles and functions that permit new adaptive integrations with social expectations and cultural values.

is a defense mechanism in which the patient reacts to an inner unacceptable impulse as if it were outside the self. In this case, the man projects his envy as coming from his friend when it is actually an inner unacceptable impulse. In *reaction formation*, an unacceptable unconscious impulse is transformed into its opposite. The teenage boy, rather than accepting his feelings of hatred toward his mother, treats her with love and constant attention. *Sublimation* is satisfaction of an objectionable impulse obtained by using socially acceptable means. The man in this case is therefore channeling his urges to control others into his job as a prison guard rather than preventing them. *Repression* is the unconscious act of preventing a thought or feeling from entering consciousness.

The Patient–Doctor Relationship and the Psychiatric Interview

The quality of the patient–doctor relationship is crucial to the practice of medicine and psychiatry. The relationship between any one patient and physician varies depending on each of their personalities and past experiences as well as the setting and purpose of the encounter. However, there are general principles that, when followed, help to ensure that the relationship established is helpful. One of the essential qualities of a clinician is interest in humanity because the secret to the care of the patient is in caring for the patient. A good physician knows his or her patients through and through. Time, sympathy, and understanding must be dispensed, and the personal bond with the patient is one of the greatest satisfactions of the practice of medicine.

An effective relationship is characterized by good rapport. Rapport is the spontaneous, conscious feeling of harmony that promotes the development of a therapeutic alliance. It implies an understanding and trust between the doctor and the patient. The patient comes to a doctor seeking help. A desire for help motivates the patient to share information and feelings that are distressing, personal, and private with a stranger. From the first encounter, the patient’s willingness to share depends on the verbal and nonverbal interventions of the physician and staff. As the physician’s behaviors demonstrate respect and considera-

tion, rapport begins to develop when the patient feels safe and comfortable.

Obtaining a good patient–doctor relationship can at times be difficult. Almost all physicians at some point treat patients who are difficult, not because of their medical illness but because they engage in power struggles or are demanding or uncooperative. The issue is especially pertinent for psychiatrists because the underlying pathology of their patients may manifest as behavioral interactions that themselves provoke negative responses. Difficult patients need acknowledgement, understanding, and special skills.

Various types of patients fall under the rubric of special patient populations. They include patients with urgent issues, patients who are severely mentally ill, patients from different cultural backgrounds who are unassimilated, patients who cannot communicate well because of difficulties with the English language, and patients whose personality problems make them difficult. Inherent in the management of all such cases is the doctor’s understanding of the emotions, fears, and conflicts that the patient’s behavior represents.

The student should test their knowledge by addressing the following questions and answers.

HELPFUL HINTS

The key terms listed below should be understood by the student.

- | | | | |
|------------------------------------|----------------------------------|-----------------------------|---------------------------|
| ▶ active versus passive patients | ▶ countertransference | ▶ isolated patients | ▶ secondary gain |
| ▶ aggression and counteraggression | ▶ cross-cultural issues | ▶ malingering | ▶ seductive patients |
| ▶ agitative patients | ▶ defensive attitudes | ▶ misperception | ▶ self-monitoring |
| ▶ belligerent patients | ▶ demanding patients | ▶ misrepresentation | ▶ sick role |
| ▶ biopsychosocial model | ▶ dependant patients | ▶ mutual participation | ▶ somatizing patients |
| ▶ burnout | ▶ emotionally charged statements | ▶ narcissistic patients | ▶ sublimation |
| ▶ coercion | ▶ empathy | ▶ need–fear dilemma | ▶ therapeutic limitations |
| ▶ closed-ended questions | ▶ George Engel | ▶ obsessive patients | ▶ thought disorder |
| ▶ compliance versus noncompliance | ▶ “good patients” | ▶ open-ended questions | ▶ transference |
| ▶ confrontation | ▶ grievance collector | ▶ overcompensatory anger | ▶ unconscious guilt |
| ▶ content versus process | ▶ illness behavior | ▶ passive suicidal patients | ▶ uncooperative patients |
| | ▶ insight | ▶ patient–doctor models | ▶ unresolved conflicts |
| | ▶ interpretation | ▶ rapport | |
| | | ▶ reflection | |

QUESTIONS

Directions

Each question or incomplete statement below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 6.1.** In response to the question, “Why did you come to the clinic?” a patient said: “When I got up this morning, I showered and dressed. I was angry at my landlord for not fixing the faucet in my bathroom. I tried to get him on the phone. He wouldn’t talk to me. I’ll call my lawyer. You see, my rent is supposed to be paid by the Department of Welfare, but they’re so nasty. [But why did you come to the clinic?] I’m coming to that, Doctor. You see, they don’t care about an upright citizen. I did so much for my community. No one can say I wasn’t a hard worker,” and so on. After repeated questioning, the patient finally stated that she was worried about being constipated. The above patient is an example of
- a patient with a thought disorder
 - a delusional patient
 - a somatizing patient
 - a demanding patient
 - an agitated patient
- 6.2.** The psychiatric interview serves all of the following functions *except*
- to establish a therapeutic relationship
 - to implement a treatment plan
 - to assess the nature of the problem
 - to demonstrate the physician’s expertise
 - none of the above
- 6.3.** During an interview, a patient sarcastically asks a physician, “Did you really go to medical school?” Which is the best way for the physician to respond?
- Promptly end the interview
 - Answer the question directly
 - Address the issue that provoked the comment
 - Do not answer
 - None of the above
- 6.4.** Rapport is
- based on a doctor projecting feelings onto the patient
 - based on a patient projecting feelings from past relationships to the doctor
 - a feeling of harmony that promotes a therapeutic relationship
 - of little significance in obtaining the history
 - none of the above
- 6.5.** Mr. M, a 60-year-old man, 10 months after the death of his wife of 40 years, reluctantly told his daughter that he wished he were dead but would never act on these wishes. Alarmed, she took him to a psychiatrist for an evaluation. Which of the following is *true*?
- Feeling this way is a normal grief reaction, so no action is required.
 - His daughter has overreacted in light of the absence of described intent.
 - Detailed questions about his suicidality are essential for prevention.
 - Euphemistic inquiries about his suicide risk would foster rapport.
 - Asking this man about suicide may increase his risk.
- 6.6.** Transference feelings
- are based on a patient projecting feelings from past relationships toward the doctor
 - are a main reason for lawsuits filed by mistreated patients
 - are based on a doctor projecting feelings onto a patient
 - do not occur with highly experienced physicians
 - none of the above
- 6.7.** At the beginning of an appointment, a patient wants to discuss her perception of why she felt ill, but the physician wants to know the chronology of her symptoms. The physician should
- inform her that time is of the essence
 - inform her that an extra charge will be made if more time is needed for the appointment
 - allow the patient to complete her thoughts
 - immediately discuss how compliance will be affected by her perceptions and responses
 - politely interrupt the patient and continue with closed-ended questions
- 6.8.** Which of the following statements on the person-centered approach is *false*?
- The individuality of the patient’s experience is a central theme.
 - The focus is on illness and deficits.
 - The focus is on strengths and assets.
 - The treatment plan should be based on the patient’s goals.
 - None of the above
- 6.9.** Illness behavior refers to
- the influence of culture on illness
 - the way the condition presents itself
 - the role society ascribes to the sick person
 - being excused from responsibilities
 - all of the above
- 6.10.** Which of the following minimizes agitation and the risk of harm by potentially violent patients?
- Asking the patient if he is carrying a weapon
 - Terminating the interview if necessary

- C. Evaluating the patient in a nonstimulating environment
 D. Heeding one's subjective sense of fear
 E. All of the above
- 6.11.** Which of the following statements about transference is *true*?
- A. Transference is a conscious process.
 B. Transference reactions may be strongest with psychiatrists.
 C. Transference is exclusively positive because patients know doctors are trying to help them.
 D. Transference occurs only in patient interactions with psychiatrists, not with clinicians from other disciplines.
 E. Transference implies that the way a clinician interacts with the patient has no direct bearing on the emotional reactions of the patient.
- 6.12.** Antisocial patients
- A. rarely malingers
 B. rarely present as socially adept or intelligent
 C. seldom cause physicians to feel threatened
 D. should never be confronted directly about inappropriate behavior
 E. must be approached with a heightened sense of vigilance
- 6.13.** Which of the following is considered important in establishing rapport with a patient?
- A. Showing expertise
 B. Evaluating a patient's insight
 C. Putting the patient at ease
 D. Expressing compassion
 E. All of the above
- 6.14.** Choose the answer that best fits the example given in the below case study.
 A soldier in basic training presents at the Mental Hygiene Clinic with a long list of symptoms. It is later learned that he has visited the base library and read about psychiatric illnesses. The symptoms reported are increasingly more dramatic as the response of the psychiatrist is not what the soldier expected. Finally, after describing some elaborate visual hallucinations that do not impress the psychiatrist, the soldier blurts out, "What's the matter, you never heard of paranoid schizophrenia?"
- A. A seductive patient
 B. A depressed patient
 C. A noncooperative patient
 D. A lying patient
 E. None of the above
- 6.15.** Which of the following is *not* considered a necessary part of a psychiatric patient–doctor relationship?
- A. The patient's familiarity with the doctor's personal life
 B. Clarification of the doctor's availability between scheduled appointments
 C. Discussion of payment
 D. The understanding that confidentiality may be broken in some situations
 E. Awareness of the consequences for missed appointments
- 6.16.** With paranoid patients, a physician
- A. should not allow a patient to remain evasive
 B. must react defensively to a patient's suspicions
 C. should be as relaxed and friendly as possible
 D. should be prepared to explain in detail every decision
 E. should not take seriously a patient's hostile or conspiratorial misperception of a neutral event
- 6.17.** In which instance is an autocratic patient–doctor relationship most appropriate?
- A. A 54-year-old woman with hypertension wishes to monitor her own blood pressure at home.
 B. A 22-year-old man is brought into the emergency department with a gunshot wound to the chest.
 C. A young woman confides in her doctor about wanting to have an abortion.
 D. A patient has a life-threatening illness with various treatment options.
 E. A woman who is a carrier of the gene for cystic fibrosis consults her doctor about whether she and her husband should conceive.
- 6.18.** Which type of patient would say the following: "I have a friend who is in the business and is great friends with some very famous celebrities. I could introduce you to them. . ."
- A. A seductive patient
 B. A noncooperative patient
 C. A lying patient
 D. A somatizing patient
 E. None of the above
- 6.19.** Confronting a patient with the topic of suicide in a psychiatric interview
- A. should not be done in a straightforward manner
 B. hinders the doctor's rapport
 C. is necessary with all depressed patients
 D. increases the chances of depressed patients attempting or committing suicide
 E. none of the above
- 6.20.** Which of the following doctor factors is associated with treatment compliance?
- A. Older doctors with experience
 B. Increased frequency of visits
 C. Positive physician attitude
 D. Short waiting room time
 E. All of the above

6.21. A 29-year-old woman with a history of schizophrenia presents to your office for a refill of her prescriptions. She is convinced her mother hid her bottle of olanzapine (Zyprexa). The patient states that she feels betrayed and is having auditory hallucinations commanding her to kill her mother. However, when questioned further, the patient denies having any specific plans to harm her mother. Which of the following is the most important next step in management?

- A. Refill the patient’s prescription with a more potent dosage of olanzapine.
- B. Immediately contact the patient’s mother.
- C. Admit the patient.
- D. Simply refill the same dosage of olanzapine.
- E. Refill the prescription and then contact the patient’s mother.

Directions

Each set of lettered headings below is followed by a list of numbered phrases. For each numbered phrase, select

- A. if the item is associated with A only
- B. if the item is associated with B only
- C. if the item is associated with both A and B
- D. if the item is associated with neither A nor B

Questions 6.22–6.26

- A. Psychiatric interview
- B. Nonpsychiatric interview

- 6.22.** Assess the nature of the problem
- 6.23.** Symptom classification
- 6.24.** Develop and maintain a therapeutic relationship
- 6.25.** Recognition of the psychological determinants of behavior
- 6.26.** Communicate information

Questions 6.27–6.31

- A. Countertransference
- B. Transference

- 6.27.** In a conversation about his patient, a physician spontaneously comments, “She’s a very nice lady; she reminds me a lot of my mother.”
- 6.28.** May be encouraged as integral to some intensive psychiatric treatment.
- 6.29.** A patient sees her doctor as overly critical because her mother had always criticized her life choices.
- 6.30.** Can be upsetting and interfere with good medical care.
- 6.31.** A patient, when asked if she shared her concerns about her sexual relationship with her husband to her physician, says, “Well, I tried to bring it up a couple of times, but he looked pretty uncomfortable, and he changed the subject. I didn’t bring it up again; I didn’t want to bother him.”

Questions 6.32–6.36

- A. Open-ended questions
- B. Close-ended questions

6.32. Are essential in obtaining necessary data for diagnosis and treatment

6.33. The interviewer selects topics

6.34. Are ideal at the beginning of the interview

6.35. Have low time efficiency

6.36. Are effective in assessing the duration of symptoms

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading that is most associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 6.37–6.42

- A. Paternalistic model
- B. Informative model
- C. Interpretive model
- D. Deliberative model

6.37. Also called the autocratic model

6.38. A doctor is trying to get a patient to stop smoking

6.39. Patient may think the doctor is cold and uncaring

6.40. Risks a clash in values

6.41. Shared decision-making between doctor and patient

6.42. Appropriate for some one-time consultations

ANSWERS

6.1. The answer is A

The patient described is an example of a *patient with a thought disorder*. Disorders of thought can seriously impair effective communication. The evaluating psychiatrist should note formal thought disorders while minimizing an adverse impact on the interview. When derailment is evident, as in this case, the psychiatrist typically proceeds with questions that call for short answers.

Somatizing patients pose a number of difficulties for consulting and treating psychiatrists because they may be reluctant to engage in self-reflection and psychological exploration. Many somatizing patients live with the fear that their symptoms are not being taken seriously and the parallel fear that something medically serious may be overlooked. Psychiatrists’ main task in dealing with these patients is to acknowledge the suffering conveyed by the symptoms without necessarily accepting the patient’s explanation for the symptoms.

Delusions are fixed, false beliefs not shared by members of one’s culture. *Delusional patients* often come for a psychiatric evaluation after having had their beliefs dismissed or belittled by friends and family. They are on guard for similar reactions from the examiner. It is possible to ask questions about delusions without revealing belief or disbelief (e.g., “Does it seem that people are intent on hurting you?” rather than “Do you believe there is a plot to hurt you?”). Many psychiatrists have found that patients can speak more freely when asked to talk about the accompanying emotions rather than the belief itself (“It must be frightening to

think there are people you do not know who are plotting against you”).

Demanding patients have a difficult time delaying gratification and demand that their discomfort be eliminated immediately. They are easily frustrated and can become petulant or even angry and hostile if they do not get what they want when they want it. Beneath their surface behavior, they may fear that they will never get what they need from others and thus must act in that inappropriately aggressive way. The doctor must be firm with these patients from the outset and must clearly define acceptable and unacceptable behavior. These patients must be treated with respect and care, but they must also be confronted with their behavior.

An *agitated* patient is emotionally restless and excited. He or she may make physical threats to the physician. When interviewing agitated and potentially violent patients, the tasks are to conduct an assessment, contain behavior, and limit the potential for harm.

6.2. The answer is D

Three functions of medical interviews are to *assess the nature of the problem, to develop and maintain a therapeutic relationship, and to communicate information* and implement a treatment plan. See Table 6.1. Although *showing expertise* may be a good way to establish rapport, it is *not* a function of psychiatric interview.

6.3. The answer is C

At times, patients will ask questions about the psychiatrist. A good rule of thumb is that questions about the physician’s qualifications and position should generally *be answered directly* (e.g., board certification, hospital privileges). On occasion, such a question might actually be a sarcastic comment (“Did you really go to medical school?”). In this case, it would be better to *address the issue that provoked the comment* rather than respond concretely. A major reason for *not answering* personal questions

directly is that the interview may become psychiatrist centered rather than patient centered.

6.4. The answer is C

Rapport is the spontaneous, conscious *feeling of harmony that promotes the development of a therapeutic alliance*. It implies an understanding and trust between the doctor and patient. Frequently, the doctor is the only person to whom a patient can talk about things that he or she cannot tell anyone else. Most patients trust their doctors to keep secrets, and this confidence must not be disobeyed.

Transference describes the process of *patients unconsciously projecting feelings from their past relationships to the doctor*. When *doctors unconsciously project their feelings to the patient*, the process is called countertransference; these feelings are not directly related to rapport. For example, a patient may remind the doctor of his father’s narcissism.

6.5. The answer is C

A *thorough assessment of suicide potential addresses intent, plans, means, and perceived consequences*, as well as a history of attempts, and family history of suicide. The examiner must ask clear, straightforward, *noneuphemistic questions*. *Asking about suicide does not increase risk*; the psychiatrist is not raising a topic that the patient has not already contemplated. Some patients may report a wish that they were dead but would never intentionally do anything to take their own lives. Others express greater degrees of determination. Either way, any expression of a wish to die should be considered and evaluated seriously. It should *never be considered lightly or as a part of a “normal” grief reaction*. Normal grief may include sadness and guilt; however, this resolves within 1 year. There are some



Table 6.1
Three Functions of the Medical Interview

Functions	Objectives	Skills
I. Determining the nature of the problem	1. To enable the clinician to establish a diagnosis or recommend further diagnostic procedures, suggest a course of treatment, and predict the nature of the illness	1. Knowledge base of diseases, disorders, problems, and clinical hypotheses from multiple conceptual domains: biomedical, sociocultural, psychodynamic, and behavioral 2. Ability to elicit data for the above conceptual domains (encouraging the patient to tell his or her story; organizing the flow of the interview, the form of questions, the characterization of symptoms, the mental status examination).
II. Developing and maintaining a therapeutic relationship	1. The patient’s willingness to provide diagnostic information 2. Allowing the patient to tell his or her story 3. Willingness to accept a treatment plan or a process of negotiation	1. Defining the nature of the relationship 2. Relief of physical and psychological distress 3. Hearing, bearing, and tolerating the patient’s expression of painful feelings 4. Appropriate and genuine interest, empathy, support, and cognitive understanding
III. Communicating information and implementing a treatment plan	1. Patient’s understanding of the illness 2. Patient’s understanding of the suggested diagnostic procedures 3. Patient’s understanding of the treatment possibilities	1. Determining the nature of the problem (function I) 2. Developing a therapeutic relationship (function II) 3. Establishing the differences in perspective between physician and patient

Adapted from Lazare A, Bird J, Lipkin M Jr, Putnam S. Three functions of the medical interview: An integrative conceptual framework. In: Lipkin Jr M, Putnam S, Lazare A, eds. *The Medical Interview*. New York: Springer; 1989:103.

patients who tell no one of their suicide plans and proceed in a deliberate, systematic manner. The *daughter did not overreact* because her father experienced a loss, and suicidal statements need to be taken seriously.

6.6. The answer is A

Transference describes the process of *patients unconsciously projecting feelings from their past relationships to the doctor*. A patient may come to see the doctor as cold, harsh, critical, threatening, seductive, caring, or nurturing, not because of anything the physician says or does but because that has been part of the patient's past. The residue of such experience leads the patient to unwittingly "transfer" the feeling from past relationships to the doctor. The transference can be positive or negative, and it can swing back and forth—sometimes abruptly—between the two. Many a physician has become unsettled when a pleasant, cooperative, and admiring patient suddenly and for no discernible reason becomes enraged and breaks off the relationship or threatens a lawsuit. Physicians are not immune to distorted perceptions of the patient–doctor relationship. When *doctors unconsciously project their feelings to the patient*, the process is called countertransference.

Although physicians can be sued for anything, transference feelings are not one of the *main reasons for lawsuits filed by mistreated patients*.

A *doctor's level of expertise* does not have any effect on whether transference feelings will occur or not.

6.7. The answer is C

The early part of the interview is generally the most open ended in that the physician allows patients to speak as much as possible in their own words by asking open-ended questions and permits them to *finish*. An open-ended question is one that cannot be answered by a simple "yes" or "no" (e.g., "Can you tell me more about that?"). This type of questioning is important to establish rapport, which is the first step in an interview. In one survey of 700 patients, the patients substantially agreed that physicians do not have the time or the inclination to listen and to consider the patient's feelings. They also stated that physicians do not have enough knowledge of the emotional problems and socioeconomic background of the patient's family and that physicians increase patients' fears by giving explanations in technical language. Psychosocial and economic factors exert a profound influence on human relationships, so the physician should have as much understanding as possible of the patient's environment and subculture.

As for *time* and *charges*, physicians should inform patients about their fee policies but should not interrupt patients to do so. Instead, those areas of business should be dealt with before the initial visit so that an ongoing relationship with a patient can be established. The matter of fees must be discussed openly from the outset; the discussion should include the physician's charges, whether the physician is willing to accept insurance payments directly (known as assignments), the policy concerning payment for missed appointments, and whether the physician is part of a managed care plan. Discussing these questions and any others about fees at the beginning of the relationship can minimize misunderstandings later.

A discussion of compliance with a medical plan is important but is premature early in the interview. Furthermore, *compliance*, which is the degree to which the patient carries out clinical recommendations by the treating physician, is a two-way street. Studies have shown that noncompliance is associated with physicians perceived as rejecting and unfriendly. Noncompliance is also associated with asking a patient for information without giving any feedback and with failing to explain a diagnosis. A physician who is aware of the patient's belief system, feelings, and habits establishes a treatment regimen that increases compliant behavior.

6.8. The answer is B

Traditionally, medicine has focused on *illness and deficits* rather than strengths and assets. A person-centered approach focuses on *strength and assets* as well as deficits. During the assessment, it is often helpful to ask the patient, "Tell me about some of the things you do best" or "What do you consider your greatest asset?" A more open-ended question such as, "Tell me about yourself" may elicit information that focuses more on either strengths or deficits, depending on a number of factors, including the patient's mood and self-image.

A psychiatric interview should be person (patient) centered. That is, the focus should be on understanding the patient and enabling the patient to tell his or her story. *The individuality of the patient's experience is a central theme*, and the patient's life history is elicited. It is subject to the constraints of time, the patient's willingness to share some of this material, and the skill of the interviewer. It is especially important that the resulting *treatment plan be based on the patient's goals*, not the psychiatrist's. Numerous studies have demonstrated that often the patient's goals for treatment (e.g., safe housing) are not the same as the psychiatrist's (e.g., decrease in hallucinations).

6.9. The answer is E (all)

The term *illness behavior* describes patients' reactions to the experience of being sick. Aspects of illness behavior have sometimes been termed the *sick role*, *the role that society ascribes to people when they are ill*. The sick role *can include being excused from responsibilities* and the expectation of wanting to obtain help to get well. *Illness behavior and the sick role are affected by people's previous experiences with illness and by their cultural beliefs about disease*. For some disorders, this varies little among cultures, but for others, *the way a person deals with the disorder may strongly shape the way the condition presents itself*. The relationship of illness to family processes, class status, and ethnic identity is also important. The attitudes of peoples and cultures about dependency and helplessness greatly influence whether and how a person asks for help, as do such psychological factors as personality type.

6.10. The answer is E (all)

Most unpremeditated violence is preceded by a prodrome of accelerating psychomotor agitation. Several steps can be taken to minimize the agitation and potential risk. The interview should be conducted in a *quiet, nonstimulating environment*. The psychiatrist should avoid any behavior that could be misconstrued as menacing, such as standing over the patient, staring, or

touching. The psychiatrist should *ask whether the patient is carrying any weapons* and ask the patient to leave the weapon with a guard or in a holding area. If the agitation continues to increase, *the psychiatrist may need to terminate the interview*. The physician should *always heed his or her own sense of comfort or fear*.

6.11. The answer is B

Transference reactions may be strongest with psychiatrists, especially when the therapeutic modality used requires the psychiatrist to be more neutral. The more neutral the psychiatrist is, the more transference fantasies and concerns are mobilized in the patient and transferred onto the doctor. Transference describes *the process of patients unconsciously attributing to their doctors aspects of important past relationships*, especially those with their parents. Transference is ubiquitous and *plays a role in the interaction of all patients with all clinicians*. The *transference can be positive or negative*, and it can swing back and forth between the two. The words and deeds of doctors have powerful effects on their patients because of the unique authority the doctor has and the patients' dependence on them. How a particular physician behaves and interacts has a direct bearing on the emotional, and even the physical, reactions of the patient.

6.12. The answer is E

Doctors must treat antisocial patients with respect but also *with a heightened sense of vigilance*. These patients can inspire fear in others, often legitimately so, because many have violent histories. Doctors who *feel threatened by patients* should unashamedly seek assistance and not feel compelled to see the patients alone. Firm limits must be set on behavior (e.g., no drugs in the hospital and no sexual activity with other patients), and the consequences of transgressing must be stated firmly and adhered to (e.g., discharge from the hospital if the patient is medically stable, isolation if not). If inappropriate behavior is discovered, patients *must be confronted directly* and nonangrily, and they must be held responsible for their actions. On the surface, these patients may appear charming, socially adept, and intelligent because over many years, they have perfected the behaviors they know to be appropriate, and they perform almost as actors. *Antisocial patients often malingers*, the term for willfully feigning

illness for a clear secondary gain (e.g., to obtain drugs, get a bed for the night, or hide from people pursuing them). They obviously get sick like any other patient. When they are sick, they need to be cared for in the same ways as others.

6.13. The answer is E (all)

Establishing rapport is the first step of a psychiatric interview. It encompasses six strategies, as defined by Ekkhard and Sieglind Othmer: *putting patients at ease*; finding patients' pain and *expressing compassion*; evaluating patients' pain and expressing compassion; *evaluating patients' insight* and becoming an ally; *showing expertise*; and establishing authority and balancing the roles of empathic listener, expert, and authority. As part of a strategy for increasing rapport, Othmer and Othmer developed a checklist that enables interviewers to recognize problems and refine their skills in establishing rapport. The first 10 questions in the checklist are shown in Table 6.2.

6.14. The answer is D

Patients *lie* or deceive their psychiatrists for many different reasons. Some are motivated by secondary gain (e.g., for financial resources, absence from work, or a supply of medication). Some may deceive, not for an external advantage, but for the psychological benefits of assuming the sick role or factitious illness. Psychiatrists are dependent on the patient's self-report. It may be useful, especially when there is a question about the patient's reliability, to gather collateral information regarding the patient. This allows the psychiatrist to have a more broad understanding of the patient outside of the interview setting. Discrepancies in symptom severity between self-report and collateral information may suggest deception. Although it is helpful and necessary to maintain some skepticism, a clinician who becomes jaded by suspiciousness risks making empathetic treatment impossible.

6.15. The answer is A

Although a clinician may choose to reveal aspects of his or her personal life when appropriate, it is not necessary to the patient–doctor relationship that the patient be *familiar with the doctor's personal life*. Limited, discreet self-disclosure, or self-revelation, by physicians may be useful in certain situations, and physicians should feel at ease and should communicate a sense of



Table 6.2
Checklist for Clinicians

The following checklist allows clinicians to rate their skills in establishing and maintaining rapport. It helps them detect and eliminate weaknesses in interviews that failed in some significant way. Each item is rated "yes," "no," or "not applicable."

	Yes	No	N/A
1. I put the patient at ease.	_____	_____	_____
2. I recognized the patient's state of mind.	_____	_____	_____
3. I addressed the patient's distress.	_____	_____	_____
4. I helped the patient warm up.	_____	_____	_____
5. I helped the patient overcome suspiciousness.	_____	_____	_____
6. I curbed the patient's intrusiveness.	_____	_____	_____
7. I stimulated the patient's verbal production.	_____	_____	_____
8. I curbed the patient's rambling.	_____	_____	_____
9. I understood the patient's suffering.	_____	_____	_____
10. I expressed empathy for the patient's suffering.	_____	_____	_____

self-comfort. Conveying this sense may involve answering a patient's questions about whether a physician is married and where he or she comes from. A doctor who practices self-revelation excessively, however, is using a patient to gratify unfulfilled needs in his or her own life and is abusing the role of the physician. If a doctor believes that a piece of information will help a patient be more comfortable, the doctor can decide in each case whether to be self-revealing. The decision depends on whether the information will further a patient's care or if it will provide nothing useful.

Before psychiatric clinicians can establish an ongoing relationship with patients, it is *necessary to address certain issues*. For example, they must *openly discuss payment of fees*. Discussing these issues and any other questions about fees from the beginning of the relationship can minimize misunderstanding later. Psychiatrists should also discuss the extent and limitations of *confidentiality* with patients so that patients are clear about what can and cannot remain confidential. As much as physicians must legally and ethically respect patients' confidentiality, it may be wholly or partially *broken in some specific situations*. For example, if a patient makes clear that he or she intends to harm someone, the doctor has a responsibility to notify the intended victim.

Patients need to be informed about a doctor's *policies for missed appointments*. Some doctors ask patients to give 24 hours' notice to avoid being billed for a missed session. Others bill for missed sessions regardless of advance notification. Patients must know in advance to make an informed decision about whether to accept the doctor's policy or to choose another doctor.

6.16. The answer is D

Paranoid patients fear that people want to hurt them and intend to do them harm. Doctors *should be able to explain in detail every decision* and planned procedure to paranoid patients and should react nondefensively to patients' suspicions. Patients may misperceive cues in their environment to the degree that they see *conspiracies in neutral events*. They are critical, *evasive*, and suspicious. They are often called *grievance seekers* because they tend to blame others for everything bad that happens in their lives. They are extremely mistrustful and may question everything that doctors advise doing. Physicians must remain somewhat formal, albeit always respectful and courteous, with these patients because they often view expressions of warmth and empathy with suspicion ("What does he want from me?").

6.17. The answer is B

In a paternalistic, or *autocratic*, patient–doctor relationship, it is assumed that the doctor knows best. He or she will prescribe treatment, and the patient is expected to comply without questioning. Moreover, the doctor may decide to withhold information when it is believed to be in the patient's best interests. In this model, the physician asks most of the questions and generally dominates the interview.

There are circumstances in which an autocratic approach is desirable. In *emergency situations*, the doctor needs to take control and make potentially life-saving decisions without long deliberation. In addition, some patients feel overwhelmed by their illness and are comforted by a doctor who can take charge. In

general, however, the paternalistic autocratic approach risks a clash of values, especially in situations in which the patient must play a role, such as a *life-threatening illness* or issues concerning *high-risk conception*. In most instances, illnesses that can be monitored and controlled by the combined efforts of the doctor and patient, such as *hypertension*, should not be treated autocratically.

6.18. The answer is A

Sex is not the only enticement with which psychiatrists can be seduced. Patients may offer insider information for profitable trading in the stock market, *may promise an introduction to a movie star friend*, or may suggest that they will dedicate their next novel to the psychiatrist. Although it is easy to understand that some offers by patients, such as the possibility of a sexual involvement, cannot be accepted without considerable harm to the patient, others may seem more innocuous. However, because they nearly always introduce a different agenda into the therapy than that originally contracted for and because they create additional, more ambiguous levels of obligation between the therapist and patient, any psychiatric work is inevitably contaminated. The ability to help the patient is compromised. Consequently, gaining any material or social benefit from the patient other than the agreed-on fee is unethical.

6.19. The answer is C

All patients must be asked about suicidal thoughts; however, depressed patients may need to be questioned more fully. A thorough assessment of suicide potential addresses intent, plans, means, and perceived consequences, as well as history of attempts and family history of suicide. Many patients mention their thoughts of suicide spontaneously. If not, the examiner can begin with a somewhat general question, such as: "Do you ever have thoughts of hurting yourself?" or "Does it ever seem that life isn't worth living?" These questions can then be followed up with more specific questions. The examiner must feel comfortable enough to ask simple, *straightforward*, noneuphemistic questions. *Asking about suicide does not increase the risk*. The psychiatrist is not raising a topic that the patient has not already contemplated. Specific, detailed questions are essential for prevention. Confronting a patient with the topic of suicide *does not hinder the psychiatrist's rapport*.

6.20. The answer is E (all)

Compliance increases when physicians have a *positive attitude* and are enthusiastic and nonpunitive. *Older doctors with experience*, the amount of time spent talking to patients, *a short waiting room time*, and *increased frequency of visits* are also associated with high compliance rates. The patient–doctor relationship, or match, is one of the most important factors in compliance issues. When a doctor and patient have different priorities and beliefs and different styles of communication (including a different understanding of medical advice and different medical expectations), compliance decreases.

6.21. The answer is C

It is the psychiatrist's responsibility to *admit the patient* (even if it must be on an involuntary basis) for stabilization and treatment

as the next best step in management. The patient is exhibiting paranoid delusions and is subject to auditory command hallucinations. However, the focus of the interview should rest on the patient’s homicidal ideation. The patient’s mother is in danger and must be immediately protected. Despite the patient’s denial of a specific plan to harm her mother, *the patient’s mother should still be warned*. Because the hallucinations likely occurred in the absence of medical management (because the pills were “hidden”), *it is unlikely that the dosage needs adjustment* as the immediate next step in management. Suicidal and homicidal ideations, substance intoxication or withdrawal, a threatening demeanor, and grave disorganization or inability to care for oneself are among the indications for admission.

Answers 6.22–6.26

6.22. The answer is C

6.23. The answer is A

6.24. The answer is C

6.25. The answer is A

6.26. The answer is C

Mack Lipkin, Jr., described three functions of medical interviews: *to assess the nature of the problem, to develop and maintain a therapeutic relationship, and to communicate information and implement a treatment plan*. These functions are exactly the same in psychiatric interviews. Also universal are the predominant coping mechanisms used in illness, both adaptive and maladaptive. These mechanisms include such reactions as anxiety, depression, regression, denial, anger, and dependency. Physicians must anticipate, recognize, and address such reactions if treatment and intervention are to be effective. Psychiatric interviews have two major technical goals: (1) *recognition of the psychological determinants of behavior* and (2) *symptoms classification*.

Answers 6.27–6.31

6.27. The answer is A

6.28. The answer is B

6.29. The answer is B

6.30. The answer is C

6.31. The answer is A

Transference and countertransference are very significant expressions of unconscious processes in an interview. They are purely hypothetical constructs, but they have proven extremely useful as organizing principles for explaining certain developments of the patient–doctor relationship that *can be upsetting* and that *can interfere with good medical care*.

Transference is the process of the patient’s unconsciously and inappropriately displacing onto the doctor aspects of important

past relationships, especially *those with parents*. A patient may come to see the doctor as cold, harsh, *critical*, threatening, seductive, caring, or nurturing, not because of anything the physician says or does but because that has been the patient’s experience in the past. Transference can be positive or negative, and it can swing back and forth—sometimes abruptly—between the two.

Transference reactions may be strongest with psychiatrists for a number of reasons. For example, as part of *intensive*, insight-oriented psychotherapy, the *encouragement of transference feelings is an integral part of treatment*.

Countertransference is the process whereby the physician unconsciously displaces onto the patient patterns of behavior or emotional reactions as if he or she was *a significant figure from earlier in the physician’s life*. Countertransference may take the form of negative, disruptive feelings, but it may also encompass disproportionately positive, idealizing, or even eroticized reactions. Psychiatrists should be alert to signs of countertransference issues (missed appointment by the psychiatrist, boredom, *discomfort*, or sleepiness in a session). Supervision or consultations can be helpful as can personal therapy in helping the psychiatrist recognize and deal with these issues.

Answers 6.32–6.36

6.32. The answer is C

6.33. The answer is B

6.34. The answer is A

6.35. The answer is A

6.36. The answer is B

Interviewing any patient involves a fine balance between allowing the patient’s story to unfold at will and *obtaining the necessary data for diagnosis and treatment*. Most experts agree that *an ideal interview begins with broad, open-ended questioning*; continues by becoming specific; and closes with detailed direct questioning.

Open-ended questions (e.g., “*Tell me about your pain*”) identify an area but provide minimal structure as to how to respond. This is in contrast to close-ended questions (e.g., “*Is your pain sharp*”), which provide much structure and narrow the field from which a response may be chosen. The ultimate close-ended question leads to a “yes” or “no” response. Close-ended questions can be effective in generating specific and quick responses about a clearly delineated topic. They have also been found to be *effective in assessing* such factors as the presence or absence, frequency, severity, and *duration of symptoms*. Table 6.3 summarizes some of the pros and cons of open- and closed-ended questions.

Answers 6.37–6.42

6.37. The answer is A

6.38. The answer is D

6.39. The answer is B



Table 6.3
Pros and Cons of Open- and Closed-Ended Questions

Aspect	Broad, Open-Ended Questions	Narrow, Closed-Ended Questions
Genuineness	High They produce spontaneous formulations.	Low They lead the patient.
Reliability	Low They may lead to nonreproducible answers.	High Narrow focus, but they may suggest answers.
Precision	Low Intent of question is vague.	High Intent of question is clear.
Time efficiency	Low Circumstantial elaborations.	High May invite yes or no answers.
Completeness of diagnostic coverage	Low Patient selects topic.	High Interviewer selects topic.
Acceptance by patient	Varies Most patients prefer expressing themselves freely; others feel guarded and insecure.	Varies Some patients enjoy clear-cut checks; others hate to be pressed into a yes or no format.

Reprinted with permission from Othmer E, Othmer SC. *The Clinical Interview Using DSM-IV*. Washington, DC: American Psychiatric Press; 1994.

6.40. The answer is A

6.41. The answer is C

6.42. The answer is B

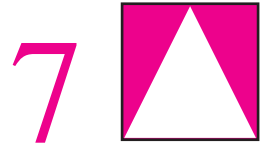
The interactions between a doctor and patient—the questions a patient asks, the way in which news is conveyed and treatment recommendations are made—can take different shapes. In the *paternalistic model*, it is assumed that the doctor knows best. He or she prescribes treatment, and the patient is expected to comply without questioning. In this model, also called the *autocratic model*, the physician asks most of the questions and generally dominates the interview. Circumstances arise in which the paternalistic approach is desirable (e.g., emergency situations). In general, however, the paternalistic approach risks a *clash of values*. A paternalistic obstetrician, for example, might insist on spinal anesthesia for delivery when the patient wants to experience natural childbirth.

In the *informative model*, the doctor dispenses information. All available data are freely given, but the choice is left wholly up to the patient. This model may be appropriate for *certain one-*

time consultations in which no established relationship exists and the patient will be returning to the regular care of a known physician. At other times, the informative model places the patient in an unrealistically autonomous role and leaves him or her believing the doctor is *cold and uncaring*.

In the *interpretive model*, the doctor has come to know his or her patients better and understand something of the circumstances of their lives, their families, their values, and their hopes and aspirations. The doctor is then better able to make recommendations that take into account the unique characteristics of an individual patient. A sense of *shared decision making* is established as the doctor presents and discusses alternatives, with the patient's participation, to find the one that is best for that particular person.

In the *deliberative model*, the physician acts as friend or counselor to the patient, not just by presenting information but also in actively advocating a particular course of action. The deliberative approach is commonly used by doctors hoping to modify injurious behavior, for example, in trying to get a patient to *stop smoking* or lose weight.



Clinical Examination of the Psychiatric Patient

The psychiatric examination consists of two parts. The first is the psychiatric history, and the second is the mental status. The psychiatric history is the record of the patient's life; it allows the psychiatrist to understand who the patient is, where the patient has come from, and where the patient is likely to go in the future. The history is the patient's life story told in the patient's own words from his or her own point of view. Information may be obtained from other sources, such as the patient's parents or spouse. A thorough psychiatric history is essential to making a correct diagnosis and formulating a specific and effective treatment plan.

A patient's history remains stable, whereas the mental status can change daily or hourly. The mental status examination (MSE) is a description of the patient's appearance, speech, actions, and thoughts during the interview. It is a systematic format for recording findings about thinking, feeling, and behavior. Only phenomena observed at the time of the interview are recorded in the mental status. Other data are recorded in the history.

In this day and age of increased monitoring of medical care by third parties, the astute clinician must be aware of good documentation of care and attend to the medical record. Reviews of cases are often conducted by persons with little or no background in psychiatry who do not recognize the complexities of psychiatric diagnosis and treatment.

Similarly, psychiatrists must have a knowledge and understanding of physical signs and symptoms. They must often decide whether a patient needs a medical examination and what that should include. There are numerous medical conditions that can manifest as psychiatric symptoms. Each of these conditions argues for a different set of laboratory and diagnostic tests. Advances in biological psychiatry have made laboratory tests more and more useful. Laboratory tests are used to monitor dosing, treatment adherence, and toxic effects of various psychotropic medications.

The student should address the following questions and study the answers to gain knowledge of the clinical examination of the psychiatric patient.

HELPFUL HINTS

Students should familiarize themselves with these terms, especially the acronyms and names of laboratory tests.

- | | | | |
|--|---|--|-----------------------------|
| ▶ anamnesis | ▶ EEG | ▶ mood, feelings, and affect | ▶ psychosexual history |
| ▶ appearance, behavior, attitude, and speech | ▶ family history | ▶ neologisms | ▶ punning |
| ▶ catecholamines | ▶ history of present illness; medical history | ▶ occupational and educational history | ▶ reliability |
| ▶ chief complaint | ▶ initial interview and greeting | ▶ paraphasia | ▶ sensorium and cognition |
| ▶ clang associations | ▶ interviewing variations | ▶ perception | ▶ sexuality |
| ▶ concentration, memory, and intelligence | ▶ judgment and insight | ▶ PET | ▶ stress interview |
| ▶ confabulation | ▶ lithium | ▶ polysomnography | ▶ thought process |
| ▶ consciousness and orientation | ▶ marital history | ▶ prognosis | ▶ treatment plan |
| ▶ CSF | ▶ mental status examination | ▶ psychiatric history | ▶ TRH |
| ▶ CT | ▶ military history | ▶ psychiatric report | ▶ TSH |
| ▶ delusional beliefs | | ▶ psychodynamic formulation | ▶ tricyclic antidepressants |
| | | | ▶ uncovering feelings |
| | | | ▶ VDRL |
| | | | ▶ word salad |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 7.1.** Systematic errors are
- the physician's fault
 - caused by flaws in the hospital system
 - attributed to a specific member of the treatment team
 - sending an email with patient information
 - most common in solo fee-for-service practices
- 7.2.** Which of the following substances has been implicated in mood disorders with a seasonal pattern?
- Estrogen
 - Gonadotropin-releasing hormone (GnRH)
 - Luteotropic hormone (LTH)
 - Melatonin
 - Testosterone
- 7.3.** If a patient receiving clozapine shows a white blood count (WBC) of 2,000 per cc, the clinician should
- stop the administration of clozapine at once.
 - increase the dosage of clozapine at once.
 - monitor the patient's WBC every 10 days.
 - terminate any antibiotic therapy.
 - institute weekly complete blood count (CBC) tests with differential.
- 7.4.** Somatizing patients can be difficult to treat because
- they have difficulty speaking spontaneously
 - they are violent
 - they may initially idealize the doctor
 - they may be reluctant to engage in self-reflection and psychological exploration
 - they complain of pain
- 7.5.** Common pretreatment lithium tests include
- serum electrolytes
 - serum BUN
 - ECG
 - pregnancy test
 - all of the above
- 7.6.** The medical record
- cannot be used in malpractice litigation
 - is accessible to patients
 - is used only by the treating team
 - cannot be used by regulatory agencies
 - is absolutely confidential
- 7.7.** In a psychiatric interview
- delusions should be challenged directly
 - the psychiatrist must not ask depressed patients if they have suicidal thoughts
 - the psychiatrist should have a seat higher than the patient's seat
 - the psychiatrist may have to medicate a violent patient before taking a history
 - a violent patient should be interviewed alone to establish a patient–doctor relationship
- 7.8.** True statements about diagnostic tests in psychiatric disorders include
- increased serum calcium has been associated with depression
 - serum bicarbonate may be elevated in patients with bulimia nervosa
 - serum amylase may be increased in patients with bulimia nervosa
 - serum bicarbonate may be decreased in patients with panic disorder
 - all of the above
- 7.9.** Polysomnography (sleep EEG) abnormalities include
- an increase in REM sleep in dementia
 - an increased sleep latency in schizophrenia
 - a decrease in the amount of REM sleep in major depressive disorder
 - a lengthened REM latency in major depressive disorder
 - none of the above
- 7.10.** The following thyroid function test changes are true in patients with hypothyroidism *except*
- Serum protein-bound iodine (PBI) is decreased.
 - Serum-free thyroxine is decreased.
 - Serum T3 uptake is decreased.
 - Serum T3-to-T4 ratio is decreased.
 - Serum T3 concentration is decreased.
- 7.11.** The psychiatric history
- has no formal structure
 - does not address medical issues
 - attends to the patient's anamnesis
 - focuses exclusively on information obtained from the patient
 - focuses primarily on symptoms
- 7.12.** Tests of concentration include all of the following *except*
- calculations
 - proverb interpretation
 - spelling "world" backward
 - repeating a series of random numbers
 - repeating three or four unrelated objects after 5 to 10 minutes

- 7.13.** A good test for recent memory is to ask patients
- to subtract 7 from 100
 - their date of birth
 - how many siblings they have
 - what they had to eat for their last meal
 - who is the president of the United States
- 7.14.** Each of the following statements is true *except*
- Panic attacks triggered by sodium lactate are inhibited by alprazolam.
 - Panic attacks triggered by sodium lactate are not inhibited by propranolol.
 - Sodium lactate provokes panic attacks in a majority of patients with panic disorder.
 - Sodium lactate can trigger flashbacks in patients with posttraumatic stress disorder.
 - Hyperventilation is as sensitive as lactate provocation in inducing panic attacks.
- 7.15.** True statements about the lengths of time drugs of abuse can be detected in urine include
- alcohol for 7 to 12 hours
 - benzodiazepine for 2 to 3 weeks
 - cocaine for 1 to 2 weeks
 - marijuana for 24 to 48 hours
 - morphine for 8 days
- 7.16.** Psychiatrist: *Did you have a happy childhood?*
 Patient: (Pause) *Yes, I guess so.*
 Psychiatrist: *Did you have friends?*
 Patient: *Well, I guess it depends on what you mean by a friend.*
 Psychiatrist: *Kids you did things with. How many?*
 This is an example of
- facilitating intervention
 - expanding intervention
 - obstructive intervention
 - reinforcement
 - none of the above
- 7.17.** A 33-year-old woman is fired from her job as a hairdresser. She had been working at the salon for 12 years and is in complete disbelief. As soon as she arrives home, her husband immediately notes that she is in an unpleasant mood. When asked what's bothering her, the woman begins to verbally assault her husband for not giving their 5-year-old daughter a bath before dinner. Which of the following defense mechanisms are being demonstrated by this woman?
- Rationalization
 - Acting out
 - Displacement
 - Dissociation
 - Conversion

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading that is most associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 7.18–7.22

- Omnipotence
 - Altruism
 - Sublimation
 - Projection
 - Reaction formation
- 7.18.** Patient falsely attributes his or her own unacceptable feelings, impulses, or thoughts onto another.
- 7.19.** Patient channels potentially maladaptive feelings or impulses into socially acceptable behavior.
- 7.20.** Patient substitutes behavior, thoughts, or feelings that are diametrically opposed to his or her own unacceptable thoughts or feelings.
- 7.21.** Patient feels or acts as if he or she possesses special powers or abilities and is superior to others.
- 7.22.** Patient dedicates him- or herself to meeting the needs of others.

Questions: 7.23–7.27

- Elevated level of 5-HIAA
 - Decreased level of 5-HIAA
- 7.23.** Aggressive behavior
- 7.24.** Carcinoid tumors
- 7.25.** High banana intake
- 7.26.** Phenothiazine medications
- 7.27.** Suicidal patients

Questions 7.28–7.32

- Bromide intoxication
 - Bulimia nervosa
 - Creutzfeldt-Jakob disease
 - Epstein-Barr virus (EBV)
 - Mean corpuscular volume (MCV)
- 7.28.** Elevated in alcoholism and vitamin B₁₂ and folate deficiency
- 7.29.** Causative agent for infectious mononucleosis; associated with depression, fatigue, and personality change
- 7.30.** Decreased serum chloride
- 7.31.** Psychosis, hallucinations, delirium
- 7.32.** Generalized sharp waves on EEG

Questions 7.33–7.37

- Circumstantiality
- Derailment
- Perseveration

- D. Flight of ideas
- E. Thought blocking

- 7.33. Multiple associations so that thoughts move abruptly from idea to idea
- 7.34. A sudden break in the flow of ideas
- 7.35. Overinclusion of trivial details that impedes getting to the point
- 7.36. A breakdown in the logical connection between ideas and overall goal directedness
- 7.37. Repetition of words, phrases, or ideas that are out of context

Questions 7.38–7.42

- A. Broca's aphasia
- B. Wernicke's aphasia
- C. Conduction aphasia
- D. Global aphasia

- 7.38. Significantly impaired ability to repeat words and phrases
- 7.39. Also called *expressive aphasia*
- 7.40. Patients are unaware of their communication problems
- 7.41. Impairment in all three dimensions of fluency, comprehension, and repetition
- 7.42. Attributed to damage to the arcuate fasciculus

ANSWERS

7.1. The answer is B

Systematic errors are *caused by flaws in the hospital system* or in the transfer of information. The failure is in the health care delivery system as a whole rather than in the individual doctor. An example is an inability to retrieve a patient's medical records. Individual errors are *attributed to a particular physician or to a specific member of the treatment team*. The physician bears the responsibility even if the error is made by a person under his or her supervision. Examples include prescribing the wrong medication or operating on the wrong leg. It is appropriate to use *email* that contains patient information providing all releases have been obtained. Systematic errors are more common in institutions where many people have to interact. *Solo practices* have few people, so there is less chance for errors to occur.

7.2. The answer is D

Melatonin is the substance that has been implicated in mood disorders with a seasonal pattern. Melatonin's exact mechanism of action is unknown, but its production is stimulated in the dark, and it may affect the sleep–wake cycle. Melatonin is synthesized from serotonin, an active neurotransmitter. Decreased nocturnal secretion of melatonin has been associated with depression. A number of other substances also affect behavior, and some known endocrine diseases (e.g., Cushing's disease) have associated psychiatric signs such as psychosis. Symptoms of anxiety or depression may also be explained in some patients by changes in endocrine function.

Luteotropic hormone (LTH) is an anterior pituitary hormone whose action maintains the function of the corpus luteum. *Gonadotropin-releasing hormone (GnRH)*, produced by

the hypothalamus, increases the pituitary secretion of LTH and follicle-stimulating hormone (FSH).

Testosterone is the hormone responsible for secondary sex characteristics in men. A decreased testosterone level has been associated with erectile dysfunction and depression. Testosterone is also formed in small amounts by the ovaries and the adrenal cortex.

Estrogen is the hormone responsible for pubertal changes in girls. Exogenous estrogen replacement therapy has been associated with depression.

7.3. The answer is A

A patient who shows a WBC of 2,000 while taking clozapine (Clozaril) is at high risk for agranulocytosis. If agranulocytosis develops (i.e., if the WBC is less than 1,000) and there is evidence of severe infection (e.g., skin ulcerations), the patient should be placed in *protective isolation on a medical unit*. The clinician should *stop the administration of clozapine at once*, not increase the dosage of clozapine. The patient may or may not have clinical symptoms, such as fever and sore throat. *If the patient does have such symptoms, antibiotic therapy* may be necessary. Depending on the severity of the condition, the physician should *monitor the patient's WBC every 2 days, not 10 days*, or institute *daily, not weekly, CBC tests* with differential.

7.4. The answer is D

Somatizing patients pose a number of difficulties for the consulting and the treating psychiatrist because *they may be reluctant to engage in self-reflection and psychological exploration*. Many somatizing patients live with the fear that their symptoms are not being taken seriously and the parallel fear that something medically serious may be overlooked. The psychiatrist's main task is to acknowledge the suffering conveyed by the patient without necessarily accepting the patient's explanation for symptoms. Clinicians should be curious about both the nature of the psychiatric complaint and the impact of those complaints on the patient's life. While *pain may be a complaint*, it is not a major impediment to treatment.

Severely depressed patients may have difficulty concentrating, thinking clearly, and *speaking spontaneously*. The psychiatrist evaluating a depressed patient may need to be more forceful and directive than usual. Although depressed patients should not be badgered, long silences are seldom useful, and the examiner may need to repeat questions more than once.

Narcissistic patients act as though they are superior to everyone around them, including the doctor. They *may initially idealize the doctor* out of a need to have their doctor be as perfect as they are, but idealization can quickly turn to disdain when they realize that the doctor is only human. Underneath their surface arrogance, narcissistic patients feel desperately inadequate and fear that others will see through them.

7.5. The answer is E (all)

The common lithium pretreatment tests include *serum electrolytes, blood urea nitrogen (BUN), serum creatinine, urinalysis, thyroid function tests (TFTs)* (e.g., thyroid-stimulating hormone, thyroxine [T₄], T₃ resin uptake [T₃RU]), and an *electrocardiogram (ECG)*. In patients with a history suggestive of

possible kidney problems, a 24-hour urine test for creatinine and protein clearance is recommended.

Lithium has effects on a number of organ systems of which the clinician should be aware. Lithium therapy is associated with a benign elevation of the white blood cell count (WBC), which may reach 15,000 cells per mm³. This WBC elevation can sometimes be mistaken for signs of infection or wrongly attributed to lithium in the context of other signs of infection. Furthermore, lithium can have adverse effects on electrolyte balance (especially in patients taking thiazide diuretics), thyroid function, the kidney, and the heart. Its levels may also be altered by nonsteroidal antiinflammatory drugs and aspirin.

Lithium may also lead to nephrogenic diabetes insipidus. Its levels can increase with dehydration. It has been argued that antithyroid antibody testing is helpful in assessing the possibility of lithium-induced hypothyroidism. Because of the potential cardiac teratogenicity of lithium, a pregnancy test in women of childbearing age should be ordered. Periodic follow-up of serum electrolytes, BUN, creatinine, glomerular filtration rate, TFTs, ECG, and 24-hour urine for creatinine and protein clearance are recommended. The frequency and exact makeup of the follow-up testing battery should be dictated by the patient's medical condition.

7.6. The answer is B

Patients have a legal right to access their medical records. This right derives from the belief that medical care is a collaborative process between doctor and patient. The medical record is a narrative that documents all events that occur during the course of treatment. *It is used not only by the treating team but also by regulatory agencies and managed care companies.* It is also crucial in malpractice litigation. Although in theory it is accessible to authorized persons only and is safeguarded for confidentiality, absolute confidentiality cannot be guaranteed.

7.7. The answer is D

Psychiatrists often encounter violent patients in a hospital setting. Frequently, the police bring a patient into the emergency department in some type of physical restraint (e.g., handcuffs). The psychiatrist must establish whether effective verbal contact can be made with the patient or whether the patient's sense of reality is so impaired that productive interviewing is impossible. If impaired reality testing is an issue, *the psychiatrist may have to medicate a violent patient before taking a history.*

With or without restraints, *a violent patient should not be interviewed alone to establish a patient–doctor relationship.* At least one other person should always be present; in some situations, that other person should be a security guard or a police officer. Other precautions include leaving the interview room's door open and sitting between the patient and the door so the interviewer has unrestricted access to an exit if it becomes necessary. The psychiatrist must make it clear, in a firm but calm manner, that the patient may say or feel anything but is not free to act in a violent way.

Delusions should never be directly challenged. Delusions are fixed false ideas that may be thought of as a patient's defensive and self-protective, albeit maladaptive, strategy against over-

whelming anxiety, low self-esteem, and confusion. Challenging a delusion by insisting that it is not true or possible only increases the patient's anxiety and often leads the patient to defend the belief desperately. However, clinicians should not pretend that they believe patients' delusions. Often, the best approach is for clinicians to indicate they understand that the patient believes the delusion to be true but he or she does not hold the same belief.

Being mindful of the possibility of suicide is imperative when interviewing any depressed patient, even if a suicidal risk is not apparent. *The psychiatrist must ask depressed patients if they have suicidal thoughts.* Doing so does not make patients feel worse. Instead, many patients are relieved to talk about their suicidal ideas. The psychiatrist should ask specifically, "Are you suicidal now?" or "Do you have plans to take your own life?" A suicide note, a family history of suicide, or previous suicidal behavior by the patient increases the risk for suicide. Evidence of impulsivity or of pervasive pessimism about the future also places patients at risk. If the psychiatrist decides that the patient is in imminent risk for suicidal behavior, the patient must be hospitalized or otherwise protected.

The way chairs are arranged in the psychiatrist's office affects the interview. *The psychiatrist should not have a seat higher than the patient's seat.* Both chairs should be about the same height so that neither person looks down on the other.

7.8. The answer is E (all)

The patient's history and physical examination typically dictate which tests are ordered. Laboratory abnormalities are typically useful when they optimize outcomes, that is, if the test results will contribute to the detection of a previously unrecognized medical condition or otherwise influence treatment. Diagnostic testing can also serve a therapeutic function by reassuring the patient or family that other serious medical problems do not appear to be present.

Serum amylase may be increased in patients with bulimia nervosa. Serum bicarbonate may be decreased in patients with panic disorder and may be elevated in patients with bulimia nervosa. Serum calcium may be increased in patients with depression in addition to hyperparathyroidism and bone metastases.

7.9. The answer is B

Electroencephalography (EEG) obtained during sleep is a potentially powerful biological marker of psychiatric illness. *In schizophrenia (not major depressive disorder), increased sleep latency has been reported, especially during relapse.* Sleep EEG abnormalities described in major depressive disorder include *an increase (not a decrease) in the overall amount of rapid-eye movement (REM) sleep and a shortened (not lengthened) REM latency.* Medical conditions giving rise to pseudodepressions are typically associated with decreased REM sleep. *Patients with dementia usually have increased amounts of non-REM sleep.*

7.10. The answer is D

Several thyroid function tests, including tests for thyroxine (T₄), are used to rule out hypothyroidism, which can appear with symptoms of depression. Table 7.1 lists the thyroid function test changes associated with hypothyroidism. Common signs and



Table 7.1
Thyroid Function Test Changes in Patients with Hypothyroidism

1. Serum T₄ concentration is decreased.
2. Serum-free thyroxine is decreased.
3. Serum T₃ concentration is decreased.
4. Serum T₃ uptake is decreased.
5. Serum PBI is decreased.
6. Serum TBG is normal.
7. Serum T₃-to-T₄ ratio is increased.
8. Serum TSH is increased

PBI, protein-bound iodine; T₃, triiodothyronine; T₄, thyroxine; TBG, thyroxine-binding globulin; TSH, thyroid-stimulating hormone. Reprinted from MacKinnon RA, Yudofsky SC. *Principles of the Psychiatric Evaluation*. Philadelphia: JB Lippincott; 1991:97, with permission.

symptoms associated with both depression and hypothyroidism include fatigue, weakness, stiffness, poor appetite, constipation, menstrual irregularities, slowed speech, apathy, impaired memory, and even hallucinations and delusions. Neonatal hypothyroidism results in mental retardation and is preventable if the diagnosis is made before birth.

7.11. The answer is C

The patient's personal and developmental history, or *anamnesis*, is an essential focus of the psychiatric history (Table 7.2). The history, which includes psychiatric, medical, and family information, comes from the patient but is often supplemented by collateral information from family members, social referral agencies, previous treating physicians, and old hospital records. It allows the psychiatrist to understand where the patient is, where



Table 7.2
Outline of Psychiatric History

- I. Identifying data
- II. Chief complaint
- III. History of present illness
 - A. Onset
 - B. Precipitating factors
- IV. Past illnesses
 - A. Psychiatric
 - B. Medical
 - C. Alcohol and other substance history
- V. Family history
- VI. Personal history (anamnesis)
 - A. Prenatal and perinatal
 - B. Early childhood (through age 3 years)
 - C. Middle childhood (ages 3–11 years)
 - D. Late childhood (puberty through adolescence)
 - E. Adulthood
 1. Occupational history
 2. Marital and relationship history
 3. Military history
 4. Educational history
 5. Religion
 6. Social activity
 7. Current living situation
 8. Legal history
 - F. Sexual history
 - G. Fantasies and dreams
 - H. Values

the patient has come from, and where the patient is likely to go in the future. It thereby *focuses on much more than a symptom checklist*. It has a structure, which is not a rigid plan for interviewing a patient but is a guide for organizing the psychiatrist's thoughts and questions.

7.12. The answer is B

Concentration is the ability to sustain attention over time. Patients who forget the examiner's question, are distracted by extraneous stimuli, or lose track of what they are saying have impaired concentration.

Memory, which involves concentration, must be evaluated across the spectrum of immediate to remote. One test of immediate recall is to *say* (without inflection or verbal spacing) a series of random numbers and have the patient repeat the series. A progressively longer sequence of numbers is presented, and both forward and backward recalls are tested. Most adults can easily recall five or six numbers forward and three or four in reverse. Recent memory is for events several minutes to hours old and may be evaluated by giving patients the names of three or four unrelated objects and asking them to repeat them after 5 to 10 minutes. Remote memory describes events 2 or more years old. It is usually revealed in the course of obtaining patients' histories, although it may be necessary to confirm facts through collateral sources.

Calculations describe the ability to manipulate numbers mentally. Simple addition, subtraction, or multiplication questions may be used. Problems of money and change are often helpful with patients who have a limited educational background. For example, if a magazine costs \$3.50 and you pay with a \$10 bill, how much change should you be given? Other tests of concentration include counting backward by 3s, reciting the alphabet backward, spelling "world" backward, and naming the months of the year backward.

Abstract reasoning describes the ability to mentally shift back and forth between general concepts and specific examples. A frequently used way to test abstract reasoning is asking *proverb interpretation*. For example, a clinician might ask the patient, "What does it mean when someone says, 'People who live in glass houses shouldn't throw stones?'" A conventional response, one that is able to generalize from the specifics of the proverb to the generalization, might be, "Don't criticize others of what you are guilty yourself." A nonabstract response would address the concrete particulars without grasping the larger meaning, for example, "You would break the glass." (Some answers will be idiosyncratic and difficult to classify as either abstract or concrete: "The police would see you and would come to arrest you.")

7.13. The answer is D

Recent memory is the ability to remember what has been experienced within the past few hours, days, or weeks. It is assessed by asking patients to describe how they spent the past 24 hours, such as *what they had to eat for their last meal*.

Remote, or long-term, memory is the ability to remember events in the distant past. Memory for the remote past can be evaluated by inquiring about important dates in patients' lives, such as *their date of birth or how many siblings they have*. The answers must be verifiable. *Subtracting 7 from 100* is more a test

of concentration. Asking *who the president of the United States is* tests the general fund of information.

7.14. The answer is E

Even though hyperventilation can trigger panic attacks in predisposed persons, *hyperventilation is not as sensitive as lactate provocation in inducing panic attacks. Sodium lactate provokes panic attacks* in a majority (up to 72 percent) of patients with panic disorder. Therefore, lactate provocation is used to confirm a diagnosis of panic disorder. *Sodium lactate can also trigger flashbacks in patients with posttraumatic stress disorder.* Carbon dioxide (CO₂) inhalation also precipitates panic attacks in those so predisposed. *Panic attacks triggered by sodium lactate are not inhibited by peripherally acting β -blockers, such as propranolol (Inderal), but are inhibited by alprazolam (Xanax) and tricyclic drugs.*

7.15. The answer is A

The laboratory is useful for detecting substances of abuse and for evaluating the impact the substance use is having on the patient's body. Often the laboratory detection of abused substances and certain diagnostic test abnormalities related to substance abuse (e.g., abnormal liver function tests in alcohol-abusing patients) are used therapeutically to confront the denial of a patient with a substance abuse disorder.

The most commonly used specimen for the detection of drugs of abuse is urine, although toxicological analyses can also be performed on blood specimens. The period of time that the clinician can detect drugs in blood specimens is typically shorter than the length of time drugs can be detected in urine specimens. However, the length of time that a particular drug of abuse can be detected in the urine is somewhat variable, depending on the specific drug, the duration and amounts of the substance used, and concomitant medical problems (e.g., liver or kidney disease). *Table 7.3 provides a list of some common drugs of abuse that can be detected in urine specimens along with a typical length of time after recent use in which the substance can be detected.* Other specimens that have been studied to detect substance abuse include saliva and hair samples.



Table 7.3
Drugs of Abuse That Can Be Tested in Urine

Drug	Length of Time Detected in Urine
Alcohol	7–12 hours
Amphetamine	48 hours
Barbiturate	24 hours (short acting) 3 weeks (long acting)
Benzodiazepine	3 days
Cocaine	6–8 hours (metabolites for 2–4 days)
Codeine	48 hours
Heroin	36–72 hours
Marijuana	3 days to 4 weeks (depending on use)
Methadone	3 days
Methaqualone	7 days
Morphine	48–72 hours
Phencyclidine (PCP)	8 days
Propoxyphene	6–48 hours



Table 7.4
Facilitating, Expanding, and Obstructive Interventions

Facilitating	Expanding	Obstructive
Reinforcement	Clarifying	Closed-ended questions
Reflection	Associations	Compound questions
Summarizing	Leading	Why questions
Education	Probing	Judgmental questions
Reassurance	Transitions	Minimizing patient's concerns
Encouragement	Redirecting	
Acknowledging emotion		
Humor		
Nonverbal communication		
Silence		

Adapted from McIntyre KM, Norton JR, McIntyre JS. Psychiatric interview, history, and mental status examination. In: Sadock BJ, Sadock VA, Ruiz P, eds. *Kaplan & Sadock's Comprehensive Textbook of Psychiatry*. 9th Ed. Baltimore: Lippincott Williams & Wilkins; 2009:886.

7.16. The answer is C

Obstructive interventions are interviewing techniques that are not helpful for gathering information and the development of a positive patient–doctor relationship. These activities are unclear, unconnected, poorly timed, and not responsive to the patient's issues or concerns (Table 7.4). The interview described above illustrates how a series of close-ended questions can retard the natural flow of the patient's history. It reinforces the patient giving a one-word or brief answer with little or no elaboration. Patients can be a partner in the interview unless blocked by the psychiatrist as with the interview above. Many patients, some of whom have previous experiences with therapy, come prepared to talk about even painful matters.

Facilitating interventions are effective in enabling the patient to continue sharing his or her story and are also helpful in promoting a positive patient–doctor relationship (Table 7.4). An example of a facilitating intervention is *reinforcement*. Brief phrases such as, “I see,” “Go on,” “Yes,” and “Tell me more” all convey the interviewer's interest in the patient's continuing. Although seemingly simplistic, such interventions are very important in the patient's sharing material about him- or herself and other important individuals and events in his or her life. Without these reinforcements, the interview will often become less productive.

Expanding interventions are used to expand the focus of the interview. Such interventions include clarifying, associations, leading, probing, transitions, and redirecting (Table 7.4). These techniques are helpful when the line of discussion has been sufficiently mined, at least for the time being, and the interviewer wants to encourage the patient to talk about other issues. These interventions are most successful when a degree of trust has been established in the interview and the patient believes that the psychiatrist is nonjudgemental about what is being shared.

7.17. The answer is C

In this vignette, the woman uses *displacement* as a neurotic defense mechanism, shifting emotions from an undesirable situation to one that is more personally acceptable to her. *Acting out* is giving in to unconscious impulses by physical means. It is

considered an immature defense mechanism. *Rationalization* is also a neurotic defense mechanism. It makes negative outcomes more acceptable by way of justification (e.g., “I was fired because my boss was in a bad mood”). *Conversion* defense mechanisms are when physical symptoms become the manifestation of an emotional disturbance (e.g., if the woman had become temporarily unable to speak after learning that she was fired). *Dissociation* is another neurotic defense mechanism that consists of blocking out unpleasant feelings or thoughts to avoid emotional consequences.

Answers 7.18–7.22

7.18. The answer is D

7.19. The answer is C

7.20. The answer is E

7.21. The answer is A

7.22. The answer is B

All of the lettered responses are examples of specific defense mechanisms, that is, the unconscious processes used by the patient to deal with emotional conflict or internal or external stressors. *Omnipotence* is when the patient, in order to cope with emotions or stressors, feels or acts as if he or she *possesses*

special powers or abilities and is superior to others. *Altruism* is when the patient gets *pleasure from giving to others* what the patient would have liked to receive. For example, a former alcoholic serves as an Alcoholics Anonymous (AA) sponsor to a new member, thereby achieving a transformative process that may be lifesaving to both the giver and receiver. Many acts of altruism involve free will, but some involuntarily sooth unmet needs. *Sublimation* is when the patient channels potentially *maladaptive feelings or impulses into socially acceptable behavior.* By analogy, sublimation permits the oyster to transform an irritating grain of sand into a pearl. In writing his Ninth Symphony, the deaf, angry, and lonely Beethoven transferred his pain into triumph by putting Schiller’s “Ode to Joy” to music. *Projection* is when the patient *falsely attributes his or her own unacceptable feelings, impulses, or thoughts onto another.* For example, a cheating husband accuses his wife of infidelity. *Reaction formation* is when the patient *substitutes behavior, thoughts, or feelings that are diametrically opposed to his or her own unacceptable thoughts or feelings.* For example, a former alcoholic works to ban the sale of alcohol in his town and annoys his social drinking friends.

Answers 7.23–7.27

7.23. The answer is B

7.24. The answer is A



Table 7.5
Some Laboratory Findings in Mental Disorders

Test	Major Psychiatric Indication	Comments
MCV (average volume of a red blood cell) EBV, CMV	Alcohol abuse	Elevated in alcoholism and vitamin B ₁₂ and folate deficiency
	Cognitive and medical workup	Part of herpes virus group EBV is causative agent for infectious mononucleosis, which can present with depression, fatigue, and personality change CMV can produce anxiety, confusion, mood disorders EBV may be associated with chronic mononucleosis-like syndrome associated with chronic depression and fatigue
Chloride), serum	Eating disorders	Decreased in patients with bulimia and psychogenic vomiting
	Panic disorder	Mild elevation in hyperventilation syndrome, panic disorder
Bromide, serum	Dementia	Bromide intoxication can cause psychosis, hallucinations, delirium
	Psychosis	Part of dementia workup, especially when serum chloride is elevated
EEG	Cognitive and medical workup	Seizures, brain death, lesions; shortened REM latency in depression
		High-voltage activity in stupor; low-voltage fast activity in excitement, functional nonorganic cases (e.g., dissociative states), alpha activity present in the background, which responds to auditory and visual stimuli
		Generalized sharp waves on EEG seen in dementia of Creutzfeldt-Jakob disease

CMV, cytomegalovirus; EBV, Epstein-Barr virus; EEG, electroencephalography; MCV, mean corpuscular volume; RBC, red blood cell; REM, rapid eye movement.

7.25. The answer is A

7.26. The answer is A

7.27. The answer is B

The serotonin metabolite 5-hydroxyindoleacetic acid (5-HIAA) is *elevated* in the urine of patients with *carcinoid tumors*; at times in patients who take *phenothiazine medications*; and in persons who eat foods high in L-tryptophan, the chemical precursor of serotonin (e.g., walnuts, *bananas*, and avocados). The amount of 5-HIAA in cerebrospinal fluid is *decreased* in some persons who display *aggressive behavior* and in some *suicidal patients* who have committed suicide in particularly violent ways.

Answers 7.28–7.32

7.28. The answer is E

7.29. The answer is D

7.30. The answer is B

7.31. The answer is A

7.32. The answer is C

There are physiological changes that occur in some psychiatric disorders. Current laboratory tests do not allow all of them to be demonstrated. However, in some cases, as listed in Table 7.5 (see p. 62), those changes are very much in evidence and are useful in confirming diagnoses.



Table 7.6
Formal Thought Disorders

Circumstantiality: Overinclusion of trivial or irrelevant details that impede the sense of getting to the point.

Clang associations: Thoughts are associated by the sound of words rather than by their meaning (e.g., through rhyming or assonance).

Derailment (synonymous with loose associations): A breakdown in both the logical connection between ideas and the overall sense of goal directedness. The words make sentences, but the sentences do not make sense.

Flight of ideas: A succession of multiple associations so that thoughts seem to move abruptly from idea to idea; often (but not invariably) expressed through rapid, pressured speech.

Neologism: The invention of new words or phrases or the use of conventional words in idiosyncratic ways.

Perseveration: Out-of-context repetition of words, phrases, or ideas.

Tangentiality: In response to a question, the patient gives a reply that is appropriate to the general topic without actually answering the question. Example:

Doctor: "Have you had any trouble sleeping lately?"

Patient: "I usually sleep in my bed, but now I'm sleeping on the sofa."

Thought blocking: A sudden disruption of thought or a break in the flow of ideas.

Answers 7.33–7.37

7.33. The answer is D

7.34. The answer is E

7.35. The answer is A

7.36. The answer is B

7.37. The answer is C

See Table 7.6.

Answers 7.38–7.42

7.38. The answer is C

7.39. The answer is A

7.40. The answer is B

7.41. The answer is D

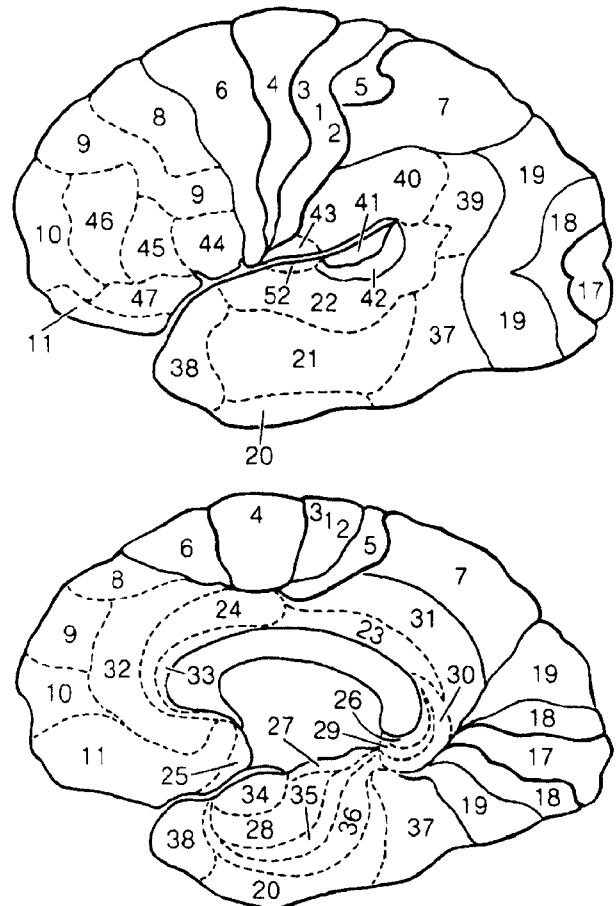


FIGURE 7.1

Brodmann's areas of the human cortex, showing convex surface (top) and medial surface (bottom). (From Elliot HC. *Textbook of Neuroanatomy*. Philadelphia: Lippincott; 1969, with permission.)

7.42. The answer is C

Broca's aphasia (also called nonfluent or *expressive aphasia*) has traditionally been characterized by nonfluent speech but intact auditory comprehension and somewhat impaired repetition. It has long been thought to be associated with damage to the Broca's area of the brain (i.e., left inferior frontal convolution) or Brodman's area 44 (see Figure 7.1 on p. 63). However, more recent neuroimaging data in stroke patients have shown that the full syndrome of Broca's aphasia, including agrammatism (telegraphic speech), is found only in the presence of more extensive damage.

Wernicke's aphasia (also called fluent or receptive aphasia) is characterized by fluent but nonsensical speech, impaired comprehension, and somewhat impaired repetition. It has been associated with damage to Wernicke's area in the region of the superior temporal gyrus. The impaired ability to comprehend language directly affects the individual's ability to self-monitor language output and may be related to a breakdown of the

syntactic structure of language. Unlike patients with Broca's aphasia, who are usually painfully and obviously aware of their communication difficulty, patients with Wernicke's aphasia are typically *not aware of their communication problems*. This is because Wernicke's area is critical for comprehending their own speech as well as the language of others.

Patients with *conduction aphasia* demonstrate relatively intact auditory comprehension and spontaneous speech because of the preservation of Wernicke's and Broca's areas. However, *the ability to repeat words and phrases is significantly impaired* and has traditionally been attributed to *damage to the arcuate fasciculus*, which interconnects Wernicke's and Broca's areas. This type of aphasia is much more subtle and tends to have less negative impact on daily functioning.

Global aphasia is characterized by impairment in *all three dimensions of fluency, comprehension, and repetition* caused by damage to core language areas on the lateral surface of the left hemisphere.

Signs and Symptoms in Psychiatry

Signs are objective (observed by the clinician), and symptoms are subjective (perceived by the patient). The clinician *observes* the patient's agitation; the patient's *complains* of feeling depressed. In psychiatry, signs and symptoms are not as clearly demarcated as in other fields of medicine; they often overlap. Because of this, disorders in psychiatry are often described as syndromes—a group of signs and symptoms that together make up a recognizable condition. There are hundreds of terms used to describe the signs and symptoms of psychiatric illness, and students of psychiatry are encouraged to familiarize themselves with as many as possible. The language of psychiatry is precise, and this allows clinicians to articulate their observations reliably.

In psychiatry, the presentation of signs and symptoms is not always straightforward. A patient may insist that nothing is wrong (that there are no symptoms) when it is obvious to most observers that certain behaviors or ways of thinking are bizarre, damaging, or disruptive. These might be defined as ego-syntonic

symptoms. Ego-dystonic symptoms are those of which the patient is aware and that are experienced as uncomfortable or unacceptable. Another complicating factor is that a clinician may not be able to literally observe or to hear a described symptom (e.g., an auditory hallucination) and may have to depend on indirect evidence (e.g., a patient's preoccupation or distraction) to diagnose it.

Many psychiatric signs and symptoms can be understood as various points of a spectrum or behavior ranging from normal to pathological. It is extremely rare to have a pathognomonic sign or symptom in psychiatry, although in some cases, the disturbance is specific to a neurological deficit. As John Nemiah wrote: "Psychiatry is a science of inexhaustible complexity. It is as infinite as the range of human emotions and behavior. One cannot possibly learn it all." Because of that, psychiatry still remains as much art as science.

Student should study the questions and answers below for a useful review of these topics.

HELPFUL HINTS

The student should be able to define and categorize the signs and symptoms and other terms listed below.

- | | | | |
|-----------------------------|---|--------------------------------|-----------------------|
| ▶ affect and mood | ▶ delusion | ▶ disturbances of perception | ▶ panic |
| ▶ agnosias | ▶ dementia | ▶ dysmegalopsia | ▶ phobias |
| ▶ anxiety | ▶ depersonalization | ▶ dysmetria | ▶ pseudodementia |
| ▶ aphasic disturbances | ▶ disorientation | ▶ <i>fausse reconnaissance</i> | ▶ psychoneurosis |
| ▶ <i>belle indifférence</i> | ▶ disturbances of conation | ▶ <i>folie à deux</i> | ▶ somatopagnosia |
| ▶ cerea flexibilitas | ▶ disturbances of consciousness and attention | ▶ hypnosis | ▶ speech form |
| ▶ coma | ▶ disturbances of intelligence | ▶ illusions | ▶ stereotypy |
| ▶ <i>déjà entendu</i> | ▶ disturbances of memory | ▶ insight and judgment | ▶ synesthesia |
| ▶ <i>déjà pensé</i> | | ▶ <i>jamais vu</i> | ▶ thought content |
| ▶ <i>déjà vu</i> | | ▶ noesis | ▶ trailing phenomenon |
| ▶ delirium | | | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

8.1. Psychoneurosis includes all of the following disorders *except*

- anxiety disorder
- obsessive-compulsive disorder (OCD)
- sexual dysfunction
- dysthymia
- delusional disorder

8.2. Stereotypy is

- ingrained, habitual involuntary movement
- repetitive fixed pattern of physical action or speech

- C. pathological imitation of movements of one person by another
- D. subjective feeling of muscular tension and restlessness secondary to antipsychotic or other medication
- E. temporary loss of muscle tone and weakness precipitated by a variety of emotional states
- 8.3.** Alexithymia is
- A. an unpleasant mood
- B. a state in which a person is easily annoyed and provoked to anger
- C. a loss of interest in and withdrawal from pleasurable activities
- D. an inability to describe or to be aware of emotions or mood
- E. a normal range of mood, implying absence of depressed or elevated emotional state
- 8.4.** Sundowning
- A. is a result of overmedication
- B. is associated with akathisia
- C. is associated with stupor
- D. occurs usually as a function of mania
- E. usually occurs in young individuals
- 8.5.** A psychiatric patient who, although coherent, never gets to the point has a disturbance in the form of thought called
- A. blocking
- B. tangentiality
- C. verbigeration
- D. circumstantiality
- E. word salad
- 8.6.** In DSM-IV-TR, delirium tremens is called
- A. opiate withdrawal delirium
- B. alcohol withdrawal delirium
- C. benzodiazepine withdrawal delirium
- D. alcohol intoxication delirium
- E. amphetamine intoxication delirium
- 8.7.** Asking a patient to interpret a proverb is used as a way of assessing
- A. abstract thinking
- B. impulse control
- C. insight
- D. intelligence
- E. judgment
- 8.8.** Which of the following is a paramnesia?
- A. Eidetic images
- B. *Jamais vu*
- C. Lethologica
- D. Repression
- E. Screen memories
- 8.9.** The “Alice in Wonderland” effect is another name for
- A. dysmegalopsia
- B. dysphasia
- C. trailing phenomenon
- D. dysmetria
- E. *fausse reconnaissance*
- 8.10.** Broca’s aphasia is another term used for
- A. fluent aphasia
- B. jargon aphasia
- C. global aphasia
- D. paraphasia
- E. expressive aphasia
- 8.11.** Compared with primary process thinking, secondary process thinking is
- A. illogical
- B. related to the id
- C. influenced by the environment
- D. immediate gratification seeking
- E. magical
- 8.12.** A 41-year-old man presents to his psychiatrist upon his wife’s request. Four weeks earlier, the patient was hospitalized for a mild injury to his head after crashing his car into a tree. He has a 3-year history of alcoholism. The patient recounts that while shopping in his local grocery store 2 weeks ago, he had the realization that the store clerk is simply an imposter replacing his wife. The patient’s wife insists that her husband is completely delusional and is on the verge of divorcing him if he continues to neglect her as his actual, lawful wife of 15 years. Which of the following types of delusions is the patient expressing?
- A. Capgras syndrome
- B. Clerambault syndrome
- C. Delusional jealousy
- D. Delusion of doubles
- E. Fregoli phenomenon

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading that is most associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 8.13–8.17

- A. *Belle Indifference*
- B. Condensation
- C. Eidetic Image
- D. Glossolalia
- E. Unio mystica

8.13. Feeling of mystic unity with an infinite power

8.14. A person showing disinterest in his or her physical complaint

- 8.15. Unusually vivid or exact mental image of objects previously seen or imagined
 8.16. Unintelligible jargon that has meaning to the speaker but not the listener
 8.17. One symbol stands for a number of components

Questions 8.18–8.21

- A. Confabulation
 B. *Déjà entendu*
 C. *Déjà pensé*
 D. *Déjà vu*
 E. *Jamais vu*

- 8.18. Illusion of auditory recognition
 8.19. Regarding a new thought as a repetition of a previous thought
 8.20. Feeling of unfamiliarity with a familiar situation
 8.21. Regarding a new situation as a repetition of a previous experience

Questions 8.22–8.26

- A. Amnesic aphasia
 B. Broca's aphasia
 C. Coprophasia
 D. Syntactical aphasia
 E. Wernicke's aphasia

- 8.22. Difficulty finding the correct name for an object
 8.23. Spontaneous but incoherent speech
 8.24. Inability to arrange words in proper sequence
 8.25. Understanding remains but speech is grossly impaired
 8.26. Involuntary obscene language

Questions 8.27–8.31

- A. Simultagnosia
 B. Astereognosis
 C. Apraxia
 D. Anosognosia
 E. Adiadochokinesia

- 8.27. Inability to carry out specific tasks
 8.28. Inability to recognize objects by touch
 8.29. Inability to perform rapid alternating movements
 8.30. Inability to recognize one's own neurological deficit
 8.31. Inability to comprehend more than one element of a visual scene at a time

Questions 8.32–8.36

- A. Aiphobia
 B. Cynophobia
 C. Musophobia
 D. Ophidiophobia
 E. Spheksophobia

- 8.32. Fear of mice
 8.33. Fear of bees

- 8.34. Fear of wasps
 8.35. Fear of snakes
 8.36. Fear of dogs

Questions 8.37–8.39

- A. Recall
 B. Registration
 C. Retention

- 8.37. Capacity to hold memories in storage
 8.38. Capacity to add new material to memory
 8.39. Capacity to return previously stored memories to consciousness

Questions 8.40–8.44

- A. Cataplexy
 B. Klein-Levin syndrome
 C. Narcolepsy
 D. Nocturnal myoclonus
 E. Restless legs syndrome

- 8.40. Peculiar feelings during sleep, causing an irresistible need to move around
 8.41. Periods of sleepiness, alternating with confusion, hunger, and sexual activity
 8.42. Sudden attacks of generalized muscle weakness, leading to physical collapse while alert
 8.43. Sudden attacks of irresistible sleepiness that may include hallucinations and cataplexy
 8.44. Repetitive jerking of the legs during sleep, waking patients as well as their partners

Questions 8.45–8.49

- A. Blocking
 B. Clang association
 C. Flight of ideas
 D. Loosening of associations
 E. Neologism

- 8.45. "I was gigglyfying, not just tempifying; you know what I mean."
 8.46. "I was grocery training; but when I ride the grocery, I drive the food everywhere on top of lollipops."
 8.47. "Cain and Abel—they were cannibals. You see, brothers kill brothers—that is laudable. If you ask me, though, never name your son Huxtibal. OK."
 8.48. Patient: "I never wanted." Physician: "Go on. What were you saying?" Patient: "I don't know."
 8.49. "Tired, mired, schmired, wired."

Questions 8.50–8.54

- A. Haptic hallucinations
 B. Olfactory hallucinations
 C. Ictal hallucinations
 D. Autoscopic hallucinations
 E. Migrainous hallucinations

- 8.50.** Most are simple visual hallucinations of geometric patterns, but phenomena such as micropsia and macropsia may occur
- 8.51.** Hallucinations of one's own physical self
- 8.52.** Involve the sense of smell and are most often associated with organic brain disease or psychotic depression
- 8.53.** Occur as part of seizure activity and are typically brief and stereotyped
- 8.54.** Formication

Questions 8.55–8.58

- A. Synesthesia
- B. Paramnesia
- C. Hypermnesia
- D. Eidetic images
- E. Lethologica

- 8.55.** Exaggerated degree of retention and recall
- 8.56.** Temporary inability to remember a name
- 8.57.** Confusion of facts and fantasies
- 8.58.** Sensations that accompany sensations of another modality

Questions 8.59–8.63

- A. Nihilistic delusion
- B. Somatopagnosia
- C. Simultanagnosia
- D. Twilight state
- E. Verbigeration

- 8.59.** Also called *ignorance of the body* and *autotopagnosia*
- 8.60.** Disturbed consciousness with hallucinations
- 8.61.** Depressive delusion that the world and everything related to it have ceased to exist
- 8.62.** Inability to recognize a part of one's body as one's own
- 8.63.** Impairment in the perception or integration of visual stimuli appearing simultaneously

ANSWERS

8.1. The answer is E

A neurosis is a chronic or recurrent nonpsychotic disorder characterized mainly by *anxiety* (not psychosis), which is experienced directly or is altered through a defense mechanism. It remains a useful term and can be sufficient to impair the person's functioning in a number of areas. It appears as a symptom, such as an *obsession*, a compulsion, a phobia, or a *sexual dysfunction*. In DSM-III, a neurotic disorder was defined as follows:

A mental disorder in which the predominant disturbance is a symptom or group of symptoms that is distressing to the individual and is recognized by him or her as unacceptable (ego-dystonic); reality testing is grossly intact. Behavior does not actively violate gross social norms (though it may be quite disabling). The disturbance is relatively enduring or recurrent without treatment and is not limited to a transitory reaction to stressor.

Using the above definition, all of the above disorders are considered neuroses except *delusional disorder*, which is a psychotic disorder.

8.2. The answer is B

Motor behavior is that aspect of the psyche that includes impulses, motivations, wishes, drives, instincts, and cravings as expressed by a person's behavior or motor activity.

Stereotypy is a *repetitive fixed pattern of physical action or speech*. *Echopraxia* is a *pathological imitation of movements of one person by another*. *Cataplexy* is a *temporary loss of muscle tone and weakness precipitated by a variety of emotional states*. *Mannerism* is an *ingrained, habitual involuntary movement*. *Akathisia* is a *subjective feeling of muscular tension secondary to antipsychotic or other medication*, which can cause *restlessness*, pacing, and repeated sitting and standing. It can be mistaken for psychotic agitation.

8.3. The answer is D

Mood is a pervasive and sustained emotion that is subjectively experienced and reported by a patient and observed by others; examples include depression, elation, and anger.

Euthymic mood is a *normal range of mood, implying absence of depressed or elevated mood*. *Alexithymia* is a *person's inability to describe or difficulty in describing or being aware of emotions or mood*. *Irritable mood* is a *state in which a person is easily annoyed and provoked to anger*. *Anhedonia* is a *loss of interest in and withdrawal from all regular and pleasurable activities*. It is often associated with depression.

8.4. The answer is A

Sundowning, or sundowner's syndrome, is *the result of being overly sedated with medications*. It is also seen with Alzheimer's disease. *It occurs in older (not younger) people* and usually occurs at night. It is characterized by drowsiness, confusion, ataxia, and falling. *It has no association with mania*. *Stupor* is a *disturbance of consciousness that is defined by a lack of reaction to and unawareness of one's surroundings; this is not true of sundowning*.

8.5. The answer is B

Tangentiality is the inability to have a goal-directed association of thoughts. The patient never gets from the desired point to the desired goal. *Word salad* is an incoherent mixture of words and phrases. *Circumstantiality* is indirect speech that is delayed in reaching the point but eventually gets there. Circumstantiality is characterized by an overinclusion of details. *Verbigeration* is a meaningless repetition of specific words or phrases. *Blocking* is an abrupt interruption in the train of thinking before a thought or idea is finished. After a brief pause, the person indicates no recall of what was being said or what was going to be said. It is also known as thought deprivation.

8.6. The answer is B

In the DSM-IV-TR, delirium tremens is called *alcohol withdrawal delirium*. Delirium tremens is an acute and sometimes fatal reaction to withdrawal from alcohol, usually occurring 72 to 96 hours after the cessation of heavy drinking. Distinctive characteristics are marked autonomic hyperactivity (tachycardia, fever, hyperhidrosis, and dilated pupils), usually accompanied by tremulousness, hallucinations, illusions, and delusions. Patients admitted to the hospital, especially for surgery, may

present several days into admission with alcohol withdrawal and may be at risk for delirium tremens. *Benzodiazepine withdrawal delirium* may appear similar to alcohol withdrawal and may also be accompanied by seizures. The onset of symptoms depends on the half-life of the particular benzodiazepine. Delirium may also occur with *opioid withdrawal* and has been reported with switching from transdermal fentanyl (Duragesic) to morphine (Duramorph). The presentation may occur because of unknown prior use of opiates in the context of abuse or prescription or methadone (Dolophine) maintenance.

8.7. The answer is A

Asking a patient to interpret a proverb is generally used as a way of assessing whether the person has the capacity for abstract thought. *Abstract thinking*, as opposed to concrete thinking, is characterized primarily by the ability to shift voluntarily from one aspect of a situation to another and to think symbolically. Concrete thinking is characterized by an inability to conceptualize beyond immediate experience or beyond actual things and events. Psychopathologically, it is most characteristic of persons with schizophrenia or organic brain disorders. For example, if the psychiatrist says, "People in glass houses shouldn't throw stones," a patient with schizophrenia may think "because the house might break."

Judgment is the patient's ability to comprehend the meaning of events and to appreciate the consequences of actions. It is often tested by asking how the patient would act in certain standard circumstances (e.g., if the patient smelled smoke in a crowded movie theater). *Impulse control* is the ability to control acting on a wish to discharge energy that is, at the moment, felt to be dangerous, inappropriate, or otherwise ill advised. *Insight* is a conscious understanding of forces that have led to a particular feeling, action, or situation. *Intelligence* is the capacity for learning, recalling, integrating, and applying knowledge and experience.

8.8. The answer is B

Paramnesias are the falsification of memory by distortion of recall. *Jamais vu* is the false feeling of unfamiliarity with a real situation that the person has experienced and, similar to confabulation, *déjà vu*, and false memory, is an example of a paramnesia. *Eidetic images* are visual memories of almost hallucinatory vividness. *Repression* is an unconscious defense mechanism characterized by unconscious forgetting of unacceptable ideas. *A screen memory* is a consciously tolerable memory that covers a painful memory. *Lethologica* is the temporary inability to remember a name or proper noun.

8.9. The answer is A

Dysmegalopsia is sometimes called the "Alice in Wonderland" effect. *Dysmegalopsia* is a distortion in which the size and shape of objects is misperceived. Objects may appear larger (macropsia) or smaller (micropsia) than they actually are. It can result from a retinal disease and more commonly from temporal and parietal lobe lesions. In rare instances, it can be associated with schizophrenia. *Dysphasia* is a difficulty in comprehending oral language (reception dysphasia) or in trying to express verbal language (expressive dysphasia). It is caused by an acquired lesion of the brain. *Trailing phenomenon* is a perceptual abnormality as-

sociated with hallucinogenic drugs in which moving objects are seen as a series of discrete and discontinuous images. *Dysmetria* is an impaired ability to gauge distance relative to movements. It is commonly seen in neurological deficits. *Fausse reconnaissance* is a false recognition and a feature of paramnesia. It can occur in delusional disorders.

8.10. The answer is E

Broca's aphasia is another term used for *expressive aphasia*. Aphasia is any disturbance in the comprehension or expression of language caused by a brain lesion. There are different types of aphasias. *Expressive aphasia* is a disturbance of speech in which understanding remains intact but the ability to speak is grossly impaired. For these patients, speech is difficult to initiate, labored, nonfluent, and halting. Writing is also difficult in that sentence structure is poor. Expressive aphasia is also known as Broca's aphasia, nonfluent aphasia, or motor aphasia. *Fluent aphasia* is characterized by the inability to understand the spoken word. Fluent but incoherent speech is present. Speech is well articulate and grammatically correct, but it lacks in content. It is also known as Wernicke's aphasia, sensory aphasia, and receptive aphasia. *Jargon aphasia* is an aphasia in which the words that are produced are neological or nonsensical. Speech is fluent and effortless with proper grammar, but the patient has difficulty with noun selection. The patient will either replace words that sound or look like the original word or will replace the original word with sounds. The jargon makes sense to the patient but may not make sense to others. *Global aphasia* is a combination of grossly nonfluent aphasia and severe fluent aphasia. All aspects of spoken and written language are impaired in both expression and comprehension. Other cognitive skills remain intact. *Paraphasia* is a form of abnormal speech in which one word is substituted for another, the irrelevant word generally resembling the required one in morphology, meaning, or phonetic composition. The inappropriate word may be a legitimate one used incorrectly (i.e., *clover* instead of *hand*) or a bizarre nonsense expression (i.e., *treen* instead of *train*). Paraphasic speech may be seen in organic aphasias and in mental disorders such as schizophrenia.

8.11. The answer is C

Compared with primary process thinking, secondary process thinking is *influenced by the demands of the environment*. Secondary process thinking is defined as a form of thinking in psychoanalysis that is *logical* (not *illogical*), organized, reality oriented (not *magical*), and influenced by the demands of the environment. It characterizes the mental activity of the *ego* (not the *id*). *Primary process thinking*, on the other hand, is directly related to the functions of the *id* and is characteristic of unconscious mental processes. It is marked by primitive, prelogical thinking and the tendency to seek immediate gratification of instinctual demands. Primary process thinking includes thinking that is illogical and magical. According to Sigmund Freud's *The Project for a Scientific Psychology*, secondary process thinking corrects and regulates the primary process in accord with principles of logic, rationality, and reality. It is aimed at avoiding unpleasure, at delaying instinctual discharge, and at binding mental energy in accordance with the demands of external reality and the subject's moral principles or values.

8.12. The answer is A

Delusions are fixed, false beliefs, strongly held and immutable in the face of refuting evidence, that are not consonant with the person's education, social, and cultural background.

Delusions of misidentification are prominently reported because of their inherently intriguing nature. In *Capgras's syndrome*, the patient believes that someone close to him or her has been replaced by an exact double, as in the above case. It is common in patients with schizophrenia, brain injuries, and dementia. In *Frégoli's phenomenon*, strangers are identified as familiar persons in the patient's life. In the *delusion of doubles*, patients believe that another person has been physically transformed into themselves. In *Clérambault's syndrome*, patients believe that a person is erotically attached to them when in fact they are not. *Delusional jealousy* is a false belief about a spouse's infidelity.

Answers 8.13–8.17**8.13. The answer is E****8.14. The answer is A****8.15. The answer is C****8.16. The answer is D****8.17. The answer is B**

Belle indifference is when a person shows disinterest in his or her physical complaint and may occur in conversion disorder. *Condensation* is a mental process in which one symbol stands for a number of components. An *eidetic image* is an unusually vivid or exact mental image of objects previously seen or imagined. *Glossolalia* is unintelligible jargon that has meaning to the speaker but not to the listener. *Unio mystica* is a feeling of mystic unity with an infinite power.

Answers 8.18–8.21**8.18. The answer is B****8.19. The answer is C****8.20. The answer is E****8.21. The answer is D**

Déjà vu is regarding a new situation as a repetition of a previous experience. *Déjà entendu* is an illusion of auditory recognition. *Déjà pensé* is regarding a new thought as a repetition of a previous thought. *Jamais vu* is a feeling of unfamiliarity with a familiar situation. *Confabulation* is the unconscious filling in of memory by imagining experiences that have no basis in fact.

Answers 8.22–8.26**8.22. The answer is A****8.23. The answer is E****8.24. The answer is D****8.25. The answer is B****8.26. The answer is C**

Broca's, nonfluent, and expressive aphasia are motor aphasias in which there is a disturbance of speech caused by a cognitive disorder in which understanding remains but the ability to speak is grossly impaired, with halting, laborious, and inaccurate speech. In a *syntactical* aphasia, there is an inability to arrange words in proper sequence. In *copropraphasia*, there is the involuntary use of vulgar language, seen in people with Tourette's disorder and some people with schizophrenia. Nominal aphasias, also termed *amnesic aphasias* or anomies, result in difficulty finding the correct name for an object. *Wernicke's aphasia* is a sensory, fluent, or receptive aphasia in which there is an organic loss of ability to comprehend the meaning of words; speech is fluid and spontaneous but incoherent and nonsensical.

Answers 8.27–8.31**8.27. The answer is C****8.28. The answer is B****8.29. The answer is A****8.30. The answer is D****8.31. The answer is A**

Simultagnosia is the inability to comprehend more than one element of a visual scene at a time or to integrate the parts into a whole. *Anosognosia*, or the ignorance of illness, is a person's inability to recognize a neurological deficit as occurring to him- or herself. *Apraxias* refer to the inability to carry out specific tasks. *Astereognosis* is the inability to recognize objects by touch. *Adiadochokinesia* is the inability to perform rapid alternating movements.

Answers 8.32–8.36**8.32. The answer is C****8.33. The answer is A****8.34. The answer is E****8.35. The answer is D****8.36. The answer is B**

Phobias are irrational fears. In an effort to reduce the intense anxiety attached to phobic objects and situations, patients do their best to avoid the feared stimuli. Thus, phobias consist both of the fears and the avoidance components. The fear itself may include all the symptoms of extreme anxiety, up to and including panic. In *specific phobias*, persistent, irrational fears are provoked by specific stimuli. Table 8.1 lists some specific phobias. Common specific phobias include fear of dust, excreta, *snakes*, spiders, heights, and blood.

Answers 8.37–8.39**8.37. The answer is C****8.38. The answer is B**



Table 8.1
Specific Phobias

Acrophobia	Fear of heights
Agoraphobia	Fear of open spaces
Amatophobia	Fear of dust
Apiphobia	Fear of bees
Astrapophobia	Fear of lightning
Blennophobia	Fear of slime
Claustrophobia	Fear of enclosed spaces
Cynophobia	Fear of dogs
Decidophobia	Fear of making decisions
Electrophobia	Fear of electricity
Eremophobia	Fear of being alone
Gamophobia	Fear of marriage
Gatophobia	Fear of cats
Gephyrophobia	Fear of crossing bridges
Gynophobia	Fear of women
Hydrophobia	Fear of water
Kakorrhaphiophobia	Fear of failure
Katagelophobia	Fear of ridicule
Keraunophobia	Fear of thunder
Musophobia	Fear of mice
Nyctophobia	Fear of night
Ochlophobia	Fear of crowds
Odynophobia	Fear of pain
Ophidiophobia	Fear of snakes
Pnigerophobia	Fear of smothering
Pyrophobia	Fear of fire
Scholionophobia	Fear of school
Sciophobia	Fear of shadows
Spheksophobia	Fear of wasps
Technophobia	Fear of technology
Thalassophobia	Fear of the ocean
Triskaidekaphobia	Fear of number 13
Trophophobia	Fear of moving or making changes

8.39. The answer is A

Memory functions have been divided into three stages: registration, retention, and recall. *Registration or acquisition refers to the capacity to add new material to memory.* The material may be sensory, perceptual, or conceptual and may come from the environment or from within the person. For new material to be acquired, the person must attend to the information presented; it must then be processed or cortically organized. Registration and short-term memory retention are usually impaired in disorders that affect vigilance and attention, such as head trauma, delirium, intoxication, psychosis, spontaneous or induced seizures, anxiety, depression, and fatigue. *Retention is the ability to hold memories in storage. Recall is the capacity to return previously stored memories to consciousness.*

Benzodiazepine use has been associated with working memory difficulties, especially in elderly patients. Some short-acting high-potency benzodiazepines used as sleeping pills may be particularly troublesome in this regard.

The retention of memories is impaired in posttraumatic amnesia as well as in a number of cognitive disorders, such as dementia of the Alzheimer's type and Wernicke-Korsakoff syndrome. The latter, which ordinarily results from the chronic thiamine deficiency seen with alcoholism, is associated with pathological alterations in the mammillary bodies and thalamus.

Disturbances in recall can occur even when memories have been registered and are in storage. Research has shown that mem-

ories are not passively retrieved but are actively reconstructed. Each act of recollection requires an act of putting the memory together, not simply lifting it ready made from a file. At times, failure to recall may signify that the memory traces themselves have disappeared and are no longer retrievable. However, difficulties in recall can occur separately, as in the everyday event of forgetting the name of a person or object, only to spontaneously remember it hours or days later.

Answers 8.40–8.44

8.40. The answer is E

8.41. The answer is B

8.42. The answer is A

8.43. The answer is C

8.44. The answer is D

In *narcolepsy*, the patient has *sudden attacks of irresistible sleepiness*, a symptom that may be part of a broader syndrome that includes *cataplexy (sudden attacks of generalized muscle weakness leading to physical collapse in the presence of alert consciousness)*.

Periodic hypersomnia occurs in the *Klein-Levin syndrome*, a condition that typically affects young men, in which periods of sleepiness alternate with confusional states, ravenous hunger, and protracted sexual activity.

Sensory symptoms during sleep, typically described by patients as peculiar feelings in their *legs, causing an irresistible need to move* around, are characteristic of *restless legs syndrome*. The motor abnormality of *repetitive myoclonic jerking of the legs, awakening both patients and their partners*, is known as *nocturnal myoclonus*.

Answers 8.45–8.49

8.45. The answer is E

8.46. The answer is D

8.47. The answer is C

8.48. The answer is A

8.49. The answer is B

All of the lettered responses are examples of specific disturbances in form of thought. *Neologisms* are new words created by the patient, often by combining syllables of other words, for idiosyncratic psychological reasons. *Loosening of associations* is a flow of thoughts in which ideas shift from one subject to another in completely unrelated ways. When the condition is severe, the patient's speech may be incoherent. *Flight of ideas* is a rapid, continuous verbalization or play on words that produces a constant shifting from one idea to another; the ideas tend to be connected, and when the condition is not severe, a listener may be able to follow them; the thought disorder is most characteristic of someone in a manic state. *Blocking* is an abrupt interruption in a train of thinking before a thought or idea is finished; after

a brief pause, the person indicates no recall of what was being said or what was going to be said. The condition is also known as thought deprivation. A person who is using *clang association* uses an association of words similar in sound but not in meaning; the words used have no logical connections and may include examples of rhyming and punning.

Answers 8.50–8.54

8.50. The answer is E

8.51. The answer is D

8.52. The answer is B

8.53. The answer is C

8.54. The answer is A

Hallucinations are perceptions that occur in the absence of corresponding sensory stimuli. Hallucinations are ordinarily subjectively indistinguishable from normal perceptions. Hallucinations are often experienced as being private, so others are not able to see or hear the same perceptions. The patient's explanation for this is typically delusional. Hallucinations can affect any sensory system and sometimes occur in several concurrently.

Autoscopic hallucinations are *hallucinations of one's own physical self*. Such hallucinations may stimulate the delusion that one has a double (*doppelganger*). Reports of near-death out-of-body experiences in which individuals see themselves rising to the ceiling and looking down at themselves in a hospital bed may be autoscopic hallucinations.

Haptic hallucinations involve touch. Simple haptic hallucinations, such as the feeling that *bugs are crawling over one's skin (formication)* are common in alcohol withdrawal syndromes and in cocaine intoxication. When unkempt and physically neglectful patients complain of these sensations, they may be caused by the presence of real physical stimuli such as lice. Some tactile hallucinations (e.g., having sexual intercourse with God) are highly suggestive of schizophrenia but may also occur in patients with tertiary syphilis and other conditions and may in fact be stimulated by local genital irritation. *Olfactory* and *gustatory hallucinations, involving smell and taste*, respectively, have most often been associated with organic brain disease, particularly with the uncinat fits of complex partial seizures. Olfactory hallucinations may also be seen in patients with psychotic depression, typically as odors of decay, rotting, or death.

Ictal hallucinations, occurring as part of seizure activity, are typically brief, lasting only seconds to minutes, and stereotyped. They may be simple images, such as flashes of light, or elaborate ones, such as visual recollections of past experiences. During the hallucinations, the patient ordinarily experiences altered consciousness or a twilight sleep.

Migrainous hallucinations are reported by about 50 percent of patients with migraines. Most are simple *visual hallucinations of geometric patterns, but fully formed visual hallucinations, sometimes with micropsia and macropsia*, may also occur. This complex has been called the *Alice in Wonderland syndrome* after Lewis Carroll's descriptions of the world in *Through the Looking Glass*, mirroring some of his own migrainous experiences. In turn, these phenomena closely resemble visual hallucinations induced by psychedelic drugs such as mescaline.

Answers 8.55–8.58

8.55. The answer is C

8.56. The answer is E

8.57. The answer is B

8.58. The answer is A

In *synesthesia*, the patient experiences *sensations that accompany sensations of another modality* (e.g., an auditory sensation is accompanied by or triggers a visual sensation or a sound is experienced as being seen or accompanied by a visual experience). *Paramnesia* is a *confusion of facts and fantasies*; it leads to a falsification of memory with the distortion of real events by fantasies. *Hypermnesia* is an *exaggerated degree of retention and recall* or an ability to remember material that ordinarily is not retrievable. *Eidetic images*, also known as primary memory images, are *visual memories* of almost hallucinatory vividness. *Lethologica* is the *temporary inability to remember a name* or a proper noun.

Answers 8.59–8.63

8.59. The answer is B

8.60. The answer is D

8.61. The answer is A

8.62. The answer is B

8.63. The answer is C

A *nihilistic delusion* is a depressive delusion that the world and everything related to it have ceased to exist. *Somatopagnosia* (also called *ignorance of the body* and *autotopagnosia*) is the inability to recognize a part of one's body as one's own. *Simultanagnosia* is impairment in the perception or integration of visual stimuli appearing simultaneously. A *twilight state* is disturbed consciousness with hallucinations. *Verbigeration* is the meaningless and stereotyped repetition of words or phrases as seen in people with schizophrenia.

Classification in Psychiatry and Psychiatric Rating Scales

Classification is the systematic arrangement of items in groups or categories according to established criteria. The classification of mental disorders consists of specific mental disorders that are grouped into various classes on the basis of some shared characteristics. Systems of classification for psychiatric diagnoses have several purposes: (1) to distinguish one psychiatric diagnosis from another, so that the clinicians can offer the most effective treatment; (2) to provide a common language among health care professionals; and (3) to explore the still unknown causes of many mental disorders.

The two most important psychiatric classifications are the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) developed by the American Psychiatric Association (APA) in collaboration with other groups of mental health professionals and the *International Classification of Diseases* (ICD) developed by the World Health Organization (WHO). The ICD is the official classification system used in Europe and many other parts of the world, and the DSM is the official coding system used in

the United States. The DSM describes manifestations of mental disorders in terms of its associated features; age, culture, and gender-related features; prevalence, incidence, and risks; course; complications; predisposing factors; familial pattern; and differential diagnosis. It is a multi-axial system that evaluates patients along several variables and contains five axes.

Psychiatric rating scales are a variety of questionnaires, interviews, checklists, outcome assessments, and other instruments that are available to inform psychiatric practice, research, and administration. They aid clinicians by helping them confirm their diagnoses and clarify their thinking in ambiguous situations. They can also provide a baseline for follow-up of the progress of an illness over time or in response to specific interventions. Without these scales, psychiatrists are left with only their clinical impressions, which does not allow for reliable comparison.

Students should study the questions and answers below for a useful review of these topics.

HELPFUL HINTS

The student should be able to define the terms below, especially the diagnostic categories.

- | | | | |
|----------------------------|--|--|--|
| ▶ atheoretical | ▶ familial pattern | ▶ Mini-Mental State Examination | ▶ residual type |
| ▶ classification | ▶ Global Assessment of Functioning Scale | ▶ multi-axial system | ▶ severity-of-stress rating |
| ▶ clinical syndromes | ▶ gross social norms | ▶ partial and full remission | ▶ sex ratio |
| ▶ competence | ▶ highest level of functioning | ▶ predictive validity | ▶ Social and Occupational Functioning Assessment Scale |
| ▶ descriptive approach | ▶ ICD-10 | ▶ predisposing factors | ▶ Structured Clinical Interview for DSM |
| ▶ diagnostic criteria | ▶ impairment | ▶ prevalence | ▶ validity and reliability |
| ▶ differential diagnosis | ▶ Emil Kraepelin | ▶ psychosocial and environmental stressors | |
| ▶ disability determination | ▶ Likert scale | ▶ reality testing | |
| ▶ DSM-IV-TR | | | |
| ▶ ego dystonic | | | |
| ▶ ego syntonic | | | |

CLASSIFICATION IN PSYCHIATRY

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 9.1.** Axis II of the DSM-IV-TR includes which of the following disorders?
- Occupational problem
 - Mental retardation
 - Neoplasms
 - Depressive disorder
 - Adjustment disorders
- 9.2.** Which of the following about the multiaxial diagnostic classification is *true*?
- It is required for proper use of DSM-IV-TR.
 - Axis I precludes disorders diagnosed in infancy, childhood, or adolescence.
 - Axis II consists of personality disorders only.
 - Axis III lists only the physical disorders that are causative of the patient's mental disorder.
 - Axis IV stressors are evaluated based on the clinician's assessment of the stress that an average person with similar sociocultural values and circumstances would experience from the psychosocial stressors.
- 9.3.** A 16-year-old male high school student presents to a clinic because of episodes of diaphoresis and palpitations. These episodes typically last 5 minutes and occur without warning. The patient becomes quite scared during the episodes and begins to tremble. He is very embarrassed about his "mental disorder." The DSM-IV-TR definition of a mental disorder includes all of the following *except*
- deviant behaviors that are primarily between the individual and society
 - not merely expectable responses to particular events
 - significantly increased morbidity
 - significant disability
 - significant distress
- 9.4.** The differentiation of *in full remission* from *recovered* requires consideration of which factor?
- The characteristic course of the disorder
 - The length of time since the last period of disturbance
 - The total duration of the disturbance
 - All of the above
 - None of the above
- 9.5.** Dementia in Alzheimer's disease may be characterized by each of the following terms *except*
- mixed type
 - atypical type
 - acute onset
 - with late onset
 - with early onset
- 9.6.** "Not otherwise specified (NOS)" categories of DSM-IV-TR may be used when
- the cause is uncertain
 - there is an atypical presentation
 - the symptoms are below the threshold for a specific disorder
 - the symptom pattern causes significant distress but has not been included in the DSM-IV-TR classification
 - all of the above
- 9.7.** Which of the following is an appendix diagnosis in DSM-IV-TR?
- Minor depressive disorder
 - Caffeine withdrawal
 - Premenstrual dysphoric disorder
 - Factitious disorder by proxy
 - All of the above
- 9.8.** In DSM-IV-TR, the severity of all the following disorders are captured by the diagnostic code *except*
- major depression
 - mental retardation
 - conduct disorder
 - mania
 - mixed manic-depressive episodes
- 9.9.** True statements about DSM-IV-TR include
- Axis I and Axis II comprise the entire classification of mental disorders.
 - Many patients have one or more disorders on both Axis I and Axis II.
 - The habitual use of a particular defense mechanism can be indicated on Axis II.
 - On Axis III, the identified physical condition may be causative, interactive, and effect or unrelated to the mental state.
 - All of the above
- 9.10.** Which of the following factors are used to designate a principal disorder in a patient with multiple psychiatric disorders?
- Age of onset
 - Relative degree of impairment
 - Reason for seeking treatment
 - All of the above
 - None of the above

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading

that is most associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 9.11–9.15

- A. Axis I
- B. Axis II
- C. Axis III
- D. Axis IV
- E. Axis V

- 9.11. Repeated theft of items that are not needed for personal use or monetary gain
- 9.12. GAF = 45 (on admission), GAF = 65 (at discharge)
- 9.13. Alcohol gastritis secondary to alcohol dependence
- 9.14. The adult manifestation of childhood conduct disorder
- 9.15. Inadequate health insurance

ANSWERS

9.1. The answer is B

Mental retardation is defined as deficits in cognitive abilities as well as in behaviors required for social and personal sufficiency, known as *adaptive functioning*. Recently, the field has replaced the term *mental retardation* with the more precise term of *intellectual instability*. This disorder is found in Axis II of the DSM-IV-TR. This axis also includes personality disorders, which are defined as enduring subjective experiences and behaviors that deviate from cultural standards, are rigidly pervasive, are stable through time and lead to unhappiness and impairment.

Occupational problem is included in Axis IV, which consists of psychosocial and environmental problems. Occupational problems often arise during stressful changes in work, namely, at initial entry into the workforce or when making job changes within the same organization to a higher position. Distress occurs particularly if these changes are not sought and no preparatory training has taken place, as well as during layoffs and at retirement. This is especially true if the retirement is mandatory and the person is not prepared for this event. *Neoplasms* are abnormal growths and dysplastic changes in tissue in animals and plants. Neoplasms are included in Axis III, which consists of physical disorders and general medical conditions that are present in addition to a mental disorder. The physical condition may be causative, the result of a mental disorder, or unrelated to the mental disorder. *Major depressive disorder* and *adjustment disorders* are both included in Axis I, which consists of clinical disorders and other conditions that may be the focus of clinical attention. Major depressive disorder is characterized by an all-encompassing low mood accompanied by low self-esteem and loss of interest or pleasure in normally enjoyable activities. It occurs without a history of a manic, mixed, or hypomanic episode and must last at least 2 weeks. Adjustment disorders are characterized by an emotional response to a stressful event. Typically, the stressor involves financial issues, a medical illness, or a relationship problem.

9.2. The answer is E

Axis IV codes the psychological and environmental problems that contribute significantly to the development or exacerbation of the current disorder. The evaluation of the stressors is *based on the clinician's assessment of the stress that an average person*

with similar values and circumstances would experience. This judgment is based on the amount of change that the stressor causes in the person's life, the degree to which the event is desired and under the person's control, and the number of stressors.

The DSM-IV-TR is a multi-axial system of evaluation in which different domains of information are described on five different axes. *Proper use of the DSM-IV-TR does not require the use of the multi-axial format*. The DSM-IV-TR also allows clinicians who do not wish to use the multi-axial format to list the diagnoses serially, with the principal diagnosis listed first. The purpose of multi-axial evaluation is to promote a comprehensive, biopsychosocial approach toward clinical assessment. *Axis I* consists of clinical disorders and other conditions that may be a focus of clinical attention. It *includes disorders first diagnosed in infancy, childhood, or adolescence, excluding mental retardation and personality disorders, which are coded on Axis II*. *Axis III* lists any physical disorder or general medical condition that is present in addition to the mental disorder. *The physical condition may be causative of, the result of, or unrelated to the mental disorder*.

9.3. The answer is A

Mental disorders must be considered a manifestation of a behavioral, psychological, or biological dysfunction in the individual. *Neither deviant behavior nor conflicts that are primarily between the individual and society are mental disorders unless the deviance or conflict is a symptom of a dysfunction in the individual*. They are conceptualized as *clinically significant behavioral or psychological syndromes* or patterns that occur in an individual and that are associated with present *distress or disability* or with a significantly increased risk of suffering death, pain, disability, or an important loss of freedom. The syndromes *must not be an expectable and culturally sanctioned response to a particular event*.

9.4. The answer is D (all)

In full remission means that there are no longer any symptoms or signs of the disorder present, but it is still clinically relevant to note the disorder. *Recovered* means that the disorder would no longer be noted. The differentiation of *in full remission* and *recovered* requires consideration of many factors, including *the characteristic course of the disorder, the length of time since the last period of disturbance, and the total duration of the disturbance*. However, the differentiation is not absolute. According to DSM-IV-TR, even when a patient is considered "recovered," a history of the disorder may be noted if the physician believes the information is valuable to the case.

9.5. The answer is C

Acute onset refers to vascular dementia, not dementia in Alzheimer's disease, which has a progressive onset. The other four types—*mixed, atypical, with late onset, and with early onset*—all refer to dementia in Alzheimer's disease.

9.6. The answer is E (all)

Each diagnosis has a "not otherwise specified" (NOS) category. According to DSM-IV-TR, an NOS diagnosis may be appropriate either *when the symptoms are below the diagnostic threshold* for one of the specific disorders or when there is an

atypical or mixed presentation. It is similarly applicable if the *symptom pattern has not been included in the DSM-IV-TR classification but it causes clinically significant distress or impairment of functioning or the cause is uncertain.*

9.7. The answer is E (all)

The DSM-IV-TR contains proposed criteria for 20 specific disorders that were not included in the official classification. They are instead included in an appendix so research can be conducted on their reliability, validity, and potential clinical utility (Table 9.1). Many of these disorders are currently captured by the classification under the “not otherwise specified” (NOS) designation. For example, depressive disorder NOS can be used for *minor depressive disorder* or *premenstrual dysphoric disorder*.

9.8. The answer is C

When the full criteria for a disorder are met, its severity can be specified as mild, moderate, or severe. Severity ratings are based on the number and intensity of the symptoms of the disorder and the impairment in occupational and social functioning caused by symptoms. In the DSM-IV-TR, the severity specifier can be applied to all disorders, although specific guidelines for making this rating are provided for only a few disorders. Examples are *mental retardation*, *conduct disorder*, *mania*, *mixed manic-depressive episodes*, and *major depression*. For each of



Table 9.1
Appendix Diagnoses in DSM-IV-TR

Postconcussional disorder
Mild neurocognitive disorder
Caffeine withdrawal
Postpsychotic depressive disorder of schizophrenia
Simple deteriorative disorder
Minor depressive disorder
Recurrent brief depressive disorder
Premenstrual dysphoric disorder
Mixed anxiety depressive disorder
Factitious disorder by proxy
Dissociative trance disorder
Binge-eating disorder
Depressive personality disorder
Passive-aggressive personality disorder (negativistic personality disorder)

these disorders, *except conduct disorder*, the disorder’s severity is captured by the diagnostic code.

9.9. The answer is E (all)

The DSM-IV-TR is a multiaxial system that comprises five axes and evaluates the patient along each. *Axis I and Axis II comprise the entire classification of mental disorders*, including 17 major groupings, more than 300 specific disorders, and almost



Table 9.2
Axes of DSM-IV-TR

Axis I: Clinical Disorders and Other Disorders That May Be a Focus of Clinical Attention

Disorders usually first diagnosed in infancy, childhood, or adolescence (excluding mental retardation)
Delirium, dementia, and amnesic and other cognitive disorders
Mental disorders caused by general medical condition not elsewhere classified
Substance-related disorder
Schizophrenia and other psychotic disorders
Mood disorders
Anxiety disorders
Somatoform disorders
Factitious disorders
Dissociative disorders
Sexual and gender identity disorder
Eating disorders
Sleep disorders
Impulse-control disorders not elsewhere classified
Adjustment disorders
Other conditions that may be a focus of clinical attention

Axis II: Personality Disorder and Mental Retardation

Paranoid personality disorder
Schizoid personality disorder
Schizotypal personality disorder
Antisocial personality disorder
Borderline personality disorder
Histrionic personality disorder
Narcissistic personality disorder
Avoidant personality disorder
Dependent personality disorder
Obsessive-compulsive personality disorder
Personality disorder not otherwise classified
Mental retardation

Axis III: General Medical Conditions

Infectious and parasitic diseases
Neoplasms
Endocrine, nutritional, and metabolic diseases and immunity disorders
Diseases of blood and blood-forming organs
Diseases of the nervous system and sense organs
Diseases of the circulatory system
Diseases of the respiratory system
Diseases of the digestive system
Diseases of the genitourinary system
Complications of pregnancy, childbirth, and puerperium
Diseases of the skin and subcutaneous tissues
Diseases of the musculoskeletal system and connective tissue
Congenital anomalies
Certain conditions originating in the perinatal period
Symptoms, signs, and ill-defined conditions
Injury and poisoning

Axis IV: Psychosocial and Environmental Problems

Problems with primary support group
Problems related to the social environment
Educational problems
Occupational problems
Housing problems
Economic problems
Problems with access to health care services
Problems related to interaction with crime or the legal system
Other psychosocial and environmental problems

400 categories. In many instances, the patient has *one or more disorders on both Axes I and II*. For example, a patient may have major depressive disorder noted on Axis I and borderline and narcissistic personality disorders on Axis II. In general, multiple diagnoses on each axis are encouraged. Axis II consists of personality disorders and mental retardation. The *habitual use of a particular defense mechanism can be indicated on Axis II*.

Axis III lists any physical disorder or general medical condition that is present in addition to the mental disorder. *The identified physical condition may be causative* (e.g., hepatic failure causing delirium), *interactive* (e.g., gastritis secondary to alcohol dependence), *and effect* (e.g., dementia and human immunodeficiency virus [HIV]-related pneumonia), *or unrelated to the mental disorder*. When a medical condition is causally related to a mental disorder, a mental disorder due to a general medical condition is listed in Axis I and the general medical condition is listed on both Axis I and III.

9.10. The answer is D (all)

Many patients have more than one psychiatric disorder. When more than one psychiatric disorder is present in a patient, the

clinician denotes one as the principal diagnosis. Several methods have been used by researchers in identifying principal disorders in patients with multiple psychiatric disorders. Some of the factors used to designate a principal disorder include *age of onset* (i.e., the principal diagnosis being the one that came first), *relative degree of impairment* (i.e., the principal diagnosis being the one responsible for the greatest degree of psychiatric impairment), and *reason for seeking treatment* (i.e., the principal diagnosis being the one that is chiefly responsible for the seeking of treatment). In the DSM-IV-TR, the determination of the principal diagnosis is based on the reason for clinical service.

Answers 9.11–9.15

9.11. The answer is A

9.12. The answer is E

9.13. The answer is C

9.14. The answer is B



Table 9.3
Global Assessment of Functioning (GAF) Scale

Consider psychological, social, and occupational functioning on a hypothetical continuum of mental health–illness. Do not include impairment in functioning due to physical (or environmental) limitations.

Code	(Note: Use intermediate codes when appropriate, e.g., 45, 68, 72.)		
100	Superior functioning in a wide range of activities, life's problems never seem to get out of hand, is sought out by others because of his or her many positive qualities. No symptoms.	40	Some impairment in reality testing or communication (e.g., speech is at times illogical, obscure, or irrelevant) OR major impairment in several areas, such as work or school, family relations, judgment, thinking, or mood (e.g., depressed man avoids friends, neglects family, and is unable to work; child frequently beats up younger children, is defiant at home, and is failing at school).
91			
90	Absent or minimal symptoms (e.g., mild anxiety before an exam), good functioning in all areas, interested and involved in a wide range of activities, socially effective, generally satisfied with life, no more than everyday problems or concerns (e.g., an occasional argument with family members).	31	
81		30	Behavior is considerably influenced by delusions or hallucinations OR serious impairment in communication or judgment (e.g., sometimes incoherent, acts grossly inappropriately, suicidal preoccupation) OR inability to function in almost all areas (e.g., stays in bed all day; no job, home, or friends).
80	If symptoms are present, they are transient and expectable reactions to psychosocial stressors (e.g., difficulty concentrating after family argument): no more than slight impairment in social, occupational, or school functioning (e.g., temporarily falling behind in schoolwork).	21	
71		20	Some danger of hurting self or others (e.g., suicide attempts without clear expectation of death, frequently violent, manic excitement) OR occasionally fails to maintain minimal personal hygiene (e.g., smears feces) OR gross impairment in communication (e.g., largely incoherent or mute).
70	Some mild symptoms (e.g., depressed mood and mild insomnia) OR some difficulty in social, occupational, or school functioning (e.g., occasional truancy, or theft within the household), but generally functioning pretty well, has some meaningful interpersonal relationships.	11	
61		10	Persistent danger of severely hurting self or others (e.g., recurrent violence) OR persistent inability to maintain minimal personal hygiene OR serious suicidal act with clear expectation of death.
60	Moderate symptoms (e.g., flat affect and circumstantial speech, occasional panic attacks) OR moderate difficulty in social, occupational, or school functioning (e.g., few friends, conflicts with peers or coworkers).	1	
51		0	Inadequate information.
50	Serious symptoms (e.g., suicidal ideation, severe obsessional rituals, frequent shoplifting) OR any serious impairment in social, occupational, or school functioning (e.g., no friends, unable to keep a job).		
41			

The GAF Scale is a revision of the GAS (Endicott J, Spitzer RL, Fleiss JL, Cohen I. The Global Assessment Scale: a procedure for measuring overall severity of psychiatric disturbance. *Arch Gen Psychiatry*. 1976;33:766) and CGAS (Shaffer D, Gould MS, Brasio J, et al. Children's Global Assessment Scale (CGAS). *Arch Gen Psychiatry*. 1983;40:1228). They are revisions of the Global Scale of the Health-Sickness Rating Scale (Luborsky I. Clinicians' judgments of mental health. *Arch Gen Psychiatry*. 1962;7:407).

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9.15. The answer is D

The DSM-IV-TR is a multiaxial system that consists of five axes. Each axis covers a different aspect of functioning (Table 9.2). Each axis should be covered for each diagnosis. *Axis I* consists of clinical disorders and conditions that may be a focus of clinical attention. Examples include mood disorders, anxiety disorders, and impulse disorders not otherwise specified (i.e., *kleptomania*). *Axis II* consists of personality disorders (i.e., *antisocial personality disorder*) and mental retardation. The habitual use of a particular defense mechanism can be indicated on Axis II.

Axis III lists any physical disorder or general medical condition that is present in addition to the mental disorder. The physical condition may be causative (e.g., kidney failure causing delirium), the result of a mental disorder (e.g., *alcoholic gastritis secondary to alcohol dependence*), or unrelated to the mental disorder. *Axis IV* is used to code psychosocial and environmental problems that contribute significantly to the development or exacerbation of the current disorder. Examples include divorce, threat of job loss, and *inadequate health insurance*. *Axis V* is a global assessment in which the clinician evaluates the highest level of functioning by the patient in the past year. The *Global Assessment of Functioning (GAF) Scale* (see Table 9.3 on p. 77) is a 100-point scale, with 100 representing the highest level of functioning in all areas.

PSYCHIATRIC RATING SCALES QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 9.16.** A Likert scale is
- a formal interview that specifies the exact wording of questions to be asked.
 - a formal interview that provides only some specific wording.
 - an ordinal scale of grading with 3 to 7 points that measures severity, intensity, frequency, or other attributes.
 - a construct that describes the presence or absence of a given attribute.
 - a construct that provides a quantitative assessment along a continuum of intensity, frequency, or severity.
- 9.17.** Which of the following scales is *not* used to rate a mood disorder?
- Raskin Depression Rating Scale
 - Montgomery-Åsberg Scale
 - Hamilton Rating Scale
 - Defensive Functioning Scale
 - Beck Depression Inventory
- 9.18.** The global assessment of function
- is a composite of social, occupational, and psychological functioning
 - is assessed by a 50-point global assessment of functioning scale
 - included impairment attributable to physical limitations
 - is recorded on Axis IV of a multiaxial evaluation
 - bears no relation to prognosis
- 9.19.** The Hamilton Anxiety Rating Scale
- is a 10-item scale
 - includes an item on mood
 - addresses suicidality
 - is exclusively history based
 - excludes somatic symptoms
- 9.20.** The Social and Occupational Functioning Assessment Scale (SOFAS)
- is included on Axis III
 - may not be used to rate functioning of a past period
 - may not be used to rate functioning at the time of the evaluation
 - is scored independently from the person's psychological symptoms
 - does not include impairment in functioning that is caused by a general medical condition
- 9.21.** Which of the following is *true* of the Defensive Functioning Scale?
- Apathetic withdrawal is measured on the "action level."
 - Idealization is measured in the "major image-distorting level."
 - Splitting is measured in the "minor image-distorting level."
 - Sublimation is measured on the "mental inhibitions level."
 - Suppression is measured on the "disavowal level."
- 9.22.** In the Scale for the Assessment of Negative Symptoms (SANS), which of the following is assessed?
- Vocal inflection
 - Sexual activity
 - Impersistence at work
 - Social inattentiveness
 - All of the above
- 9.23.** An example of a rating scale that measures severity and tracking change in specific symptoms is
- the Structured Clinical Interview for the DSM-IV-TR (SCID)
 - the Short Form 36 (SF-36)
 - the Behavior and Symptom Identification Scale (BASIS)
 - the Mini-Mental State Examination (MMSE)
 - the CAGE

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each

numbered phrase or statement, select the *one* lettered heading that is most associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 9.24–9.28

- A. Social and Occupational Functioning Assessment Scale (SOFAS)
- B. Positive and Negative Syndrome Scale (PANSS)
- C. Global Assessment of Functioning (GAF)
- D. Brief Psychiatric Rating Scale (BPRS)
- E. Defensive Functioning Scale (DFS)

- 9.24.** Covers the defense mechanisms used by the patient to cope with stressors
- 9.25.** Used in Axis V of DSM-IV-TR
- 9.26.** Measures the negative and positive symptoms of schizophrenia and other psychotic disorders
- 9.27.** Used to track a patient's progress in social and occupational areas
- 9.28.** Used to measure the severity of psychiatric symptomatology

Questions 9.29–9.31

- A. Hamilton Rating Scale
- B. Social and Occupational Functioning Assessment Scale
- C. Yale-Brown Scale
- D. None of the above

- 9.29.** Abnormal involuntary movements
- 9.30.** Depression and anxiety
- 9.31.** Obsessive-compulsive symptoms

Questions 9.32–9.36

- A. Systematic Assessment of Treatment-Emergent Events (SAFTEE)
- B. Composite International Diagnostic Instrument (CIDI)
- C. Montgomery-Åsberg Depression Rating Scale (MADRS)
- D. Conners Rating Scales
- E. Abnormal Involuntary Movement Scale (AIMS)

- 9.32.** A family of instruments designed to measure a range of childhood and adolescent psychopathology
- 9.33.** Aimed at maximizing sensitivity to change in established depression
- 9.34.** A systematic tool used to assess side effects in clinical trials
- 9.35.** Used to measure dyskinetic symptoms in patients taking antipsychotic drugs
- 9.36.** A fully structured diagnostic interview designed for lay administration

ANSWERS

9.16. The answer is C

A Likert scale is an ordinal scale of grading with 3 to 7 points that measure severity, intensity, frequency, or other attributes. They

are most often partially or fully anchored, assigning a meaning to each numeric level. The same anchors can apply to all of the items, or the instrument may provide specific anchors for each. Examples of rating scales scored on a Likert scale are the Brief Psychiatric Rating Scale (BPRS), which measures the severity of psychiatric symptomatology, and the Montgomery-Åsberg Depression Rating Scale (MADRS), which is used in clinical trials and is aimed at maximizing sensitivity to change in established depression.

Rating scales are available in a variety of formats. Some are simply checklists or guides to observation that help the clinician achieve a standardized rating. Others are self-administered questionnaires or tests. Still others are formal interview that may be fully structured or partly structured. A fully structured formal interview *specifies the exact wording of questions to be asked*. A partly structured formal interview *provides only some specific wording* along with suggestions for additional questions or probes. Whether fully structured or not, instruments may be written such that all questions are always included, or they may have formal skip-out sections to limit administration time. Psychiatric practitioners and investigators assess a broad range of areas, referred to as *constructs*, to underscore the fact that they are not simple, direct observations of nature. Some constructs are viewed as categorical, or classifying, and others are seen as continuous or measuring. A categorical construct *describes the presence or absence of a given attribute* (e.g., competency to stand trial) or the category best suited to a given individual among a finite set of options (e.g., assigning a diagnosis). A continuous construct *provides a quantitative assessment along a continuum of intensity, frequency, or severity*. In addition to symptom severity and functional status, multidimensional personality traits, cognitive status, social support, and many other attributes are generally measured continuously.

9.17. The answer is D

The Defensive Functioning Scale (DFS) covers the defensive mechanisms used by the patient to cope with stressors. All of the other scales listed are rating scales used for mood disorders.

9.18. The answer is A

The Global Assessment of Functioning (GAF) Scale is considered a *composite of three major areas: social functioning, occupational functioning, and psychological functioning*. It is documented on Axis V and is a 100-point scale based on a continuum of mental health and illness. It is *specifically not designed to include impairment in functioning attributable to physical or environmental limitations*. People with a *high level of functioning before an episode of illness generally have a better prognosis than those who had a low level of functioning*.

9.19. The answer is B

The Hamilton Anxiety Rating Scale addresses *depressed mood, focusing on loss of interest, lack of pleasure in hobbies, depression, early wakening, and diurnal swing*. It is a 14-item scale that includes assessment of *sensory, cardiovascular, respiratory, gastrointestinal, genitourinary, and autonomic symptoms*. It includes an assessment of *behavior at the time of interview, focusing on fidgeting, restlessness, tremor, a furrowed brow, a strained face, sighing, facial pallor, swallowing, belching, brisk tendon jerks, dilated pupils, and exophthalmos*. There is *no item dedicated to assessing suicidal ideation or intent*.

9.20. The answer is D

The Social and Occupational Functioning Assessment Scale (SOFAS) is a new scale included in a DSM-IV-TR appendix. The scale differs from the Global Assessment of Functioning (GAF) Scale in that it focuses only on the person's level of social and occupational functioning. *It is scored independently of the severity of the person's psychological symptoms.* And unlike the GAF scale, the SOFAS may include *impairment in functioning* that is caused by a general *medical condition*. The SOFAS may be used to rate functioning at the time of the evaluation, or *it may be used to rate functioning of a past period.* The SOFAS is included on Axis V, not Axis III.

9.21. The answer is A

The "action level" is characterized by defensive functioning that deals with internal or external stressors by action or withdrawal, such as apathetic withdrawal. *Suppression and sublimation are rated on the "high adaptive level,"* the level of defensive functioning that result in the optimal adaptation in the handling of stressors. *Idealization is rated on the "minor image-distorting" level,* the level characterized by distortion in the image of self, body, or others that may be used to regulate self-esteem. *Splitting is rated on the "major image-distorting level,"* the level characterized by gross distortion or misattribution of the image of self or others.

9.22. The answer is E (all)

The Scale for the Assessment of Negative Symptoms (SANS) has five main categories: affective blunting, avolition, anhedonia-asociality, and attention. In the affective blunting category, *vocal inflection*, eye contact, facial expression, spontaneous movements, expressive gestures, and affective responsiveness are measured. The avolition-apaty category measures *impersistence at work* or school, grooming, and physical anergia. The anhedonia-asociality category looks at *sexual activity*, recreational interests, ability to feel intimacy, and relationships with peers and friends. The attention category assesses *social inattentiveness* and inattentiveness during the mental status examination. Another scale, used extensively for both positive and negative symptoms is called the Positive and Negative Syndrome Scale (PANSS).

9.23. The answer is D

Most psychiatric rating scales in common use fall into one or more of the following categories: making a diagnosis, measuring severity and tracking change in specific symptoms, in general functioning, or in overall outcome and screening for conditions that may or may not be present. *The Mini-Mental State Examination (MMSE)* is an example of a rating scale that measures the severity and tracking change in specific symptoms. It is used to provide a bedside assessment of a broad array of cognitive function, including orientation, attention, memory, construction, and language. The MMSE is used commonly to screen for dementia and in following the progression of dementia over time in the clinic or in clinical trials. A patient with mild dementia tends to score from 20 to 24, moderate from 11 to 19, and severe from 0 to 10.

The Structured Clinical Interview for the revised fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) (SCID) is a rating scale used to make a diagnosis. It was developed to provide standard DSM-III-R Axis I diagnosis (SCID-I) based on an efficient but thorough evaluation. It has since been updated for the DSM-IV-TR. SCID-II is a similar measure for Axis II disorders. *The Short Form 36 (SF-36)* is a rating scale used in general functioning. It is a general measure of health status from the patient's point of view that would be independent to specific diseases. SF-36 is focused on the individual's functional status as it relates to physical problems, pain, and emotional difficulties over 4 weeks. An acute version, focused on the past week, is also available; however, the 4-week version is most widely used. *The Behavior and Symptom Identification Scale (BASIS)* is a rating scale used in overall outcome. It was developed to provide a broad but brief overview of psychiatric symptoms and functional status from the patient's point of view for use in assessing the outcome of psychiatric treatment. *The CAGE* is used to screen for significant alcohol problems in a variety of settings, which could then be followed up by clinical inquiry. CAGE is an acronym for the four questions that comprise the instrument: (1) Have you ever felt you should cut down on your drinking? (2) Have people annoyed you by criticizing your drinking? (3) Have you ever felt bad or guilty about your drinking? (4) Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover (eye-opener)? Each "yes" answer is a score of 1. A score of 1 or more warrant a follow-up, and a score of 2 or more strongly suggests significant alcohol problems.

Answers 9.24–9.28**9.24. The answer is E****9.25. The answer is C****9.26. The answer is B****9.27. The answer is A****9.28. The answer is D**

The Social and Occupational Functioning Assessment Scale (SOFAS) is used to track a patient's progress in social and occupational areas. It is independent of the psychiatric diagnosis and the severity of the patient's psychological symptoms. It is clinician rated on a 100-point scale based on all available information, with clear descriptions of each 10-point interval. It is not widely used. *The Positive and Negative Syndrome Scale (PANSS)* measures negative and positive symptoms of schizophrenia and other psychotic disorders. It includes 30 items on three subscales: seven items covering positive symptoms (e.g., hallucinations and delusions), seven covering negative symptoms (e.g., blunt affect), and 16 covering general psychopathology (e.g., guilt or uncooperativeness). Each item is scored on a seven-point, item-specific Likert scale ranging from 1 to 7. The PANSS has become the standard tool for assessing clinical outcome in treatment studies of schizophrenia and other psychotic disorders. *The Global Assessment of Functioning (GAF)* is used in Axis V of the DSM-IV-TR to report a clinician's judgment of a patient's overall level of functioning. The information is used to decide on a treatment plan and later to measure the plan's effect. Its ratings

are often required for billing purposes. Similar to the SOFAS, it is clinician-rated on a 100-point scale. The *Brief Psychiatric Rating Scale (BPRS)* is a short scale used to measure the severity of psychiatric symptomatology. It is most useful for patients with fairly significant impairment. Its 18 items are rated on a 7-point item-specific Likert scale from 0 to 6, with the total score ranging from 0 to 108. Reliability is good to excellent when raters are experienced. The *Defensive Functioning Scale (DFS)* covers the defense mechanisms used by the patient to cope with stressors. Humor, suppression, anticipation, and sublimation are among the healthiest defense mechanisms. Denial, acting out, projection, and projective identification are some of the most pathological.

Answers 9.29–9.31

9.29. The answer is D

9.30. The answer is A

9.31. The answer is C

Psychiatric rating scales can be specific or comprehensive and can measure both internally experienced variables (e.g., mood) and externally observable variables (e.g., behavior). Specific scales measure discrete thoughts, moods, or behaviors, such as *obsessive thoughts* and temper tantrums; comprehensive scales measure broad abstractions, such as *depression and anxiety*. Well-known rating scales include the *Hamilton Rating Scale for depression and anxiety* and the *Yale-Brown Scale for obsessive-compulsive symptoms*.

Social adjustments (e.g., occupational success and quality of relationships with the *Social and Occupational Functioning Assessment Scale [SOFAS]*) and psychoanalytic concepts (e.g., ego strength and defense mechanisms) are also measured by some rating scales, although the reliability and the validity of such scales are lower.

Answers 9.32–9.36

9.32. The answer is D

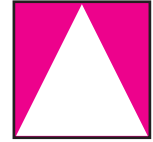
9.33. The answer is C

9.34. The answer is A

9.35. The answer is E

9.36. The answer is B

The *Systematic Assessment of Treatment-Emergent Events (SAFTEE)* is a systematic tool used to assess side effects in clinical trials. It has two versions, a general inquiry form (SAFTEE-GI) and a much more detail specific inquiry form (SAFTEE-SI) that incorporates a formal review of symptoms. The SAFTEE-GI is rated based on three open-ended questions regarding new symptoms experienced in the past week. To avoid bias, the questions are focused on novelty of the symptoms rather than on any relationship to the drug. The *Composite International Diagnostic Instrument (CIDI)* is a fully structured diagnostic interview designed for lay administration. It was developed from the Diagnostic Interview Schedule (DIS) for international use and covers both ICD and DSM criteria of 11 diagnostic modules; it does not cover antisocial personality or childhood onset disorders. The *Montgomery-Åsberg Depression Rating Scale (MADRS)* is aimed at maximizing sensitivity to change in established depression. It can be administered by a psychiatrist, other physician, or psychiatric nurse, and a structured interview guide and self-report version are also available. It is frequently used in clinical trials of antidepressants and may also have a role in assessing the impact of treatment in clinical practice. The *Conners Rating Scales* are a family of instruments designed to measure a range of childhood and adolescent psychopathology. They are most commonly used in the assessment of attention-deficit/hyperactivity disorder (ADHD). The *Abnormal Involuntary Movement Scale (AIMS)* is used to measure dyskinesic symptoms in patients taking antipsychotic drugs. It has 12 items, each of which is rated on an item-specific 5-point severity scale ranging from 0 to 4. Total scores are not generally reported. Instead, changes in global severity and individual areas can be monitored over time.



Delirium, Dementia, and Amnestic and Other Cognitive Disorders and Mental Disorders Due to a General Medical Condition

Cognition includes language, memory, judgment, orientation, conducting interpersonal relationships, performing actions (praxis), and problem solving. Cognitive disorders reflect disruption in one or more of these domains, and are frequently complicated by behavioral symptoms. These disorders include delirium, dementia, and amnestic disorders. Although other psychiatric disorders can exhibit some cognitive impairment as a symptom, with the aforementioned disorders, cognitive impairment is the cardinal symptom.

Delirium is marked by short-term confusion and changes in cognition. It is a life-threatening yet potentially reversible disorder of the central nervous system that often involves perceptual disturbances, abnormal psychomotor activity, sleep cycle impairment, and a waxing and waning level of consciousness. It is not a disease but rather a syndrome and has many causes, all of

which result in similar patterns of signs and symptoms relating to the patient's level of consciousness and cognitive impairment.

Dementia is marked by severe impairment of memory, judgment, orientation, and cognition. Unlike delirium, deficits in dementia occur in the context of a clear sensorium. The critical clinical points of dementia are the identification of the syndrome and the clinical workup of its cause.

Amnestic disorder is marked by memory impairment and forgetfulness. Memory impairments are associated with significant deficits in social or occupational functioning. Amnestic disorders are causally related to general medical conditions, such as head trauma. This characteristic distinguishes them from the dissociative disorders involving memory impairments.

The questions and answers below can test knowledge of the subject.

HELPFUL HINTS

Students should be able to define the signs, symptoms, and syndromes listed below.

- ▶ Addison's disease
- ▶ AIP
- ▶ ALS
- ▶ amnestic disorders
- ▶ anxiety disorder due to a general medical condition
- ▶ auditory, olfactory, and visual hallucinations
- ▶ beclouded dementia
- ▶ beriberi
- ▶ black patch
- ▶ catastrophic reaction
- ▶ cognitive disorders
- ▶ confabulation
- ▶ cretinism
- ▶ Creutzfeldt-Jakob disease
- ▶ Cushing's syndrome
- ▶ delirium
- ▶ delusional disorder
- ▶ dementia
- ▶ dementia of the Alzheimer's type
- ▶ diabetic ketoacidosis
- ▶ Down syndrome
- ▶ dysarthria
- ▶ epilepsy
- ▶ general paresis
- ▶ granulovacuolar degeneration
- ▶ Huntington's disease
- ▶ hypnagogic and hypnopompic hallucinations
- ▶ hypoglycemic, hepatic, and uremic encephalopathy
- ▶ interictal
- ▶ intoxication and withdrawal
- ▶ intracranial neoplasms
- ▶ Korsakoff's syndrome
- ▶ kuru
- ▶ Lilliputian hallucinations
- ▶ memory
- ▶ mild cognitive impairment
- ▶ mood disorder due to a general medical condition
- ▶ multiple sclerosis
- ▶ myxedema
- ▶ neurofibrillary tangles
- ▶ normal aging
- ▶ normal-pressure hydrocephalus
- ▶ parkinsonism
- ▶ partial versus generalized seizures
- ▶ pellagra
- ▶ pernicious anemia
- ▶ personality change due to a general medical condition

- | | | | |
|----------------------|---|------------------------------------|-----------------------------|
| ▶ Pick's disease | ▶ retrograde versus anterograde amnesia | ▶ sundowner syndrome | ▶ transient global amnesia |
| ▶ prion disease | ▶ senile plaques | ▶ systemic lupus erythematosus | ▶ transient ischemic attack |
| ▶ pseudobulbar palsy | ▶ short-term versus long-term memory loss | ▶ tactile or haptic hallucinations | ▶ vascular dementia |
| ▶ pseudodementia | | | ▶ vertebrobasilar disease |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 10.1.** Which statement below about the interrelationship between delirium and dementia is *true*?
- Delirium is a risk factor for the development of dementia.
 - Fully two-thirds of cases of dementia occur in patients with delirium.
 - The vulnerability of the brain in patients with dementia may predispose the patient to delirium.
 - Dementia contributes to a loss of independence among patients with delirium.
 - Dementia can alter the course of an underlying delirium.
- 10.2.** Alzheimer's dementia is
- associated with hypoactive levels of acetylcholine
 - associated with pathognomonic neurofibrillary tangles
 - more common in men
 - linked to chromosome 7
 - a clinical diagnosis
- 10.3.** Creutzfeldt-Jakob disease is characterized by
- rapid deterioration
 - myoclonus
 - diffuse, symmetric, rhythmic slow waves and sharp spikes in EEG
 - postmortem definitive diagnosis
 - all of the above
- 10.4.** The core features of dementia with Lewy bodies include
- disturbance of consciousness
 - recurrent detailed visual hallucinations
 - cognitive decline caused by cerebrovascular disease
 - progressive language dysfunction
 - gradual changes in personality
- 10.5.** Transient global amnesia
- is more common in women
 - is more common in young people
 - is associated with loss of self-identity
 - has a characteristically abnormal EEG pattern
 - has been linked to vascular instability
- 10.6.** Which of the following is a *true* statement about Parkinson's disease?
- It is the result of the degeneration of the substantia nigra, globus pallidus, putamen, and caudate.
 - It cannot be distinguished from parkinsonian syndromes that arise from a variety of causes.
 - Dementia is more common in early-onset disease.
 - It is a prototype of a cortical degenerative disease.
 - The only cells affected are those containing dopamine.
- 10.7.** Clinical characteristics of vascular dementia
- are the same regardless of the area of infarction
 - are the same regardless of the number of infarctions
 - are the same regardless of the type of vasculature involved
 - are the same regardless of whether or not deficits accumulate or resolve quickly after small strokes
 - none of the above
- 10.8.** Huntington's disease
- is linked to the long arm of chromosome 4
 - is associated with "boxcar" ventricles on brain scanning
 - is not usually associated with emotional symptoms
 - shows striatal hypermetabolism on positron emission tomography (PET)
 - affects men only
- 10.9.** The criteria for mild cognitive impairment includes all of the following *except*
- memory complaints
 - objective memory impairment
 - preserved general cognitive function
 - intact daily living activities
 - dementia
- 10.10.** Which of the following is a prion disease?
- Creutzfeldt-Jakob disease
 - Variant Creutzfeldt-Jakob disease
 - Kuru
 - Fatal familial insomnia
 - All of the above

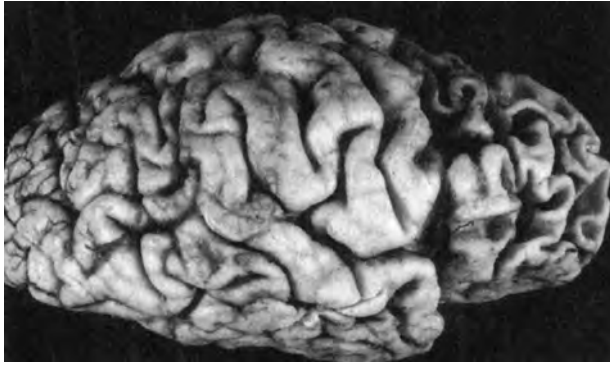


FIGURE 10.1

Pick's disease gross pathology. This demonstrates the marked frontal and temporal atrophy seen in frontotemporal dementias, such as Pick's disease. (Courtesy of Dashyant Purohit, MD, Associate Professor, Department of Neuropathology, Mount Sinai School of Medicine, New York, NY.)

- 10.11.** The brain depicted in Figure 10.1 shows frontal and temporal atrophy associated with frontotemporal dementia. Which of the following statements is *true*?
- Pick bodies are found in all the frontotemporal dementias.
 - Pick's disease has its own separate diagnostic criteria in the DSM-IV-TR.
 - Frontotemporal dementia is more likely to affect older populations.
 - Progressive nonfluent aphasia is a frontotemporal dementia.
 - Genetic linkage to chromosome 9 has been found in frontotemporal dementia.
- 10.12.** True statements about Alzheimer's disease include all of the following *except*
- The age at onset is earlier in patients with a family history of the disease.
 - Brain imaging studies are used to exclude other identifiable causes.
 - The early-onset type may have a more rapidly progressive course.
 - There is clear phenomenological separation between early-onset and late-onset cases.
 - No features of the physical examination or laboratory evaluation are pathognomonic.
- 10.13.** Factors that predispose to delirium include all of the following *except*
- vision impairment
 - use of bladder catheterization
 - smoking history
 - age older than 60 years
 - abnormal glucose level
- 10.14.** Which of the following statements about delirium is *true*?
- It is independent of age.
 - It has no bearing on overall patient prognosis.
 - Male gender is an independent risk factor.
 - Postcardiotomy patients rarely develop delirium.
 - Few hospitalized medically ill patients develop delirium.
- 10.15.** The most common cause of delirium within 3 days post-operatively in a 40-year-old man with a history of alcohol dependence is
- delirium tremens
 - infection
 - pain medication
 - postoperative pain
 - stress of surgery
- 10.16.** Which clinical features may be associated with delirium?
- Disorganized thought processes
 - Hallucinations
 - Illusions
 - Mood alterations
 - All of the above
- 10.17.** Which of the following drugs is best used to treat acute delirium?
- Amobarbital (Amytal)
 - Chlorpromazine (Thorazine)
 - Diazepam (Valium)
 - Haloperidol (Haldol)
 - Physostigmine salicylate (Antilirium)
- 10.18.** In delirium,
- epinephrine is hypothesized to be the major neurotransmitter involved.
 - the major pathway implicated is the dorsal tegmental pathway.
 - the electroencephalogram (EEG) usually shows diffuse background quickening.
 - there is hyperactivity in the nucleus accumbens.
 - the level of consciousness is preserved.
- 10.19.** Mr. E is 68 years old and married with two children. His wife reports changes in his memory and behavior over the past 9 years. She reports that he frequently forgets his keys, he goes into the house to get something and then forgets what he wants, and he has changed from an outgoing pleasant person to one who avoids conversation. She says that he seems hostile at times for no apparent reason. Mr. E is in good general health, taking no medications, and his alcohol consumption is limited to two to three beers a day.
- What may you observe on examination of Mr. E?
- A grasp reflex
 - Paranoid delusions

- C. Pathological crying
D. Poor hygiene
E. All of the above
- 10.20.** In the case described above, what is the most likely diagnosis other than dementia for Mr. E?
A. Chronic paranoid schizophrenia
B. Delirium
C. Factitious disorder
D. Major depression
E. Normal aging
- 10.21.** Which of the following would be consistent with the progression of Mr. E's illness?
A. Frequent nighttime pacing
B. Increased agitation
C. Physical threats toward his wife
D. Urinary incontinence
E. All of the above
- 10.22.** The EEG shown in Figure 10.2 is an example of
A. partial seizure
B. grand mal epilepsy
C. petit mal epilepsy or absence seizure
D. psychomotor epilepsy
E. none of the above
- 10.23.** True statements about the epidemiology of dementia include all of the following *except*
A. The risk for vascular dementia is six times greater than that for Alzheimer's disease among people older than 75 years.
B. There appears to be a higher rate of vascular dementia in men, and a higher rate of Alzheimer's disease in women.
C. In geriatric psychiatric populations, Alzheimer's disease is much more common than vascular dementia.
D. The estimated prevalence in a population older than age 65 years is consistently reported to be about 5 percent.
E. Dementia of the Alzheimer's type is the most common dementing disorder in North America, Scandinavia, and Europe.
- 10.24.** Delirium
A. has an insidious onset.
B. rarely has associated neurological symptoms.
C. generally has an underlying cause residing in the central nervous system.
D. may be successfully treated with lithium.
E. generally causes a diffuse slowing of brain activity.
- 10.25.** Of the following cognitive functions, the one most likely to be difficult to evaluate and interpret on formal testing is
A. abstraction
B. calculations
C. memory
D. reading and writing
E. visuospatial and constructional ability
- 10.26.** Amnesic disorders
A. are invariably persistent, lasting at least 1 month.
B. are defined by a better memory for remote events than recent ones.

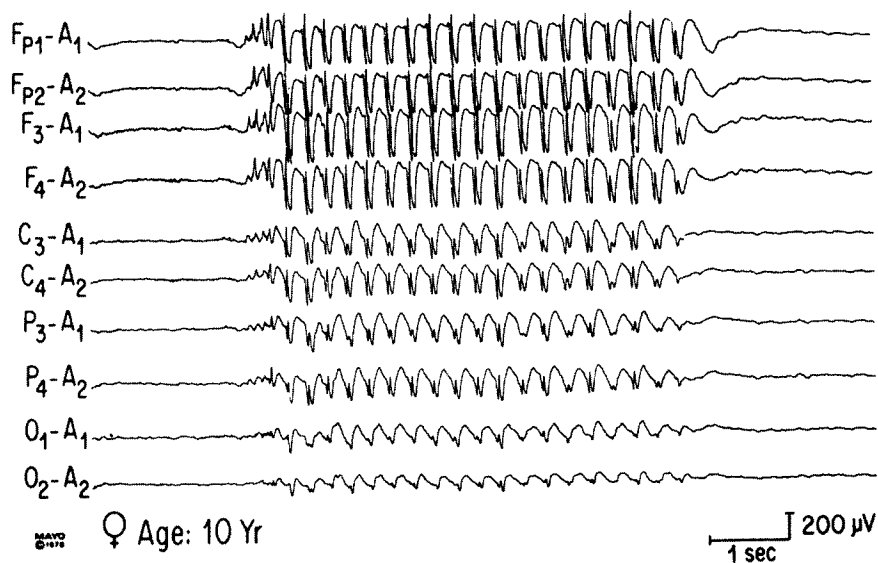


FIGURE 10.2
Electroencephalogram (EEG).

- C. do not typically impair the ability to immediately repeat a sequential string of information (e.g., digit span).
- D. typically have a gradual onset.
- E. none of the above

10.27. Amnestic disorders

- A. are secondary syndromes caused by primary etiologies.
- B. are most often caused by nutritional deficiencies related to chronic alcohol dependence.
- C. may be diagnosed in the context of delirium.
- D. may be diagnosed in the context of dementia.
- E. none of the above

10.28. True statements about vascular causes of dementia include

- A. Approximately 15 percent of cerebrovascular disease is caused by cerebral hemorrhage related to hypertension.
- B. It is believed that tissue damage in infarction underlies vascular dementia.
- C. The most common cause of cerebral infarction is thromboembolism from a large vessel plaque.
- D. It comprises the second most common cause of dementia.
- E. All of the above

10.29. Frontal lobe degeneration is associated with

- A. apathy
- B. disinhibition
- C. lack of insight
- D. social misconduct
- E. all of the above

10.30. Risk factors for the development of delirium include

- A. increased severity of physical illness
- B. older age
- C. preexisting dementia
- D. use of anticholinergics
- E. all of the above

10.31. Bovine spongiform encephalopathy is associated with all of the following *except*

- A. amyloid plaques
- B. astrocyte proliferation in the cerebral cortex
- C. “bulls eye” rash on the thigh
- D. neuronal loss
- E. spongiform vacuolization

10.32. Which of the following statements about psychotic symptoms in dementia is *false*?

- A. Psychotic symptoms usually occur in the early stages of illness.
- B. Psychotic symptoms often co-occur with behavioral disturbances.

- C. A common early psychotic symptom is paranoia.
- D. Patients may see deceased relatives.
- E. Psychotic symptoms can lead to aggression.

10.33. A 77-year-old widower presents for a routine health check-up accompanied by his daughters. His medical history is significant for diabetes, hypertension, and peripheral vascular disease. Eight months ago, he had a stroke and still experiences left leg weakness. His daughter reports that her father sometimes does not remember to call her back and forgets to take his diabetes medications at least once a week. Once in a while, the patient is noted to “word hunt” during conversations. The patient insists he is “fine” and that he drives places without getting lost, does his own grocery shopping, and is never in a bad mood. The patient visits his best friend once a month. He admits that occasionally he has difficulty falling asleep. Which of the following is the most likely diagnosis?

- A. Depression
- B. Alzheimer’s dementia
- C. Frontotemporal dementia
- D. Vascular dementia
- E. Normal aging changes

Directions

Each set of lettered headings below is followed by a list of numbered phrases. For each numbered phrase, select

- A. if the item is associated with A only.
- B. if the item is associated with B only.
- C. if the item is associated with both A and B.
- D. if the item is associated with neither A nor B.

Questions 10.34–10.39

- A. Delirium
- B. Dementia

10.34. Catastrophic reaction

10.35. Decreased acetylcholine activity

10.36. Hallucinations

10.37. High mortality rate

10.38. Insight present

10.39. Sundowning

Questions 10.40–10.45

- A. Cortical dementia
- B. Subcortical dementia

10.40. Huntington’s chorea

10.41. Alzheimer’s disease

10.42. Early decline in calculation, naming, and copying skills

10.43. Language is relatively spared

10.44. Presenting symptoms more likely to be a personality change or mood disturbance

10.45. Presenting symptoms more often reflect cognitive impairment

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading that is most associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 10.46–10.50

- A. Dementia caused by Huntington's disease
 - B. Dementia caused by HIV disease
 - C. Dementia caused by Parkinson's disease
 - D. Dementia caused by head trauma
 - E. Dementia caused by Creutzfeldt-Jakob disease
- 10.46.** This is the third most common dementia in individuals younger than age 50 years.
- 10.47.** The incidence has been reduced because of highly active antiretroviral therapy.
- 10.48.** The disease is transmitted by a mutation on chromosome 4.
- 10.49.** This is a subcortical dementia with slowed processing speed.
- 10.50.** The only treatment is supportive care.

Questions 10.51–10.55

- A. Creutzfeldt-Jakob disease
 - B. Huntington's disease
 - C. Multiple sclerosis
 - D. Neurosyphilis
 - E. Normal-pressure hydrocephalus
- 10.51.** Death occurring 15 to 20 years after the onset of the disease, with suicide being common
- 10.52.** Death occurs within 2 years of the diagnosis
- 10.53.** Manic syndrome with neurological signs in up to 20 percent of cases
- 10.54.** Treatment of choice is a shunt
- 10.55.** More prevalent in cold and temperate climates than in the tropics and subtropics

ANSWERS

10.1. The answer is C

Delirium and dementia are highly interrelated. *Dementia is the leading risk factor for delirium* (not vice versa), and *fully two-thirds of cases of delirium occur in patients with dementia* (not vice versa). Thus, the underlying *vulnerability of the brain in patients with dementia may predispose them to the development of delirium* as a result of insults related to acute medical illnesses, medications, or environmental perturbations.

Delirium is defined by the acute onset of fluctuating cognitive impairment and a disturbance of consciousness. The hallmark symptom is an impairment of consciousness, usually occurring in association with global impairments of cognitive functions. Dementia is defined as progressive impairment of

cognitive functions occurring in clear consciousness (i.e., in the absence of delirium). Global impairment of intellect is the essential feature, manifested as difficulty with memory, attention, thinking, and comprehension. Although it is not likely that delirium itself causes the pathological change in dementia, there is no question that *delirium* (not dementia) contributes to worsening functional status, *loss of independence*, and poorer outcome among patients with dementia. *Delirium can alter the course of an underlying dementia*, with dramatic worsening of the trajectory of cognitive decline, resulting in more rapid progression of functional losses and worse long-term outcomes.

10.2. The answer is A

The neurotransmitters that are most often implicated in the pathophysiological condition of Alzheimer's disease are *acetylcholine and norepinephrine*, both of which are *hypoactive in the disease*. The disease has shown *linkage to chromosomes 1, 14, and 21, not chromosome 7*. Although it is commonly diagnosed in the clinical setting after other causes of dementia have been excluded, *the final diagnosis of Alzheimer's disease requires a brain biopsy*. The classic gross neuroanatomical observation of the brain from patients with this disease is diffuse atrophy. The classic microscopic findings are senile plaques, neuronal loss, synaptic loss, and granulovascular degeneration of the neurons. *Neurofibrillary tangles are not unique to Alzheimer's disease* but also occur in Down syndrome, dementia pugilistica, Parkinson-dementia complex of Guam, and the brains of normal people as they age. *The risk factors for developing Alzheimer's dementia include being female*, having a first-degree relative with the disorder, and having a history of head injury.

10.3. The answer is E (all)

Creutzfeldt-Jakob disease is an infection that causes a rapidly progressive cortical-pattern dementia. The infectious agent, a *prion*, is a subviral replicative protein that is now known to cause a variety of so-called spongiform diseases in animals and humans. The age at onset of Creutzfeldt-Jakob disease is usually in the sixth or seventh decade of life, although onset can occur at any age. The incidence is one in 1,000,000. The clinical symptoms vary with progression of the illness and depend on the regions of the brain that become involved. Patients may present initially with nonspecific symptoms, including lethargy, depression, and fatigue. Within weeks, however, more fulminant symptoms develop, including progressive cortical-pattern dementia, myoclonus, and pyramidal and extrapyramidal signs. Although blood, cerebrospinal fluid, and imaging studies are unremarkable, the *electroencephalogram (EEG) may demonstrate a characteristic pattern of diffuse, symmetric, rhythmic slow waves and sharp spikes*. A *presentation with rapid deterioration, myoclonus, and the characteristic EEG pattern* should raise suspicion of Creutzfeldt-Jakob disease. The *definitive diagnosis is made by postmortem microscopic examination*, which demonstrates spongiform neural degeneration and gliosis throughout the cortical and subcortical gray matter; white matter tracts are usually spared. Prion disease can incubate for decades before the emergence of clinical symptoms and subsequent rapid progression. Reported routes of transmission include invasive

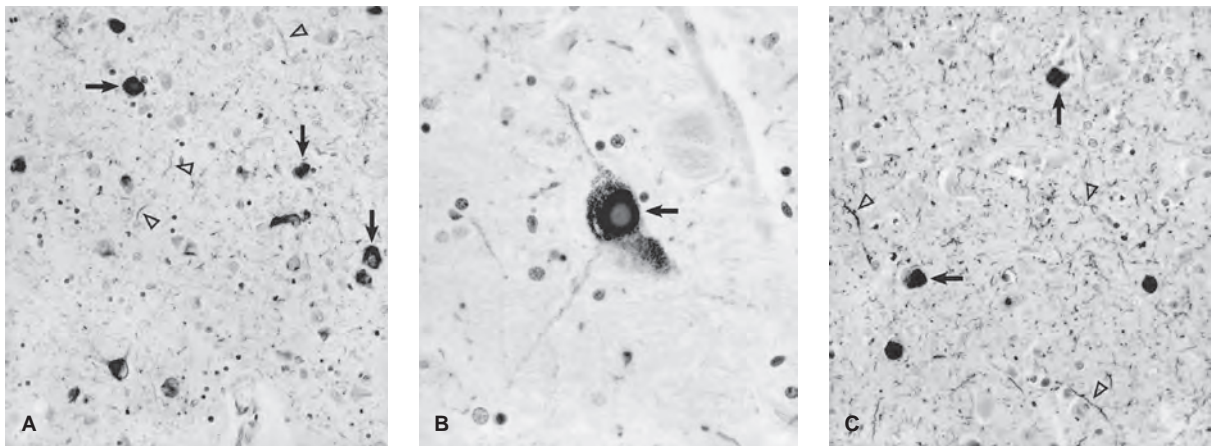


FIGURE 10.3

Photomicrographs of Lewy body pathology. (A) Abnormal accumulation of α -synuclein aggregates demonstrated by immunocytochemistry in the amygdala of a subject with dementia. Lewy bodies appear as dense intracellular inclusions (arrows), but staining of neuronal processes can be seen throughout the neuropil (arrowheads). In individuals in whom Lewy body pathology occurs concurrently with Alzheimer's disease, the amygdala is often the only region affected. (B) Classic appearance of a Lewy body (arrow) in a large pigmented neuron of the substantia nigra. (C) Lewy body pathology in the neocortex. Both Lewy bodies (arrows) and substantial labeling of neuronal processes in the neuropil (arrowheads) are evident. (Magnification for [A] and [B] 200 \times ; for [C], 400 \times . All images provided courtesy of Dr. Ronald L. Hamilton, Department of Pathology, Division of Neuropathology, University of Pittsburgh School of Medicine.)

body contacts, such as direct tissue transplantation (e.g., corneal transplants) or hormonal extracts (e.g., human growth hormone before synthetic supplies were developed). Familial patterns have also been reported, which suggests that there may be genetic susceptibility to infection or vertical transmission of the disease agent. No antiviral agents have been shown to be effective in retarding or slowing disease progress, although amantadine (Symmetrel) has been reported occasionally to have had some success. Death usually ensues within 6 months to 2 years of onset.

10.4. The answer is B

The core features of dementia with Lewy bodies include (1) fluctuating cognition with pronounced variations in attention and alertness; (2) recurrent visual hallucinations, which are typically well formed and detailed; and (3) spontaneous motor features

of parkinsonism. At least one core feature must be present for clinical diagnosis, although the presence of two core features leads to a higher sensitivity. Dementia with Lewy bodies is a neurodegenerative dementia characterized by progressive cognitive decline of sufficient magnitude to interfere with normal social or occupational function. It is now considered to be the second most common cause of dementia after Alzheimer's disease. Figure 10.3 shows cortical Lewy bodies. Table 10.1 lists the pathological features of dementia with Lewy bodies, and Table 10.2 includes recently developed consensus guidelines for clinical diagnosis.

The core symptoms of delirium include a disturbance of consciousness that is accompanied by a change in cognition that develops rapidly, usually over hours or days, and tends to fluctuate during the course of the day.

Vascular dementia refers to cognitive decline caused by ischemic, hemorrhagic, or oligemic injury to the brain as a consequence of cerebrovascular and cardiovascular disease. The diagnosis is made if dementia is associated with focal neurological signs and symptoms and neuroimaging evidence of cerebrovascular disease is present. Frontotemporal dementia is a progressive change in personality and behavior, with variable degrees of language and other cognitive impairment. There are two core clinical patterns: (1) gradual changes in personality and behavior and (2) progressive language dysfunction. The hallmark of the behavioral presentation is typically a combination of disinhibition, apathy, and limited insight.

10.5. The answer is E

Transient global amnesia is a syndrome characterized by the sudden onset of a profound anterograde amnesia and retrograde amnesia for the past weeks or months. There is an association with migraine in about 15 percent of cases, leading to etiologic speculation of vascular instability. It occurs in men more than

Table 10.1
Pathological Features Associated with Dementia with Lewy Bodies

Essential for diagnosis
Lewy bodies
Associated but not essential
Lewy-related neurites
Plaques (all morphological types)
Neurofibrillary tangles
Regional neuronal loss, especially brainstem (substantia nigra and locus ceruleus) and nucleus basalis of Meynert
Microvacuolation (spongiform change) and synapse loss
Neurochemical abnormalities and neurotransmitter deficits

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Table 10.2
Consensus Criteria for the Clinical Diagnosis of Probable and Possible Dementia with Lewy Bodies

1. The central feature required for a diagnosis of dementia with Lewy bodies is progressive cognitive decline of sufficient magnitude to interfere with normal social or occupational function. Prominent or persistent memory impairment may not necessarily occur in the early stages but is usually evident with progression. Deficits on tests of attention and of frontal-subcortical skills and visuospatial ability may be especially prominent.
2. Two of the following core features are essential for a diagnosis of probable dementia with Lewy bodies, and one is essential for possible dementia with Lewy bodies:
 - a. Fluctuating cognition with profound variations in attention and alertness
 - b. Recurrent visual hallucinations that are typically well formed and detailed
 - c. Spontaneous motor features of parkinsonism
3. Features supportive of the diagnosis are:
 - a. Repeated falls
 - b. Syncope
 - c. Transient loss of consciousness
 - d. Neuroleptic sensitivity
 - e. Systematized delusions
 - f. Hallucinations in other modalities
4. A diagnosis of dementia with Lewy bodies is less likely in the presence of:
 - a. Stroke disease, evident as focal neurologic signs or on brain imaging
 - b. Evidence on physical examination and investigation of any physical illness or other brain disorder sufficient to account for the clinical picture

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women, and typically after age 50 years. The patient is generally able to recall his or her own identity and that of relatives or close associates but is not able to retain his or her immediate context even when explained to the patient repeatedly. There is no disturbance of consciousness and no detectable seizure activity on electroencephalogram obtained during the event.

10.6. The answer is A

Described by James Parkinson in 1817, Parkinson's disease is a prototype of a subcortical, not cortical, degenerative disease. It is idiopathic and must be distinguished from parkinsonian syndromes that arise from a variety of causes.

Parkinson's disease is the result of the degeneration of subcortical structures, primarily the substantia nigra but also the globus pallidus, putamen, and caudate. Cells containing dopamine are predominantly affected, although serotonergic and other systems are disrupted as well. Medication-induced parkinsonism presumably involves only a dysfunction of the basal ganglia structures without any obvious pathoanatomical abnormality. The typical age at the onset of Parkinson's disease is between 50 and 60 years but may vary widely with the onset sometimes occurring 1 to 2 decades earlier. The clinical course is chronic and progressive with severe disability attained after approximately

10 years. A smaller proportion of patients have a more rapidly progressive disease, and a yet smaller group has a slowly progressive disorder in which deterioration plateaus or remains minimal for 2 to 3 decades.

In general, subcortical diseases are thought to impinge on the three Ms—movement, mentation, and mood. In Parkinson's disease, all three of these areas are affected, although not always uniformly. The movement abnormalities are characterized by the triad of tremor, rigidity, and bradykinesia. The tremor and rigidity may be unilateral or bilateral. Bradykinesia is manifested by slowness in the initiation and execution of movement. The typical presentation, with a masklike facies, minimal blink, and monotonic speech, is a concomitant of the rigidity and slowness of movement. Other prominent characteristics include postural changes such as chin-to-chest flexion and gait abnormalities. The gait is characteristically slow and shuffling, and the patient has difficulty turning (en bloc turning) and trouble initiating and stopping walking. Seborrhea, sialorrhea, excessive fatigue, and constipation are also common.

Mentation or cognition in Parkinson's disease is an area of controversy. Most patients complain of slowed thinking, sometimes called *bradyphrenia*. In general, approximately 20 to 30 percent of patients with Parkinson's disease are found to have dementia, with the likelihood greater in those with late-onset disease (after age 70 years). Neuropathologically, cases intermediate between Parkinson's disease and Alzheimer's disease exist, with Lewy bodies in the substantia nigra suggesting the former. There is no clear line of division as yet between a process resembling dementia of the Alzheimer's type on which abnormal parkinsonian movements are superimposed and a clinical presentation of Parkinson's disease in which the patient slowly develops a global progressive dementia.

10.7. The answer is E (none)

The clinical characteristics of a vascular dementia depend on the area of infarction. As such, there is a wide variability in the possible presenting features of a vascular dementia. Single infarctions may result in the discrete loss of one particular function (e.g., language) without dementia per se. However, some strategically located infarctions can affect more than one domain of cognitive function and mimic the clinical picture of a global dementia. An example is the angular gyrus syndrome that can occur with large posterior lesions in the dominant hemisphere. It has been characterized as manifesting with alexia with agraphia, aphasia, constructional disturbances, and Gerstmann syndrome (acalculia, agraphia, right-left disorientation, and finger agnosia). Although the findings are similar to those of dementia of the Alzheimer's type, angular gyrus syndrome can be distinguished by its abrupt onset; the presence of focal neurological, electroencephalographic, and imaging abnormalities; and preservation of memory and ideomotor praxis.

Vascular dementia is more commonly associated with multiple infarctions. The infarctions may take the form of numerous large infarctions accompanied by widespread cognitive and motor deficits. Tiny, deep infarctions—*lacunae*—result from disease of the small arteries that usually involves subcortical structures, such as the basal ganglia, thalamus, and internal capsule. Lacunar strokes are frequently associated with hypertension. The neurological and cognitive deficits may resolve quickly after each

of the small strokes; however, the deficits may accumulate, leading to a persisting functional and intellectual decline. In the past, a stepwise pattern of deterioration was described for that type of vascular dementia, but it was dropped from the text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) criteria because no specific pattern of deterioration has been reliably demonstrated for vascular dementias. Similarly, the description of patchy deficits has been deleted in light of the *marked variability in presentation of vascular dementia, depending on the type of vasculature and the site and extent of infarction.*

10.8. The answer is B

In Huntington's disease, computed tomography and magnetic resonance imaging scans show caudate atrophy and characteristic "boxcar" ventricles. Functional imaging, such as positron emission tomography (PET), may show striatal hypometabolism. It is transmitted by a single autosomal dominant gene found on the short arm of chromosome 4. It is usually diagnosed in the late 30s or early 40s and affects men and women equally. Emotional symptoms often appear early and include irritability, depression, or psychosis.

10.9. The answer is E

The criteria proposed by the Mayo Clinic Alzheimer's Disease Research Center (MCADRC) for mild cognitive impairment are (1) *memory complaint*, preferably qualified by an informant; (2) *objective memory impairment* for age and education; (3) *preserved general cognitive function*; (4) *intact activities of daily living*; and (5) *not demented.*

10.10. The answer is E (all)

Prion disease is a group of related disorders caused by a transmissible infectious protein known as a prion. Included in this group are *Creutzfeldt-Jakob disease* (CJD), Gerstmann-Straussler syndrome (GSS), *fatal familial insomnia* (FFI), and *kuru*. A variant of CJD (vCJD), also called "mad cow disease," appeared in 1995 in the United Kingdom and is attributed to the transmission of bovine spongiform encephalopathy (BSE) from cattle to humans.

10.11. The answer is D

Frontotemporal dementia is a term that encompasses several variant forms of dementia, including Pick's disease, *progressive nonfluent aphasia*, semantic dementia, and corticobasal degeneration. The DSM-IV-TR lists dementia due to Pick's disease within the category of dementia due to other general medical conditions; *there are no separate diagnostic criteria for Pick's disease or other frontotemporal dementias. Frontotemporal dementia is more likely to affect younger populations, and the age of onset ranges between 35 and 75 years of age. The etiology remains unclear, but in some cases, genetic linkage to chromosome 17, not 9, has been found.* Frontotemporal dementia is typically characterized by asymmetrical focal atrophy of the frontotemporal regions. There is underlying neuronal loss, gliosis, and subsequent spongiform change in the affected cortices. Pick's bodies are pathognomonic in Pick's disease, and they appear swollen and stain pink on hematoxylin and eosin stain.

10.12. The answer is D

No features of the physical examination or laboratory evaluation are pathognomonic for dementia of the Alzheimer's type. Some studies have apparently identified patients with dementia of the Alzheimer's type from patients with dementia of other etiologies by using techniques such as electroencephalography (EEG), magnetic resonance imaging (MRI), and single photon emission computed tomography (SPECT). These studies have been difficult to replicate consistently, and at present, *brain imaging studies are best used to exclude other identifiable causes.* Indeed, available technological diagnostic methods have not proved more sensitive and specific than astute clinical evaluation. *Age at onset is earlier in patients with a family history of Alzheimer's disease.* Despite some data to suggest distinctive age-related clinical patterns, *no phenomenological separation between early- and late-onset cases has been found;* however, *early-onset dementia of the Alzheimer's type may have a more rapidly progressive course.* A major component of the presenting symptoms is usually subjective complaints of memory difficulty, language impairment ("I can't find the word"), and dyspraxia (loss of learned skills). Diagnosis at this juncture is primarily based on exclusion of other possible causes of dementia.

10.13. The answer is D

Being older than 70, not 60, years of age is a predisposing factor for delirium. Numerous factors increase a person's risk for delirium (Table 10.3). In one study of elderly hospitalized patients, the risk of delirium was higher if the patients had *vision impairment*, more severe medical illness, cognitive impairment, or an elevated ratio of blood urea nitrogen to creatinine. Other studies of intensive care unit patients suggested that hypertension, abnormal total bilirubin, *smoking history*, epidural use, morphine use, and use of intravenous dopamine were associated with delirium.



Table 10.3
Factors That Predispose Patients to Delirium

Vision Impairment	Hypertension	Use of Bladder Catheter
Medical illnesses (severity and quantity)	Chronic obstructive pulmonary disease	Preoperative cognitive impairment
Cognitive impairment	Alcohol abuse	Functional limitations
Older than 70 years of age	Smoking history	History of delirium
Any iatrogenic event	Abnormal sodium level	Abnormal potassium, sodium, or glucose test results
Use of physical restraints	Abnormal glucose level	Preoperative use of benzodiazepines
Malnutrition	Abnormal bilirubin level	Preoperative use of narcotic analgesics
More than three medications added	Ratio of blood urea nitrogen to creatinine > 18	Epidural use

10.14. The answer is C

Male gender is an independent risk factor for delirium, according to DSM-IV-TR. About 10 to 30 percent of medically ill patients who are hospitalized exhibit delirium. Advanced age is a major risk factor for its development, and approximately 30 to 40 percent of hospitalized patients older than 65 years of age have an episode of delirium. The highest rate of delirium, which is more than 90 percent, is found in postcardiotomy patients. Delirium is a poor prognostic sign. Rates of institutionalization are increased threefold for patients age 65 years and older who exhibit delirium while in the hospital, and the 1-year mortality rate for patients who have an episode of delirium may be as high as 50 percent.

10.15. The answer is A

The most common cause of delirium in this case is *delirium tremens* (called alcohol withdrawal delirium in DSM-IV-TR). It is a medical emergency that results in mortality in about 20 percent of patients if left untreated. It occurs within 1 week after the person stops drinking. It usually develops on the third hospital day in a patient admitted for an unrelated condition (e.g., surgery) who has no access to alcohol and stops drinking suddenly. Another less common cause of postoperative delirium is *stress*, especially in major procedures such as cardiac or transplantation surgery. *Pain, pain medications, and infection* must also be considered in the postoperative period.

10.16. The answer is E (all)

The core features of delirium include altered consciousness, altered attention, impaired cognition, rapid onset, brief duration, and unpredictable fluctuations in severity. Associated features that are often present include *disorganized thought processes*, perceptual disturbances such as *illusions* and *hallucinations*, psychomotor hyperactivity and hypoactivity, disruptions of the sleep-wake cycle, *mood alterations*, and other manifestations of altered neurological function (e.g., autonomic instability).

10.17. The answer is D

Of the drugs listed, the best choice is *haloperidol (Haldol)*, a butyrophenone. Depending on the patient's age, weight, and physical condition, the initial dose may range from 0.5 to 10 mg intramuscularly repeated in an hour if the patient remains agitated. As soon as the patient is calm, oral medication in liquid concentrate or tablet form should begin. Two daily oral doses should suffice, with two-thirds of the dose being given at bedtime. To achieve the same therapeutic effect, the clinician should give an oral dose about 1.5 times higher than a parenteral dose. The effective total daily dosage of haloperidol may range from 5 to 50 mg for the majority of delirious patients. The patient's response should always be closely monitored for possible side effects.

Phenothiazines, such as *chlorpromazine (Thorazine)*, should be avoided in delirious patients because these drugs are associated with significant anticholinergic activity. Benzodiazepines with long half-lives, such as *diazepam (Valium)*, and barbiturates, such as *amobarbital (Amytal)*, should be avoided unless they are being used as part of the treatment for the underlying disorder

(e.g., alcohol withdrawal). Sedatives can increase cognitive disorganization in delirious patients. When the delirium is caused by anticholinergic toxicity, the use of *physostigmine salicylate (Antilirium)* may be indicated, but it is not the first drug to be used in an acute delirium in which the cause has not been determined.

10.18. The answer is B

The reticular formation of the brainstem is the principal area regulating attention and arousal; *the major pathway implicated is the dorsal tegmental pathway*. The major neurotransmitter hypothesized to be involved is acetylcholine, *not epinephrine*. In delirium, *there is no hyperactivity in the nucleus accumbens*. The *electroencephalogram characteristically shows a generalized slowing of activity*. A core feature of delirium is *altered consciousness*.

10.19. The answer is E (all)

An estimated 20 to 30 percent of patients with dementia have hallucinations, and *30 to 40 percent have delusions, primarily of a paranoid or persecutory nature*. They may exhibit *pathological laughter or crying* with no apparent provocation. *Primitive reflexes, such as the grasp, snout, suck, tonic-foot, and palmomental reflexes*, may be present. Patients with dementia often have disregard for the conventional rules of social conduct and demonstrate coarse language, inappropriate jokes, *and neglect of personal appearance and hygiene*.

10.20. The answer is D

Although all of the diagnoses listed should be considered in the differential diagnosis of dementia, the cognitive impairment associated with depression is often the most difficult to distinguish from the symptoms of dementia. *The clinical picture is often referred to as pseudodementia or depression-related cognitive dysfunction* (see Table 10.4). Although *schizophrenia* may be associated with some acquired intellectual impairment, it is much less severe than that seen in dementia. *Aging* is not necessarily associated with any significant cognitive decline. Minor memory problems can occur as a normal part of aging, but these do not interfere significantly with a person's social or occupational behavior. *Delirium* has a rapid onset, brief duration, fluctuating cognitive impairment, nocturnal exacerbations, and prominent disturbances in attention and perception. People who attempt to simulate memory loss, as *in factitious disorder*, do so in an erratic and inconsistent manner. In true dementia, memory for time and place is lost before memory for persons, and recent memory is lost before remote memory.

10.21. The answer is E (all)

The classic course of dementia is an onset in the patient's 50s or 60s, with gradual deterioration over 5 to 10 years, leading eventually to death. The average survival expectation for patients with dementia of the Alzheimer's type is 8 years. Progression of the disease involves *increased agitation*, frequent emotional outbursts, and poor sleep with *night pacing* and wandering. In the terminal phases of dementia, patients become empty shells



Table 10.4
Major Clinical Features Differentiating Pseudodementia from Dementia

Pseudodementia	Dementia
<p>Clinical course and history</p> <ul style="list-style-type: none"> Family always aware of dysfunction and its severity Onset can be dated with some precision Symptoms of short duration before medical help is sought Rapid progression of symptoms after onset History of previous psychiatric dysfunction common <p>Complaints and clinical behavior</p> <ul style="list-style-type: none"> Patients usually complain much of cognitive loss Patients' complaints of cognitive dysfunction usually detailed Patients emphasize disability Patients highlight failures Patients make little effort to perform even simple tasks <ul style="list-style-type: none"> Patients usually communicate a strong sense of distress Affective change often pervasive Loss of social skills often early and prominent Behavior often incongruent with severity of cognitive dysfunction Nocturnal accentuation of dysfunction uncommon <p>Clinical features related to memory, cognitive, and intellectual dysfunctions</p> <ul style="list-style-type: none"> Attention and concentration often well preserved "Don't know" answers typical On tests of orientation, patients often give "don't know" answers Memory loss for recent and remote events usually severe <ul style="list-style-type: none"> Memory gaps for specific periods or events common Marked variability in performance on tasks of similar difficulty 	<ul style="list-style-type: none"> Family often unaware of dysfunction and its severity Onset can be dated only within broad limits Symptoms usually of long duration before medical help is sought Slow progression of symptoms throughout course History of previous psychiatric dysfunction unusual <ul style="list-style-type: none"> Patients usually complain little of cognitive loss Patients' complaints of cognitive dysfunction usually vague Patients conceal disability Patients delight in accomplishments, however trivial Patients struggle to perform tasks Patients rely on notes, calendars, and so on to keep up Patients often appear unconcerned Affect labile and shallow Social skills often retained Behavior usually compatible with severity of cognitive dysfunction <ul style="list-style-type: none"> Nocturnal accentuation of dysfunction common <ul style="list-style-type: none"> Attention and concentration usually faulty Near-miss answers frequent On tests of orientation, patients often mistake unusual for usual Memory loss for recent events usually more severe than for remote events Memory gaps for specific periods unusual^a Consistently poor performance on tasks of similar difficulty

^aExcept when caused by delirium, trauma, seizures, and so on.
Reprinted with permission from Wells CE. Pseudodementia. *Am J Psychiatry*. 1979;36:898.

of their former selves, profoundly disoriented, amnesic, and *incontinent of urine and feces*.

10.22. The answer is C

Petit mal epilepsy or absence seizure is associated with a characteristic generalized, bilaterally synchronous, 3-Hz spike-and-wave pattern in the EEG and is often easily induced by hyperventilation. Petit mal epilepsy occurs predominantly in children. It usually consists of simple absence attacks lasting 5 to 10 seconds, during which the patient has an abrupt alteration in awareness and responsiveness and an interruption in motor activity. The child often has a blank stare associated with an upward deviation of the eyes and some mild twitching movements of the eyes, eyelids, face, or extremities. Petit mal epilepsy is usually a fairly benign seizure disorder, often resolving after adolescence.

A *partial seizure* is a type of epilepsy characterized by recurrent episodes of focal motor seizures. It begins with localized tonic or clonic contraction, increases in severity, and may generalize by spreading progressively through the entire body and terminating in a generalized convulsion with loss of consciousness. *Grand mal epilepsy* is the major form of epilepsy. Gross tonic-clonic convulsive seizures are accompanied by loss of con-

sciousness and often incontinence of stool or urine. *Psychomotor epilepsy* is a type of epilepsy characterized by recurrent behavior disturbances. Complex hallucinations or illusions, frequently gustatory or olfactory, often herald the onset of the seizure, which typically involves a state of impaired consciousness resembling a dream, during which paramnesic phenomena, such as *déjà vu* and *jamais vu*, are experienced, and the patient exhibits repetitive, automatic, or semipurposeful behaviors. In rare instances, violent behavior may be prominent. The EEG reveals a localized seizure focus in the temporal lobe.

10.23. The answer is A

Dementia of the Alzheimer's type becomes more common with increasing age; among persons older than 75 years, *the risk is six times greater than the risk for vascular dementia*. The prevalence of dementia increases exponentially with age. *The estimated prevalence* of moderate to severe dementia in a population ages 65 years or older is consistently reported at *approximately 5 percent*. *Dementia of the Alzheimer's type is the most common dementing disorder* in clinical and neuropathological prevalence studies reported from *North America, Scandinavia, and Europe*. Prevalence studies from Russia and Japan show vascular dementia to be more common in those countries. It remains unclear

whether those apparent clinical differences reflect true etiological distinctions or inconsistent uses of diagnostic criteria. There is a suggestion of *higher rates of dementia of the Alzheimer's type in women and higher rates of vascular dementia in men. In geriatric psychiatric patient samples, dementia of the Alzheimer's type is a much more common etiology (50 to 70 percent) than vascular dementia (15 to 25 percent).*

10.24. The answer is E

Delirium *generally causes a diffuse slowing of brain activity on the EEG, which may be useful in differentiating delirium from depression and psychosis. The EEG of a delirious patient sometimes shows focal areas of hyperactivity. In rare cases, differentiating delirium related to epilepsy from delirium related to other causes may be difficult. In general, delirium has a sudden, not insidious, onset. Patients with delirium commonly have associated neurological symptoms, including dysphasia, tremor, asterixis, incoordination, and urinary incontinence. Delirium does not generally have an underlying cause residing in the central nervous system (CNS). Delirium has many causes, all of which result in a similar pattern of symptoms relating to the patient's level of consciousness and cognitive impairment. Most of the causes of delirium lie outside the CNS (e.g., renal and hepatic failures). Delirium cannot be successfully treated with lithium (Eskalith). However, patients with variable lithium serum concentrations may be at risk for delirium.*

10.25. The answer is A

When testing cognitive functions, the clinician should evaluate *memory, visuospatial and constructional abilities, reading and writing, and mathematical abilities. Abstraction ability is also valuable to assess, although a patient's performance on tasks, such as proverb interpretation, may be difficult to evaluate when abnormal. Proverb interpretation may be a useful bedside projective test in some patients, but the specific interpretation may result from a variety of factors, such as poor education, low intelligence, and failure to understand the concept of proverbs, as well as a broad array of primary and secondary psychopathological disturbances.*

10.26. The answer is C

For some forms of amnestic disorder, events from the *remote past may be better remembered than more recent events. However, such a gradient of recall is not present uniformly among individuals with amnestic disorders. Typically, the ability to immediately repeat a sequential string of information (e.g., a digit span) is not impaired in amnestic disorder; when such impairment is evident, it suggests the presence of attentional dysfunction that may be indicative of delirium. Amnestic disorders may be transient, lasting for several hours to a few days, as in transient global amnesia, or persistent, lasting at least 1 month.*

Depending on the cause of the disorder, the *onset of amnesia may be sudden or gradual. Head trauma, vascular events, and specific types of neurotoxic exposure (e.g., carbon monoxide poisoning) may lead to acute mental status changes. Prolonged substance abuse, chronic neurotoxic exposure, and sustained nutritional deficiency exemplify conditions that may lead to an*

insidious memory decline, eventually causing a clinically definable cognitive impairment. Amnestic disorder may also develop as a result of alcohol dependence associated with dietary and vitamin deficiency.

10.27. The answer is A

Amnestic disorders are secondary syndromes caused by systemic medical or primary cerebral diseases, substance use disorders, or medication adverse effects. The essential feature of amnestic disorders is the acquired impaired ability to learn and recall new information coupled variably with the inability to recall previously learned knowledge or past events. The impairment must be sufficiently severe to compromise personal, social, or occupational functioning. The diagnosis is not made if the memory impairment exists in the context of reduced ability to maintain and shift attention, as encountered in delirium, or in association with significant functional problems caused by the compromise of multiple intellectual abilities, as seen in dementia.

10.28. The answer is E (all)

Cerebrovascular diseases together comprise the second most common cause of dementia. This category of dementia was referred to in the past as arteriosclerotic dementia, reflecting the belief that vascular insufficiency was responsible for the cognitive degeneration. That has now been supplanted by the belief that tissue damage or infarction underlies the vascular dementias. Cerebral infarction can be the result of a number of processes, of which thromboembolism from a large vessel plaque or cardiothrombus is the most common. Anoxia caused by cardiac arrest, hypotension, anemia, or sleep apnea can also produce ischemia and infarction. Cerebral hemorrhage related to hypertension or an arteriovenous malformation accounts for approximately 15 percent of cerebrovascular disease.

10.29. The answer is E (all)

In recent years, several authors have sought to distinguish dementias of the frontal lobe from other disorders. The uncertain status of dementias of the frontal lobe as distinct clinical and neuropathological entities has not yet warranted their formal inclusion in DSM-IV-TR or ICD-10. They are described as cortical dementias that are found in as many as 10 to 20 percent of cases in some neuropathological series. The age at onset is apparently between 50 and 60 years for the majority, but the reported range is broad—20 to 80 years. The early clinical features of frontal lobe dementias are typified by damage to the frontal lobes and include prominent changes in personality and behavior. *The personality changes include disinhibition, social misconduct, and lack of insight; these changes progress to apathy, mutism, and repetitive behaviors.*

Neuropsychological testing in patients suspected of having dementia of frontal lobe origin may demonstrate disproportionate impairment in tasks related to frontal lobe function, such as deficiency in abstract thinking, attentional shifting, or set formation. Structural neuroimaging, such as computed tomography or magnetic resonance imaging, may reveal prominent atrophy of the frontal lobe, especially early in the disease process.

10.30. The answer is E (all)

There have been relatively few studies of the incidence and prevalence of delirium. Little is known about the epidemiology of delirium in community or other nonpatient, noninstitutionalized populations. An estimated 10 to 15 percent of general medical inpatients are delirious at any given time, and studies indicate that as many as 30 to 50 percent of acutely ill geriatric patients become delirious at some point during their hospital stay. Rates of delirium in psychiatric and nursing home populations are not well established but are clearly substantial. Risk factors for the development of delirium include *increased severity of physical illness, older age, baseline cognitive impairment (e.g., caused by dementia), and use of anticholinergics.*

Delirium is frequently unrecognized by treating physicians. Because of its wide array of associated symptoms, it may be detected but misdiagnosed as depression, schizophrenia, or another psychiatric disorder. Delirium is a frequent cause for psychiatric consultation in the general hospital but often is not recognized as delirium by the referring physician.

10.31. The answer is C

Bovine spongiform encephalopathy is also known as subacute spongiform encephalopathy because of shared neuropathological changes that consist of (1) *spongiform vacuolization*, (2) *neuronal loss*, and (3) *astrocyte proliferation in the cerebral cortex*. *Amyloid plaques* may or may not be present. A characteristic *bull's eye rash* is found at the site of a tick bite and is not associated with bovine spongiform encephalopathy.

10.32. The answer is A

Psychotic symptoms in dementia generally occur in the *middle stages* (not in the early stages) of the illness and often co-occur with *behavioral disturbance*. A common early psychotic symptom is *paranoia* and the belief that belongings have been stolen. This may develop as a result of poor short-term memory and misplacing objects. This paranoia can become more pervasive as the illness progresses. In later stages, patients may have hallucinations in any modality, but these most commonly are visual hallucinations. *They may say they see deceased relatives.* The hallucinations are often congruent with delusions of the same theme. Psychotic symptoms can sometimes lead to agitation, aggression, and behavioral disturbance as patients act out on their hallucinations, paranoia, or delusional thinking.

10.33. The answer is E

A variety of neuropsychiatric disorders may explain the patient's symptoms; however, he is most likely exhibiting *normal changes related to aging*. It is normal to have episodes of forgetfulness as one ages. Furthermore, the patient's memory deficits do not appear to alter his social functioning. His independence in activities of daily living is not impaired. The patient is still able to operate a motor vehicle and care for himself on his own. As people age, they also become more easily tired, exhibit diminished energy levels, and may find it difficult falling asleep. *Depression* may manifest as a pseudodementia in elderly individuals. It may involve forgetfulness and personality changes; however, this patient does not exhibit depressed mood or social withdrawal. Normal-pressure hydrocephalus is characterized by the triad of

“wet, whacky, and wobbly,” that is incontinence, dementia, and ataxia. *Frontotemporal dementia* is characterized by prominent personality changes and loss of executive function. *Vascular dementia* will present with a stepwise downward shift in cognitive functioning.

Answers 10.34–10.39**10.34. The answer is B****10.35. The answer is C****10.36. The answer is C****10.37. The answer is A****10.38. The answer is D****10.39. The answer is C**

The differentiation between delirium and dementia can be difficult, but several clinical features help in the differentiation. In contrast to the sudden onset of delirium, dementia usually has an insidious onset. Although both conditions include cognitive impairment, the changes in dementia are relatively stable over time and do not fluctuate over the course of a day, for example. A patient with dementia is usually alert; a patient with delirium has episodes of clouding of consciousness. Delirium and in rare cases dementia are reversible, although delirium has a better chance of reversing if treatment is timely. *Insight*, defined as the awareness that one is mentally ill, is absent in both conditions. *Hallucinations* can occur in both conditions and must be differentiated from those that occur in schizophrenia. In general, the hallucinations of schizophrenic patients are more constant and better formed than are the hallucinations of delirious patients. *Sundowning* is observed in both demented and delirious patients. Sundowning is characterized by drowsiness, confusion, ataxia, and accidental falls just around bedtime. Kurt Goldstein described a *catastrophic reaction* in demented patients; it is marked by agitation secondary to the subjective awareness of one's intellectual deficits under stressful circumstances. The presence of delirium is a bad prognostic sign. Patients with delirium have a *high mortality rate*. The 3-month mortality rate of patients who have an episode of delirium is estimated to be 23 to 33 percent; the 1-year mortality rate may be as high as 50 percent. The major neurotransmitter hypothesized to be involved in delirium and dementia is acetylcholine. Several types of studies of delirium and dementia have shown a correlation between *decreased acetylcholine activity* in the brain and both delirium and dementia.

Answers 10.40–10.45**10.40. The answer is B****10.41. The answer is A****10.42. The answer is A****10.43. The answer is B**

10.44. The answer is B**10.45. The answer is A**

Degenerative CNS diseases can be distinguished clinically from one another by the relative impairment and sparing of various cognitive and behavioral functions. Two basic patterns of dementia have been characterized clinically: cortical and subcortical.

The *cortical pattern* of dementia is characterized by impairments in memory (primarily a storage and recall deficit) and gnostic-practice abilities (primarily involving language, visuospatial abilities, calculation, and motor praxis). Executive or managerial functions such as organization, judgment, abstraction, emotional control or modulation, and insight and social judgment are similarly affected. Personality often remains intact or displays subtle variations, with patients becoming more passive or less spontaneous or becoming coarse and crude in their interactions. With disease progression, the changes in personality become more common and pronounced. Affective expression is generally preserved, although again, a coarsening may be noted in the form of emotional lability. Early in the disease, patients frequently discern and express dismay about their intellectual decline.

The *subcortical pattern* is characterized by a generalized slowing of mental processing. Specific cognitive skills, such as calculation, naming, or copying, are less affected initially in contrast to their early decline in the cortical degenerative processes. Verbal and visual memory impairment may be present early in the course, although such impairment more often takes the form of forgetfulness or a failure of retrieval that is initially amenable to prompting. This is in contrast to the more severe recall deficits of cortical dementia. Patients also show deficits in learning new motor movements or complex psychomotor procedures. Planning and organizational skills are disrupted. Abnormal movements are common and manifest as a slowing and awkwardness in normal movement or chorea and tremor. In contrast to the early impairment of language function in cortical disease, language is relatively spared, although the motor production of speech may be abnormal. The personality change is often *marked*, with striking patterns of apathy, inertia, and diminished spontaneity. Mood disorders, including major depression and mania, occur frequently. The presenting symptoms in subcortical degenerative processes may be those of a personality change or a mood disorder at a time when cognitive impairment or motor dysfunction is not yet obvious. In the cortical processes, by contrast, the presenting symptoms more often reflect cognitive impairment, particularly memory and language dysfunction. As the dementia and the degenerative process progress, the clinical presentations of cortical and subcortical diseases become nearly indistinguishable from one another.

The term *subcortical dementia* was first used to describe the cognitive and behavioral deficits seen in patients with *Huntington's disease*. A similar clinical pattern was soon described for other subcortical diseases, such as progressive supranuclear palsy and Parkinson's disease. Although the term was initially used in reference to a clinical picture that could be localized to the subcortex, *subcortical dementia* is now considered a pseudoanatomical designation. It is clear from imaging and neu-

ropathological studies that cortical dementia (e.g., *dementia of the Alzheimer's type*) is not restricted pathologically to the cortex; major affected cholinergic fiber pathways are subcortical in origin.

Answers 10.46–10.50**10.46. The answer is D****10.47. The answer is B****10.48. The answer is A****10.49. The answer is C****10.50. The answer is E**

The lettered choices are all categorized in DSM-IV-TR under *dementia due to a general medical condition*. *Dementia due to head trauma* is the third most common cause of dementia in individuals younger than 50 years old, most frequently occurring in men ages 14 to 24 years. Closed head injury is the most common cause. Memory loss and impaired executive function are common features.

Parkinson's disease is a movement disorder characterized by tremor, muscle rigidity, bradykinesia, and postural instability. About 30 to 50 percent of patients with Parkinson's disease develop dementia. *Parkinson's disease dementia* is a subcortical dementia with slowed processing speed and memory loss, mood disorders, and difficulties with abstract thought and reasoning.

Human immunodeficiency virus type 1 (HIV-1) is commonly associated with motor and cognitive impairment ranging from subtle changes to overt dementia. HIV-1-associated dementia (HIV-D) occurs in approximately 10 percent of patients with acquired immune deficiency syndrome (AIDS). HIV-D presents with psychomotor slowing, personality changes, impaired abstract reasoning, and problem-solving and memory deficits. Psychosis can occur in later stages. Highly active antiretroviral therapy has reduced the incidence of *HIV-D*.

Huntington's disease is a rare motor disorder characterized by involuntary dance-like movements (chorea) and lack of coordination (ataxia). It is an autosomal dominant, inherited disease transmitted by a mutation on *chromosome 4*. Cognitive changes include psychomotor slowing, impaired executive functioning, and memory deficits. Huntington's disease is inevitably fatal.

Creutzfeldt-Jakob disease is a very rare disorder caused by a transmissible prion that accumulates in the brain, leading to neuron death. It is characterized by a rapidly progressive dementia, with memory loss, personality changes, and hallucinations, and inevitably resulting in death over the course of a few months. There are no treatments other than *supportive care*.

Answers 10.51–10.55**10.51. The answer is B****10.52. The answer is A**

10.53. The answer is D**10.54. The answer is E****10.55. The answer is C**

Huntington's disease, which is inherited in an autosomal dominant pattern, leads to major atrophy of the brain with extensive degeneration of the *caudate* nucleus. The onset is usually insidious and most commonly begins in late middle life. The course is one of gradual progression; *death occurs 15 to 20 years after the onset* of the disease, and *suicide* is common.

Creutzfeldt-Jakob disease is a rare degenerative brain disease caused by a prion protein, with *death occurring within 2 years of the diagnosis*. A computed tomography scan shows cerebellar and cortical atrophy.

Neurosyphilis is a chronic dementia and psychosis caused by the tertiary form of syphilis affecting the brain. The presenting

symptoms include a *manic syndrome* with neurological signs in up to 20 percent of cases.

Normal-pressure hydrocephalus is associated with enlarged ventricles and normal cerebrospinal fluid (CSF) pressure. The characteristic signs include dementia, a gait disturbance, and urinary incontinence. *The treatment of choice is CSF shunt* from the ventricular space to either the atrium or the peritoneal space. Reversal of the dementia and associated signs is sometimes dramatic after treatment.

Multiple sclerosis is characterized by diffuse multifocal lesions in the white matter of the central nervous system. Its clinical course is characterized by exacerbations and remissions. It has no known specific cause, although research has focused on slow viral infections and autoimmune disturbances. Multiple sclerosis is much *more prevalent in cold and temperate climates* than in the tropics and subtropics. It is *more common in women than in men* and is predominantly a disease of young adults.

Neuropsychiatric Aspects of HIV Infection and AIDS

The human immunodeficiency virus (HIV) is an epidemic that continues to be a major public health problem throughout the world. Currently, it is estimated that up to 40 million people are infected with HIV worldwide, approximately 1 million within the United States. Psychiatric disorders play a role in this epidemic by increasing risk behaviors for infection and decreasing access to treatment. Thus, HIV has become a psychiatric epidemic as well.

An extensive array of disease processes can affect the brain of a patient infected with HIV. The most important diseases for mental health workers to be aware of are HIV mild neurocognitive disorder and HIV-associated dementia. HIV-associated dementia can affect 50 percent of HIV infected patients. Multiple psychiatric syndromes can also affect HIV-infected patients, from adjustment disorders to mood disorders to substance abuse

disorders and suicide, all of which the psychiatrist must be familiar. Similarly, the pharmacotherapies used in the management and treatment of HIV disease and AIDS may directly affect the brain or interact with the medications used by psychiatrists to treat the associated psychiatric syndromes.

Psychiatrists must be familiar with counseling patients about their risk factors for the disease, and the importance of HIV testing. Confidentiality issues are key in this matter. Psychotherapy plays an important role in working with this patient population, and psychiatrists must be familiar with the range of approaches that may be appropriate for these patients, including supportive, cognitive, behavioral, or psychodynamic approaches, both as individual treatments or in groups.

Students should study the questions and answers below for a useful review of this topic.

HELPFUL HINTS

The following terms should be known by students.

- | | | | |
|-------------------------------------|---------------------------|---|---|
| ▶ AIDS dementia complex | ▶ cytomegalovirus (CMV) | ▶ <i>Pneumocystis carinii</i> pneumonia | ▶ <i>Toxoplasma gondii</i> and <i>Cryptococcus neoformans</i> |
| ▶ AIDS mania | ▶ ddI | ▶ pretest and posttest counseling | ▶ transmission |
| ▶ AZT | ▶ ELISA | ▶ protease inhibitors | ▶ tuberculosis |
| ▶ <i>Candida albicans</i> | ▶ Guillain-Barré syndrome | ▶ safe sex guidelines | ▶ wasting syndrome |
| ▶ Central nervous system infections | ▶ HIV encephalopathy | ▶ seropositive | ▶ Western blot analysis |
| ▶ confidentiality | ▶ Kaposi's sarcoma | ▶ T4 lymphocytes | ▶ worried well |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 11.1.** Which of the following statements about Guillain-Barré syndrome is *false*?
- It is associated with late human immunodeficiency virus (HIV) infection.
 - It causes symmetrical paralysis.

- It may impair respiration.
- It usually occurs in young men.
- It becomes serious if thoracic musculature is involved.

11.2. True statements associated with the treatment of delirium in HIV illness include

- Patients with underlying HIV-associated dementia do not appear to be at higher risk for medication-induced movement disorders.
- Symptoms of delirium in HIV illness can be managed effectively with low-potency antipsychotics such as chlorpromazine (Thorazine).

- C. There is no increased incidence of extrapyramidal symptoms associated with high-potency typical agents in advanced HIV illness.
- D. The use of benzodiazepines alone appears to be effective in delirious states.
- E. None of the above.
- 11.3.** True statements about the association of suicide and HIV disease include
- A. Studies suggest that patients with advanced HIV disease have a 30-fold increased risk of committing suicide compared with matched seronegative persons.
- B. Some reports indicate that high-risk seronegative persons have an elevated lifetime prevalence of suicidal ideation and attempt compared with community control subjects.
- C. Psychiatric disorders are strongly implicated in suicidal ideation and attempted suicide.
- D. HIV-infected adolescents are at a particularly high risk for suicide.
- E. All of the above
- 11.4.** Neuropathic pain related to HIV
- A. should not be treated with acetaminophen (Tylenol) because it may diminish the metabolism of zidovudine.
- B. is not effectively managed with anticonvulsants such as phenytoin (Dilantin) or carbamazepine (Tegretol).
- C. is generally more effectively treated with selective serotonin reuptake inhibitors than with tricyclic antidepressants.
- D. is rarely effectively treated with opioid analgesics.
- E. all of the above
- 11.5.** Protease inhibitors can increase plasma levels of all of the following *except*
- A. alprazolam and zolpidem
- B. nefazodone
- C. valproate
- D. bupropion
- E. fluoxetine
- 11.6.** Acquired immunodeficiency syndrome (AIDS) mania is
- A. benign in its course
- B. mild in its presentation
- C. described in late HIV infection
- D. not associated with cognitive impairment
- E. more episodic than chronic
- 11.7.** A 28-year-old AIDS patient presents to clinic with his mother. The patient's mother complains that her son stays up all night and speaks so fast that she cannot keep up with what he is saying. The patient confirms a grandiose scheme to take over the earth as a novel prophet with infinite powers. He acknowledges a \$4,000 shopping spree during which he purchased accessories to embellish himself with. In treating AIDS patients with mania, potential complications include
- A. Carbamazepine may increase serum concentrations of protease inhibitors.
- B. Lithium and antipsychotic medications may be poorly tolerated by individuals with HIV-related neurocognitive disorders.
- C. The gastrointestinal disturbances associated with AIDS (e.g., vomiting and diarrhea) rarely affect lithium absorption or excretion.
- D. Protease inhibitors increase valproate concentrations.
- E. Valproate is usually poorly tolerated by individuals with evidence of brain atrophy on MRI.
- 11.8.** Which of the following about the pharmacotherapy of HIV disease is *true*?
- A. Two protease inhibitors and one reverse transcriptase is indicated.
- B. A two-agent therapy is indicated in health care workers who have been pricked by a needle from an HIV-infected patient.
- C. White matter signal abnormalities on MRI in patients who are HIV positive are permanent and not responsive to anti-HIV pharmacotherapy.
- D. Zidovudine penetrates the blood-brain barrier well.
- E. Protease inhibitors are metabolized primarily in the kidney.
- 11.9.** In persons infected by HIV
- A. seroconversion usually occurs 2 weeks after infection.
- B. the estimated length of time from infection to the development of AIDS is 5 years.
- C. 10 percent have neuropsychiatric complications.
- D. the T4-lymphocyte count usually decreases to abnormal levels during the asymptomatic period.
- E. the majority are infected by HIV type 2 (HIV-2).
- 11.10.** In a test for HIV
- A. assays usually detect the presence of viral proteins.
- B. the enzyme-linked immunosorbent assay (ELISA) is used to confirm positive test results of the Western blot analysis.
- C. the results cannot be shared with other members of a medical treatment team.
- D. pretest counseling should not inquire why a person desires HIV testing.
- E. a person may have a true-negative result even if the person is infected by HIV if given prior to seroconversion.
- 11.11.** Diseases affecting the central nervous system (CNS) in patients with AIDS include
- A. atypical aseptic meningitis
- B. *Candida albicans* abscess

- C. cerebrovascular infarction
- D. primary CNS lymphoma
- E. all of the above

- 11.12.** Mild neurocognitive deficits associated with HIV infection
- A. include attentional problems, slowing of information processing, and deficiencies in learning.
 - B. do not suggest selective involvement of subcortical structures.
 - C. are often characterized by confabulatory responses on formal memory testing.
 - D. do not occur independently of depression or anxiety.
 - E. are rarely associated with difficulties in abstract reasoning.
- 11.13.** Which of the following personality disorders is a risk factor for HIV infection?
- A. Antisocial personality disorder
 - B. Obsessive-compulsive personality disorder
 - C. Histrionic personality disorder
 - D. Paranoid personality disorder
 - E. Avoidant personality disorder
- 11.14.** Clinical symptoms associated with HIV encephalopathy diagnosis include all of the following *except*
- A. psychomotor slowing
 - B. problems with memory and concentration
 - C. mood and personality changes
 - D. hyperreflexia and paraparesis
 - E. early-onset aphasia
- 11.15.** Which of the following statements about lymphoma and AIDS is *false*?
- A. Lymphoma is the most common neoplasm seen in AIDS.
 - B. Seizures are present in about 15 percent of patients.
 - C. A brain biopsy is not required to confirm diagnosis.
 - D. Central nervous system lymphoma is at times misdiagnosed as toxoplasmosis.
 - E. The prognosis depends on the highly active antiretroviral therapy (HAART) response.
- 11.16.** Which of the following is an early symptom of HIV-associated dementia?
- A. Psychosis
 - B. Sleep disturbances
 - C. Apathy
 - D. Weight loss
 - E. Anxiety

Directions

The group of questions below consists of lettered headings followed by a list of numbered words or statements. For each num-

bered word or statement, select the *one* lettered heading most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 11.17–11.21

- A. Nucleoside reverse transcriptase inhibitor
- B. Nonnucleoside reverse transcriptase inhibitor
- C. Protease inhibitor
- D. All of the above
- E. None of the above

11.17. AZT

11.18. Nevirapine

11.19. Ritonavir

11.20. Stavudine

11.21. 3TC

ANSWERS

11.1. The answer is A

A small percentage of patients, usually *young men*, present with Guillain-Barré syndrome associated with *early* (not late) *HIV infection*. Guillain-Barré syndrome is an inflammatory demyelinating polyneuropathy causing *symmetrical paralysis* and few, if any, sensory symptoms, usually beginning in the lower extremities and progressing upward. The condition becomes *especially serious if the thoracic musculature is involved* because it may *impair respiration*. The disorder is thought to be autoimmune in etiology and generally self-limited. Intravenous immunoglobulin and plasmapheresis have been used to shorten the course, but neither treatment has been studied well in HIV-infected individuals.

11.2. The answer is B

Symptoms of delirium in HIV illness can be managed effectively with modest dosages of either low-potency antipsychotic agents, such as chlorpromazine at 10 to 25 mg once to three times daily; or with high-potency agents, such as haloperidol (Haldol) at 0.25 mg to 5 mg once to three times daily; or with atypical serotonin-dopamine agonists, including risperidone (Risperdal) at 0.5 mg to 2 mg daily; or olanzapine (Zyprexa) at 10 mg daily. There may well be an increased incidence of extrapyramidal symptoms associated with high-potency typical agents in advanced HIV illness, and patients with underlying HIV-associated dementia appear to be at higher risk for medication-induced movement disorders. For patients who do not respond to low-dosage oral therapy, excellent results have been reported with intravenous (IV) haloperidol given in individual boluses ranging from 2 to 10 mg every hour. Some clinicians have also had good results with a combination of IV haloperidol and lorazepam (Ativan), with an average daily IV dose of less than 50 mg of haloperidol and 10 mg of lorazepam. In general, no serious adverse effects have been noted with more aggressive IV regimens, although nearly half of the patients treated may have extrapyramidal symptoms, and extreme care must be used.

Benzodiazepines alone (e.g., lorazepam) do not appear to be effective in delirious states, and they may accentuate confusion.

11.3. The answer is E (all)

Studies based on coroners' reports suggest that *patients with advanced HIV disease have a 30-fold increased risk of committing suicide* compared with seronegative persons matched for age and social position. Some survey reports indicate that seronegative persons who are in a high-risk group for HIV infection, as well as seropositive persons at all stages of HIV infection, have an *elevated lifetime prevalence of suicidal ideation and suicide attempt* compared with community control subjects. It is important to note that both sources of data suggest that *psychiatric disorder is strongly implicated in suicide, attempted suicide, and suicidal ideation*. Psychological autopsies from coroners' cases have identified psychiatric histories in almost 50 percent of the cases. Suicide attempt and suicidal ideation are correlated with histories of major depressive disorder or substance-related disorders, and in more than half of the cases, these suicidal behaviors commenced before the likely date of seroconversion. Conflicts about sexual orientation may be associated with suicide attempts by adolescents. This, together with the increase in HIV infection in adolescents, may place *HIV-infected youths at particularly high risk*. Suicide rates in women are not noted to be elevated, but the epidemic is now just starting to affect large numbers of women, and their greater vulnerability to major depressive disorder may mean that women are at increased risk. Advances in therapy may heighten hope and reduce the risk of suicide. However, those whose hopes are first raised but who then do not respond to or cannot tolerate these agents may require psychotherapeutic intervention.

11.4. The answer is A

Among the rheumatologic disorders are arthralgias, myalgias, and arthritides involving large joints of the leg. Patients with HIV-related arthralgias may respond to nonsteroidal antiinflammatory agents, although *acetaminophen (Tylenol) should be avoided* because it may diminish the metabolism of zidovudine. HIV may also be associated with a polymyositis, which involves pain, weakness, and elevated creatine phosphokinase, along with changes on electromyography indicating a myopathic process. Long-term administration of zidovudine may also produce a myositis that persists when the medication is discontinued. Psychopharmacologic interventions are not of demonstrated efficacy in these states.

Neuropathic pain related to HIV usually presents as a persisting, painful sensorimotor neuropathy with dysesthesia, stocking-glove distribution of sensory loss, diminished distal reflexes, and distal weakness. Similarly, postherpetic neuralgia (herpes zoster radiculitis) may involve pain of the face or trunk. Treatment of neuropathic pain syndromes is usually with low-dosage tricyclic antidepressant agents, such as desipramine or nortriptyline at 10 to 25 mg a day. The typical steady-state dosage is 50 mg a day, although some patients require higher amounts (75 to 100 mg daily). A response often occurs within 1 to 2 weeks, but 4 to 6 weeks of treatment may be necessary before response occurs or another tricyclic agent is chosen. In general, *tricyclic antidepressants are more effective than the selective serotonin reuptake inhibitors (SSRIs)* for chronic neuropathic pain. *Opioid analgesics* are also useful. *Anticonvulsants* such as phenytoin (Dilantin) or carbamazepine (Tegretol), at usual therapeutic

concentrations required for seizure management, may also be effective. Postherpetic neuralgia may likewise be treated with topical capsaicin (Dolorac) and may respond to clonazepam at 1 to 5 mg daily.

Finally, studies of acute postoperative pain and chronic cancer pain generally indicate that for conditions in which opiate analgesia is indicated, those medications are often underprescribed or irrationally prescribed in subtherapeutic doses at too extended an interval. The clinician should always be alert to that possibility in advanced HIV disease.

11.5. The answer is C

A growing list of agents that act at different points of viral replication has raised for the first time the hope that HIV can be permanently suppressed or actually eradicated from the body.

Antiretroviral agents have many adverse effects, too numerous to describe. Of importance to psychiatrists is that protease inhibitors are metabolized by the hepatic cytochrome P450 oxidase system and can therefore increase levels of certain psychotropic drugs that are similarly metabolized. These include *bupropion* (Wellbutrin), *meperidine* (Demerol), various benzodiazepines, and SSRIs. Therefore, prescribing psychotropic drugs to persons taking protease inhibitors must be done with caution. For example, plasma concentrations of *alprazolam* (Xanax), *midazolam* (Versed), *triazolam* (Halcion), and *zolpidem* (Ambien) may be increased, and dosage reduction and careful monitoring may be required to prevent oversedation or other toxic effects. Protease inhibitors have been reported to increase concentrations of *bupropion*, *nefazodone* (Serzone), and *fluoxetine* (Prozac) to toxic levels and to increase desipramine plasma concentrations by 100 to 150 percent. Drug interactions with antipsychotic agents are less well studied, but ritonavir may particularly increase concentrations. Concentrations of methadone and meperidine are also reported to be elevated. Additionally, concentrations of some drugs of abuse such as methylenedioxymethamphetamine (MDMA) may be increased. In turn, protease inhibitors may induce the metabolism of *valproate* (Depakene) and of *lorazepam* (Ativan) and lead to *lower plasma concentrations*.

Some psychotropic medications may induce metabolism of protease inhibitors. Carbamazepine and phenobarbital may reduce serum concentrations of protease inhibitors. The clinical relevance of this potential interaction is not clear, but use of an alternate mood stabilizer may be indicated. Interactions with lithium (Eskalith) and gabapentin (Neurontin) have not been reported.

Finally, psychotropic drugs may reduce the metabolism of some protease inhibitors, with an increase of protease inhibitor adverse effects; this has been reported with *nefazodone* and *fluoxetine*.

11.6. The answer is C

Mania can occur any time in the course of HIV infection for individuals with preexisting bipolar disorder, but AIDS mania has been described in *late HIV infection*, thus appearing to be a consequence of HIV brain involvement. Mania is a mood state characterized by elation, agitation, hyperactivity, hypersexuality, and accelerated thinking and speaking (flight of ideas). AIDS mania is a specific type of mania that appears to be specifically

associated with late-stage HIV infection and *is associated with cognitive impairment* and a lack of previous episodes or family history. Clinical experience has suggested that AIDS mania is usually quite *severe* (not mild) in its presentation and *malignant* (not benign) in its course. AIDS mania seems to be more characteristically *chronic than episodic*, has infrequent spontaneous remissions, and usually relapses with cessation of treatment.

11.7. The answer is B

For immediate control of manic excitement, up to 10 mg of clonazepam (Klonopin) daily is effective in many instances, although the risk for disinhibition or delirium must always be monitored. If psychotic features are present, low doses of antipsychotic agents, such as risperidone at 0.5 to 2 mg daily, olanzapine up to 10 mg daily, chlorpromazine at 25 to 150 mg daily, or haloperidol at 0.5 to 5 mg daily, may be used. For longer-term management, lithium is effective but may not be as well tolerated as carbamazepine and valproate. For example, *in some studies, lithium and antipsychotic medications are poorly tolerated* by individuals with HIV-associated neurocognitive disorders, especially if brain magnetic resonance imaging (MRI) abnormalities are present (e.g., atrophy), but *valproate* (dosage range, 750 to 1,750 mg daily; plasma concentration $>50 \mu\text{g}$ per mL) is more successful. Good control is usually possible within 7 days, and treatment gains have been maintained for up to 4-year follow-up. Lithium has been used to treat patients who develop manic syndromes as an adverse effect of zidovudine with good control of symptoms, which allows a patient to continue antiretroviral therapy. It may be that valproic acid and carbamazepine would be effective for patients with these iatrogenic manias.

In HIV-infected patients treated with lithium for the control of bipolar I disorder, care must be taken to monitor lithium concentrations closely, especially if the patient has significant *gastrointestinal disturbances* (e.g., vomiting and diarrhea) that may affect lithium absorption and excretion. *Carbamazepine may reduce serum concentrations of protease inhibitors, and these agents themselves may lower valproate concentrations.*

11.8. The answer is D

High-dosage *zidovudine monotherapy can ameliorate HIV-associated neurocognitive impairment because it penetrates the blood–brain barrier well.* Since the introduction of protease inhibitors and combination antiretroviral therapy, zidovudine monotherapy is no longer an option of treatment, but it remains an important component of combination regimes. Current recommendations are that treatment should be initiated with triple therapy, that is, a combination of two reverse transcriptase inhibitors and one protease inhibitor. *Triple therapy* may also be used for people who have had an unexpected sexual encounter with a potentially infected partner and *in health care workers who have been pricked by a needle from an infected patient.* Protease inhibitors are metabolized in the liver by the hepatic cytochrome P450 oxidase system and can therefore increase levels of certain psychotropic drugs that are similarly metabolized. Clinical improvement, including enhanced performance on standardized neuropsychological testing and of the pattern and severity of white matter signal abnormalities on magnetic resonance imaging, can be seen within 2 to 3 months of beginning therapy.

11.9. The answer is D

The T4-lymphocyte count usually decreases to abnormal levels during the asymptomatic period of HIV infection. The normal values are greater than $1,000/\text{mm}^3$, and grossly abnormal values can be fewer than $200/\text{mm}^3$.

Seroconversion is the change after infection with HIV from a negative HIV antibody test result to a positive HIV antibody test result. *Seroconversion usually occurs 6 to 12 weeks after infection.* In rare cases, seroconversion can take 6 to 12 months. The estimated length of *time from infection to the development of AIDS is 8 to 11 years*, although that time is gradually increasing because of the early implementation of treatment. *At least 50 percent of HIV-infected patients have neuropsychiatric complications*, which may be the first signs of the disease in about 10 percent of patients. At least two types of HIV have been identified, HIV type 1 (HIV-1) and HIV type 2 (HIV-2). *The majority of HIV-positive patients are infected by HIV-1.* However, HIV-2 infection seems to be increasing in Africa.

11.10. The answer is E

A person may have a true negative result, even if the person is infected by HIV, if the test takes place after infection but before seroconversion. Assays do not usually detect the presence of viral proteins. *The enzyme-linked immunosorbent assay (ELISA) is not used to confirm positive test results of the Western blot analysis.* Rather, the ELISA is used as an initial screening test because it is less expensive than the Western blot analysis and more easily used to screen a large number of samples. The ELISA is sensitive and reasonably specific; although it is unlikely to report a false-negative result, it may indicate a false-positive result. For that reason, positive results from an ELISA are confirmed by using the more expensive and cumbersome Western blot analysis, which is sensitive and specific.

Confidentiality is a key issue in serum testing. No persons should be given HIV tests without their prior knowledge and consent, although various jurisdictions and organizations (e.g., the military) now require HIV testing for all their inhabitants or members. *The results can be shared with other members of a medical treatment team* but should be provided to no one else.

Pretest counseling should inquire why a person desires HIV testing to detect unspoken concerns and motivations that may merit psychotherapeutic intervention. Table 11.1 lists general guidelines for HIV testing and counseling.

11.11. The answer is E (all)

Most of the infections secondary to HIV involvement of the central nervous system (CNS) are viral or fungal. *Atypical aseptic meningitis, Candida albicans abscess, primary CNS lymphoma, and cerebrovascular infarction* can all affect a patient with AIDS.

11.12. The answer is A

A person experiencing mild neurocognitive disorder associated with HIV infection typically has some difficulty concentrating, may experience unusual fatigability when engaged in demanding mental tasks, may feel subjectively slowed down, and may notice *difficulty in remembering.* Such persons may say they are not as sharp or as quick as they once were.



Table 11.1
Pretest HIV Counseling

1. Discuss the meaning of a positive result and clarify distortions (e.g., the test detects exposure to the AIDS virus; it is not a test for AIDS).
2. Discuss the meaning of a negative result (e.g., seroconversion requires time; recent high-risk behavior may require follow-up testing).
3. Be available to discuss the patient's fears and concerns (unrealistic fears may require appropriate psychological intervention).
4. Discuss why the test is necessary (not all patients will admit to high-risk behaviors).
5. Explore the patient's potential reactions to a positive result (e.g., "I'll kill myself if I'm positive"). Take appropriate necessary steps to intervene in a potentially catastrophic reaction.
6. Explore past reactions to severe stresses.
7. Discuss the confidentiality issues relevant to the testing situation (e.g., is it an anonymous or nonanonymous setting?). Inform the patient of other possible testing options where the counseling and testing can be done completely anonymously (e.g., where the result is not made a permanent part of a hospital chart). Discuss who has access to the test results.
8. Discuss with the patient how being seropositive can potentially affect social status (e.g., health and life insurance coverage, employment, housing).
9. Explore high-risk behaviors and recommend risk-reducing interventions.
10. Document discussions in chart.
11. Allow the patient time to ask questions.

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Such a set of presenting complaints, especially in younger individuals who may be struggling to accept their seropositive status, may lead the clinician to conclude that anxiety, depression, or hypochondriasis is responsible. Although affective features are occasionally the best explanation for such complaints, that is not generally the case. Rather, comprehensive neuropsychological testing may reveal that the individual does indeed have difficulties with speeded information processing, divided attention, and sustained effortful processing as well as deficiencies in learning and recalling new information.

Some individuals with mild neurocognitive disorder also have difficulties with tasks involving problem solving and *abstract reasoning*, and there may also be slowing of simple motor performance (e.g., speed of finger tapping). Verbal skills are less affected, although there may be some decrement in fluency (e.g., quickly reciting as many animals as possible or as many words beginning with a particular letter as possible).

These neuropsychological findings, which emphasize *attentional problems, slowing of information processing, and deficiencies in learning*, are reminiscent of neuropsychological patterns seen in patients with so-called subcortical dementias (e.g., Huntington's disease and Parkinson's disease). Fine-grained analysis of memory breakdown in HIV-infected persons also confirms a subcortical pattern. For example, persons with HIV-associated cognitive disorders have difficulty recalling words from a list but do not make intrusion errors (i.e., *confabulatory responses*) the way patients with cortical dementias (e.g., dementia of the Alzheimer's type) tend to do. Neuropsychological features that suggest *selective involvement of subcortical structures* are consistent with neuropathological findings. It is important to stress that these mild neurocognitive deficits occur independently of depression, anxiety, and other non-HIV sources of cognitive deficit.

11.13. The answer is A

Antisocial personality disorder is a risk factor for HIV infection. Personality disorders represent extremes of normal personality characteristics and are disabling conditions. Prevalence rates of

personality disorders among HIV-infected (19 to 36 percent) and HIV at-risk (15 to 20 percent) individuals are high and significantly exceed rates found in the general population (10 percent). Antisocial personality disorder is the most common. Individuals with personality disorder, particularly antisocial personality disorder, have high rates of substance abuse and are more likely to inject drugs and share needles compared with those without an Axis II diagnosis. Approximately half of drug abusers meet criteria for a diagnosis of antisocial personality disorder. Individuals with antisocial personality disorder are also more likely to have higher numbers of lifetime sexual partners, engage in unprotected anal sex, and contract sexually transmitted infections compared to individuals without antisocial personality disorder.

11.14. The answer is E

HIV encephalopathy is a subacute encephalitis that results in a progressive subcortical dementia without focal neurological signs. The major differentiating feature between subcortical dementia and cortical dementia is the absence of classical cortical symptoms (e.g., *aphasia*) until late in the illness. Patients with HIV encephalitis or their friends usually notice *subtle mood and personality changes, problems with memory and concentration*, and some *psychomotor slowing*. The presence of motor symptoms may also suggest a diagnosis of HIV encephalopathy. Motor symptoms associated with subcortical dementia include *hyperreflexia*, spastic or ataxic gait, *paraparesis*, and increased muscle tone.

11.15. The answer is C

Brain biopsy is required for confirmation of the diagnosis of central nervous system (CNS) lymphoma. Lymphoma is the most common neoplasm seen in AIDS patients, affecting between 0.6 to 3 percent. AIDS is the most common condition associated with primary CNS lymphoma. The patient is generally afebrile and may develop a signal lesion with focal neurological signs or small, multifocal lesions most commonly presenting with mental status change. Seizures present in about 15 percent of patients. CNS lymphoma is at times misdiagnosed as

toxoplasmosis, HIV dementia, or other encephalopathy. CT scan of the brain may be normal or show multiple hypodense or patchy, nodular-enhancing lesions. MRI generally shows enhanced lesions that may be difficult to differentiate from *CNS toxoplasmosis*, but thallium single photon emission computed tomography scanning may help to differentiate the two disorders and is 90 percent sensitive and specific to lymphoma. Lymphoma may respond in part to radiation therapy and steroids. Chemotherapy is generally adjunctive for lymphoma. Although CNS lymphoma had a grim prognosis with an average survival of 3 to 5 months before the advent of highly active antiretroviral therapy (HAART), the prognosis now *depends on the HAART response*, with considerable improvement possible in patients who respond to HAART.

11.16. The answer is C

Apathy is a common early symptom of HIV-associated dementia, often causing a noticeable withdrawal by the patient from social activity. A frank depressive syndrome also commonly develops, typically with irritable mood and anhedonia instead of sadness and crying spells. *Sleep disturbances* are common, as is *weight loss*. Restlessness and *anxiety* may be complicating factors. *Psychosis* develops in a significant number of patients, typically with paranoid ideas and hallucinations. In about 5 to 8 percent of patients, a syndrome known as AIDS mania develops. Overall, HIV-associated dementia is rapidly progressive, usually ending in death within 2 years.

Answers 11.17–11.21

11.17. The answer is A

11.18. The answer is B

11.19. The answer is C

11.20. The answer is A



Table 11.2
Antiretroviral Agents

Generic Name	Trade Name	Usual Abbreviation
Nucleoside reverse transcriptase inhibitors		
Zidovudine	Retrovir	AZT or ZDV
Didanosine	Videx	ddl
Zalcitabine	Hivid	ddC
Stavudine	Zerit	d4T
Lamivudine	EpiVir	3TC
Abacavir	Ziagen	
Nonnucleoside reverse transcriptase inhibitors		
Nevirapine	Viramune	
Delavirdine	Rescriptor	
Efavirenz	Sustiva	
Protease inhibitors		
Saquinavir	Invirase	
Ritonavir	Norvir	
Indinavir	Crixivan	
Nelfinavir	Viracept	

11.21. The answer is A

A growing list of agents that act at different points in viral replication has raised for the first time the hope that HIV might be permanently suppressed or actually eradicated from the body. The reverse transcriptase inhibitors are further subdivided into the nucleoside reverse transcriptase inhibitor group and the non-nucleoside reverse transcriptase inhibitors. In addition to the new nucleoside reverse transcriptase inhibitors, nonnucleoside reverse transcriptase inhibitors, and protease inhibitors, other classes of drugs are under investigation. These include agents that interfere with HIV cell binding and fusion (e.g., enfuvirtide [Fuzeon]) or the action of HIV integrase and certain HIV genes such as gag, among others. Table 11.2 lists some of the available agents in these three categories.

Substance-Related Disorders

Substance disorders are complex psychiatric conditions that govern both internally perceived mental states, such as mood, and externally observable activities, such as behavior. As with most other psychiatric disorders, both biological factors and environmental circumstance govern a person's involvement in the disorder. Substances can cause neuropsychiatric symptoms indistinguishable from those of common psychiatric disorders with no known causes (e.g., schizophrenia and mood disorders), and thus primary psychiatric disorders and disorders involving the use of substances are possibly related. It is important to understand and appreciate the common features found in these disorders and how they differ from other psychiatric illnesses in order to provide adequate care and treatment for patients with these conditions.

Diagnosing a psychiatric disorder in the context of substance abuse can be complicated. A careful and detailed chronological history of symptom development and its relationship to

substance use is critical to clarifying diagnoses. Although a primary diagnosis may be unclear at times, what does seem clear is that substance abuse worsens the course, prognosis, and presentation of any preexisting psychiatric disorder. A patient with schizophrenia who abuses crack cocaine or a depressed patient abusing cocaine or benzodiazepines will undoubtedly be more impaired than a patient who is not. In fact, most experienced clinicians will agree that effectively treating any psychiatric disorder in the context of ongoing substance abuse is not possible.

Clinicians need to be clear about the definitions of many terms relating to substance use, including *addiction*, *dependence*, *abuse*, *tolerance*, *cross-tolerance*, *intoxication*, and *withdrawal*. Each substance-related disorder also has its own definition, epidemiology, and clinical features, and skilled clinicians must be knowledgeable about each one.

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

Students should know each of the terms below.

- | | | | |
|---------------------------------------|---|--|--|
| ▶ AA | ▶ codependence | ▶ Korsakoff's and Wernicke's syndromes | ▶ persisting dementia |
| ▶ abuse | ▶ cross-tolerance | ▶ LAMM | ▶ physical dependence |
| ▶ addiction | ▶ DEA | ▶ LSD | ▶ psychedelics |
| ▶ AI-Anon | ▶ dispositional tolerance | ▶ MDMA | ▶ psychoactive |
| ▶ alcohol delirium | ▶ disulfiram | ▶ methadone withdrawal | ▶ psychological dependence |
| ▶ alcohol psychotic disorder | ▶ DSM-IV-TR course modifiers | ▶ misuse | ▶ RFLP |
| ▶ alcohol withdrawal | ▶ DTS | ▶ MPTP-induced parkinsonism | ▶ "roid" rage |
| ▶ amotivational syndrome | ▶ dual diagnosis | ▶ nicotine receptor | ▶ sedative-hypnotic anxiolytic |
| ▶ anabolic steroids | ▶ fetal alcohol syndrome | ▶ NIDA | ▶ STP alcohol intoxication; blood levels |
| ▶ arylcyclohexylamines | ▶ flashback | ▶ nitrous oxide | ▶ substance dependence and abuse |
| ▶ belladonna alkaloids | ▶ freebase | ▶ opiate | ▶ THC |
| ▶ binge drinking | ▶ hallucinogen | ▶ opioid antagonists | ▶ tolerance |
| ▶ blackouts | ▶ hallucinogen persisting perception disorder | ▶ opioid intoxication and withdrawal | ▶ type I and II alcoholism |
| ▶ caffeine | ▶ idiosyncratic alcohol intoxication | ▶ PCP | ▶ volatile hydrocarbons |
| ▶ cocaine delirium | ▶ illicit drug use | ▶ persisting amnesic disorder | ▶ withdrawal |
| ▶ cocaine-induced psychotic disorder | ▶ inhalant intoxication | | |
| ▶ cocaine intoxication and withdrawal | ▶ ketamine | | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 12.1.** The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) states specifically that the diagnosis of dependence can be applied to every class of substances *except*
- anabolic steroids
 - caffeine
 - nicotine
 - nitrous oxide
 - none of the above
- 12.2.** FT is a 73-year old successful emeritus professor at a small liberal arts college in the Midwest. He was in relative good health when he entered the hospital for an elective hernia repair. The brief history contained no detailed notes of his drinking pattern and made no mention of his γ -glutamyltransferase value of 55 U/L along with the mean corpuscular volume (MCV) of $93.5 \mu\text{m}^3$. Eight hours postsurgery, the nursing staff noted an acute increase in the pulse rate to 110 beats/min, an increased in blood pressure to 150/100 mm Hg, prominent diaphoresis, and a tremor to both hands, after which the patient demonstrated a brief but intense grand mal convulsion. He awoke agitated and disoriented to time, place, and person. A reevaluation of the history and an interview with the patient's wife documented his alcohol dependence with a consumption of approximately six standard drinks per night. Over the following 4 days, the patient's autonomic nervous system dysfunction decreased as his cognitive impairment disappeared. Which condition is the best classification for Mr. FT in the above case?
- Alcohol withdrawal delirium
 - Wernicke's encephalopathy
 - Korsakoff's syndrome
 - Alcohol-induced anxiety disorder
 - Alcohol-induced persisting dementia
- 12.3.** Which of the following statements regarding cancer and alcohol use is *correct*?
- Cancer may be caused by the immunosuppressive effects of ethanol.
 - Cancer is the second leading cause of premature death in alcoholics.
 - Increases in breast cancer have been noted with just two drinks per day.
 - Alcohol can be directly linked to cancers of mucous membranes.
 - All of the above
- 12.4.** Which of the following statements regarding alcohol's effect on sleep is *false*?
- Heavy drinkers often awaken at night and have difficulty going back to sleep.
 - Alcoholics tend to have more dreams later in the night.
 - Alcohol increases rapid eye movement (REM) sleep.
 - Alcohol can significantly impair normal sleep patterns.
 - Alcohol use tends to inhibit stage 4 sleep.
- 12.5.** Acute PCP intoxication is *not* treated with
- diazepam (Valium)
 - cranberry juice
 - phenothiazines (Regitine)
 - phenothiazines
 - all of the above
- 12.6.** In distinguishing schizophrenia from amphetamine-induced toxic psychosis, the presence of which of the following is most helpful?
- tactile or visual hallucinations
 - paranoid delusions
 - intact orientation
 - clear consciousness
 - auditory hallucinations
- 12.7.** The image in Figure 12.1 shows decreased dopamine type 2 (D_2) receptor binding in the striatum in drug users compared with normal control subjects. Which of the following types of substance withdrawal is this pattern *not* typical of?
- Alcohol
 - Cocaine
 - Methamphetamine
 - Opioids
 - All of the above
- 12.8.** Which of the following is *not* a therapeutic indication for use of anabolic-androgenic steroids?
- Anemia
 - Hereditary angioedema
 - Hyperthyroidism
 - Male hypogonadism
 - Osteoporosis
- 12.9.** Ms. E is a 32-year-old single white woman employed full time at a local factory. She is a smoker and occasionally has flares of asthma. She typically drinks four to five mugs of coffee each day and prefers to drink it without cream, milk, or sugar. Physicians had recommended she cut down or stop her coffee use because of complaints of mild indigestion, and she abruptly stopped her caffeine intake as a result of these recommendations. Which of the following statements regarding caffeine is *true*?
- Caffeine is slowly absorbed and metabolized by the kidneys.

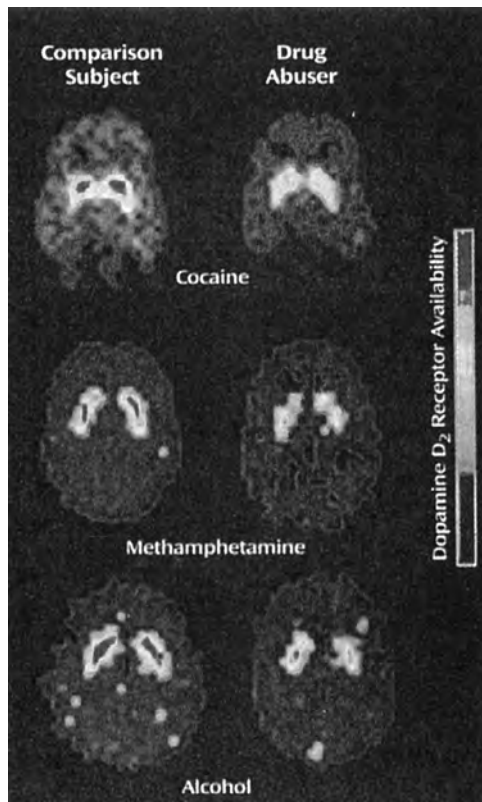


FIGURE 12.1

- B. Caffeine's effects on the body include bronchoconstriction.
- C. Caffeine metabolism is markedly increased at the end of pregnancy.
- D. Caffeine increases the metabolism of the antipsychotic clozapine.
- E. The rate of caffeine elimination is increased by smoking.
- 12.10.** The above patient would most likely experience all of the following because of her abruptly stopping caffeine intake *except*
- decreased concentration
 - headache
 - insomnia
 - irritability
 - muscle aches
- 12.11.** Which of the following is contraindicated for the treatment of acute disulfiram (Antabuse) overdose?
- Activated charcoal
 - Decontamination
 - Gastric lavage
 - Hemodialysis
 - Syrup of ipecac
- 12.12.** Minor signs and symptoms of the benzodiazepine discontinuation syndrome commonly include
- hyperpyrexia
 - grand mal seizures
 - psychosis
 - nightmares
 - death
- 12.13.** Which of the following is *not* a therapeutic effect for which cannabinoids are commonly used?
- Weight loss
 - Reduced muscle spasticity
 - Relief of nausea and vomiting
 - Decreased intraocular pressure
 - Appetite stimulant
- 12.14.** Amphetamines and cocaine are similar in
- their metabolic pathways
 - the induction of paranoia and production of major cardiovascular toxicities
 - their mechanisms of action at the cellular level
 - their duration of action
 - all of the above
- 12.15.** Inhalant use most often correlates with which of the following comorbid conditions?
- Borderline personality disorder
 - Conduct disorder
 - Major depression
 - Manic episode
 - Schizophrenia
- 12.16.** The single photon emission computed tomography (SPECT) image in Figure 12.2 shows multifocal areas of hypoperfusion in a patient with chronic substance abuse. The patient's ischemic cerebrovascular disorder is most likely precipitated by which of the following substances?
- Barbiturates
 - Cannabis
 - Cocaine
 - Heroin
 - Phencyclidine (PCP)
- 12.17.** Which of the following drugs is an opioid antagonist?
- Naloxone
 - Naltrexone
 - Nalorphine
 - Apomorphine
 - All of the above
- 12.18.** Which of the following atypical substances is also known to produce symptoms of intoxication?
- Benadryl
 - Betel nut

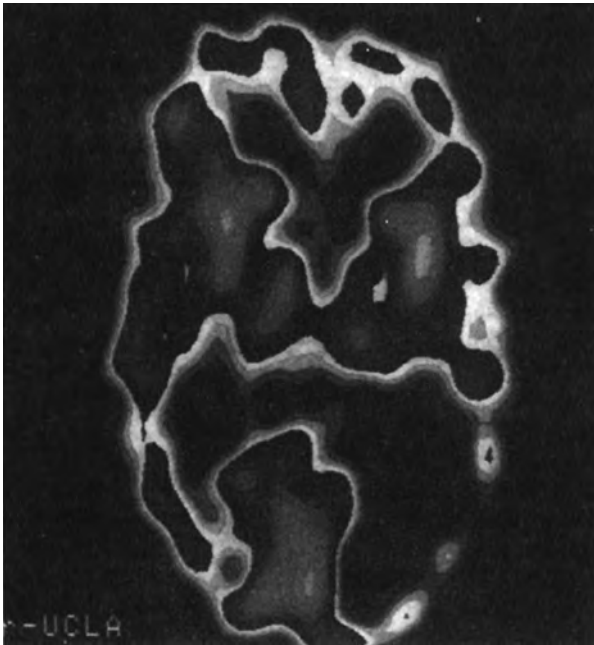


FIGURE 12.2

- C. Catnip
- D. Kava
- E. All of the above

12.19. You are called for a consult on a 42-year-old woman with alcohol dependence who is complaining of persisting severe depressive symptoms despite 5 days of abstinence. In the initial stage of the interview, she noted that she had “always been depressed” and believed that she “drank to cope with the depression.” Her current complaint includes a prominent sadness that has persisted for several weeks, difficulties concentrating, initial and terminal insomnia, and feelings of hopelessness and guilt.

What is the most appropriate next step to distinguish between alcohol-induced depression and an independent major depressive episode?

- A. Chronological history
- B. Trial of electroconvulsive therapy (ECT)
- C. Proton emission tomography (PET) scan
- D. Antidepressant treatment
- E. Intensive psychotherapy

12.20. Cocaine

- A. competitively blocks dopamine reuptake by the dopamine transporter.
- B. does not lead to physiological dependence.
- C. does not induce psychotic disorders.
- D. has been used by 40 percent of the United States population since 1991
- E. is no longer used as a local anesthetic

12.21. Which of the following is *not* a component of acute nicotine intoxication?

- A. Tachycardia
- B. Visual hallucinations
- C. Bizarre dreams
- D. Lability of mood
- E. Cardiac arrhythmias

12.22. Laboratory tests useful in making the diagnosis of alcohol abuse or dependence include

- A. triglycerides
- B. γ -glutamyltransferase (GGT)
- C. MCV
- D. all of the above
- E. none of the above

12.23. Mouth ulceration is associated with which of the following types of withdrawal?

- A. Alcohol
- B. Benzodiazepines
- C. Cocaine
- D. Nicotine
- E. Opioids

12.24. A 35-year-old male dentist with no history of other substance problems complains of problems with nitrous oxide abuse for 10 years. This had begun as experimentation with what he had considered a harmless substance. However, his rate of use increased over several years, eventually becoming almost daily for months at a time. He felt a craving before sessions of use. Then, using the substance while alone in his office, he immediately felt numbness, a change in his temperature and heart rate, and an alleviation of depressed feelings. “Things would go through my mind. Time was erased,” he said. He sometimes fell asleep. Sessions might last a few minutes or up to 8 hours; they ended when the craving and euphoria ended. He had often tried to stop or cut down, sometimes consulting a professional about the problem.

Which category best fits the condition of the above patient?

- A. Hallucinogen-related disorder not otherwise specified (NOS)
- B. Opioid-related disorder NOS
- C. Inhalant-related disorder NOS
- D. Phencyclidine-related disorder NOS
- E. Anabolic steroid-related disorder NOS

12.25. A 31-year-old woman is hospitalized after sustaining multiple rib fractures from a motor vehicle accident. Forty-eight hours later, she complains to the hospital’s patient relations department that the nurses are constantly hiding in the bathroom of her hospital room and making fun of her. After extensively speaking with the nurses, the hospital administration finds no evidence that any such behavior has occurred. Her vital signs are stable.

The patient has no psychiatric history, denies smoking or recreational drugs, and has four standard drinks daily. On the sixth day of hospitalization, the patient is no longer agitated and does not have the same complaints. What is the most likely diagnosis?

- A. Paranoid personality disorder
- B. Brief psychotic disorder
- C. Adjustment disorder
- D. Alcoholic hallucinosis
- E. Posttraumatic stress disorder

Directions

Each set of lettered headings below is followed by a list of numbered words or phrases. For each numbered word or phrase, select

- A. if the item is associated with A only
- B. if the item is associated with B only
- C. if the item is associated with both A and B
- D. if the item is associated with neither A nor B

Questions 12.26–12.33

- A. Barbiturates
- B. Benzodiazepines

- 12.26. Pose a lower risk when taken in overdose.
- 12.27. Delirium may occur with withdrawal.
- 12.28. Withdrawal severity is greater with high scores on the Minnesota Multiphase Personality Inventory 2 (MMPI-2).
- 12.29. Has a risk of pharmacodynamic tolerance.
- 12.30. Withdrawal in a hospital is necessary to prevent death.
- 12.31. Have symptoms of withdrawal that usually appear within 3 days.
- 12.32. Cause REM–sleep suppression.
- 12.33. Are clinically used as muscle relaxants.

Questions 12.34–12.38

- A. Alcohol dehydrogenase
- B. Aldehyde dehydrogenase

- 12.34. Converts acetaldehyde into acetic acid
- 12.35. Involved in alcohol metabolism
- 12.36. Converts alcohol into acetaldehyde
- 12.37. Inhibited by disulfiram (Antabuse)
- 12.38. Decreased in Asian people

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading that is most associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 12.39–12.48

- A. Intoxication
- B. Abuse
- C. Physical dependence
- D. Withdrawal
- E. Codependence
- F. Misuse
- G. Addiction
- H. Tolerance
- I. Cross-tolerance
- J. Neuroadaptation

- 12.39. Increasingly larger doses of a drug are necessary to obtain the effects of the original dose.
- 12.40. Neurochemical changes in the body caused by repeated administration of a drug.
- 12.41. The behavior of family members affected by the substance use of the patient.
- 12.42. The reduction or cessation of a substance after prolonged regular use or abuse.
- 12.43. The use of a drug or substance beyond approved social or medical patterns.
- 12.44. A reversible nondependent experience with a substance.
- 12.45. A drug prescribed by a physician is not used as it was prescribed.
- 12.46. One drug is substituted for another drug that produces the same psychological effect.
- 12.47. The repeated and increased use of a substance.
- 12.48. Can be a feature of problematic use of a substance.

Questions 12.49–12.53

- A. Amphetamines
- B. Cocaine
- C. LSD
- D. Marijuana
- E. PCP

- 12.49. Horizontal and vertical nystagmus
- 12.50. Injected conjunctiva
- 12.51. Atrophic nasal mucosa
- 12.52. Amotivational syndrome
- 12.53. Colorful hallucinations

ANSWERS

12.1. The answer is B

The DSM-IV-TR section dealing with substance dependence and substance abuse presents descriptions of the clinical phenomena associated with the use of 11 designated classes of pharmacological agents: alcohol; amphetamines or similarly acting agents; *caffeine*; cannabis; cocaine; hallucinogens; inhalants; *nicotine*; opioids; PCP or similar agents; and sedatives, hypnotics, and anxiolytics. A residual twelfth category includes a variety of agents, such as *anabolic steroids* and *nitrous oxide*, that are not in the 11 designated classes.

In addition to requiring the clustering of three criteria in a 12-month period, the DSM-IV-TR includes a few other qualifications. *It states specifically that the diagnosis of dependence can be applied to every class of substances except caffeine.* That point is admittedly controversial, and some researchers believe, on the basis of the same DSM-IV-TR generic criteria, that caffeine produces a distinct form of dependence, although it is relatively benign for most persons.

12.2. The answer is A

FT experienced *alcohol withdrawal delirium* postsurgery. Alcohol intoxication delirium and alcohol withdrawal delirium occur when intoxication or withdrawal is accompanied by severe cognitive symptoms and occur in fewer than 5 percent of intoxications or withdrawals. When this agitated confusion is associated with tactile or visual hallucinations, the diagnosis of alcohol withdrawal delirium (also called *delirium tremens*) can be made. During withdrawal, some alcoholic people show one or several grand mal convulsions, sometimes called *rum fits*.

Wernicke's encephalopathy and *Korsakoff's syndrome* are both subdivisions of alcohol-induced persisting amnesic disorder, which is the result of a relatively severe deficiency of vitamin B1, thiamine. *Wernicke's encephalopathy*, also called *alcoholic encephalopathy*, is an acute neurological disorder characterized by ataxia (affecting primarily the gait), vestibular dysfunction, confusion, and nystagmus. *Wernicke's encephalopathy* may clear spontaneously within a few days or weeks or may progress into *Korsakoff's syndrome*. *Korsakoff's syndrome* is characterized by impaired mental syndrome (especially recent memory) and anterograde amnesia in an alert and responsive patient. The patient may or may not have the symptom of confabulation. The syndrome is permanent in at least partial form in about 50 to 70 percent of affected patients, and 30 percent of patients may recover fully. Patients appear to respond to 50 to 100 mg of oral thiamine a day, usually administered for many months.

Alcohol-induced persisting dementia is characterized by heterogeneous long-term cognitive problems that develop in the course of alcoholism. Global decreases in intellectual functioning, cognitive abilities, and memory are observed. Brain functioning tends to improve with abstinence, but perhaps half of all affected patients have long-term and even permanent disabilities in memory and thinking.

Anxiety symptoms fulfilling the diagnostic criteria for *alcohol-induced anxiety disorder* are also common in the context of acute and protracted alcohol withdrawal. Almost 80 percent of alcoholic people report panic attacks during at least one acute withdrawal episode. Similarly, during the first 4 weeks or so of abstinence, people with severe alcohol problems have symptoms resembling social phobia.

12.3. The answer is E (all)

High rates of most cancers are seen in alcoholic people, especially cancers of the head, neck, esophagus, stomach, liver, colon, lungs, and breast tissue. An enhanced risk for breast malignancies might be seen *with as few as two drinks per day*, especially in women with family histories of this disease. The association with cancer probably reflects *alcohol-related immune*

system suppression and the *direct effects of ethanol on mucous membranes*. The heightened rates of malignant tumors in alcoholic people remain significant even when the possible effects of smoking and poor nutrition are considered, and this is the *second leading cause of premature death* in alcohol-dependent men and women.

12.4. The answer is C

Alcohol intoxication can help a person fall asleep more quickly, but if the intake in an evening is more than one or two drinks, the *sleep pattern can be significantly impaired*. Most *heavy drinkers awaken after several hours and can have problems falling back asleep*. Alcohol also tends to *depress rapid eye movements (REMs)* and *inhibit stage 4 sleep* and thus is likely to be associated with frequent alternations between sleep stages (sleep fragmentation) and with *more dreams late in the night* as the blood alcohol level decreases. Exaggerated forms of similar problems are seen in alcoholics in whom sleep stages might not return to normal for 3 or more months after abstinence.

12.5. The answer is D

Phenothiazines are not used in the treatment of acute PCP intoxication because they have anticholinergic effects that may potentiate the adverse effects of PCP, such as seizures. *Diazepam (Valium)* is useful in reducing agitation. If agitation is severe, however, the antipsychotic haloperidol (Haldol) may have to be used. *Cranberry juice* is used to acidify the urine and to promote the elimination of the drug; ammonium chloride or ascorbic acid serves the same purpose. *Phentolamine (Regitine)* is a hypotensive agent that may be needed to deal with severe hypertensive crises produced by PCP.

12.6. The answer is A

Amphetamine-induced toxic psychosis can be exceedingly difficult to differentiate from schizophrenia and other psychotic disorders characterized by hallucinations or delusions. *Paranoid delusions* occur in about 80 percent of patients and *hallucinations* in 60 to 70 percent. *Consciousness is clear, and disorientation is uncommon. The presence of vivid visual or tactile hallucinations should raise suspicion of a drug-induced disorder*. In areas where and populations in whom amphetamine use is common, it may be necessary to provide only a provisional diagnosis until the patient can be observed and drug test results are obtained. Even then, there may be difficulties because in some urban areas, a high percentage of persons with established diagnoses of schizophrenia also use amphetamines or cocaine. Typically, symptoms of amphetamine psychosis remit within 1 week, but in a small proportion of patients, psychosis may last for more than 1 month.

12.7. The answer is D

Opioid withdrawal has not been associated with decreased dopamine binding in the striatum. It has been found repeatedly that there are perfusion deficits in brains of cocaine-dependent subjects recently withdrawn from *cocaine*. This deficit is probably not related to tolerance or withdrawal, but several other

findings probably are. Many (but not all) studies using positron emission tomography and single photon emission computed tomography to examine the brains of cocaine-dependent subjects have found a decreased number of dopamine transporters in the striatum, a finding consistent with postmortem studies. At 1 to 4 weeks and at 3 to 4 months postwithdrawal, cocaine abusers have lower metabolic rates in the frontal cortex that correlate with symptoms of depression and decreased availability of D₂ receptors. These findings were similar in studies of patients after alcohol and amphetamine withdrawal.

12.8. The answer is C

Anabolic-androgenic steroids (AAS) have not been used in the treatment of hyperthyroidism. The anabolic steroids are a family of drugs comprising the natural male hormone testosterone and a group of more than 50 synthetic analogs of testosterone, synthesized over the past 60 years. These drugs all exhibit various degrees of anabolic (muscle-building) and androgenic (masculinizing) effects. Thus, they should more correctly be called AAS. Note that it is important not to confuse the AAS (testosterone-like hormones) with corticosteroids (cortisol-like hormones such as hydrocortisone and prednisone). Corticosteroids have no muscle-building properties and hence little abuse potential. AAS, by contrast, have only limited legitimate medical applications. However, AAS are widely used illicitly, especially by boys and young men seeking to gain increased muscle mass and strength either for athletic purposes or simply to improve personal appearance.

AAS are primarily indicated for testosterone deficiency (*male hypogonadism*), *hereditary angioedema* (a congenital skin disorder), and some uncommon forms of *anemia* caused by bone marrow or renal failure. In women, they are given, although not as first-choice agents, for metastatic breast cancer, *osteoporosis*, endometriosis, and adjunctive treatment of menopausal symptoms. In men, they have also been used experimentally as a male contraceptive and for treating major depressive disorder and sexual disorders in eugonadal men. Recently, they have been used to treat wasting syndromes associated with AIDS. Controlled studies have also suggested that testosterone has antidepressant effects in some HIV-infected men with major depressive disorder, and it is also a supplementary (augmentation) treatment in some depressed men with low endogenous testosterone levels who are refractory to conventional antidepressants.

12.9. The answer is E

Caffeine is a methylxanthine, as are theobromine (found in chocolate) and theophylline (typically used in the treatment of asthma). Caffeine is well absorbed from the gastrointestinal tract, with peak plasma concentrations typically occurring within 1 hour after ingestion. *Caffeine is readily distributed throughout the body and is metabolized by the liver.* The half-life of caffeine is approximately 5 hours, with large individual differences. *The rate of caffeine elimination is increased by smoking*, oral contraceptives, steroids, cimetidine, and fluvoxamine (Luvox). *Caffeine inhibits the metabolism of the antipsychotic clozapine (Clozaril) and the bronchodilator theophylline (Theo-Dur) to an*

extent that might be clinically significant. *Caffeine metabolism is markedly slowed at the end of pregnancy.*

Caffeine exerts effects throughout the body, including *bronchodilation* (hence the therapeutic application of caffeine and theophylline in the treatment of asthma); modest increases in blood pressure (which are reduced in caffeine-tolerant individuals); increased production of urine; increases in gastric acid secretion; and increases in plasma epinephrine, norepinephrine, renin, and free fatty acids. Centrally, caffeine affects turnover or levels of various neurotransmitters, and it functions as a central nervous system stimulant.

12.10. The answer is C

Insomnia is a symptom of caffeine intoxication, not withdrawal. Even though the DSM-IV-TR does not include a diagnosis of caffeine withdrawal, several well-controlled studies indicate that caffeine withdrawal is a real phenomenon. The appearance of withdrawal symptoms reflects the tolerance and physiological dependence that develop with continued caffeine use. Several epidemiological studies have reported symptoms of caffeine withdrawal in 50 to 75 percent of all caffeine users studied. The most common symptoms are *headache* and *fatigue*; other symptoms include anxiety, *irritability*, mild depressive symptoms, impaired psychomotor performance, nausea, vomiting, craving for caffeine, and *muscle aches* and stiffness. The number and severity of the withdrawal symptoms are correlated with the amount of caffeine ingested and the abruptness of the withdrawal. Caffeine withdrawal symptoms have their onset at 12 to 24 hours after the last dose; the symptoms peak in 24 to 48 hours and resolve within 1 week.

12.11. The answer is E

Disulfiram (Antabuse) is used to ensure abstinence in the treatment of alcohol dependence. Its main effect is to produce a rapid and violently unpleasant reaction in a person who ingests even a small amount of alcohol while taking disulfiram. Disulfiram is an aldehyde dehydrogenase inhibitor that interferes with the metabolism of alcohol and produces a marked increase in blood acetaldehyde levels because it prevents the conversion of acetaldehyde to acetyl coenzyme A. The accumulation of acetaldehyde, which may be 10-fold more than normal, leads to many unpleasant effects, including nausea, throbbing headache, vomiting, hypertension, flushing, sweating, thirst, dyspnea, chest pain, vertigo, and blurred vision.

No specific antidote is available for the treatment of acute disulfiram overdose. *Using ipecac syrup is contraindicated* because this syrup contains ethanol and could precipitate a disulfiram-ethanol reaction. Emesis is also not recommended because this may delay the administration of *activated charcoal*, worsen nausea and vomiting, and increase the risk of pulmonary aspiration by an unprotected airway if seizures and coma suddenly supersede. The use of activated charcoal in multiple doses may be beneficial because it increases the rate of elimination of disulfiram. *Gastric lavage* may be useful in cases of massive alcohol ingestion. *Neither decontamination nor hemodialysis* is likely to be beneficial after the reaction begins; however, they are not contraindicated.



Table 12.1
Signs and Symptoms of the Benzodiazepine Discontinuation Syndrome

The following signs and symptoms may be seen when benzodiazepine therapy is discontinued; they reflect the return of the original anxiety symptoms (recurrence), worsening of the original anxiety symptoms (rebound), or emergence of new symptoms (true withdrawal)

Disturbances of mood and cognition:

Anxiety, apprehension, dysphoria, pessimism, irritability, obsessive rumination, paranoid ideation

Disturbances of sleep:

Insomnia, altered sleep–wake cycle, daytime drowsiness

Physical signs and symptoms:

Tachycardia, elevated blood pressure, hyperreflexia, muscle tension, agitation—motor restlessness, tremor, myoclonus, muscle and joint pain, nausea, coryza, diaphoresis, ataxia, tinnitus, grand mal seizures

Perceptual disturbances:

Hyperacusis, depersonalization, blurred vision, illusions, hallucinations

12.12. The answer is D

Studies in the early 1960s by Leo Hollister established that abrupt discontinuation of high doses of chlordiazepoxide or diazepam could lead to a withdrawal syndrome.

The American Psychiatric Association’s Task Force Report on Benzodiazepine Dependence, Toxicity, and Abuse defined withdrawal as a true abstinence syndrome consisting of “new signs and symptoms and worsening of preexisting symptoms following drug discontinuance that were not part of the disorder for which the drugs were originally prescribed.”

The signs and symptoms of the benzodiazepine discontinuation syndrome (Table 12.1) have been classified as major or minor, similar to those of the alcohol withdrawal syndrome. According to that classification, minor symptoms include anxiety, insomnia, and *nightmares*. Major symptoms (which are extremely rare) include *grand mal seizures*, *psychosis*, *hyperpyrexia*, and death.

The discontinuance syndrome may also be divided into symptoms of rebound, recurrence, and withdrawal. *Rebound symptoms* are symptoms for which the benzodiazepine was originally prescribed that return in a more severe form than they had before treatment. They have a rapid onset after termination of therapy and a brief duration. *Recurrence* refers to return of the original symptoms at or below their original intensity.

The temporal sequence of symptom development is not well established, but upon the abrupt cessation of benzodiazepines with short elimination half-lives, symptoms may appear within 24 hours and peak at 48 hours. Symptoms arising from abrupt discontinuation of benzodiazepines with long half-lives may not peak until 2 weeks later.

12.13. The answer is A

Tetrahydrocannabinol (THC) has been shown to *stimulate appetite* and assist with weight gain (*not weight loss*) in AIDS patients in short-term trials. When cannabinoids and cannabis are

advocated for medical uses, it is primarily to relieve symptoms rather than to cure underlying diseases. The conditions for which cannabis is most commonly advocated are for symptomatic *relief of nausea and vomiting* caused by cancer chemotherapy, appetite loss in AIDS, and *muscle spasticity* and chronic pain in neurological disorders. Cannabis and THC have also been documented to *reduce intraocular pressure* by 25 percent, a therapeutic effect that may be useful in the treatment of glaucoma.

12.14. The answer is B

The reinforcing and toxic effects of amphetamines and amphetamine-like drugs play an important role in the genesis of amphetamine dependence and other amphetamine-related disorders. Amphetamines produce subjective effects that are very similar, if not identical, to those produced by cocaine. Both categories of drugs can produce a sense of alertness, euphoria, and well-being. Performance impaired by fatigue is usually improved. There may be decreased hunger and decreased need for sleep. Patterns of toxicity are also similar but not identical. Both the amphetamines and cocaine *can induce paranoia*, suspiciousness, and overt psychosis that can be difficult to distinguish from paranoid-type schizophrenia; both *can produce major cardiovascular toxicities*. However, the *amphetamines and cocaine differ distinctly in their mechanisms of action at the cellular level*, their *duration of action*, and their *metabolic pathways*.

Although amphetamines inhibit reuptake of monoamines to a small degree, their major action is the release of monoamines from storage sites in axon terminals, which in turn increases monoamine concentrations in the synaptic cleft. The release of dopamine in the nucleus accumbens and related structures is thought to account for their reinforcing and mood-elevating effects; the release of norepinephrine is probably responsible for the cardiovascular effects. In contrast to cocaine, which binds to neurotransmitters and inhibits reuptake of the neurotransmitters released into the synapse, amphetamine-like drugs are taken into the neurons, where they are transported into the neurotransmitter storage vesicles.

12.15. The answer is B

People with *adolescent conduct disorder* or adult antisocial personality disorder are prone to taking extreme risks, and many inhalant users have these disorders. Several studies suggest an association of inhalant use and conduct problems. Among youths in grades 7 through 12, inhalant users (compared with others who used no drugs or who used only cannabis or alcohol) had many characteristics suggesting conduct disorder. They accepted cheating more readily; admitted to more stealing; perceived less objection to drug use from their families; liked school less; and reported more sadness, tension, anger, and a feeling of being blamed by others. In addition, school surveys showed that solvent users were more likely to be involved with other drugs. Similarly, among youths referred to court-mandated education for minor alcohol offenses, those who also had used inhalants reported fewer school honors and more expulsions, truancy, academic failures, criminal offenses, running away, and associations

with troubled peers as well as many more drug and alcohol problems.

12.16. The answer is C

The development of an ischemic cerebrovascular disorder is *an adverse effect of cocaine abuse*. The most common cerebrovascular diseases associated with cocaine use are nonhemorrhagic cerebral infarctions. When hemorrhagic infarctions do occur, they can include subarachnoid hemorrhages. Other adverse effects of cocaine use include seizures, myocardial infarction, and arrhythmias.

12.17. The answer is E (all)

Opioid antagonists block or antagonize the effects of opiates and opioids. Unlike methadone, they do not themselves exert narcotic effects and do not cause dependence. The antagonists include the following drugs: *naloxone*, (*Narcan*) which is used in the treatment of opiate and opioid overdose because it reverses the effects of narcotics; *naltrexone*, (*ReVia*) which is the longest-acting (72 hours) antagonist; and *nalorphine*, levallorphan (*Lorfan*), and *apomorphine* (*Apokyn*).

12.18. The answer is E (all)

Many atypical substances are capable of producing mild intoxication. These include *catnip*, which can produce states similar to those observed with marijuana and which in high doses is reported to result in lysergic acid diethylamide-type perceptions; *betel nut*, which is chewed in many cultures to produce a mild euphoria; and *kava* (a substance derived from the South Pacific pepper plant), which produces sedation, incoordination, weight loss, mild forms of hepatitis, and lung abnormalities. In addition, individuals can develop dependence and impairment through repeated self-administration of over-the-counter and prescription drugs, including cortisol, antiparkinsonian agents that have anticholinergic properties, and antihistamines (e.g., *Benadryl*).

12.19. The answer is A

In an effort to distinguish between an alcohol-induced mood disorder and an independent major depressive episode, a *timeline-based chronological history* should be obtained. This should focus on the age of onset of this patient's alcohol dependence, periods of abstinence that extended for several months or more since the onset of dependence, and the ages of occurrence of clear major depressive episodes lasting several weeks or more at a time.

Heavy intake of alcohol over several days results in many of the symptoms observed in major depressive disorder, but the intense sadness markedly improves within days to 1 month of abstinence. Eighty percent of alcoholic patients report histories of intense depression, including 30 to 40 percent who were depressed for 2 or more weeks at a time. However, when information from patients and resource people was carefully evaluated, only 5 percent of alcoholic men and 10 percent of alcoholic women ever had depressions that met the criteria for major depressive disorder when not drinking heavily.

Clinical data reveal that when even severe depression develops in alcoholic people, they are likely to improve fairly rapidly

without *medications or intensive psychotherapy* aimed at the depressive symptoms. A recent study of almost 200 alcoholic men found that although 40 percent had severe levels of depression after 1 week of abstinence, these symptoms markedly improved in all but 5 percent after 3 additional weeks of sobriety. At the end of several weeks to 1 month, most alcoholic patients are left with mood swings or intermittent symptoms of sadness that can resemble cyclothymic disorder or dysthymic disorder. *Electroconvulsive therapy* is indicated only in depression resistant to all other treatments.

12.20. The answer is A

Cocaine *competitively blocks dopamine reuptake by the dopamine transporter*. This primary pharmacodynamic effect is believed to be related to cocaine's behavioral effects, including elation, euphoria, heightened self-esteem, and perceived improvement on mental and physical tasks. Cocaine *does lead to physiological dependence*, although cocaine withdrawal is mild compared with the effects of withdrawal from opiates and opioids. A psychological dependence on cocaine can develop after a single use because of its potency as a positive reinforcer of behavior. *Cocaine-induced psychotic disorders are most common in intravenous users and crack users, not in those who snort cocaine*. The National Institute of Drug Abuse reported that cocaine *has been used by 12 percent, not 40 percent, of the United States population since 1991*. The highest use was in the 18- to 25-year-old age group. Although cocaine use is highest among unemployed individuals, cocaine is also used by highly educated persons in high socioeconomic groups. Cocaine use among men is twice as frequent as cocaine use among women.

Despite its reputation as the most addictive commonly abused substance and one of the most dangerous, cocaine does have some important medical applications. Cocaine *is still used as a local anesthetic*, especially for eye, nose, and throat surgery, for which its vasoconstrictive effects are helpful.

12.21. The answer is B

Nicotine is a highly toxic alkaloid. Doses of 60 mg in an adult are fatal secondary to respiratory paralysis; doses of 0.5 mg are delivered by smoking an average cigarette. Acute intoxication caused by nicotine is evidenced by dysfunctional behavior or perceptual abnormalities, as well as physical signs that are often attributed to sympathetic activation. The behavioral abnormalities include insomnia, *bizarre dreams*, *labile mood*, derealization, and interference with personal functioning. Physically, nicotine intoxication can lead to nausea, vomiting, sweating, *tachycardia*, and *cardiac arrhythmias*. *Visual hallucinations have not been noted to be an effect of nicotine intoxication*.

12.22. The answer is D (all)

Establishing the diagnosis for alcohol abuse or dependence centers on obtaining from the patient and a resource person a history of the patient's life problems and the possible role played by alcohol. Up to one-third of all psychiatric patients are likely to have an alcohol problem that either caused or exacerbated the presenting clinical condition.

The process of identification can also be facilitated by a series of blood tests, outlined in Table 12.2. Those state markers of heavy drinking reflect physiological alterations likely to be observed if the patient regularly ingests four or more drinks a day over many days or weeks. One of the most sensitive and specific of the markers is a level of 30 or more units per liter of γ -glutamyltransferase (GGT), an enzyme that aids in the transport of amino acids and that is found in most areas of the body. Because this enzyme is likely to return to normal levels after 2 to 4 weeks of abstinence, even 20 percent increases in enzyme levels above those observed after 4 weeks of abstinence can be useful in identifying patients who have returned to drinking after treatment. Equally impressive results have been reported for the measure of a deglycosylated form of the protein transferrin, known as carbohydrate-deficient transferrin (CDT). With a biological half-life of about 16 days, this test can also be useful in monitoring abstinence in alcoholics. It appears that patients not identified by higher GGT values might still have elevations in CDT so that both tests should be used for identification and abstinence-monitoring functions in alcoholics.

The *MCV blood test*, with perhaps 70 percent sensitivity and specificity, is a state marker when the size of the red blood cell (RBC) is 91 or more cubic micrometers. The 120-day life span of the RBC does not allow the test to be used as an indicator of a return to drinking after about 1 month of abstinence. Other tests that can be helpful in identifying patients who are regularly consuming heavy doses of alcohol include those for high-normal concentrations of uric acid (greater than 6.4 mg/dL, with a range that depends on the sex of the person); mild elevations in the usual liver function tests, including aspartate aminotransferase and alanine aminotransferase with a 2:1 ratio of AST to ALT; and elevated levels of *triglycerides* or low-density lipoprotein cholesterol.

12.23. The answer is D

The development of mouth ulcers and dry mouth *has been noted as a sign of chronic tobacco use* and may occur acutely during withdrawal. The DSM-IV-TR does not have a diagnostic



Table 12.2
State Markers of Heavy Drinking Useful in Screening for Alcoholism

Test	Relevant Range of Results
γ -Glutamyltransferase (GGT)	>30 U/L
Carbohydrate-deficient transferrin (CDT)	>20 mg/L
Mean corpuscular volume (MCV)	>91 μm^3
Uric acid	>6.4 mg/dL for men >5.0 mg/dL for women
Serum glutamic-oxaloacetic transaminase (aspartate aminotransferase) (SGOT [AST])	>45 IU/L
Serum glutamic-pyruvic transaminase (alanine aminotransferase) (SGPT [ALT])	>45 IU/L
Triglycerides	>160 mg/dL

category for nicotine intoxication, but it does have a diagnostic category for nicotine withdrawal.

Withdrawal symptoms can develop within 2 hours of smoking the last cigarette, generally peak in the first 24 to 48 hours, and can last for weeks or months. The common symptoms include an intense craving for nicotine, tension, irritability, difficulty concentrating, drowsiness and paradoxical trouble sleeping, decreased heart rate and blood pressure, increased appetite and weight gain, decreased motor performance, and increased muscle tension.

12.24. The answer is C

The patient in this case has a nitrous oxide-related disorder, which is included in the DSM-IV-TR as an *inhalant-related disorder not otherwise specified (NOS)*. Nitrous oxide-related disorders are included in DSM-IV-TR under this category because of differences between nitrous oxide and other inhalants in modes of action and associated problems. However, it is rarely studied separately from other inhalants. Nitrous oxide produces feelings described as “drunk,” “dreamy,” “coasting or spaced out,” and “pleasant bodily sensations.” Nitrous oxide produces higher rates of euphoria but no significant increases in subjective sleepiness, distinguishing it from the central nervous system depressant effects of most inhalants. Coordination and reaction time seem to be intact, but logical reasoning appears to be impaired. Chronic use may produce diffuse polyneuropathy and myelinopathy with extensive, although sometimes reversible, neurological symptoms mimicking those of vitamin B₁₂-related pernicious anemia.

Hallucinogen-related disorder NOS is diagnosed when a patient with a hallucinogen-related disorder does not meet the diagnostic criteria for any of the standard hallucinogen-related disorders. The DSM-IV-TR does not have a diagnostic category of hallucinogen withdrawal, but some clinicians anecdotally report a syndrome with depression and anxiety after the cessation of frequent hallucinogen use.

Opioid-related disorder NOS is diagnosed when the clinical situation does not fit into the standard opioid-related disorder categories, namely opioid-related disorder with symptoms of delirium, abnormal mood, psychosis, abnormal sleep, and sexual dysfunction.

Phencyclidine-related disorder NOS is appropriate when a patient does not fit into any of the standard diagnoses for phencyclidine-related disorders.

Anabolic steroid-related disorder NOS includes symptoms with anxiety disorders and associated substance abuse or dependence.

12.25. The answer is D

Auditory, tactile, and visual hallucinations are typical components of *alcohol hallucinosis*. This is characterized by symptoms that frequently resolve by 24 to 48 hours and does not typically include autonomic dysregulation. Because the patient’s auditory hallucinations and agitation appeared 48 hours after admission, hallucinosis caused by alcohol consumption is a likely explanation. *Paranoid personality disorder* consists of a long-standing history of suspiciousness. Personality disorders are unlikely to disappear within days of hospitalization. *Brief psychotic*

disorder is a psychosis that lasts no more than 1 month but at least 1 day. It consists of disorganized speech and behavior, hallucinations, and delusions and is an unlikely diagnosis because the patient has a history of alcoholism. An *adjustment disorder* typically occurs within 3 months of a specific stressor and results in emotional turmoil that does not include hallucinations. *Posttraumatic stress disorder* is frequently triggered by natural disasters, military combat, sexual abuse, and even motor vehicle accidents. It includes flashbacks, nightmares, and recurrent thoughts of the event but does not involve hallucinations.

Answers 12.26–12.33

12.26. The answer is B

12.27. The answer is A

12.28. The answer is B

12.29. The answer is A

12.30. The answer is A

12.31. The answer is C

12.32. The answer is A

12.33. The answer is B

Benzodiazepines have become the primary drugs used to treat anxiety and insomnia, largely replacing barbiturates and other sedative-hypnotic agents. Benzodiazepines have lower abuse potential than most barbiturates, *pose a lower risk when taken in overdose*, and have fewer interactions with other drugs. The abrupt discontinuation of these drugs, particularly chloridiazepoxide (Librium) and diazepam (Valium), can lead to a withdrawal syndrome. Minor signs of discontinuation include anxiety, insomnia, and nightmares. Major signs (which are extremely rare) include grand mal seizures, psychosis, hyperpyrexia, and death. Personality traits may be a risk factor for development of the benzodiazepine withdrawal syndrome. Withdrawal severity is *greater* in patients with *higher* scores on the dependence scale of the Minnesota Multiphase Personality Inventory 2 (MMPI-2), high prewithdrawal levels of anxiety and depression, lower education level, and passive-dependent personality disorder. Even when grossly excessive amounts (more than 2 g) of benzodiazepines are taken in suicide attempts, the symptoms include only drowsiness, lethargy, ataxia, some confusion, and mild depression of the user's vital signs. A much more serious condition prevails when benzodiazepines are taken in overdose in combination with other sedative-hypnotic substances, such as alcohol. In such cases, small doses of benzodiazepines can cause death.

Since the advent of benzodiazepines, barbiturate use has been limited in modern medicine. Pentobarbital (Nembutal) is still prescribed as an anticonvulsant and as a sedative, especially in children. A major disadvantage of the use of barbiturates is the development of pharmacokinetic and *pharmacodynamic toler-*

ance. Tolerance is defined as reduced drug response as a result of decreased drug concentration at the site of action, usually the result of increased drug metabolism (pharmacokinetic) or of cellular adaptive changes with unchanged or higher drug concentrations at the site of action (pharmacodynamic). Pharmacodynamic tolerance begins after acute doses and continues to develop over weeks to months. Minor symptoms of withdrawal include apprehension and uneasiness, insomnia, muscular weakness, twitches, coarse tremors, myoclonic jerks, and electroencephalographic changes within 24 hours of the last dose. Minor symptoms may persist as long as 2 weeks. At high doses, major symptoms develop, which include grand mal seizures and *delirium*. The delirium can sometimes be accompanied by hypothermia, which may be fatal. Overdose is lethal with barbiturates because they induce respiratory depression. As with benzodiazepines, the lethal effects of barbiturates are additive to those of other sedative-hypnotic drugs, including alcohol and benzodiazepines. Barbiturates overdose is characterized by induction of *coma*, respiratory arrest, cardiovascular failure, and death. Barbiturates *cause REM sleep suppression*. An abrupt withdrawal of a barbiturate causes a marked increase or rebound in REM sleep. *Symptoms of withdrawal* from both benzodiazepines and barbiturates *usually appear within 3 days*.

Answers 12.34–12.38

12.34. The answer is B

12.35. The answer is C

12.36. The answer is A

12.37. The answer is B

12.38. The answer is C

Alcohol is metabolized by two enzymes, *alcohol dehydrogenase* (ADH) and *aldehyde dehydrogenase*. ADH catalyzes the conversion of alcohol into acetaldehyde, which is a toxic compound, and *aldehyde dehydrogenase* catalyzes the conversion of acetaldehyde into acetic acid. Aldehyde dehydrogenase is *inhibited by disulfiram (Antabuse)*, often used in the treatment of alcohol-related disorders. Some studies have shown that women have a lower ADH blood content than do men; this fact may account for women's tendency to become more intoxicated than men after drinking the same amount of alcohol. The decreased function of *alcohol-metabolizing enzymes in some Asian people* can also lead to easy intoxication and toxic symptoms.

Answers 12.39–12.48

12.39. The answer is H

12.40. The answer is J

12.41. The answer is E

12.42. The answer is D

12.43. The answer is B

12.44. The answer is A

12.45. The answer is F

12.46. The answer is I

12.47. The answer is G

12.48. The answer is C

The lettered terms are all terms associated with dependence or abuse. See Table 12.3 for definitions of terms used in dependence or abuse. The concept of substance dependence has had many officially recognized and commonly used meanings over the decades. In behavior dependence, substance-seeking activities and related evidence of pathological use patterns are emphasized; *physical dependence* refers to the physical (physiological) effects of multiple episodes of substance use. Physical dependence can be a *feature of problematic use*, but it is neither necessary nor sufficient for diagnosis of (syndromic) dependence. A person may be physically dependent on a substance (e.g., a patient treated with opioid analgesics for cancer pain) but not have problematic use and vice versa.

Answers 12.49–12.53

12.49. The answer is E

12.50. The answer is D

12.51. The answer is B

12.52. The answer is D

12.53. The answer is C

A common adverse effect associated with *cocaine* use is nasal congestion; serious inflammation, swelling, bleeding, and ulceration of the *nasal mucosa* can also occur. Long-term use of cocaine can also lead to perforation of the nasal septa. Freebasing and smoking crack can damage the bronchial passages and the lungs. The intravenous use of cocaine can result in infection, embolisms, and the transmission of HIV. The major complications of cocaine use are cerebrovascular (infarctions), epileptic, and cardiac (MI and arrhythmias). About two-thirds of these acute toxic effects occur within 1 hour of intoxication.

The most common *physical effects of cannabis* are *dilation of the conjunctival vessels* (injected or red eyes) and mild tachycardia. At high doses, orthostatic hypotension may appear. Increased appetite and dry mouth are also common effects of cannabis intoxication. Traditionally, *amotivational syndrome* has been associated with long-term heavy use and has been characterized by a person's unwillingness to persist in a task, be it at school, work, or in any setting that requires prolonged attention or tenacity. Persons are described as becoming apathetic and anergic, usually gaining weight and appearing slothful.

People who have just taken phencyclidine (PCP) are frequently uncommunicative, appear to be oblivious, and report active fantasy production. They experience speedy feelings, euphoria, bodily warmth, tingling, peaceful floating sensations,



Table 12.3
Terms Used in Dependence and Abuse

Dependence The repeated use of a drug or chemical substance with or without physical dependence. Physical dependence indicates an altered physiologic state caused by repeated administration of a drug, the cessation of which results in a specific syndrome.

Abuse Use of any drug, usually by self-administration, in a manner that deviates from approved social or medical patterns.

Misuse Similar to abuse but usually applies to drugs prescribed by physicians that are not used properly.

Addiction The repeated and increased use of a substance, the deprivation of which gives rise to symptoms of distress and an irresistible urge to use the agent again and which leads also to physical and mental deterioration. The term is no longer included in the official nomenclature, having been replaced by the term *dependence*, but it is a useful term in common usage.

Intoxication A reversible syndrome caused by a specific substance (e.g., alcohol) that affects one or more of the following mental functions: memory; orientation; mood; judgment; and behavioral, social, or occupational functioning.

Withdrawal A substance-specific syndrome that occurs after stopping or reducing the amount of the drug or substance that has been used regularly over a prolonged period of time. The syndrome is characterized by physiologic signs and symptoms in addition to psychological changes, such as disturbances in thinking, feeling, and behavior. Also called *abstinence syndrome* or *discontinuation syndrome*.

Tolerance Phenomenon in which, after repeated administration, a given dose of drug produces a decreased effect or increasingly larger doses must be administered to obtain the effect observed with the original dose. *Behavioral tolerance* reflects the ability of the person to perform tasks despite the effects of the drug.

Cross-tolerance Refers to the ability of one drug to be substituted for another, each usually producing the same physiologic and psychological effect (e.g., diazepam and barbiturates). Also known as *cross-dependence*.

Neuroadaptation Neurochemical or neurophysiologic changes in the body that result from repeated administration of a drug.

Neuroadaptation accounts for the phenomenon of tolerance. *Pharmacokinetic adaptation* refers to adaptation of the metabolizing system in the body. *Cellular or pharmacodynamic adaptation* refers to the ability of the nervous system to function despite high blood levels of the offending substance.

Codependence Term used to refer to family members affected by or influencing the behavior of the substance abuser. Related to the term *enabler*, which is a person who facilitates the abuser's addictive behavior (e.g., providing drugs directly or money to buy drugs). Enabling also includes the unwillingness of a family member to accept addiction as a medical-psychiatric disorder or to deny that person is abusing a substance.

and occasionally feelings of depersonalization. Hypertension, hyperthermia, and *vertical or horizontal nystagmus* are common effects of PCP. The short-term effects last 3 to 6 hours and sometimes give way to a mild depression, irritability, paranoia, and occasionally belligerent and violent behavior.

With hallucinogen use, such as LSD, perceptions become unusually brilliant and intense. Colors and textures seem richer than in the past, contours sharpened, music more emotionally profound, and smells and tastes heightened. Synesthesia is common; colors may be heard or sounds seen.



Schizophrenia

Schizophrenia is one of the most debilitating clinical syndromes within psychiatry. It is characterized by disordered cognition, emotions, perceptions, and abnormal behavior. The effect of the illness is always severe despite variations across patients and it is usually long lasting. The consequences of the illness for the patient, his or her family, and society in general are devastating. Schizophrenia affects about 1 percent of the world's population, and in the United States, it has a financial cost that is estimated to exceed that of all cancers combined.

Two major figures in psychiatry who studied the disorder are Emil Kraepelin (1856–1926) and Eugene Bleuler (1857–1939). The term *démence précoce*, coined by French psychiatrist Benedict Morel (1809–1873), was translated by Kraepelin to *dementia praecox*. Patients with dementia praecox were described as having symptoms of hallucinations and delusions and having a long deteriorating course. Bleuler introduced the term *schizophrenia* in 1911. He chose it to express the presence of schisms among thought, emotion, and behavior in patients with the disorder. He stressed that, unlike Kraepelin's dementia praecox, schizophrenia need not have a deteriorating course. He identified four primary symptoms commonly known as the “four As”: associations, affect, autism, and ambivalence. He also identified secondary symptoms: hallucinations and delusions.

The cause of schizophrenia is still unknown. There is considerable evidence that genetic factors make a considerable contribution to its etiology. The presence of a proband with schizophrenia significantly increases the prevalence of this disorder among biological relatives. Eight genetic linkage sites

have been identified, and specific candidate genes have been implicated. A number of environmental factors have also been identified that may contribute to the development of schizophrenia.

In the past, it was believed that schizophrenia was a Western disease. This belief has been disproven by the fact that no community has been found to be free of schizophrenia. The clinical presentation of schizophrenia is very similar across cultures. Schizophrenia is equally prevalent in men and women. Where they differ is in the onset and course of the illness. Patients with schizophrenia are at increased risk for substance abuse, especially nicotine dependence. They are also at an increased risk for suicide and assaultive behavior; approximately 10 percent of patients commit suicide.

Antipsychotic medications, which are the mainstay of pharmacological treatment of patients with schizophrenia, are effective in reducing the impact of psychotic symptoms such as hallucinations, delusions, and suspiciousness. After these symptoms are minimized, or in some cases eliminated altogether, medications can decrease the likelihood that they will return. Psychosocial and rehabilitative interventions are fundamental parts of the treatment of patients with schizophrenia. These include cognitive behavioral therapy, supportive educationally oriented psychotherapy, family therapy and educational programs, social and living skills training, supported employment programs, and supervised residential living arrangements.

Students should test their knowledge by addressing the following questions and answers.

HELPFUL HINTS

The following names and terms, including the schizophrenic signs and symptoms listed, should be studied and the definitions learned.

- ▶ akathisia
- ▶ antipsychotics
- ▶ autistic disorder
- ▶ Gregory Bateson
- ▶ Eugen Bleuler
- ▶ *bouffée délirante*
- ▶ brain imaging—CT, PET, MRI
- ▶ catatonic type
- ▶ deinstitutionalization
- ▶ delusions
- ▶ dementia praecox
- ▶ disorganized type
- ▶ dopamine hypothesis
- ▶ downward-drift hypothesis
- ▶ dystonia
- ▶ ECT
- ▶ ego boundaries
- ▶ electrophysiology—EEG
- ▶ first-rank symptoms
- ▶ flat affect and blunted affect
- ▶ forme fruste
- ▶ the four As
- ▶ fundamental and accessory symptoms
- ▶ genetic hypothesis
- ▶ hallucinations
- ▶ Emil Kraepelin
- ▶ mesocortical and mesolimbic tracts
- ▶ Adolf Meyer
- ▶ Benedict Morel
- ▶ paranoid type
- ▶ paraphrenia
- ▶ positive and negative symptoms
- ▶ residual type
- ▶ RFLPs
- ▶ schizoaffective disorder
- ▶ Kurt Schneider
- ▶ seasonality of birth

- | | | | |
|-------------------------------|--------------------------|------------------------|-------------------------|
| ▶ serotonin hypothesis | ▶ soft signs | ▶ Harry Stack Sullivan | ▶ thought disorders |
| ▶ social causation hypothesis | ▶ stress–diathesis model | ▶ tardive dyskinesia | ▶ undifferentiated type |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 13.1.** Which of the following statements about the dopamine hypothesis of schizophrenia is *true*?
- Dysregulation of dopaminergic neurotransmission is caused by postsynaptic sensitivity.
 - Dopamine release caused by amphetamine challenge is higher during remission.
 - Higher amphetamine-provoked dopamine release predicts worsening of psychotic symptoms.
 - Overactivity of dopamine in the subcortical basal ganglia contributes to negative symptoms.
 - There is a lower occupancy of $D_{2/3}$ receptors in relapsed patients.
- 13.2.** True statements about hypothesized neurobiological models of schizophrenia include
- Genes function in part by increasing vulnerability to environmental factors.
 - Environmental factors increase risk by producing subtle brain damage.
 - The apparent lack of gliosis in postmortem studies implicates in utero factors.
 - As the prefrontal cortex matures, behavioral and cognitive sequelae of subtle structural deficits become manifest.
 - All of the above
- 13.3.** With regard to the ventricular size in schizophrenia, which of the following statements is *true*?
- Patients with schizophrenia invariably demonstrate significant enlargement of the fourth ventricle only.
 - Ventricular enlargement is a pathognomonic finding in schizophrenia.
 - Ventricular changes in schizophrenia are likely to be specific for the pathophysiological processes underlying this disorder.
 - All of the above
 - None of the above
- 13.4.** All of the following lead to an increased risk of schizophrenia *except*
- having a deviant course of personality maturation and development
 - having previously attempted suicide
 - having a schizophrenic family member
 - having a history of temporal lobe epilepsy
 - having low levels of monoamine oxidase, type B, in blood platelets
- 13.5.** True statements about violence and schizophrenia include all of the following *except*
- Violence in a hospital setting can result from undiagnosed neuroleptic-induced acute akathisia.
 - Patients with schizophrenia are more violent as a group than the general population.
 - It is more difficult to prevent most schizophrenic homicides compared with the general population.
 - Patients with disorganized schizophrenia are at much greater risk to commit violence than those with paranoid schizophrenia.
 - Command hallucinations do not appear to play a particularly important role in violence.
- 13.6.** Which of the following statements best describes a characteristic of the epidemiology of schizophrenia?
- Female patients with schizophrenia are more likely to commit suicide than are male patients.
 - In the northern hemisphere, schizophrenia occurs more often among people born from July to September than in those born in the other months.
 - Reproduction rates among people with schizophrenia are typically higher than those among the general population.
 - Patients with schizophrenia occupy about 50 percent of all hospital beds.
 - Some regions of the world have an unusually high prevalence of schizophrenia.
- 13.7.** True statements about eye movement dysfunction in schizophrenia include
- Abnormal eye movements occur more often in patients with schizophrenia compared with control subjects.
 - Eye movement dysfunction is associated with a frontal lobe pathology.
 - Eye movement dysfunction is independent of drug treatment.
 - Eye movement dysfunction is seen in first degree probands.
 - All of the above
- 13.8.** In general, pooled studies show concordance rates for schizophrenia in monozygotic twins of
- 0.1 percent

- B. 5 percent
C. 25 percent
D. 40 percent
E. 50 percent
- 13.9.** A schizophrenic patient who states that he feels his brain burning is most likely experiencing a
- A. cenesthetic hallucination
B. delusional feeling
C. gustatory hallucination
D. haptic hallucination
E. hypnopompic hallucination
- 13.10.** Childhood schizophrenia
- A. tends to have a chronic course
B. tends to have a better prognosis than adult schizophrenia
C. is not diagnosed using the same symptoms as are used for adult schizophrenia
D. tends to have an abrupt onset
E. all of the above
- 13.11.** Late-onset schizophrenia
- A. is more common in men
B. is associated with a preponderance of paranoid symptoms
C. is clinically distinguishable from early-onset schizophrenia
D. results in poorer response to antipsychotic medications
E. has an onset after age 60 years
- 13.12.** Which of the following is *true* of brain imaging technologies in the study of schizophrenia?
- A. Computed tomography (CT) is used more often than magnetic resonance imaging (MRI) in schizophrenia research because its resolution is superior to that of MRI.
B. The abnormalities reported in CT studies of patients with schizophrenia are specific for the pathophysiological processes underlying the disease.
C. In studies of monozygotic twins discordant for schizophrenia, MRI studies have shown that the cerebral ventricles in the affected twins are larger than in the nonaffected twins.
D. Positron emission tomography (PET) studies have shown almost no impairment of brain areas after psychological test stimulation.
E. Function magnetic resonance imaging (fMRI) has shown no differences in the brains of patients with schizophrenia compared with control subjects.
- 13.13.** The majority of CT studies of patients with schizophrenia have reported
- A. atrophy of the cerebellar vermis
B. cortical atrophy in 10 to 35 percent of patients
C. enlarged lateral and third ventricles in 10 to 50 percent of patients
D. findings that are not artifacts of treatment
E. all of the above
- 13.14.** Which of the following is *not* typically associated with catatonia?
- A. Mannerisms
B. Mutism
C. Stereotypies
D. Verbigeration
E. Waxy flexibility
- 13.15.** Persons in the United States who develop schizophrenia are more likely to
- A. have been born abroad
B. have been born in the months from January to April
C. have been born in the months from July to September
D. have been exposed to the parainfluenza virus
E. none of the above
- 13.16.** Which of the following statements comparing the serotonin-dopamine antagonists (SDAs) with dopamine receptor antagonists (DRAs) is *true*?
- A. The DRAs remain the first choice of treatment for schizophrenia.
B. The SDAs affect both serotonin and glutamate receptors.
C. The SDAs produce more extrapyramidal symptoms than the DRAs.
D. The SDAs produce more neurological adverse effects than the DRAs.
E. The SDAs are less effective than the DRAs for positive symptoms of schizophrenia.
- 13.17.** Which of the following statements about the cause of negative symptoms in schizophrenia is *false*?
- A. Patients lose drive because circumstances eliminate them.
B. Positive symptoms commonly cause alogia.
C. Excessive doses of antipsychotic medications cause blunting of affect.
D. Persecutory delusions can lead to social withdrawal.
E. None of the above
- 13.18.** Clozapine (Clozaril)
- A. has been associated with few, if any, extrapyramidal side effects
B. is believed to exert its therapeutic effect mainly by blocking dopamine receptors
C. causes significant increases in prolactin levels
D. is associated with a 10 to 20 percent incidence of agranulocytosis
E. requires monthly monitoring of blood chemistry

- 13.19.** Investigations into the cause of schizophrenia have revealed that
- a specific family pattern plays a causative role in the development of schizophrenia.
 - the efficacy and potency of most antipsychotics correlate with their ability to act primarily as antagonists of the dopamine type 1 (D₁) receptor.
 - a particular defective chromosomal site has been found in all schizophrenic patients.
 - no significant abnormalities appear in the evoked potentials in schizophrenic patients.
 - a monozygotic twin reared by adoptive parents has schizophrenia at the same rate as his or her twin raised by biological parents.
- 13.20.** Epidemiological studies of schizophrenia have found all of the following *except*
- Hospital records suggest that the incidence of schizophrenia in the United States has remained unchanged for the past 100 years.
 - The peak age of onset for schizophrenia is the same for men and women.
 - Schizophrenia is equally prevalent among men and women.
 - Approximately 50 percent of schizophrenic patients attempt suicide at least once in their lifetimes.
 - The lifetime prevalence is usually between 1 and 1.5 percent of the population.
- 13.21.** Features weighing toward a good prognosis in schizophrenia include all of the following *except*
- depression
 - a family history of mood disorders
 - paranoid features
 - undifferentiated or disorganized features
 - an undulating course
- 13.22.** MRI studies of patients with schizophrenia have found evidence for
- increased cortical gray matter
 - increased temporal cortex gray matter
 - increased volume of the amygdala
 - increased volume of basal ganglia nuclei
 - increased volume of the hippocampus
- 13.23.** Prefrontal cortex and limbic system hypotheses are the predominant neuroanatomical theories of schizophrenia because of the demonstration of
- decreased volume of prefrontal gray or white matter
 - disturbed prefrontal metabolism and blood flow
 - disarray or abnormal migration of hippocampal neurons
 - prefrontal cortical interneuron abnormalities
 - all of the above
- 13.24.** The rationale for the role of excess dopamine in schizophrenia is based on observations that
- dopaminergic drugs can induce paranoid psychosis
 - drugs that block postsynaptic dopamine receptors reduce symptoms of schizophrenia
 - metabolic alterations in limbic anatomy are consistent with a disturbance in dopamine metabolism
 - increased concentrations of dopamine have been found in the amygdalas in postmortem brains of schizophrenic patients
 - all of the above
- 13.25.** True statements about structural brain abnormalities in patients with schizophrenia include
- abnormalities are present from birth
 - abnormalities are present in a minority of patients
 - abnormalities have not been correlated with cognitive deficits
 - cortical involvement is multifocal rather than diffuse
 - none of the above
- 13.26.** In simple deteriorative disorder,
- delusions are common
 - early diagnosis is common
 - hallucinations are common
 - homelessness is common
 - all of the above
- 13.27.** A 63-year-old man who was diagnosed with schizophrenia in his mid-20s and living off and on with family, neighbors, and in shelters since he first became ill wanted to find some source of regular income so he might escape the noise and threats of violence in the homeless shelters where he had been residing. He was advised to seek a disability pension and was given detailed instructions on how and where to go and apply. At the next visit, his physician inquired about his application. "I didn't go," he replied. The physician asked, "Is there something that kept you from going to apply?" He replied, "I guess, but I don't remember anything, really."
- "Were you afraid anything might happen to you if you went?"
- "No, I've been feeling pretty safe."
- "Was there any problem taking the bus to the Social Security office?"
- "No, the bus goes by there on the way to your office, doc."
- "Would you like to have more money so you could pay rent for your own place?"
- "I guess."
- "Can you think of a reason not to go to apply?"
- "No, it would be good to go so I could get out of the shelters."

“Could you try to go and get the forms on the way home today, and we could help you fill them out on your next visit?”

“Yeah, sure.”

At the next visit, and at subsequent visits, the patient made no progress toward a disability application, although he could acknowledge that he would feel safer getting out of the shelters. It was not until months later, when a social worker was available to accompany him to the office, that he was able to apply for benefits.

The patient above is showing which negative symptom of schizophrenia?

- A. Alogia
- B. Avolition
- C. Anhedonia
- D. Blunting
- E. Social inattentiveness

- 13.28.** A married man, age 38 years, with a history of dependable, conscientious work as a bookkeeper, became sleepless, anxious, and unable to concentrate three months prior. He developed the belief that his vision was failing because of poisons secretly placed in his food by former neighbors. He found a misprint in a newspaper that he believed was placed there by the editor to shame him publicly. Admitted to the psychiatric service of a general hospital, he said that cars passing up and down the street contained agents who were spying on him. He believed that the electric light bulbs in his room were emanating a purifying radiation to counteract syphilitic germs, which he was supposedly breathing into the atmosphere, although a physical examination was negative for syphilis.

Which of the following psychiatric conditions is the most likely diagnosis?

- A. Brief psychotic disorder
- B. Schizophrenia, paranoid type
- C. Delusional disorder
- D. Schizophrenia, disorganized type
- E. Malingering

- 13.29.** Mr. G, a 36-year-old man, is admitted to a psychiatric unit after being brought to the emergency department by police. As he was walking past a hotel in the central part of the city, he saw a man and woman standing on the sidewalk about to take a photograph of a building across the street. Thinking that they were going to take his picture, he grabbed the camera, smashed it on the ground, and pulled out all the film. He explained his actions by saying the photograph would be used to control him and that it is illegal to take another person's photograph.

Mr. G has a history of multiple hospitalizations dating back to age 14 years. During the hospitalizations, his symptoms have been well controlled with a variety of typical and atypical antipsychotic medications. After being discharged, he begins drinking four to five beers

a day, neglects getting prescriptions refilled, and stops medication when his supply runs out. He made two prior suicide attempts, both by hanging, in which he experienced no serious medical sequelae. He reports numerous blackouts from drinking, but he has never had seizures or delirium tremens (DTs). He does not use illicit drugs.

Mr. G dropped out of high school in the 11th grade. He worked a number of short-term, unskilled jobs before going on public assistance at age 21 years. He lives alone, is estranged from his family, and has no friends. On examination, Mr. G is lying motionless. He makes good eye contact and says, “I’m trying not to move.”

He fears that if he moves he may die. He currently hears voices saying, “Be good,” “Get the dog,” and “He’s the one.” He also sees shapes, which he describes as colored letters dancing in front of his eyes. He talks about being monitored by hidden cameras and microphones everywhere he goes in the city. He is alert and oriented. He can recall three out of three objects after 5 minutes. His concentration is impaired.

Which of the following is the most likely diagnosis for the case described above?

- A. Delusional disorder
- B. Schizophrenia, catatonic type
- C. Schizophrenia, paranoid type
- D. Schizophrenia, undifferentiated type
- E. Schizoaffective disorder

- 13.30.** Which of the following interventions is most likely to prevent relapse in the case above?

- A. Alcohol counseling
- B. Increased socialization
- C. Use of an atypical antipsychotic
- D. Use of a long-term depot antipsychotic
- E. Vocational rehabilitation

- 13.31.** A 32-year-old woman with a history of schizophrenia presents to clinic with her sister. The patient has been treated for the past 3 years with risperidone (Risperdal). The patient's sister states she believes the patient's symptoms are well controlled; however, she is worried about unusual movements she noticed recently. She states that the patient has been protruding her tongue and making strange noises with her lips. Which of the following is the most likely diagnosis?

- A. Akathisia
- B. Tardive dyskinesia
- C. Parkinsonism
- D. Dystonia
- E. None of the above

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading

that is most associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 13.32–13.36

- A. Paranoid schizophrenia
- B. Catatonic schizophrenia
- C. Residual schizophrenia
- D. Disorganized schizophrenia
- E. Undifferentiated schizophrenia

13.32. Inappropriate laughter

13.33. Mutism

13.34. Auditory hallucinations

13.35. Self-inflicted injury

13.36. No active symptoms

Questions 13.37–13.41

- A. Clang association
- B. Echolalia
- C. Loosening of associations
- D. Neologism
- E. Verbigeration

13.37. Loss of logical relations between thoughts

13.38. Creation of a new expression or word

13.39. Repetition of interviewer's words when answering a question

13.40. Words associated by sound rather than meaning

13.41. Use of words in stereotypically repetitive fashion

Questions 13.42–13.46

- A. Catatonic posturing
- B. Echopraxia
- C. Catatonic negativism
- D. Catatonic stupor
- E. Catalepsy

13.42. A patient remains with his hands behind his back hours after restraints are removed.

13.43. A patient stands on one foot for 5 hours.

13.44. A patient sits unmoving in a recliner all day until a nurse takes him to bed at night.

13.45. A patient resists attempts to move him from the fetal position.

13.46. A patient crosses his leg after the physician does.

Questions 13.47–13.51

- A. Emil Kraepelin
- B. Eugen Bleuler
- C. Kurt Schneider

13.47. More concerned with course and prognosis

13.48. Divided symptoms into first- and second-rank symptoms

13.49. More concerned with understanding the underlying psychological mechanisms

13.50. Created the original subtypes of schizophrenia

13.51. Saw symptoms in a continuum with normal behavior

Questions 13.52–13.56

- A. Vocational rehabilitation
- B. Cognitive behavioral therapy
- C. Token economy program
- D. Social skills training
- E. Assertive community treatment

13.52. Patient engages in role play with a trainer

13.53. A multidisciplinary team provides services 24 hours a day

13.54. A variety of methods are used to help patients regain old skills

13.55. Therapist gains a clear understanding of the patient's experience of hallucinations

13.56. Promotes learning behavior to enhance patient's functioning

ANSWERS

13.1. The answer is C

According to the dopamine hypothesis of schizophrenia, *higher amphetamine-provoked dopamine release predicts worsening of psychotic symptoms*. The dopamine hypothesis of schizophrenia posits that overactivity of dopamine neurotransmission in the subcortical basal ganglia contributes to *positive* (not negative) *symptoms*, and the hypoactivity of prefrontal cortical dopamine neurotransmission contributes to *negative symptoms* and cognitive abnormalities in patients with schizophrenia. This theory evolved from two observations: (1) the efficacy and the potency of many antipsychotic drugs (i.e., the dopamine receptor antagonists [DRAs]) are correlated with their ability to act as antagonists of the dopamine 2 (D₂) receptor; and (2) drugs that increase dopaminergic activity, notably cocaine and amphetamine, are psychotomimetic. It has been suggested that the dysregulation of dopaminergic neurotransmission in schizophrenia is caused by *presynaptic reactivity*, not *postsynaptic sensitivity*. Dopamine release provoked by amphetamine challenge is higher in schizophrenic patients at the onset of illness (drug-naïve patients) and during a relapse and is *normal* (not higher) *during remission*. Depletion of endogenous presynaptic dopamine vesicles has demonstrated that there is a *higher* (not lower) occupancy of D_{2/3} receptors by dopamine treatment-naïve patients and in *relapsed* schizophrenic patients.

13.2. The answer is E (all)

The essential neurobiological features of schizophrenia may place some constraints on plausible pathophysiological processes. First, there is a major genetic contribution. *Many genes* are likely to be involved, and these *may function in part by increasing vulnerability to the deleterious effects of environmental factors*. *Several environmental factors have been hypothesized to increase the risk of schizophrenia, perhaps by producing subtle brain damage*. Structural abnormalities have played an important role in placing theoretical constraints on mechanisms. Because

they are present from early in the illness and do not appear to progress, they may predate the onset of illness. Neuropathological data and studies of obstetric and perinatal complications support the idea that an early lesion may account for structural changes. *The apparent lack of gliosis in postmortem studies is particularly critical and implicates in utero factors.* Structural and functional neuroimaging, as well as neuropsychological data and animal studies, present converging evidence for the importance of frontal and temporal regions. Finally, altered dopamine and glutamate neurotransmission is likely to play a part in the expression of psychotic symptoms.

The neurodevelopmental model can account for many of these findings. In short, some process (genetic or environmental) produces damage to selected brain areas early in life. Temporal lobe regions such as the hippocampus may be particularly vulnerable. Secondary functional abnormalities develop later. *As the prefrontal cortex matures in late adolescence, the behavioral and cognitive sequelae of subtle structural deficits become manifest.* One result is hypofrontality and cognitive impairment. Alterations in limbic and prefrontal function then produce downstream, secondary alterations in subcortical dopamine, glutamate, and other neurotransmitter systems. Dopamine dysfunction, in particular, may lead to positive psychotic symptoms. The feasibility of this model has received substantial validation from animal studies showing the delayed behavioral and neurobiological effects of minor damage to the hippocampus in neonatal rats. Observations that children at risk for schizophrenia have a number of subtle neuropsychiatric abnormalities, such as deficits in attention, motor control, and social interactions, also support the neurodevelopmental model.

13.3. The answer is E (none)

Magnetic resonance imaging (MRI) studies have consistently shown that the brains of many schizophrenic patients have *lateral and third ventricular enlargement* and some degree of reduction in cortical volume. These findings can be interpreted as consistent with the presence of less than usual brain tissue in affected patients; whether that decrease is attributable to abnormal development or to degeneration remains undetermined.

However, the abnormalities reported in MRI studies of schizophrenic patients have also been reported in other neuropsychiatric conditions, including mood disorders, alcohol-related disorders, and dementias. Thus, *these changes are not likely to be pathognomonic for the pathological processes underlying schizophrenia.* Although the *enlarged ventricles* in schizophrenic patients can be shown when groups of patients and control subjects are used, the difference between affected and unaffected persons is variable and usually small.

One of the most important MRI studies examined monozygotic twins who were discordant with schizophrenia. The study found that virtually all of the affected twins had larger cerebral ventricles than did the nonaffected twins, although most of the affected twins had cerebral ventricles within a normal range.

13.4. The answer is B

Having previously attempted suicide does not increase the risk for developing schizophrenia, although at least 50 percent of patients with schizophrenia attempt suicide once in their life-

times. *Having a schizophrenic family member,* especially having one or two schizophrenic parents or a monozygotic twin who is schizophrenic, *increases the risk for schizophrenia.* Other risk factors include (1) having lived through a difficult obstetrical delivery, presumably with trauma to the brain; (2) having, for unknown reasons, *a deviant course of personality maturation and development* that has produced an excessively shy, day-dreaming, withdrawn, friendless child; an excessively compliant, good, or dependent child; a child with idiosyncratic thought processes; a child who is particularly sensitive to separation; a child who is destructive, violent, incorrigible, and prone to truancy; or an anhedonic child; (3) having a parent who has paranoid attitudes and formal disturbances of thinking; (4) *having low levels of monoamine oxidase, type B, in the blood platelets;* (5) having abnormal pursuit eye movements; (6) having taken a variety of drugs, particularly lysergic acid diethylamide (LSD), amphetamines, cannabis, cocaine, and phencyclidine; and (7) *having a history of temporal lobe epilepsy,* Huntington's disease, homocystinuria, folic acid deficiency, or the adult form of metachromatic leukodystrophy.

None of those risk factors invariably occurs in schizophrenic patients; they may occur in various combinations. The vast majority of people who ingest psychotomimetic drugs do not become schizophrenic. Not every schizophrenic patient has abnormal pursuit eye movements, and some well relatives of schizophrenic patients may also have abnormal pursuit eye movements.

13.5. The answer is D

Patients with schizophrenia are more violent as a group than the general population. This is particularly a problem for patients with the paranoid type, who may act quite suddenly and impulsively on a delusional idea. *Patients with paranoia tend to be intelligent and capable of forming plans; therefore, they represent a much greater risk than individuals who are disorganized and cannot plan an effective attack.* *Despite earlier beliefs, command hallucinations do not appear to play a particularly important role in violence.* Violence between patients in hospitals frequently results from the attacking patient's mistaken belief that another patient is behaving in a threatening way or getting physically too close. *Studies have revealed that violence in a hospital setting can result from undiagnosed neuroleptic-induced acute akathisia.* Persistently violent inpatients often do well in special treatment units that provide a more structured program and a less crowded environment. Patients who fail to respond to this kind of care usually show neurological signs in addition to their diagnosis.

Unfortunately, it is exceedingly difficult to prevent most schizophrenic homicides because there is usually no clear warning. Most of the homicides come as a horrifying surprise. Patients who are known to be paranoid with homicidal tendencies should not, as a rule, be allowed to move about freely as long as they retain their delusions and their aggressive tension.

13.6. The answer is E

An important epidemiological factor in schizophrenia is that *some regions of the world have an unusually high prevalence of the disorder.* Certain researchers have interpreted this geographic

inequity as supporting an infectious cause for schizophrenia; others emphasize genetic or social factors.

Schizophrenic patients occupy 50 percent of mental hospital beds, not of all hospital beds.

Female patients with schizophrenia are no more likely to commit suicide than are male patients; the risk factors are equal.

There is a difference in prevalence of schizophrenia according to season, but *in the northern hemisphere, schizophrenia occurs more often among people* born from January to April, not from July to September. The latter time range refers to a seasonal preference for the disorder in the southern hemisphere. *Reproduction rates among people with schizophrenia* have been increasing in recent years because of newly introduced medications and changes in laws and policies about hospitalization and community-based care. *The fertility rate among people with schizophrenia, however, is only approaching the rate for the general population and does not exceed it.*

13.7. The answer is E (all)

The inability to follow a moving visual target accurately is the defining basis for the disorders of smooth visual pursuit and disinhibition of saccadic eye movements seen in patients with schizophrenia. Eye movement dysfunction may be a trait marker for schizophrenia; it is *independent of drug treatment and clinical state* and is also *seen in first-degree relatives of probands with schizophrenia*. Various studies have reported *abnormal eye movements in 50 to 85 percent of patients with schizophrenia* compared with about 25 percent in psychiatric patients without schizophrenia and *fewer than 10 percent in nonpsychiatrically ill control subjects*. Because eye movement is partly controlled by centers in the frontal lobes, a disorder in eye movement is consistent with *theories that implicate a frontal lobe pathological process* in schizophrenia.

13.8. The answer is E

In general, pooled studies show *concordance rates of about 50 percent* in monozygotic twins. This is the most robust finding pointing to a genetic etiologic component to the disorder.

13.9. The answer is A

A person with schizophrenia often experiences a *cenesthetic hallucination*, a sensation of an altered state in body organs without any special receptor apparatus to explain the sensation—for example, *a burning sensation in the brain*, a pushing sensation in the abdominal blood vessels, or a cutting sensation in the bone marrow.

A *delusional feeling* is a feeling of false belief based on an incorrect inference about external reality. A *gustatory hallucination* involves primarily taste. A tactile or *haptic hallucination* involves the sense of touch (e.g., fornication—the feeling of bugs crawling under the skin). A *hypnopompic hallucination* is a hallucination that occurs as one awakes. Neither hallucinations nor delusions are pathognomonic of schizophrenia; they may occur in other disorders.

13.10. The answer is A

Recent studies have established that *the diagnosis of childhood schizophrenia may be based on the same symptoms used for*

adult schizophrenia. What characterizes childhood schizophrenia is not the nature but the dramatic intensity of its symptoms. *Its onset is usually insidious, its course tends to be chronic, and the prognosis is mostly unfavorable*. Briefly, it resembles the typical Kraepelinian case of dementia precox. What gives childhood schizophrenia unique importance for research is the observation that anatomical features of the brain that are often associated with adult-onset schizophrenia (e.g., enlarged ventricles) are also present in this early-onset form of the disease. Neurobiological studies of children with schizophrenia may therefore provide significant clues to the developmental pathogenesis of adult-onset schizophrenia.

13.11. The answer is B

Late-onset schizophrenia is *clinically indistinguishable from early-onset schizophrenia* but has an *onset after age 45 years*. This condition tends to *appear more frequently in women* and tends to be *characterized by a predominance of paranoid symptoms*. The prognosis is favorable, and *these patients usually do well on antipsychotic medication*.

13.12. The answer is C

Magnetic resonance imaging (MRI) studies demonstrate that in monozygotic twins who are discordant for schizophrenia, *virtually all the affected twins have larger cerebral ventricles than their nonaffected twins*. MRI is used in schizophrenia research because its *resolution is superior to that with computed tomography (CT)*. The abnormalities reported in CT studies of patients with schizophrenia have also been reported in other neuropsychiatric conditions and *are unlikely to be specific for the pathophysiological processes underlying schizophrenia*. Positron emission tomography studies have shown evidence of impaired activation of certain brain areas after psychological test stimulation in schizophrenics. *Functional MRI has shown differences in sensorimotor cortex activation and a decreased blood flow to the occipital lobes in patients with schizophrenia*.

13.13. The answer is E (all)

The majority of CT studies of patients with schizophrenia have reported *enlarged lateral and third ventricles in 10 to 50 percent of patients* and *cortical atrophy in 10 to 35 percent of patients*. Controlled studies have also revealed *atrophy of the cerebellar vermis*, decreased radiodensity of brain parenchyma, and reversals of the normal brain asymmetries. Those *findings are not artifacts of treatment* and are not progressive or reversible. The enlargement of the ventricles seems to be present at the time of diagnosis before the use of medication. Some studies have correlated the presence of CT scan findings with the presence of negative or deficit symptoms (e.g., social isolation), neuropsychological impairment, frequent motor side effects from antipsychotics, and a poor premorbid adjustment.

13.14. The answer is D

Verbigeration is a specific disorder in the form of thought. It is the meaningless repetition of specific words or phrases and is not associated with catatonia.

The catatonic type of schizophrenia, which was common several decades ago, has become rare in Europe and North America.

The classic feature of the catatonic type is a marked disturbance in motor function; this disturbance may involve stupor, negativism, rigidity, excitement, or posturing. Sometimes the patient shows rapid alteration between extremes of excitement and stupor. Associated features include *stereotypies*, *mannerisms*, and *waxy flexibility* (or *cerea flexibilitas*). *Stereotypies* are repetitive fixed patterns of voluntary physical action or speech. *Mannerisms* are ingrained, habitual involuntary movements. Finally, *waxy flexibility* or *cerea flexibilitas* is a condition in which a person can be molded into a position and then maintained or when an examiner moves the person's limb and the limb feels as if it were made of wax; this is another term for *catatonia*.

13.15. The answer is B

Persons who develop schizophrenia are more likely to have been born in the winter and early spring. In the Northern Hemisphere, including the United States, *persons with schizophrenia are more often born in the months from January to April*. In the Southern Hemisphere, persons with schizophrenia are more often born in the months from July to September. *There are no data to suggest that being born abroad is a risk factor for developing schizophrenia*. Some studies show that *the frequency of schizophrenia is increased after exposure to influenza, not parainfluenza*.

13.16. The answer is B

The serotonin-dopamine antagonists (SDAs) affect both serotonin and glutamate receptors. However, the SDAs produce minimal or no extrapyramidal symptoms and interact with different subtypes of dopamine receptors than do the standard antipsychotics. They also produce fewer neurological adverse effects and are effective in treating negative symptoms of schizophrenia. They are at least as effective as haloperidol for positive symptoms and are uniquely effective for the negative symptoms. These drugs have replaced the dopamine receptor antagonists as the drug of first choice for the treatment of schizophrenia.

13.17. The answer is E (none)

All of these statements about negative symptoms in schizophrenia are *true*. Negative symptoms can arise from multiple causes, including iatrogenic causes. Long-term institutional care or life on the streets and in shelters can remove normal, expectable pleasures and reinforcing activities and narrow the number of relationships someone with schizophrenia will have. People with schizophrenia may lose the *capacity to experience drives* and social relationships and reward simply because circumstances eliminate them. A frequently unrecognized cause of negative symptoms is treatment with antipsychotic medications. Medications for the treatment of schizophrenia can cause a phenocopy of primary negative symptoms that can only be distinguished with a full history of illness or empiric trials of medication adjustment. Reports of excessive doses of antipsychotic medications causing *blunting of affect*, diminution of motor activity, impairments in grooming and hygiene, and anhedonia have existed almost since the introduction of neuroleptics, but for many patients, overtreatment with medications remains the rule rather than the exception.

Negative symptoms can also arise from the presence of other psychiatric symptoms. Positive symptoms are a common cause

of apparent apathy, social withdrawal, and *alogia*. Persecutory delusions can precipitate frantic attempts to protect safety but can also engender fear, leading to a very active *social withdrawal*, and prominent hallucinations can reinforce these fears. Frequent and intrusive hallucinations can lead directly to withdrawal and inaction strictly through their effects on attention.

13.18. The answer is A

Clozapine (Clozaril) *has been associated with few, if any, extrapyramidal side effects* or tardive dyskinesia. It is an antipsychotic medication that is appropriate in the treatment of patients with schizophrenia who have not responded to first-line DRAs or who have tardive dyskinesia. It is not an appropriate first-line drug for the treatment of schizophrenia. Clozapine *has been associated with a 1 to 2 percent (not 10 to 20 percent) incidence of agranulocytosis* and thus *requires weekly, not monthly, monitoring of blood chemistries*. Clozapine *is believed to exert its therapeutic effect* by blocking serotonin type 2 (5-HT₂) and, secondarily, dopamine receptors.

13.19. The answer is E

The cause of schizophrenia is unknown. However, a wide range of genetic studies strongly suggests a genetic component to the inheritance of schizophrenia. Monozygotic twins have the highest concordance rate for schizophrenia. *The studies of adopted monozygotic twins show that twins who are reared by adoptive parents have schizophrenia at the same rate as their twin siblings raised by their biological parents*. That finding suggests that the genetic influence outweighs the environmental influence. In further support of the genetic basis is the observation that the more severe the schizophrenia, the more likely the twins are to be concordant for the disorder.

Nevertheless, *a particular genetic defect has not been found in all patients with schizophrenia*. Many associations between particular chromosomal sites and schizophrenia have been reported in the literature since the widespread application of the techniques of molecular biology.

The research literature also reports that *a large number of abnormalities appear in the evoked potentials in schizophrenic patients*.

Except for the serotonin-dopamine antagonists, *the efficacy and the potency of most antipsychotics correlate* with their ability to act as antagonists of the dopamine type 2 (D₂) (not type 1) receptor.

No well-controlled evidence indicates that any specific family pattern plays a causative role in the development of schizophrenia.

13.20. The answer is B

Men have an earlier onset of schizophrenia than do women. The peak ages of onset for men are 25 to 35 years. However, *schizophrenia is equally prevalent in men and women*.

Hospital records suggest that *the incidence of schizophrenia in the United States has probably remained unchanged for the past 100 years* and possibly throughout the entire history of the country despite tremendous socioeconomic and population changes.

Suicide is a common cause of death among schizophrenic patients. *About 50 percent of patients with schizophrenia attempt suicide at least once in their lifetimes, and 10 to 15 percent of schizophrenic patients die by suicide during a 20-year follow-up period.*

The lifetime prevalence of schizophrenia is usually between 1 and 1.5 percent of the population. Consistent with that range, the National Institute of Mental Health–sponsored Epidemiologic Catchment Area study reported a lifetime prevalence of 1.3 percent.

13.21. The answer is D

Poor prognostic features in schizophrenia include a family history of schizophrenia; poor premorbid social, sexual, and work histories; and *undifferentiated or disorganized features*. Features weighting toward a good prognosis in schizophrenia include mood symptoms (especially *depression*), *a family history of mood disorders, paranoid features, and an undulating course*. Table 13.1 presents a summary of the factors used to assess prognosis in schizophrenia.

13.22. The answer is D

Studies using magnetic resonance imaging have found evidence in patients with schizophrenia for *decreased (not increased) cortical gray matter, especially in the temporal cortex; decreased volume of limbic system structures (e.g., the amygdala, hippocampus, and parahippocampus); and increased volume of basal ganglia nuclei*. These findings are consistent with the findings of neuropathological examinations of postmortem tissue, including ultrastructural examination, which in some cases indicates cell loss, misalignment of cells, altered intracellular structure, abnormal protein expression, or gliosis.



Table 13.1
Features Weighting toward Good to Poor Prognosis in Schizophrenia

Good Prognosis	Poor Prognosis
Late onset	Young onset
Obvious precipitating factors	No precipitating factors
Acute onset	Insidious onset
Good premorbid social, sexual, and work histories	Poor premorbid social, sexual, and work histories
Mood disorder symptoms (especially depressive disorders)	Withdrawn, autistic behavior
Married	Single, divorced, or widowed
Family history of mood disorders	Family history of schizophrenia
Good support systems	Poor support systems
Positive symptoms	Negative symptoms
	Neurological signs and symptoms
	History of perinatal trauma
	No remissions in 3 years
	Many relapses
	History of assaultiveness

13.23. The answer is E (all)

Prefrontal cortex and limbic system hypotheses are the predominant neuroanatomical theories of schizophrenia. The demonstration of *decreased volumes of prefrontal gray or white matter, prefrontal cortical interneuron abnormalities, disturbed prefrontal metabolism and blood flow, decreased volumes of hippocampal and entorhinal cortex, and disarray or abnormal migration of hippocampal and entorhinal neurons* provide strong support for the involvement of these brain regions in the pathophysiology of schizophrenia. In the context of neural circuit hypotheses linking the prefrontal cortex and limbic system, studies demonstrating a relationship between hippocampal morphological abnormalities and disturbances in prefrontal cortex metabolism or function are particularly interesting.

13.24. The answer is E (all)

The hyperdopaminergic hypothesis of schizophrenia arose from two sets of observations of drug action relating to the dopaminergic system. *Drugs that increase dopamine system activity, such as D-amphetamine, cocaine, levodopa (Larodopa), and methylphenidate (Ritalin), can induce a paranoid psychosis* that is similar to some aspects of schizophrenia. Substantial evidence supports the *role of postsynaptic dopamine blockade* as an initiating factor in a cascade of events responsible for the mode of therapeutic action of antipsychotic drugs.

Functional imaging studies provide indirect evidence of dopamine involvement through the examination of metabolic rates in brain regions where dopamine is an important neurotransmitter. For example, data confirming *metabolic alterations in limbic anatomy are consistent with a disturbance in dopamine metabolism*, but it is not possible to determine the extent to which this reflects an alteration of dopamine biochemistry versus an alteration of any one of a number of interacting neurotransmitter and neuromodulatory systems.

Finally, there is the potential for the relatively precise biochemical study of dopamine in postmortem tissue, but here, as with the use of body fluids, sources of artifact and imprecision have been difficult to manage.

Despite these methodological limitations, postmortem studies have reported differences between schizophrenic and control brains. For example, *increased concentration of dopamine has been found in the left amygdala* (a limbic system structure) in the postmortem brains of patients with schizophrenia. This finding has been replicated, and because it is lateralized, is not likely to be an artifact.

13.25. The answer is E (none)

Structural abnormalities in schizophrenia, such as enlarged ventricles and reduced cortical volume, are a prominent feature. *It is unclear whether cortical involvement is multifocal or diffuse*. Temporal and frontal lobe regions are certainly involved. These abnormalities are present very early in the illness. *It is too early to say, however, whether they are present from birth or develop at a later stage. Structural abnormalities may be present in a majority of patients, although the exact percentage is unknown.* The prevalence is most apparent when compared with ideally matched genetic control subjects. Structural abnormalities are

correlated to some degree with clinical aspects of the illness, such as cognitive deficits. A key issue remains unresolved: what neurobiological processes account for these enigmatic changes?

13.26. The answer is D

The DSM-IV-TR diagnosis of simple deteriorative disorder (simple schizophrenia) is characterized by a gradual, insidious loss of drive, interest, ambition, and initiative. *Hallucinations and delusions are uncommon, and if these symptoms do occur, they do not persist.* Patients with simple deteriorative disorder withdraw from contact with other people, tend to stay in their rooms, avoid meeting or eating with other members of the family, stop working, and stop seeing friends. If they are still in school, their grades drop to a low level even if they were consistently high in the past.

These patients avoid going out into the street during the day but may go for long walks alone at 2:00 or 3:00 A.M. They tend to sleep until noon or later after staying up alone most of the night. During the early stages of the illness, they may have many somatic complaints, variously described as fatigue, nervousness, neurosis, psychosomatic disease, and laziness.

Patients are often treated for 1 year or more before the correct diagnosis is made. In many cases, patients with simple deteriorative disorder later become homeless. They become increasingly shallow in their emotional responses and are quite content to drift aimlessly through life as long as they are left alone.

Patients with simple deteriorative disorder may resemble personalities of the schizoid type. The distinguishing feature is the disorder makes its appearance at some time during or after puberty and from then on goes on to definite deterioration; personality deviations usually start earlier and remain the same over the years.

To meet the International Classification of Diseases (ICD-10) diagnostic criteria for simple schizophrenia, the individual must show over a period of at least 1 year all of the following manifestations: (1) a significant and consistent change in the overall quality of some aspect of personal behavior such as loss of drive and interest; (2) gradual appearance and deepening of negative symptoms such as marked apathy; and (3) a marked decline in social, scholastic, or occupational performance.

13.27. The answer is B

The patient in this case is showing signs of *avolition*, which is one of the most common negative symptoms seen in schizophrenia. Avolition is defined as a loss of will or drive. Avolition is similar to apathy, and these may be considered closely related, with avolition identifying a deficit in the ability to act and apathy a loss of concern for an idea or task. In the case of the aforementioned man, he knows that getting the application for the disability pension is the best for him to get out of the homeless shelter, but he just does not possess the drive to actively pursue this goal. Avolition seems associated with deficits in grooming and hygiene, and it seriously impairs educational and vocational progress. Although often overlooked, this loss of will can be severely disabling for patients.

Anhedonia is the loss of the ability to find or derive pleasure from activities or relationships and may be the most persistent of the

negative symptoms. Although present in depressive disorders, when anhedonia in schizophrenia is part of a negative syndrome, it should not be considered a manifestation of depression.

Affective *blunting*, consisting of both an inability to understand or recognize displays of emotion from others and an inability to express emotion, is an important predictor of functional impairment in schizophrenia. The blunting of expression includes deficits in production, facial expression, gestures, and prosody, and understanding these social signals is similarly impaired. It is more common in men, in people with an early-onset illness, and in people with poor premorbid function, and it predicts lower scores on quality of life measures.

Alogia is a decrease in verbal communication, and it is found in up to 25 percent of people with schizophrenia. Although *alogia* has been considered both the loss of production and a deficit of content with a normal volume of words, only the loss of production is a negative symptom. The lack of speech production is considered to result from a decreased rate of verbal cognition. In this way, *alogia* is also conceived of as a "negative thought disorder." This loss of production can include an increased latency to response, short verbal responses, and a paucity or complete lack of spontaneous production.

13.28. The answer is B

The presence of hallucinations or delusions is not necessary for a diagnosis of schizophrenia. To make the diagnosis, the patient must demonstrate the presence of two or more of the following: delusions, hallucinations, disorganized speech, grossly disorganized or catatonic behavior, or negative symptoms. Symptoms must persist for at least 6 months. The *paranoid type of schizophrenia* is characterized by preoccupation with one or more delusions or frequent hallucinations. Classically the paranoid type of schizophrenia is characterized mainly by the presence of delusions of persecution or grandeur. The *disorganized type of schizophrenia* is characterized by a marked regression to primitive, disinhibited, and unorganized behavior and by the absence of symptoms that meet the criteria for the catatonic type. Disorganized patients are usually active but in an aimless, non-constructive manner.

Brief psychotic disorder is an acute and transient psychotic syndrome. The disorder lasts from 1 day to 1 month, and the symptoms may resemble those of schizophrenia. In addition, the disorder develops in response to a severe psychosocial stressor or group of stressors.

Nonbizarre delusions present for at least 1 month without other symptoms of schizophrenia or a mood disorder warrant the diagnosis of *delusional disorder*.

Malingering is characterized by the voluntary production and presentation of false or grossly exaggerated physical or psychological symptoms. The presence of a clearly definable goal is the main factor that differentiates malingering from factitious disorders.

13.29. The answer is D

Mr. G has a long-standing illness characterized by periods of hallucinations and delusions. He is socially isolated and not working. *The most likely diagnosis is schizophrenia.*

There is no description of current or past mood symptoms that would make a diagnosis of schizoaffective disorder reasonable,

and the presence of prominent hallucinations is inconsistent with a diagnosis of delusional disorder. The designation of the subtype of schizophrenia is based on the current episode. Although Mr. G's attempt to not move superficially resembles catatonia, his openly discussing with the examiner his reasons for remaining still is most uncharacteristic of the catatonic subtype. The continued presence of delusions and auditory and visual hallucinations makes the diagnosis of an undifferentiated subtype more appropriate.

13.30. The answer is A

Mr. G is lucky in having a good response to many different antipsychotics. There is no reason to suppose that an atypical agent will help him more than conventional antipsychotics. His multiple relapses result from his failure to fill prescriptions because of his drinking, and a long-acting depot medication is not likely to disturb that pattern. It is probable that he would get an injection, start drinking, and not go for his next injection. *Alcohol counseling is, therefore, of the greatest importance* in giving him some stability and freedom from the ongoing cycle of relapse and rehospitalization. Vocational counseling and increased socialization may help, but only if his drinking is brought under control.

13.31. The answer is B

Extrapyramidal symptoms may occur as a result of both typical and atypical antipsychotics. Among the atypical antipsychotics, risperidone is the most likely to result in extrapyramidal symptoms. This patient has developed *tardive dyskinesia*. Tardive dyskinesia is characterized by involuntary movements such as tongue protrusion, lip smacking, and other perioral movements. However, involuntary movements of the limbs, trunk, and head are also possible. Tardive dyskinesia typically appears between 4 months to 4 years after treatment is initiated. *Akathisia* is characterized by restlessness in which the patient is constantly moving about. *Parkinsonism* classically results in bradykinesia, pill-rolling tremors, and cogwheel rigidity. *Dystonia* is characterized by sustained muscle contractions and stiffness. Dystonia occurs 4 hours to 4 days after treatment.

Answers 13.32–13.36

13.32. The answer is D

13.33. The answer is B

13.34. The answer is A

13.35. The answer is B

13.36. The answer is C

The DSM-IV-TR classifies the subtypes of schizophrenia as paranoid, disorganized, catatonic, undifferentiated, and residual based predominantly on clinical presentation. *Paranoid schizophrenia* is characterized by the presence of one or more delusions and frequent *auditory hallucinations*. Delusions do not need to be persecutory in nature. The contents of the auditory hallucinations are often related to the contents of the delusions.

Patients show less regression of their mental faculties, emotional responses, and behavior than do patients with other types of schizophrenia. Patients are typically tense, suspicious, guarded, reserved, and sometimes hostile or aggressive. They can occasionally conduct themselves adequately in social situations. This subtype has a relatively favorable prognosis.

Catatonic schizophrenia is characterized by a marked disturbance in motor function; this disturbance may involve stupor, negativism, rigidity, excitement, or posturing. Associated features include stereotypies, mannerisms, and waxy flexibility. *Mutism* is particularly common. During catatonic excitement, patients need careful supervision to prevent from *hurting themselves* or others. Medical care may be needed because of malnutrition, exhaustion, hyperpyrexia, or self-inflicted injury.

Residual schizophrenia is characterized by continuing evidence of schizophrenic disturbance in the absence of a complete set of *active symptoms* or of sufficient symptoms to meet the diagnosis of another type of schizophrenia. Emotional blunting, social withdrawal, eccentric behavior, illogical thinking, and mild loosening of associations are common. The condition can be chronic or may be a transition to a complete remission of the illness.

Disorganized schizophrenia is characterized by a marked regression to primitive, disinhibited, and unorganized behavior and by the absence of symptoms that meet the criteria for the catatonic type. The onset is generally early, occurring before age 25 years. Patients are usually active but in an aimless, nonconstructive manner. Their thought disorders are pronounced, and their contact with reality is poor. Their personal appearance is disheveled, and their social behavior and their emotional responses are inappropriate. They often *burst into laughter without any apparent reason*. Incongruous grinning and grimacing are common in these patients, whose behavior is best described as silly or fatuous. A continuous course and a poor prognosis are characteristic of this subtype.

Undifferentiated schizophrenia is defined to include patients who meet criteria for schizophrenia but cannot be clearly classified into any of the other subtypes. Its diagnosis is through exclusion of the other subtypes. When patients with schizophrenia are carefully diagnosed, a large number of patients are found to meet criteria for this subtype.

Answers 13.37–13.41

13.37. The answer is C

13.38. The answer is D

13.39. The answer is B

13.40. The answer is A

13.41. The answer is E

Occasionally, patients with schizophrenia *create a completely new expression, a neologism*, when they need to express a concept for which no ordinary word exists.

A woman with schizophrenia who had been hospitalized for several years kept repeating (in an otherwise quite rational

conversation) the word “polamolalittersjitterstittersleelitla.” Her psychiatrist asked her to spell it out, and she proceeded to explain the meaning of the various components, which she insisted were to be used as one word. “Polamolalitters” was intended to recall the disease poliomyelitis because the patient wanted to indicate that she believed she was suffering from a serious disease affecting her nervous system; the component “litters” stood for untidiness or messiness, the way she felt inside; “jitterstitters” reflected her inner nervousness and lack of ease; and “leelita” was a reference to the French *le lit là* (that bed there), meaning that she both depended on and felt handicapped by her illness. That single neologistic production thus enabled the patient to express—in a condensed, autistic manner—information about her preoccupations and apprehensions that otherwise would have taken a whole paragraph to explain in common language.

It is assumed that the disorders of language reflect an underlying disorder of thinking. A variety of features have been reported by clinicians for the past 100 years as characteristic of this syndrome. These include the loss of the logical relations between antecedent and subsequent associations that is termed *loosening of associations*. For example, during a sentence completion test, a patient is asked to complete the sentence “The man fell on the street . . .” The patient responds “because of World War I.” Although the thought of falling might be associated with falling in combat, it was an inappropriate association for the stimulus. Words can be combined on the basis of sound rather than on meaning (*clang association*). *Verbigeration* involves the use of words in a stereotypically repetitive fashion. This rare symptom is found almost exclusively in chronic and very regressed patients with schizophrenia. It consists of the senseless repetition of the same words or phrases, and it may go on for days. Similar to neologisms and echolalia, verbigeration is a rare symptom today and is almost restricted to long-term institutionalized schizophrenia patients. Many psychiatrists working with patients with schizophrenia in the community may never encounter these manifestations of deterioration.

Echolalia involves the repetition of the examiner’s words.

Examiner: How did you sleep last night?

Patient: I slept well last night.

Examiner: Can you tell me the name of your head nurse?

Patient: The name of my head nurse is Miss Brown.

Echolalia seems to signal two facts: patients are aware of some shortcomings in their ideation, and they are striving to maintain active rapport with the interviewer. They act much like someone learning a new language who answers the teacher’s questions with as many of the teacher’s words in the strange language as they can possibly manage.

Thought blocking involves the sudden and inexplicable blocking of thoughts manifested by the patient’s inability to speak.

Answers 13.42–13.46

13.42. The answer is E

13.43. The answer is A

13.44. The answer is D

13.45. The answer is C

13.46. The answer is B

Catatonia is a syndrome of psychomotor disturbance that is characterized by periods of physical rigidity, negativism, or stupor. *Catatonic negativism* refers to the automatic resistance to attempts to move limbs, postures, or direct ambulation. For example, a patient may continually lie in the fetal position and resist any attempts to move him or her from said position. *Catatonic posturing* involves patients holding odd or exaggerated postures for prolonged periods (Figure 13.1). For example, patients may stand on one foot or sit with their feet under them for hours. Catatonic rigidity is similar and refers to patients holding simple, fixed, rigid postures. Some people with *catatonic stupor* can be obviously awake but immobile without rigidity and will sit or lie in these postures until moved. For example, patients may sit in a chair all day, just staring into space, and will not move until a nurse or a loved one moves them to put them to bed at night. In catatonia, *cataplexy* refers to waxy flexibility or *cerea flexibilitas*, the tendency of patients to hold postures that are manipulated by others. For example, patient can be restrained with their hands behind their back and will continue to keep their hands in that position even after the restraints are removed.



FIGURE 13.1

A patient with chronic schizophrenia stands in a catatonic position. He maintained this uncomfortable position for hours. (Courtesy of Emil Kraepelin, MD.)

Patients may sometimes mimic the motor behaviors of others, which is referred to as *echopraxia* (i.e., a patient crossing his or her legs after the physician does).

Answers 13.47–13.51

13.47. The answer is A

13.48. The answer is C

13.49. The answer is B

13.50. The answer is A

13.51. The answer is B

Emil Kraepelin described two major patterns of primary insanity: manic depressive psychosis and dementia praecox. The two syndromes were divided based on the long-term *prognosis and course* of the illnesses. It was believed that affective psychosis (i.e., manic depressive psychosis) had a nondeteriorating course, but dementia praecox was deemed as deteriorating and irreversible. Kraepelin believed that dementia praecox was a loss of the inner unity of intellect, emotion, and volition. He went further by grouping illnesses that were previously described as paranoia, catatonia, and hebephrenia within dementia praecox and included these *as the original subtypes of schizophrenia*.

Eugen Bleuler first coined the term *schizophrenia* in 1911. He thought the name denoted the “splitting” of psychotic functions, which he believed to be the basis of the illness. Bleuler was less interested in the course of the illness, as Kraepelin had been, and was much more interested in *the understanding of the psychological mechanisms underlying the disease process*. He divided the symptoms into primary and secondary symptoms. Primary symptoms included what is known as the four As: abnormal associations, autistic behavior and thinking, abnormal affect, and ambivalence. Secondary symptoms include hallucinations, delusions, social withdrawal, and diminished drive. Bleuler also *saw symptoms of schizophrenia in a continuum with normal behavior*.

Kurt Schneider (1887–1967) contributed a description of *first- and second-rank symptoms of schizophrenia*. First-rank symptoms include symptoms such as various forms of hallucinations, thought withdrawal, and delusional thoughts. Second-rank symptoms include perplexity and mood changes along with others (Table 13.2). Schneider emphasized that in patients who showed no first-rank symptoms, the disorder could be diagnosed exclusively on the basis of second-rank symptoms and an otherwise typical clinical appearance. Clinicians frequently ignore his warnings and sometimes see the absence of first-rank symptoms during a single interview as evidence that a person does not have schizophrenia.

Answers 13.52–13.56

13.52. The answer is D



Table 13.2
Kurt Schneider Criteria for Schizophrenia

-
1. First-rank symptoms
 - a. Audible thoughts
 - b. Voices arguing or discussing or both
 - c. Voices commenting
 - d. Somatic passivity experiences
 - e. Thought withdrawal and other experiences of influenced thought
 - f. Thought broadcasting
 - g. Delusional perceptions
 - h. All other experiences involving volition made affects and made impulses
 2. Second-rank symptoms
 - a. Other disorders of perception
 - b. Sudden delusional ideas
 - c. Perplexity
 - d. Depressive and euphoric mood changes
 - e. Feelings of emotional impoverishment
 - f. “. . . and several others as well”
-

13.53. The answer is E

13.54. The answer is A

13.55. The answer is B

13.56. The answer is C

In *vocational rehabilitation*, a variety of methods and settings are used to help patients *regain old skills* or develop new ones. Impairment of vocational role function is a common complication related to schizophrenia. The unemployment rates among this population are much higher than among the general population and among others with mental illnesses. However, many patients with schizophrenia frequently express a desire to work. Many approaches to help people with schizophrenia gain employment have developed. Many involve train-then-place models in which extensive pre-employment training is used to evaluate and improve the person’s “readiness” to work.

Cognitive behavioral therapy has been used in schizophrenia patients to improve cognitive distortions, reduce distractibility, and correct errors in judgment. In cases of auditory hallucinations, the therapist’s first task is to *gain a clear understanding of the person’s experience of the hallucinations*. From there, the therapist can begin to formulate a plan for helping the patient reduce or cope better with the hallucinations. Patients who may benefit generally have some insight into their illness.

Token economies are behavioral reinforcement programs based on the principles of social learning. The overall goal is to promote learning of behaviors that will *enhance each patient’s functioning* and allow him or her to make a transition to less restrictive care environments. Token economies are based on the premise that all psychiatric patients can learn to build on their strengths when treatment is offered in a positive, creative, and systematic manner. These programs also emphasize the importance of positively reinforcing desired behaviors, thereby improving cooperation in the treatment setting; increasing active

participation in treatment; and decreasing the frequency of problem behaviors, especially dangerous behaviors that traditionally lead to seclusion and restraint.

Social skills training emphasizes the role of behavioral rehearsal in skill development rather than discussion. The primary modality of social skills training is through *role play* of simulated conversations. The trainer first provides instructions on how to perform the skill and then models the behavior to demonstrate how it is performed. After identifying a relevant social situation in which the skill might be used, the patient engages in a role play with the trainer. The trainer next provides feedback and positive reinforcement followed by suggestions for how the response can

be improved. The sequence of role play followed by feedback and reinforcement is repeated until the patient can perform the response adequately.

The Assertive Community Treatment (ACT) program was developed for delivery of services for persons with chronic mental illness. Patients are assigned to one multidisciplinary team (e.g., case manager, psychiatrist, nurse, general physicians). The team has a fixed caseload of patients and delivers all services when and where needed by the patient, *24 hours a day, 7 days a week*. ACT programs can effectively decrease the risk of rehospitalization for persons with schizophrenia, but they are labor-intensive and expensive programs to administer.



Other Psychotic Disorders

There are six disorders within the category of other psychotic disorders: schizophreniform, schizoaffective, delusional, shared psychotic, brief psychotic, and psychotic disorder not otherwise specified. These disorders occur less frequently and are less understood than schizophrenia and mood disorders with psychotic features. They can be difficult to distinguish from other forms of psychosis. However, these disorders can have profound short- and long-term psychosocial consequences, and it is important to be able to identify and treat patients who have them.

Schizophreniform disorder is conceptualized as a variant of schizophrenia. Patients with this condition are floridly psychotic with a prodromal, active and residual phase between 1 and 6 months. If the duration of illness extends beyond 6 months, the diagnosis might be changed to schizophrenia. Risk factors include unemployment; residence in a metropolitan area; low income; being separated, widowed, or divorced; young age; low education; living with nonrelatives; obstetric and early neonatal complications; childhood emotional problems; and cannabis use.

Schizoaffective disorder combines the symptoms of mood disorders and schizophrenia. It may be a neurodevelopmental disorder, and gender differences parallel those seen in mood disorders. Although almost 85 percent of women experience some type of mood disturbance during the postpartum period, postpartum psychosis is rare. Students should be familiar with it because infanticide may occur. Hormonal hypotheses have been posited to explain its etiology, which remains unknown, however.

Delusional disorders, once referred to as *paranoid disorders*, are diagnosed when the individual reports nonbizarre delusions for more than 1 month without prominent hallucinations and with a relative preservation of functioning. Nonbizarre delusions are plausible, understandable, and derive from ordinary life experience. The course appears to be less chronic, with less associated deterioration in functioning than the course of schizophrenic patients. Shared psychotic disorder, commonly referred to as a *folie a deux*, refers to the condition in which two individuals with a close and generally long-term relationship share the same delusional belief, although it may involve more than two individuals, including entire families.

Brief psychotic disorder is a psychotic condition involving the sudden onset of psychotic symptoms that lasts one day or more but less than 1 month. Remission is full, and the individual returns to the premorbid level of functioning.

Knowledge of the culture-bound syndromes is increasingly important. The growing wave of immigration from developing countries to the United States over the past few decades has meant that doctors in the United States need to acquire a basic understanding of the formulations of health and illness in the culture from which their patients come. The course of these syndromes is generally favorable, and most present as self-limiting episodes after stressful events.

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

Students should know the psychotic syndromes and other terms listed here.

- | | | | |
|----------------------------|--|--|-----------------------------|
| ▶ amok | ▶ Fregoli's syndrome | ▶ paraphrenia | ▶ schizoaffective disorder |
| ▶ Arctic hysteria | ▶ Ganser's syndrome | ▶ <i>piblokto</i> | ▶ schizophreniform disorder |
| ▶ atypical psychoses | ▶ heutoscopy | ▶ postpartum blues | ▶ Daniel Paul Schreber |
| ▶ autoscopic psychosis | ▶ <i>koro</i> | ▶ postpartum psychosis | ▶ SES |
| ▶ <i>bouffée délirante</i> | ▶ Gabriel Langfeldt | ▶ postpsychotic depressive disorder of schizophrenia | ▶ shared psychotic disorder |
| ▶ brief psychotic disorder | ▶ lithium | ▶ pseudocommunity | ▶ significant stressor |
| ▶ conjugal paranoia | ▶ lycanthropy | ▶ psychodynamic formulation | ▶ simple schizophrenia |
| ▶ Cotard's syndrome | ▶ mental status examination | ▶ psychosis of association | ▶ suicidal incidence |
| ▶ culture-bound syndromes | ▶ mood-congruent and -incongruent psychotic features | ▶ psychotic disorder not otherwise specified | ▶ <i>suk-yeong</i> |
| ▶ Cushing's syndrome | ▶ nihilistic delusion | ▶ reduplicative paramnesia | ▶ TRH stimulation test |
| ▶ delusional disorder | ▶ paranoid states | | ▶ wigtigo psychosis |
| ▶ double insanity | | | |
| ▶ erotomania | | | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 14.1.** The delusion that a familiar person has been replaced by an imposter is referred to as
- intermetamorphosis
 - Cotard syndrome
 - Capgras syndrome
 - olfactory reference syndrome
 - conjugal paranoia
- 14.2.** Which of the following statements is *true* about brief psychotic disorder?
- Approximately 10 percent of patients diagnosed retain the diagnosis.
 - Fifty percent of the cases evolve into either schizophrenia or major mood disorder.
 - There are clear distinguishing features between brief psychotic disorder and acute-onset schizophrenia on initial presentation.
 - Poor prognosis is associated with emotional turmoil.
 - None of the above
- 14.3.** The differential diagnosis of brief psychotic disorder includes
- malingerer
 - severe personality disorders
 - substance-induced psychotic disorder
 - psychotic disorder due to a general medical condition
 - all of the above
- 14.4.** All of the following are associated with a good prognosis in a brief psychotic disorder *except*
- confusion during psychosis
 - severe precipitating stressor
 - sudden onset of symptoms
 - few premorbid schizoid traits
 - no affective symptoms
- 14.5.** Mrs. P is a 47-year-old, divorced, unemployed woman who lived alone and who experienced chronic psychotic symptoms despite treatment with olanzapine (Zyprexa) 20 mg per day and citalopram (Celexa) 20 mg per day. She believed that she was getting messages from God and the police department to go on a mission to fight against drugs. She also believed that an organized crime group was trying to stop her in this pursuit. The onset of her illness began at age 20 years, when she experienced the first of several depressive episodes. She also described periods when she felt more energetic; was more talkative; had a decreased need for sleep; and was more active, sometimes cleaning her house throughout the night. About 4 years after the onset of her symptoms, she began to hear “voices” that became stronger when she was depressed but were still present and disturbed her even when her mood was euthymic.
- The case of Mrs. P is a classic presentation of
- schizophreniform disorder
 - schizoaffective disorder
 - delusional disorder
 - brief psychotic disorder
 - acute and transient disorders
- 14.6.** In schizoaffective disorder, all of the following variables indicate a poor prognosis *except*
- early onset
 - depressive type
 - bipolar type
 - no precipitating factor
 - a predominance of psychotic symptoms
- 14.7.** *Folie à deux* is another name for
- erotomania
 - brief psychotic disorder
 - shared psychotic disorder
 - delusional disorder, persecutory type
 - schizoaffective disorder
- 14.8.** True statements concerning the treatment of shared psychotic disorder include all of the following *except*
- Recovery rates have been reported to be as low as 10 percent.
 - The submissive person commonly requires treatment with antipsychotic drugs.
 - Psychotherapy for nondelusional members of the patient’s family should be undertaken.
 - Separation of the submissive person from the dominant person is the primary intervention.
 - The submissive person and the dominant person usually move back together after treatment.
- 14.9.** The best-documented risk factor for delusional disorder is
- family history
 - advanced age
 - social isolation
 - sensory impairment
 - recent immigration
- 14.10.** Delusional disorder may include
- auditory hallucinations
 - olfactory hallucinations
 - tactile hallucinations
 - visual hallucinations
 - all of the above
- 14.11.** Delusional disorder
- usually begins by age 20 years
 - is more common in men than in women

- C. is less common than schizophrenia
- D. is an early stage of schizophrenia
- E. is caused by frontal lobe lesions

14.12. Mr. T was 42 years old when he was brought to a psychiatrist for evaluation. He lived with his parents and four brothers. His chief complaint was that his business partner was trying to force him to quit by giving him too much work. Although he appeared outwardly calm, Mr. T complained of nervousness and restlessness. He also noted an inability to sleep at night, believing that his neighbor was making noise on purpose. Mr. T's brother corroborated that the neighbor was being quite noisy at night and did not seem to respond to requests to be quieter. The psychiatrist prescribed hypnotic and anxiolytic medication.

Three days later, the psychiatrist received a phone call from the patient's brother, who requested that Mr. T be seen emergently. Upon arriving at the psychiatrist's office, Mr. T appeared quite anxious and perplexed. He stated that the noises had grown louder and were now present throughout the day. He was also convinced that other people besides his neighbor and his business partner were trying to harm him. Mr. T's brother now reported that Mr. T's beliefs had no basis in reality.

This case illustrates which of the following difficulties in diagnosing delusional disorder?

- A. The initial report appears believable but is actually a delusion.
- B. The initial report appears delusional but is actually true.
- C. The patient believes the physician is in on the plot against him.
- D. The patient is unwilling to provide information.
- E. None of the above

14.13. Evidence that suggests delusional disorder is a separate entity from schizophrenia or mood disorders includes

- A. epidemiological data
- B. family or genetic studies
- C. natural history of the disorder
- D. premorbid personality data
- E. all of the above

14.14. True statements about patients with delusional disorder, erotomanic type, include:

- A. They exhibit what has been called "paradoxical conduct."
- B. The course of the disorder is invariably chronic.
- C. Separation from the love object is usually not an effective treatment.
- D. Women predominate in forensic populations.
- E. All of the above

14.15. The following statements about psychotherapeutic treatment of delusional disorders is true *except*

- A. It is essential that the patient trust the therapist.
- B. The therapist should not challenge the patient's delusions.
- C. Empathy toward the patient's struggle with the delusion is useful.
- D. Individual therapy seems to be less effective than group therapy.
- E. When available, family members should be involved in therapy.

14.16. Of the following somatic treatments for delusional disorder, which is considered the *least* likely to be successful?

- A. Dopamine receptor antagonists
- B. Electroconvulsive treatment
- C. Selective serotonin reuptake inhibitors
- D. Serotonin-dopamine antagonists
- E. All of the above are considered equally effective

14.17. The postpartum blues

- A. occurs in up to 50 percent of women after childbirth
- B. is self-limited
- C. begins shortly after childbirth and lessens in severity over the course of 1 week
- D. is considered to be normal
- E. all of the above

14.18. Postpartum psychosis

- A. occurs more commonly in multigravida women
- B. is rarely correlated with perinatal complications
- C. almost always begins within 8 weeks of delivery
- D. usually occurs abruptly, with no prodromal psychotic symptoms
- E. is essentially an episode of a psychotic disorder

14.19. All of the following are true statements about postpartum psychosis *except*

- A. Generally, it is not considered a psychiatric emergency.
- B. Delusional material may involve the idea that the baby is dead.
- C. The risk is increased if the patient had a recent mood disorder.
- D. Hallucinations involve voices telling the patient to kill her baby.
- E. It is found in one to two per 1,000 deliveries.

14.20. Most studies of normal pregnant women indicate that the percentage who report the "blues" in the early postpartum period is about

- A. 10 percent
- B. 25 percent
- C. 50 percent
- D. 75 percent
- E. 100 percent

14.21. *Ataque de nervios*

- A. is usually associated with acute fear
- B. usually results in a deteriorating course
- C. is most common in Puerto Ricans
- D. usually has no precipitating stressful event
- E. usually features a sense of being out of control

14.22. Erotomania is also referred to as

- A. Ganser's syndrome
- B. Fregoli's syndrome
- C. Cotard's syndrome
- D. Clérambault's syndrome
- E. Capgras syndrome

14.23. Puerperal psychosis

- A. is most likely to occur in patients with a previous history of the disorder
- B. usually does not occur until 2 to 3 months postpartum
- C. has a prevalence of 10 to 15 percent
- D. usually has insidious onset
- E. all of the above

14.24. Acute and transient psychotic disorder

- A. can be definitively diagnosed without an extensive past history
- B. is easily recognized early in its course
- C. is often only definitively diagnosed retrospectively
- D. may have a better outcome with acute onset
- E. has a higher age of onset in developing countries

14.25. A 13-year-old girl presents to clinic for unusual behavior. Her father states that for the past 3 months, his daughter claims she has been "communicating with unidentified flying objects from outer space." During this period, it has become increasingly difficult to communicate with his daughter, and she has become an introvert. What is the most likely diagnosis?

- A. Schizophrenia
- B. Brief psychotic disorder
- C. Schizoaffective disorder
- D. Schizophreniform disorder
- E. None of the above

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading that is most associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 14.26–14.30

- A. Brief psychotic disorder
- B. Schizoaffective disorder
- C. Schizophreniform disorder
- D. Acute and transient psychotic disorders
- E. Delusional disorder

14.26. Mood symptoms are present**14.27.** Return to baseline state within 6 months**14.28.** May progress to schizophrenia**14.29.** Prominent hallucinations are absent**14.30.** The presence of acute stress within 2 weeks of onset**Questions 14.31–14.35**

- A. Delusional disorder
- B. Major depressive episode
- C. Manic episode
- D. Paranoid personality disorder
- E. Schizophrenia

14.31. Psychomotor retardation**14.32.** Thought broadcasting**14.33.** Easy distractibility with an elevated, expansive, or irritable mood**14.34.** Nonbizarre persecutory or grandiose delusions**14.35.** Suspiciousness and mistrust of people without psychotic symptoms**Questions 14.36–14.40**

- A. Delusions of guilt
- B. Delusions secondary to perceptual disturbances
- C. Grandiose delusions
- D. Bizarre delusions of being controlled
- E. Delusions of jealousy

14.36. Cognitive disorders**14.37.** Delusional disorder**14.38.** Depressive disorders**14.39.** Mania**14.40.** Schizophrenia**ANSWERS****14.1. The answer is C**

Capgras syndrome is the belief that a familiar person has been replaced by an imposter. Capgras syndrome is a member of the unspecified type of delusional disorders. There are variants of Capgras syndrome such as the delusion that familiar persons can assume the guise of strangers (Frégoli's phenomenon) and the very rare delusion that familiar persons can change themselves into other persons at will (*intermetamorphosis*). Patients with *Cotard syndrome* (also known as *délire de négation* or nihilistic delusional disorder) complain of having lost not only possessions, status, and strength, but also their heart, blood, and intestines. Each delusional disorder of the unspecified type is not

only rare but may be associated with schizophrenia, dementia, epilepsy, and other organic disorders.

Olfactory reference syndrome is a subcategory of delusional disorder, somatic type, in which the patient has delusions of foul body odors or halitosis. It differs from other delusions of the somatic type in that it has an earlier age of onset (mean of 25 years), male predominance, unmarried, and absence of past psychiatric treatment.

Conjugal paranoia is a delusional disorder of infidelity in which the patient has delusions that a spouse is being unfaithful. The eponym Othello syndrome has been used to describe morbid jealousy that can arise from multiple concerns. The delusion usually affects men, often those with no prior psychiatric illness. It may appear suddenly and serve to explain a host of present and past events involving the spouse's behavior. The condition is difficult to treat and may diminish only on separation, divorce, or death of the spouse.

14.2. The answer is B

The course of brief psychotic disorder is found in the diagnostic criteria of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR). It is a psychotic episode that lasts more than 1 day but less than 1 month, with eventual return to pre-morbid level of functioning. *Approximately 50 percent patients diagnosed with brief psychotic disorder retain this diagnosis; the other 50 percent evolve into either schizophrenia or a major affective disorder.* There are no apparent distinguishing features among brief psychotic disorder, acute-onset schizophrenia, and mood disorders with psychotic features on initial presentation. Several prognostic features have been proposed to characterize the illness, but they are inconsistent across studies. The *good prognostic features* are similar to those found in schizophreniform disorder, including acute onset of psychotic symptoms, confusion or emotional turmoil at the height of the psychotic episode, good premorbid functioning, the presence of affective symptoms, and a short duration of symptoms. There is a relative dearth of information on the recurrence of brief psychotic episodes, however, so the course and prognosis of this disorder have not been well characterized.

14.3. The answer is E (all)

Sharing rapid onset of symptoms, brief psychotic disorder must be differentiated from *substance-induced psychotic disorders* and *psychotic disorders due to a general medical condition*. A thorough medical evaluation, including a physical examination, laboratory studies, and brain imaging, helps rule out many of those conditions. With only cross-sectional information, brief psychotic disorder is difficult to differentiate from other types of functional psychosis.

The relationship between brief psychotic disorder and both schizophrenia and affective disorders remains uncertain. The DSM-IV-TR has made the distinction between brief psychotic disorder and schizophreniform disorder clearer by now requiring a full month of psychotic symptoms for the latter. If psychotic symptoms are present longer than 1 month, the diagnoses of schizophreniform disorder, schizoaffective disorder, schizophrenia, mood disorders with psychotic features, delusional disorder, and psychotic disorder not otherwise specified need to be enter-

tained. If psychotic symptoms of sudden onset are present for less than 1 month in response to an obvious stressor, the diagnosis of brief psychotic disorder is strongly suggested. Other diagnoses to differentiate include factitious disorder, *malinger-ing*, and *severe personality disorders*, with consequent transient psychosis possible.

14.4. The answer is E

Good prognostic features for brief psychotic disorders include good premorbid adjustment, *few premorbid schizoid traits*, a *severe precipitating stressor*, the *sudden onset of symptoms*, *affective symptoms*, *confusion and perplexity during psychosis*, little affective blunting, a short duration of symptoms, and the absence of schizophrenic relatives.

14.5. The answer is B

The case of Mrs. P demonstrates a "classic" presentation of *schizoaffective disorder*. Schizoaffective disorder has features of both schizophrenia and mood disorders. Patients are diagnosed with schizoaffective disorder if they fit into one of six categories: (1) patients with schizophrenia who have mood symptoms, (2) patients with mood disorder who have symptoms of schizophrenia even when euthymic, (3) patients with both mood disorder and schizophrenia, (4) patients with a third psychosis unrelated to schizophrenia and mood disorder, (5) patients whose disorder is on a continuum between schizophrenia and mood disorder, and (6) patients with some combination of the above. In the case of Mrs. P, clear depressive and hypomanic episodes are present in combination with continuous psychotic illness.

Schizophreniform disorder is an acute psychotic disorder that has a rapid onset and lacks a long prodromal phase. Symptoms must last at least 1 month but less than 6 months. In the case of Mrs. P, symptoms presented for more than 6 months and include depressive and manic symptoms that are not indicated in the diagnostic criteria for schizophreniform disorder. *Delusional disorder* is diagnosed when a person exhibits nonbizarre delusions for at least 1 month's duration that cannot be attributed to other psychotic disorders. The mood of patients with delusional disorders is consistent with the content of the delusions (i.e., a person with persecutory delusions is suspicious). Mrs. P experiences depressive and manic episodes that do not appear to coincide with the content of her delusions. *Brief psychotic disorder* is a psychotic condition that involves the sudden onset of psychotic symptoms and lasts 1 day or more but less than 1 month. It can also include the presence of marked stressors (i.e., war, torture, serious medical illness). Mrs. P's symptoms present too long to qualify for this diagnosis. *Acute and transient psychotic disorders* are defined as psychotic conditions with an onset within 2 weeks and full remission within 1 to 3 months. It is also a nonaffective psychotic disorder; therefore, Mrs. P's mood symptoms and the duration of the illness rule out acute and transient psychotic disorders.

14.6. The answer is C

The course and the prognosis of schizoaffective disorder are variable. As a group, patients with this disorder have a prognosis intermediate between patients with schizophrenia and patients with

mood disorders. Patients with schizoaffective disorder, *bipolar type*, typically have a better prognosis. A poor prognosis is associated with the *depressive type* of schizoaffective disorder. A poor prognosis is also associated with the following variables: *no precipitating factor*, *a predominance of psychotic symptoms*, *early* or *insidious onset*, a poor premorbid history, and a positive family history of schizophrenia.

14.7. The answer is C

Folie à deux is another name for *shared psychotic disorder*. Other references for the disorder are *shared paranoid disorder*, *induced psychotic disorder*, *folie impose*, and *double insanity*. The disorder is characterized by the transfer of delusions from one person to another. The key features of the disorder are the unquestioning acceptance of the other individual's delusional beliefs and the temporal sequence of development of the disorder, with one of the individuals having an earlier onset. Both persons are closely associated for a long time and typically live together in relative social isolation. Shared psychotic disorder usually involves two individuals but may involve more than two individuals, including entire family units. Persecutory delusional beliefs are most commonly seen in shared psychotic disorder, comprising about 70 percent of patients in one study; however, religious, grandiose, and somatic delusions may also be observed.

14.8. The answer is C

Psychotherapy for nondelusional *members of the patient's family* is usually not necessary. Clinical reports vary, but the prognosis is guarded—recovery rates have been reported to be as low as 10 percent. The *submissive person often requires treatment with antipsychotic drugs*, as does the dominant person. *Separation of the submissive person from the dominant person is the primary intervention*. The submissive person and the dominant person usually *move back together after treatment*.

14.9. The answer is A

The cause of delusional disorder is unknown. The epidemiological and clinical literature suggests that certain risk factors may be relevant to the etiology and deserve further research elaboration. These risk factors are found in Table 14.1. Whether they are risk predictors or simply characteristics or markers of the disorder is unknown. *Familial psychiatric disorder*, including delusional disorder, is the *best documented risk factor at present*.

14.10. The answer is E (all)

Generally, in delusional disorders, the patient's delusions are well systematized and have been developed logically. The per-

son *may experience auditory or visual hallucinations*, but these are not prominent features. *Tactile or olfactory hallucinations* may be present and prominent if they are related to the delusional content or theme. Examples are the sensation of being infested by bugs or parasites, associated with delusions of infestation, and the belief that one's body odor is foul, associated with somatic delusions. The person's behavioral and emotional responses to the delusion appear to be appropriate. Impairment of functioning is not marked and personality deterioration is minimal, if it occurs at all. General behavior is neither obviously odd nor bizarre.

14.11. The answer is C

Delusional disorder *is less common than schizophrenia*. Its prevalence in the United States is estimated to be 0.03 percent—in contrast with 1 percent for schizophrenia and 5 percent for mood disorders.

The neuropsychiatric approach to delusional disorder derives from the observation that delusions are a common symptom in many neurological conditions, particularly those involving the limbic system and the basal ganglia. *No evidence indicates that the disorder is caused by frontal lobe lesions*. Long-term follow-up of patients with delusional disorder has found that their diagnoses are rarely revised as schizophrenia or mood disorders; hence, delusional disorder *is not an early stage of schizophrenia* or mood disorders. Moreover, delusional disorder has a later onset than does schizophrenia or mood disorders. The mean age of onset is 40 years; the disorder *does not usually begin by age 20 years*. The disorder *is slightly more common in women than in men*.

14.12. The answer is A

The initial report in this case *appears believable but is actually a delusion*. Upon the first evaluation, Mr. T's complaint about noise seemed believable and was verified by his brother, but by the second visit 3 days later, it was clear that Mr. T's complaints were delusions.

Delusions are false fixed beliefs not in keeping with the culture. The diagnosis of delusional disorder is made when a person exhibits nonbizarre delusions of at least 1 month's duration that cannot be attributed to other psychiatric disorders. The first step in the clinical assessment is establishing whether a delusion exists. Some statements that *initially* seem to be delusional may, in fact, be true. In contrast, as in the above case, reports of circumstances that initially seem believable may be clearly identified as delusions as the symptoms worsen, the delusion becomes less encapsulated, or more information comes to light. Certain behavioral features such as hypersensitivity, guardedness, evasiveness, secretiveness, litigiousness, overly detailed descriptions, hostility, and humorlessness are characteristic of delusional patients yet are not pathognomonic. The patient may also be secretive and vague and may not voluntarily provide the clinician with necessary details. At other times, the patient may see no need to convey information, believing that the interviewer is part of the "conspiracy" and already knowledgeable about its specifics. For example, the patient may view the interview as a staged game in which both parties know the hidden meanings behind the overt text. As a result, certain phrases are commonly heard



Table 14.1
Risk Factors Associated with Delusional Disorder

Advanced age
Sensory impairment or isolation
Family history
Social isolation
Personality features (e.g., unusual interpersonal sensitivity)
Recent immigration

from individuals with persecutory ideas in the context of delusional disorder (e.g., “Don’t play games with me,” “You know what ‘they’ have been doing”).

14.13. The answer is E (all)

An issue that is central to attributing causation is whether delusional disorder represents a separate group of conditions or is an atypical form of schizophrenic and mood disorders. The relevant data come from a limited number of studies and are inconclusive. *Epidemiology data suggest that delusional disorder is a separate condition*; it is far less prevalent than schizophrenic or mood disorders; the age of onset is later than in schizophrenia, although men tend to experience the illness at earlier ages than women; and the sex ratio is different from that of mood disorder, which occurs disproportionately among women. Findings from *family or genetic studies* also support the theory that delusional disorder is a distinct entity. If delusional disorder is simply an unusual form of schizophrenic or mood disorders, the incidence of these latter conditions in family studies of delusional disorder patient probands should be higher than that of the general population. However, this has not been a consistent finding. A recent study concluded that patients with delusional disorder are more likely to have family members who show suspiciousness, jealousy, secretiveness, even paranoid illness, than families of controls. Other investigative efforts have found paranoid personality disorder and avoidant personality disorder to be more common in the relatives of patients with delusional disorder than in the relatives of control subjects or of schizophrenic patients. A recent study documented modest evidence for an increased risk of alcoholism among the relatives of patients with delusional disorder compared with probands with schizophrenia, probands with psychotic disorder not otherwise specified, and probands with schizophreniform disorder.

Investigations into the *patient’s natural history* also lend support to the suggestion that delusional disorder is a distinct category: age of onset appears to be later than in schizophrenia, and outcome is generally better for delusional patients with disorder than for those with schizophrenia. Although fraught with methodological shortcomings, *premorbid personality data* indicate that people with schizophrenia and those with delusional disorder differ early in life. The former are more likely to be introverted, schizoid, and submissive and the latter extroverted, dominant, and hypersensitive. Patients with delusional disorder may have below-average intelligence. Precipitating factors, especially related to social isolation, conflicts of conscience, and immigration, are more closely associated to delusional disorder than schizophrenia. These characteristics support the view that environmental factors may play an important etiological role.

14.14. The answer is A

Patients with erotomania have delusions of secret lovers. Most frequently, the patient is a woman, but men are also susceptible to the delusion. The patient believes that a suitor, usually more socially prominent than herself, is in love with her. The onset can be sudden, and the delusion becomes the central focus of the patient’s existence.

Patients with erotomania frequently show certain characteristics: they are generally but not exclusively women; may be

considered unattractive in appearance; are in low-level jobs; and lead withdrawn, lonely lives, being single and having few sexual contacts. They select secret lovers who are substantially different from themselves. *They exhibit what has been called “paradoxical conduct,”* the delusional phenomenon of interpreting all denials of love as secret affirmations of love. *The course may be chronic, recurrent, or brief. Separation from the love object may be the only satisfactory means of intervention.* Although men are less commonly affected by this condition than women, they may be more aggressive and possibly violent in their pursuit of love. Hence, *in forensic populations, men with this condition predominate.* The object of aggression may not be the loved individual but companions or protectors of the love object, who are viewed as trying to come between the lovers. The tendency toward violence among men with erotomania may lead initially to police rather than psychiatric contact. In certain cases, resentment and rage in response to an absence of reaction from all forms of love communication may escalate to a point that the love object is in danger.

14.15. The answer is D

The use of *individual therapy* in the treatment of patients with delusional disorders seems to be *more* (not less) effective than *group therapy*. The essential element in effective psychotherapy is to establish a relationship in which *the patient begins to trust the therapist*. Initially, *the therapist should neither agree with nor challenge the patient’s delusions*. Although the therapist must ask about a delusion to establish its extent, persistent questioning about it should probably be avoided. The physicians may stimulate the motivation to receive help by emphasizing a willingness to help the patient with his or her anxiety or irritability without suggesting that the delusions be treated, but the therapist should not actively support the notion that the delusions are real. A useful approach in building a therapeutic alliance is to *empathize with the patient’s internal experience of being overwhelmed by persecution*. It may be helpful to make such comments as, “You must be exhausted, considering what you have been through.” Without agreeing with every delusional misperception, a therapist can acknowledge that from the patient’s perspective, such perceptions create much distress. The ultimate goal is to help the patient entertain the possibility of doubt about his or her perceptions. When *family members* are available, clinicians may decide to *involve them in the treatment plan*.

14.16. The answer is B

Patients with delusional disorders *respond less well generally to electroconvulsive treatment* than do patients with major mood disorders with psychotic features. Some patients may respond to selective serotonin reuptake inhibitor (SSRIs), especially cases of body dysmorphic disorder with delusional concerns. Dopamine-receptor antagonists (DRAs) (particularly pimozide [Orap]), serotonin-dopamine antagonists (SDAs), and SSRIs are pharmacological agents with reports of successful use in delusional disorder.

Delusional disorder is a psychotic disorder by definition, and the natural presumption has been that patients with the condition would respond to antipsychotic medication. Because controlled

studies are limited and the disorder is uncommon, the results required to support this practice empirically have been only partially obtained.

The disparate findings in the recent literature on delusional disorder treatment have been summarized recently, with several qualifications. Of approximately 1,000 articles published since 1961, the majority since 1980, 257 cases of delusional disorder (consistent with DSM-IV-TR criteria), of which 209 provided sufficient treatment detail to make comparison, were assessed. Overall treatment results indicated that 80.8 percent of patients recovered either fully or partially. Pimozide (the most frequently reported treatment) produced full recovery in 68.5 percent and partial recovery in 22.4 percent of patients treated, and there was full recovery in 22.6 percent and partial recovery in 45.3 percent of patients treated with DRAs that are typical neuroleptic agents (e.g., thioridazine [Mellaril], haloperidol [Haldol], chlorpromazine [Thorazine], loxapine [Loxitane], perphenazine [Trilafon], and others). The remaining patients were noncompliant with any treatment. There were no specific conclusions drawn regarding treatment with SSRIs, although a number of such reports have been published.

The results of treatment with the SDAs (i.e., clozapine [Clozaril], risperidone [Risperdal], olanzapine [Zyprexa], and others) are preliminary. Unfortunately, systematic case series will develop slowly, but these early results suggest that the atypical neuroleptic agents may add to the available treatment options.

14.17. The answer is E (all)

The so-called postpartum blues is a normal condition that occurs in up to 50 percent of women after childbirth. Postpartum blues is self-limited; lasts only a few days; and is characterized by tearfulness, fatigue, anxiety, and irritability that begin shortly after childbirth and lessen in severity over the course of 1 week.

14.18. The answer is C

The symptoms of postpartum psychosis most often begin within 8 weeks of delivery. About 50 to 60 percent of affected women with postpartum psychosis have just had their first child, and in that group, half of the newborns have perinatal complications. The onset of florid psychotic symptoms is usually preceded by prodromal signs, such as insomnia, restlessness, agitation, lability of mood, and mild cognitive deficits. The most robust data indicate that postpartum psychosis is related to a mood disorder, usually a bipolar disorder. Relatives of those with postpartum psychosis have an incidence of mood disorders that is similar to the incidence in relatives of persons with mood disorders.

14.19. The answer is A

Postpartum psychosis is found in one to two per 1,000 deliveries. The risk is increased if the patient or the patient's mother had a previous postpartum illness or mood disorder. The symptoms are usually experienced within days of delivery and almost always within the first 8 weeks after giving birth. The patient begins to complain of insomnia, restlessness, and fatigue, and she shows lability of mood with tearfulness. Later symptoms include suspiciousness, confusion, incoherence, irrational statements, and obsessive concerns about the baby's health. Delusional material may involve the idea that the baby is dead or defective. The birth

may be denied, or ideas of persecution, influence, or perversity may be expressed. *Hallucinations may involve voices telling the patient to kill her baby. Postpartum psychosis is a psychiatric emergency.* In one study, 5 percent of patients killed themselves, and 4 percent killed the baby. Postpartum psychosis is not to be confused with postpartum "blues."

14.20. The answer is C

Postpartum psychosis should not be confused with postpartum "blues," a normal condition that occurs in about 50 percent of women after childbirth. The "blues" are self-limited; last only a few days; and are characterized by tearfulness, fatigue, anxiety, and irritability that begin shortly after childbirth and lessen in severity each day postpartum. Postpartum psychosis is characterized by agitation, severe depression, and thoughts of infanticide.

14.21. The answer is E

A general feature of *ataque de nervios* is a sense of being out of control. *Ataque de nervios* is reported in Latinos from throughout the Caribbean and it is not most common among Puerto Ricans. It also occurs in South America and Mediterranean countries. It frequently occurs as a direct result of a stressful event relating to the family. It most closely resembles a panic attack, but unlike panic attacks, it is associated with a precipitating event. Panic attacks occur spontaneously. Persons may experience amnesia for what occurred during the attack, but they otherwise return rapidly to their usual level of functioning.

14.22. The answer is D

Erotomania, the delusional disorder in which the person makes repeated efforts to contact the object of the delusion through letters, phone calls, gifts, visits, surveillance, and even stalking, is also called *Clérambault's syndrome*. Most patients with erotomania are women. In forensic samples in which harm is done to another person, most patients are men. In *Cotard's syndrome*, patients may believe that they have lost everything: possessions, strength, and even bodily organs. *Fregoli's syndrome* is the delusion that a persecutor is taking on a variety of faces, like an actor. *Ganser's syndrome* is the voluntary production of severe psychiatric symptoms, sometimes described as the giving of approximate answers (e.g., $2 + 2 = 5$). *Capgras syndrome* is the delusion that familiar people have been replaced by identical impostors.

14.23. The answer is A

Puerperal psychosis is the most severe form of postpartum psychiatric illness. In contrast to postpartum blues and depression, puerperal psychosis is a rare event that occurs in approximately one to two per 1,000 women after childbirth. Its presentation is often dramatic, with onset of psychosis as early as the first 48 to 72 hours postpartum. Most women with puerperal psychosis develop symptoms within the first 2 to 4 weeks after delivery.

In women with this disorder, psychotic symptoms and disorganized behavior are prominent and cause significant dysfunction. Puerperal psychosis resembles a rapidly evolving affective psychosis with restlessness, irritability, and insomnia. Women with this disorder may exhibit a rapidly shifting depressed or



Table 14.2
History of Psychiatric Illness and Risk for Puerperal Relapse

Disorders	Risk of Relapse at Future Pregnancy (%)
Postpartum psychosis	70
Postpartum depression	50
Bipolar I disorder	20–50
Major depressive disorder	30

elated mood, disorientation or depersonalization, and disorganized behavior. Delusional beliefs often center on the infant and include delusions that the child may be defective or dying, that the infant has special powers, or that the child is either Satan or God. Auditory hallucinations that instruct the mother to harm or kill herself or her infant are sometimes reported. Although most believe that this illness is indistinguishable from an affective (or manic) psychosis, some have argued that puerperal psychosis may be clinically distinct in that it is more commonly associated with confusion and delirium than nonpuerperal psychotic mood disorder.

Although it has been difficult to identify specific demographic and psychosocial variables that consistently predict risk for postpartum illness, there is a well-defined association between all types of postpartum psychiatric illness and a personal history of mood disorder (Table 14.2). *At highest risk are women with a history of postpartum psychosis; up to 70 percent of women who have had one episode of puerperal psychosis will experience another episode after a subsequent pregnancy.* Similarly, women with histories of postpartum depression are at significant risk, with rates of postpartum depression recurrence as high as 50 percent. Women with bipolar disorders also appear to be particularly vulnerable during the postpartum period, with rates of bipolar relapse ranging from 20 to 50 percent.

14.24. The answer is C

A definitive diagnosis of acute and transient psychotic disorder is often only possible *retrospectively* and *with* (not without) extensive information on the patient's past history. Acute and transient psychotic disorders are defined by the tenth edition of the *International Statistical Classification of Diseases and Related Health Problems* (ICD-10) as psychotic conditions with onset within 2 weeks and full remission within 1 to 3 months. These conditions do not have a designated place in the DSM-IV-TR. Many of the cases of ICD-10 acute and transient psychotic disorders would be categorized as schizophreniform disorder, brief psychotic disorder, or psychotic disorder not otherwise specified in the DSM-IV-TR. The age of onset in developing countries appears to be *lower* (not higher) than in industrialized settings. Recognition of acute and transient psychotic disorders early in their course is *difficult* (not easy). In the first few weeks of the illness, there are no specific indicators that would distinguish acute and transient disorder from other nonaffective psychotic disorders with acute onset. Furthermore, even in retrospect, it is often difficult to assess the duration of a psychotic episode or distinguish spontaneous remission from remission caused by

antipsychotic medication treatment. The ICD-10 also suggests that a distinction be made between acute onset (i.e., onset within 2 weeks) and abrupt onset (i.e., onset within 48 hours), noting that the latter may be associated with even better outcome.

14.25. The answer is D

Because symptoms are present for more than 1 month but less than 6 months, the diagnosis of *schizophreniform disorder* is likely. The patient is presenting with hallucinations and negative symptoms. In schizophreniform disorder, the diagnosis must include at least two of any of the following: disorganized speech or behavior, negative symptoms, delusions, and hallucinations. *Schizophrenia* would present with symptoms for at least 6 months. The diagnosis of *brief psychotic disorder* requires symptoms be present for at least 1 day but less than 1 month. Diagnosis requires one or more of hallucinations, delusions, or disorganized behavior or speech. *Schizoaffective disorder* may be diagnosed when a mood disorder and schizophrenia are both present.

Answers 14.26–14.30

14.26. The answer is B

14.27. The answer is C

14.28. The answer is C

14.29. The answer is E

14.30. The answer is D

Schizoaffective disorder has features of both schizophrenia and *mood disorders*. Patients must fit into one of six categories: (1) patients with schizophrenia who have mood symptoms, (2) patients with mood disorder who have symptoms of schizophrenia during periods of euthymia, (3) patients with both mood disorder and schizophrenia, (4) patients with a psychosis unrelated to schizophrenia as well as a mood disorder, (5) patients whose disorder is on a continuum between schizophrenia and mood disorder, and (6) patients with some combination of the above. However, it can be difficult to diagnose. The clinician must accurately diagnose the mood disorder, making sure it meets the criteria of either a manic or a depressive episode but also determining the exact length of each episode (not always easy or even possible).

By definition, patients with *schizophreniform disorder* return to their *baseline state within 6 months*. However, in some cases, the illness is episodic with more than one episode occurring after long periods of full remission. Some studies show that 45 to 75 percent of schizophreniform patients *may progress to schizophrenia* with longitudinal assessment. Schizophreniform disorder is an acute psychotic disorder that has a rapid onset and lacks a long prodromal phase. The initial symptom profile is the same as schizophrenia in that two or more psychotic symptoms (hallucinations, delusions, disorganized speech and behavior, or negative symptoms) must be present.

Acute and transient psychotic disorders are defined by the ICD-10 as psychotic conditions with onset within 2 weeks and

full remission within 1 to 3 months. The ICD-10 provides a sequence of three “key features” to be used for diagnosing acute and transient psychotic disorders. In order of priority, these features are (1) an acute onset (within 2 weeks); (2) the presence of typical syndromes, which are the basis for the subcategorization into specific disorders; and (3) the presence of associated *acute stress* (within about 2 weeks of onset). Acute onset is defined as “a change from a state without psychotic features to a clearly abnormal psychotic state, within a period of 2 weeks or less.”

Patients with *delusional disorder*, by definition, do not have *prominent* or sustained *hallucinations*. The diagnosis of delusional disorder is made when a person exhibits nonbizarre delusions of at least 1 month’s duration that cannot be attributed to other psychotic disorders. There are five subtypes of delusional disorders: (1) persecutory type (the belief by the patient that he or she is being persecuted or harmed), (2) jealous type (i.e., the belief that one’s spouse is unfaithful), (3) erotomanic type (the belief that another person, usually of higher status, is in love with the patient), (4) somatic type (delusions of a hypochondriacal or somatic nature), and (5) grandiose type (delusions of grandeur).

The diagnosis of *brief psychotic disorder* is based on the presence of one or more psychotic symptoms, including delusions, hallucinations, disorganized speech, and disorganized or catatonic behavior for less than 1 month.

Answers 14.31–14.35

14.31. The answer is B

14.32. The answer is E

14.33. The answer is C

14.34. The answer is A

14.35. The answer is D

Psychomotor retardation is a general slowing of mental and physical activity. It is often a sign of a *major depressive episode*,

which is characterized by feelings of sadness, loneliness, despair, low self-esteem, and self-reproach. *Thought broadcasting* is the feeling that one’s thoughts are being broadcast or projected into the environment. Such feelings are encountered in *schizophrenia*.

A patient in a manic episode is easily distracted, with an elevated, expansive, or irritable mood with pressured speech and hyperactivity.

Delusional disorder is characterized by nonbizarre *persecutory* or *grandiose delusions* and related disturbances in mood, thought, and behavior.

The essential feature of *paranoid personality disorder* is a long-standing *suspiciousness and mistrust of people without the presence of psychotic symptoms*. Patients with this disorder are hypersensitive and continually alert for environmental clues that will validate their original prejudicial ideas.

Answers 14.36–14.40

14.36. The answer is B

14.37. The answer is E

14.38. The answer is A

14.39. The answer is C

14.40. The answer is D

In *delusional disorder*, *delusions of jealousy* are most commonly found. In *schizophrenia*, *bizarre delusions* may occur (e.g., of being controlled by outside persons or forces and delusions of persecution). *Grandiose delusions* are most often seen in *mania* but can be observed in other psychotic disorder as well. In *depressive disorders*, *delusions of guilt* are especially characteristic. In *cognitive disorders*, such as dementia, *delusions secondary to perceptual disturbances* are most often evident.



Mood Disorders

Mood is defined as a pervasive and sustained feeling that is experienced internally and that, in the extreme, can markedly influence all aspects of a person's behavior and his or her perception of the world. Affect is the external expression of mood. Mood disorders, formally known as *affective disorders*, include a group of psychological disorders that are mainly characterized by pathological moods and related vegetative and psychomotor disturbances. The term *mood disorder* is preferred over *affective disorder* because it refers not only to the external (affective) expression of the present emotional state but also to sustained emotional states. Mood disorders are syndromes (not diseases) that consist of signs and symptoms that present a deviation from a person's normal functioning and are sustained over a period of weeks to months. These signs and symptoms tend to recur, often in periodic or cyclical fashion.

The most common mood disorder is major depressive disorder (unipolar depression). Major depressive disorder is characterized by one or more episodes of major depression without a manic episode. Patients with both manic and depressive episodes or with manic episodes alone are diagnosed with bipolar disorder. Dysthymia and cyclothymia are less severe forms of major depression and bipolar disorder, respectively. Hypomania is an episode of manic symptoms but does not meet the criteria for a manic episode.

Mood disorders can sometimes be difficult to diagnose, given the subjective nature of the symptoms. All people have normal periods of feeling either blue or elated, and most of these obviously are not diagnosable as disorders. A mood disorder is characterized by the intensity, duration, and severity of the symptoms. Symptoms interfere with normal thought process and

content and cognitive, speech, and social functioning. Unfortunately, many people with depressive disorders go untreated because their symptoms are minimized or misinterpreted. People with bipolar disorders are more often treated because their symptoms more frequently are bizarre or disruptive enough to bring them to medical and psychiatric attention.

Mood disorders are caused by a complex interplay of biological and psychological factors. Biologic theories involve the role of the biogenic amines, particularly dysfunction in the norepinephrine, serotonin, dopamine, and GABA (γ -aminobutyric acid) neurotransmitter systems. Most antidepressant medications involve complex manipulations of these systems. There appears to be dysregulation as well in the adrenal, thyroid, and growth hormone axes, all of which have been implicated in the etiology of mood disorders. Abnormalities in the sleep cycle and in regulation of circadian rhythms have also been studied.

Genetics always play an important role in the etiology of mental disorders, but genetic input is especially relevant in mood disorders. Bipolar I disorder is one of the most genetically determined disorders in psychiatry. However, as with any mental disorder, psychosocial factors play a crucial role in the development, presentation, course, and prognosis of mood disorders. Issues of real and symbolic loss, family relationships and dynamics, environmental stress, and unconscious conflicts all strongly contribute to and determine mood symptoms. Some clinicians believe that these factors are particularly important in the first episodes of mood disorders, but in one form or another, they play a role in all episodes.

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

Students should know the following terms that relate to mood disorders.

- ▶ adrenal axis
- ▶ anxiety-blissfulness
- ▶ atypical features
- ▶ biogenic amines
- ▶ bipolar I disorder
- ▶ bipolar II disorder
- ▶ carbamazepine
- ▶ cognitive, behavioral, family, and psychoanalytic therapies
- ▶ cognitive theories
- ▶ cyclothymic disorder
- ▶ depression rating scales
- ▶ depressive equivalent
- ▶ double depression
- ▶ dysthymia
- ▶ ECT
- ▶ euthymic
- ▶ *folie à double forme*
- ▶ *folie circulaire*
- ▶ GABA
- ▶ GH
- ▶ 5-HT
- ▶ hypomania
- ▶ kindling
- ▶ learned helplessness
- ▶ LH, FSH
- ▶ lithium
- ▶ major depressive disorder
- ▶ mania
- ▶ MAOIs
- ▶ melancholic features
- ▶ melatonin
- ▶ mild depressive disorder
- ▶ mixed episode
- ▶ mood-congruent and -incongruent psychotic fear
- ▶ neurological, medical, and pharmacological causes of mood disorders

- | | | | |
|-----------------------------------|------------------------|--------------------|------------------------|
| ▶ norepinephrine | ▶ premorbid factors | ▶ seasonal pattern | ▶ TSH, TRH |
| ▶ phototherapy | ▶ pseudodementia | ▶ SSRI | ▶ vegetative functions |
| ▶ postpartum onset | ▶ rapid cycling | ▶ suicide | ▶ <i>Zeitgeber</i> |
| ▶ premenstrual dysphoric disorder | ▶ REM latency, density | ▶ T3 | |
| | ▶ RFLP | ▶ thymoleptics | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 15.1.** Mild, nonpsychotic depression with predominant anxiety is called
- Endogenomorphic depression
 - Bipolar disorder
 - Chronic depression
 - Dysthymia
 - Anxiety disorder
- 15.2.** The most consistent computer tomography (CT) and magnetic resonance imaging (MRI) abnormality observed in depressive disorders is
- cortical atrophy
 - sulcal widening
 - ventricular enlargement
 - increased frequency of hyperintensities in subcortical regions
 - none of the above
- 15.3.** The following situations call for a break in doctor–patient confidentiality *except*
- A patient with a delusional disorder thinks his boss is out to get him and threatens to kill her.
 - A patient with major depressive disorder who is sexually promiscuous contracts syphilis.
 - A patient with bipolar I disorder admits he is homosexual.
 - A patient with conduct disorder thrives on the sexual abuse of young children.
 - A patient with schizoaffective disorder hallucinates that he can fly.
- 15.4.** A 27-year-old patient has been diagnosed with bipolar disorder. Before starting this patient on lithium for mood stabilization, which of the following laboratory tests should be obtained?
- Thyroid function tests, creatinine, pregnancy test
 - Thyroid function tests, creatinine, liver function tests
 - Thyroid function tests, creatinine, complete blood count
 - Thyroid function tests, liver function tests, pregnancy test
 - Thyroid function tests, complete blood count, pregnancy test
- 15.5.** Which of the following statements regarding mood disorders is *false*?
- One of four patients with an acute depressive episode will have recurrences throughout life.
 - Approximately 15 percent of depressed patients eventually commit suicide.
 - Incidence of depression in younger age groups is increasing.
 - Manic forms of mood disorders predominate in men.
 - Depressive disorders are more common in women.
- 15.6.** All of the following are vegetative disturbances of depression *except*
- Hypersexuality
 - Anorexia
 - Hypersomnia
 - Insomnia
 - Circadian dysregulation
- 15.7.** Serotonin
- helps to regulate circadian rhythms
 - is an important regulator of sleep, appetite, and libido
 - stores are increased by transient stress and depleted by chronic stress
 - permits or facilitates goal-directed motor and consummatory behavior in conjunction with norepinephrine and dopamine
 - all of the above
- 15.8.** Which graph in Figure 15.1 depicts the pattern with the best future prognosis?
- A
 - B
 - C
 - D
 - None of the above
- 15.9.** Which of the graphs in Figure 15.1 depicts the prototypical course of double depression?
- A
 - B
 - C
 - D
 - None of the above

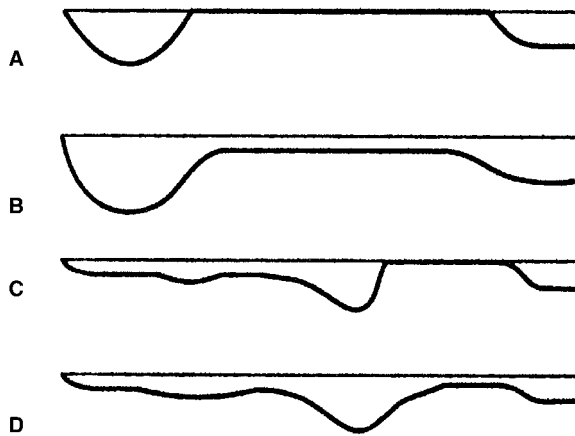


FIGURE 15.1

- 15.10.** Double depression is characterized by
- two family members with major depressive disorder concurrently
 - recurrent major depressive disorder with current symptoms twice as disabling as usual
 - two episodes of major depressive disorder per month consistently
 - superimposed bipolar II disorder and atypical depression
 - recurrent major depressive disorder superimposed with dysthymic disorder
- 15.11.** Depression and mania share which of the following symptoms?
- Psychomotor acceleration
 - Low-self esteem
 - Grandiosity
 - Anger
 - Pessimism
- 15.12.** The person *least* likely to develop major depressive disorder in his or her lifetime is
- a 60-year-old man with pancreatic cancer
 - a 19-year-old woman who was raped 3 weeks ago
 - a 12-year-old girl mourning the death of her mother
 - a 10-year-old boy diagnosed with dysthymia
 - an identical twin of a patient with major depressive disorder who committed suicide
- 15.13.** A hypomanic episode differs from a manic episode in that a hypomanic episode
- lasts at least 1 week
 - lacks psychotic features
 - is severe
 - causes greater social impairment
 - all of the above
- 15.14.** The defense mechanism most commonly used in depression is
- undoing
 - sublimation
 - projection
 - introjection
 - altruism
- 15.15.** Which of the following is *not* part of the text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR)* criteria for diagnosing atypical depression?
- Hypersomnia
 - Lead paralysis
 - Shortening of REM latency
 - Mood reactivity
 - Significant weight gain
- 15.16.** L-Tryptophan
- has been used as an adjuvant to both antidepressants and lithium
 - has not been associated with any serious side effects
 - is the amino acid precursor to dopamine
 - has been used as a stimulant
 - all of the above
- 15.17.** Which of the following is *not* an indicator of a good prognosis for major depressive disorder?
- Stable family functioning
 - No more than one previous hospitalization
 - A history of more than one previous depressive episode
 - Advanced age of onset
 - The absence of psychotic symptoms
- 15.18.** Reactive depression can best be compared to
- Adjustment disorder
 - Atypical depression
 - Conduct disorder
 - Oppositional defiant disorder
 - Schizoaffective disorder
- 15.19.** Which of the following statements regarding rapid cycling bipolar disorder is *true*?
- Alcohol, stimulants, and caffeine use are risk factors.
 - It is defined as at least four episodes per month.
 - Hospitalization of these patients is rare.
 - It is more common in men than women.
 - It often responds to tricyclic antidepressants.
- 15.20.** All of the following are common causes of misdiagnosis of mood disorder as schizophrenia *except*
- reliance on the longitudinal rather than cross-sectional picture
 - flight of ideas perceived as loose associations

- C. ascribing irritable mood to paranoid delusions
 D. mistaking depressive depersonalization for schizophrenic emotional blunting
 E. incomplete interepisodic recovery equated with schizophrenic defect
- 15.21.** All of the following statements regarding cyclothymic disorder are true *except*
- A. Symptoms must be present for at least 2 years.
 B. It occurs at the same rate in men and women.
 C. Symptoms may satisfy criteria for major depression.
 D. It consists of hypomania alternating with depressed mood.
 E. Its lifetime prevalence rate is about 0.4 to 1 percent.
- 15.22.** Dysthymic disorder differs from major depressive disorder because in dysthymic disorder,
- A. depression is episodic
 B. the symptoms outnumber the signs
 C. the onset is usually late in life
 D. manic episodes are common
 E. has a high-grade chronicity
- 15.23.** Psychomotor retardation is characterized by all of the following *except*
- A. indecisiveness
 B. paucity of spontaneous movements
 C. poor concentration
 D. reduced speech amplitude and flow
 E. restlessness
- 15.24.** Features of anhedonia may include all of the following *except*
- A. derealization
 B. difficulty describing or being aware of emotions
 C. inability to experience normal emotions
 D. loss of pleasure
 E. withdrawal from interests
- 15.25.** The *highest* suicide rates are in which of the following age groups?
- A. Younger than age 15 years
 B. 15 to 24 year olds
 C. 25 to 44 year olds
 D. 45 to 64 year olds
 E. Older than age 65 years
- 15.26.** Which of the following is the best predictor of the likelihood of attempting suicide in the future?
- A. Alcohol abuse
 B. Gender
 C. Prior suicide attempt
 D. Recent divorce
 E. Unemployment
- 15.27.** In the differential diagnosis, the diagnosis of schizoaffective disorder should be restricted to
- A. mixed episodes of bipolar disorder
 B. affective psychosis with concurrent brain disease
 C. full affective and schizophrenic symptoms simultaneously
 D. affective psychosis superimposed on mental retardation
 E. a contagious expansive and elated affect
- 15.28.** Drugs that may precipitate mania include all of the following *except*
- A. Bromocriptine
 B. Disulfiram
 C. Isoniazid
 D. Propranolol
 E. All of the above
- 15.29.** Which of the following antidepressants would *not* be the best choice for a patient with a history of suicidal ideation?
- A. Bupropion (Wellbutrin)
 B. A monoamine oxidase inhibitor
 C. A selective serotonin reuptake inhibitor
 D. A tricyclic antidepressant
 E. Venlafaxine (Effexor)
- 15.30.** Which of the following statements regarding electroconvulsive therapy (ECT) is *false*?
- A. ECT should be used in cases of psychotic depression only.
 B. Bilateral ECT is somewhat more effective than unilateral ECT.
 C. Retrograde memory impairment is a common side effect.
 D. ECT is often used for refractory mood disorders.
 E. Eight to 12 treatments are usually needed for symptomatic remission.
- 15.31.** Mr. M is an 87-year-old man who, 6 weeks after a coronary artery bypass graft that was complicated by pneumonia and renal insufficiency, was admitted to an inpatient rehabilitation service for management of physical deconditioning. A psychiatrist was consulted 10 days after admission to rule out depression in the context of persistent low appetite and energy associated with suboptimal participation in rehabilitation. Mr. M reported no prior psychiatric history. He had worked as a chemist until retirement nearly 2 decades earlier. Laboratory examination revealed a low hematocrit of 21 and moderately elevated blood urea nitrogen of 65. On interview, Mr. M demonstrated psychomotor slowing and bland affect. He denied depression, hopelessness, worthlessness, and suicidal ideation. He expressed a desire to recover from his debilitated state but acknowledged uncertainty that he

was capable of doing so. He also complained of extreme weakness. He stated, "I just don't seem to have an appetite anymore." Cognition largely was intact; there was mild short-term memory deficit.

The most likely diagnosis in this patient is:

- A. Anxiety disorder with depressed mood
- B. Delirium
- C. Dementia
- D. Major depressive disorder
- E. Mood disorder secondary to a general medical condition

- 15.32.** A 19-year-old single woman presented with the chief complaint that "all men are bastards." Since her early teens, with the onset of her menses, she had complained of extreme variability in her moods on a nearly daily basis; irritability with hostile outbursts was her main affect, although more protracted hypersomnic depressions with multiple overdoses and wrist slashings had led to at least three hospitalizations. She also had migrainous headaches that, according to her mother, had motivated at least one of those overdoses. Despite her tempestuous and suicidal moods that led to these hospitalizations, she complained of "inner emptiness and a bottomless void." She had used heroin, alcohol, and stimulants to overcome this troubling symptom. She said that she was mentally disturbed because of a series of stepfathers who had all forced "oral rape" on her when she was between 11 and 15 years of age. She subsequently became sexually involved with any man that she met in bars, no longer knowing whether she was a "prostitute" or a "nice little girl." On two occasions, she had inflicted cigarette burns inside her vagina "to feel something." She had also engaged in a "brief lesbian relationship" that ultimately left her "emptier" and guilt ridden; nonetheless, she now believed that she should burn in hell because she could not get rid of "obsessing" about the excitement of mutual cunnilingus with her much older female partner. The patient was given phenelzine (Nardil), eventually increased to 75 mg per day, at which point the mother described her as "the sweet daughter she was before age 13." At her next premenstrual phase, the patient developed insomnia, ran away from home at night, started "dancing like a go-go girl, met an incredibly handsome man" of 45 years of age (a pornography shop owner), and had a clandestine marriage to him.

Other than a mood disorder, this patient also shows signs of

- A. an anxiety disorder
- B. schizophrenia
- C. borderline personality disorder
- D. schizoaffective disorder
- E. none of the above

- 15.33.** A 35-year-old woman has just been diagnosed with major depressive disorder. For the past 8 months, she has had a depressed mood, decreased energy and concentration,

and loss of interest in previously enjoyed activities. Although she never attempted suicide, she acknowledges that she thought she would probably jump off a local bridge if she ever had the chance. She denies any history of excessively elevated moods. You decide to start her on antidepressant therapy. Two weeks later, this patient is at greatest risk for

- A. extrapyramidal symptoms
- B. hypomanic episode
- C. manic episode
- D. medication noncompliance
- E. suicide completion

- 15.34.** A 57-year-old woman presents to you after being diagnosed with major depressive disorder. She has been depressed ever since the death of her husband 2 years earlier. She has been taking the same antidepressant since her diagnosis 1 year ago, with no relief of her symptoms. She states that she would like your help in ending her life. The best option for your next step is:

- A. respect the patient's wishes because she is of sound mind
- B. seek to more adequately treat her depression
- C. seek family members to make a more informed decision
- D. contact the hospital ethics committee
- E. obtain information from the state regarding physician-assisted suicide laws

- 15.35.** Ms. S, a 24-year-old woman, is brought for a psychiatric consultation by her mother who complains of bizarre behavior. One month ago, Ms. S was fired from her job at a local bookstore because of frequently arriving late and not performing her duties adequately. She states that she fell in love with another employee and tried to get his attention and spend time with him even though he seemed uninterested. Over the past 3 months, she increased her use of alcohol and marijuana to three beers and two to three joints per day. Her mother reports a 2-week history of increased energy, eating little, talking a great deal, and interrupting others frequently. A week ago, Ms. S reported that her former work colleagues were plotting against her and attempting to control her by broadcasting thoughts into her brain. She did not sleep the previous 2 nights. Ms. S has no significant psychiatric or medical history. She takes no medications.

Physical examination reveals a blood pressure of 135/75 mm Hg, heart rate of 84 beats/min, and temperature of 37°C. Her conjunctivae are pink, and her pupils are equal, 3 mm, and reactive to light. Deep tendon reflexes are normal throughout. Urine toxicology reveals the presence of cannabinoids. On mental status testing, her mood is euphoric, her speech is pressured, and she is emotionally labile and irritable. Her thinking is illogical and disorganized. She denies hallucinations. She is alert and oriented to person, place, and time. Immediate recall and recent and remote memory are intact. Throughout the

interview, she is preoccupied by thoughts of the coworker with whom she has fallen in love.

Ms. S is admitted to a psychiatric unit, and treatment is initiated with haloperidol, 10 mg/day, which is increased to 20 mg/day on day 5 because of continued agitation. On day 6, she becomes withdrawn and uncommunicative. She is diffusely rigid with a temperature of 39°C. Her white blood count is 14,300 and her creatinine phosphokinase is 2,100. Several blood cultures are negative.

Which of the following is the most likely diagnosis at the time of admission?

- A. Bipolar disorder
 - B. Delusional disorder, erotomanic type
 - C. Marijuana-induced psychotic disorder
 - D. Schizoaffective disorder, bipolar type
 - E. Schizophrenia
- 15.36.** Which of the following is the most likely explanation for her behavior on day 6?
- A. Anticholinergic delirium
 - B. Neuroleptic malignant syndrome
 - C. Marijuana-induced delirium
 - D. Occult infection
 - E. Worsening psychosis
- 15.37.** Which of the following pharmacologic approaches is most appropriate on day 6?
- A. Increase dose of haloperidol.
 - B. Stop haloperidol and add risperidone.
 - C. Stop haloperidol, add bromocriptine, and seek medical consultation.
 - D. Continue the same dose of haloperidol and add risperidone.
 - E. Continue the same dose of haloperidol and add benzotropine.
- 15.38.** A suicidal patient with chronic depressive disorder presents to your office very frustrated and in tears. He tells you he cannot stop thinking about ending his life because he is so depressed. You ask him if he has a plan, and he details where he could buy a handgun and where he would go to shoot himself. You fear the patient will carry out this plan because he has not had adequate control of his symptoms since his last antidepressant change 1 month ago. You discuss inpatient hospitalization for medication stabilization, but the patient refuses. You're next step in management of this patient would best be:
- A. Admit the patient to the hospital anyway.
 - B. Give the latest antidepressant more time to take affect.
 - C. Change to another class of antidepressant.
 - D. Try to persuade the patient to admit himself to the hospital.
 - E. Initiate psychotherapy to discuss the reasons behind the suicidal thoughts.

15.39. A 64-year-old woman with an extensive smoking history has recently been diagnosed with small cell lung cancer. She develops a depressed mood, decreased interests, and difficulty concentrating soon thereafter because she reports she cannot stop thinking about how worthless her life has been. She eats incessantly and has gained 10 lb in the last 5 weeks; she also reports increased sleep. You decide to prescribe phenelzine for her symptoms of atypical depression. Which of the following is contraindicated in those patients taking phenelzine?

- A. Valproic acid
- B. Trazodone
- C. Lithium
- D. Fluoxetine
- E. Clomipramine

15.40. A 28-year-old woman presents to a clinic with a chief complaint of fatigue. She states that this feeling of "being tired" has persisted for the past 4 years. She has lost 12 lb over the past 2 years and admits to overeating. The patient states that she sleeps at least 11 hours per night. She denies suicidal ideation but complains about not being able to concentrate. What is the likely diagnosis?

- A. Generalized anxiety disorder
- B. Dysthymia
- C. Major depressive disorder
- D. Substance abuse
- E. None of the above

Directions

Each set of lettered headings below is followed by a list of phrases or statements. For each numbered phrase or statement, select:

- A. if the item is associated with A only
- B. if the item is associated with B only
- C. if the item is associated with both A and B
- D. if the item is associated with neither A nor B

Questions 15.41–15.45

- A. Bereavement
- B. Depression

- 15.41.** Is perceived as normal
- 15.42.** Active suicidal ideation is common
- 15.43.** Persons often experience guilt
- 15.44.** Persons react to the environment
- 15.45.** Delusions of worthlessness

Questions 15.46–15.49

- A. Clozapine
- B. Imipramine

- 15.46.** Cardiotoxic
- 15.47.** Causes weight gain

15.48. Acts as an NE partial agonist

15.49. Teratogenic

Questions 15.50–15.53

- A. Unipolar depression
- B. Bipolar II depression

15.50. Never any history of acute mania

15.51. Typically has psychotic features present

15.52. Symptoms of hypomania are present

15.53. Can present with atypical features

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading that is most associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 15.54–15.59

- A. Dysthymic disorder
- B. Neurasthenia
- C. Bipolar I disorder
- D. Cyclothymic disorder
- E. Bipolar II disorder
- F. Hypomania

15.54. Is diagnosed more in China than the rest of the world

15.55. Subsyndromal depression and hypomania

15.56. Rarely progresses to manic psychosis

15.57. Insidious onset of depression dating back to childhood

15.58. Manic-like symptoms do not meet full manic syndrome criteria

15.59. Includes a full set of mania symptoms

ANSWERS

15.1. The answer is D

Dysthymia is defined as a reactive nonpsychotic depression of mild to moderate intensity with predominant anxiety. It is characterized by the presence of a depressed mood that lasts most of the day and is present almost continuously. Patients complain that they have always been depressed. It is not a sequela to a major depressive episode as with chronic depression. There are associated feelings of inadequacy, guilt, irritability, and anger; withdrawal from society; loss of interest; and inactivity and lack of productivity. Most cases are of early onset, beginning in childhood or adolescence and certainly by the time patients reach their 20s. The overall prognosis for dysthymia is good with treatment; however, 25 percent of dysthymic patients never attain complete recovery.

Bipolar disorder is defined as a mood disorder in which the patient exhibits both manic and depressive episodes. The criteria

for a manic episode require the presence of a distinct period of abnormal mood lasting at least 1 week. Typically beginning in the teenage years, the 20s, or the 30s, the first episode of bipolar I disorder could be manic, depressive, or mixed. On average, manic episodes predominate in youth, and depressive episodes predominate in later years. Although the overall sex ratio is 1:1, men, on average, undergo more manic episodes, and women experience more mixed and depressive episodes.

Endogenomorphic depression is a term used to describe inhibition of the pleasure or reward system to such an extent that the patient no longer has the capacity for enjoyment. There may or may not be an apparent environmental precipitant or stress. In most cases, patients show dramatic abnormalities in psychomotor activity and somatic rhythms (i.e., sleep, appetite, libido). Such patients may also be delusional. The symptom profile in *chronic depression* usually displays low-grade intensity. Full criteria for a major depressive episode must have been met continuously for at least the past 2 years. Instead of the customary remission within 1 year, patients are ill for years.

Anxiety disorders are disorders in which anxiety is the most prominent disturbance or in which patients experience anxiety if they resist giving in to their symptoms. They are among the most prevalent mental disorders in the general population. Women are affected nearly twice as frequently as men. They are associated with significant morbidity and often are chronic and resistant to treatment. They include (1) panic disorder with or without agoraphobia, (2) agoraphobia with or without panic disorder, (3) specific phobia, (4) social phobia, (5) obsessive-compulsive disorder (OCD), (6) posttraumatic stress disorder (PTSD), (7) acute stress disorder, and (8) generalized anxiety disorder.

15.2. The answer is D

Computed tomography (CT) and magnetic resonance imaging (MRI) scans provide sensitive, noninvasive methods to assess the brain, including cortical and subcortical tracts, as well as white matter lesions. The most consistent abnormality observed in the depressive disorders is *increased frequency of abnormal hyperintensities in subcortical regions*, especially the periventricular area, basal ganglia, and thalamus (Figure 15.2). More common in bipolar I disorder and among the elderly, these hyperintensities appear to reflect the deleterious neurodegenerative effects of recurrent mood episodes. *Ventricular enlargement, cortical atrophy, and sulcal widening* have also been reported in patients with mood disorders compared with normal control subjects. In addition to age and illness duration, structural abnormalities are associated with increased illness severity, bipolar status, and increased cortisol levels. Some depressed patients also may have reduced caudate nucleus volumes, suggesting a defect in the mesocorticolimbic system. Cerebrovascular factors often involve subcortical frontal and basal ganglia structures and appear particularly relevant to late-life depression.

15.3. The answer is C

Confidentiality refers to the therapist's responsibility to not release information learned in the course of treatment to third parties. Confidentiality is an essential ingredient of psychiatric care because it is a prerequisite for patients to be willing to speak freely to therapists. People would be less likely to go for help and would tend to withhold crucial information if confidentiality

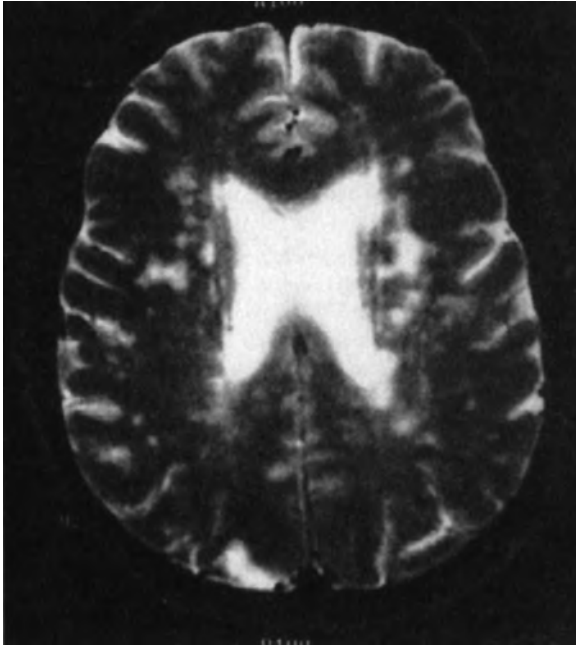


FIGURE 15.2

Magnetic resonance imaging scan of a patient with late-onset major depressive disorder illustrating extensive periventricular hyperintensities associated with diffuse cerebrovascular disease.

was not assured. There is no reason to break doctor–patient confidentiality in situations involving a patient’s sexual preference (e.g., *homosexuality*) unless there is some threat to the patient’s safety. Confidentiality must give way to the responsibility to protect others when a patient makes a credible threat to harm someone (e.g., *a patient threatening to kill his boss*) or acts in a way that could harm him- or herself (e.g., *a patient who thinks he can fly*). Reportable diseases (e.g., *sypphilis*) must also be reported to the proper authorities despite the bond of patient confidentiality. Any suspicion of *child abuse* must also be reported to the authorities.

15.4. The answer is A

Lithium (Eskalith), used for mood stabilization in patients with bipolar disorder, is known for its low margin of safety, making frequent monitoring necessary. Common side effects include gastrointestinal disturbances, nephrotoxicity, hypothyroidism, tremors, leukocytosis, acne, psoriasis flares, hair loss, and edema. Because of these effects, it is important to get *thyroid function tests* and renal function tests (*creatinine*) before starting any patient on this medication. Lithium is also teratogenic and has been associated with cardiac defects, so a *pregnancy test* is necessary before lithium therapy.

15.5. The answer is A

Three (not one) out of four patients with acute depression will experience recurrences, with varying degrees of residual symptoms between episodes. Of note, although depressive disorders

are more common in women, more men than women die of suicide because of more lethal methods chosen.

15.6. The answer is A

Hypersexuality is cardinal sign of mania and usually indicates a mixed episode of bipolar disorder in depressed patients. The small subgroup of depressed persons with increased sexual drive usually exhibit other atypical features; hence, increased sexual drive is considered the fifth reverse vegetative sign (after even worsening mood, initial insomnia, hypersomnia, and weight gain).

The biological concomitants of melancholia include profound reductions in appetite (i.e., *anorexia* or weight loss), sleep (i.e., *insomnia*), and sexual functioning, as well as alterations in other circadian rhythms, especially worsening of mood and psychomotor performance. An equally prominent subgroup of depressed persons exhibits a reversal of the vegetative and circadian functions, with increases in appetite and sleep—and sometimes in sexual functioning—and an evening worsening of mood; in this atypical pattern, patients characteristically exhibit mood reactivity and sensitivity to rejection.

15.7. The answer is E (all)

Serotonergic neurons project from the brainstem dorsal raphe nuclei to the cerebral cortex, hypothalamus, thalamus, basal ganglia, septum, and hippocampus. Serotonin (5-HT) pathways have both inhibitory and facilitatory functions in the brain. For example, much evidence suggests that 5-HT is *an important regulator of sleep, appetite, and libido*. Serotonergic neurons projecting to the suprachiasmatic nucleus of the hypothalamus *help to regulate circadian rhythms* (e.g., sleep–wake cycles, body temperature, and hypothalamic–pituitary–adrenocortical axis function). Serotonin also *permits or facilitates goal-directed motor and consummatory behaviors in conjunction with norepinephrine and dopamine*. Moreover, serotonin inhibits aggressive behavior across mammalian and reptilian species.

There is some evidence that serotonin neurotransmission is partly under genetic control. Nevertheless, whereas acute stress increases serotonin release transiently, *chronic stress eventually depletes serotonin stores*. Chronic stress may also increase synthesis of 5-HT_{1A} autoreceptors in the dorsal raphe nucleus, which further decrease serotonin transmission. Elevated glucocorticoid levels tend to enhance serotonergic functioning and thus may have significant compensatory effects on chronic stress.

15.8. The answer is A

The course of major depressive disorder, recurrent, with no antecedent dysthymic disorder and a period of full remission between the episodes predicts the best future prognosis. This is depicted in *graph A*.

15.9. The answer is D

Graph D depicts double depression, which is characterized by recurrent major depressive disorder and antecedent dysthymic disorder with no period of full remission in between the two most recent episodes. *Graph A* is the course of major depressive disorder, recurrent, with no antecedent dysthymic

disorder and full remission between episodes. *Graph B* is the course of major depressive disorder, recurrent, with no antecedent dysthymic disorder but with prominent symptoms persisting between episodes (partial remission is attained). *Graph C* is the rare pattern major depressive disorder, recurrent, with antecedent dysthymic disorder but with full interepisodic recovery.

15.10. The answer is E

Double depression is characterized by *recurrent major depressive disorder with antecedent dysthymic disorder* and no period of full remission between the two most recent episodes. This pattern is seen in approximately 20 to 25 percent of the persons with major depressive disorder.

15.11. The answer is D

Despite their contrasts, depression and mania share such symptoms as irritability, *anger*, insomnia, and agitation. Mania is defined as a mood disorder characterized by elation, agitation, hyperactivity, and hyperexcitability. The clinical features of mania are generally the opposite of those of depression. Depression is defined as a mental state characterized by feelings of sadness, loneliness, despair, low self-esteem, and self-reproach. Depression is commonly associated with cases of lowered mood, thinking, *self-esteem*, and activity. Mania, on the other hand, is commonly associated with elevated mood, a rush of ideas, *psychomotor acceleration*, and *grandiosity*. An excess of the shared symptoms of escalating intensity suggests a mixed phase of mixed episode of mania and depression occurring simultaneously, commonly called bipolar I disorder.

15.12. The answer is B

The *19-year-old rape victim* is more likely to develop a variation of posttraumatic stress disorder, which is highest among victims of rape, military combat veterans, and survivors of torture. *Childhood onset of dysthymia* similarly presages extremely high rates of depression and bipolar disorder in adulthood. *Monozygotic twins* have been shown to have a two- to fourfold increase in concordance rates for mood disorders over dizygotic twins, compelling data for the role of genetic factors in mood disorders.

Parental loss before adolescence is also a well-documented risk factor for adult-onset depression. Medical problems of many types, such as *cancer of the pancreas*, multiple sclerosis, and space-occupying lesions of the brain, can produce depression.

15.13. The answer is B

A hypomanic episode *lacks psychotic features*, which can sometimes be associated with mania. A manic episode is a distinct period of an abnormally and persistent elevated, expansive, or irritable mood lasting for *at least 1 week* or less if a patient must be hospitalized. A hypomanic episode lasts at least 4 days and is similar to a manic episode except that it is *not sufficiently severe* to cause impairment in *social* or occupational functioning. Patients often believe that they benefit from the energy and confidence of hypomania. Diagnostically, history of hypomania is preferably obtained from significant others who have observed

the patient; the experience is often pleasant, and the subject may be unaware of it or may tend to deny it. Both mania and hypomania are associated with inflated self-esteem, decreased need for sleep, distractibility, great physical and mental activity, and overinvolvement in pleasurable behavior.

15.14. The answer is D

In Sigmund Freud's structural theory, *introjection* of the lost object into the ego leads to the typical depressive symptoms of a lack of energy available to the ego. The superego, which is unable to retaliate against the lost object externally, flails out at the psychic representation of the lost object, now internalized in the ego as an introject. When the ego overcomes or merges with the superego, energy previously bound in the depressive symptoms is released, and mania supervenes with the typical symptoms of excess.

Projection is the unconscious defense mechanism in which a person attributes to another person those generally unconscious ideas, thoughts, feelings, and impulses that are personally undesirable or unacceptable. *Sublimation* is an unconscious defense mechanism in which the energy associated with unacceptable impulses or drives is diverted into personally and socially acceptable channels.

Undoing is an unconscious defense mechanism by which a person symbolically acts out to reverse something unacceptable that has already been done or against which the ego must defend itself. *Altruism* is regard for and dedication to the welfare of others.

15.15. The answer is C

Nearly two-thirds of patients with depressive disorders, whether experiencing typical or atypical symptoms, *exhibit marked shortening of rapid eye movement (REM) latency*, the period from sleep onset to the first REM period. This fact is not specific to atypical depression as are the other choices listed. *Mood reactivity* is characterized by mood elevation in response to something good happening. *Leadens paralysis* (a heavy, leaden feelings in one's arms and legs), *hypersomnia*, increased appetite, and *significant weight gain* are also among the features of atypical depression.

15.16. The answer is A

L-Tryptophan, the amino acid precursor to serotonin, *has been used as an adjuvant to both antidepressants and lithium* in the treatment of bipolar I disorder. Tyrosine *is the amino acid precursor to dopamine*. L-Tryptophan has also been *used alone as a hypnotic and an antidepressant*. L-Tryptophan and L-tryptophan-containing products have been recalled in the United States because L-tryptophan *has been associated with eosinophilia-myalgia syndrome*. The symptoms include fatigue, myalgia, shortness of breath, rashes, and swelling of the extremities. Congestive heart failure and death can also occur.

Although several studies have shown that L-tryptophan is an efficacious adjuvant in the treatment of mood disorders, it should not be used for any purpose until the problem with eosinophilia-myalgia syndrome is resolved. Current evidence points to a contaminant in the manufacturing process.

15.17. The answer is C

A history of more than one previous depressive episode is not an indicator of a good prognosis for major depressive disorder. Rather, it increases the possibility for a poor prognosis. Other indicators of a poor prognosis include coexisting dysthymic disorder, abuse of alcohol and other substances, and anxiety disorder symptoms. Men are more likely than women to experience a chronically impaired course.

Mild episodes, the *absence of psychotic symptoms*, and a short hospital stay are good prognostic indicators. Psychosocial indicators of a good course include a history of solid friendships during adolescence, *stable family functioning*, and generally sound social functioning for the 5 years preceding the illness. Additional good prognostic signs are the absence of a comorbid psychiatric disorder and of a personality disorder, *no more than one previous hospitalization* for major depressive disorder, and *an advanced age of onset*.

15.18. The answer is A

Reactive depression is defined as depression that results from a specific life event. It continues as long as the event is present, and it terminates with the reversal of the event (e.g., return of a lover after a breakup). With interpersonal support, most people can face life's reversals, which explains why reactive depression tends to be self-limiting. Hence, *adjustment disorder* is the more appropriate diagnosis for many cases of reactive depression. *Oppositional defiant disorder* is a recurring pattern of negative, hostile, disobedient, and defiant behavior in a child or adolescent, lasting for at least 6 months without serious violation of the basic rights of others. *Conduct disorder* is a childhood behavioral condition involving a pattern of repetitive and persistent conduct that infringes on the basic rights of others or does not conform to established societal norms or rules that are appropriate for a child of that age. *Atypical depression* is characterized by "reversed vegetative symptoms," which include oversleeping, overeating, rejection sensitivity, and temporary brightening of mood in response to positive events. *Schizoaffective disorder* is a disorder with symptoms of both schizophrenia and manic-depressive disorder.

15.19. The answer is A

Among the factors favoring the occurrence of rapid cycling bipolar disorder are *alcohol, stimulant, and caffeine use*. Other factors include female gender because this subtype is much more common in women than men. Most antidepressants readily induce excited episodes and thus aggravate the rapid cycling pattern. Rapid cycling is defined as the occurrence of at least four episodes of depression and hypomania or mania per year (not per month). Hospitalization of these patients is often frequent to stabilize medication and achieve compliance.

15.20. The answer is A

Reliance on the *cross-sectional* rather than *longitudinal* picture (not vice versa) may cause a misdiagnosis of mood disorder as schizophrenia. Cross-sectionally, young patients with bipolar disorder might seem psychotic and disorganized and thus schizophrenic. Their thought processes are so rapid that they may seem loose, but unlike patients with schizophrenia, they



Table 15.1
Common Causes of Misdiagnosis of Mood Disorder as Schizophrenia

Reliance on cross-sectional rather than longitudinal picture
Incomplete interepisodic recovery equated with schizophrenic defect
Equation of bizarreness with schizophrenic thought disorder
Ascribing irritable and cantankerous mood to paranoid delusions
Mistaking depressive anhedonia and depersonalization for schizophrenic emotional blunting
Flight of ideas perceived as loose associations
Lack of familiarity with the phenomenological approach in assessing affective delusions and hallucinations
Heavy weight given to incidental schneiderian symptoms

Adapted from Akiskal HS, Puzantian VR. Psychotic forms of depression and mania. *Psychiatr Clin North Am.* 1979;2:419

display an expansive and elated affect, which is often contagious. By contrast, a severely retarded bipolar depressive person, whose affect may superficially seem flat, almost never exhibits major fragmentation of thought. The clinician should therefore place greater emphasis on the pattern of symptoms than on individual symptoms in the differential diagnosis of mood and schizophrenic psychosis. Table 15.1 lists the most common pitfalls in diagnosis.

15.21. The answer is C

Cyclothymia is characterized by at least 2 years of numerous periods with hypomanic symptoms and numerous periods with depressive symptoms that *do not meet criteria for a major depressive episode*. This disorder apparently occurs at the same rate in both men and women, but women seek treatment more often than men. The lifetime prevalence rate of cyclothymic disorder is 0.4 to 1 percent.

15.22. The answer is B

The profile of dysthymic disorder overlaps with that of major depressive disorder but differs from it in that *symptoms tend to outnumber signs* (more subjective than objective depression). This means that disturbances in appetite and libido are uncharacteristic, and psychomotor agitation or retardation is not observed. This all translates into a depression with attenuated symptomatology. Subtle endogenous features are observed, however, including inertia, lethargy, and anhedonia that are characteristically worse in the morning.

Dysthymic disorder is distinguished from major depressive disorder by the fact that patients complain that they have always been depressed. Most cases are of *early onset* beginning in childhood or adolescence and certainly occurring by the time patients reach their 20s. A late-onset subtype, which is much less prevalent and not well characterized clinically, has been identified among middle-aged and geriatric populations, largely through epidemiological studies in the community. Diagnostic criteria stipulate the presence of depressed mood most of the time for at least 2 years (not episodic) or 1 year for children or adolescents. Patients should not have symptoms that are better accounted for as major depressive disorder and *should never have had a manic or hypomanic episode*. The DSM-IV-TR allows clinicians to

specify whether the onset was early (before age 21 years) or late (age 21 years or older).

Dysthymic disorder refers to a subaffective or subclinical depressive disorder with (1) *low-grade (not high-grade) chronicity* for at least 2 years; (2) insidious onset, with the origin often in childhood or adolescence; and (3) a persistent or intermittent course.

15.23. The answer is E

Features such as *restlessness*, agitation, and pressured speech are characteristic of psychomotor agitation, not retardation. Psychomotor retardation, which is often present in depressed patients, manifests as *paucity of spontaneous movements, reduced speech amplitude and flow*, increased latency of responses, *indecisiveness, poor concentration* and forgetfulness, and overwhelming fatigue. Brain imaging research that has revealed subcortical (extrapyramidal system) disturbances in mood disorders tends to support the centrality of psychomotor dysfunction in these disorders.

15.24. The answer is B

Anhedonia is one of the DSM IV-TR criteria for major depression. Patients with severe depression and anhedonia may complain of being emotionally cut off from others and experience depersonalization in a world that seems strange to them (*derealization*). *Loss of pleasure and withdrawal from previously enjoyable activities* is typical of anhedonia. The impact of the loss of emotional resonance can be so pervasive that patients may denounce values and beliefs that had previously given meaning to their lives (e.g., members of the clergy complain they no longer believe in the Church and have lost God). The *inability of a person with depressive disorder to experience normal emotions* (commonly observed among young depressed patients) differs from a schizophrenic person's flat affect in that the loss of emotions is itself experienced as painful; that is, the patient suffers immensely from the inability to experience emotions. Anhedonia does not typically include *alexithymia*, which is defined as a person's *inability to describe or be aware of one's emotions or mood*.

15.25. The answer is E

Suicide is almost twice as frequent in older adults as in the general population. The suicide rate for white men *older than 65 years of age* is five times higher than that of the general population. Aging reduces suicide attempts but increases their lethality. Depression is the most common psychiatric diagnosis in elderly suicide victims, unlike younger adults, in whom substance abuse alone or with comorbid mood disorders is the most frequent diagnosis. Older patients with major medical illnesses or a recent loss should be evaluated for depressive symptomatology and suicidal ideation or plans, and aggressive treatment can help prevent their acting on suicidal thoughts. Suicide rates are rising most rapidly in young adults, but *the greatest risk remains in those people older than the age of 65 years*.

15.26. The answer is C

The strongest indicator of the likelihood of attempting suicide is a *history of previous suicide attempts*. It has been shown that

women make more suicidal gestures, but men are more likely to choose lethal methods and thus are more likely to successfully commit suicide. Therefore, male gender is considered more a risk factor for suicide completion. Alcohol or substance abuse, unemployment, and recent divorce are all additional risk factors but are less significant than a history of previous suicide attempts.

15.27. The answer is C

The concept of schizoaffective (or cycloid) psychosis should be restricted to recurrent psychoses, with *full affective and schizophrenic symptoms* occurring nearly *simultaneously* during each episode. This diagnosis should *not* be considered for a mood psychosis in which mood-incongruent psychotic features (e.g., Schneiderian and Bleulerian symptoms) can be explained on the basis of one of the following: (1) affective psychosis superimposed by mental retardation, giving rise to extremely hyperactive and bizarre manic behavior; (2) affective psychosis complicated by concurrent brain disease, substance abuse, or substantial withdrawal, known to give rise to numerous schneiderian symptoms; or (3) mixed episodes of bipolar disorder (which are notorious for signs and symptoms of psychotic disorganization). Official diagnostic systems use the category of schizoaffective disorder broadly. Thus, patients with clear-cut manic episodes receive a schizoaffective diagnosis if delusions or hallucinations occur in the interepisodic period in the absence of prominent affective symptoms. Many psychotic symptoms in mood disorders are often explanatory, whereby the patient tries to make sense of the core experiences of the affective illness.

15.28. The answer is D

Propranolol (Inderal), a β -blocker, is an antihypertensive and may actually cause depressive symptoms. Many pharmacological agents, such as *bromocriptine* (Parlodel), *isoniazid* (Nydravid), *cimetidine* (Tagamet), and *disulfiram* (Antabuse), may precipitate mania, as can antidepressant treatment or withdrawal.

15.29. The answer is D

In considering antidepressant use in suicidal or impulsive patients, caution should be taken in using medications that may be lethal in overdose (e.g., *tricyclic antidepressants [TCA]*) or that may exacerbate disinhibition or cognitive deficits (e.g., *benzodiazepines*). Therefore, it is not the best idea to prescribe a TCA to this patient. *Selective serotonin reuptake inhibitors (SSRIs)* and *monoamine oxidase inhibitors (MAOIs)* are better choices. Care should be taken to avoid precipitating a hypertensive crisis in patients taking MAOIs. *Bupropion* and *venlafaxine* are other antidepressants that can be used alone or in combination with another medication.

15.30. The answer is A

Electroconvulsive therapy (ECT) is effective in *psychotic and nonpsychotic forms of depression*. Usually, *8 to 12 ECT treatments* are required to achieve symptomatic remission, and this form of therapy has been shown to be effective *even in patients who are refractory* to several different medications. *Bilateral ECT is somewhat more effective than unilateral therapy*, but

bilateral ECT also appears to have more cognitive side effects, such as *retrograde memory loss*.

15.31. The answer is E

After an extended hospital course, many patients, like this one, demonstrate withdrawn behavior, anorexia, and fatigue, occasionally associated with mild cognitive loss, that do not meet criteria for cognitive or mood disorder but are a direct product of resolving medical illness and associated debilitation. The likelihood that a mood disorder is *due to a general medical condition* is increased if a temporal relationship exists between the onset, exacerbation, or remission of the medical condition and the mood disorder. Atypical features (e.g., unusual age of onset, lack of family history, and lack of prior episodes of mood disorder) also raise the likelihood of a medical basis for mood symptoms. Mild short-term memory deficits can be normal with aging and do not necessarily indicate that Mr. M has *dementia*. He also demonstrated largely intact cognition, making *delirium* an unlikely diagnosis. Patients with a diagnosis of *anxiety disorder with depressed mood* primarily exhibit symptoms of anxiety states, such as marked tension, phobias, and panic attacks, all of which predate any depressive symptoms. In addition, anxiety disorders rarely appear for the first time after 40 years of age.

15.32. The answer is C

This case illustrates the intimate relationship among atypical depression, *borderline personality disorder*, and bipolar II disorder. These three conditions, listed as distinct nosological entities in the DSM-IV-TR, may nonetheless share an underlying psychobiological or genetic diathesis. The complaint is often heard that even when a mood disorder is diagnosed in a “borderline” patient, response to antidepressants is disappointing. The problem is that affective disorders in these patients usually conform to bipolar II disorder—often complicated by ultrarapid cycling—and many clinicians trained in an earlier era, including some with a biological orientation, may lack sufficient experience in the art of pharmacologically managing patients who markedly deviate from classic bipolar I disorder. Recently, lamotrigine has shown promise for such patients.

Table 15.2 shows that the overlap between borderline personality and mood disorders is extensive, so giving a *borderline* diagnosis to a person with mood disorder is redundant. Use of personality disorder diagnoses may lead to a neglect of the mood disorder or, perhaps, half-hearted treatment of the mood disorder; failure to respond would then be blamed on the patient’s “self-defeating character” or “resistance to getting well,” thus exculpating the clinician.

15.33. The answer is E

When antidepressant medications first begin to work, patients tend to report an increase in energy levels before significant improvement in mood symptoms. For this reason, *carrying out suicide plans* is more of a risk during this period. *Medication non-compliance* with effective psychopharmacological treatments during both acute and maintenance therapy is a major cause of morbidity among patients with schizophrenia and disorders with poor insight, not among patients with depression. Although



Table 15.2
Overlap of Borderline Personality Disorder and Mood Disorders

Familial	High rates of mood disorder
Phenomenology	Dysthymic disorder
	Cyclothymic disorder
	Bipolar II disorder
	Mixed state
Pharmacological response	Worsening on most antidepressants
	Stabilization on anticonvulsants
Prospective course	Major mood episodes
	Suicide

Adapted from Akiskal HS, Chen SE, Davis GC, Puzantian VR, Kashgarian M. Borderline: An adjective in search of a noun. *Clin Psychiatry*. 1985;46:41.

noncompliance is a possibility with any patient, it is not the best choice listed. This patient has nothing in her history to indicate bipolar disorder as a more appropriate diagnosis; therefore, there is no reason to believe *manic or hypomanic episodes* will be precipitated by antidepressant use. *Extrapyramidal symptoms* are a consequence of typical antipsychotic use, not antidepressant use.

15.34. The answer is B

Much political and theological heat has been generated in recent years by the debate on physician-assisted suicide. Many of the patients requesting death are depressed and would be likely to respond to psychotherapy, pharmacotherapy, or both. Frequently, they have been inadequately diagnosed or treated. Active depression can be considered a state of incompetence, making such patients unable to make informed decisions for themselves. *Family members or a living will should be consulted only in cases of medical emergencies* in which decisions must be made immediately. *In this case, treating the patient’s depression is the best option. It is not necessary to involve the hospital ethics committee* in this decision. Currently, Oregon is the only state that has passed enabling laws regarding physician-assisted suicide.

15.35. The answer is A

The diagnosis of bipolar disorder best fits the history and symptoms, but it is by no means certain. She presents with a 1-month history of impaired judgment and erratic behavior followed by increased energy, pressured speech, mood lability, and decreased need for sleep, all of which indicate a manic episode. The emergence of paranoid delusions is also consistent with mania, and a single manic episode, with or without major depressive episodes, qualifies for a diagnosis of bipolar disorder. That diagnosis can only be made, however, if it is believed that the symptoms are not the result of a general medical condition or substance use. We know that she has been using increased amounts of marijuana and alcohol and that she is probably intoxicated with marijuana at the time of admission. Heavy marijuana use in some individuals can cause a psychotic state with paranoid delusions and hallucinations. There are some features, however, that are inconsistent

with a purely *marijuana-induced state*, which more typically presents with decreased talkativeness and long response latency than with the pressured speech seen here. In addition, increased energy and activity and decreased need for sleep are much more likely in bipolar disorder than in a marijuana psychosis. The delusional belief of her thoughts being controlled by an outside force is strikingly similar to delusions of control that are so often seen in *schizophrenia*, but the prominent mood symptoms and time course (1 month) preclude that diagnosis. The diagnosis of *schizoaffective disorder* would require a 2-week period of psychotic symptoms without prominent mood symptoms, which is not the case here. An *erotomantic delusional belief* is that the patient is loved by another (often famous) person, not as is the case here, which the patient herself is preoccupied with being in love with someone else.

15.36. The answer is B

The events of days 5 and 6 almost certainly represent the *emergence of a neuroleptic malignant syndrome*, an idiosyncratic response to antipsychotics (especially high-potency, typical agents) characterized by fever, rigidity, and obtundation. The clinical diagnosis is confirmed, with the typical findings of leukocytosis and greatly increased creatinine phosphokinase (CPK). *Anticholinergic delirium* includes fever but not the rigidity or laboratory findings. In addition, patients with an anticholinergic delirium are more likely to be agitated than withdrawn.

15.37. The answer is C

Neuroleptic malignant syndrome (NMS) is a life-threatening medical emergency. *All medications must be stopped; switching to an atypical agent such as risperidone will not help her.* Appropriate treatment includes life support, maintaining fluid and electrolyte balance, and decreasing her fever. *Bromocriptine* is a centrally acting dopamine agonist that presumably works by reversing the effects of the antipsychotic-caused dopamine blockade. The treatment of NMS commonly combines bromocriptine with dantrolene, a peripheral muscle relaxant. *Consultation with the medical service* is crucial because the treatment may be complex.

15.38. The answer is A

Suicidal patients with intent and specific plans should always be taken seriously. For patients believed to be too much at risk for outpatient therapy or partial hospital programs, *inpatient treatment is required.* Such hospitalization is preferably on a voluntary basis, but if the patient refuses, involuntary admission is required. The options of *changing antidepressants* and *giving more time for the medication to take effect* are not the best options in this circumstance, although they may be in patients when suicide is less of an acute risk. *Psychotherapy* is also not an option when immediate intervention is needed with actively suicidal patients. Contact with the family and friends of suicidal patients is essential, and maintaining patient confidentiality is not mandatory if divulged material is believed to be necessary to protect the patient's life. Some patients appear so imminently and acutely suicidal that the clinician is afraid to let them out of the office. Patients can be admitted to the hospital against their will if they are a danger to themselves or to other people.

15.39. The answer is D

MAOIs have been shown to be particularly effective in the treatment of patients with atypical depression. Important side effects of MAOI therapy include hypertensive crisis and serotonin syndrome. Hypertensive crisis can be precipitated when foods rich in tyramine (e.g., wine, cheese) are ingested by someone who is taking an MAOI. *Serotonin syndrome* is caused by the interaction of an MAOI with a SSRI, pseudoephedrine, or meperidine. Serotonin syndrome is characterized by hyperthermia, muscle rigidity, and altered mental status. Therefore, *fluoxetine*, an SSRI, is contraindicated in this patient.

15.40. The answer is B

Given the chronological course and degree of severity of the patient's symptoms, the most likely diagnosis is *dysthymia*. Dysthymia is diagnosed when a patient experiences depressed mood for most of the day for a minimum of 2 years plus at least two of the following: insomnia or hypersomnia, poor concentration, low energy, change in appetite, or lack of self-worth. Unlike dysthymia, in *major depressive disorder*, patients must have five or more symptoms for most of the day over 2 weeks. *Generalized anxiety disorder* is characterized by sleep disturbance, irritability, inability to concentrate, uncontrollable worrying, and fatigue. *Substance abuse* is a possibility, although it is a less likely diagnosis given the duration of symptoms.

Answers 15.41–15.45

15.41. The answer is A

15.42. The answer is B

15.43. The answer is C

15.44. The answer is A

15.45. The answer is B

Bereaved persons exhibit many depressive symptoms during the first 1 to 2 years after their loss. However, there is a distinction between depression and bereavement. Whereas grieving persons and their relatives perceive bereavement as a *normal reaction* to the loss, those with depressive disorder often view themselves as sick and may actually believe they are losing their minds. *Active suicidal ideation* is rare in grief but *common* in major depressive disorder. Unlike a melancholic person, a grieving person *reacts to the environment* and tends to show a range of positive effects. *Delusions of worthlessness* or sin and psychotic experiences in general point toward a mood disorder. *Guilt is experienced in both bereavement and depression.* Bereaved persons often feel guilty about not having done certain things that they believe might have saved the life of the deceased loved one.

Answers 15.46–15.49

15.46. The answer is B

15.47. The answer is C

15.48. The answer is D**15.49. The answer is D**

Tricyclic antidepressants such as imipramine (Tofranil) are known for their *cardiotoxicity* because they prolong cardiac conduction time and can cause a variety of arrhythmias. Also among the substantial side effects of tricyclic antidepressants are *weight gain*, sedation, anticholinergic effects, and orthostatic hypotension. *Weight gain* is also a common adverse effect of clozapine (Clozaril), as well as agranulocytosis; therefore, weekly blood monitoring is necessary. Neither clozapine nor imipramine acts as *norepinephrine partial agonists*; instead, clozapine acts by blockade of serotonin-2a and D₂ receptors, and imipramine acts by reducing the reuptake of norepinephrine and serotonin. *There are no known teratogenic effects of clozapine or imipramine.*

Answers 15.50–15.53**15.50. The answer is C****15.51. The answer is D****15.52. The answer is B****15.53. The answer is C**

Between the extremes of manic-depressive illness defined by at least one acute manic episode, which could be mood-congruent or -incongruent (*bipolar I disorder*), and strictly defined major depressive disorder without any personal or family history of mania (pure *unipolar disorder*), there exists an overlapping group of intermediary forms characterized by recurrent major depressive episodes and hypomania (*bipolar II disorder*). There is never any history of acute mania in either unipolar depression or bipolar II disorder. *Psychotic features* are typically not present in either form of depression. There can be recurrent episodes of major depressive symptoms, as well as *atypical features* in both unipolar and bipolar II forms. *Symptoms of hypomania* are characteristic only of bipolar II disorder.

Answers 15.54–15.59**15.54. The answer is B****15.55. The answer is D****15.56. The answer is F****15.57. The answer is A****15.58. The answer is E****15.59. The answer is C**

The diagnosis of *neurasthenia* is currently used more in China than the rest of the world. It is a condition characterized by vague functional physical and mental fatigue. The anxiety gen-

erated by overstimulation is so excessive that it is replaced by a chronic disposition to irritability, fatigue (especially mental fatigue), lethargy, and exhaustion. It seems as if the patient's mind refuses to take on new stresses. Anxious manifestations include headache, backache, heavy limbs, vague neuralgias, yawning, dyspepsia, palpitations, sweating of the hands and feet, chills, flushing, sensitivity to weather changes, insomnia, nightmares, pantophobia, asthenopia, and tinnitus.

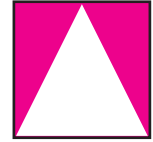
Cyclothymic disorder is characterized by frequent short cycles of subsyndromal mild depression and hypomania. The course of cyclothymia is continuous or intermittent, with infrequent periods of euthymia. Shifts in mood often lack adequate precipitants. Persons with cyclothymic disorder are dilettantes; they show great promise in many areas but rarely bring any of their efforts to fruition.

Hypomania occurring as part of bipolar II disorder rarely progresses to manic psychosis, and insight is relatively preserved. Hypomania refers to a distinct period of at least a few days of mild elevation of mood, sharpened and positive thinking, and increased energy and activity levels, typically without the impairment characteristic of manic episodes. It is not merely a milder form of mania. Hypomania is distinguished from mere happiness in that it tends to recur and can sometimes be mobilized by antidepressants.

The most typical developmental background of *dysthymic disorder* is an insidious onset of depression dating back to late childhood or the teens, preceding any superimposed major depressive episodes by years or even decades. The typical features of dysthymic disorder are the presence of a depressed mood that lasts most of the day and is present almost continuously. There are associated feeling of inadequacy, guilt, irritability, and anger; withdrawal from society; loss of interest; and inactivity and lack of productivity. It differs from major depression in that patients complain that they have always been depressed.

The designation *bipolar I disorder* is synonymous with what was formally known as bipolar disorder—a syndrome in which a complete set of mania symptoms occurs during the course of the disorder. Typically beginning in the teenage years, the 20s, or the 30s, the first episode could be manic, depressive, or mixed. Bipolar I disorder, single manic episode, describes patients having a first episode of mania (most such patients eventually develop depressive episodes). Bipolar I disorder, recurrent, is diagnosed on the basis of the symptoms of the most recent episode (i.e., bipolar I disorder, most recent episode manic; bipolar disorder I disorder, most recent episode depressed).

Bipolar II disorder is characterized by depressive episodes and hypomanic episodes, but the episodes of manic-like symptoms do not quite meet the diagnostic criteria for a full manic syndrome. A few studies indicate that bipolar II disorder is associated with more marital disruption and with an onset at an earlier age than bipolar I disorder. Evidence also indicates that patients with bipolar II disorder are at greater risk of both attempting and completing suicide than patients with bipolar I disorder or major depressive disorder.



Anxiety Disorders

Anxiety disorders are among the most prevalent mental disorders in the general population. Nearly 30 million persons are affected in the United States. Anxiety disorders are associated with significant morbidity and often are chronic and resistant to treatment. The text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) contains eight anxiety disorders: (1) panic disorder with or without agoraphobia, (2) agoraphobia with or without panic disorder, (3) specific phobia, (4) social phobia, (5) obsessive-compulsive disorder (OCD), (6) posttraumatic stress disorder (PTSD), (7) acute stress disorder, and (8) generalized anxiety disorder (GAD).

Anxiety disorders, similar to most psychiatric disorders, are usually the result of a complex interplay of biological, psychological, and psychosocial elements. Treatment of patients with

these disorders can be correspondingly complex. Understanding the neuroanatomy and molecular biology of anxiety promises new insights into the etiology and more effective treatments in the future. An array of treatment approaches is currently available, including psychoanalytic, cognitive, behavioral, and psychopharmacologic treatments. Many times, a combination of these treatments is used to best address the multiplicity of etiologic forces.

Another aspect of anxiety disorders is the exquisite interplay of genetic and experiential factors. Students should also be aware of the role of specific neurotransmitters in the development of anxiety and the mechanisms of anxiolytic medications.

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

Students should know the following names, cases, terms, and acronyms related to anxiety disorders.

- | | | | |
|----------------------------|-----------------------------------|--|------------------------------|
| ▶ acute stress disorder | ▶ Sigmund Freud | ▶ MHPG | ▶ propranolol (Inderal) |
| ▶ anticipatory anxiety | ▶ GABA | ▶ mitral valve prolapse | ▶ reaction formation |
| ▶ anxiety | ▶ generalized anxiety disorder | ▶ norepinephrine | ▶ repression |
| ▶ <i>Aplysia</i> | ▶ hypnosis | ▶ numbing | ▶ secondary gain |
| ▶ aversive conditioning | ▶ imipramine (Tofranil) | ▶ obsessive-compulsive disorder (OCD) | ▶ serotonin |
| ▶ benzodiazepines | ▶ implosion | ▶ panic attack | ▶ shell shock |
| ▶ clomipramine (Anafranil) | ▶ intrapsychic conflict | ▶ panic disorder | ▶ sleep EEG studies |
| ▶ counterphobic attitude | ▶ isolation | ▶ panicogens | ▶ soldier's heart |
| ▶ Jacob M. DaCosta | ▶ lactate infusion | ▶ phobias | ▶ systematic desensitization |
| ▶ Charles Darwin | ▶ limbic system | ○ agoraphobia | ▶ thought stopping |
| ▶ ego dystonic | ▶ Little Albert | ○ social | ▶ undoing |
| ▶ fear | ▶ Little Hans | ○ specific | ▶ John B. Watson |
| ▶ Otto Fenichel | ▶ locus ceruleus and raphe nuclei | ▶ posttraumatic stress disorder (PTSD) | ▶ Joseph Wolpe |
| ▶ flooding | | | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 16.1. Posttraumatic stress disorder (PTSD) differs from acute stress disorder in that

- acute stress disorder occurs earlier than PTSD
- PTSD is associated with at least three dissociative symptoms
- reexperiencing the trauma is not found in acute stress disorder
- avoidance of stimuli associated with the trauma is only found in PTSD
- PTSD lasts less than 1 month after a trauma

- 16.2.** The risk of developing anxiety disorders is enhanced by
- eating disorders
 - depression
 - substance abuse
 - allergies
 - all of the above
- 16.3.** Which of the following is *not* a sign of poor prognosis in obsessive-compulsive disorder (OCD)?
- Childhood onset
 - Coexisting major depression
 - Good social adjustment
 - Bizarre compulsions
 - Delusional beliefs
- 16.4.** Which of the following statements regarding anxiety and gender differences is *true*?
- Women have greater rates of almost all anxiety disorders.
 - Gender ratios are nearly equal with OCD.
 - No significant difference exists in average age of anxiety onset.
 - Women have a twofold greater lifetime rate of agoraphobia than men.
 - All of the above
- 16.5.** Which of the following epidemiological statements is *true* regarding anxiety disorders?
- Panic disorder has the lowest heritability.
 - The mean age of onset is higher in girls.
 - The age of onset is earlier than that of mood disorders.
 - Rates in males peak in the fourth and fifth decades of life.
 - All of the above
- 16.6.** Sigmund Freud postulated that the defense mechanisms necessary in phobias are
- regression, condensation, and dissociation
 - regression, condensation, and projection
 - regression, repression, and isolation
 - repression, displacement, and avoidance
 - repression, projection, and displacement
- 16.7.** Anxiety disorders
- are greater among people at lower socioeconomic levels
 - are highest among those with higher levels of education
 - are lowest among homemakers
 - have shown different prevalences with regard to social class but not ethnicity
 - all of the above
- 16.8.** Generalized anxiety disorder
- is least likely to coexist with another mental disorder
 - has a female-to-male ratio of 1:2
 - is a mild condition
 - has about a 50 percent chance of a recurrence after recovery
 - has a low prevalence in primary care settings
- 16.9.** Physiological activity associated with PTSD include all *except*
- decreased parasympathetic tone
 - elevated baseline heart rate
 - excessive sweating
 - increased circulating thyroxine
 - increased blood pressure
- 16.10.** Unexpected panic attacks are required for the diagnosis of
- generalized anxiety disorder
 - panic disorder
 - social phobia
 - specific phobia
 - all of the above
- 16.11.** Isolated panic attacks without functional disturbances
- usually involves anticipatory anxiety or are phobic
 - are part of the criteria for diagnostic panic disorder
 - occur in less than 2 percent of the population
 - rarely involve avoidance
 - none of the above
- 16.12.** Which of the following is *not* a component of the DSM-IV-TR diagnostic criteria for OCD?
- Children need not recognize that their obsessions are unreasonable.
 - Obsessions are acknowledged as excessive or unreasonable.
 - Obsessions or compulsions are time consuming and take more than 1 hour a day.
 - The person recognized the obsessional thoughts as a product of outside him- or herself.
 - The person attempts to ignore or suppress compulsive thoughts or impulses.
- 16.13.** All of the following are true for the course of panic disorder *except*
- patients become concerned after the first one or two panic attacks
 - excessive caffeine intake can exacerbate symptoms
 - comorbid depression increases risk for committing suicide
 - the overall course is variable
 - patients without comorbid agoraphobia have a higher recovery rate

- 16.14.** Tourette's disorder has been shown to possibly have a familial and genetic relationship with
- generalized anxiety disorder
 - obsessive-compulsive disorder
 - panic disorder
 - social phobia
 - none of the above
- 16.15.** All of the following have been noted through brain imaging in patients with panic disorder *except*
- magnetic resonance imaging (MRI) studies have shown pathological involvement of both temporal lobes
 - generalized cerebral vasoconstriction
 - right temporal cortical atrophy
 - increased blood flow to the basal ganglia
 - positron emission tomography scans have implicated dysregulation of blood flow in panic disorder
- 16.16.** A patient with OCD might exhibit all of the following brain imaging findings *except*
- longer mean T1 relaxation times in the frontal cortex than normal control subjects
 - significantly more gray matter and less white matter than normal control subjects
 - abnormalities in the frontal lobes, cingulum, and basal ganglia
 - decreased caudate volumes bilaterally compared with normal control subjects
 - lower metabolic rates in basal ganglia and white matter than in normal control subjects
- 16.17.** Buspirone (Buspar) acts as a
- dopamine partial agonist useful in the treatment of OCD
 - serotonin partial agonist useful in the treatment of OCD
 - dopamine partial agonist useful in the treatment of generalized anxiety disorder
 - serotonin partial agonist useful in treatment of generalized anxiety disorder
 - none of the above
- 16.18.** Which of the following choices most accurately describes the role of serotonin in OCD?
- Serotonergic drugs are an ineffective treatment.
 - Dysregulation of serotonin is involved in the symptom formation.
 - Measures of platelet binding sites of titrated imipramine are abnormally low.
 - Measures of serotonin metabolites in cerebrospinal fluid are abnormally high.
 - None of the above
- 16.19.** Which of the following medical disorders are *not* associated with panic disorder due to a general medical condition?
- Cardiomyopathy
 - Parkinson's disease
 - Epilepsy
 - Sjögren's syndrome
 - Chronic obstructive pulmonary disease (COPD)
- 16.20.** Which of the following disorders is rarely confused with anxiety that stems primarily from medical disorders?
- Panic disorder
 - Specific phobia
 - Obsessive-compulsive disorder
 - Posttraumatic stress disorder
 - Generalized anxiety disorder
- 16.21.** Induction of panic attacks in patients with panic disorder can occur with
- carbon dioxide
 - cholecystokinin
 - doxapram
 - yohimbine
 - all of the above
- 16.22.** First-line medication treatments of anxiety disorders may generally include all of the following *except*
- diazepam (Valium)
 - fluoxetine (Prozac)
 - fluvoxamine (Luvox)
 - nefazodone (Serzone)
 - venlafaxine (Effexor)
- 16.23.** Therapy for phobias may include all of the following *except*
- counterphobic attitudes
 - flooding
 - phenelzine (Nardil)
 - propranolol (Inderal)
 - systematic desensitization
- 16.24.** Mr. A was a successful businessman who presented for treatment after a change in his business schedule. Although he had formerly worked largely from an office near his home, a promotion led to a schedule of frequent out-of-town meetings requiring weekly flights. Mr. A reported being "deathly afraid" of flying. Even the thought of getting on an airplane led to thoughts of impending doom in which he envisioned his airplane crashing to the ground. These thoughts were associated with intense fear, palpitations, sweating, clamminess, and stomach upset. Although the thought of flying was terrifying enough, Mr. A became nearly incapacitated when he went to the airport. Immediately before boarding, Mr. A would often

have to turn back from the plane, running to the bathroom to vomit. Which of the following is the most appropriate treatment for this patient who has another flight scheduled tomorrow?

- A. β -agonists
- B. Exposure therapy
- C. Lorazepam
- D. Paroxetine
- E. None of the above

- 16.25.** Ms. K was referred for psychiatric evaluation by her general practitioner. On interview, Ms. K described a long history of checking rituals that had caused her to lose several jobs and had damaged numerous relationships. She reported, for example, that because she often had the thought that she had not locked the door to her car, it was difficult for her to leave the car until she had checked repeatedly that it was secure. She had broken several car door handles with the vigor of her checking and had been up to an hour late to work because she spent so much time checking her car door. Similarly, she had recurrent thoughts that she had left the door to her apartment unlocked, and she returned several times daily to check the door before she left for work. She reported that checking doors decreased her anxiety about security. Although Ms. K reported that she had occasionally tried to leave her car or apartment without checking the door (e.g., when she was already late for work), she found that she became so worried about her car being stolen or her apartment being broken into that she had difficulty going anywhere. Ms. K reported that her obsessions about security had become so extreme over the past 3 months that she had lost her job because of recurrent tardiness. She recognized the irrational nature of her obsessive concerns but could not bring herself to ignore them.

Which of the following symptom patterns of OCD does Mrs. K present?

- A. Intrusive thoughts
- B. Symmetry
- C. Pathological doubt
- D. Contamination
- E. None of the above

- 16.26.** A 23-year-old woman presents to clinic with a chief complaint of “difficulty concentrating because I worry about my child.” She had recently gone back to teaching after having her third child. The patient states she is constantly wondering about other things as well. For example, she is going to help her sister-in-law throw a goodbye party and finds herself constantly going over what she needs to do to prepare for the party. At the end of the day, her husband claims she is irritable and tired. At night, she is unable to sleep and keeps thinking about her tasks for the next day. What is the most likely diagnosis?

- A. Avoidant personality disorder
- B. Obsessive-compulsive disorder

- C. Obsessive-compulsive personality disorder
- D. Generalized anxiety disorder
- E. None of the above

Directions

Each set of lettered headings below is followed by a list of numbered words or phrases. For each numbered word or phrase, select

- A. if the item is associated with A only
- B. if the item is associated with B only
- C. if the item is associated with both A and B
- D. if the item is associated with neither A nor B

Questions 16.27–16.31

- A. Social phobia
- B. Agoraphobia

- 16.27.** Symptoms include blushing and muscle twitching
- 16.28.** Is associated with a sense of suffocation
- 16.29.** Is chronic without a history of panic disorder
- 16.30.** May be associated with panic attacks
- 16.31.** Patients are comforted by the presence of another person

Questions 16.32–16.36

- A. Generalized anxiety disorder
- B. Panic disorder

- 16.32.** Response rates between 60 and 80 percent have been reported to buspirone
- 16.33.** Patients with the disorder may still be responsive to buspirone after being exposed to benzodiazepine
- 16.34.** Buspirone’s use is limited to potentiating the effects of other antidepressants and counteracting the adverse sexual effects of selective serotonin reuptake inhibitors
- 16.35.** Relapse rates are generally high after discontinuation of medication
- 16.36.** Tricyclic drugs have been reported to worsen anxiety symptoms in patients in whom the first symptoms were precipitated by cocaine

Questions 16.37–16.40

- A. Cognitive behavioral therapy
- B. Psychodynamic therapy

- 16.37.** Produces 80 to 90 percent panic-free status in panic disorder within at least 6 months of treatment
- 16.38.** May be nearly twice as effective in the treatment of social phobia as a more educational-supportive approach
- 16.39.** Goals are more ambitious and require more time to achieve
- 16.40.** Combining treatment with medication may be superior to either treatment alone

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading that is most associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 16.41–16.45

- A. Panic disorder
- B. Generalized social phobia
- C. Posttraumatic stress disorder
- D. Generalized anxiety disorder
- E. Acute stress disorder

- 16.41.** Is associated with depersonalization
16.42. Must include at least two spontaneous panic attacks
16.43. Symptoms must persist at least 1 month after the trauma
16.44. Must include three somatic or cognitive symptoms associated with worry
16.45. Difficult to distinguish from avoidant personality disorder

Questions 16.46–16.49

- A. Imaginal exposure
- B. Interoceptive exposure
- C. In vivo exposure
- D. Systematic desensitization

- 16.46.** A patient is presented with photographs of snakes while practicing various relaxation techniques to overcome fear; gradually, he practices relaxation while in the presence of live snakes.
16.47. A patient with OCD attempts to use public telephones and doorknobs while intentionally refraining from washing her hands afterward.
16.48. A patient is asked to imagine his wartime experiences as vividly as possible to confront his memory of the traumatic events.
16.49. A patient breathes through a thin straw to produce the sensation of not getting enough air; this activity produces a similar sensation to the distressing feeling of getting on an airplane.

Questions 16.50–16.54

- A. Acrophobia
- B. Ailurophobia
- C. Cynophobia
- D. Mysophobia
- E. Xenophobia

- 16.50.** Fear of dirt and germs
16.51. Fear of heights
16.52. Fear of strangers
16.53. Fear of dogs
16.54. Fear of cats

ANSWERS

16.1. The answer is A

Acute stress disorder is a disorder that is similar to posttraumatic stress disorder (PTSD), but *acute stress disorder occurs earlier than PTSD* (within 4 weeks of the traumatic event) and remits within 2 days to *1 month after a trauma* (not PTSD).

PTSD shows three domains of symptoms: *reexperiencing the trauma*; *avoiding stimuli associated with the trauma*; and experiencing symptoms of increased autonomic arousal, such as enhanced startle. Flashbacks, in which the individual may act and feel as if the trauma is recurring, represent a classic form of reexperiencing. Other forms of reexperiencing symptoms include distressing recollections or dreams and either physiological or psychological stress reactions on exposure to stimuli that are linked to the trauma. Symptoms of avoidance associated with PTSD include efforts to avoid thoughts or activities related to trauma, anhedonia, reduced capacity to remember events related to trauma, blunted affect, feelings of detachment or derealization, and a sense of a foreshortened future. Symptoms of increased arousal include insomnia, irritability, hypervigilance, and exaggerated startle. The diagnosis of PTSD is only made when symptoms persist for at least 1 month; the diagnosis of acute stress disorder is made in the interim.

Acute stress disorder is characterized by *reexperiencing, avoidance*, and increased arousal, similar to PTSD. Acute stress disorder (not PTSD) is also associated with *at least three dissociative symptoms*.

16.2. The answer is E (all)

Disorders that may enhance the risk for the development of anxiety disorders include eating disorders, depression, and substance use and abuse. In contrast, anxiety disorders have been shown to elevate the risk of subsequent substance use disorders and may comprise a mediator of the link between depression and the subsequent development of substance use disorders in a clinical sample.

Several studies have also suggested that there is an association between anxiety disorders and allergies, high fever, immunological diseases and infections, epilepsy, and connective tissue diseases. Likewise, prospective studies have revealed that the anxiety disorders may comprise risk factors for the development of some cardiovascular and neurological diseases, such as ischemic heart disease and migraine.

16.3. The answer is C

A good prognosis for people with obsessive-compulsive disorder (OCD) is indicated by *good social and occupational adjustment*, the presence of a precipitating event, and an episodic nature of symptoms. About one-third of patients with OCD have major depressive disorder, and suicide is a risk for all patients with OCD. A poor prognosis is indicated by yielding to (rather than resisting) compulsions, *childhood onset, bizarre compulsions*, the need for hospitalization, *a coexisting major depressive disorder, delusional beliefs*, the presence of overvalued ideas (i.e., some acceptance of obsessions and compulsions), and the presence of a personality disorder (especially schizotypal personality

disorder). The obsessional content does not seem to be related to the prognosis.

16.4. The answer is E (all)

The results of community studies reveal that *women have greater rates of almost all of the anxiety disorders*. Despite differences in the magnitude of the rates of specific anxiety disorders across studies, the gender ratio is strikingly similar. Women have an approximately twofold elevation in lifetime rates of panic, generalized anxiety disorder, agoraphobia, and simple phobia compared with men in nearly all of the studies. The only exception is the *nearly equal gender ratio in the rates of OCD and social phobia*.

Studies of youth report similar differences in the magnitude of anxiety disorders among girls and boys. Similar to the gender ratio for adults, girls tend to have more of all subtypes of anxiety disorders irrespective of the age composition of the sample. However, it has also been reported that despite the greater rates of anxiety in girls across all ages, there is *no significant difference between boys and girls in the average age at onset of anxiety*.

16.5. The answer is C

Anxiety disorders have been shown to have the earliest age of onset of all major classes of mental and behavioral disorders with a median onset by the age of 12 years. This is far *earlier than the onset of mood disorders* or substance use disorders and comparable to that of impulse control disorders. Women have greater rates of anxiety disorders than men. This difference in gender rates can be seen as early as 6 years of age. Despite the far more rapid increase in anxiety disorders with age in girls than in boys, there are no gender differences in the *mean age at onset* of anxiety disorders (not higher in girls) or in their duration. Female preponderance of anxiety disorders is present across all stages of life but is most pronounced throughout early and mid-adulthood. The rates of anxiety disorders in men are also rather constant throughout adult life, but the rates in women *peak in the fourth and fifth decades of life* and decrease thereafter.

Studies show a three- to fivefold increased risk of anxiety disorders among first-degree relatives of persons with anxiety disorders. Twin studies reveal that *panic disorder has the highest heritability* and has been shown to have the strongest degree of familial aggregation, with an almost sevenfold elevation in risk.

16.6. The answer is D

Sigmund Freud viewed phobias as resulting from conflicts centered on an unresolved childhood oedipal situation. In adults, because the sexual drive continues to have a strong incestuous coloring, its arousal tends to create anxiety that is characteristically a fear of castration. The anxiety then alerts the ego to exert *repression* to keep the drive away from conscious representation and discharge. Because repression is not entirely successful in its function, the ego must call on auxiliary defenses. In phobic patients, the defenses, arising genetically from an earlier phobic response during the initial childhood period of the oedipal conflict, involves primarily the use of *displacement*—that is, the sexual conflict is transposed or displaced from the person who evoked the conflict to a seemingly unimportant, irrelevant object



Table 16.1
Psychodynamic Themes in Phobias

Principal defense mechanisms include displacement, projection, and avoidance.
Environmental stressors, including humiliation and criticism from an older sibling, parental fights, or loss and separation from parents, interact with a genetic constitutional diathesis.
A characteristic pattern of internal object relations is externalized in social situations in the case of social phobia.
Anticipation of humiliation, criticism, and ridicule is projected onto individuals in the environment.
Shame and embarrassment are the principal affect states.
Family members may encourage phobic behavior and serve as obstacles to any treatment plan.
Self-exposure to the feared situation is a basic principle of all treatment.

or situation, which has the power to elicit anxiety. The phobic object or situation selected has a direct associative connection with the primary source of the conflict and has thus come naturally to symbolize it. Furthermore, the situation or object is usually such that the patient is able to keep out of its way and by the additional defense mechanism of *avoidance* to escape suffering from serious anxiety.

Regression is an unconscious defense mechanism in which a person undergoes a partial or total return to early patterns of adaptation. *Condensation* is a mental process in which one symbol stands for a number of components. *Projection* is an unconscious defense mechanism in which persons attribute to another person generally unconscious ideas, thoughts, feelings, and impulses that are undesirable or unacceptable in themselves. In psychoanalysis, *isolation* is a defense mechanism involving the separation of an idea or memory from its attached feeling tone. *Dissociation* is an unconscious defense mechanism involving the segregation of any group of mental or behavioral processes from the rest of the person's psychic activity. Table 16.1 describes a more current view of seven of the psychodynamic themes in phobias.

16.7. The answer is A

Community studies have consistently found that rates of anxiety disorders in general are *greater among those at lower levels of socioeconomic status and education level*. Anxiety disorders are negatively associated with income and education levels. For example, there is almost a twofold difference between rates of anxiety disorders in individuals in the highest income bracket and those in the lowest and between those who completed more than 16 years of school and those who completed less than 11 years of school. In addition, certain anxiety disorders seem to be elevated in specific occupations. *Anxiety disorders are higher in homemakers* and those who are unemployed or have a disability. Several community studies have also yielded greater rates of anxiety disorders, particularly phobic disorders, among African Americans. The reasons for *ethnic and social class differences* have not yet been evaluated systematically; however, both methodological factors and differences in exposure to stressors have been advanced as possible explanations.

16.8. The answer is D

Generalized anxiety disorder (GAD) is a *chronic* (not mild) *condition*, and *nearly half of patients who eventually recover experience a later recurrence*. GAD is characterized by frequent, persistent worry and anxiety that is disproportionate to the impact of the events or circumstances on which the worry focuses. The distinction between GAD and normal anxiety is emphasized by the use of the words “excessive” and “difficult to control” in the criteria and by the specification that the symptoms cause significant impairment or distress. The anxiety and worry are accompanied by a number of physiological symptoms, including motor tension (i.e., shakiness, restlessness, headache), autonomic hyperactivity (i.e., shortness of breath, excessive sweating, palpitations), and cognitive vigilance (i.e., irritability). The *ratio of women to men* with the disorder is about 2:1 (not 1:2). The disorder usually has its onset in late adolescence or early adulthood, although cases are commonly seen in older adults. Also, some evidence suggests that the prevalence is particularly high (not low) in *primary care settings*. This is because patients with GAD usually seek out a general practitioner or internist for help with a somatic symptom. GAD is probably the disorder that most (not least) *often coexist with another mental disorder*, usually social phobia, specific phobia, panic disorder, or a depressive disorder.

16.9. The answer is D

According to current conceptualizations, PTSD is associated with objective measures of *physiological arousal*. This includes *elevated baselines heart rate, increased blood pressure, and excessive sweating*. Furthermore, evidence from studies of baseline cardiovascular activity revealed a positive association between heart rate and PTSD.

The finding of elevated baseline heart rate activity is consistent with the hypothesis of tonic sympathetic nervous system arousal in PTSD. *Disturbance in autonomic nervous system activity in individuals with PTSD is characterized by increased sympathetic and decreased parasympathetic tone*. Preliminary evidence suggests that this autonomic imbalance can be normalized with selective serotonin reuptake inhibitor treatment. *There is no change in blood level of thyroxine in those with PTSD*.

16.10. The answer is B

Unexpected panic attacks are required for the diagnosis of *panic disorder*; but panic attacks can occur in several anxiety disorders. The clinician must consider the context of the panic attack when making a diagnosis. Panic attacks can be divided into two types: (1) unexpected panic attacks, which are not associated with a situational trigger, and (2) situationally bound panic attacks, which occur immediately after exposure in a situational trigger or in anticipation of the situational trigger. Situationally bound panic attacks are most characteristic of *social phobia* and *specific phobia*. In *generalized anxiety disorder*, the anxiety cannot be about having a panic attack.

16.11. The answer is A

Some differences between the DSM-IV-TR and earlier versions in the diagnostic criteria of panic disorder are interesting. For example, no longer is a specific number of panic attacks necessary

in a specific period of time to meet criteria for panic disorder. *Rather, the attacks must be recurrent, and at least one attack must be followed by at least 1 month of anticipatory anxiety or phobic avoidance*. This recognizes for the first time that although the panic attack is obviously the seminal event for diagnosing panic disorder, the syndrome involves a number of disturbances that go beyond the attack itself. *Isolated panic attacks without functional disturbances are not diagnosed as panic disorder*. Furthermore, *isolated panic attacks without functional disturbance are common, occurring in approximately 15 percent of the population*.

16.12. The answer is D

Obsessions and compulsions are the essential features of OCD. An individual must exhibit either obsessions or compulsions to meet DSM-IV-TR criteria. The DSM-IV-TR recognizes obsessions as “persistent ideas, thoughts, impulses, or images that are experienced as intrusive and inappropriate,” causing distress. Obsessions provoke anxiety, which accounts for the categorization of OCD as an anxiety disorder. However, they must be differentiated from excessive worries about real-life problems and associated with efforts to either ignore or suppress the obsessions. The DSM-IV-TR diagnostic criteria for OCD indicate that *the obsessions must be acknowledged as excessive or unreasonable (with the exception that children need not acknowledge this fact), there must be attempts to suppress these intrusive thoughts, and the obsessions or compulsions are time consuming to the point of requiring at least 1 hour a day*, among other diagnostic criteria. As part of the criteria, however, is *not that the thoughts are a product of outside the person, as in thought insertion, but that the person recognizes that the thoughts are a product of his or her own mind*.

16.13. The answer is A

After the first one or two panic attacks, patients may be relatively *unconcerned* about their condition. With repeated attacks, however, the symptoms may become a major concern. Patients may attempt to keep the panic attacks secret and thereby cause their families and friends concern about unexplained changes in behavior. Panic disorder, in general, is a chronic disorder, although its *course is variable*, both among patients and within a single patient. The frequency and severity of the attacks can fluctuate. Panic attacks can occur several times a day or less than once a month. *Excessive intake of caffeine* or nicotine can exacerbate the symptoms. Depression can complicate the symptom picture in anywhere from 40 to 80 percent of all patients. Although the patients do not tend to talk about suicidal ideation, they are at *increased risk for committing suicide*. *Recovery rates appear to be higher in patients without comorbid agoraphobia* than in those who meet criteria for both conditions. Family interactions and performance in school and at work commonly suffer. Patients with good premorbid functioning and symptoms of brief duration tend to have a good prognosis.

16.14. The answer is B

An interesting set of findings concerns the possible relationship between a subset of cases of OCD and certain types of motor tic

syndromes (i.e., Tourette's disorder and chronic motor tics). Increased rates of OCD, Tourette's disorder, and chronic motor tics were found in the relatives of Tourette's disorder patients compared with relatives of control subjects whether or not the patient had OCD. However, most family studies of probands with OCD have found elevated rates of Tourette's disorder and chronic motor tics only among the relatives of probands with OCD who also have some form of tic disorder. Taken together, these data suggest that *there is a familial and perhaps genetic relationship between Tourette's disorder and chronic motor tics and some cases of OCD*. Cases of the latter in which the individual also manifests tics are the most likely to be related to Tourette's disorder and chronic motor tics. Because there is considerable evidence of a genetic contribution to Tourette's disorder, this finding also supports a genetic role in a subset of cases of OCDs.

16.15. The answer is D

Structural brain imaging studies, such as magnetic resonance imaging (MRI), in patients with panic disorder have implicated *pathological involvement in the temporal lobes*, particularly the hippocampus. One MRI study reported abnormalities, especially *cortical atrophy*, in the right temporal lobes of these patients. Functional brain imaging studies, such as positron emission tomography (PET), have implicated *dysregulation of cerebral blood flow*. Specifically, anxiety disorders and panic attacks are associated with *cerebral vasoconstriction*, which may result in central nervous system symptoms such as dizziness and in peripheral nervous system symptoms that may be induced by hyperventilation and hypocapnia. *Increased blood flow to the basal ganglia has not been noted in patients with panic disorder*.

16.16. The answer is E

Brain imaging studies of patients with OCD using PET scans have found *abnormalities in frontal lobes, cingulum, and basal ganglia*. PET scans have shown *higher (not lower) levels of metabolism and blood flows to those areas in OCD patients than in control subjects*. Volumetric computed tomography scans have shown *decreased caudate volumes bilaterally in OCD patients* compared with normal control subjects. Morphometric MRI has revealed that *OCD patients have significantly more gray matter and less white matter than normal control subjects*. MRI has also shown *longer mean T1 relaxation times in the frontal cortex in OCD patients than is seen in normal control subjects*.

16.17. The answer is D

Buspirone (Buspar) is a *serotonin receptor partial agonist and is most likely effective in 60 to 80 percent of patients with generalized anxiety disorder (GAD)*. Data indicate that buspirone is more effective in reducing the cognitive symptoms of GAD than in reducing the somatic symptoms. The major disadvantage of buspirone is that its effects take 2 to 3 weeks to become evident in contrast to the almost immediate anxiolytic effects of the benzodiazepines.

16.18. The answer is B

Clinical trials of drugs have supported the hypothesis that *dysregulation of serotonin is involved in the symptom formation of*

obsessions and compulsions. Data show that *serotonergic drugs are an effective treatment*, but it is unclear whether serotonin is involved in the cause of OCD.

Clinical studies have shown that measures of platelet binding sites of imipramine and of serotonin metabolites in cerebrospinal fluid are variable, neither consistently abnormally low nor abnormally high.

16.19. The answer is D

A high prevalence of generalized anxiety disorder (not panic disorder) symptoms has been reported in patients with *Sjögren's syndrome*. Sjögren's syndrome is a chronic autoimmune disease in which a person's white blood cells attack their moisture-producing glands. The hallmark symptoms are dry eyes and dry mouth; however, it may also cause dysfunction of other organs.

The symptoms of anxiety disorder caused by a general medical condition can be identical to those of the primary anxiety disorders. A syndrome similar to panic disorder is the most common clinical picture. Patients who have *cardiomyopathy* may have the highest incidence of panic disorder secondary to a general medical condition. Cardiomyopathy is a disease of the heart muscle (myocardium). One study reported that 83 percent of patients with cardiomyopathy awaiting cardiac transplantation had panic disorder symptoms. Increased noradrenergic tone in these patients may be the provoking stimulus for the panic attacks. In some studies, about 25 percent of patients with *Parkinson's disease and chronic obstructive pulmonary disease* have symptoms of panic disorder. Other medical disorders associated with panic disorder include chronic pain; primary biliary cirrhosis (an autoimmune disease of the liver); and *epilepsy* (a chronic disorder characterized by paroxysmal brain dysfunction caused by excessive neuronal discharge), particularly when focus is in the right parahippocampal gyrus.

16.20. The answer is B

Specific phobia is usually easily distinguished from anxiety stemming from primary medical problems by the focused nature of the anxiety. Such specificity is not typical of anxiety disorders related to medical problems.

Panic disorder with or without agoraphobia must be differentiated from a number of medical conditions that produce similar symptomatology. Panic attacks are associated with a variety of endocrinologic disorders, including hypo- and hyperthyroid states, hyperparathyroidism, and pheochromocytomas. Episodic hypoglycemia associated with insulinomas can also produce panic-like states, as can primary neuropathologic processes. These include seizure disorders, vestibular dysfunction, neoplasms, and the effects of both prescribed and illicit substances on the central nervous system. Finally, disorders of the cardiac and pulmonary systems, including arrhythmias, chronic obstructive disease, and asthma, can produce autonomic symptoms and accompanying crescendo anxiety that can be difficult to distinguish from panic disorder.

A number of primary medical disorders can produce syndromes that bear a striking resemblance to *obsessive-compulsive disorder (OCD)*. In fact, the current conceptualization of OCD

as a disorder of the basal ganglia derives from the phenomenological similarity between idiopathic OCD and OCD-like disorders that are associated with basal ganglia diseases, such as Sydenham's chorea and Huntington's disease. It should be noted that OCD frequently develops before age 30 years, and new-onset OCD in an older individual should raise questions about potential neurological contributions to the disorder. Also, among children with pediatric autoimmune neuropsychiatric disorder associated with streptococcus (PANDAS), the syndrome appears to emerge relatively acutely, in contrast to the more insidious onset of childhood OCD in the absence of infection. Hence, children with acute presentations, the role of such an infectious process should be considered.

It is particularly important to recognize potentially treatable contributors to posttraumatic symptomatology in the differential for *posttraumatic stress disorder (PTSD)*. For example, neurological injury after head trauma can contribute to the clinical picture, as can psychoactive substance use disorders or withdrawal syndromes, either in the period immediately surrounding the trauma or many weeks after the trauma. Medical contributors can usually be detected through careful history and physical examination.

Generalized anxiety disorder (GAD) must be differentiated from both medical and other psychiatric disorders. Similar neurological, endocrinologic, metabolic, and medication-related disorders to those considered in the differential diagnosis of panic disorder are relevant to the differential diagnosis of GAD.

16.21. The answer is E (all)

Since the original finding that sodium lactate infusion can induce panic attacks in patients with panic disorder, many substances have shown similar panicogenic properties, including the noradrenergic stimulant *yohimbine (Yocon)*, *carbon dioxide*, the respiratory stimulant *doxapram (Dopram)*, and *cholecystokinin*. Disordered serotonergic, noradrenergic, and respiratory systems are doubtless implicated in panic disorder, and the condition appears to be caused both by a genetic predisposition and some type of traumatic distress. More recently, neuroimaging studies revealed that patients with panic disorder have abnormally brisk cerebrovascular responses to stress, showing greater vasoconstriction during hypocapnic respiration than normal control subjects.

16.22. The answer is A

Antidepressant medication is increasingly seen as the medication treatment of choice for the anxiety disorders. More specifically, drugs with primary effects on the serotonin neurotransmission system have become first-line recommendations for panic disorder, social phobia, OCD, and PTSD. Evidence now exists that such medications are also effective for generalized anxiety disorder. Although they typically take longer to work than benzodiazepines, the selective serotonin reuptake inhibitors (SSRIs) such as *fluoxetine (Prozac)*, *sertraline (Zoloft)*, *paroxetine (Paxil)*, *fluvoxamine (Luvox)*, and *citalopram (Celexa)*, as well as *venlafaxine (Effexor)* and *nefazodone (Serzone)*, are probably more effective than benzodiazepines and easier to discontinue. Increasingly, benzodiazepines such as *diazepam (Valium)* are used only for the temporary relief of extreme anxiety

as clinician and patient wait for the effects of antidepressants to take hold. Longer-term administration of benzodiazepines is reserved for patients who do not respond to or cannot tolerate antidepressants.

16.23. The answer is A

A *counterphobic attitude* is not a therapy for phobias, although it may lead to counterphobic behavior. Many activities may mask phobic anxiety, which can be hidden behind attitudes and behavior patterns that represent a denial, either that the dreaded object or situation is dangerous or that one is afraid of it. Basic to this phenomenon is a reversal of the situation in which one is the passive victim of external circumstances to a position of attempting actively to confront and master what one fears. The counterphobic person seeks out situations of danger and rushes enthusiastically toward them. The devotee of dangerous sports, such as parachute jumping, rock climbing, bungee jumping, and parasailing, may be exhibiting counterphobic behavior.

Both behavioral and pharmacological techniques have been used in treating phobias. The most common behavioral technique is *systematic desensitization*, in which the patient is exposed serially to a predetermined list of anxiety-provoking stimuli graded in a hierarchy from least to most frightening. Patients are taught to self-induce a state of relaxation in the face of each anxiety-provoking stimulus. In *flooding*, patients are exposed to the phobic stimulus (actually [in vivo] or through imagery) for as long as they can tolerate the fear until they reach a point at which they can no longer feel it. The social phobia of stage fright in performers has been effectively treated with such β -adrenergic antagonists as *propranolol (Inderal)*, which blocks the physiological signs of anxiety (e.g., tachycardia). *Phenelzine (Nardil)*, a monoamine oxidase inhibitor, is also useful in treating social phobia.

16.24. The answer is C

Patients with specific phobias are often treated with as-needed benzodiazepines, such as lorazepam (Ativan). In the clinical case described, this is the most appropriate choice of treatment given their high safety margin (e.g., in overdose) and their overall excellent efficacy and rapid onset of action. *β -adrenergic receptor antagonists (not agonists)* may be useful in the treatment of specific phobia, especially when the phobia is associated with panic attacks. The most commonly used treatment for specific phobia is *exposure therapy*. In this method, therapists desensitize patients by using a series of gradual, self-paced exposures to the phobic stimulus; thus, this method would not be appropriate when immediate relief is required. *Paroxetine, an SSRI, is not indicated for the immediate treatment of phobias.*

16.25. The answer is C

The symptoms of an individual patient with OCD can overlap and change with time, but OCD has four major symptom patterns. In this case, Mrs. K presents the symptom pattern of *pathological doubt* followed by a compulsion of checking. It is the second most common symptom pattern. The obsession often implies some danger of violence, in this case forgetting to lock the car door or the door to the apartment. The checking may involve multiple trips back into the house to check the stove, for example.

For Mrs. K, checking involves trips back to her car and her apartment to make sure both are secure, thereby making her constantly late for work. The patients have an obsessional self-doubt and always feel guilty about having forgotten or committed something.

The most common symptom pattern in OCD is an obsession of *contamination* followed by washing or accompanied by compulsive avoidance of the presumably contaminated object. The feared object is often hard to avoid (e.g., feces, urine, dust, or germs). Patients with contamination obsessions usually believe that the contamination is spread from object to object or person to person by the slightest contact.

In the third most common pattern, there are *intrusive obsessional thoughts* without a compulsion. Such obsessions are usually repetitious thoughts without a compulsion. Such obsessions are usually repetitious thoughts of a sexual or aggressive act that are reprehensible to the patient. Patients obsessed with thoughts or aggressive or sexual acts may report themselves to the police or confess to a priest.

The fourth most common pattern is the need for *symmetry* or precision, which can lead to a compulsion of slowness. Patients can literally take hours to eat a meal or shave their faces.

16.26. The answer is D

Excessive and uncontrollable worry characterized by irritability, insomnia, and fatigue is the most likely attributable to *generalized anxiety disorder*. The patient's worries typically include various aspects of the patient's life and cause functional impairment. These symptoms must persist for at least 6 months. Patients with *avoidant personality disorder* have a long-standing pattern of avoiding activities because they fear judgment and feel inadequate. These symptoms are part of a lifelong pattern rather than new onset. *Obsessive-compulsive disorder* involves intrusive thoughts that result in compulsive activity to relieve anxiety. These patients' symptoms are ego dystonic in that they are able to recognize their problematic compulsions and obsessions. Patients with *obsessive-compulsive personality disorder* often seek perfection and organization to a degree that it causes functional impairment. Their symptoms are ego syntonic in that they do not recognize the unreasonable nature of their behaviors.

Answers 16.27–16.31

16.27. The answer is A

16.28. The answer is B

16.29. The answer is A

16.30. The answer is C

16.31. The answer is B

Social phobia is the excessive fear of humiliation or embarrassment in various social setting, such as speaking in public, urinating in a public rest room (also called shy bladder), or speaking to a date. It can sometimes be difficult to differentiate from *agoraphobia*, which is the fear of or anxiety regarding places from which escape may be difficult. Both disorders can be *associ-*

ated with panic attacks, agoraphobia more so than social phobia. Whereas patients with agoraphobia are often *comforted by the presence of another person* in an anxiety-provoking situation, patients with social phobia are made more anxious than before by the presence of other persons. Breathlessness, dizziness, a *sense of suffocation*, and fear of dying are common with panic disorder and agoraphobia; however, the symptoms associated with social phobia usually involve *blushing, muscle twitching*, and anxiety about scrutiny. Most cases of agoraphobia are thought to be caused by panic disorder. When the panic disorder is treated, the agoraphobia often improves with time. Agoraphobia without a history of panic disorder is often incapacitating and *chronic*, and depressive disorders and alcohol dependence often complicate its course.

Answers 16.32–16.36

16.32. The answer is A

16.33. The answer is A

16.34. The answer is D

16.35. The answer is C

16.36. The answer is B

Buspirone was promoted as a less sedating alternative to benzodiazepines in the treatment of panic disorder. Buspirone has lower potential for abuse and dependence than benzodiazepines and produces relatively few adverse effects and no withdrawal syndrome. Buspirone does not alter cognitive or psychomotor function, does not interact with alcohol, and is not a muscle relaxant or an anticonvulsant. However, the efficacy of buspirone in patients with panic disorder is disappointing, and with its further drawback of delayed onset of action and the need for multiple dosings, its *use is limited to potentiating the efficacy of other antidepressants and counteracting the adverse sexual effects of SSRIs*.

Although the short-term efficacy of antipanic medications has been established, the question of how long to treat a panic patient who responds to treatment remains open. The results of follow-up studies are mixed. *Several reports indicate that most panic patients relapse within 2 months to 2 years after the medication is discontinued*. Following medication discontinuation, only about 30 to 45 percent of the patients remain well, and even remitted patients rarely revert back to significant phobic avoidance or serious vocational or social disability. Improvement may continue for years after a single course of medication treatment. Given the uncertainty about the optimal duration of treatment, the current recommendation is to continue full-dosage medication for panic-free patients for at least 1 year. Medication taper should be slow, with careful monitoring of symptoms. Distinction should be made among return symptoms, withdrawal, and rebound anxiety.

Atypical responses to medications have been reported in panic patients whose first panic attacks were precipitated by cocaine use. These patients respond preferentially to benzodiazepines and anticonvulsants, *but tricyclic drugs seem to worsen*

their anxiety symptoms. This pattern of medication response suggests that cocaine-induced panic attacks may be related to a kindling-like phenomenon.

Tolerance to the sedative effects of benzodiazepines develops quickly, but the antianxiety effect of a given dosage is well maintained over time in those with generalized anxiety disorder (GAD). *However, the relapse rate upon discontinuation of benzodiazepines is high, as is the risk for dependency.*

Bupirone is a potential alternative to benzodiazepine treatment in GAD. *Response rates between 60 and 80 percent have been reported at levels ranging from 30 to 60 mg a day in three divided doses.* Although response rates seem comparable, more patients drop out of bupirone trials than benzodiazepine trials. The relative merits of bupirone and benzodiazepines are further detailed under panic disorder. One notable exception is that *patients with GAD exposed to benzodiazepines may still be responsive to bupirone, unlike panic patients.*

Answers 16.37–16.40

16.37. The answer is A

16.38. The answer is A

16.39. The answer is B

16.40. The answer is C

Some studies have shown that cognitive-behavioral treatment of panic disorder, or panic control therapy, produces 80 to 90 percent panic-free status within at least 6 months of treatment. Two-year follow-up indicates that more than 50 percent of patients who originally responded to panic control therapy have occasional panic attacks, and more 25 percent seek additional treatment. Nonetheless, these treatment responders do tend to have a significant decline in panic-related symptoms and most maintain many of their treatment gains.

As with panic disorder, considerable progress in the psychological treatment of social anxiety or social phobia is linked to the application of cognitive-behavioral methods. Unlike more traditional psychotherapies, cognitive-behavioral approaches do not focus on the origins of social anxiety but instead focus on the use of coping strategies that can be implemented in current fearful situations. The most thoroughly studied form of cognitive-behavioral therapy for social phobia is a group therapy consisting of several discrete entities, including (1) presentation of a three-system (cognitive-behavioral-physiological) model of social anxiety, (2) training in identification and restructuring of irrational beliefs regarding social performance, (3) in-session exposure to feared social situations via group role-playing scenarios, and (4) homework assignments directing patients to use cognitive and exposure techniques in vivo. Groups are particularly amenable to the treatment of social phobia in that they provide natural opportunities for patients to practice feared behaviors in a supportive and informative context.

Outcome research is somewhat limited, but one study showed that *cognitive-behavioral group therapy was nearly twice as effective as standard educational-supportive group psychotherapy.*

Psychodynamic psychotherapy is based on the concept that symptoms result from mental processes that may be outside of the patient's conscious awareness and that elucidating these processes can lead to remission of symptoms. Moreover, to lessen the patient's vulnerability to panic, the psychodynamic therapist considers it necessary to identify and alter core conflicts. *The goals of psychodynamic psychotherapy are more ambitious and require more time to achieve than those of a more symptom-focused treatment approach.* Thus, these therapies are inherently more difficult to study than more concrete, focused, manual-based therapies.

Investigators have examined use of the combination of medication and cognitive behavioral therapy for patients with panic disorder and agoraphobia. *Several short-term treatment studies have shown that the combination of the tricyclic medication imipramine (Tofranil) with one component of cognitive behavioral therapy, behavioral exposure, may be superior to either treatment alone.* Another study showed that selective serotonin reuptake inhibitors, such as paroxetine (Paxil), plus cognitive therapy worked significantly better for patients with panic disorder than cognitive therapy plus placebo. There has been one study of the combination of psychodynamic psychotherapy with medication. This study suggested that psychodynamic psychotherapy may improve the long-term outcome of medication-treated patients.

Answers 16.41–16.45

16.41. The answer is E

16.42. The answer is A

16.43. The answer is C

16.44. The answer is D

16.45. The answer is B

To meet the criteria for *panic disorder*, an individual must have experienced at least two spontaneous panic attacks in the absence of any trigger or environmental cue. Furthermore, at least one of these attacks must be associated with concern about additional attacks, worry about attacks, or changes in behavior. A panic attack is defined as an episode of abrupt intense fear accompanied by at least four autonomic or cognitive symptoms (i.e., sweating, palpitations, fear of dying).

A *generalized social phobia* is a chronic and disabling condition characterized by a phobic avoidance of most social situations. It can be difficult to distinguish from avoidant personality disorder. Both disorders include avoidance; however, in generalized social phobia, the patient has a desire and capacity to interact, but with avoidant personality disorder, the patient appears to have given up.

Posttraumatic stress disorder (PTSD) is a condition marked by the development of symptoms after exposure to traumatic life events (e.g., war, natural disaster). The person reacts to this experience with fear and helplessness, persistently relives the event, and tries to avoid being reminded of it. To make the diagnosis, the symptoms must last for more than 1 month after the event and

must significantly affect important areas of life, such as family and work. *Acute stress disorder* is similar to PTSD but occurs earlier than PTSD (within 4 weeks of the traumatic event) and remits within 2 days to 4 weeks. Acute stress disorder is also associated with at least three of the following dissociative symptoms: (1) a subjective sense of numbing, detachment, or absence of emotional responsiveness; (2) a reduction in awareness of his or her surroundings; (3) derealization; (4) depersonalization; and (5) dissociative amnesia.

Generalized anxiety disorder (GAD) is characterized by a pattern of frequent, persistent worry and anxiety that is disproportionate to the impact of the events or circumstances on which the worry focuses. Patients with GAD do not necessarily acknowledge the excessive nature of their worries, but they must be bothered by their degree of worry. This pattern must occur “more days than not” for at least 6 months. Patients must find it difficult to control their worry and must report three or more of six somatic or cognitive symptoms, which include feeling restless, fatigue, muscle tension, or insomnia. Worry can be commonplace in many other anxiety disorders, but the worries in GAD must exceed in the breadth or scope the worries characterized in other anxiety disorders.

Answers 16.46–16.49

16.46. The answer is D

16.47. The answer is C

16.48. The answer is A

16.49. The answer is B

Exposure therapy involves intentionally confronting feared, but otherwise not dangerous, objects, situations, thoughts, memories, and physical sensations for the purpose of reducing fear reactions associated with the same or similar stimuli. Systematic desensitization was the first exposure therapy technique to undergo scientific investigation. Although an effective treatment for some anxiety disorders, it has generally fallen out of use among researchers and cognitive-behavioral therapists. The contemporary use of exposure therapy may be usefully divided into three classes of procedures: *in vivo* exposure, imaginal exposure, and interoceptive exposure.

In vivo exposure involves helping patients to directly confront feared objects, activities, and situations. It is usually conducted in a graduated fashion according to a mutually agreed-on (between patient and therapist) hierarchy. For example, a hierarchy for a specific animal phobia, such as a snakes or spiders, may begin with looking at pictures and other representations of the feared animal followed by looking at the actual animal kept in a cage, first at a distance and then gradually moving closer.

Imaginal exposure typically involves having the patient close his or her eyes and imagine feared stimuli as vividly as possible. The primary use of this type of exposure is to help patients confront feared thoughts, images, and memories. For example, individuals with OCD may experience obsessional thoughts and images about causing harm to people they love.

Interoceptive exposure is the most recent form of exposure therapy to be introduced. This procedure is designed to induce feared physiological sensations under controlled circumstances. A number of specific exercises have been developed to induce specific panic-like sensations. For example, the step-up exercise, in which the patient repeatedly steps up and down on a single step as rapidly as possible, produces rapid heart rate and shortness of breath.

Systematic desensitization requires initial training in progressive muscle relaxation and the development of one or more carefully constructed hierarchies of feared stimuli. Treatment then involves the pairing of mental images of the lowest items on the hierarchy with relaxation until the image can be held in mind without it producing significant distress.

Answers 16.50–16.54

16.50. The answer is D

16.51. The answer is A

16.52. The answer is E

16.53. The answer is C

16.54. The answer is B

Specific phobia is divided into four subtypes (animal type, natural environment type, blood injury type, and situational type) in addition to a residual category for phobias that do not clearly fall into any of these four categories. The key feature in each type of phobia is that the fear is circumscribed to a specific object, both temporally and with respect to other objects. Phobias have traditionally been classified according to the specific fear by means of Greek or Latin prefixes, as indicated by the examples below.

Acrophobia: fear of heights
 Agoraphobia: fear of open places
 Ailurophobia: fear of cats
 Claustrophobia: fear of closed spaces
 Cynophobia: fear of dogs
 Hydrophobia: fear of water
 Mysophobia: fear of dirt and germs
 Pyrophobia: fear of fire
 Xenophobia: fear of strangers
 Zoophobia: fear of animals



Somatoform Disorders

Six somatoform disorders are currently listed in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM): somatization disorder, conversion disorder, hypochondriasis, body dysmorphic disorder, pain disorder, and undifferentiated somatoform disorder not otherwise specified.

The term *somatoform* is derived from the Greek word *soma*, which means body. Somatoform disorders are a broad group of illnesses that have bodily signs and symptoms as a major component. These disorders encompass mind-body interactions in which the brain, in ways still not well understood, sends various signals that impinge on the patient's awareness, indicating a serious problem in the body. Additionally, minor or as yet undetectable changes in neurochemistry, neurophysiology, and neuroimmunology may result from unknown mental or brain mechanisms that cause illness.

Before a somatoform disorder is diagnosed, the clinician must initiate a thorough medical evaluation to rule out the presence of actual medical pathology. A certain percentage of these patients will turn out to have real underlying medical pathology, but it

does not usually account for the symptoms described by the patient. The disorders may be chronic or episodic, they may be associated with other mental disorders, and the symptoms described are always worsened by psychological stress.

Treatment is often very difficult because the symptoms tend to have deeply rooted and unconscious psychological meanings for most patients, and these are patients who do not or cannot express their feelings verbally. Unconscious conflicts are expressed somatically and seem to have a particular tenaciousness and resistance to psychological treatment.

Treatment involves both biological and psychological strategies, including cognitive-behavioral treatments, psychodynamic therapies, and psychopharmacologic approaches. If other psychiatric disorders, such as depression or anxiety disorders, are also present, they must be treated concomitantly. Different medications are effective with the range of disorders, and students should be knowledgeable about this.

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

Students should be able to define the terms listed below.

- | | | | |
|-----------------------------------|--------------------------------|---|--|
| ▶ amobarbital (Amytal) interview | ▶ Briquet's syndrome | ▶ pain disorder | ▶ stocking-and-glove anesthesia |
| ▶ anorexia nervosa | ▶ conversion disorder | ▶ pimizide (Orap) | ▶ symbolization and projection |
| ▶ antisocial personality disorder | ▶ dysmorphophobia | ▶ primary gain and secondary gain | ▶ undifferentiated somatoform disorder |
| ▶ astasia-abasia | ▶ endorphins | ▶ pseudocyesis | ▶ undoing |
| ▶ autonomic arousal disorder | ▶ hemianesthesia | ▶ pseudoseizures | |
| ▶ biofeedback | ▶ hypochondriasis | ▶ secondary symptoms | |
| ▶ body dysmorphic disorder | ▶ hysteria | ▶ somatization disorder | |
| | ▶ identification | ▶ somatoform disorder not otherwise specified | |
| | ▶ instinctual impulse | ▶ somatosensory input | |
| | ▶ <i>la belle indifférence</i> | | |
| | ▶ malinger | | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

17.1. Which of the following features are helpful in deciding whether idiopathic physical symptoms may have a psychiatric basis?

- Symptoms have comorbid major psychiatric disorders such as depression.
- Symptoms closely follow traumatic events.

- C. Symptoms lead to psychological “gratification.”
 D. Symptoms represent predictable personality traits.
 E. All of the above
- 17.2.** Conversion disorder
- A. usually has a chronic course
 B. is associated with antisocial personality disorder
 C. is commonly comorbid with a schizoid personality disorder
 D. responds well to a confrontation of the “false nature” of the symptoms
 E. is associated with symptoms that conform to known anatomical pathways
- 17.3.** Which of the following statements regarding conversion disorder and gender differences is *true*?
- A. Women are often involved in occupational accidents.
 B. Symptoms are more common on the right side than the left side of the body in women.
 C. The ratio of women to men among adult patients is as high as 10:1.
 D. In children, there is a higher predominance in boys.
 E. There is an association with borderline personality disorder in men.
- 17.4.** Conversion reactions
- A. seem to change the psychic energy of acute conflict into a personally meaningful metaphor of bodily dysfunction
 B. conform to usual dermatomal distribution of underlying peripheral nerves
 C. are invariably sensorimotor as opposed to autonomic
 D. are always transient
 E. all of the above
- 17.5.** Characteristic signs of conversion disorder include all of the following *except*
- A. astasia-abasia
 B. cogwheel rigidity
 C. hemianesthesia of the body beginning precisely at the midline
 D. normal reflexes
 E. stocking-and-glove anesthesia
- 17.6.** Which of the following diseases is part of the differential diagnosis for conversion disorder?
- A. Multiple sclerosis
 B. Guillain-Barré syndrome
 C. Acquired immunodeficiency syndrome (AIDS)
 D. Dementia
 E. All of the above
- 17.7.** Conversion disorder differs from somatization disorder in that
- A. conversion disorder includes symptoms in many organ systems
 B. somatization disorder begins early in life
 C. complaints are limited to pain in conversion disorder
 D. complaints are not limited to neurological symptoms in conversion disorder
 E. conversion disorder involves a particular disease rather than a symptom
- 17.8.** A patient with somatization disorder
- A. has had physical symptoms for only 3 months
 B. usually experiences minimal impairment in social or occupational functioning
 C. may have a false belief of being pregnant with objective signs of pregnancy, such as decreased menstrual flow or amenorrhea
 D. presents the initial physical complaints after age 30 years
 E. has complained of symptoms not explained by a known medical condition
- 17.9.** All of the following mental disorders are frequently seen in patients with somatization disorder (relative to the general population) *except*
- A. bipolar I disorder
 B. generalized anxiety disorder
 C. major depressive disorder
 D. obsessive-compulsive personality disorder
 E. schizophrenia
- 17.10.** The most frequently occurring of the somatoform disorders is
- A. somatization disorder
 B. pain disorder
 C. hypochondriasis
 D. conversion disorder
 E. body dysmorphic disorder
- 17.11.** Medical disorders to be considered in a differential diagnosis of somatization disorder include
- A. multiple sclerosis
 B. systemic lupus erythematosus
 C. acute intermittent porphyria
 D. hyperparathyroidism
 E. all of the above
- 17.12.** Which of the following is *not* a recommended treatment strategy for a patient with somatization disorder?
- A. Increasing the patient’s awareness that psychological factors may be involved
 B. Having several different clinicians involved in caring for the patient
 C. Avoiding additional laboratory and diagnostic procedures
 D. Seeing patients during regularly scheduled visits at regular intervals
 E. Listening to somatic complaints as emotional expressions rather than medical complaints

- 17.13.** Chronic pain disorder is most frequently associated with
- substance-related disorders
 - anxiety disorder
 - dementia
 - depressive disorder
 - schizophrenia
- 17.14.** All of the following depressive symptoms are most prominent in patients with pain disorder *except*
- decreased libido
 - insomnia
 - weight loss
 - anhedonia
 - anergia
- 17.15.** The most accurate statement regarding pain disorder is
- It is diagnosed equally among men and women.
 - Peak ages of onset are in the second and third decades.
 - It is least common in persons with blue-collar occupations.
 - First-degree relatives of patients have an increased likelihood of having the same disorder.
 - Depressive disorders are no more common in patients with pain disorder than in the general public.
- 17.16.** People with hypochondriasis
- are usually women
 - are often thanatophobic
 - do not respond to reassurance
 - seek treatment more than explanations
 - in postmortem examinations, have a greater degree of upper gastrointestinal (GI) inflammation and congestion than normal control subjects
- 17.17.** Which of the following is a theory for the cause of hypochondriasis?
- Symptoms are viewed as a request for admission to the sick role made by a person facing challenges in his or her life.
 - Persons with hypochondriasis have low thresholds for and low tolerance of physical discomfort.
 - Aggressive and hostile wishes toward others are transferred (through repression and displacement) into physical complaints.
 - Hypochondriasis is a variant form of other mental disorders, such as depressive or anxiety disorders.
 - All of the above
- 17.18.** True statements about hypochondriasis include all of the following *except*
- Depression accounts for a major part of the total picture in hypochondriasis.
 - Hypochondriasis symptoms can be part of dysthymic disorders, generalized anxiety disorder, or adjustment disorder.
 - Hypochondriasis is a chronic and somewhat disabling disorder.
 - Recent estimates are that 4 to 6 percent of the general medical population meets the specific criteria for the disorder.
 - Significant numbers of patients with hypochondriasis report traumatic sexual contacts, physical violence, and major parental upheaval before the age of 17 years.
- 17.19.** Body dysmorphic disorder is associated with
- a family history of substance abuse
 - major depressive disorder
 - obsessive-compulsive disorder
 - social phobia
 - all of the above
- 17.20.** In body dysmorphic disorder,
- plastic surgery is usually beneficial
 - a comorbid diagnosis is unusual
 - anorexia nervosa may also be diagnosed
 - about 50 percent of patients may attempt suicide
 - serotonin-specific drugs are effective in reducing the symptoms
- 17.21.** A 34-year-old woman presented with chronic and intermittent dizziness, paresthesias, pain in multiple areas of her body, and intermittent nausea and diarrhea. She reported that these symptoms had been present most of the time, although they had been undulating since she was approximately 24 years old. In addition, she complained of mild depression; was disinterested in many things in life, including sexual activity; and had been to many doctors to try to find out what was wrong with her. Physical examination, including a neurological examination, was normal. There were no abnormalities on laboratory testing. Her doctor diagnoses somatization disorder. Which of the following about this disorder is true?
- It occurs more commonly in men.
 - It is more common in urban populations.
 - These patients are no more likely to develop another medical illness than people without the disorder.
 - The symptoms typically begin in middle age.
 - These patients usually give a very thorough and complete report of their symptoms.
- 17.22.** Mr. J is a 28-year-old single man who is employed in a factory. He was brought to an emergency department by his father, complaining that he had lost his vision while sitting in the back seat on the way home from a family gathering. He had been playing volleyball at the gathering but had sustained no significant injury except for the volleyball hitting him in the head a few times. As was usual for this man, he had been reluctant to play volleyball because of his lack athletic skills, and he was placed on a team at the last moment. He recalls having

some problems with seeing during the game, but his vision did not become ablated until he was in the car on the way home. By the time he got to the emergency department, his vision was improving, although he still complained of blurriness and mild diplopia. The double vision could be attenuated by having him focus on items at different distances.

On examination, Mr. J was fully cooperative, somewhat uncertain about why this would have occurred, and rather nonchalant. Pupillary, oculomotor, and general sensorimotor examinations were normal. After being cleared medically, the patient was sent to a mental health center for further evaluation.

At the mental health center, the patient recounted the same story as he did in the emergency department, and he was still accompanied by his father. He began to recount how his vision started to return to normal when his father pulled over on the side of the road and began to talk to him about the events of the day. He spoke with his father about how he had felt embarrassed and somewhat conflicted about playing volleyball and how he had felt that he really should play because of external pressures. Further history from the patient and his father revealed that this young man had been shy as an adolescent, particularly around athletic participation. He had never had another episode of visual loss. He did recount feeling anxious and sometimes not feeling well in his body during athletic activities. (Courtesy of Michael A. Hollifield, MD.)

Which of the following is the most likely diagnosis?

- A. Conversion disorder
 - B. Somatization disorder
 - C. Pain disorder
 - D. Hypochondriasis
 - E. Malingering
- 17.23.** A 54-year-old man presents to clinic stating he “can no longer feel his legs.” He has no other accompanying symptoms, and his physical examination results are normal, including motor strength bilaterally. However, after receiving an injection of sodium Amytal, his symptoms markedly improve. What is the diagnosis?
- A. Factitious disorder
 - B. Conversion disorder
 - C. Malingering
 - D. Histrionic personality disorder
 - E. None of the above

Directions

Each set of lettered headings below is followed by a list of numbered phrases. For each numbered phrase, select:

- A. if the item is associated with A only
- B. if the item is associated with B only
- C. if the item is associated with both A and B
- D. if the item is associated with neither A nor B

Questions 17.24–17.28

- A. Body dysmorphic disorder
 - B. Hypochondriasis
- 17.24.** Beliefs and symptoms may reach delusional intensity
17.25. Has high rates of coexisting depressive and anxiety disorders
17.26. Patients actively seek out attention for their symptoms
17.27. Causes persistent distress or interference with personal functioning
17.28. May be related to the defense mechanisms of repression and displacement

Questions 17.29–17.33

- A. Pain disorder
 - B. Somatization disorder
- 17.29.** Affects women more often than men
17.30. Most often begins during a person’s teens
17.31. Responds to antidepressants
17.32. May involve serotonin in its pathophysiology
17.33. Is commonly associated with anorexia nervosa

ANSWERS

17.1. The answer is E (all)

Because somatoform disorders are placed at the crossroads between physical and mental disorder, their differential diagnosis tends to be quite inclusive and elaborate. However, several features of these disorders can help the differential diagnosis. Table 17.1 lists features that can help in deciding whether idiopathic physical symptoms may have a psychiatric cause.

17.2. The answer is B

There is an association between conversion disorder and anti-social personality disorder. The onset of the disorder is usually acute, and symptoms or deficits are usually of short duration. The symptoms usually do not conform to known anatomical pathways and physiological mechanisms but instead follow the individual’s conceptualization of his or her illness. Confronting



Table 17.1
Features that May Help in the Differential
Diagnosis of Somatoform Disorders

-
- The symptoms coexist with major psychiatric disorders such as depression or panic.
 - The symptoms closely follow traumatic events.
 - The symptoms lead to psychological “gratification” or “secondary gain.”
 - The symptoms represent predictable personality traits (coping mechanisms).
 - The symptoms become persistent, join a conglomerate of other symptoms, and convey such attitudes as overuse of medical services and dissatisfaction with medical care.
-

Adapted from Javier I. Escobar, MD.

the patient about the so-called “false nature” of his or her symptoms is contraindicated. In acute cases, reassurance and suggestion of recovery coupled with early rehabilitation are the treatments of choice. *Schizoid disorder is not comorbid in patients with conversion disorder.*

17.3. The answer is C

The ratio of women to men among adult conversion disorder patients is at least 2:1 and as much as 10:1; among children, an even *higher predominance is seen in girls* (not boys). Symptoms are more common on *the left side than the right side of the body in women* (not vice versa). Women who present with conversion symptoms are more likely to subsequently develop somatization than women who have not have conversion symptoms. An association exists between conversion disorder and *antisocial personality disorder in men* (not borderline personality disorder). Men with conversion have *more often been involved in occupational or military accidents* (not women).

17.4. The answer is A

Many conversion disorders simulate acute neurological pathology (e.g., strokes and disturbances of speech, hearing, or vision). However, conversion disorders are not associated with the usual pathological neurodiagnostic signs or the underlying somatic pathology. *Conversion symptoms* (e.g., anesthetics and paresthesias produced by a conversion disorder) *do not conform to usual dermatomal distribution of the underlying peripheral nerves*; rather, the signs and symptoms of a conversion disorder typically conform to the patient’s concept of the medical condition.

Conversion disorders seem to change or convert the psychic energy of the turmoil of acute conflict into a personally meaningful metaphor of bodily dysfunction. Turbulence of the mind is transformed into a somatic statement, condensing and focusing concepts, role models, and communicative meanings into one or several physical signs or symptoms of dysfunction. These somatic representations often simulate an acute medical calamity; initiate urgent, sometimes expensive medical investigation; and produce disability. In primitive settings, however, certain conversion symptoms have been taken as tokens of religious faith and even as expressions of witchcraft.

Although most conversion reactions are transient (hours to days), some can persist. Chronic conversion disorders can actually produce permanent conversion complications, such as disuse contractures of a “paralyzed” limb that remains long after the psychic strife that prompted the conversion has been resolved. In many cases, a chronic conversion disorder serves to help stabilize an otherwise dysfunctional family. *In addition to sensorimotor symptoms, marked autonomic disturbances such as protracted (psychogenic) vomiting, hyperemesis gravidarum, urinary retention, and pseudocyesis are also seen, although less commonly.* Conversion disorders challenge the diagnostic competence of internists, neurologists, otolaryngologists, ophthalmologists, and psychiatrists.

Similar to the other somatoform disorders, conversion disorders are not volitional. Rather, ego defense mechanisms of repression and dissociation act outside of the patient’s awareness. Many patients with conversion disorders experience *la belle indifférence*, an emotional unconcern or even flatness in

a setting of catastrophic illness, but some patients experience considerable anguish over their new symptoms.

17.5. The answer is B

Cogwheel rigidity is an organic sign secondary to disorders of the basal ganglia and not a sign of conversion disorder. In conversion disorder, anesthesia and paresthesia, especially of the extremities, are common. All sensory modalities are involved, and the distribution of the disturbance is inconsistent with that of either central or peripheral neurological disease. Thus, one sees the characteristic *stocking-and-glove anesthesia* of the hands or feet or *hemianesthesia of the body beginning precisely at the midline*. Motor symptoms include abnormal movements and gait disturbance, which is often a wildly ataxic, staggering gait accompanied by gross, irregular, jerky truncal movements and thrashing and waving arms (also known as *astasia-abasia*). *Normal reflexes* are seen. The patient shows no fasciculations or muscle atrophy, and electromyography findings are normal.

17.6. The answer is E (all)

Neurological disorders (e.g., *dementia* and other degenerative diseases), brain tumors, and basal ganglia disease must be considered in the differential diagnosis for conversion disorder. For example, weakness may be confused with myasthenia gravis, polymyositis, acquired myopathies, or *multiple sclerosis*. Optic neuritis may be misdiagnosed as conversion disorder blindness. Other diseases that can cause confusing symptoms are *Guillain-Barré syndrome*, Creutzfeldt-Jakob disease, periodic paralysis, and early neurological manifestations of *acquired immunodeficiency syndrome (AIDS)*. Conversion disorder symptoms occur in schizophrenia, depressive disorders and anxiety disorders, but these other disorders are associated with their own distinct symptoms that eventually make differential diagnosis possible.

17.7. The answer is B

Conversion disorder is an illness of symptoms or deficits that affect voluntary motor or sensory functions, which suggest another medical condition, but that is judged to be caused by psychological factors because the illness is preceded by conflicts or other stressors. Somatization disorder is an illness of multiple somatic complaints in multiple organ systems that occurs over a period of several years and results in significant impairment, treatment seeking, or both. Sensorimotor symptoms also occur in somatization disorder. But somatization disorder is a chronic illness that *begins early in life* and includes *symptoms in many other organ systems* (not conversion disorder). In hypochondriasis (general and nondelusional preoccupation with fears of having, or the idea that one has a serious disease), as opposed to conversion disorder, patients have no actual loss or distortion of function; the somatic complaints are chronic and are *not limited to neurological symptoms*, and the characteristic hypochondriacal attitudes and beliefs are present. If the patient’s symptoms are *limited to pain*, pain disorder (not conversion disorder) can be diagnosed. Conversion disorder is acute and generally transient and usually involves *a symptom rather than a particular disease* (not vice versa). This is in contrast to hypochondriasis, which involves a particular disease.

17.8. The answer is E

During the course of somatization disorder, the patient has complained of pain and gastrointestinal, sexual, and pseudoneurological symptoms that are *not explained by a known medical condition*. In addition, the patient *presents the initial physical complaints before, not after, age 30 years*. The patient *has had physical symptoms for at least several years, not just 3 months*. The patient has had interpersonal problems and tremendous psychological distress and *usually experiences significant, not minimal, impairment in social or occupational functioning*. A patient who has a *false belief of being pregnant* and objective signs of pregnancy, such as decreased menstrual flow or amenorrhea, *does not have somatization disorder*. Instead, the patient has pseudocyesis, a somatoform disorder not otherwise specified.

17.9. The answer is A

Somatization disorder commonly coexists with other mental disorders. About two-thirds of all patients with somatization disorder have identifiable psychiatric symptoms, and up to half have other mental disorders. Commonly associated personality traits or personality disorders are those characterized by avoidant, paranoid, self-defeating, and *obsessive-compulsive* features. Patients with *major depressive disorder*, *generalized anxiety disorder*, and *schizophrenia* may all have an initial complaint that focuses on somatic symptoms. In all of these disorders, however, the symptoms of depression, anxiety, and psychosis eventually predominate over the somatic complaints. Two disorders that are *not* seen more commonly in patients with somatization disorder than in the general population are *bipolar I disorder* and substance abuse.

17.10. The answer is D

Conversion disorder may be the most frequently occurring of the somatoform disorders. The text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) gives a range from a low of 11 to a high of 500 cases per 100,000. Affected persons can range in age from early childhood into old age. The annual incidence of conversion disorders seen by psychiatrists in a New York county has been estimated to be 22 cases per 100,000. In a general hospital setting, 5 to 16 percent of all psychiatric consultation patients manifest some conversion symptoms. In a study of a rural Veterans Administration general hospital, 25 to 30 percent of all male patients had a conversion symptom at some time during their admission. By contrast, in a psychiatric emergency department or psychiatric clinic, the incidence of conversion disorder is far lower (1 percent of all psychiatric admissions) because different selection factors supervene. Lifetime figures for ever having any conversion symptoms, even if only on a transient basis, are far higher, with some studies reporting a 33 percent prevalence rate. Conversion disorder occurs mainly in women, with a ratio of 2:1 up to 5:1 in some studies.

17.11. The answer is E (all)

The clinician must always rule out organic causes for the patient's symptoms. Medical disorders that present with nonspecific, transient abnormalities pose the greatest diagnostic difficulty in the differential diagnosis of somatization disorder. The



Table 17.2
Conditions Commonly Confused with Somatoform Disorder

Multiple sclerosis
Central nervous system syphilis
Brain tumor
Hyperparathyroidism
Acute intermittent porphyria
Lupus erythematosus
Hyperthyroidism
Myasthenia gravis

disorders to be considered include *multiple sclerosis*, *systemic lupus erythematosus*, *acute intermittent porphyria*, and *hyperparathyroidism*. In addition, the onset of many somatic symptoms late in life must be presumed to be caused by a medical illness until testing rules it out. Table 17.2 lists a few of the disorders commonly confused with somatoform disorders, especially early in their courses.

17.12. The answer is B

Somatization disorder is best treated *when the patient has a single identified physician as his or her primary caretaker*. When more than one clinician is involved, patients have increased opportunities to express somatic complaints. Primary physicians should see patients *during regularly scheduled visits, usually at monthly intervals*. The visits should be relatively brief, although a partial physical examination should be conducted to respond to each new somatic complaint. *Additional laboratory and diagnostic procedures should generally be avoided*. After somatization disorder has been diagnosed, the treating physician should *listen to the somatic complaints as emotional expressions rather than as medical complaints*. Nevertheless, patients with somatization disorder can also have bona fide physical illnesses; therefore, physicians must always use their judgment about what symptoms to work up and to what extent. A reasonable long-range strategy for a primary care physician who is treating a patient with somatization disorder is to *increase the patient's awareness of the possibility that psychological factors are involved in the symptoms* until the patient is willing to see a mental health clinician.

17.13. The answer is D

A pain disorder is characterized by the presence of and focus on pain in one or more body sites and is sufficiently severe to come to clinical attention. Pain disorder is associated with other psychiatric disorders, especially affective and anxiety disorders. Chronic pain appears to be most frequently associated with *depressive disorders*, and acute pain appears to be more commonly associated with *anxiety disorders*. The associated psychiatric disorders may precede the pain disorder, may co-occur with it, or may result from it. Depressive disorders, alcohol dependence, and chronic pain disorder may be more common in relatives of individuals with chronic pain disorder. Individuals whose pain is associated with severe depression and those whose pain is related to a terminal illness, such as cancer, are at increased risk of suicide. Some investigators believe that chronic pain is almost

always a variant of a depressive disorder, a masked or somatized form of depression. The clinical picture of a patient with pain disorder can be complicated by *substance-related disorders* because these patients attempt to reduce the pain through the use of alcohol and other substances.

17.14. The answer is C

The most prominent depressive symptoms in patients with pain disorder are *anergia* (lack of energy), *anhedonia* (absence of pleasure from acts that would ordinarily be pleasurable), *decreased libido*, *insomnia*, and irritability; diurnal variation, *weight loss*, and psychomotor retardation appear to be less common. Major depressive disorder is present in about 25 to 50 percent of patients with pain disorder, and dysthymic disorder or depressive disorder symptoms are reported in 60 to 100 percent of patients.

17.15. The answer is D

The most accurate statement about pain disorder is that *first-degree relatives of patients with pain disorder have an increased likelihood of having the same disorder*, thus indicating the possibility of genetic inheritance or behavioral mechanisms in the transmission of the disorder. Pain disorder is actually *diagnosed twice as frequently in women as in men*. The *peak ages of onset are in the fourth and fifth decades of life*, when the tolerance for pain declines. Pain disorder is *most common in persons with blue-collar occupations*, perhaps because of increased job-related injuries. *Depressive disorders, anxiety disorders, and substance abuse are also more common in families of patients with pain disorder than in the general population*.

17.16. The answer is B

People with hypochondriasis are highly thanatophobic (fear of death), which is a central clinical feature of the disorder. They are *persistent seekers of explanations rather than of treatment*, are largely unsatisfied with their medical care, and often believe that physicians have not recognized their needs. The onset of the disorder is most commonly in the third and fourth decades of life, and it is *equally common in men and women*. Reassurance that is delivered confidently by a competent doctor using multiple modalities, including skillful examination, effective communication, and helpful education, is the cornerstone of treatment of the patients with hypochondriasis. Without successful reassurance, more specific treatments are not likely to be accepted or adhered to by the patient. There is no known somatic pathology specific to hypochondriasis. Investigators who conducted *post-mortem examinations of patients with hypochondriasis found no evidence of inflammation and congestion in the upper gastrointestinal tract*.

17.17. The answer is E (all)

A reasonable body of data indicates that persons with hypochondriasis augment and amplify their somatic sensations; *they have low thresholds for and low tolerance of physical discomfort*. They may focus on bodily sensations, misinterpret them, and become alarmed by them because of a faulty cognitive scheme.

A second theory is that hypochondriasis is understandable in terms of a social learning model. *The symptoms of hypochondriasis are viewed as a request for admission to the sick role made by a person facing seemingly insurmountable and unsolvable problems*. The sick role offers an escape that allows a patient to avoid noxious obligations, to postpone unwelcome challenges, and to be excused from usual duties and obligations. A third theory suggests that hypochondriasis is *a variant form of other mental disorders, among which depressive disorders and anxiety disorders are most frequently included*. An estimated 80 percent of patients with hypochondriasis may have coexisting depressive or anxiety disorders. Patients who meet the diagnostic criteria for hypochondriasis may be somatizing subtypes of these other disorders. The psychodynamic school of thought has produced a fourth theory of hypochondriasis. According to this theory, *aggressive and hostile wishes toward others are transferred (through repression and displacement) into physical complaints*. The anger of patients with hypochondriasis originates in past disappointments, rejections, and losses. Hypochondriasis is also viewed as a defense against guilt, a sense of innate badness, an expression of low self-esteem, and a sign of excessive self-concern.

17.18. The answer is A

Hypochondriacal symptoms can be a part of another disorder such as major depressive disorder, dysthymic disorders, generalized anxiety disorder, or adjustment disorder. However, primary hypochondriasis or hypochondriacal disorder is a chronic and somewhat disabling disorder with hypochondriacal symptoms, not merely a part of another psychiatric condition.

Hypochondriasis is rather common in primary care settings. In various locales, the prevalence has varied from 3 to 14 percent. Recent work indicates that in a 6-month period of observation, *4 to 6 percent of the general medical population meets the specific criteria for this disorder*. The prevalence in either gender is comparable to that within the general medical population. There are no specific tendencies for overrepresentation based on social position, education, marital status, or other sociodemographic descriptors. There is a wide range of ages at onset. Although the disorder can begin at any age, onset is thought to be most common between 20 and 30 years of age.

Comorbidity with other psychiatric disorders is common with hypochondriasis and must be treated accordingly. *Depression only accounts for a minor part of the total picture in hypochondriasis, however, so it is a mistake to think that all hypochondriasis is the result of some other Axis I disorder*.

The developmental background of hypochondriacal patients is of interest in that significantly more of these patients than matched control subjects report traumatic sexual contacts, physical violence, and major parental upheaval before the age of 17 years.

17.19. The answer is E (all)

Body dysmorphic disorder (BDD) is common as a comorbid condition in patients with major depressive disorder, obsessive-compulsive disorder (OCD), and social phobia. Indeed, in one study of 30 patients, all met the DSM-III-R criteria for at least one

other psychiatric diagnosis at some point in their lives, usually concurrently.

The cause of BDD is unknown. The high comorbidity with depressive disorders, a higher-than-expected family history of mood disorders and OCD, and the reported responsiveness to selective serotonin reuptake inhibitors indicates that, in at least some patients, the pathophysiology of the disorder may involve serotonin and may be related to other disorders. There may be significant cultural or social effects on patients with BDD because of the emphasis on stereotyped concepts of beauty that may be emphasized in certain families and within the culture at large.

Family histories of substance abuse and mood disorder are common in documented cases. Also predisposing to the disorder may be certain types of personality characteristics, especially a mixture of obsessional and avoidant traits, but no single personality pattern predominates. Reportedly, the patients are shy, self-absorbed, and overly sensitive to their imagined defect as a focus of notice or criticism.

17.20. The answer is E

Serotonin-specific drugs, such as clomipramine (Anafranil) and fluoxetine (Prozac), are effective in reducing the symptoms in at least 50 percent of patients with body dysmorphic disorder (BDD). In any patient with a coexisting mental disorder or an anxiety disorder, the coexisting disorder should be treated with the appropriate pharmacotherapy and psychotherapy. How long treatment should be continued when the symptoms of BDD have remitted is unknown. *Plastic surgery is not usually beneficial in the treatment of patients with BDD.* In fact, surgical, dermatological, dental, and other medical procedures to address the alleged defects rarely satisfy the patient.

A comorbid diagnosis is not unusual. BDD commonly coexists with other mental disorders. One study found that more than 90 percent of patients with BDD had experienced a major depressive episode in their lifetimes, about 70 percent had an anxiety disorder, and about 30 percent had a psychotic disorder. However, *anorexia nervosa should not be diagnosed* along with BDD because distortions of body image occur in people with anorexia nervosa, gender identity disorders, and some specific types of brain damage (e.g., neglect syndromes).

The effects of BDD on a person's life can be significant. Almost all affected patients avoid social and occupational exposure. As many as one-third of the patients may be housebound by their concern about being ridiculed for their alleged deformities, and as many as 20 percent, not 50 percent, of patients attempt suicide.

17.21. The answer is C

Patients with somatization disorder consider themselves to be medically ill. Despite this, there is good evidence *that they are no more likely to develop another medical illness in the next 20 years than people without somatization disorder.* The onset is before 25 years of age in 90 percent of people with the disorder, but initial symptoms generally develop during adolescence. Partly because of the undulating nature of the disorder, *people with somatization disorder are usually poor historians, and they seem*

to exaggerate various symptoms, each at different times. The female to male ratio ranges from five to one to 20 to one. It is relatively more common in rural areas and in people who are nonwhite, unmarried, and have less education.

17.22. The answer is A

The most likely diagnosis for Mr. J in this case is *conversion disorder* caused by the alternation in sensory functioning, the lack of a clear general medical condition, and the relation of the symptoms to a psychological issue. The patient complains of sensory disturbances (blurred vision, diplopia, loss of vision) that suggest a physical disorder; but thorough examinations have failed to detect a general medical condition that could account for the symptoms. The context in which these symptoms occurs suggests the role of psychological factor in their development: the patient lost his vision after play volleyball to which he had anxiety, and his vision started to improve after he began talking to his father about his anxiety. The diagnosis of a factitious disorder or *malingering* is ruled out because there is no evidence that the patient is conscious of intentionally producing the symptoms (e.g., taking a drug that would induce such symptoms, claiming to have the symptoms when they are not present). *Somatization disorder* is excluded because the patient's complaints are not part of a long-standing polysymptomatic disturbance involving many organ systems. *Pain disorder* is ruled out because the patient does not complain of severe, persistent pain.

17.23. The answer is B

Subjective neurological symptoms are components of *conversion disorder*. These pseudoneurologic symptoms appear after a stressor and are not created intentionally. The definitive diagnosis follows a thorough medical workup that does not explain the symptoms. Sodium Amytal may give relief to patients, but it is not unusual for patients to be indifferent (*la belle indifférence*). *Factitious disorder* consists of psychological or physical symptoms that are intentionally created as the patient takes part in the "sick role." Also intentionally produced, *malingering* consists of physical or psychological symptoms created to make secondary gains (e.g., avoiding work, obtaining drugs, avoiding criminal persecution). *Histrionic personality disorder* consists of a long-standing pattern of attention-seeking behavior and excessive displays of emotion. It does not present acutely.

Answers 17.24–17.28

17.24. The answer is D

17.25. The answer is C

17.26. The answer is B

17.27. The answer is C

17.28. The answer is C

Hypochondriasis and *body dysmorphic disorder (BDD)* have several similarities in their proposed root causes and diagnostic criteria, which is perhaps why the tenth edition of the

International Classification of Diseases (ICD-10) includes BDD as a subcategory of hypochondriacal disorder. In psychodynamic models of etiology, *both hypochondriasis and BDD may be related to the defense mechanisms of repression and displacement.* In hypochondriasis, for example, aggressive and hostile wishes toward others are believed to be transferred through repression and displacement into physical complaints; BDD, meanwhile, is seen as reflecting the *displacement* of a sexual or emotional conflict onto a nonrelated body part. Such association occurs through the defense mechanisms of *repression*, dissociation, distortion, symbolization, and projection. According to the DSM-IV-TR, the preoccupation with symptoms in both disorders cause *clinically significant distress or impairment in social, occupational, or other important areas of functioning.* In all of the somatoform disorders, patients firmly believe that their physical complaints are real, but these convictions *do not reach delusional intensity*; if they do, the appropriate diagnosis is delusional disorder. Moreover, all of the somatoform disorders are related to high rates of comorbid mental disorders, such as depressive or anxiety disorders. Hypochondriasis, for example, is often accompanied by symptoms of depression and anxiety and *commonly coexists with a depressive or anxiety disorder.* Similarly, BDD commonly coexists with other mental disorders: one study found that more than 90 percent of patients with BDD had experienced a major depressive episode in their lifetimes, and about 70 percent had experienced an anxiety disorder. Although these two categories of somatoform disorders have some similarities, the DSM-IV-TR maintains them as separate entities because of fundamental differences in their presentation. For example, whereas patients with BDD wish to appear normal but believe that others notice that they are not, those with hypochondriasis *seek out attention for their presumed diseases.*

Answers 17.29–17.33

17.29. The answer is C

17.30. The answer is B

17.31. The answer is C

17.32. The answer is C

17.33. The answer is D

Both somatization disorder and pain disorder affect *women more than men.* Somatization disorder has a female-to-male ratio of five to one. The lifetime prevalence of somatization disorder among women in the general population may be 1 to 2 percent. Pain disorder is diagnosed twice as commonly in women as in men. Somatization disorder is defined as beginning before age 30 years, and it *most often begins during a person's teens.* As for pain disorder, the peak of onset is in the fourth and fifth decades of life, perhaps because the tolerance for pain decreases with age.

Antidepressants, such as fluoxetine (Prozac), sertraline (Zoloft), and clomipramine (Anafranil), *are effective* in the treatment of pain disorder and somatization disorder. *Serotonin may be involved in the pathophysiology of both disorders.* It is probably the main neurotransmitter in the descending inhibitory pathways. Endorphins also play a role in the central nervous system modulation of pain. *Anorexia nervosa is not commonly associated with either pain disorder or somatization disorder.* Anorexia nervosa is an eating disorder that presents a dramatic picture of self-starvation, distorted body image, peculiar attitudes toward food, weight loss (leading to the maintenance of the patient's body weight at least 15 percent below that expected), and an intense fear of weight gain.



Factitious Disorders

Patients with factitious disorder simulate, induce, or aggravate illness in order to receive medical attention whether or not they are actually ill. With factitious disorder patients, there is always the possibility of the patient's inflicting painful, deforming, or life-threatening injury on themselves, their children, or other dependents. Unlike malingering, the motive of patients with factitious disorder is not for financial gain or avoidance of duties but to acquire medical care and to partake in the medical system.

According to the American Heritage Dictionary, the word *factitious* means "artificial; false," derived from the Latin word *facticius*, which means "made by art." The art and artifice of factitious patients often creates drama within the hospital and thus causes frustration and dismay for the clinicians and staff involved in their care. Clinicians may dismiss, avoid, or refuse to treat patients with factitious disorder. Strong countertransference of clinicians can be major obstacles toward the proper care of these patients, who arguably are among the most psychiatrically disturbed. Although the presenting complaints by these patients are false, it is still important to take the medical and mental needs of these patients seriously because factitious disorder can lead to significant morbidity and even mortality.

The best known factitious disorder is perhaps factitious disorder with predominantly physical signs and symptoms, pop-

ularly known as Munchausen syndrome. This presentation involves persons who travel from hospital to hospital, gaining admission, receiving multiple diagnoses and treatments until they are found out by staff, and then they quickly move on to the next hospital to repeat the same rituals. Common complaints or presenting symptoms include hematomas, abdominal pain, fever, and seizures. Patients have been known to do such bizarre things as inject themselves with feces to induce infections or to willingly undergo repeated unnecessary surgeries.

Despite potentially high stakes, relatively little empirical knowledge is available about the etiology, epidemiology, course and prognosis, and effective treatment of factitious disorders. Most knowledge comes from case reports, information that is frequently suspect, given the false, unreliable nature of the information these patients give. The text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) categories for the disorder include predominantly physical signs and symptoms, predominantly psychological signs and symptoms, both physical and psychological signs and symptoms, and factitious disorder not otherwise specified.

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

Students should be able to define each of these terms.

- | | | | |
|---|---|------------------------------------|--------------------------|
| ▶ approximate answers | ▶ factitious disorder | ○ with | ▶ Munchausen syndrome |
| ▶ as-if personality | ○ by proxy | ▶ predominantly | ▶ pseudologia fantastica |
| ▶ borderline personality disorder | ○ not otherwise specified | ▶ psychological signs and symptoms | ▶ pseudomalingering |
| ▶ Briquet's syndrome | ○ with | ▶ Ganser's syndrome | ▶ regression |
| ▶ depressive-masochistic personality | ▶ predominantly physical signs and symptoms | ▶ gridiron abdomen | ▶ sick role |
| ▶ dissociative disorder not otherwise specified | | ▶ impostorship | ▶ somatoform disorders |
| | | ▶ malingering | ▶ symbolization |
| | | | ▶ unmasking ceremony |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

18.1. Which of the following disorders when concurrent with factitious disorder with predominantly physical signs and symptoms bodes a poorer prognosis?

- Alcohol abuse disorder
- Bipolar disorder
- Anxiety disorder

- D. Antisocial personality disorder
E. None of the above
- 18.2.** The perpetrators in factitious disorder by proxy
- often suffer from psychotic or dissociative disorders
 - rarely have personal histories of factitious or somatoform disorders
 - most often suffered direct abuse in childhood themselves
 - are commonly unresponsive to their infants when their behavior is unwitnessed
 - all of the above
- 18.3.** Which of the following is the gold standard for diagnosis of factitious disorder by proxy?
- Confession by the child
 - Finding inconsistencies in the medical records
 - Direct observation of the caretaker doing harm
 - Improvement when the child is removed from the caretaker
 - Discovery of illness-inducing agents in the caregiver's possession
- 18.4.** True statements about factitious disorder by proxy include all of the following *except*
- The disorder currently accounts for fewer than 1,000 of the almost 3 million cases of child abuse reported each year in the United States.
 - The prevalence of the disorder in life-threatening episodes treated with cardiopulmonary resuscitation has been estimated to be as high as 9 percent.
 - The prevalence of the disorder has been estimated to be approximately 5 percent in children presenting with allergies.
 - The average length of time to establish a diagnosis after the initial presentation is about 2 months.
 - Often a sibling has died of undiagnosed causes before the disorder is recognized.
- 18.5.** Which of the following occurs in factitious disorder by proxy?
- The mother has had some medical education.
 - The patient fails to respond to appropriate treatments.
 - Maternal lying is observed.
 - Unexplained illnesses have occurred in the mother.
 - All of the above
- 18.6.** The following statements regarding the differentiation between factitious disorders and somatoform disorders are true *except*
- Somatization patients seem more willing to undergo numerous mutilating procedures.
 - Patients with conversion disorder symptoms have a symbolic reference to specific emotional conflicts.
 - The age of onset for hypochondriasis is typically later than that of factitious disorders.
 - The multiple hospitalizations of a patient with factitious disorder have an extreme course.
 - Patients with factitious disorder produce factitious symptoms voluntarily.
- 18.7.** Factitious disorder
- may result in death because of needless medical interventions
 - is associated with a history of childhood abuse
 - occurs more frequently in women than in men
 - is not associated with economic gain
 - all of the above
- 18.8.** Factitious disorders
- usually have a good prognosis
 - may occur by proxy
 - usually begin in childhood
 - are best treated with psychoactive drugs
 - are synonymous with Ganser's syndrome
- 18.9.** The differential diagnosis of a factitious disorder includes
- antisocial personality disorder
 - hypochondriasis
 - malingering
 - somatization disorder
 - all of the above
- 18.10.** Because of their dramatic flair, patients with factitious disorder are often classified as having
- histrionic personality disorder
 - paranoid personality disorder
 - schizotypal personality disorder
 - narcissistic personality disorder
 - none of the above
- 18.11.** Patients with factitious disorders, either physical or psychological, most often demonstrate
- poor sexual adjustment
 - generally adequate frustration tolerance
 - a below-average IQ
 - a formal thought disorder
 - all of the above
- 18.12.** The term *Munchausen's syndrome* was coined by
- Baron Karl Friedrich Hieronymus von Munchausen
 - Richard Asher
 - Jean-Marie Charcot
 - Roy Meadow
 - Alan Gelenberg
- 18.13.** Factitious disorder patients with Munchausen syndrome are typically
- estranged from their families
 - middle-aged men
 - unemployed
 - unmarried
 - all of the above

- 18.14.** Psychosocial factors that contribute to factitious disorders include
- childhood abuse
 - masochistic personality
 - parental rejection in childhood
 - poor identity formation
 - all of the above
- 18.15.** Which of the following symptoms would a patient with Munchausen syndrome most likely present with?
- Amnesia
 - Depression
 - Hemoptysis
 - Pain disorder
 - Psychosis
- 18.16.** True statements about patients with factitious disorder with predominantly psychological signs and symptoms include
- Virtually all patients with this type of factitious disorder have a personality disorder.
 - The rate of suicide is generally reported to be low in this population.
 - The prognosis is slightly better than for most other Axis I disorders.
 - Factitious psychosis, in particular, almost never represents the prodrome to an authentic psychosis.
 - None of the above
- 18.17.** Factitious disorders are best treated by which of the following?
- Confrontation about the patient's deceit
 - Immediate discharge from the hospital
 - Focusing on management rather than cure
 - Performing only minimally invasive procedures to satisfy the patient
 - Using low-dose neuroleptics to decrease the patient's physical distress
- 18.18.** You begin treatment of a new patient with a previously known history of factitious disorder. Within the first few sessions, you also become aware that this patient meets criteria for a diagnosis of antisocial personality disorder as well.
- Which of the following statements regarding this patient is *true*?
- Persons with antisocial personality disorder do not usually volunteer for invasive procedures.
 - Persons with both of these disorders have repeated hospitalizations.
 - It is rare for persons with factitious disorder to also present with antisocial traits.
 - Factitious disorder symptoms almost always precede antisocial traits.
 - All of the above
- 18.19.** You are asked by the court to evaluate a 21-year-old man arrested in a robbery because his lawyer raised the issue of his competence to stand trial. He has no known psychiatric history, and no psychotic symptoms have been previously reported. During the interview, the man appears calm and in control, sits slouched in the chair, and has good eye contact. His affect shows a good range. His thought processes are logical, sequential, and spontaneous even when he describes many difficulties with his thinking. He seems guarded in his answers, particularly to questions about his psychological symptoms.
- He claims to have precognition on occasion, knowing, for instance, what is going to be served for lunch in the jail, and that he does not like narcotics because Jean Dixon does not like narcotics either, and she is in control of his thoughts. He states that he has seen a vision of General Lee in his cell as well as "little green men from Mars" and that his current incarceration is a mission in which he is attempting to be an undercover agent for the police, although none of the local police realize this. Despite the overtly psychotic nature of these thoughts as described, the patient does not seem to be really engaged in the ideas; he seems to be simply reciting a list of what appears to be crazy rather than recounting actual experiences and beliefs. When the interviewer expresses some skepticism about his described beliefs, he responds by saying that he has "many other crazy ideas" that he can share.
- Which of the following is the most likely diagnosis?
- Capgras' syndrome
 - Delusional disorder
 - Factitious disorder with predominantly psychological symptoms
 - Malingering
 - Schizophrenia, paranoid type
- 18.20.** Ganser's syndrome
- is associated with a severe personality disorder
 - has a chronic remitting and relapsing course
 - is motivated by involuntary phenomena
 - is a factitious disorder
 - is more common in women than in men
- 18.21.** Masquerade syndrome is when
- a child is confined to a sick role while avoiding physicians and agencies
 - a parent exaggerates the child's symptoms in an effort to increase a pediatrician's attention to the child
 - illness fabrication results in the child's increasing dependency on the parent
 - a hypochondriac parent is so preoccupied with the child's health that he or she risks unnecessary procedures and iatrogenic illnesses for the child
 - none of the above

ANSWERS

18.1. The answer is D

In factitious disorder with predominantly physical signs and symptoms, a concurrent mood (i.e., *bipolar disorder*), *anxiety*, or *substance abuse disorder* bodes a better prognosis; comorbid personality disorder, especially *antisocial personality disorder*, bodes a poorer prognosis. According to some experts, many patients with factitious disorder experience remission around 40 years of age, corresponding to the age of remission for many patients with borderline personality disorder.

Factitious disorder with predominately physical signs and symptoms is the best known type of Munchausen's syndrome. The essential features of patients with the disorder is their ability to present physical symptoms so well that they can gain admission to and stay in a hospital. The wide spectrum of this disorder should be kept in mind when considering the course and prognosis. At one end of the spectrum, factitious illness behavior can be considered within the range of normal, as when a child exaggerates distress from a knee scrape to gain attention or when a mother magnifies her child's symptoms to seek reassurance from a physician. Further along the spectrum, factitious illness behavior can be a maladaptive way of coping with stress and does not necessarily imply an ongoing factitious disorder.

18.2. The answer is D

By definition, factitious disorder by proxy requires that any external gains for the victim's fabricated or induced illnesses, such as disability payments or respite from child-rearing responsibilities during hospitalization, are incidental to the pursuit of the vicarious sick role. In contrast to the devoted, even symbiotic, parenting style they reveal in public, these mothers *are commonly unresponsive to their infants* when their behavior is unwitnessed. Despite the perversity of their behavior, they *rarely have psychotic or dissociative disorders*, although they *often have personal histories of factitious or somatoform disorders*. Although they may have been neglected or undervalued, most perpetrators *did not suffer direct abuse in childhood*. Table 18.1 lists the clinical indicators that may suggest factitious disorder by proxy.

18.3. The answer is C

Factitious disorder by proxy should not be considered a diagnosis of exclusion. Confirmatory evidence should be actively pursued, so as to lessen risk to the child. The safety of the child should be ensured at the same time. *The gold standard for confirming factitious disorder by proxy is direct observation of a parent causing harm to a child*. Covert video has also shown cases in which mothers, who appear concerned in the presence of staff, behave indifferently toward their children when they are not aware of being watched. Covert video should only be undertaken after consultation with legal counsel. A court order may need to be obtained, and a bioethics consultation may be helpful to weigh the potential benefits to the child versus compromises of privacy for the parent.

Other means of confirming factitious disorder by proxy include searching the mother's belongings for *illness-inducing agents*, reviewing collateral information and *medical records*



Table 18.1
Clinical Indicators That May Suggest Factitious Disorder by Proxy

<p>The symptoms and pattern of illness are extremely unusual or inexplicable physiologically.</p> <p>Repeated hospitalizations and workups by numerous caregivers fail to reveal a conclusive diagnosis or cause.</p> <p>Physiological parameters are consistent with induced illness (e.g., apnea monitor tracings disclose a massive muscle artifact before respiratory arrest), suggesting that the child has been struggling against an obstruction to the airways.</p> <p>The patient fails to respond to appropriate treatments.</p> <p>The vitality of the patient is inconsistent with the laboratory findings.</p> <p>The signs and symptoms abate when the mother has not had access to the child.</p> <p>The mother is the only witness to the onset of signs and symptoms.</p> <p>Unexplained illnesses have occurred in the mother or her other children.</p> <p>The mother has had medical or nursing education or exposure to models of the illnesses affecting the child (e.g., a parent with sleep apnea).</p> <p>The mother welcomes even invasive and painful tests.</p> <p>The mother grows anxious if the child improves.</p> <p>Maternal lying is proved.</p> <p>Medical observations yield information that is inconsistent with parental reports.</p>

Adapted from Feldman MD, Eisendrath SJ. *The Spectrum of Factitious Disorders*. Washington, DC: American Psychiatric Press; 1996.

for inconsistencies, gathering information on siblings, recording temporal associations between parental visits and the child's signs and symptoms, observing the child's well-being when *removed from the parent's care* for extended periods, and analyzing specimens taken in the presence of the parent compared with those taken in the parent's absence.

18.4. The answer is D

Factitious disorder by proxy currently accounts for *fewer than 1,000 of the almost 3 million cases of child abuse reported each year in the United States*, but this number may increase as mass media and professional attention increase recognition of these cases. Authors have attempted to elucidate the prevalence of factitious disorder by proxy within particular populations, such as children presenting with apnea (0.27 percent), *allergy (5 percent)*, asthma (1 percent), apparent life-threatening episodes (1.5 percent), and *life-threatening episodes treated with cardiopulmonary resuscitation (more than 9 percent among children in whom final diagnoses were established)*. *The average length of time to establish a diagnosis of factitious disorder by proxy after the initial presentation is 15 months, and often a sibling has died of undiagnosed causes before the disorder is recognized*. Table 18.2 summarizes the most common presentations of the disorder.

18.5. The answer is E (all)

In factitious disorder by proxy, classified in DSM-IV-TR as a factitious disorder not otherwise specified, a person intentionally produces physical signs or symptoms in another person who is under the first person's care. The most common cases involve



Table 18.2
Ranking of the Most Common Bibliographic
References to Signs and Symptoms of Factitious
Disorder by Proxy

Poisoning (includes Munchausen syndrome by proxy and intentional poisoning)
 Seizures or vomiting
 Apnea
 Diarrhea
 Unconsciousness
 Fevers
 Lethargy
 Dehydration or hematemesis
 Ataxia or hematuria

Adapted from Schreier HA, Libow JA. *Hunting for Love: Munchausen by Proxy Syndrome*. New York: Guilford Press; 1993; and Rosenberg DA. Web of deceit: a literature review of Munchausen syndrome by proxy. *Child Abuse Negl.* 1987;11:533.

mothers who deceive medical personnel into believing that their child is ill. In this disorder, it has been noted that the symptoms and pattern of illness are extremely unusual. The mothers have often had some medical or nursing education, are observed to lie, and are the only witnesses to the onset of signs and symptoms. *Unexplained illnesses have occurred in the mother or her other children*, and she often welcomes even invasive and painful tests. The tenth edition of the *International Classification of Diseases* (ICD-10) classifies this condition under child abuse, not factitious disorders.

18.6. The answer is A

A factitious disorder is differentiated from somatization disorder (Briquet's syndrome) by the *voluntary production of factitious symptoms, the extreme course of multiple hospitalizations, and the seeming willingness of patients with a factitious disorder* (not somatization disorder) *to undergo an extraordinary number of mutilating procedures*. Patients with conversion disorder are not usually conversant with medical terminology and hospital routines, and their symptoms have a direct temporal relation or *symbolic reference to specific emotional conflicts*. Hypochondriasis differs from factitious disorder in that patients with hypochondriasis do not voluntarily initiate the production of symptoms, and hypochondriasis *typically has a later age of onset*. As with somatization disorder, patients with hypochondriasis do not usually submit to potentially mutilating procedures.

18.7. The answer is E (all)

The prevalence of factitious disorder in the general population is unknown, but it *occurs more frequently in women than in men*, and the severe syndromes are more frequent in women. Anecdotal case reports indicate that many of the *patients suffered childhood abuse or deprivation*, resulting in frequent hospitalizations during early development. The motivation for the behavior is to assume the sick role, and external incentives, such as *economic gain*, avoiding legal responsibility, or improving physical well-being, as in malingering, are absent. The prognosis in most cases is poor, and although there are no adequate data about the ulti-

mate outcome for the patients, *a few of them probably die as a result of needless medication, instrumentation, or surgery*.

18.8. The answer is B

Factitious disorders *may occur by proxy*; such disorders are dually classified as factitious disorder by proxy and factitious disorder not otherwise specified.

Factitious disorders *usually begin in early adult life*, although they may appear during childhood or adolescence. The onset of the disorder or of discrete episodes of treatment seeking may follow a real illness, loss, rejection, or abandonment. Usually, the patient or a close relative had a hospitalization in childhood or early adolescence for a genuine physical illness. Thereafter, a long pattern of successive hospitalizations unfolds, beginning insidiously.

Factitious disorders *are not best treated with psychoactive drugs*. Pharmacotherapy is of limited use. No specific psychiatric therapy has been effective in treating patients with factitious disorders. Although no adequate data are available about the ultimate outcome for patients, a number of them probably die as a result of needless medication, instrumentation, or surgery. They *usually have a poor prognosis*.

Factitious disorders *are not synonymous with Ganser's syndrome*, a controversial condition that is characterized by the use of approximate answers. Ganser's syndrome may be a variant of malingering in that patients avoid punishment or responsibility for their actions. Ganser's syndrome is classified as a dissociative disorder not otherwise specified.

18.9. The answer is E (all)

A factitious disorder is differentiated from *somatization disorder* (Briquet's syndrome) by the voluntary production of factitious symptoms; the extreme course of multiple hospitalizations; and the patient's seeming willingness to undergo an extraordinary number of painful, even mutilating, procedures.

Hypochondriasis differs from factitious disorder in that patients with hypochondriasis do not voluntarily initiate the production of symptoms, and hypochondriasis typically has a later age of onset. As is the case with somatization disorder, patients with hypochondriasis do not usually submit to potentially mutilating procedures.

Because of their pathological lying, lack of close relationships with others, hostile and manipulative manner, and associated substance and criminal history, patients with factitious disorder are often classified as having *antisocial personality disorder*. However, persons with antisocial personality disorder do not usually volunteer for invasive procedures or resort to a way of life marked by repeated or long-term hospitalizations.

Factitious disorder must be distinguished from *malingering*. Malingerers have an obvious, recognizable environmental goal in producing signs and symptoms of illness. They may seek hospitalization to secure financial compensation, evade the police, avoid work, or merely obtain free bed and board for the night, yet they always have some apparent end for their behavior.

18.10. The answer is A

Patient with factitious disorder may be classified as having *histrionic personality disorder* because of the attention seeking and

dramatic flair of histrionic persons. But not all persons with histrionic have a dramatic flair; many are withdrawn and bland. Patients with factitious disorder may also be classified as having borderline personality disorder. This is because of these patients' chaotic lifestyles, history of disturbed interpersonal relationships, identity crises, substance abuse, self-damaging acts, and manipulative tactics. Persons with factitious disorder usually do not have the eccentricities or dress, thought, or communication that characterize patients with *schizotypal personality disorder*.

Paranoid personality disorder is characterized by long-standing suspiciousness and mistrust of persons in general. They refuse responsibility for their own feelings and assign responsibility to others. They are often hostile, irritable, and angry. Bigots, injustice collectors, pathological jealous spouses, and litigious cranks often have paranoid personality disorder. *Narcissistic personality disorder* is characterized by a heightened sense of self-importance and grandiose feelings of uniqueness. They consider themselves special and expect special treatment. Their sense of entitlement is striking. They handle criticism poorly and may become enraged when someone dares to criticize them, or they may appear completely indifferent to criticism.

18.11. The answer is A

Patients with factitious disorders, whether physical or psychological, most often demonstrate *an average or above-average IQ, absence of a formal thought disorder, a poor sense of identity, poor sexual adjustment, poor frustration tolerance, strong dependency needs, and narcissism*.

18.12. The answer is B

Munchausen's syndrome is a colorful term coined by *Richard Asher* in 1951 in his famous article in *The Lancet*. He wrote:

Here is described a common syndrome which most doctors have seen, but about which little has been written. Like the famous Baron von Munchausen, the persons affected have always travelled widely; their stories, like those attributed to him, are both dramatic and untruthful. Accordingly, the syndrome is respectfully dedicated to the baron, and named after him.

Patients with Munchausen's syndrome constantly seek medical care and hospitalization and often assume grandiose, false identities, sometimes claiming to be royalty, relatives of celebrities, or figures in important historical events. It is also known as chronic factitious disorder with predominately physical signs and symptoms. The two terms are used interchangeably.

The *Baron Karl Friedrich Hieronymus von Munchausen* (1720–1797) was a nobleman who served in the Russian army in the war against the Turks. After retirement, he entertained friends with embellished stories of his war adventures. The syndrome was named after him because of the dramatic nature of the false histories and symptoms and the travel from hospital to hospital that are characteristic of people with the syndrome.

Jean-Marie Charcot, around 1890, used the term *mania operativa activa* to describe a young girl who continually sought surgery for pain in a knee joint until her medical care seeking resulted in a surgeon amputating the leg. No pathology was ever found in the leg.

"Munchausen's syndrome by proxy" was first described in 1977 by British pediatrician *Roy Meadow*. The essential feature of this disorder is the intentional feigning or production of physical or psychological symptoms in another individual who is under the perpetrator's care. The perpetrator's motive is to assume the sick role by proxy.

Factitious disorder with psychological symptoms was first described by *Alan Gelenberg* in 1977, who mused that whereas other patients with factitious disorder avoided psychiatrists, his patient, a war veteran, gained admission to more than 30 psychiatric hospitals within a few years, usually feigning depression and suicidality under various pseudonyms.

18.13. The answer is E (all)

Overall, demographic analyses of factitious disorders in the literature have distinguished two general patterns. Factitious disorder patients with Munchausen syndrome are *typically middle-aged men who are unmarried, unemployed, and estranged from their families*; the remaining patients are generally women ages 20 to 40 years. A number of reports suggest that those in the second group are commonly employed in or intimately familiar with health care occupations such as nursing and physical therapy. In a 10-year retrospective study of hospitalized patients, 28 of 41 patients with factitious disorder identified worked in medically related fields, 15 as nurses.

18.14. The answer is E (all)

The psychodynamic underpinnings of factitious disorders are poorly understood because the patients are difficult to engage in an exploratory psychotherapy process. They may insist that their symptoms are physical and that psychologically oriented treatment is therefore useless. Anecdotal case reports indicate that many of the patients suffered *childhood abuse* or deprivation, resulting in frequent hospitalizations during early development. In such circumstances, an inpatient stay may have been regarded as an escape from a traumatic home situation, and the patient may have found a series of caretakers (e.g., doctors, nurses, and hospital workers) to be loving and caring. The patients' families included a *rejecting mother* or an *absent father*. The usual history reveals that the patient perceives one or both parents as rejecting figures who are unable to form close relationships. The facsimile of genuine illness, therefore, is used to recreate the desired positive parent-child bond. The disorders are a form of repetitional compulsion, repeating the basic conflict of needing and seeking acceptance and love while expecting that they will not be forthcoming. Hence, the patient transforms the physicians and staff members into rejecting parents.

Patients who seek out painful procedures, such as surgical operations and invasive diagnostic tests, may have a *masochistic personality* makeup in which pain serves as punishment for past sins, imagined or real. Some patients may attempt to master the past and the early trauma of serious medical illness or hospitalization by assuming the role of the patient and reliving the painful and frightening experience over and over again through multiple hospitalizations. Patients who feign psychiatric illness may have had a relative who was hospitalized with the illness they are simulating. Through identification, patients hope to reunite with the relative in a magical way.

Many patients have the *poor identity formation* and disturbed self-image that is characteristic of someone with borderline personality disorder. Some patients are *as-if personalities* who have assumed the identities of those around them. If these patients are health professionals, they are often unable to differentiate themselves from the patients with whom they come in contact. The cooperation or encouragement of other persons in simulating a factitious illness occurs in a rare variant of the disorder. Although most patients act alone, friends or relatives participate in fabricating the illness in some instances.

18.15. The answer is C

Munchausen syndrome is another name for factitious disorder with predominantly physical signs and symptoms. A primary feature of this disorder is a patient's ability to present physical symptoms such as *hemoptysis* so well that he or she gains admission to a hospital. A patient may feign symptoms of a severe disorder with which he or she is familiar and may give a history that is good enough to deceive a skilled clinician. The patient usually demands surgery or other treatment and can become abusive when negative test results threaten to reveal the factitious behavior. The other choices listed—depression, amnesia, pain disorder, and psychosis—are common presentations of patients with factitious disorder with predominantly psychological signs and symptoms.

18.16. The answer is A

The literature on factitious disorder with predominantly psychological signs and symptoms is notable for the magnitude of the psychological dysfunction present in patients. *Almost all have serious personality disorders*, often associated with substance abuse. Several authors have reported that *there is a high rate of suicide in this population* and that patients with factitious psychological disorders *have a worse prognosis than patients with most other Axis I disorders*.

The patient's simulation of a mental disorder *may actually represent the prodrome to an authentic mental disorder* with a serious outcome. In particular, clinicians *should be cautious in diagnosing factitious psychosis because in two small studies a majority of these patients eventually manifested clear-cut psychotic disorders such as schizophrenia*. In other cases, an ostensibly feigned condition such as depression has responded to psychotropic medications, validating at least some element of the presentation. Because virtually all patients with this type of factitious disorder have a personality disorder (usually borderline, histrionic, or antisocial), caregivers must also recognize that the simulated mental disorder coexists with an authentic one.

18.17. The answer is C

No specific psychiatric therapy has been effective in treating patients with factitious disorders. It is a clinical paradox that patients with the disorders simulate serious illness and seek and submit to unnecessary treatment while they deny to themselves and others their true illness and thus avoid possible treatment for it. *Treatment is thus best focused on management rather than cure*. Perhaps the single most important factor in successful management is a physician's early recognition of the disorder.

Physicians should try not to feel resentment when patients humiliate their diagnostic prowess, and they should *avoid any unmasking ceremony that sets up the patients as adversaries* and precipitates their flight from the hospital. The staff *should not perform unnecessary procedures or discharge patients abruptly*, both of which are manifestations of anger. Pharmacotherapy for factitious disorders is of limited use. Patients with comorbid Axis I disorders (e.g., schizophrenia) will respond to antipsychotic medication, but in all cases, medication should be administered carefully because of the potential for abuse.

18.18. The answer is A

Because of their pathological lying, lack of close relationships with others, hostile and manipulative behavior, and associated substance abuse and criminal history, patients with factitious disorder are often classified as having antisocial personality disorder. Antisocial persons, however, *do not usually volunteer for invasive procedures or resort to a way of life marked by repeated or long-term hospitalizations*. There is no evidence that factitious disorder symptoms precede the development of antisocial personality traits or vice versa.

Because of attention seeking and an occasional flair for the dramatic, patients with factitious disorder may be classified as having histrionic personality disorder. Consideration of the patient's chaotic lifestyle, history of disturbed interpersonal relationships, identity crisis, substance abuse, self-damaging acts, and manipulative tactics may lead to the diagnosis of borderline personality disorder.

18.19. The answer is D

Malingering is the most likely diagnosis based on the clinical presentation. Until his arrest, there was no psychiatric history or previously reported psychiatric symptoms. The man's mental status examination results are apparently normal; there are no disorganized thoughts or loosening of associations. The patient claims a variety of unrelated bizarre beliefs, presenting responses in a manner that is inconsistent with the disorganization of psychological functioning that would be expected if the symptoms were genuine. In this case, the "psychotic" symptoms are under voluntary control, and because there is external incentive (avoiding prosecution) and no evidence of an intrapsychic need to maintain a sick role, the diagnosis of *factitious disorder with predominantly psychotic features* is ruled out. The patient expresses no paranoid feelings, as would be seen in *schizophrenia, paranoid type*. His delusions lack conviction and are therefore not indicative of the unshakable beliefs in a *delusional disorder*. *Capgras' syndrome*, the delusion that familiar people have been replaced by identical impostors, is not seen here.

18.20. The answer is A

Ganser's syndrome, the voluntary production of severe psychiatric symptoms, sometimes described as giving approximate answers or talking past the point, *is strongly associated with a severe personality disorder*. It is *more common in men than in women*, and it most typically associated with prison inmates. It was previously classified as a factitious disorder but is commonly associated with dissociative phenomena such as amnesia, fugue, perceptual disturbances, and conversion symptoms and

is thus classified as a dissociative disorder. Recovery from the syndrome is sudden; patients claim amnesia for the events.

18.21. The answer is C

Masquerade syndrome is when *illness fabrication results in the child's increasing dependency on the parent*. When considering the differential diagnosis for factitious disorder by proxy, other by-proxy conditions should also be considered because children can be made to manifest psychopathologies of their parents. For

example, in hypochondriasis by proxy, *a hypochondriac parent preoccupied with her child's health* can repetitively seek pediatric care and thus *risk unnecessary procedures and iatrogenic illness for the child*. Other by-proxy syndromes include mothering to death in which *the child is confined to the sick role* as if the child were ill *while avoiding physicians and agencies*; extreme illness exaggeration in which *a parent exaggerates the child's symptoms in an effort to increase a pediatrician's attention to the child*; and achievement by proxy.



Dissociative Disorders

Dissociative disorders are a group of syndromes characterized by a sudden, temporary alteration in the normally integrated functions of consciousness, identity, or motor behavior in which some part of these functions is lost. Patients lose the sense of having one consciousness and feel that they either have more than one identity or no identity at all. The integrated thoughts, feelings, and actions that give every person his or her unique personality is abnormal in these patients. There are currently five dissociative disorders: (1) dissociative amnesia, (2) dissociative fugue, (3) dissociative identity disorder (formally known as multiple personality disorder), (4) depersonalization disorder, and (5) dissociative disorder not otherwise specified.

Normal people can experience feelings of dissociation or depersonalization under a variety of circumstances, such as fatigue, isolation, or hypnosis. These feelings tend to be temporary, and although perhaps briefly uncomfortable, are not experienced as overly distressful. Dissociative disorders are much more severe and disabling. Pathological dissociative states are associated with histories of childhood physical, emotional, and sexual abuse, or may be seen in people who have undergone traumatic wartime or disaster experiences. A careful and thorough medical evaluation is necessary to rule out any possible organic cause for the dissociative symptoms.

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

The terms below relate to dissociative disorders and should be defined.

- | | | | |
|--------------------------|--|---------------------------------|----------------------------|
| ▶ anterograde amnesia | ▶ Dissociative Experience Scale | ▶ false memory syndrome | ▶ possession state |
| ▶ approximate answers | ▶ dissociative fugue | ▶ Ganser's syndrome | ▶ reduplicative paramnesia |
| ▶ automatic writing | ▶ dissociative identity disorder | ▶ hemidepersonalization | ▶ repression |
| ▶ brainwashing | ▶ dissociative trance | ▶ highway hypnosis | ▶ retrograde amnesia |
| ▶ coercive persuasion | ▶ dissociative identity disorder | ▶ hypnotizability | ▶ secondary gain |
| ▶ continuous amnesia | ▶ dissociative trance | ▶ Korsakoff's syndrome | ▶ selective amnesia |
| ▶ crystal gazing | ▶ dominant personality | ▶ localized amnesia | ▶ sleepwalking disorder |
| ▶ denial | ▶ double orientation | ▶ malingering | ▶ temporal lobe functions |
| ▶ depersonalization | ▶ doubling | ▶ multiple personality disorder | ▶ transient global amnesia |
| ▶ derealization disorder | ▶ epidemiology of dissociative disorders | ▶ paramnesia | ▶ unitary sense of self |
| ▶ dissociation | | | ▶ wandering |
| ▶ dissociative amnesia | | | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 19.1. The systematized type of dissociative amnesia is
- the failure to recall successive events as they occur
 - the inability to recall events related to a circumscribed period of time

- the failure to recall one's entire life
- amnesia for certain categories of memory
- the ability to remember some, but not all, of the events occurring during a circumscribed period

- 19.2. Which of these statements regarding the prognosis of dissociative identity disorder is *incorrect*?

- Recovery is generally complete.
- The earlier the onset of dissociative identity disorder, the poorer the prognosis is.
- The level of impairment is determined by the number and types of various personalities.

- D. Individual personalities may have their own separate mental disorders.
- E. One or more of the personalities may function relatively well.
- 19.3.** *Reduplicative paramnesia* is a condition of which of the following disorders?
- A. Déjà vu
- B. Depersonalization disorder
- C. Dissociative amnesia
- D. Dissociative fugue
- E. Dissociative identity disorder
- 19.4.** Culture-bound syndromes in which dissociative fugue is a prominent feature include
- A. *amok*
- B. *grisi siknis*
- C. *latah*
- D. *piblokto*
- E. all of the above
- 19.5.** Which of the following statements about the nonclassic presentation of dissociative amnesia is *false*?
- A. Patients do not reveal the presence of dissociative symptoms unless asked directly.
- B. Some patients may describe a history of fugue-like states.
- C. Patients are quickly brought to medical attention for dissociative symptoms.
- D. Amnesia presents as a circumscribed memory gap.
- E. Primary complaints do not relate directly to amnesia.
- 19.6.** Organic amnesias are distinguished from dissociative amnesias by which of the following?
- A. They do not normally involve recurrent identity alteration.
- B. The amnesia is not selectively limited to personal information.
- C. The memories do not focus on an emotionally traumatic event.
- D. The amnesia is more often anterograde than retrograde.
- E. All of the above
- 19.7.** Which of the following statements regarding transient global amnesia is *false*?
- A. Complete recovery does not occur.
- B. It usually lasts 6 to 24 hours.
- C. It is an acute retrograde amnesia.
- D. It is most often caused by transient ischemic attacks.
- E. It affects recent memories more than remote memories.
- 19.8.** Patients with dissociative amnesia
- A. do not retain the capacity to learn new information
- B. commonly retain awareness of personal identity but have amnesia for general information
- C. present very similarly to patients with dementia
- D. typically behave in a confused and disorganized way
- E. none of the above
- 19.9.** Dissociative amnesia is thought to be
- A. decreased in times of war and natural disaster
- B. the least common of the dissociative disorders
- C. more common in older adults than younger
- D. more common in women than men
- E. none of the above
- 19.10.** The mental status examination of a patient with dissociative identity disorder would most likely reveal which of the following?
- A. Decreased concentration
- B. Flat affect
- C. Impaired recent memory
- D. Orientation difficulties
- E. Normal examination results
- 19.11.** Dissociative fugue
- A. is caused by heavy alcohol use
- B. occurs more often during wartime and natural disasters
- C. has new identities that are more complete than in dissociative identity disorder
- D. identities can alternate as in dissociative identity disorder
- E. all of the above
- 19.12.** The most common cause of organic fugue is probably
- A. brain tumors
- B. epilepsy
- C. head trauma
- D. hypoglycemia
- E. migraines
- 19.13.** All of the following are true statements about dissociative fugue *except*
- A. It is usually a long-lasting state.
- B. Recovery is spontaneous and rapid.
- C. It is a rare type of dissociative disorder.
- D. It is characterized by a lack of awareness of the loss of memory.
- E. It is not characterized by behavior that appears extraordinary to others.
- 19.14.** The mainstay of treatment of dissociative fugue is
- A. antidepressant medication
- B. hypnosis
- C. psychodynamic psychotherapy
- D. sodium amobarbital interviewing
- E. none of the above

- 19.15.** Patients predisposed to dissociative fugue include those with all of the following *except*
- borderline personality disorders
 - heavy alcohol abuse
 - histrionic personality disorders
 - mood disorders
 - schizophrenia
- 19.16.** Depersonalization disorder is characterized by
- gradual onset
 - onset impaired reality testing
 - ego-dystonic symptoms
 - a brief course and a good prognosis
 - occurrence in the late decades of life
- 19.17.** A patient normally without cognitive deficits, who seems out of touch with the environment and in a dream-like state for a brief period of time and who has amnesia regarding the experience when it is ended is likely to have
- dementia
 - dissociative fugue
 - localized amnesia
 - generalized amnesia
 - sleepwalking disorder
- 19.18.** Which of the following statements about malingered and factitious dissociative disorders is *true*?
- Feigned amnesia is more common in patients presenting with nonclassic forms of dissociative amnesia.
 - Patients asking to recover repressed memories as a chief complaint are most likely to have a factitious disorder.
 - Malingering of dissociative symptoms cannot be maintained during hypnosis.
 - Patients feigning dissociative identity disorder are able to describe typical comorbid conditions.
 - The Structured Clinical Interview for *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) Dissociative Disorders, Revised (SCID-D-R) has been used to help distinguish genuine from feigned depersonalization disorder.
- 19.19.** A teenage girl was continually sexually abused by her alcoholic father and another family friend. She was threatened with perpetration of sexual abuse on her younger siblings if she told anyone about the abuse. The girl became suicidal but believed she had to stay alive to protect her siblings. She precipitously ran away from home after being raped by her father and several of his friends as a “birthday present” for one of them. She traveled to a part of the city where she had lived previously with the idea that she would find her grandmother with whom she had lived before the abuse began. She traveled by public transportation and walked the streets, apparently without

attracting attention. After approximately 8 hours, she was stopped by the police in curfew check. When questioned, she could not recall recent events or give her current address, insisting that she lived with her grandmother. On initial psychiatric examination, she was aware of her identity, but she believed that it was 2 years earlier, giving her age as 2 years younger and insisting that none of the events of recent years had occurred. (Courtesy of Richard J. Loewenstein, MD, and Frank W. Putnam, MD.)

Which of the following is the most likely diagnosis?

- Dissociative amnesia
- Depersonalization
- Dissociative fugue
- Dissociative identity disorder
- Dissociative trance disorder

Directions

Each set of lettered headings below is followed by a list of numbered words or phrases. For each numbered word or phrase, select

- if the item is associated with A only
- if the item is associated with B only
- if the item is associated with both A and B
- if the item is associated with neither A nor B

Questions 19.20–19.23

- Possession trance disorder
- Dissociative identity disorder

19.20. A different personality emerges.

19.21. The alternate personality relates to the patient in some way.

19.22. The condition is generally time limited.

19.23. It is viewed in some religious groups as demonic possession.

Questions 19.24–19.27

- Dissociative amnesia
- Amnesia secondary to organic etiology

19.24. More likely to involve interruption of the episodic-autobiographical memory

19.25. More likely to involve interruption of general cognitive functioning

19.26. More likely to involve interruption of language capacity

19.27. More likely to be localized

Directions

The lettered headings below are followed by a list of numbered statements. For each numbered statement, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 19.28–19.31

- A. Dissociative amnesia
- B. Dissociative fugue
- C. Dissociative identity disorder
- D. Depersonalization disorder

- 19.28.** A 45-year old man comes to the emergency department and behaves and responds as if it were 1995.
- 19.29.** A 16-year-old girl is found in another city far from her home and does not recall how she got there.
- 19.30.** A 27-year-old woman says, “All of sudden, I was talking, but it didn’t feel like it was me talking. I felt like I was just watching someone else talk.”
- 19.31.** A 33-year old librarian arrives at work in revealing clothing and refers to herself in the third person.

ANSWERS**19.1. The answer is D**

The systematized type of dissociative amnesia is *amnesia for certain categories of memory* such as all memories relating to one’s family or to a specific person. Table 19.1 lists the different patterns of dissociative amnesia.

19.2. The answer is A

In dissociative identity disorder, although *recovery is possible*, it is *generally incomplete*. This is considered the most severe and chronic of the dissociative disorders. *The earlier the onset of dissociative identity disorder, the poorer the prognosis is*. The level of impairment ranges from moderate to severe and *is determined by variables such as the number, the type, and the chronicity of the various personalities*. The individual personalities may have their own separate mental disorders; mood disorders, personality disorders, and other distinctive disorders are most common. One or more of the personalities may function relatively well, and the others function marginally.

19.3. The answer is B

An occasional phenomenon of *depersonalization disorder* is doubling; patients believe that the point of consciousness is outside their bodies, often a few feet overhead, and from there,

they observe themselves as if they were totally separate persons. Sometimes patients believe that they are in two places at the same time, a condition called *reduplicative paramnesia* or *double orientation*. Most patients are aware of their disturbed sense of reality; this awareness is considered one of the salient characteristics of the disorder. *Dissociation* is defined as an unconscious defense mechanism involving the segregation of any group of mental or behavioral processes from the rest of the person’s psychic activity; this may entail the separation of an idea from its accompanying emotional tone, as seen in dissociative and conversion disorders. *Déjà vu* is an illusion of visual recognition in which a new situation is incorrectly regarded as a repetition of a previous experience.

19.4. The answer is E (all)

There are a number of culture-bound psychiatric syndromes in which fugue is a prominent feature. These syndromes include the “running” syndromes, which include *latah* and *amok*, that occur in several nations along the western Pacific rim; *grisi sickness*, occurring among the Miskito of Nicaragua and Honduras; and *piblokto* (Arctic hysteria), occurring among the Eskimos of northern Greenland. These syndromes are characterized by a high level of agitation, running about, trance-like states, and amnesia for the episode.

19.5. The answer is C

The classic (not nonclassic) presentation of dissociative amnesia is an overt, florid, dramatic clinical disturbance that frequently results in the patient’s being *brought quickly to medical attention specifically for symptoms related to the dissociative disorder*. In the nonclassic dissociative amnesia, on the other hand, patients frequently come to treatment for a variety of symptoms other than the dissociative symptoms and the amnesia (e.g., depression, mood swings, anxiety). The nonclassic presentation of dissociative amnesia can be said to have a covert dissociative syndrome because their *primary complaints infrequently relate directly to amnesia*. Chronic, recurrent, or persistent dissociative amnesia, or a combination of these, is the most common symptom in these cases, although some may also describe a *history of fugue-like states*. Commonly, patients with the nonclassic presentations of amnesia *do not reveal the presence of dissociative symptoms unless directly asked about them*. These patients are often uncomfortable when amnesia is inquired about and may minimize the presences or rationalize the importance of the symptoms.

In patients with nonclassic dissociative amnesia, the amnesia manifests itself as a *circumscribed memory gap* or series of memory gaps for the life history, primarily for times when traumatic events occurred, such as childhood or wartime. Self-mutilation and violent behavior in these patients may also be accompanied by amnesia. Amnesia may also occur for flashbacks or behavioral reexperiencing episodes related to trauma.

19.6. The answer is E (all)

Amnesic disorders are caused by a variety of organic conditions. Examples of organic causes of amnesia are epileptic seizure, head trauma, alcoholic blackouts, Korsakoff’s syndrome, stroke, postoperative amnesia, postinfectious amnesia,

 **Table 19.1**
Types of Dissociative Amnesia

Localized amnesia: inability to recall events related to a circumscribed period of time
Selective amnesia: ability to remember some, but not all, of the events occurring during a circumscribed period of time
Generalized amnesia: failure to recall one’s entire life
Continuous amnesia: failure to recall successive events as they occur
Systematized amnesia: amnesia for certain categories of memory, such as all memories relating to one’s family or to a particular person

Courtesy of Daphne Simeon, MD, and Richard J. Loewenstein, MD.

after electroconvulsive therapy (ECT), surgery, infection, and transient global amnesia. Less common causes are cerebrovascular disease, metabolic abnormalities, and toxic states.

Organic amnesias have several distinguishing features: they *do not normally involve recurrent identity alteration*, the amnesia is *not selectively limited to personal information*, the memories *do not focus on or result from an emotionally traumatic event*, and the amnesia is *more often anterograde* than retrograde. In cases of amnesia of organic etiology (excluding substance abuse, transient global amnesia, and metabolic abnormalities), the amnesia is usually permanent and does not lend itself to therapeutic technique. Whereas dissociative amnesia represents a displacement of the memory from awareness, organic amnesias represent the erasure or destruction of that memory through disturbance of the neuropsychological process.

19.7. The answer is A

Transient global amnesia is an acute and *transient retrograde amnesia* that *affects recent, more than remote, memories*. Although patients are usually aware of the amnesia, they may still perform highly complex mental and physical acts during the *6 to 24 hours that transient global amnesia episodes usually last. Recovery from the disorder is usually complete*. Transient global amnesia is *most often caused by transient ischemic attacks* that affect limbic midline brain structures. It can also be associated with migraine headaches, seizures, and intoxication with sedative-hypnotic drugs.

19.8. The answer is E (none)

The symptom of amnesia is common to dissociative amnesia, dissociative fugue, and dissociative identity disorder. Dissociative amnesia is the appropriate diagnosis when the dissociative phenomena are limited to amnesia. Its key symptom is the inability to recall information, usually about stressful or traumatic events in people's lives. This inability cannot be explained by ordinary forgetfulness, and there is no evidence of an underlying brain disorder. People retain the *capacity to learn new information*.

A common form of dissociative amnesia involves *amnesia for personal identity but unimpaired memory of general information*. This *clinical picture is exactly the reverse of the one seen in dementia*, in which patients may remember their names but forget general information, such as what they had for lunch. Except for their amnesia, patients with dissociative amnesia appear completely intact and *function coherently*. By contrast, in most amnesias caused by a general medical condition (e.g., postictal and toxic amnesias), patients may be confused and behave in a disorganized manner. Other types of amnesias (e.g., transient global amnesia and postconcussion amnesia) are associated with an ongoing anterograde amnesia, which does not occur in patients with dissociative amnesia.

19.9. The answer is D

Amnesia is the most common dissociative symptom and occurs in almost all of the dissociative disorders. Dissociative amnesia is thought to be the *most common of the dissociative disorders*, although epidemiological data for all the dissociative disorders are limited and uncertain. Dissociative amnesia is thought to

occur *more often in women than in men* and *more often in young adults than in older adults*. Inasmuch as the disorder is usually associated with stressful and traumatic events, its incidence probably *increases during times of wars and natural disasters*. Cases of dissociative amnesia related to domestic settings (e.g., spouse abuse and child abuse) are probably constant in number.

19.10. The answer is E

On examination, *patients with dissociative identity disorder frequently show nothing unusual in their mental status* other than a possible amnesia for periods of varying duration. Often, a clinician can detect the presence of multiple personalities only with prolonged interviews or many contacts with a patient with dissociative identity disorder. Sometimes by having a patient keep a diary, the clinician finds the multiple personalities revealed in the diary entries. An estimated 60 percent of patients switch to alternate personalities only occasionally; another 20 percent of patients not only have rare episodes but are also adept at covering the switches.

19.11. The answer is B

The behavior of patients with dissociative fugue is unusual and dramatic. The term *fugue* is used to reflect the fact that patients physically travel away from their customary homes or work situations and fail to remember important aspects of their previous identities (e.g., name, family, occupation). Such patients often, but not always, take on an entirely new identity and occupation, although *the new identity is usually less complete than the alternate personalities in dissociative identity disorder*, and the *old and new identities do not alternate*, as they do in dissociative identity disorder. Dissociative fugue is rare and, similar to dissociative amnesia, *occurs most often during wartime, after natural disasters*, and as a result of personal crises with intense internal conflicts. According to the text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR)*, there is a prevalence rate of 0.2 percent in the general population. Although *heavy alcohol abuse may predispose persons to dissociative fugue, the cause of the disorder is thought to be basically psychological*. The essential motivating factor seems to be a desire to withdraw from emotionally painful experiences.

19.12. The answer is B

The differential diagnosis of fugue states is vast. Genuine dissociative fugue must be excluded as a diagnosis if dissociative identity disorder is present or if the fugue is caused by the direct physiological effects of drugs, medications, or alcohol; it cannot be diagnosed if it is caused by a general medical condition such as epilepsy.

Probably the most common organic fugue is secondary to *epilepsy*, especially complex partial seizure disorder. During such seizures or postictally, the individual may exhibit wandering behaviors. The clinical differentiation is usually fairly easily accomplished by a good clinical history regarding epileptic symptoms and electroencephalographic studies.

Several medical conditions besides epilepsy can cause organic fugue. These conditions include *brain tumor, head trauma, migraine, cerebrovascular accidents, hypertensive neuropathy,*

limbic system dysfunction, *hypoglycemia*, uremia, dementia, and malaria.

19.13. The answer is A

A dissociative fugue is *usually brief (not long lasting)* (i.e., hours to days). Generally, *recovery is spontaneous and rapid*, and recurrences are rare. Dissociative fugue is considered *rare*, and similar to dissociative amnesia, it occurs most often during wartime, after natural disasters, and as a result of personal crises with intense conflict. Dissociative fugue is characterized by a *lack of awareness of the loss of memory but not by behavior that appears extraordinary* to others.

19.14. The answer is C

The mainstay of treatment of dissociative fugue is *psychodynamic psychotherapy*. A gently exploratory and expressive form is preferred in most cases, although a largely supportive form will usually suffice for those of low ego strength. The clinician should begin with a thorough clinical history and pay close attention to possible precipitating events. In many cases, encouraging persons with dissociative fugue to talk about what they already remember will bring the return of other memories; in some cases, free association has proven helpful.

When acute traumatic events have precipitated the dissociative fugue, a gentle abreaction of the trauma is indicated. However, the clinician should be very careful to not proceed with abreactive work until a stable therapeutic alliance has been established. In addition, abreactive work should be suspended, at least temporarily, if the patient's condition worsens (e.g., if the patient becomes depressed or suicidal).

If the individual with dissociative fugue continues to be densely amnesic for identity and autobiographical memory, the use of *hypnosis* or *sodium amobarbital interviewing* may be tried cautiously, keeping in mind that the dissociative fugue serves a defensive purpose, and that if the amnesia is suddenly lifted, the individual may become depressed or even suicidal. Also, after the hypnotic session is completed, the amnesia may recur. Informed consent should be obtained whenever hypnosis or sodium amobarbital is used.

After the amnesia has been lifted, continued psychotherapy is indicated to help the individual cope with the underlying psychological conflicts that initially caused the dissociative fugue. Ideally, the patient should be helped to integrate the memories of the dissociative fugue state into a cohesive self and memory. *Antidepressant medication* may be helpful in the treatment of depressive symptoms that may accompany the fugue state.

19.15. The answer is E

Schizophrenia does not predispose patients to dissociative fugue state. *Heavy alcohol abuse* may predispose a person to dissociative fugue, but the cause is thought to be basically psychological. The essential motivating factor appears to be a desire to withdraw from emotionally painful experiences. Patients with *mood disorders* and certain personality disorders (e.g., *borderline*, *schizoid*, and *histrionic personality disorders*) are predisposed to dissociative fugue.

19.16. The answer is C

Depersonalization disorder is characterized by *ego-dystonic symptoms*—that is, symptoms that are distressing to the patient.

However, the person maintains *intact (not impaired) reality testing*; he or she is aware of the disturbances. Depersonalization *rarely occurs in the late decades of life*; it most often starts between the ages of 15 and 30 years. In the large majority of patients, the symptoms first appear suddenly; only a few patients report a *gradual onset*. A few follow-up studies indicate that in more than half of cases, depersonalization disorder tends to have a *long-term (not brief) course and a poor (not good) prognosis*.

19.17. The answer is E

Patients with *sleepwalking disorder*, classified in the DSM-IV-TR as a type of sleep disorder, often behave like someone in a dissociative state. They appear out of touch with their environment and preoccupied with a private world; they may act emotionally upset and speak excitedly and incomprehensibly. When the episode has ended, patients have amnesia for it. By contrast, patients with *localized* or *generalized amnesia* do not seem out of touch with the environment and do not appear to be dreaming; to observers, they seem to act normally and are alert both before and after amnesia appears.

Dissociative fugue is similar to dissociative amnesia, but in dissociative fugue, patients' behavior seems more integrated with their amnesia than it is for patients with dissociative amnesia.

Patients with dissociative fugue travel away from home or work and forget their name, occupation, and other aspects of their identity. Patients often take on a new identity and profession.

When patients with *dementia* have symptoms of amnesia, the dementia is often advanced, and the amnesia does not give way to a clear memory. Social awareness and ability to perform complex activities are also diminished, and personality is affected.

19.18. The answer is B

In the current clinical environment, a patient who presents to psychiatric attention *asking to recover repressed memories as a chief complaint is most likely to have a factitious disorder* or to have been subject to suggestive influences. Most of these individuals actually do not describe bona fide amnesia when carefully questioned but are often insistent that they must have been abused in childhood to explain their unhappiness or life dysfunction.

Feigned amnesia is more common in patients presenting with the acute, classic (not nonclassic) forms of dissociative amnesia. There is no absolute way to differentiate dissociative amnesia from factitious or malingered amnesia. Malingering of dissociative symptoms, such as reports of amnesia for purposeful travel during an episode of antisocial behavior, *can be maintained even during hypnotic* or pharmacologically facilitated interviews. Many malingerers confess spontaneously or when confronted.

The SCID-D-R has been used to help distinguish genuine from feigned dissociative identity disorder (not depersonalization disorder) in a clinical and forensic contexts. In addition, psychological assessment by a psychologist experienced in evaluation of trauma, posttraumatic stress disorder, and dissociation may also be quite helpful in the differential diagnosis. On the SCID-D-R, fabricated dissociative identity disorder patients tend *not to describe the typical comorbid conditions* and symptoms

associated with dissociative identity disorder, such as amnesia, identity confusion, and identity alteration, although they may report high levels of depersonalization and derealization. They often describe symptoms in a jargon-filled way (“I’m dissociating” or “I’m switching”) and cannot readily explain their subjective experience on follow-up questions on the SCID-D-R or in clinical interviews.

19.19. The answer is C

The patient can be diagnosed with *dissociative fugue* because of the unexpected travel away from home and the inability to recall some of her past (i.e., the past 2 years). The essential feature of dissociative fugue is sudden, unexpected travel away from home or one’s customary place of daily activities, with the inability to recall some or all of one’s past. This is accompanied by confusion about personal identity or even the assumption of a new identity. In the above case, the patient’s identity is essentially intact; however, the patient believes she is 2 years younger than she actually is. Traumatic circumstances (i.e., recurrent childhood sexual abuse, as in this case), leading to an altered state of consciousness dominated by a wish to flee, are the underlying cause of most fugue episodes. Dissociative fugues can last from minutes to months. Some patients report multiple fugues, in which case a more chronic dissociative disorder, such as dissociative identity disorder, was not ruled out. Children and, as in this case, adolescents may be more limited than adults in their ability to travel. Thus, fugues in this population may be brief and involve only short distances.

The essential feature of *dissociative amnesia* is an inability to recall important personal information, usually of a traumatic or stressful nature, that is too extensive to be explained by normal forgetfulness. In this case, the patient does experience amnesia of the past 2 years of sexual abuse; however, the symptoms are not exclusive to the amnesia and include unexpected travel, thus ruling out dissociative amnesia as the diagnosis.

The essential feature of *depersonalization* is the persistent or recurrent feeling of detachment or estrangement from one’s self. The individual may report feeling like an automaton or as if in a dream or watching himself or herself in a movie. Patients often have great difficulty expressing what they are feeling. In this case, the patient does not convey any feelings of detachment from herself, so depersonalization can be ruled out.

Dissociative identity disorder, formally known as multiple personality disorder, is characterized by the presence of two or more distinct identities or personality states (sometimes called *alters*, *self-states*, *alter identities*, or *parts*) that control the individual’s behavior and is accompanied by the inability to recall important personal information that is too extensive to be explained by normal forgetfulness. In this case, there is not any indication of possible alter identities, so a diagnosis of dissociative identity disorder can be ruled out.

Dissociative trance disorder is manifested by a temporary, marked alteration in the state of consciousness or by loss of the customary sense of personal identity without the replacement by an alternate sense of identity. There is often a narrowing of awareness of the immediate surroundings or a selective focus on stimuli within the environment and the manifestation of stereotypical behaviors or movements that the individual experiences as beyond his or her control.

Answers 19.20–19.23

19.20. The answer is C

19.21. The answer is B

19.22. The answer is A

19.23. The answer is C

Possession trance disorder is a variant of dissociative trance disorder that involves single or episodic alternations in the state of consciousness, characterized by the exchange of the person’s customary identity by a new identity usually attributed to a spirit, divine power, deity, or another person. In this state, the individual exhibits stereotypically and culturally determined behaviors or experiences being controlled by the possessing entity.

Dissociative identity disorder, formally known as multiple personality disorder, is characterized by the presence of two or more distinct identities or personality states (sometimes called *alters*, *self-states*, *alter identities*, or *parts*) that control the individual’s behavior and is accompanied by the inability to recall important personal information that is too extensive to be explained by normal forgetfulness.

Possession trance differs from dissociative identity disorder in that (1) it is generally a sharply time-limited condition (usually hours), (2) it is usually related to immediate stressors, (3) the possessing personality seeks to differentiate itself as external to the victim, and (4) the possessing personality is usually recognizable to its audience by its stereotypical speech and behavior. In the United States, some religious groups view the alter identities in dissociative identity disorder as manifestations of demonic possession.

Answers 19.24–19.27

19.24. The answer is A

19.25. The answer is B

19.26. The answer is B

19.27. The answer is A

Dissociative amnesia is more likely to involve *interruption of the episodic-autobiographical memory* than the implicit-semantic memory. The memories unavailable for recall tend toward historical factual information (i.e., Where was I?; Who was I with?; and What did I do, think, and feel during the unaccountable period of time?) rather than *interruption of general cognitive functioning* or *language capacity*. This period of amnesia usually centers around a traumatic event or series of events and is *usually localized*, occurring during a specific period of time lasting anywhere from a few hours to several years. Occasionally, the amnesia may be selective or systematized, whereby it is restricted to certain memories such as those involving a particular individual. Other forms of amnesia also occur (generalized amnesia, when the amnesia extends over the patient’s entire life, and continuous amnesia, when the amnesia extends

from a specific time up to the present) but are much more rare and are often associated with more severe dissociative disorders.

Dissociative amnesia is one of the most difficult disorders to assess because it cannot be observed directly except in cases of global amnesia; patients rarely complain about amnesia itself. Clinically, the patient may present symptoms of anxiety, depression, confusion, difficulty concentrating, and a history of blank spells or gaps in memory. Even after amnesia has been confirmed, clinicians typically find it difficult to obtain from patients reliable estimates of the frequency and extent of their amnestic episodes.

Answers 19.28–19.31

19.28. The answer is A

19.29. The answer is B

19.30. The answer is D

19.31. The answer is C

Dissociative amnesia, as in the case of the man who *behaves and responds as if it were 1995*, is characterized by an inability to remember information, usually related to a stressful or traumatic event, which cannot be explained by ordinary forgetfulness, the ingestion of substances, or a general medical condition. *Dissociative fugue*, as in the case of the girl who is *found in another city* far from her home, is characterized by sudden and unexpected travel away from home or work, associated with an inability to recall one's past, confusion about one's past, and confusion about one's personal identity or the adoption of a new identity. *Dissociative identity disorder*, as in the case of the woman who *suddenly arrives at work in revealing clothing and refers to herself in the third person*, is characterized by the presence of two or more distinct personalities within a single person; dissociative identity disorder is generally considered the most severe and chronic of the dissociative disorders. *Depersonalization disorder*, as in the case of the woman *who complains she felt like she was watching someone else talk as she was speaking*, is characterized by recurrent or persistent feelings of detachment from one's body or mind.



Human Sexuality

Sexuality has been a consistent focus of curiosity, interest, and analysis to humankind. Depictions of sexual behavior have existed from the time of prehistoric cave drawings through Leonardo da Vinci's anatomical illustrations of intercourse to current pornographic sites available on the Internet.

Sexuality is determined by anatomy, physiology, the culture in which a person lives, relationships with others, and developmental experiences throughout the life cycle. It includes the perception of being male or female and private thoughts and fantasies as well as behavior. To the average normal person, sexual attraction to another person and the passion and love that follow are deeply associated with feelings of intimate happiness.

Normal sexual behavior brings pleasure to oneself and one's partner and involves stimulation of the primary sex organs, including coitus; it is devoid of inappropriate feelings of guilt or anxiety and is not compulsive. Recreational, as opposed to relational sex, that is sex outside a committed relationship, masturbation, and various forms of stimulation involving other than the primary sex organs, constitutes normal behavior in some contexts.

Abnormal sexuality is defined as that which is destructive, compulsive, associated with overwhelming guilt and anxiety, and unable to be directed toward a partner. The revised fourth

edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) broadly classifies sexual disorders as sexual dysfunctions, paraphilias, and sexual disorder not otherwise specified (NOS). *Sexual dysfunctions* describe disturbed sexual desire and psychophysiologic problems in the sexual response cycle. *Paraphilias* are characterized by recurrent sexual urges or fantasies involving unusual objects, activities, or situations. *Sexual disorder NOS* describes sexual dysfunction not classifiable in any other category.

There are several terms related to human sexuality that are often misunderstood and misused. *Sexual identity* is a person's biological sexual characteristics, including genes, external and internal sexual organs, hormonal makeup, and secondary sex characteristics. *Gender identity* is a person's sense of being female or male. *Sexual orientation* describes the object of a person's sexual impulses: heterosexual, homosexual, or bisexual. *Sexual behavior* encompasses all the activities that are driven by the sexual impulse and are designed to bring a person sexual gratification.

Clinicians should be familiar with the sexual disorders as well as with the variety of treatments available to address these disorders. Students should study the following questions and answers related to the topic for a helpful review.

HELPFUL HINTS

Students should know the following terms and their definitions.

- | | | | |
|----------------------------------|-------------------------------------|-------------------------------|---------------------------------------|
| ▶ anorgasmia | ▶ female orgasmic disorder | ▶ libido | ▶ premature ejaculation |
| ▶ bisexuality | ▶ fetishism | ▶ male erectile disorder | ▶ psychosexual stages |
| ▶ castration | ▶ gender role | ▶ masturbation | ▶ sex addiction |
| ▶ clitoral versus vaginal orgasm | ▶ heterosexuality | ▶ nocturnal penile tumescence | ▶ sexual arousal disorders |
| ▶ dual-sex therapy | ▶ homophobia | ▶ orgasm | ▶ sexual aversion disorder |
| ▶ dyspareunia | ▶ homosexuality | ▶ paraphilias | ▶ sexual desire disorders |
| ▶ exhibitionism | ▶ hypoactive sexual desire disorder | ▶ phases of sexual response | ▶ sexual identity and gender identity |
| | | | ▶ statutory rape |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

20.1. Which of the following is *not* true about sexual addiction?

- Individuals who engage addictively in one form of sexual behavior are likely also to engage addictively in other forms of sexual behavior.
- Sexual addiction is usually a chronic disorder.

- C. There is a higher prevalence of sexual addiction among women.
- D. Obsessions and compulsions with sexual content can occur in individuals with obsessive-compulsive disorder (OCD).
- E. Hypersexual behavior can occur in individuals with bipolar disorder.
- 20.2.** With regard to innervation of sex organs, all of the following are true *except*
- A. Penile tumescence occurs through the synergistic activity of parasympathetic and sympathetic pathways.
- B. Clitoral engorgement results from parasympathetic stimulation.
- C. Vaginal lubrication results from sympathetic stimulation.
- D. Sympathetic innervation is responsible for ejaculation.
- E. Sympathetic innervation facilitates the smooth muscle contraction of the vagina, urethra, and uterus during orgasm.
- 20.3.** Which part of the brain is directly involved in sexual drive in mammals?
- A. Temporal lobe
- B. The limbic system
- C. Neo cortex
- D. Frontal lobe
- E. Parietal lobe
- 20.4.** Among the following, the sexual dysfunction *not* correlated with phases of the sexual response cycle is
- A. sexual aversion disorder
- B. vaginismus
- C. premature ejaculation
- D. postcoital dysphoria
- E. male erectile disorder
- 20.5.** Which of the following statements is *true* about paraphilias?
- A. Paraphilias are usually not distressing to the person with the disorder.
- B. Paraphilias are found equally among men and women.
- C. According to the classic psychoanalytic model, paraphilias are caused by a failure to complete the process of genital adjustment.
- D. With an early age of onset, paraphilias are associated with a good prognosis.
- E. Paraphilias such as pedophilia usually involve vaginal or anal penetration of the victim.
- 20.6.** The term *partialism* refers to fetishes involving
- A. a specific item of clothing
- B. a nonsexual body part
- C. a specific type of material
- D. a nonsexual behavior
- E. a specific food item
- 20.7.** Research has indicated that
- A. a majority of married people are unfaithful to their spouses
- B. the median number of sexual partners over a lifetime for men is six and for women two
- C. vaginal intercourse is considered the most appealing type of sexual experience by a large majority of men and women
- D. masturbation is more common among those 18 to 24 years old than among those 24 to 34 years old
- E. the percentage of single women reporting “usually or always” having an orgasm during intercourse is greater than the percentage of married women reporting this
- 20.8.** Measures used to help differentiate organically caused impotence from functional impotence include
- A. monitoring of nocturnal penile tumescence
- B. glucose tolerance tests
- C. follicle-stimulating hormone (FSH) determinations
- D. testosterone level tests
- E. all of the above
- 20.9.** Psychiatric interventions used to assist the paraphilia patient include
- A. dynamic psychotherapy
- B. external control
- C. cognitive behavioral therapy
- D. treatment of comorbid conditions
- E. all of the above
- 20.10.** Which of the following substances have been associated with sexual dysfunction?
- A. Cocaine
- B. Trazodone
- C. Amoxapine
- D. Antihistamines
- E. All of the above
- 20.11.** In the most severe forms of paraphilia,
- A. persons never experience normal sexual behavior with partners
- B. the specific paraphilia imagery or activity is absolutely necessary for any sexual function
- C. the need for sexual behavior consumes so much money, time, concentration, and energy that persons describe themselves as out of control
- D. orgasm does not produce satiety in the same way it typically does for age mates
- E. all of the above

Directions

Each set of lettered headings below is followed by a list of numbered words or statements. For each numbered word or statement, select the *one* lettered heading most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 20.12–20.16

- A. Vaginismus
- B. Sexual aversion disorder
- C. Anorgasmia
- D. Hypoactive sexual desire disorder
- E. Dyspareunia

- 20.12. Avoidance of genital sexual contact with a sexual partner
- 20.13. Patient has few or no sexual thoughts or fantasies
- 20.14. Recurrent and persistent inhibition of female orgasm
- 20.15. Recurrent pain during intercourse
- 20.16. Involuntary and persistent constrictions of the outer one-third of the vagina

Questions 20.17–20.19

- A. Fetishism
- B. Voyeurism
- C. Frotteurism
- D. Exhibitionism
- E. Sexual masochism
- F. Sexual sadism
- G. Transvestic fetishism

- 20.17. Rubbing up against a fully clothed woman to achieve orgasm
- 20.18. Sexual urges by heterosexual men to dress in female clothes for the purposes of arousal
- 20.19. Preoccupation with fantasies and acts that involve observing people who are naked or engaging in sexual activity.

Questions 20.20–20.22

- A. Sensate focus exercises
- B. Squeeze technique

- 20.20. Intercourse is interdicted initially
- 20.21. Raises the threshold of penile excitability
- 20.22. Attempts to decrease “spectatoring”

Questions 20.23–20.27

- A. Desire phase
- B. Excitement phase
- C. Orgasm phase
- D. Resolution phase

- 20.23. Vaginal lubrication
- 20.24. Orgasmic platform
- 20.25. Testes increase in size by 50 percent

- 20.26. Slight clouding of consciousness
- 20.27. Detumescence

Questions 20.28–20.32

- A. Sexual identity
- B. Gender identity
- C. Sexual orientation
- D. Sexual behavior

- 20.28. Sense of maleness or femaleness
- 20.29. The object of a person’s sexual impulses
- 20.30. Chromosomes
- 20.31. Gonads and secondary sex characteristics
- 20.32. Desire and fantasies

Questions 20.33–20.38

- A. Virilizing adrenal hyperplasia (adrenogenital syndrome)
- B. Turner’s syndrome
- C. Klinefelter’s syndrome
- D. Androgen insensitivity syndrome (testicular feminization syndrome)
- E. Enzymatic defects in XY genotype (e.g., 5- α -reductase deficiency, 17-hydroxy-steroid deficiency)
- F. Hermaphroditism

- 20.33. Interruption in production of testosterone
- 20.34. Genotype is XXY
- 20.35. Excess androgens in fetus with XX genotype
- 20.36. Absence of second female sex chromosome (XO)
- 20.37. Inability of tissues to respond to androgens
- 20.38. Both testes and ovaries

ANSWERS

20.1. The answer is C

There is a *higher prevalence of sexual addiction in men* than in women. The same is true of paraphilias. Theories as to the reason for this include the higher levels of testosterone in men (testosterone is the libido driving hormone in both men and women) and the particular challenge little boys face during the oedipal phase of development. At this time, the boy must give up his identification with the primary caregiver—usually the mother—and instead identify with his father. Other factors cited as contributors to sex addiction include a history of abuse (whether sexual, emotional, or physical) or having been an “erotized child,” that is, the object of a highly seductive parent.

20.2. The answer is C

Innervation of the sexual organs is mediated primarily through the autonomic nervous system (ANS). *Penile tumescence occurs through the synergistic activity of two neurophysiologic pathways.* A parasympathetic (cholinergic) component mediates reflexogenic erections via impulses that pass through the pelvic splanchnic nerves (S2, S3, and S4). A thoracolumbar pathway transmits psychologically induced impulses. Both

parasympathetic and sympathetic mechanisms are thought to play parts in relaxing the smooth muscles of the penile corpora cavernosa, which allow the penile arteries to dilate and cause the inflow of blood that results in penile erection. Relaxation of cavernosal smooth muscles is aided by the release of nitric oxide, an endothelium-derived relaxing factor. *Clitoral engorgement and vaginal lubrication also result from parasympathetic stimulation that increases blood flow to genital tissue.*

Evidence indicates that the *sympathetic (adrenergic) system is responsible for ejaculation.* Through its hypogastric plexus, the adrenergic impulses innervate the urethral crest; the muscles of the epididymis; and the muscles of the vas deferens, seminal vesicles, and prostate. Stimulation of the plexus causes emission. In women, the *sympathetic system facilitates the smooth muscle contraction of the vagina, urethra, and uterus that occurs during orgasm.*

The ANS functions outside of voluntary control and is influenced by external events (e.g., stress, drugs) and internal events (hypothalamic, limbic, and cortical stimuli). It is not surprising, therefore, that erection and orgasm are so vulnerable to dysfunction.

20.3. The answer is B

The limbic system is directly involved with elements of sexual drive. In all mammals, the limbic system is involved in behavior required for self-preservation and the preservation of the species.

20.4. The answer is B

Seven major categories of sexual dysfunction are listed in the DSM-IV-TR: (1) sexual desire disorders, (2) sexual arousal disorders, (3) orgasm disorders, (4) sexual pain disorders, (5) sexual dysfunction due to a general medical condition, (6) substance-induced sexual dysfunction, and (7) sexual dysfunction NOS.

In the DSM-IV-TR, sexual dysfunctions are categorized as Axis I disorders. All of the syndromes listed except *vaginismus*, including *sexual aversion disorder*, *premature ejaculation*, *post-coital dysphoria*, and *male erectile disorder*, are correlated with the sexual physiological response cycle, which is divided into four phases: desire, excitement, orgasm, and resolution. The essential feature of the sexual dysfunctions is inhibition in one or more of the phases, including disturbance in the subjective sense of pleasure or desire or disturbance in the objective performance. Either type of disturbance can occur alone or in combination. Sexual dysfunctions are diagnosed only when they are a major part of the clinical picture. They can be lifelong or acquired and generalized or situational and can be attributable to psychological factors, physiological factors, or combined factors. If they are attributable entirely to a general medical condition, substance use, or adverse effects of medication, then sexual dysfunction due to a general medical condition or substance-induced sexual dysfunction is diagnosed.

Vaginismus is an involuntary muscle constriction of the outer third of the vagina that interferes with penile insertion and intercourse. It can also occur during a gynecological examination. It is not correlated with phases of the sexual response cycle and is considered a pain dysfunction.



Table 20.1
Frequency of Paraphiliac Acts Committed by Paraphilia Patients Seeking Outpatient Treatment

Diagnostic Category	Paraphilia Patients Seeking Outpatient Treatment (%)	Paraphiliac Acts per Paraphilia Patient ^a
Pedophilia	45	5
Exhibitionism	25	50
Voyeurism	12	17
Frotteurism	6	30
Sexual masochism	3	36
Transvestic fetishism	3	25
Sexual sadism	3	3
Fetishism	2	3
Zoophilia	1	2

^aMedian number.

Courtesy of Gene G. Abel, MD.

20.5. The answer is C

Paraphilias, according to the classic psychoanalytic model, are caused by a failure to complete the process of genital adjustment. However bizarre its manifestation, the paraphilia provides an outlet for the sexual and aggressive drives that would otherwise have been channeled into proper sexual behavior. Paraphilias are usually distressing to the person with the disorder. Paraphilias are not found equally among men and women. As usually defined, paraphilias seem to be largely male conditions. Paraphilias with an early age of onset are associated with a poor prognosis, as are paraphilias with a high frequency of the acts (Table 20.1), no guilt or shame about the acts, and substance abuse. Paraphilias such as *pedophilia* usually do not involve vaginal or anal penetration of the victim. The majority of child molestations involve genital fondling or oral sex.

20.6. The answer is B

The term *partialism* refers to fetishes involving non sexual body parts (e.g., a foot fetish). Individuals who achieve sexual gratification with the use of objects, most commonly women's undergarments, shoes, stockings, or other clothing items, are fetishists. Fetishists often collect the object of their sexual gratification. Some of the more common objects are women's lingerie or specific materials such as silk, leather, or fur. Fetishism has been exclusively described in men and often exists with other paraphilias.

20.7. The answer is C

A 1994 study, which was based on a representative United States population between the ages of 18 and 59, found the following:

1. Eighty-five percent of married women and 75 percent of married men are faithful to their spouses.
2. Forty-one percent of married couples have sex twice a week or more compared with 23 percent of single persons.
3. Cohabiting single persons have the most sex of all, twice a week or more.
4. The median number of sexual partners over a lifetime for men is 12 (not six) and for women, six (not two).

5. A homosexual orientation was reported by 2.8 percent of men and 1.4 percent of women, with 9 percent of men and 5 percent of women reporting that they had at least one homosexual experience after puberty.
6. *Vaginal intercourse* is considered the most appealing type of sexual experience by the majority of both men and women.
7. Both men and women who as children had been sexually abused by an adult were more likely as adults to have had more than 10 sex partners, to engage in group sex, to report a homosexual or bisexual identification, and to be unhappy.
8. About one man in four and one woman in 10 masturbates at least once a week, and *masturbation* is less common (not more common) among those 18 to 24 years of age than among those 24 to 34 years old.
9. Three-quarters of the married women said “they usually or always” had an *orgasm during sexual intercourse* compared with 62 percent of single women. Among men, married or single, 95 percent said they usually or always had an orgasm.

20.8. The answer is E (all)

A variety of measures is used to differentiate organically caused impotence from psychologically caused impotence. The *monitoring of nocturnal penile tumescence* is a noninvasive procedure; normally, erections occur during sleep and are associated with rapid eye movement (REM) sleep periods. Tumescence may be determined with a simple strain gauge. In most cases in which organic factors account for the impotence, the man has minimal or no nocturnal erections. Conversely, in most cases of psychologically caused or psychogenic impotence, erections do occur during REM sleep.

Other diagnostic tests that delineate organic bases of impotence include *glucose tolerance tests*, *follicle stimulating hormone (FSH) determinations*, and *testosterone level tests*. The glucose tolerance curve measures the metabolism of glucose over a specific period and is useful in diagnosing diabetes, of which impotence may be a symptom. FSH is a hormone produced by the anterior pituitary, which stimulates the secretion of estrogen from the ovarian follicle in women; it is also responsible for the production of sperm from the testes in men. An abnormal finding suggests an organic cause for impotence. Testosterone is the male hormone produced by the interstitial cells of the testes. In men, a low testosterone level produces a lack of desire as the chief complaint, which may be associated with impotence. If the measure of nocturnal penile tumescence is abnormal, indicating the possibility of organic impotence, a measure of plasma testosterone is indicated.

20.9. The answer is E (all)

Five types of psychiatric interventions are used to assist the paraphilia patient to rebalance internal control mechanisms, cease victimization of others, and enhance the capacities to relate to others: *external control*, reduction of sexual drives, *treatment of comorbid conditions*, *cognitive behavioral therapy*, and *dynamic psychotherapy*. The art of therapy is to select and modify these various elements for the individual patient.

When sexual victimization of others has occurred, new external controls should be instituted. Prison is an external control for sexual crimes that usually does not contain a treatment element. All relevant persons in the environment need to know what the person has done and is capable of doing again under opportune conditions. For intrafamilial abuse of children, for instance, the adults and other children in the family are informed of the abuse. The children in the family are not permitted to be alone with the offender again as long as they are unable to adequately protect themselves.

Psychiatrists need to consider the role of inadequately treated comorbid states when planning to treat sexual compulsivity or impulsivity. Alcohol and substance abuse, major depressive disorder, grief, psychotic disorder, attention-deficit/hyperactivity disorder, bipolar II disorder, and others may be the cofactor that enables a compensated sexual pattern to deteriorate and come to clinical attention.

It is frequently observed that sex offenders lack the social skills necessary to live effectively and create nonproblematic sexual relationships. Correcting some of these deficits is a goal of most cognitive behavioral treatment programs for sexually offending paraphiliac individuals. Each intervention is an aspect of a therapy approach that assumes that a paraphiliac lifestyle is learned and can be significantly modified. The specific techniques can be implemented in individual or group settings.

Patients with the nonviolent paraphilias and the paraphilia-related disorders are often treated with traditional individual or group therapies using a combination of supportive, growth-promoting tactics. Such therapies aim at creating an evolving hypothesis about the unique developmental origin of the patient's eroticism. The defensive function of the impulse to act out (the anxiety reduction function) is defined so the person can deal directly with the unpleasant feelings that trigger the impulses. Dynamic psychotherapy approaches emphasize the importance of the trusting relationship with the therapist to enable the work to occur.

20.10. The answer is E (all)

Intoxication with *cocaine* and alcohol, among other substances, produces sexual dysfunction. Medications such as *antihistamines*, antidepressants, and antiepileptics, among others, can cause arousal and orgasmic disorders as well as decreased sexual interest. *Trazodone (Desyrel)* is one of the substances associated with priapism, and *amoxapine (Asendin)* is associated with painful orgasm. Still other substances implicated in sexual dysfunction include antihypertensives, antiparkinsonian agents, anxiolytics, hypnotics, sedatives, amphetamines, and anabolic steroids.

20.11. The answer is E (all)

The DSM-IV-TR recognizes the paraphilias as consisting of recurrent, intensely sexually arousing fantasies, sexual urges, or sexual behaviors that involve nonhuman objects and the suffering of the self, partner, children, or nonconsenting persons. To qualify as a diagnosis, however, these patterns must have existed for at least 6 months, and they have to cause clinically significant distress or impairment in social; occupational; or some other important area, such as sexual function.

The DSM-IV-TR specifies nine paraphiliac diagnoses: (1) exhibitionism or genital exposure; (2) voyeurism, or clandestine

observation of another person's undressing, toileting, or sexual behavior; (3) sadism, or causing suffering during sexual behavior; (4) masochism or being humiliated during sexual behavior; (5) pedophilia, or sexual behavior with prepubescent or peripubertal children; (6) fetishism, or use of nonliving objects for sexual behavior; frotteurism or rubbing against or touching a nonconsenting person; (7) transvestic fetishism, or use of clothing of the opposite sex for arousal; and (8) paraphilia NOS for other observed atypical sexual patterns such as dressing in diapers, requiring a partner who has an amputated limb, and others.

All paraphilia behaviors are rehearsed repeatedly in fantasy; often these unusual fantasies have been present since childhood or puberty. Some persons with paraphilias *never experience any sexual behavior with partners*. The shame of the paraphilia interest and the fear of negative consequences may contribute to a lifelong avoidance of intimate contact.

In the most severe forms of paraphilia, the *specific paraphiliac imagery or activity is absolutely necessary* for any sexual function. The final parameter of severity is the degree of drive to masturbate or act out the fantasy with a partner.

The most severe form of compulsivity is the loss of autonomy. The loss of autonomy has three characteristics: (1) the *need for sexual behavior* consumes so much money, time, concentration, and energy that the patient describes himself as out of control; (2) intrusive, unwanted paraphiliac thoughts prevent concentration on other life demands and are the source of anxiety; and (3) *orgasm does not produce satiety* in the way it typically does for age mates.

Answers 20.12–20.16

20.12. The answer is B

20.13. The answer is D

20.14. The answer is C

20.15. The answer is E

20.16. The answer is A

Sexual aversion disorder is defined in the DSM-IV-TR as a “persistent or recurrent and extreme aversion to, and avoidance of, all or almost all, genital sexual contact with a sexual partner.” Some researchers consider the line between hypoactive desire disorder and sexual aversion disorder blurred, and in some cases, both diagnoses are appropriate. Low frequency of sexual interaction is a symptom common to both disorders. The clinician should think of the words “repugnance” and “phobia” in relation to patients with sexual aversion disorder.

Hypoactive sexual desire disorder is experienced by both men and women; however, they may not be hampered by any dysfunction after they are involved in the sex act. Conversely, hypoactive desire may be used to mask another sexual dysfunction. Lack of desire may be expressed by decreased frequency of coitus, perception of the partner as unattractive, or overt complaints of lack of desire. Upon questioning, the patient is found to have few or no sexual thoughts or fantasies, a lack of awareness of sexual cues, and little interest in initiating sexual experiences.

Female orgasmic disorder (also known as inhibited female orgasm or *anorgasmia*) is defined as the recurrent and persistent inhibition of the female orgasm, manifested by the absence or delay of orgasm after a normal sexual excitement phase that the clinician judges to be adequate in focus, intensity, and duration. Women who can achieve orgasm with noncoital clitoral stimulation but cannot experience it during coitus in the absence of manual stimulation are not necessarily categorized as anorgasmic.

Dyspareunia refers to recurrent and persistent pain during intercourse in either a man or a woman. In women, the dysfunction is related to and often coincides with vaginismus. Repeated episodes of vaginismus may lead to dyspareunia and vice versa, but in either case, somatic causes must be ruled out. Dyspareunia should not be diagnosed as such when a medical basis for the pain is found or when (in a woman) it is associated with vaginismus or with lack of lubrication.

Vaginismus is an involuntary and persistent constriction of the outer third of the vagina that prevents penile insertion and intercourse. The response may be demonstrated during a gynecological examination when involuntary vaginal constriction prevents introduction of the speculum into the vagina, although some women only have vaginismus during coitus.

Answers 20.17–20.19

20.17. The answer is C

20.18. The answer is G

20.19. The answer is B

In fetishism, the sexual focus is on objects (e.g., shoes, gloves, pantyhose, stockings) that are intimately associated with the human body. The particular fetish may be linked to someone involved closely with the patient during childhood and has some quality associated with that loved, needed, or even traumatizing person. *Voyeurism* is the recurrent preoccupation with fantasies and *acts that involve observing people who are naked or engaging in sexual activity*. Masturbation to orgasm usually occurs during or after the event. *Frotteurism* is usually characterized by the man's *rubbing up against a fully clothed woman to achieve orgasm*. The acts usually occur in crowded places, particularly subways and buses.

Transvestic fetishism is marked by *fantasies and sexual urges by heterosexual men to dress in female clothes for purposes of arousal* and as an adjunct to masturbation or coitus. Transvestic fetishism typically begins in childhood or early adolescence. As years pass, some men with transvestic fetishism want to dress and live permanently as women. Such persons are classified as persons with transvestic fetishism and gender dysphoria.

Answers 20.20–20.22

20.20. The answer is A

20.21. The answer is B

20.22. The answer is A



Table 20.2
Male Sexual Response Cycle^a

Organ	Excitement Phase	Orgasmic Phase	Resolution Phase
Skin	Just before orgasm: sexual flush inconsistently appears; maculopapular rash originates on abdomen and spreads to anterior chest wall, face, and neck and may include shoulders and forearms	Well-developed flush	Flush disappears in reverse order of appearance; inconsistently appearing film of perspiration on soles of feet and palms of hands
Penis	Erection in 10 to 30 sec caused by vasocongestion of erectile bodies of corpus cavernosa of shaft; loss of erection may occur with introduction of asexual stimulus, loud noise; with heightened excitement, size of glans and diameter of penile shaft increase further	Ejaculation; emission phase marked by three to four 0.8-sec contractions of vas, seminal vesicles, prostate; ejaculation proper marked by 0.8-sec contractions of urethra and ejaculatory spurt of 12 to 20 inches at age 18 years, decreasing with age to seepage at 70 years	Erection: partial involution in 5 to 10 sec with variable refractory period; full detumescence in 5 to 30 min
Scrotum and testes	Tightening and lifting of scrotal sac and elevation of testes; with heightened excitement, 50 percent increase in size of testes over unstimulated state and flattening against perineum, signaling impending ejaculation	No change	Decrease to baseline size because of loss of vasocongestion; testicular and scrotal descent within 5 to 30 min after orgasm; involution may take several hours if no orgasmic release takes place
Cowper's glands	2 to 3 drops of mucoid fluid that contain viable sperm are secreted during heightened excitement	No change	No change
Other	Breasts: inconsistent nipple erection with heightened excitement before orgasm Myotonia: semispastic contractions of facial, abdominal, and intercostal muscles Tachycardia: up to 175 beats/min Blood pressure: increase in systolic 20 to 80 Hg mm; in diastolic 10 to 40 Hg mm Respiration: increased	Loss of voluntary muscular control Rectum: rhythmical contractions of sphincter Heart rate: up to 180 beats/min Blood pressure: up to 40 to 100 Hg mm systolic; 20 to 50 Hg mm diastolic Respiration: up to 40 respirations a minute	Return to baseline state in 5 to 10 min

^aA desire phase consisting of sex fantasies and desire to have sex precedes the excitement phase.

Treatment of patients with sexual dysfunction tends to be short term and behaviorally oriented. Specific exercises are prescribed to help the couple with their particular problem. Sexual dysfunction often involves a fear of inadequate performance. Thus, couples are specifically prohibited from any sexual play other than that prescribed by the therapist. Initially, *intercourse is interdicted*, and couples learn to give and receive bodily pleasure without the pressure of performance. Beginning exercises usually focus on heightening sensory awareness to touch, sight, sound, and smell.

During those exercises, called *sensate focus exercises*, the couple is given much reinforcement to lessen anxiety. They are urged to use fantasies to distract them from obsessive concerns about performance, which is termed *spectatoring*. The needs of both the dysfunctional partner and the nondysfunctional partner are considered. If either partner becomes sexually excited by the exercises, the other is encouraged to bring him or her to orgasm by manual or oral means.

The specific exercises vary with differing presenting complaints, and special techniques are used to treat patients with

the various dysfunctions. In cases of premature ejaculation, an exercise known as the *squeeze technique* is used to raise the *threshold of penile excitability*. In that exercise, the man or the woman stimulates the erect penis until the earliest sensations of impending orgasm and ejaculation are felt. Penile stimulation is then stopped abruptly, and the coronal ridge of the penis is squeezed forcibly for several seconds. The technique is repeated several times. A variation is the stop-start technique in which stimulation is interrupted for several seconds but no squeeze is applied. Masturbation to the point of imminent orgasm raises the threshold of excitability to a more tolerant stimulation level.

Answers 20.23–20.27

20.23. The answer is B

20.24. The answer is B

20.25. The answer is B



Table 20.3
Female Sexual Response Cycle^a

Organ	Excitement Phase	Orgasmic Phase	Resolution Phase
Skin	Just before orgasm: sexual flush inconsistently appears; maculopapular rash originates on abdomen and spreads to anterior chest wall, face, and neck; can include shoulders and forearms	Well-developed flush	Flush disappears in reverse order of appearance; inconsistently appearing film of perspiration on soles of feet and palms of hands
Breasts	Nipple erection in two-thirds of women, venous congestion and areolar enlargement; size increases to one-fourth over normal	Breasts may become tremulous	Return to normal in about 0.5 hr
Clitoris	Enlargement in diameter of glans and shaft; just before orgasm, shaft retracts into prepuce	No change	Shaft returns to normal position in 5 to 10 sec; detumescence in 5 to 30 min; if no orgasm, detumescence takes several hours
Labia majora	Nullipara: elevate and flatten against perineum Multipara: congestion and edema	No change	Nullipara: increase to normal size in 1 to 2 min Multipara: decrease to normal size in 10 to 15 min
Labia minora	Size increased two to three times over normal; change to pink, red, deep red before orgasm	Contractions of proximal labia minora	Return to normal within 5 min
Vagina	Color change to dark purple; vaginal transudate appears 10 to 30 sec after arousal; elongation and ballooning of vagina; lower third of vagina constricts before orgasm	Three to 15 contractions of lower third of vagina at intervals of 0.8 sec	Ejaculate forms seminal pool in upper two-thirds of vagina; congestion disappears in seconds; if no orgasm, in 20 to 30 min
Uterus	Ascends into false pelvis; labor-like contractions begin in heightened excitement just before orgasm	Contractions throughout orgasm	Contractions cease, and uterus descends to normal position
Other	Myotonia A few drops of mucoid secretion from Bartholin's glands during heightened excitement Cervix swells slightly and is passively elevated with uterus	Loss of voluntary muscular control Rectum: rhythmical contractions of sphincter Hyperventilation and tachycardia	Return to baseline status in seconds to minutes Cervix color and size return to normal, and cervix descends into seminal pool

^aA desire phase consisting of sex fantasies and desire to have sex precedes excitement phase.

20.26. The answer is C

20.27. The answer is D

The DSM-IV-TR defines a four-phase sexual response cycle: phase 1, desire; phase 2, excitement; phase 3, orgasm; and phase 4, resolution.

The *desire phase* is distinct from any phase identified solely through physiology, and it reflects the psychiatrist's fundamental interest in motivations, drives, and personality. It is characterized by sexual fantasies and the desire to have sexual activity. The *excitement phase* is brought on by psychological stimulation (fantasy or the presence of a love object) or physiological stimulation (stroking or kissing) or a combination of the two. It consists of a subjective sense of pleasure. The excitement phase is characterized by penile tumescence, leading to erection in the man and by *vaginal lubrication* in the woman. Initial excitement may last several minutes to several hours. With continued stimulation, the woman's vaginal barrel shows a characteristic constriction along the outer third, known as the *orgasmic platform*, and the man's *testes increase in size 50 percent* and elevate.

The *orgasm phase* consists of a peaking of sexual pleasure, with the release of sexual tension and the rhythmic contraction of the perineal muscles and the pelvic reproductive organs. A subjective sense of ejaculatory inevitability triggers the man's orgasm. The forceful emission of semen follows. The male orgasm is also associated with four to five rhythmic spasms of the prostate, seminal vesicles, vas, and urethra. In women, orgasm is characterized by three to 15 involuntary contractions of the lower third of the vagina and by strong sustained contractions of the uterus, flowing from the fundus downward to the cervix. Blood pressure increases 20 to 40 mm (both systolic and diastolic), and the heart rate increases up to 160 beats/min. Orgasm lasts 3 to 25 seconds and is associated with a *slight clouding of consciousness*.

The *resolution phase* consists of the disgorgement of blood from the genitalia (*detumescence*), and detumescence brings the body back to its resting state. If orgasm occurs, resolution is rapid; if it does not occur, resolution may take 2 to 6 hours and may be associated with irritability and discomfort. Tables 20.2 (see p. 199) and 20.3 describe the male and female sexual response cycles.



Table 20.4
Classification of Intersexual Disorders^a

Syndrome	Description
Virilizing adrenal hyperplasia (adrenogenital syndrome)	Results from excess androgens in fetus with XX genotype; most common female intersex disorder; associated with enlarged clitoris, fused labia, hirsutism in adolescence
Turner's syndrome	Results from absence of second female sex chromosome (XO); associated with web neck, dwarfism, cubitus valgus; no sex hormones produced; infertile; usually assigned as females because of female-looking genitals
Klinefelter's syndrome	Genotype is XXY; male habitus present with small penis and rudimentary testes because of low androgen production; weak libido; usually assigned as male
Androgen insensitivity syndrome (testicular feminization syndrome)	Congenital X-linked recessive disorder that results in inability of tissues to respond to androgens; external genitals look female, and cryptorchid testes present; assigned as females even though they have XY genotype; in extreme form, patient has breasts, normal external genitals, short blind vagina, and absence of pubic and axillary hair
Enzymatic defects in XY genotype (e.g., 5- α -reductase deficiency, 17-hydroxysteroid deficiency)	Congenital interruption in production of testosterone that produces ambiguous genitals and female habitus; usually assigned as female because of female-looking genitalia
Hermaphroditism	True hermaphrodite is rare and characterized by both testes and ovaries in same person (may be 46 XX or 46 XY)
Pseudohermaphroditism	Usually the result of endocrine or enzymatic defect (e.g., adrenal hyperplasia) in persons with normal chromosomes; female pseudohermaphrodites have masculine-looking genitals but are XX; male pseudohermaphrodites have rudimentary testes and external genitals and are XY; assigned as males or females, depending on morphology of genitals

^aIntersexual disorders include a variety of syndromes that produce persons with gross anatomical or physiological aspects of the opposite sex.

Answers 20.28–20.32

20.28. The answer is B

20.29. The answer is C

20.30. The answer is A

20.31. The answer is A

20.32. The answer is D

Sexual identity is the pattern of a person's biological sexual characteristics: *chromosomes*, external and internal genitalia, hormonal composition, *gonads*, and *secondary sex characteristics*. In normal development, these characteristics form a cohesive pattern that leaves persons in no doubt about his or her sex.

Gender identity is a person's *sense of maleness or femaleness*. By the age of 2 or 3 years, almost everyone has a firm conviction that "I am male" or "I am female." Gender identity results from an almost infinite series of clues derived from experiences with family members, peers, and teachers and from cultural phenomena. For instance, male infants tend to be handled more vigorously, and female infants to be cuddled more.

Sexual orientation describes the *object of a person's sexual impulses*: heterosexual (opposite sex), homosexual (same sex), or bisexual (both sexes). In the United States, research indi-

cates that 2.8 percent of men and 1.4 percent of women identify themselves as homosexual. These numbers are compatible with figures from Western European countries as well. However, a higher percentage of persons have had at least one same-sex experience in their lives. Additionally, gay people more typically settle in urban areas, so the incidence of homosexuality in some large cities is as high as 9 or 10 percent.

Sexual behavior includes *desire*, *fantasies*, pursuit of partners, autoeroticism, and all the activities engaged in to express and gratify sexual needs. It is an amalgam of psychological and physiological responses to internal and external stimuli.

Answers 20.33–20.38

20.33. The answer is E

20.34. The answer is C

20.35. The answer is A

20.36. The answer is B

20.37. The answer is D

20.38. The answer is F

See Table 20.4 for classification of intersexual disorders.



Gender Identity Disorders

The fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) and the text revised fourth edition of the DSM (DSM-IV-TR) define gender identity disorders as a group whose common feature is a strong, persistent preference for living as a person of the other sex. The affective component of gender identity disorders is gender dysphoria, which is discontent with one's designated birth sex and a desire to have the body of the other sex and to be regarded socially as a person of the other sex. Gender identity disorder in adults was referred to in early versions of the DSM as *transsexualism*.

Interest in gender identity disorders grew from several sources. Behaviors distinguished between male and female children are a focus of developmental psychologists studying con-

ventional patterns of psychosexual differentiation. Transsexuals became popularly known with the sex change of George Jorgensen into Christine Jorgensen in 1952. The 1966 book by Harry Benjamin, the pioneer who evaluated or treated many hundreds of patients, and the introduction of sex reassignment surgery at the Johns Hopkins Hospital in that year were great strides in transsexualism's medical recognition and treatment. Work with sexually atypical adults, including transsexuals and homosexuals who recalled extensive cross-gender behavior in childhood, brought clinical interest to this area.

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

Students should know the gender identity syndromes and terms listed below.

- | | | | |
|--------------------------------------|--|-------------------------------|---------------------------------------|
| ▶ adrenogenital syndrome | ▶ cryptorchid testis | ▶ homosexual orientation | ▶ sex steroids |
| ▶ agenesis | ▶ dysgenesis | ▶ hormonal treatment | ▶ sexual object choice |
| ▶ ambiguous genitals | ▶ effeminate boys and
masculine girls | ▶ intersex conditions | ▶ testicular feminization
syndrome |
| ▶ androgen insensitivity
syndrome | ▶ gender confusion | ▶ Klinefelter's syndrome | ▶ transsexualism |
| ▶ asexual | ▶ gender identity | ▶ male habitus | ▶ transvestic fetishism |
| ▶ assigned sex | ▶ disorder not otherwise
specified | ▶ phenotype | ▶ Turner's syndrome |
| ▶ Barr chromatin body | ▶ gender role | ▶ prenatal androgens | ▶ virilized genitals |
| ▶ bisexuality | ▶ genotype | ▶ pseudohermaphroditism | ▶ X-linked |
| ▶ buccal smear | ▶ hermaphroditism | ▶ rough-and-tumble play | |
| ▶ cross-dressing | ▶ heterosexual orientation | ▶ sex of rearing | |
| ▶ cross-gender | | ▶ sex-reassignment
surgery | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

21.1. Which of the following is true?

- Girls with congenital virilizing adrenal hyperplasia are less interested in dolls.
- Polycystic ovaries has not been considered as associated with transsexualism.
- Mothers, more than fathers, give negative responses to boys playing with dolls.

- Boys with gender identity disorders (GIDs) are more likely to be right-handed than control boys.
- Boys with GID generally tend to have more sisters than brothers.

21.2. In a patient with Turner's syndrome, all of the following are common findings *except*

- atypical female sex identification
- gonadal dysgenesis
- female genitalia
- small uterus
- dyspareunia

21.3. Sex reassignment

- A. is often the best solution in treating gender dysphoria
- B. usually involves a full-time social transition to living in the desired gender before hormonal treatment
- C. includes daily doses of oral estrogen in persons born male
- D. may involve sex reassignment surgery
- E. all of the above

21.4. Gender constancy

- A. is a task of separation-individuation
- B. has no age-related stage-like sequence because it is inherent
- C. includes a sense of “gender stability”
- D. cannot be tested in the clinical situation
- E. none of the above

21.5. In patients born with ambiguous genitalia, which of the following is the predominant factor by which assigned sex is determined?

- A. Wishes of the parents
- B. Genetic phenotype and potential for reproduction
- C. Extent of virilization
- D. Surgical team capabilities
- E. Wishes of the patient at the time of puberty

21.6. A boy with gender identity disorder

- A. usually begins to display signs of the disorder after age 9 years
- B. experiences sexual excitement when he cross-dresses
- C. has boys as his preferred playmates
- D. is treated with testosterone
- E. may say that his penis or testes are disgusting

21.7. Girls with gender identity disorder in childhood

- A. regularly has male companions
- B. may refuse to urinate in a sitting position
- C. may assert that she has or will grow a penis
- D. may give up masculine behavior by adolescence
- E. all of the above

21.8. In biological men undertaking estrogen hormone treatment, all of the following side effects are common *except*

- A. testicular atrophy
- B. change in pitch of voice
- C. diminished erectile capacity
- D. breast enlargement
- E. decrease in density of body hair

21.9. True statements about the epidemiology of gender identity disorders include

- A. As many as five boys are referred for each girl referred.
- B. Among a sample of 4- to 5-year-old boys referred for a range of clinical problems, the reported desire to be the opposite sex was 15 percent.

- C. Most parents of children with gender identity disorder report that cross-gender behaviors were apparent before age 3 years.
- D. The prevalence rate of transsexualism is estimated to be about one case per 10,000 males.
- E. All of the above

21.10. Which of the following statements does *not* apply to the treatment of gender identity disorder?

- A. Adult patients generally enter psychotherapy to learn how to deal with their disorder, not to alter it.
- B. Before sex-reassignment surgery, patients must go through a trial of cross-gender living for at least 3 months.
- C. A one-to-one play relationship is used with boys in which adults’ role model masculine behavior.
- D. Hormonal therapy is not required as a preceding event in sex-reassignment surgery.
- E. During hormonal treatments, both males and females need to be watched for hepatic dysfunction and thromboembolic phenomena.

Directions

The lettered headings below are followed by a list of numbered statements. For each numbered statement, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 21.11–21.15

- A. Klinefelter’s syndrome
- B. Turner’s syndrome
- C. Congenital virilizing adrenal hyperplasia
- D. True hermaphroditism
- E. Androgen insensitivity syndrome

21.11. A 17-year-old girl presented to a clinic with primary amenorrhea and no development of secondary sex characteristics. She was short in stature and had a webbed neck.

21.12. A baby was born with ambiguous external genitalia. Further evaluation revealed that both ovaries and testes were present.

21.13. A baby was born with ambiguous external genitalia. Further evaluation revealed that ovaries, a vagina, and a uterus were normal and intact.

21.14. A buccal smear from a phenotypically female patient revealed that the patient was XY. A further workup revealed undescended testes.

21.15. A tall, thin man presented for infertility problems was found to be XXY.

ANSWERS**21.1. The answer is A**

Evidence for hormonal influence in gender identity disorder (GID) derives from several sources. *Girls with congenital*

virilizing adrenal hyperplasia overproduce adrenal androgen in utero and, *as girls, are less interested in dolls* and more likely to be considered tomboys than girls who do not have the disorder. Reports describe *polycystic ovaries as more common in female-to-male transsexuals than in the typical female population*. In social learning theories that focus on the differential reinforcement of sex-typed behavior by parents, starting shortly after birth, *it has been noted that fathers, more than mothers, give negative responses to boys playing with dolls*. Handedness may relate to prenatal sex steroid levels, and *boys with GID are significantly more likely to be left-handed than control boys*. Similarly, *boys with GID have been reported to have significantly more brothers than sisters*.

21.2. The answer is A

Patients with Turner's syndrome have typical female identification. The majority report heterosexual identification, although they tend to have fewer sexual relationships. During adolescence, many patients have difficulties reading social cues and experience social isolation and anxiety. Most patients with Turner's syndrome have *gonadal dysgenesis* and require exogenous estrogen to complete growth and develop secondary sex characteristics. However, in patients with 45,X0/46,XX mosaicism, spontaneous menarche is common (40 percent), and in rare cases, pregnancy is possible. These patients typically experience ovarian failure at a later date. *Patients with Turner's syndrome have female genitalia. The uterus may be small*, but structural abnormalities are not typical. *The lack of estrogen may shorten the vagina and contribute to dyspareunia*.

21.3. The answer is E (all)

No drug treatment has been shown to be effective in reducing cross-gender desire, and when *gender dysphoria is severe and intractable, sex reassignment may be the best solution*. This involves an extensive set of clinical management guidelines, and many clinicians *require that the patient begin the Real Life Test or Real Life Experience before hormonal treatment*. The Real Life Test is typically 1 to 2 years of full-time cross-gender living, including at least 1 year of employment in the desired gender role and 1 year on high doses of cross-sex hormones. *For biological males, this includes high doses of oral estrogens*; biological women are treated with monthly or three weekly injections of testosterone. *Sex reassignment surgery* is often the last stage in the reassignment process.

21.4. The answer is C

Gender constancy is a *Piagetian construct of the constancy of gender and its possibility to change by altering superficial characteristics*. It is *not described by Mahler in separation-individuation*. It *involves an age-related stage-like sequence*, in which children first self-categorize the gender of self and others, "gender identity," and then appreciate its invariance over time, "gender stability." Finally, it involves understanding that invariance in the face of superficial transformations of gender, such as changing sex-typed clothing or hair length. Although no psychological test is diagnostic of gender identity disorder (GID) in children, *the It-Scale for Children and the Draw-A-Person test have been used to assess GID in the clinical situation*.

21.5. The answer is B

In patients born with ambiguous genitalia, *the determination of genetic phenotype and considerations for reproduction generally dominates other factors in the designation of assigned sex*. Decision making in this area of pediatric urology is multifactorial, requiring biological, surgical, and social factors to be evaluated. Controversy surrounds pediatric sex assignment because among many other factors, decisions are most often made without patient or parent input. Some in the lay community advocate *waiting until puberty before making an assignment* to allow the patient to make the determination. Surgeons tend to support earlier intervention, generally before 5 years of age.

A 2006 survey by the American Academy of Pediatrics produced consensus data around two standard cases. In the case of a genetic female (XX) who had been exposed to excess androgen and had virilized genitalia (i.e., Prader V 46XX with congenital adrenal hyperplasia), 99 percent of the pediatric urologists agreed that female assignment would be preferred, the foremost reason being the potential for reproduction. The lack of exogenous steroids and overall better outcomes with female assignment were also cited. If required, surgery was advised to take place between 3 and 18 months of age.

In the case of a genetic male (XY) with cloacal exstrophy with rudimentary phallic structures, 70 percent of pediatric urologists concurred that a male assignment would be optimal. The effect of androgens on the development of the male nervous system was cited as the foremost reason. The desire not to remove both gonads and fertility were also prominent. Physicians who designated female assignment cited difficulty with creating a functional phallus as a reason. Of note, one study found that more than 50 percent of these patients assigned female sex with gonadectomy desired reassignment to male at a later date, therefore calling into question the validity of surgical capability as a dominant criteria in this case.

21.6. The answer is E

A boy with gender identity disorder (GID) *may say that his penis or testes are disgusting* and that he would be better off without them. Persons with this disorder *usually begin to display signs of the disorder before age 4 years (not after age 9 years)*, although it may present at any age. Cross-dressing may be part of the disorder, but *boys do not experience sexual excitement when they cross-dress*. A boy with a GID is generally preoccupied with female stereotypical activities and usually *has girls (not boys) as his preferred playmates*. Patients with GID *are not treated with testosterone*.

21.7. The answer is E (all)

Girls with gender identity disorder (GID) in childhood *regularly have male companions* and an avid interest in sports and rough-and-tumble play; they show no interest in dolls and playing house. In a few cases, a girl with this disorder *may refuse to urinate in a sitting position, may assert that she has or will grow a penis*, does not want to grow breasts or menstruate, and says that she will grow up to become a man. Girls with GID in childhood *may give up masculine behavior by adolescence*.

21.8. The answer is B

The pitch of the male voice is determined primarily by the resonance and volume of the chest and not affected by estrogen treatment. Speech therapy can be undertaken to achieve a more feminine pitch, and laryngeal surgery is an option, although the range may be decreased by the procedure. Biological men undergoing hormonal treatment with daily doses of estrogen can expect the *enlargement of breast tissue, testicular atrophy, decreased libido, diminished erectile tissue, and decreased body hair.* Facial hair most often requires electrolysis. Maximal breast tissue development is generally achieved within 2 years of hormonal treatment, and surgical augmentation may be required to achieve aesthetic goals. In addition to estrogen, a variety of anti-androgenic compounds (cyproterone acetate, flutamide, spironolactone) and gonadectomy can be used to counter the effects of testosterone.

21.9. The answer is E (all)

The prevalence of the gender identity disorder (GID) of childhood can only be estimated because no epidemiological studies have been published. A rough estimate can be obtained from two items on Thomas Achenbach's Child Behavior Checklist that are consistent with components of the diagnosis: behaves like opposite sex and wishes to be of opposite sex. In one study, among a sample of 4- to 5-year-old boys referred for a range of clinical problems, the reported desire to be of the opposite sex was 15 percent. Among 4- to 5-year-old boys not referred for behavioral problems, it was only 1 percent. For ages 6 to 7 years, the rates were 2.7 and 0 percent; for ages 8 to 9 years, 5.1 and 0 percent; and for ages 10 to 11 years, 1.1 and 2.3 percent. For clinically referred girls, there was more uniformity across the ages, with the highest being 8 percent at age 9 and the lowest being 4 percent for other ages. For nonreferred girls, the highest rate was 5 percent at ages 4 to 5 years and less than 3 percent for other ages.

As many as five boys are referred for each girl referred, for which several explanations are possible. First, there is greater parental concern with sissiness than with tomboyishness, and greater peer group stigma attaches to substantial cross-gender behavior in boys. Thus, there may be an equal prevalence of GID in boys and girls but a differential referral rate. Another possibility is that a genuine disparity results from males' more perilous developmental course. The fundamental mammalian state is female. No sex hormones are required for prenatal female anatomical development (XO children with gonadal dysgenesis [Turner's syndrome] appear female at birth). However, sex hormones are required at critical developmental times for male anatomical differentiation. If the mechanisms of behavioral development track anatomical development, the masculine behavioral system requires adequate levels of hormones at the appropriate time for normative expression. Finally, the psychodynamic developmental model explaining the disparate referral rates views both boys and girls as initially identifying with the female parent, with only boys needing to make the developmental shift for later normative male identification.

Most children with a GID are referred for clinical evaluation in early grade school. Parents typically report that *cross-gender behaviors were apparent before age 3 years.*

There is no basis for estimating the proportion of adults who would qualify for a DSM-IV-TR diagnosis of GID. The only relevant data are for transsexuals, who comprise only a subgroup of gender-dysphoric adults, and even them, figures may be underestimated. The available data (from the United Kingdom, the Netherlands, Sweden, and Australia) place *the prevalence rate of transsexualism* at about one case per 10,000 males and one in 30,000 females.

21.10. The answer is D

Hormone treatment is required and must be received by patients for about 1 year before sex-reassignment surgery, with estradiol and progesterone in male-to-female changes and testosterone in female-to-male changes. Many transsexuals like the changes in their bodies that occur as a result of that treatment, and some stop at that point, not progressing to surgery. Another requirement before sex-reassignment surgery is that patients *must go through a trial of cross-gender living for at least 3 months* and in many cases up to 1 year. *Adult patients generally enter psychotherapy to learn how to deal with their condition, not to alter it.* In boys with gender identity disorder, a one-to-one play relationship is used, in which *adults or peers role model masculine behavior.* During hormonal treatments, both males and females need to be watched for hepatic dysfunction and thromboembolic phenomena.

Answers 21.11–21.15**21.11. The answer is B****21.12. The answer is D****21.13. The answer is C****21.14. The answer is E****21.15. The answer is A**

In *Turner's syndrome* (Figure 21.1), one sex chromosome is missing (XO). The result is an absence (agenesis) or minimal development (dysgenesis) of the gonads; no significant sex hormones, male or female, are produced in fetal life or postnatally. The sexual tissues remain in a female resting state. Because the second X chromosome, which seems to be responsible for full femaleness, is missing, these girls have an incomplete sexual anatomy and, lacking adequate estrogens, have *amenorrhea and develop no secondary sex characteristics* without treatment. They often have other stigmata, such as a webbed neck, low posterior hairline margin, short stature, and cubitus valgus. Infants are born with normal-appearing female external genitals and so are unequivocally assigned to the female sex and are so reared. All of the children develop as unremarkably feminine, heterosexually oriented girls.

True hermaphroditism is characterized by the presence of both ovaries and testes in the same person. The genitals' appearance at birth determines the sex assignment, and the core gender identity is male, female, or hermaphroditic, depending on the family's conviction about the child's sex. Usually, a panel of experts determines the sex of rearing; they base their



FIGURE 21.1

A patient with Turner's syndrome. The main characteristics are a webbed neck, short stature, broad chest, and absence of sexual maturation. (Reprinted with permission from Sadler T. *Langman's Medical Embryology*. 5th ed. Baltimore: Williams & Wilkins; 1985:121.)

decision on buccal smears, chromosome studies, and parental wishes.

Congenital virilizing adrenal hyperplasia results from an excess of androgen acting on the fetus. When the condition occurs in girls, excessive fetal androgens from the adrenal gland

cause *ambiguous external genitals*, ranging from mild clitoral enlargement to external genitals that look like a normal scrotal sac, testes, and a penis, but they also have ovaries, a vagina, and a uterus.

Androgen insensitivity syndrome, a congenital X-linked recessive-trait disorder, results from an inability of the target tissues to respond to androgens. Unable to respond, the fetal tissues remain in their female resting state, and the central nervous system (CNS) is not organized as masculine. The infant at birth *appears to be female*, although she is later found to have *undescended testes*, which produce the testosterone to which the tissues do not respond, and minimal or absent internal sexual organs. Secondary sex characteristics at puberty are female because of the small but sufficient amounts of estrogens typically produced by the testes. The patients invariably sense themselves to be female and are feminine. They are clinically considered to be female. Intersex conditions, such as androgen insensitivity syndrome and congenital adrenal hyperplasia, are diagnosed as gender identity disorders not otherwise specified.

In *Klinefelter's syndrome*, the person (usually XXY) has a male habitus, under the influence of the Y chromosome, but the effect is weakened by the second X chromosome. Although the patient is born with a penis and testes, the testes are small and *infertile*, and the penis may also be small. Beginning in adolescence, some patients develop gynecomastia and other feminine-appearing contours. Their sexual desire is usually weak. Sex assignment and rearing should lead to a clear sense of maleness, but the patients often have gender disturbances, ranging from transsexualism to an intermittent desire to put on women's clothes. As a result of lessened androgen production, the fetal hypogonadal state in some patients seems to have interfered with the completion of the CNS organization that should underlie masculine behavior. In fact, patients may have any of a wide variety of neuro- and psychopathologies, ranging from emotional instability to mental retardation.



Eating Disorders

Eating disorders are disorders of eating behaviors; associated thoughts, emotions, and attitudes; and their resulting physiological impairments. They have been present in various forms for thousands of years with a particular increase of prevalence since the 1950s. Eating disorders have some of the highest premature mortality rates in psychiatry—up to 19 percent within 20 years of onset among those initially requiring hospitalization. There are three major categories of eating disorders: anorexia nervosa; bulimia nervosa; and eating disorders not otherwise specified, which includes binge eating disorder. Partial and subclinical syndromes are abundant, and transitions between them are common (i.e., from anorexia nervosa to bulimia nervosa, full syndromes to subclinical syndromes).

Anorexia nervosa is defined as occurring at onset in a person, usually an adolescent girl, who refuses to maintain a minimally normal body weight, fears gaining weight, and has a disturbed perception of body shape and size. Bulimia nervosa is characterized by a person engaging in binge eating and using inappropriate and dangerous compensatory methods, such as induced vomiting or use of laxatives, to prevent weight gain. Besides those who clearly fit diagnostic criteria for these disorders, many others

may exhibit various aspects and degrees of them. Bulimia nervosa is more common than anorexia nervosa.

Anorexia nervosa and bulimia nervosa are strikingly similar in some regards but differ dramatically in others. Students need to be aware of these differences as well as of the various treatments available. Family therapy has traditionally been considered a mainstay of treatment, especially with younger anorexic patients. Treatment in some severe cases of both disorders is ineffective, and death can result.

Obesity is a growing global epidemic that has resulted in an increase in associated morbidity and mortality. Obesity is a chronic illness in which the person has an excess of body fat. Although the manifestation and comorbid states of obesity are mainly physical, it has many psychological ramifications. Metabolic syndrome is characterized by a cluster of metabolic abnormalities associated with obesity and contributes to an increased risk of cardiovascular disease and type II diabetes. The cause of the syndrome is unknown, but obesity, insulin resistance, and genetic vulnerability are involved.

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

- | | | | |
|---------------------------------|---|-------------------------|---------------------------------|
| ▶ ACTH | ▶ BMI | ▶ hyperphagia | ▶ night eating syndrome |
| ▶ amenorrhea | ▶ bulimia nervosa | ▶ hypersexuality | ▶ obesity |
| ▶ anorexia nervosa | ▶ compulsive eating | ▶ hypersomnia | ▶ obsessive-compulsive disorder |
| ○ food-restricting type | ▶ Cushing's syndrome | ▶ hypokalemic alkalosis | ▶ Pickwickian syndrome |
| ○ binge eating and purging type | ▶ diuretic abuse | ▶ hypothermia | ▶ post-binge anguish |
| ▶ aversive conditioning | ▶ dynamic psychotherapy | ▶ Kleine-Levin syndrome | ▶ purging |
| ▶ behavior therapy | ▶ eating disorder not otherwise specified | ▶ Klüver-Bucy syndrome | ▶ pyloric stenosis |
| ▶ binge eating disorder | ▶ family therapy | ▶ laxative abuse | ▶ satiety |
| | ▶ geophagia | ▶ Metabolic Syndrome | |
| | | ▶ MHPG | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

22.1. Anorexia nervosa has a mortality rate of up to approximately

- A. 1 percent
- B. 18 percent
- C. 30 percent
- D. 42 percent
- E. 50 percent

- 22.2.** Characteristic results in anorexia nervosa include
- A. decreased serum cholesterol levels
 - B. decreased serum salivary amylase concentrations
 - C. ST-segment and T-wave changes on electrocardiography
 - D. increased fasting serum glucose concentrations
 - E. all of the above
- 22.3.** Features associated with anorexia nervosa include
- A. onset between the ages of 10 and 30 years
 - B. mortality rates of 20 to 25 percent
 - C. the fact that 7 to 9 percent of those affected are male
 - D. normal hair structure and distribution
 - E. all of the above
- 22.4.** Which of the following is the most common comorbid disorder associated with anorexia nervosa?
- A. Body dysmorphic disorder
 - B. Bulimia
 - C. Depression
 - D. Obsessive-compulsive disorder
 - E. Social phobia
- 22.5.** Which of the following percentages below expected weight does an anorexic patient generally fall before being recommended for inpatient hospitalization?
- A. 20 percent
 - B. 40 percent
 - C. 60 percent
 - D. 80 percent
 - E. None of the above
- 22.6.** Treatments that have shown some success in ameliorating anorexia nervosa include
- A. cyproheptadine
 - B. electroconvulsive therapy
 - C. chlorpromazine
 - D. fluoxetine
 - E. all of the above
- 22.7.** A young woman who weighed about 10 percent above the average weight but was otherwise healthy, functioning well, and working hard as a university student joined a track team. She started training for hours a day, more than her teammates, and began to perceive herself as fat and thought that her performance would be enhanced if she lost weight. She started to diet and reduced her weight to 87 percent of the “ideal weight” for her age according to standard tables. She started to feel apathetic and morbidly afraid of becoming fat. Her food intake became restricted, and she stopped eating anything containing fat. Her menstrual periods became skimpy and infrequent but did not cease, and she was not taking oral contraceptives. The diagnosis of anorexia nervosa can be made for the above patient because
- A. she did not reach less than 85 percent of “expected weight”
 - B. she restricted her food intake
 - C. she retained some menstrual functioning
 - D. she joined the track team
 - E. she started out 10 percent above the average weight
- 22.8.** Patients with “atypical anorexia nervosa”
- A. have a distorted body image
 - B. recognize their thinness
 - C. respond poorly to treatment
 - D. have less favorable outcomes
 - E. none of the above
- 22.9.** Which of the following features can be associated with bulimia nervosa?
- A. Undeveloped breasts
 - B. Abnormal insulin secretion
 - C. Widespread endocrine disorder
 - D. A previous episode of anorexia nervosa
 - E. Body weight at least 15 percent below normal
- 22.10.** Which of the following is *not* an endocrine or structural change noted as a result of starvation?
- A. Thyroid suppression
 - B. Increased total brain volume
 - C. Hypercortisolemia
 - D. Gonadotropin-releasing hormone suppression
 - E. Enlarged ventricles
- 22.11.** Biological complications of eating disorders may include
- A. salivary gland and pancreatic inflammation
 - B. gastric or esophageal tearing or rupture
 - C. cardiac arrhythmias, loss of cardiac muscle, and cardiomyopathy
 - D. leukopenia
 - E. all of the above
- 22.12.** Medical complications of eating disorders related to weight loss include all of the following *except*
- A. abnormal taste sensation
 - B. bradycardia
 - C. constipation and delayed gastric emptying
 - D. erosion of dental enamel with corresponding decay
 - E. osteoporosis
- 22.13.** Patients who binge eat but do not compensate in any way afterward are most likely to have
- A. anorexia nervosa
 - B. bulimia nervosa
 - C. binge eating disorder
 - D. obesity
 - E. night eating syndrome

- 22.14.** Pickwickian syndrome is
- when persons eat excessively after they have had their evening meal
 - binge eating without the inappropriate compensatory behaviors
 - when a person is 100 percent over desirable weight with cardiorespiratory pathology
 - when persons feel their bodies are grotesque and loathsome
 - sudden, compulsive ingestion of very large amounts of food in a short time
- 22.15.** Ipecac intoxication is associated with
- pericardial pain and cardiac failure
 - dyspnea
 - generalized muscle weakness
 - hypotension
 - all of the above
- 22.16.** Which of the following is *true* of eating disorders in relation to obesity?
- Binge eating disorder is more common than bulimia nervosa in obese patients.
 - All bulimic persons are obese.
 - Patients with bulimia nervosa have lower rates of psychopathology than obese patients.
 - All of the above
 - None of the above
- 22.17.** A 17-year-old young woman presents to clinic reporting anhedonia, decreased energy, and hopeless feelings for the past 2 years. She denies drinking, smoking, or use of recreational drugs. Her physical examination results are normal, and she denies suicidal ideations. After some consideration, her psychiatrist decides to prescribe her bupropion. Of the following, which is a contraindication for usage of bupropion?
- Smoking
 - Dysthymia
 - Chronic fatigue syndrome
 - Bulimia
 - None of the above
- 22.18.** Social isolation
- 22.19.** Tend to have family members who are obese
- 22.20.** Calorie consumption is usually below 500 calories per day
- 22.21.** Overexercising
- 22.22.** Has similar features to bulimia nervosa without anorexia nervosa
- Questions 22.23–22.30**
- Anorexia nervosa
 - Bulimia nervosa
- 22.23.** Severe weight loss and amenorrhea
- 22.24.** Visual agnosia, compulsive licking and biting, hypersexuality
- 22.25.** After 5 to 10 years, at least 50 percent will be markedly improved
- 22.26.** Higher fatality rate
- 22.27.** Family therapy is not widely used
- 22.28.** Cognitive behavioral therapy is the benchmark, first-line treatment
- 22.29.** Decreased appetite only occurs in the most severe stages
- 22.30.** Body weight of less than 85 percent of the patient's expected weight
- Questions 22.31–22.35**
- Bulimia nervosa
 - Binge eating disorder
- 22.31.** Patients are almost as likely to be male as female.
- 22.32.** Binges include high carbohydrates and sugars.
- 22.33.** Binge eating begins before dieting.
- 22.34.** Eating is in response to unpleasant emotions.

ANSWERS

22.1. The answer is B

Most studies show that anorexia nervosa has a range of mortality rates from 5 percent to *18 percent*. Indicators of a favorable outcome are admission of hunger, lessening of denial and immaturity, and improved self-esteem. Such factors as childhood neuroticism, parental conflict, bulimia nervosa, vomiting, laxative abuse, and various behavioral manifestations (e.g., obsessive-compulsive, hysterical, depressive, psychosomatic, neurotic, and denial symptoms) have been related to poor outcome in some studies but not in others.

22.2. The answer is C

No laboratory tests can provide a diagnosis of anorexia nervosa. The medical phenomena present in this disorder result from the starvation or purging behaviors. However, several relevant laboratory tests should be obtained in these patients. A complete blood count often reveals leukopenia with a relative lymphocytosis in emaciated anorexia nervosa patients. If binge eating and purging are present, serum electrolytes will reveal hypokalemic alkalosis. *Fasting serum glucose concentrations are often low (not increased) during the emaciated phase, and serum salivary amylase concentrations are often elevated (not decreased) if*

Directions

Each set of lettered headings below is followed by a list of numbered words or phrases. For each numbered word or phrase, select

- if the item is associated with A only.
- if the item is associated with B only.
- if the item is associated with both A and B.
- if the item is associated with neither A nor B.

Questions 22.18–22.22

- Anorexia nervosa, food-restricting type
- Anorexia nervosa, binge eating and purging type

the patient is vomiting. An *electrocardiogram may show ST-segment and T-wave changes*, which are usually secondary to electrolyte disturbances; emaciated patients will have hypotension and bradycardia. Adolescents may have an *elevated (not decreased) serum cholesterol level*. All of these values revert to normal with nutritional rehabilitation and cessation of purging behaviors. Endocrine changes that occur, such as amenorrhea, mild hypothyroidism, and hypersecretion of corticotrophin-releasing hormone, are attributable to the underweight condition and revert to normal with weight gain.

22.3. The answer is A

Features associated with anorexia nervosa include *onset between the ages of 10 and 30 years; lanugo (neonatal-like body hair), not normal hair structure and distribution; mortality rates of 5 to 18 percent (not 20 to 25 percent); and the fact that 4 to 6 percent (not 7 to 9 percent) of those affected are male*.

22.4. The answer is C

The diagnostic challenges of eating disorders are only partly addressed when a specific eating disorder is identified because in the large majority of cases, comorbid psychiatric disorders accompany the eating disorder, with two to four separate additional diagnoses on Axis I or II of the text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR)* commonly seen. *Anorexia nervosa is associated with depression in 65 percent of cases, social phobia in 34 percent of cases, and obsessive-compulsive disorder in 26 percent of cases*. There is also a high comorbidity of anorexia nervosa with *body dysmorphic disorder*—estimated at 20 percent—in which patients additionally have obsessional preoccupations regarding specific body parts not related to weight or shape in particular.

22.5. The answer is A

In general, *anorexia nervosa patients who are 20 percent below the expected weight for their height are recommended for inpatient hospital programs*, and patients who are 30 percent below their expected weight require psychiatric hospitalization for 2 to 6 months. The decision to hospitalize a patient is based on the patient's medical condition and the amount of structure needed to ensure patient cooperation. The first consideration in the treatment of anorexia nervosa is to restore patients' nutritional state; dehydration, starvation, and electrolyte imbalances can seriously compromise health and, in some cases, lead to death.

22.6. The answer is E (all)

Medications can be useful adjuncts in the treatment of anorexia nervosa. The first drug used in treating anorexic patients was *chlorpromazine (Thorazine)*. This medication is particularly helpful for severely ill patients who are overwhelmed with constant thoughts of losing weight and behavioral rituals for losing weight. There are few double-blind controlled studies to definitively prove this drug's effectiveness for calming such patients and inducing needed weight gain. *Cyproheptadine (Periactin)* in high dosages (up to 28 mg a day) can facilitate weight gain in anorectic restrictors and also has an antidepressant effect. Some recent studies indicate that *fluoxetine (Prozac)* may be effective in preventing relapse in patients with anorexia nervosa.

Amitriptyline (Elavil) has been reported to have some benefit in patients with anorexia nervosa, as have imipramine (Tofranil) and desipramine (Norpramin). There is some evidence that *electroconvulsive therapy (ECT)* is beneficial in certain cases of anorexia nervosa associated with major depressive disorder.

22.7. The answer is B

Most experienced eating disorder clinicians would diagnosis the patient above with anorexia nervosa, restrictor subtype, because *she restricted her food intake* and she pushed herself hard in her training, even harder than her teammates on *the track team*, because she feared she was becoming fat and her performance on the track team was in jeopardy. She does not meet the strict "letter of the law" for anorexia nervosa, but she does meet all of the core clinical psychopathological and behavioral criteria for anorexia nervosa. However, under strict DSM-IV-TR criteria, this patient would be diagnosed as having an eating disorder not otherwise specified because *she did not reach less than 85 percent of "expected weight" and still retain some menstrual functioning*.

22.8. The answer is B

The term *atypical anorexia* has been applied to patients who *recognize their thinness*, in contrast to those with typical anorexia nervosa, who insist that *their body image distortions* represent objective fact. Prognostically, those with recognition of their extreme thinness have *better (not poorer) responses to treatment and more (not less) favorable outcomes* because they are not constantly fighting an inaccurate view of themselves as being heavy. In most patients, body weight is tightly tied to self-esteem.

22.9. The answer is D

A previous episode of anorexia nervosa is often associated with bulimia nervosa. This episode may have been fully or only moderately expressed.

Underdeveloped and underdeveloped breasts, abnormal insulin secretion, widespread endocrine disorder, and body weight at least 15 percent below normal are all associated with anorexia nervosa, not bulimia nervosa.

22.10. The answer is B

Endogenous opiates may contribute to the denial of hunger in patients with anorexia nervosa. Preliminary studies show dramatic weight gains in some patients given opiate antagonists. Starvation results in many biochemical changes, some of which are also present in depression, such as *hypercortisolemia* and nonsuppression by dexamethasone. *Thyroid function is suppressed as well*. These abnormalities are corrected by re-alimentation. Starvation produces amenorrhea, which reflects *lowered hormonal levels (luteinizing, follicle-stimulating, and gonadotropin-releasing hormones)*. Some anorexia nervosa patients, however, become amenorrheic before significant weight loss. Several computed tomography studies reveal *enlarged cerebrospinal fluid spaces (enlarged sulci and ventricles)* in anorectic patients during starvation, a finding that is reversed by weight gain. Although *decreases in total brain volume* and increases in brain ventricular size are usually seen, normal brain

structural studies may also be seen in some very malnourished patients.

22.11. The answer is E (all)

Most of the physiological and metabolic changes in anorexia nervosa are secondary to the starvation state or purging behaviors. These changes usually revert to normal with nutritional rehabilitation or cessation of the purging behavior (Table 22.1).

22.12. The answer is D

Erosion of dental enamel with corresponding decay is associated with the purging behavior of eating disorders, not to the weight loss of eating disorders. Table 22.1 lists medical complications related to weight loss and purging in eating disorders. Among these complications are *bradycardia*, *delayed gastric emptying*, disturbed *taste sensation*, and *osteoporosis*.

22.13. The answer is C

Patients who binge eat but do not compensate in any way after binge eating meet the criteria for *binge eating disorder*, an eating disorder subtype considered a research diagnosis within “atypical” eating disorder not otherwise specified. These patients are often medically overweight or obese, generally somewhat older (30s to 50s), and are almost as likely to be male as female. Patients are not fixated on body shape and weight.



Table 22.1
Medical and Biological Complications of Eating Disorders

Related to weight loss

Cachexia: loss of fat, muscle mass, reduced thyroid metabolism (low T_3 syndrome), cold intolerance, difficulty in maintaining core body temperature
 Cardiac: loss of cardiac muscle; small heart; cardiac arrhythmias, including atrial and ventricular premature contractions, prolonged His bundle transmission (prolonged QT interval), bradycardia, ventricular tachycardia; sudden death
 Digestive-gastrointestinal: delayed gastric emptying, bloating, constipation, abdominal pain
 Reproductive: amenorrhea, low levels of LH and FSH
 Dermatological: lanugo (fine baby-like hair over body), edema
 Hematological: leukopenia
 Neuropsychiatric: abnormal taste sensation (possible zinc deficiency), apathetic depression, mild cognitive disorder
 Skeletal: osteoporosis

Related to purging (vomiting and laxative abuse)

Metabolic: electrolyte abnormalities, particularly hypokalemic, hypochloremic alkalosis; hypomagnesemia
 Digestive-gastrointestinal: salivary gland and pancreatic inflammation and enlargement with increase in serum amylase, esophageal and gastric erosion, dysfunctional bowel with haustral dilation
 Dental: erosion of dental enamel, particularly of front teeth, with corresponding decay
 Neuropsychiatric: seizures (related to large fluid shifts and electrolyte disturbances), mild neuropathies, fatigue and weakness, mild cognitive disorder

FSH, follicle-stimulating hormone; LH, luteinizing hormone; T_3 , triiodothyronine.

From Yager I. Eating disorders. In: Stoudemire A, ed. *Clinical Psychiatry for Medical Students*. Philadelphia: JB Lippincott; 1990:324, with permission.

A subtype of *anorexia nervosa*, the binge-purge subtype, includes binge eating. Patients alternate attempts at rigorous dieting with intermittent binge or purge episodes. In this subtype, the purging is used as a secondary compensation for the unwanted calories, and patients may purge without prior binge eating.

Bulimia nervosa for some represents a failed attempt at anorexia nervosa, sharing the goal of becoming very thin but occurring in an individual less able to sustain severe hunger as in classic anorexia nervosa patients. For others, eating binges represent “breakthrough eating” episodes of giving in to hunger pangs generated by efforts to restrict eating so as to maintain socially desirable level of thinness. Eating binges provoke panic as individuals believe that their eating has been out of control. The unwanted binges lead to secondary attempts to avoid the feared weight gain by a variety of compensatory behaviors, such as purging or excessive exercise.

In *night eating syndromes*, some individuals may engage in binge eating in a semi- or unaware state of consciousness during sleepwalking episodes (some of which have been linked to parasomnias such as sleepwalking). In another form of night eating syndromes, perhaps more common, individuals generally have little appetite during the day and eat far more than 50 percent of their usual daily caloric intake during the evening hours.

Obesity is a complex disease resulting from a combination of genetic susceptibility, increased availability of high-energy foods, and decreased requirements for physical activity in modern society. Obesity refers to an excess of body fat. In healthy individuals, body fat accounts for approximately 25 percent of body weight in women and 18 percent in men.

22.14. The answer is C

Pickwickian syndrome is said to exist when a person is *100 percent over desirable weight* and has associated respiratory and cardiovascular pathology. Night eating syndrome is one in which persons *eat excessively after they have had their evening meal*; it seems to be precipitated by stressful life circumstances. Binge-eating disorder is recurrent episodes of *binge eating in the absence of the inappropriate compensatory behaviors* characteristic of bulimia nervosa; these patients are not fixated on their body shape and weight. Body dysmorphic disorder is when *some persons believe that a specific aspect of their bodies is grotesque*. The binge-eating syndrome (bulimia) is characterized by *sudden, compulsive ingestion of very large amounts of food in a short time*.

22.15. The answer is E (all)

Bulimia nervosa patients who engage in self-induced vomiting and who abuse purgative or diuretic medications are susceptible to the same complications as patients with anorexia nervosa involved in this behavior. Exposure to gastric juices through vomiting can cause severe erosion of the teeth, pathological pulp exposures, diminished masticatory ability, and an unaesthetic facial appearance. Parotid gland enlargement is associated with elevated serum amylase concentrations and is commonly observed in patients who binge and vomit. Acute dilatation of the stomach is a rare emergency condition for patients who binge eat, and esophageal tears can occur in the process of self-induced vomiting. Severe abdominal pain in a patient with bulimia nervosa should alert the physician to a diagnosis of gastric dilatation and

the need for nasal gastric suction, radiographs, and surgical consultation. Cardiac failure caused by cardiomyopathy from ipecac intoxication is a medical emergency that usually results in death. Symptoms of *pericardial pain*, *dyspnea*, and *generalized muscle weakness* associated with *hypotension*, tachycardia, and electrocardiogram (ECG) abnormalities should alert medical personnel to possible ipecac intoxication.

22.16. The answer is A

Two eating disorders can be associated with obesity: bulimia nervosa and binge eating disorder. *Binge eating disorder is more common than bulimia nervosa in obese patients* and is associated with more comorbid psychiatric illness, such as major depression. It is important to note that *not all patients with bulimia nervosa are obese*; they may be overweight or of normal weight. More males are affected by binge eating disorder than bulimia nervosa. Bulimia nervosa has an earlier age of onset (15.7 vs. 17.2 years). Although patients with bulimia nervosa have higher rates of psychopathology compared with patients with binge eating disorder, patients with binge eating disorder *have higher (not lower) rates of psychopathology compared with obese patients without binge eating disorder*.

22.17. The answer is D

Bupropion may induce seizures in patients with eating disorders such as *bulimia*. Bulimic patients may have electrolyte abnormalities due to vomiting, diuretics, or laxative usage. *Smoking* is not a contraindication for the use of bupropion. It is used to facilitate smoking cessation.

Bupropion may be used to relieve depressive symptoms in patients with *dysthymia* and *chronic fatigue syndrome* and is therefore not contraindicated for treatment of patients with these conditions.

Answers 22.18–22.22

22.18. The answer is C

22.19. The answer is B

22.20. The answer is A

22.21. The answer is C

22.22. The answer is B

Anorexia nervosa has been divided into two subtypes—the food-restricting category and the binge eating or purging category. In the food-restricting category, which is present in approximately 50 percent of cases, food intake is highly restricted (usually with attempts to consume *fewer than 300 to 500 calories per day* and no fat grams), and the patient may be relentlessly and compulsively overactive, with the overuse of athletic injuries. In the binge-eating or purging subtype, patients alternate attempts at rigorous dieting with intermittent binge or purge episodes, with the binges, if present, being either subjective (more than the patient intended or because of social pressure, but not enormous) or objective. Purging represents a secondary compensation for

the unwanted calories, most often accomplished by self-induced vomiting, frequently by laxative abuse, less frequently by diuretics, and occasionally with emetics. Sometimes repetitive purging occurs without prior binge eating after ingesting only relatively few calories. Both subtypes may be *socially isolated* and have depressive disorder symptoms and diminished sexual interest. *Overexercising* and perfectionistic traits are common in both types.

Those who practice binge eating and purging *share many features with persons who have bulimia nervosa without anorexia nervosa*. Those who binge eat and purge *tend to have families in which some members are obese*, and they themselves have histories of heavier body weights before the disorder than do persons with the restricting type. People with binge eating and purging are likely to be associated with substance abuse, impulse control disorders, and personality disorders. Persons with restricting anorexia nervosa often have obsessive-compulsive traits with respect to food and other matters. Some persons with anorexia nervosa may purge but not binge.

Answers 22.23–22.30

22.23. The answer is A

22.24. The answer is D

22.25. The answer is C

22.26. The answer is A

22.27. The answer is B

22.28. The answer is B

22.29. The answer is A

22.30. The answer is A

If bingeing and purging behaviors are occurring in a person who meets diagnostic criteria for anorexia nervosa, bulimia nervosa cannot be the diagnosis. *Severe weight loss and amenorrhea* are two features differentially distinguishing anorexia nervosa from bulimia nervosa.

On rare occasions, a central nervous system tumor may be associated with bulimic behaviors. Overeating episodes also occur in the Klüver-Bucy syndrome, which consists of *visual agnosia, compulsive licking and biting*, inability to ignore any stimulus, and *hypersexuality*. Another uncommon syndrome associated with hyperphagia is the Kleine-Levin syndrome, which is characterized by periodic hypersomnia lasting for several weeks.

Ten-year outcome studies in the United States have shown that about one-fourth of anorexic patients recover completely and another *one-half are markedly improved* and functioning fairly well. The other one-fourth includes an overall 7 percent mortality rate and those who are functioning poorly with a chronic underweight condition. Importantly, about half of anorexia nervosa patients will eventually have the symptoms of bulimia, usually

within the first year after the onset of anorexia nervosa, which has a *higher fatality rate*.

The severity of illness will determine the intensity of treatment required for the anorexia nervosa patient. Treatment levels can range from an inpatient specialized and multimodal eating disorder unit, to a partial hospitalization or day program, to outpatient care depending on the weight, medical status, and other psychiatric comorbidity of the patient. Decisions about particular treatment modalities and strategies must be based on the needs of the individual patients as well as the capabilities of the treatment setting.

In contrast to the relatively *few outpatient treatment studies of anorexia nervosa*, treatment outcome studies of bulimia nervosa have proliferated since the late 1980s.

Family therapy is not widely used in the treatment of bulimia nervosa, as it is for anorexia nervosa, because most patients with bulimia nervosa are in their 20s or older and live away from their family of origin. There is a consensus that families of younger patients should be involved with their treatment; however, controlled studies are needed to prove this.

Cognitive behavioral therapy should be considered the benchmark, first-line treatment for bulimia nervosa. It has been found to be the most effective treatment in more than 35 controlled psychosocial studies. About 40 to 50 percent of patients are abstinent from both binge eating and purging at the end of treatment (16 to 20 weeks). Altogether, improvement by a reduction in binge eating and purging occurred in a range from 70 to 95 percent of patients.

Generally, a patient with a depressive disorder has a decreased appetite, but a patient with anorexia nervosa may deny the existence of, yet still have, an appetite. It is *only in the most severe stages of anorexia nervosa that the patient actually has a decreased appetite*.

The diagnostic criteria of anorexia nervosa include a persistent refusal to maintain body weight at or above a minimum expected weight (e.g., loss of weight leading to a *body weight of less than 85 percent of the patient's expected weight*) or a failure to gain the expected weight during a period of growth, leading to a body weight less than 85 percent of the expected weight.

Answers 22.31–22.34

22.31. The answer is B

22.32. The answer is A

22.33. The answer is B

22.34. The answer is B

Bulimia nervosa is defined as binge eating combined with inappropriate ways of stopping weight gain. Social interruption or physical discomfort—that is, abdominal pain or nausea—terminates the binge eating, which is often followed by feelings of guilt, depression, or self-disgust. Patients can be overweight or, in most cases, of normal weight. Patients with bulimia nervosa tend to *binge on carbohydrates and sugars*. In bulimia nervosa, compensation for binge episodes is carried out most commonly by purging through self-induced vomiting or laxative abuse (approximately 80 percent of cases), but, in a second subtype of bulimia nervosa (20 percent), it is carried out by “other compensation”—usually intensified, even stricter dieting and unrelenting exercise or both. Although the majority of patients purge by self-induced vomiting by gagging themselves with fingers or toothbrushes, some patients develop the capacity to vomit automatically, just by thinking about it, so that the act of vomiting takes on an almost reflexive quality.

Patients who binge eat but do not compensate in any way after binge eating are often medically overweight or obese, generally somewhat older (30s to 50s), and are *almost as likely to be male as female*. These patients meet criteria for *binge eating disorder*, an eating disorder subtype currently considered a research diagnosis within “atypical” eating disorder not otherwise specified. Binge eating disorder patients *begin binging prior to dieting*, which differs from bulimia nervosa in which patients start dieting before binge eating. Patients binge on foods they generally eat as part of a usual meal, not primarily carbohydrates and sugars as seen in bulimia nervosa. Patients with binge eating disorder tend to eat *in response to unpleasant emotions* such as dysphoria, anxiety, or boredom.



Normal Sleep and Sleep Disorders

Sleep is a process the brain requires for proper functioning. It is not in fact a single process; rather, there are several distinct types of sleep. The different types of sleep differ both qualitatively and quantitatively. Each type of sleep has unique characteristics, functional importance, and regulatory mechanisms. Selectively depriving a person of one particular type of sleep produces compensatory rebound when the individual is allowed to sleep ad lib. Finally, sleep is not a passive process; rather, sleep can be associated with a high degree of brain activation. Sleep is regulated by several basic mechanisms, and when these systems go awry, sleep disorders occur. To understand sleep disorders, one must first have a solid understanding of the processes involved in normal sleep. Normal sleep has two essential phases: nonrapid eye movement sleep (NREM) and rapid eye movement sleep (REM). NREM sleep is composed of stages 1 through 4 and is characterized as the phase of sleep associated with a strong reduction in physiological functioning. REM sleep, on the other hand, is characterized by a highly active brain with physiological levels similar to the awake state.

REM sleep is associated with dreaming. The four stages of NREM sleep are qualitatively different, with such differences being displayed in electroencephalogram voltages and wave forms.

NREM sleep normally changes over to the first REM episode about 90 minutes after a person falls asleep. In disorders such as depression and narcolepsy, this latency is markedly shortened, and REM sleep begins much sooner. Many antidepressants act to suppress REM sleep, thus effectively increasing this latency period back toward normal.

The necessary amount of sleep can vary greatly from person to person. Many factors interfere with sleep, from emotional or physical stress to multiple substances and medications. Sleep deprivation can lead to ego disorganization, hallucinations, and delusions and has been shown to lead to death in animals. Students should be aware of how biological rhythms can affect sleep and how the 24-hour clock affects the natural body clock of 25 hours. Dyssomnias are disturbances in the amount, quality, or timing of sleep, and parasomnias are abnormal or physiological events that occur in connection with various sleep stages or during the sleep-wake transition. To effectively treat patients with sleep disorders, the clinician must have a firm understanding of normal sleep and the factors that interfere with it.

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

Students should know and be able to define each of these terms.

- | | | | |
|-------------------------------------|----------------------------------|-----------------------------------|---------------------|
| ▶ advanced sleep phase syndrome | ▶ dyssomnias | ▶ nightmares | ▶ slow-wave sleep |
| ▶ alveolar hypoventilation syndrome | ▶ familial sleep paralysis | ▶ night terrors | ▶ somniloquy |
| ▶ circadian rhythm sleep disorder | ▶ hypersomnia | ▶ parasomnias | ▶ somnolence |
| ▶ delayed sleep phase syndrome | ▶ idiopathic CNS hypersomnolence | ▶ sleep apnea | ▶ variable sleepers |
| | ▶ insomnia | ▶ sleep deprivation, REM-deprived | |
| | ▶ hypocretin system | ▶ sleep terror disorder | |
| | ▶ L-Tryptophan | ▶ sleepwalking disorder | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

23.1. Sleep is best described as the integrated product of the following two factors:

- age and health
- seasonality and photoperiods
- sleep homeostat and the circadian clock
- melatonin peak and temperature nadir
- transition from day to night (dusk) and night to day (dawn)

23.2. Which of the following is the treatment of choice for patients with obstructive sleep apnea?

- A. Benzodiazepines
 B. Theophylline
 C. Uvulopalatoplasty
 D. Weight loss
 E. Nasal continuous positive airway pressure
- 23.3.** Which of the following is a component of good sleep hygiene?
 A. Arise at the same time daily
 B. Eat larger meals near bedtime
 C. Take daytime naps as needed
 D. Establish physical fitness with exercise in the evening
 E. All of the above
- 23.4.** Sleep latency is defined as
 A. the period of time from the onset of sleep until the first sleep spindle
 B. the period of time from the onset of sleep until the first REM period of the night
 C. the period of time from turning out the lights until the appearance of stage 2 sleep
 D. the time of being continuously awake from the last stage of sleep until the end of the sleep record
 E. none of the above
- 23.5.** You begin treating a blind woman who presents with difficulty sleeping. This patient is most likely to be experiencing which of the following circadian disturbances?
 A. No disturbances
 B. Non-24-hour sleep-wake cycle
 C. Delayed sleep phase syndrome
 D. Irregular sleep-wake rhythm
 E. Advanced sleep phase syndrome
- 23.6.** All of the following statements regarding nightmares are true *except*
 A. REM-suppressing drugs can bring about nightmares.
 B. Children who have nightmares do not awaken confused.
 C. Creative people have been shown to have nightmares more frequently.
 D. Massive autonomic signs often accompany nightmares in children.
 E. Nightmares occur in up to 50 percent of children aged 3 to 6 years.
- 23.7.** An experiment is performed in which sleeping patients are awakened at the beginning of REM cycles. They are then allowed to sleep with repeated interruption. Which of the following will be the result of this experiment?
 A. Increase in REM latency
 B. More frequent nighttime awakenings
 C. Increase in the number of REM periods
 D. Decrease in the length of REM periods
 E. No change in sleep patterns
- 23.8.** A dysfunction in the *hypocretin system* plays a critical role in which of the following disorders?
 A. Insomnia
 B. Sleepwalking
 C. Restless legs syndrome
 D. Narcolepsy
 E. Sleep paralysis
- 23.9.** Relief of depression has been linked to
 A. sleep deprivation in the last half of the night
 B. total sleep deprivation
 C. selective REM sleep deprivation
 D. all of the above
 E. none of the above
- 23.10.** The characteristic four-stage pattern of electroencephalogram (EEG) changes from a wakeful state to sleep are
 A. regular activity, delta waves at 3 to 7 cycles a second, sleep spindles, and K complexes
 B. regular activity at three to seven cycles a second, delta waves, sleep spindles, and K complexes
 C. regular activity, sleep spindles and K complexes, and delta waves at 3 to 7 cycles a second
 D. regular activity, delta waves, sleep spindles and K complexes at 3 to 7 cycles a second
 E. regular activity at 3 to 7 cycles a second, sleep spindles and K complexes, delta waves
- 23.11.** Ms. W, a 41-year-old divorced white woman, presented with a 2.5-year complaint of sleeplessness. She had some difficulty falling asleep (30 to 45 minutes sleep onset latency) and awakened every hour or two after sleep onset. These awakenings could last 15 minutes to several hours, and she estimated getting approximately 4.5 hours of sleep on an average night. She rarely took daytime naps notwithstanding feeling tired and edgy. At times, Ms. W would be unsure whether she was asleep or awake. Her appetite and libido were unchanged. She denied mood disturbance, except that she was quite frustrated and concerned about sleeplessness and its effect on her work. She had moved to her current city 2.5 years earlier.
 Ms. W has which of the following sleep disorders?
 A. Hypersomnia
 B. Sleep apnea
 C. Parasomnia
 D. Sleep starts
 E. Insomnia
- 23.12.** In REM sleep,
 A. there is infrequent genital tumescence
 B. cerebral glucose metabolism is decreased
 C. respiratory rate is decreased
 D. cardiac output is decreased
 E. brain temperature is decreased

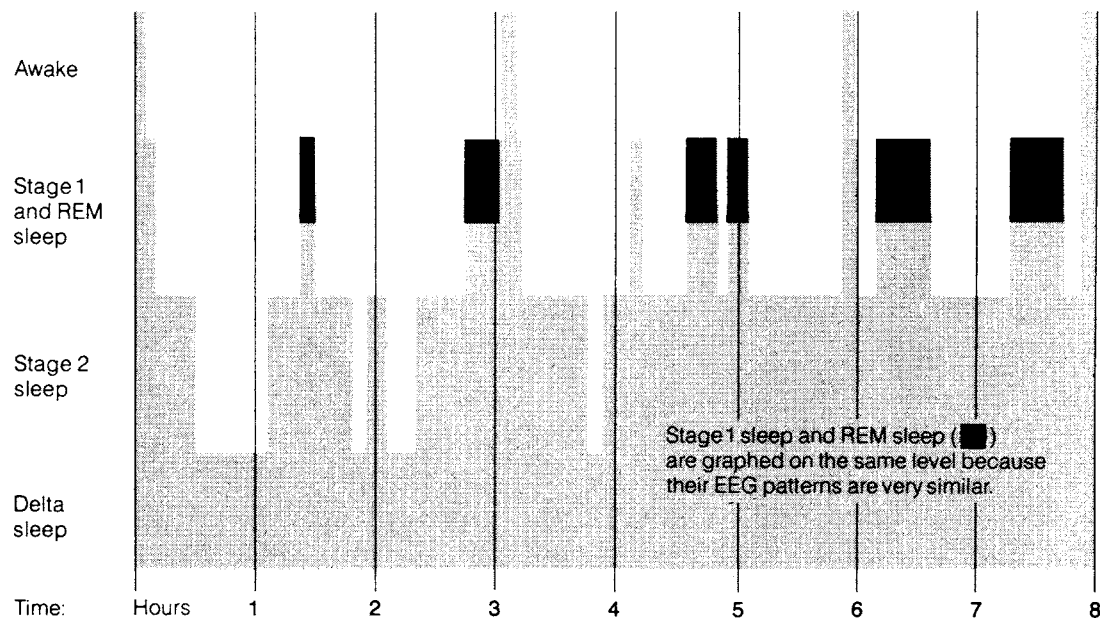


FIGURE 23.1

The stages of a patient's sleep pattern. (Reproduced with permission from Hauri P. *The Sleep Disorders*. Current Concepts. Kalamazoo, MI: Upjohn; 1982:82.)

- 23.13.** Anatomical sites implicated in the generation of NREM sleep include
- the medulla
 - the dorsal raphe nucleus
 - the basal forebrain area
 - the thalamus and hypothalamus
 - all of the above
- 23.14.** Figure 23.1 illustrates the stages of a patient's sleep pattern. Which of the following statements regarding this sleep pattern is true?
- The sleep pattern is abnormal because of the shortened latency of REM sleep.
 - The sleep pattern represents human sleep between the ages of newborn and young adult.
 - The sleep pattern is consistent with that found in a patient with depression.
 - The sleep pattern is consistent with that found in a patient with narcolepsy.
 - The sleep pattern is normal.
- 23.15.** Which of the following *not* true about restless leg syndrome?
- Unpleasant sensations are partially or totally relieved by movement.
 - Sensations are worse in evening.
 - It consists of uncontrollable movement of the legs.
 - It is worse when sitting or lying down.
 - It has an onset in middle-aged people and usually has a progressive course.
- 23.16.** The symptoms of narcolepsy include all of the following *except*
- sleep paralysis
 - hallucinations
 - daytime sleepiness
 - cataplexy
 - cataplexy
- 23.17.** Which of the following statements about the sleep stage histograms shown in Figure 23.2 is true?
- B* is characteristic of major depressive disorder.
 - A* is characterized by an abnormal latency to REM sleep.
 - A* is characteristic of obstructive sleep apnea syndrome.
 - Both are within normal limits.
 - A* is characteristic of anxiety disorder.
- 23.18.** True statements about sleep in the elderly include all of the following *except*
- Individuals with periodic limb movements sleep about 1 hour less per night than control subjects.
 - Death rates are higher in the elderly both in people who sleep more than 9 hours and those who sleep fewer than 5 hours.
 - After the age of 65 years, one-third of women and one-fifth of men report that they take more than 30 minutes to fall asleep.
 - The incidence of nocturnal myoclonus increases with age.

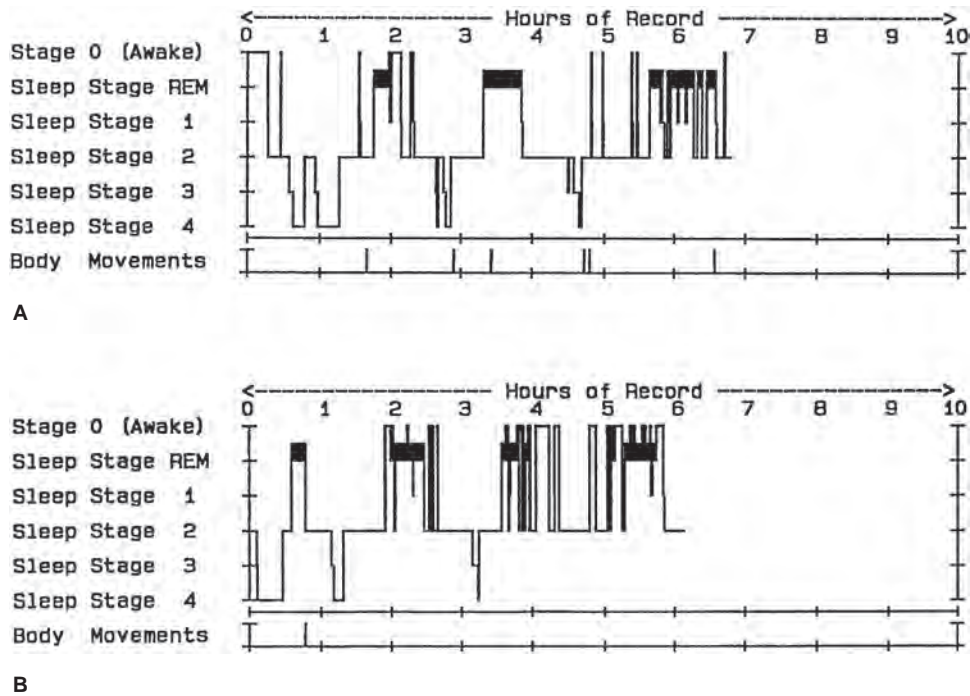


FIGURE 23.2

Sleep stage histograms. (Reproduced with permission from Hauri P. *The Sleep Disorders*. Current Concepts. Kalamazoo, MI: Upjohn; 1982:82.)

- E. The average daily total sleep time decreases after the age of 65 years.
- 23.19.** Many benzodiazepine hypnotic medications cause which of the following?
- Abnormally decreased EEG beta and sleep spindle activity
 - Profound hypersomnia during withdrawal
 - Increases in slow wave sleep
 - Reductions in REM sleep
 - All of the above
- 23.20.** Which of the following features is *not* typical of REM sleep?
- Dreams are typically concrete and realistic.
 - Polygraph measures show irregular patterns.
 - The resting muscle potential is lower in REM sleep than in a waking state.
 - Near-total paralysis of the postural muscles is present.
 - A condition of temperature regulation similar to that in reptiles occurs.
- 23.21.** Which of the following statements does *not* correctly describe sleep regulation?
- Melatonin secretion helps regulate the sleep–wake cycle.
 - Destruction of the dorsal raphe nucleus of the brainstem reduces sleep.
 - L-Tryptophan deficiency is associated with less time spent in NREM sleep.
 - REM sleep can be reduced by increased firing of noradrenergic neurons.
 - Disrupted REM sleep patterns in patients with depression show shortened REM latency.
- 23.22.** Which of the following statements regarding Kleine-Levin Syndrome is *false*?
- It involves recurrent episodes of hypersomnia with 18- to 20-hour sleep periods.
 - Other symptoms include voracious eating, hypersexuality, and disinhibition.
 - It only affects adolescent males.
 - Episodes last for a few days up to several weeks once to 10 times per year.
 - A monosymptomatic hypersomnolent form can occur.
- Directions**
- Each group of questions below consists of lettered headings followed by a list of numbered words or phrases. For each numbered word or phrase, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.
- Questions 23.23–23.26**
- Adjustment insomnia
 - Psychophysiological insomnia

- C. Idiopathic insomnia
- D. Paradoxical insomnia

- 23.23.** An individual thinks that he or she is awake and having insomnia even though brain electrophysiological activity pattern is consistent with the correlates of normal sleep.
- 23.24.** A transient insomnia presumably caused by acute stress, conflict, or change.
- 23.25.** A conditioned arousal associated with the thought of sleeping.
- 23.26.** A lifelong inability to obtain adequate sleep.

Questions 23.27–23.31

- A. Delayed sleep phase circadian disorder
- B. Free running circadian disorder
- C. Irregular sleep-wake pattern
- D. Jet lag
- E. Advanced sleep phase

- 23.27.** An desynchrony between circadian and environmental clocks occurs because of travel.
- 23.28.** Occurs when the biological clock run slower than 24 hours or is shifted later than the desired schedule.
- 23.29.** The circadian sleep–wake pacemaker has a cycle length greater or less than 24 hours and is not reset each morning.
- 23.30.** Occurs when the circadian sleep–wake rhythm is absent or pathologically diminished.
- 23.31.** Occurs when the circadian rhythm cycle is shifted earlier.

ANSWERS

23.1. The answer is C

Sleep is the integrated product of two oscillatory processes. The first process, frequently referred to as the *sleep homeostat*, is an oscillation that stems from the accumulation and dissipation of sleep debt. The biological substrates encoding sleep debt are not known, although adenosine is emerging as a primary candidate. The second oscillatory process is governed by the *circadian clock* and controls a daily rhythm in sleep propensity or, conversely, arousal.

The circadian cycle in arousal (wakefulness) steadily increases throughout the day, reaching a maximum immediately before an *increase in plasma melatonin*. Arousal subsequently decreases to coincide with the circadian trough in *core body temperature*. Experiments imposing forced sleep schedules throughout the circadian day have shown that an uninterrupted 8-hour bout of sleep can only be obtained if sleep is initiated approximately 6 hours before the *temperature nadir*.

Age is one contribution to the sleep homeostat. Sleep deprivation studies have shown that the homeostat component of sleep is remarkably similar among individuals of similar age. There is a well-established age-dependent decline in sleep need.

Biological evidence exists for an adaptive system that allows humans to track the transition from *day to night (dusk)* and *night to day (dawn)*. This system could function to maintain proper sleep patterns during changing *photoperiods* (changing

day length associated with seasonality). Ill health (emotional or physical) can disrupt normal sleep physiology.

23.2. The answer is E

Nasal continuous positive airway pressure (nCPAP) is the treatment of choice for patients with obstructive sleep apnea. Other procedures include *weight loss*, nasal surgery, tracheostomy, and *uvulopalatoplasty*. Some medications may normalize sleep in patients with apnea. Selective serotonin reuptake inhibitors (SSRIs) and heterocyclic antidepressant drugs sometimes help treat patients with sleep apnea by decreasing the amount of time spent in REM sleep, the stage of sleep in which apneic episodes occur most often. In addition, *theophylline* has been shown to decrease the number of episodes of apnea; however, it may interfere with the overall quality of sleep, limiting its general utility. When apnea is established or suspected, patients must *avoid using sedative medication*, including alcohol, because it can considerably exacerbate the condition, which may then become life threatening.

23.3. The answer is A

A common finding is that a patient's lifestyle leads to sleep disturbance. This is usually phrased as *inadequate sleep hygiene*, referring to a problem in following generally accepted practices to aid sleep. These practices include, for instance, *keeping regular hours of bedtime and arousal*, avoiding excessive caffeine, *not eating heavy meals before bedtime*, and getting adequate exercise (exercise during the day, *not in the evening*, because it may disturb sleep). In general, *napping is discouraged* except in elderly and debilitated patients. Two caveats are in order when helping to educate a patient about sleep hygiene. The first is that these are general principles and are not applicable to all patients. The second is that when trying to modify a patient's behavior, it is usually better to focus on one or two changes at a time, rather than assaulting him or her with panoply of desired changes, which can come across as overwhelming.

23.4. The answer is C

Common polysomnographic measures are used to diagnose and describe sleep disorders. *Sleep latency* is the period of time from turning out the lights until the appearance of stage 2 sleep. The period of time from the onset of sleep until the first REM period is known as *REM latency*. *Early morning awakening* is defined as a time of being continuously awake from the last stage of the sleep until the end of the sleep record (usually at 7 AM).

23.5. The answer is B

In a *non-24-hour sleep–wake cycle*, a patient may report intermittent insomnia that periodically recurs. It is usually found in blind individuals and results from a complete failure of the resetting mechanism of the pacemaker. The patient then begins to live with a propensity to have a sleep–wake rhythm with the inherent and uncorrected period of the internal pacemaker, approximately 24.15 hours. In a world in which day and night follow a 24-hour cycle, this means that the patient's propensity for sleep is constantly shifting forward relative to what would be appropriate to his or her surroundings. The result is that he or she experiences

insomnia, which is periodically exacerbated when his or her internal rhythm is most out of phase with the environment. Melatonin administration has been demonstrated to be useful in regulating sleep in these individuals.

Delayed sleep phase syndrome is a persistent pattern of late sleep onset and late awakening times, with an inability to fall asleep and awaken at a desired earlier time. *Advanced sleep phase syndrome*, in contrast, is early sleep onset and early awakening, with an inability to fall asleep and awaken at a desired later time. *Irregular sleep-wake rhythm* is characterized by constantly shifting hours of sleepiness and wakefulness. It is generally a disorder of disco aficionados and others who maintain a highly irregular schedule, although it is sometimes seen in persons who have had tumors or other pathology of the hypothalamus. Treatment is organized around altering behavior, encouraging the patient to keep regular hours of bedtime and arising and to avoid napping.

23.6. The answer is D

Nightmares are vivid dreams that become progressively more anxiety producing, ultimately resulting in an awakening. They can occur occasionally in as many as half of children in the range of 3 to 6 years of age. In contrast to night terrors, the child is not confused, does not exhibit the massive autonomic signs, and describes having had a scary dream. Nightmares in children are not associated with psychiatric illness; in contrast, approximately half of the roughly 1 percent of adults who experience frequent nightmares are found to have disorders, including borderline personality and schizophrenia. *Nightmares are sometimes brought out by REM-suppressing drugs*, in which case, the treatment is to gradually discontinue the medication, if possible. Some workers suggest that nightmares occur more frequently in persons with certain personality traits, including those with thin boundaries and *more creative individuals*. There is no widely accepted medical intervention.

23.7. The answer is C

Prolonged periods of sleep deprivation sometimes lead to ego disorganization, hallucinations, and delusions. Depriving persons of REM sleep by awakening them at the beginning of REM cycles increases the number of REM periods and the amount of REM sleep (rebound increase) when they are allowed to sleep without interruption. Studies have also shown that REM deprivation leads to a *shortening of REM latency (not an increase)*. There has been no evidence of increased frequency of nighttime awakenings in studies of REM deprivation.

REM-deprived patients may exhibit irritability and lethargy. In studies with rats, sleep deprivation produces a syndrome that includes a debilitated appearance, skin lesions, increased food intake, weight loss, increased energy expenditure, decreased body temperature, and death. The neuroendocrine changes include increased plasma norepinephrine and decreased plasma thyroxine levels.

23.8. The answer is D

It has become apparent that the *hypocretin system* plays a critical role in *narcolepsy*. Narcolepsy is the prototypical example of sleepiness produced by a basic central nervous system dysfunction

of sleep mechanisms. The etiology stems from a genetically triggered *hypocretin* dysfunction and deficit.

Insomnia is defined as difficulty initiating sleep or maintaining sleep or having nonrestorative sleep for 1 month or more. The insomnia or resulting sleepiness must cause clinically significant impairment or distress. To qualify as primary insomnia, the etiology must not be rooted in psychiatric conditions, parasomnias, substance use or abuse, sleep-disordered breathing, or circadian rhythm disorders.

Sleepwalking in its classic form, as the name implies, is a condition in which an individual arises from bed and ambulates without fully awakening. It is sometimes called somnambulism, and individuals can engage in a variety of complex behaviors while unconscious.

Restless legs syndrome is characterized by the irresistible urge to move the legs when at rest or while trying to fall asleep. Patients often report crawling feelings in their legs. Moving the legs or walking around helps to alleviate the discomfort.

Sleep paralysis is, as the name implies, an inability to make voluntary movements during sleep. It becomes a parasomnia when it occurs at sleep onset or on awakening, a time when the individual is partial conscious and aware of the surroundings.

23.9. The answer is D (all)

Although the morbidity associated with sleep deprivation has been emphasized, the paradoxical finding that *total sleep deprivation*, *partial sleep deprivation* (especially in the last half of the night), and *selective REM sleep deprivation* have antidepressant effects in depressed patients must not be overlooked; unfortunately, the beneficial effect of total and partial sleep deprivation only lasts until the next sleep period, after which the patient typically awakens depressed again. Hence, sleep may be depressogenic in some patients.

23.10. The answer is E

The characteristic sequential pattern of electroencephalographic (EEG) changes from a wakeful state to sleep are *regular activity at 3 to 7 cycles per second, sleep spindles and K complexes, and delta waves*—not *regular activity, delta waves, and sleep spindles and K complexes* in other configurations. The waking EEG is characterized by alpha waves of 8 to 12 cycles per second and low-voltage activity of mixed frequency. As the person falls asleep, alpha activity begins to disappear. Stage 1, considered the lightest stage of sleep, is characterized by low-voltage regular activity at 3 to 7 cycles a second. After a few seconds or minutes, that stage gives way to stage 2, a pattern showing frequent spindle-shaped tracings at 12 to 14 cycles per second (sleep spindles) and slow triphasic waves known as K complexes. Soon thereafter, delta waves—high-voltage activity at 0.5 to 2.5 cycles per second—make their appearance (stage 3). Eventually, in stage 4, delta waves occupy more than 50 percent of the record. It is common practice to describe stages 3 and 4 as delta sleep or slow-wave sleep because of their characteristic appearance on the EEG record.

23.11. The answer is E

Ms W's symptoms fell into the category of *insomnia*. Environmental sleep disorder (noise) and adjustment sleep disorder (new job, city, and apartment) were likely initial diagnoses.

23.12. The answer is D

In REM sleep, there may be frequent genital tumescence, *cardiac output is decreased*, *cerebral glucose metabolism is unchanged or increased* (not decreased), *respiratory rate is variable* (not decreased), and *brain temperature is increased* (not decreased).

23.13. The answer is E (all)

At least five anatomical sites have been implicated in the generation of NREM sleep: the *basal forebrain area*, *thalamus*, *hypothalamus*, *dorsal raphe nucleus*, and *medulla*. For example, whereas lesions of the preoptic basal forebrain area produce hypsomnia lasting 4 to 6 weeks in rats and cats, electrical stimulation and local warming of this region elicit both electroencephalographic and behavioral signs of sleep. The thalamus in general and the reticular nucleus of the thalamus in particular appear to play an important role in the generation of cortical sleep spindles (12 to 14 Hz) and delta waves (0.5 to 3 Hz; 75 mV or greater in humans) during NREM sleep.

23.14. The answer is E

Figure 23.1 represents a *normal sleep pattern* of a young human adult. The periods of REM sleep shown are consistent with that found in a normal young adult, occurring every 90 to 100 minutes during the night, with most REM sleep occurring in the last third of the night.

Depressed patients, in contrast, experience *shortened REM latency* (60 minutes or less), an increased percentage of REM sleep (over the normal 25 percent), and a shift in REM distribution from most occurring in the last half (normal) to most occurring in the first half of the night (abnormal).

Narcolepsy is characterized by abnormal manifestations of REM sleep, including the appearance of REM sleep within 10 minutes of sleep onset (sleep-onset REM periods), as well as hypnagogic and hypnopompic hallucinations, cataplexy, and sleep paralysis.

Sleep patterns change over the life span. In the neonatal period, REM sleep occurs during more than 50 percent of total sleep time; in *young adulthood*, REM sleep occurs during 25 percent of total sleep time. In addition, the electroencephalogram pattern of *newborns* goes from the alert state directly to the REM state without going through stages 1 through 4.

23.15. The answer is C

Uncontrollable movement of the legs is not a symptom of restless leg syndrome (RLS). RLS (also known as *Ekbom syndrome*) is an uncomfortable, subjective sensation of the limbs, usually the legs, sometimes described as a “creepy crawlly” feeling or as the sensation of ants walking on the skin. It tends to be *worse at night* and is relieved by walking or moving about. It appears as a cause of sleep initiation insomnia because the patient may find it *difficult to lie still* in bed, needing to get up to relieve the discomfort. The ultimate cause is unknown, but it appears often in pregnancy, iron or vitamin B₁₂ deficiency anemia, and renal disease.

The first step in treatment is looking for anemia and treating it, if found. Benzodiazepines are relatively ineffective. The

off-label use of L-dopa and carbidopa (Sinemet), bromocriptine (Parlodel), and pergolide (Permax) is often helpful. In rare patients who are severely affected, the off-label use of narcotic analgesics can help when other treatments have been tried and have failed. Ropinirole (Requip), a dopamine agonist already available for treatment of patients with Parkinson’s disease, is now the first drug approved by the U.S. Food and Drug Administration for treatment of moderate to severe RLS.

23.16. The answer is D

Catalepsy is a condition in which a person maintains the body position in which it is placed. It is a symptom observed in severe cases of catatonic schizophrenia. Excessive *daytime sleepiness*, naps, and the accessory symptoms of *cataplexy*, *sleep paralysis*, and hypnagogic and hypnopompic *hallucinations* are the classically recognized symptoms of narcolepsy. Patients generally report the onset of daytime sleepiness before the accessory symptoms are noted.

Cataplexy, which occurs in 67 to 95 percent of cases, is paralysis of the antigravity muscles in the awake state. A cataplectic attack often begins during expressions of emotion, such as laughter, anger, and exhilaration. The attacks vary in intensity and frequency; they can consist of a weakening of the knees, a jaw drop, a head drop, or a sudden paralysis of all of the muscles of the body—except for the eyes and the diaphragm—leading to a complete collapse.

Sleep paralysis is a neurological phenomenon that is most likely caused by a temporary dysfunction of the reticular activating system. It consists of brief episodes of an inability to move or speak when awake or asleep.

Hypnagogic hallucinations are vivid perceptual, dream-like experiences occurring at sleep onset. They occur in about 50 percent of patients. The accompanying affect is usually fear or dread. Hypnopompic hallucinations occur upon awakening. The hallucinatory imagery is remembered best after a brief narcoleptic sleep attack, when it is often described as a dream.

23.17. The answer is A

The sleep stage histograms demonstrate *normal sleep* in A and that found in a patient with *major depressive disorder* in B. As shown in histogram A, *REM sleep normally has a latency* (time between sleep onset and first REM episode) of about 90 minutes. In contrast, REM latency is shortened to 60 minutes or less in major depressive disorder, as shown in histogram B. Other findings in B consistent with major depressive disorder include disruption of sleep continuity and early morning awakenings.

Obstructive sleep apnea syndrome is characterized by repetitive episodes of upper airway obstruction that occur during sleep, usually associated with a reduction in blood oxygen saturation. Sleep is disturbed by frequent awakenings, but REM and slow-wave (stages 3 and 4) sleep are nearly absent.

23.18. The answer is E

Average daily total sleep time actually increases slightly (rather than decreases) after the age of about 65 years. Greater numbers of elderly individuals fall into either long-sleeping (>9 hours) or short-sleeping (<5 hours) subgroups. After the age of 65 years,

about one-third of women and one-fifth of men report that they take *more than 30 minutes to fall asleep*. Wake time after sleep onset tends to increase with age, perhaps because of the greater incidence of sleep-related breathing disorders (i.e., mild apnea) and *nocturnal myoclonus*. In general, the severity of apnea in older persons is mild compared with that seen in patients with clinical sleep apnea. *Periodic limb movements* during sleep are also common in elderly individuals, with prevalence rates ranging from 25 to 60 percent in various studies of healthy elderly people. Individuals with periodic limb movements are reported to sleep about 1 hour less per night than control subjects without periodic limb movements. Perhaps as a result, napping also increases with age, although it rarely accounts for a large proportion of total sleep time in healthy individuals.

It is noteworthy that *death rates are higher both in long-sleeping and excessively short-sleeping individuals*. The reasons for that are still unknown, although there has been speculation that sleep apnea might contribute to increased mortality in the long-sleeping group.

23.19. The answer is D

Alcohol, anxiolytics, opioids, and sedative-hypnotics all promote sleep by sedation. However, the resulting sleep, although apparently of greater quantity, is of poorer quality. Many benzodiazepine hypnotic medications alter the basic architecture of sleep. Most *reduce (rather than increase) slow-wave sleep*, and *some reduce REM sleep*. *Abnormally increased (not decreased) electroencephalographic beta and sleep spindle activity* result from ingesting some hypnotic drugs. Alcohol may relax a tense person and thereby decrease latency to sleep; however, sleep later in the night is fragmented by arousals. As tolerance develops to chronic drug and alcohol use, increased dosage is needed to sustain effects; lower dosage produces an abstinence syndrome, and sleep regresses to its initial abnormal pattern. Furthermore, during withdrawal of hypnotic medication or after tolerance has developed, the sleep disturbance can rebound to a more severe level than the initial problem leading to insomnia.

By contrast, psychostimulant use poses a different problem. Cocaine, amphetamine and related stimulants, caffeine, and theobromine all produce central nervous system arousal that may persist into the sleep period and produce insomnia. Especially in cases of stimulant abuse, an individual usually becomes severely sleep deprived. Over time, a massive sleep debt accumulates, and upon substance discontinuation, *profound hypersomnia* results. This compensatory sleep, or sleep rebound, continues for an extended time (several weeks or more in some instances).

23.20. The answer is A

In REM sleep, *dreams are typically abstract and surreal, not concrete and realistic*. People report dreaming 60 to 90 percent of the time during REM sleep. Dreaming also occurs during NREM sleep, but these dreams are lucid and purposeful.

During REM sleep, *polygraph measures show irregular patterns*, sometimes close to waking patterns. Aside from measures of muscle tone, physiological measures during REM periods could be inferred as those of a person in a waking state. Pulse, respiration, and blood pressure are all high during REM sleep,

higher than during NREM sleep, and sometimes higher than during waking.

The *resting muscle potential is lower in REM sleep* than in a waking state. *Near-total paralysis of the postural muscles* is present during REM sleep, so the body cannot move. This motor inhibition is sometimes thought to be associated with dreams of being unable to move. Also during REM sleep, a condition of *temperature regulation* similar to that in reptiles occurs; in this condition (poikilothermia), body temperature varies with the temperature of the environment.

23.21. The answer is C

L-Tryptophan deficiency is associated with less time spent in REM sleep, not in NREM sleep. Ingestion of large amounts of L-tryptophan reduces sleep latency and nocturnal awakening.

Melatonin secretion helps regulate the sleep-wake cycle; melatonin secretion is inhibited by bright light, so that the lowest concentrations occur during the day. A circadian pacemaker in the hypothalamus may regulate melatonin secretion. *Destruction of the dorsal raphe nucleus of the brainstem* reduces sleep because nearly all of the brain's serotonergic cell bodies are located there. Reduced REM sleep can also be caused by *increased firing of noradrenergic neurons*.

Disrupted REM sleep patterns in patients with depression show shortened REM latency. Compared with normal sleep patterns, sleep patterns of people with depression also show an increased percentage of REM sleep and a shift of REM sleep from the last to the first half of the night.

23.22. The answer is C

Kleine-Levin syndrome is the best-recognized hypersomnia. It *predominantly affects males in early adolescence*; however, it can occur later in life and in females. In its classic form, the *recurrent episodes are associated with hypersomnia (18- to 20-hour sleep periods), voracious eating, hypersexuality, and disinhibition* (e.g., aggression). Episodes typically *last for a few days up to several weeks and appear once to 10 times per year*. A *monosymptomatic hypersomnolent form can occur*.

Answers 23.23–23.26

23.23. The answer is D

23.24. The answer is A

23.25. The answer is B

23.26. The answer is C

Insomnia is difficulty initiating or maintaining sleep. It is the most common sleep complaint and may be transient or persistent. Population surveys show a 1-year prevalence rate of 30 to 45 percent in adults. Common causes of insomnia are given in Table 23.1.

Adjustment insomnia is a transient insomnia presumably caused by acute stress, conflict, or change. The course is usually brief, lasting a week to several months. The problem quickly resolves when the stressor is removed. The first day of school, an impending examination, a change in employment, or the death



Table 23.1
Common Causes of Insomnia

Symptom	Insomnia Secondary to Medical Conditions	Insomnia Secondary to Psychiatric or Environmental Conditions
Difficulty falling asleep	Any painful or uncomfortable condition CNS lesions Conditions listed below, at times	Anxiety Tension anxiety, muscular Environmental changes Circadian rhythm sleep disorder
Difficulty remaining asleep	Sleep apnea syndromes Nocturnal myoclonus and restless legs syndrome Dietary factors (probably) Episodic events (parasomnias) Direct substance effects (including alcohol) Substance withdrawal effects (including alcohol) Substance interactions Endocrine or metabolic diseases Infectious, neoplastic, or other diseases Painful or uncomfortable conditions Brainstem or hypothalamic lesions or diseases Aging	Depression, especially primary depression Environmental changes Circadian rhythm sleep disorder Posttraumatic stress disorder Schizophrenia

CNS, central nervous system.
Courtesy of Ernest L. Hartmann, MD.

of a loved one can produce an immediate, brief disturbance in the normal sleep–wake pattern.

A patient with *psychophysiological insomnia* has developed a *conditioned arousal associated with the thought of sleeping*. Objects related to sleep (e.g., the bed, the bedroom) likewise have become conditioned stimuli that evoke insomnia. Daytime adaptation is usually good (in contrast to impaired function in patients with psychiatrically related insomnia); however, there can be extreme tiredness, and the individual can become desperate. Psychophysiological insomnia often occurs in combination with stress and anxiety disorders, delayed-sleep-phase syndrome, and hypnotic drug use and withdrawal. Other features characteristic of psychophysiological insomnia include (1) excessive worry about not being able to sleep, (2) trying too hard to sleep, (3) rumination (inability to clear one's mind while trying to sleep), (4) increased muscle tension when getting into bed, (5) other somatic manifestations of anxiety, (6) ability to fall asleep when not trying to (e.g., when watching television), and (7) sleeping better away from one's bedroom (including the sleep laboratory).

Patients with *idiopathic insomnia* have a *lifelong inability to obtain adequate sleep*. The insomnia must predate any psychiatric condition, and other etiologies must be ruled out or treated, including psychophysiological insomnia, environmental sleep disturbances, and practices that would constitute poor sleep hygiene. If the insomnia persists, then it is assumed that there is a defect in the neurological mechanisms that govern the sleep–wake system. That is, the sleep homeostatic process is dysfunctional. Sleep restriction therapy may provide some benefit and will also give the clinician a clue to the limits of the patient's homeostatic process. Sleep restriction is a technique by which homeostatic drive is maximized by sleep schedule compression. Unfortunately, patients with idiopathic insomnia will likely never have normal sleep.

In *paradoxical insomnia*, an individual thinks that he or she is awake and having insomnia even though brain electrophysiological activity pattern is consistent with the correlates of normal

sleep. That is, paradoxical insomnia is diagnosed when a patient complains of difficulty initiating or maintaining sleep and no objective evidence of sleep disruption is found. Paradoxical insomnia can occur in individuals who are apparently free from psychopathology; however, it may represent a somatic delusion or hypochondriasis. Some patients with paradoxical insomnia have obsessional features with respect to somatic functions.

Answers 23.27–23.31

23.27. The answer is D

23.28. The answer is A

23.29. The answer is B

23.30. The answer is C

23.31. The answer is E

The *delayed sleep phase circadian disorder* occurs when the *biological clock runs slower than 24 hours or is shifted later than the desired schedule*. This produces a phase delay in the sleepiness–alertness cycle. Individuals with delayed sleep phase are more alert in the evening and early nighttime, stay up later, and are more tired in the morning. These individuals are commonly referred to as *night owls*.

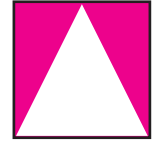
When the *circadian sleep–wake pacemaker* has a cycle length greater or less than 24 hours and is not reset each morning, a patient may develop *free running circadian rhythm disorder*. Under normal circumstances, resynchronization of the circadian rhythm occurs daily in response to the light–dark cycle. Problems occur incrementally when internal and environmental clocks become more and more out of phase. If the circadian clock's period is longer than 24 hours and does not reset each day, the patient experiences progressively worsening sleep-onset insomnia and daytime sleepiness. Sleep problems peak when circadian and

environmental clocks are 12 hours out of phase and then begin to lessen, emulating a progressively resolving advanced sleep phase. Eventually, the clocks correlate, and the sleep–wake cycle is normal for a few days, after which the insomnia–hypersomnia cycle begins again. For this reason, non–24-hour sleep–wake disorder has been called *periodic insomnia* and *periodic excessive sleepiness*.

The *irregular sleep–wake pattern* occurs when the circadian sleep–wake rhythm is absent or pathologically diminished. The sleep–wake pattern is temporally disorganized, and the timing of sleep and wakefulness is unpredictable. Individuals with this condition have a normal amount of sleep during a 24-hour period; however, it is fragmented into three or more episodes that occur irregularly. Long daytime naps and inappropriate nocturnal wakefulness occur. Except in unusual circumstances, activities of daily life are significantly impaired.

With the advent of high-speed air travel, an *induced desynchrony between circadian and environmental clocks* became possible. Thus, the term *jet lag* came into use. When an individual rapidly travels across many time zones, either a circadian phase advance or a phase delay is induced, depending on the direction of travel. Typically, translocation of one or two time zones will not produce a sustained problem; however, overseas travel can be marked by great difficulty in adjusting one’s sleep–wake routine.

Advanced sleep phase occurs when the circadian rhythm cycle is shifted earlier. Therefore, the sleepiness cycle is advanced with respect to clock time. Individuals with advanced sleep phase are drowsy in the evening, want to retire to bed earlier, awaken earlier, and are more alert in the early morning. Individuals with this pattern of advanced sleep phase are sometimes called *early birds* or *larks* (sometimes jokingly called *surgeons* in the medical center).



Impulse-Control Disorder Not Elsewhere Classified

Merriam-Webster Dictionary defines *impulse* as “a sudden spontaneous inclination or incitement to some usually unpremeditated action.” Although it is normal for a person to act on impulse at one point or another, persons with impulse-control disorders are unable to resist the impulse to perform a particular act even if it is obviously harmful to the self, others, or both. Six conditions fall under the category of impulse-control disorder not elsewhere specified: (1) intermittent explosive disorder, (2) kleptomania, (3) pyromania, (4) pathological gambling, (5) trichotillomania, and (6) impulse-control disorder not otherwise specified (NOS). Affected individuals often feel anxiety or tension in considering these behaviors, and this anxiety or tension is relieved or diminished after the impulse is acted on.

Intermittent explosive disorder manifests as discrete episodes of losing control of aggressive impulses that can result in serious assault or destruction of property. Kleptomania is evidenced by acting out the impulse to steal objects without the motive of monetary gain. Pyromania is the recurrent, deliberate, and purposeful setting of fires. Pathological gambling is characterized by persistent and recurrent maladaptive gambling that causes

economic problems and significant disturbances in personal, social, or occupational functioning. Trichotillomania is characterized by repetitive hair pulling.

As with most psychiatric disorders, both biological and psychological components contributing to the etiology of these disorders have been studied and identified. Biological investigations have been particularly relevant to the understanding of violent impulse-control disorders. Studies include investigations of the limbic system of the brain; the effects of testosterone; histories of head trauma and childhood abuse; childhood histories of attention deficit/hyperactivity disorder; and cerebrospinal fluid levels of 5-hydroxyindolacetic acid (5-HIAA), a metabolite of serotonin. Alcohol abuse has been associated with some of the more violent impulse-control disorders and can act as a facilitator to losing control. Unfulfilled narcissistic, dependency, and self-object needs have also been implicated, as are exposure to parental impulse-control problems during development.

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

These terms relate to impulse-control disorders and should be defined by students.

- | | | | |
|--|--|---|--------------------------|
| ▶ alopecia | ▶ hydroxyzine | ▶ kleptomania | ▶ progressive-loss stage |
| ▶ attention-deficit/hyperactivity disorder | ▶ hydrochloride | ▶ limbic system | ▶ psychodynamics |
| ▶ biofeedback | ▶ hypnotherapy | ▶ lust angst | ▶ pyromania |
| ▶ desperate stage | ▶ impulse-control disorder | ▶ multidetermined | ▶ social gambling |
| ▶ enuresis | ▶ impulse-control disorder not otherwise specified | ▶ oniomania | ▶ SSRIs |
| ▶ epileptoid personality | ▶ intermittent explosive disorder | ▶ parental factors | ▶ testosterone |
| ▶ 5-HIAA | | ▶ pathological gambling | ▶ trichophagy |
| | | ▶ pleasure principle, reality principle | ▶ trichotillomania |
| | | | ▶ winning phase |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

24.1. Impulsivity and compulsivity are similar in that they both include

- acting without forethought
- the inability to inhibit harmful behavior in response to a stimulus
- acting after too much thought

- D. all of the above
E. none of the above
- 24.2.** Intermittent explosive disorder
- is associated with lower than expected rates of depressive disorders in first-degree relatives of patients
 - is typically seen in small men with avoidant personality features
 - is characterized by discrete periods of aggressive episodes
 - is relatively common
 - none of the above
- 24.3.** Which of the following is *not* a neuroendocrine change noted in patients with abnormal aggression?
- Deranged serotonin neurotransmission
 - Low cerebrospinal fluid (CSF) levels of 5-hydroxyindolacetic acid (5-HIAA)
 - Decreased platelet serotonin reuptake
 - Elevated CSF testosterone
 - Increased glucose metabolism
- 24.4.** A 28-year-old man had been repeatedly brutalized by his alcoholic mother throughout childhood and early adolescence. He felt particularly humiliated when she would slap his face during frequent bouts of uncontrollable anger. One evening while they were drinking at a local tavern, a friend playfully slapped his cheek. The patient suddenly “saw red,” broke a beer bottle over the man’s head, and then mauled him severely. Which of the following defense mechanisms is this patient with intermittent explosive disorder exhibiting?
- Regression
 - Reaction formation
 - Passive-aggressive behavior
 - Identification with the aggressor
 - Controlling
- 24.5.** Which of the following selections is *not* associated with intermittent explosive disorder?
- Patients may feel helpless before an episode.
 - The disorder usually grows less severe with age.
 - A predisposing factor in childhood is encephalitis.
 - Dopaminergic neurons mediate behavioral inhibition.
 - Neurological examination can show left–right ambivalence.
- 24.6.** The term *epileptoid personality* has been used in reference to patients with which of the following?
- Pyromania
 - Kleptomania
 - Trichotillomania
 - Intermittent explosive disorder
 - Seizure disorder
- 24.7.** Which impulse-control disorder is structured more like a substance use disorder?
- Pyromania
 - Pathological gambling
 - Kleptomania
 - Intermittent explosive disorder
 - Trichotillomania
- 24.8.** True statements about pathological gambling include
- Rates of pathological gambling are lower in locations where gambling is legal.
 - Rates of pathological gambling are lower among the poor and minorities.
 - Rates of pathological gambling have been shown to be lower in high school students than in the general population.
 - The natural history of the illness has been divided into four phases: winning, losing, desperation, and hopelessness.
 - All of the above
- 24.9.** All of the following have been identified as predisposing factors for the development of pathological gambling *except*
- childhood enuresis
 - inappropriate parental discipline
 - family emphasis on material symbols
 - loss of a parent before the child is 15 years old
 - attention-deficit/hyperactivity disorder
- 24.10.** Which of the following is true of kleptomania?
- Children and adolescents who steal become kleptomaniac adults.
 - Men are more likely to present for psychiatric treatment.
 - Men are more likely to be sent to prison.
 - Patients only steal from stores.
 - Thefts are committed to express anger.
- 24.11.** All of the following are often found in family members of trichotillomania patients *except*
- sexual dysfunction
 - tics
 - impulse-control disorders
 - obsessive-compulsive symptoms
 - none of the above
- 24.12.** Commonly associated features of pyromania include all of the following *except*
- sexual dysfunctions
 - kleptomania
 - alcohol intoxication
 - below-average IQ
 - resentment toward authority figures

24.13. *Onionmania* is another term used for

- A. compulsive buying
- B. Internet compulsion
- C. hairballs accumulating in the alimentary tract
- D. seizure-like quality of outbursts
- E. mobile phone compulsion

Directions

Each set of lettered headings below is followed by a list of numbered words or phrases. For each numbered word or phrase, select

- A. if the item is associated with A only.
- B. if the item is associated with B only.
- C. if the item is associated with both A and B.
- D. if the item is associated with neither A nor B.

Questions 24.14–24.19

- A. Pyromania
- B. Trichotillomania

- 24.14.** More common in females than in males
- 24.15.** Onset generally in childhood
- 24.16.** Sense of gratification or release during the behavior
- 24.17.** Treated with lithium
- 24.18.** Associated with trancy
- 24.19.** May be a response to an auditory hallucination

Questions 24.20–24.24

- A. Compulsive buying
- B. Kleptomania

- 24.20.** Chronic condition
- 24.21.** Recognized as a discrete disease entity by the text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR)
- 24.22.** Preponderance in women
- 24.23.** Increased lifetime rate of major mood disorders
- 24.24.** Treatment has included both psychological and pharmacological modalities

ANSWERS

24.1. The answer is B

Impulsivity and compulsivity may appear to be at opposite ends of the spectrum of behavior disorders. Whereas impulsivity implies *acting without forethought*, compulsivity is *acting after too much thought* or an obsession. However, both impulsivity and compulsivity share an *inability to inhibit a potentially harmful behavior in response to a stimulus*, whether it is internal or external.

24.2. The answer is C

The existence of intermittent explosive disorder as a unique entity remains controversial. Many have difficulty with the idea of *a normal baseline with superimposed periods of aggressive*

episodes. In addition, anger outbursts are a part of many other disease entities.

Intermittent explosive disorder is thought to be rare (not common) and occurs more frequently in males. High rates of fire-setting behavior in persons with the disorder have been reported. Recent studies suggest higher than normal rates of intermittent explosive disorder in families of patients with the diagnosis. First-degree relatives of patients with the disorder appear to have higher (not lower) than expected rates of depressive disorders and alcohol and substance abuse. Typical patients appear to be large (not small) men with dependent (not avoidant) personality features who respond to feelings of uselessness or impotence with violent outbursts.

24.3. The answer is E

Modest neurobiological studies point to possible *deranged serotonin neurotransmission* in patients identified with intermittent explosive disorder; *low cerebrospinal fluid (CSF) levels of 5-hydroxyindoleacetic acid (5-HIAA)* in some impulsive, temper-prone individuals; and *lowered levels of platelet serotonin reuptake* in patients with episodic rage. A connection has also been inferred between *elevated CSF testosterone levels* and aggressive or openly violent behavior. An element of genetic loading is also suggested by the fact that blood relatives are more likely to have characteristic outbursts of explosive behavior compared with adoptive relatives. *Increased glucose metabolism* has not been implicated in patients with abnormal aggression.

24.4. The answer is D

Although research has been limited, it is generally assumed that intermittent explosive disorder—similar to other impulse-control disturbances—is caused by a varying confluence of psychosocial and neurobiological factors. Patients regularly describe chaotic family backgrounds, rife with explosive behavior and verbal and physical abuse, often in the context of acute alcohol intoxication. *Identification with the aggressor* is a common defense mechanism, in which the explosive violence of a parent or close relative is internalized. This sinister coping strategy replicates the acts of stormy violence to which patients have been exposed during their formative years. Situations that realistically or symbolically evoke memories of early oppression and trauma may spark explosive episodes. Typically, an acute sense of narcissistic injury, lowered self-esteem, and profound feelings of shame and humiliation are evoked.

Passive-aggressive behavior is aggression toward an object expressed indirectly and ineffectively through passivity, masochism, and turning against the self. *Regression* is a return to a previous stage of development or functioning to avoid the anxieties involved in later stages. *Controlling* is the excessive attempt to manage events or objects in the environment in the interest of minimizing anxiety and solving internal conflicts. *Reaction formation* is the management of unacceptable impulses by permitting expression of the impulse in an antithetical form.

24.5. The answer is D

Serotonergic neurons (not dopaminergic neurons) mediate behavioral inhibition. Decreases in serotonergic transmission can

reduce the effect of punishment as a deterrent of behavior, and the restoration of serotonin activity restores the behavioral effect of punishment. Researchers have suggested a connection between low levels of CSF and 5-HIAA and impulsive behavior. Patients with intermittent explosive disorder are typically large, dependent men with a poor sense of masculine identity. *Patients may feel helpless* before an episode. A predisposing factor in childhood is *encephalitis*, as are perinatal trauma, minimal brain dysfunction, and hyperactivity. A patient's childhood was often violent and traumatic. Neurological examination can show *left-right ambivalence* and perceptual reversal. The disorder *usually grows less severe with age*, but heightened organic impairment can lead to frequent and severe episodes.

24.6. The answer is D

Intermittent explosive disorder manifests as discrete episodes of losing control or aggressive impulses; these episodes can result in serious assault or the destruction of property. The symptoms, which patients may describe as spells or attacks, appear within minutes or hours and, regardless of duration, remit spontaneously and quickly. The term *epileptoid personality* has been used to convey the seizure-like quality of these characteristic outbursts. The outbursts are not typical of the patient's usual behavior, and the term also conveys the suspicion of an organic disease process, for example, damage to the central nervous system. Several associated features suggest the possibility of an epileptoid state: the presence of auras; postictal-like changes in sensorium, including partial or spotty amnesia; and hypersensitivity to photic, aural, or auditory stimuli. *Trichotillomania* is the pulling of hair, *kleptomania* is compulsive stealing, and *pyromania* is the setting of fires.

24.7. The answer is B

Unlike the other impulse-control disorders, the diagnostic criteria for *pathological gambling* are structured more like a substance use disorder than an obsessive-compulsive disorder (OCD), with gambling with increased amounts of money needed to achieve the same level of excitement (tolerance) and restlessness and irritability when attempting to stop or cut back on gambling (withdrawal). The association between pathological gambling and substance use does not end with the diagnosis. Substance misuse is a common comorbidity in pathological gambling, with 73.2 percent of subjects with pathological gambling having comorbid alcohol use disorders and 38.1 percent having a drug use disorder.

The diagnosis for *pyromania* requires a pattern of behavior with more than one occasion of purposeful fire setting. In addition, there is a tension before the act and a relief after the act, structured similar to OCD. Patients also have an interest in, curiosity about, or attraction to fire and the activities and equipment associated with firefighting.

The essential feature of *kleptomania* is a recurrent failure to resist impulses to steal objects not needed for personal use or for monetary value. The objects taken are often given away, returned surreptitiously, or kept and hidden. Persons with kleptomania usually have the money to pay for the objects they impulsively steal.

The diagnostic criteria for *trichotillomania* are structurally similar to OCD, with an increased in tension before the act and a relief of tension or gratification after the act. Trichotillomania is a chronic disorder characterized by repetitive hair pulling, driven by escalating tension and causing variable hair loss that is usually—but not always—visible to others.

Intermittent explosive disorder manifests as discrete episodes of losing control of aggressive impulses; these episodes can result in serious assault or the destruction of property. The aggressiveness expressed is grossly out of proportion to any stressors that may have helped elicit the episodes.

24.8. The answer is D

Up to 3 percent of adults in the general population may be classified with probable pathological gambling. Based on treatment samples, the typical pathological gambler is an upper-middle-class or middle-class white man between the ages of 40 and 50 years. However, pathological gamblers in treatment may differ significantly from those in the general population. Surveys demonstrate that *rates of pathological gambling are higher (not lower) among the poor and minorities* and that these individuals are underserved by current treatment resources. Although male pathological gamblers outnumber women, the previous ratio of 2 to 1 may be high. Individuals younger than the age of 30 years are probably underrepresented in treatment centers, and data suggest that the prevalence of pathological gambling among adolescents is increasing. Some surveys have shown *higher (not lower) rates of pathological gambling among high school students* than in the general population. Pathological gamblers tend to have had an alcohol- or other substance-abusing parent, and approximately 25 percent had a parent who was probably a pathological gambler. Surveys also demonstrate that *rates of pathological gambling are considerably higher (not lower) in locations where gambling is legal*.

The *natural history of the illness has been divided into four phases*. In the *first (winning)* phase, a big win stimulates feelings of omnipotence. Women do not generally experience a big win initially. They may see gambling as a means of escaping overwhelming problems in their environment or in their past. Thus, there are apparently two possible motivators for ongoing gambling activity: action seeking (characterized by the big win) or escape seeking. In the *second (losing)* phase, the person either has a string of bad luck or begins to find losing intolerable. Gamblers then alter their strategy in an attempt to win back everything at once (chasing). Debts accrue, and there is a sense of urgency and an attempt to cover up both the behavior and the losses by lies. Relationships suffer as gamblers become irritable and secretive. In the *third (desperation)* phase, gamblers engage in uncharacteristic, often illegal behaviors. They write bad checks; embezzle funds; and desperately seek ways to obtain money to continue gambling, both to recoup losses and to regain the feeling of arousal characteristic of the initial phase. Relationships deteriorate further. Symptoms of depression appear, including neurovegetative signs, suicidal ideation, and suicide attempts. The fourth and *final phase (hopelessness)* involves an acceptance that losses can never be made good. Nevertheless, gambling continues, with the main motivator being the attainment of arousal or excitement.

Although a few gamblers seek help while in the winning phase, most seek help much later, generally because their relationships are threatened or they have committed illegal acts.

24.9. The answer is A

Childhood enuresis is the involuntary loss of urine (sometimes the condition is seen as voluntary). It is not a predisposing factor for the development of pathological gambling. *Loss of a parent* by death, separation, divorce, or desertion before the child is 15 years old may be a predisposing factor. Other possible factors include *attention-deficit/hyperactivity disorder (ADHD)*; *inappropriate parental discipline*; *family emphasis on material symbols*; and a lack of family emphasis on saving, planning, and budgeting.

24.10. The answer is C

Men with kleptomania are more likely to be sent to prison, and women (not men) are more likely to present for psychiatric evaluation or treatment than men. Men tend to present with the disorder at about 50 years of age and women at about 35 years of age. Kleptomania may begin in childhood, although most children and adolescents who steal *do not become kleptomaniac adults*. The onset of the disorder generally is late adolescents.

The key feature of the diagnosis of kleptomania that separates it from more common theft is the fact that the items stolen are not needed for personal use or their monetary value and the thefts *are not committed to express anger* or vengeance or in response to a delusion or a hallucination. *Most (not all) kleptomaniacs steal from retail stores*, but they may also steal from family members in their own households. The course of the disorder waxes and wanes but tends to be chronic. Its spontaneous recovery rate is unknown. The prognosis with treatment can be good, but few patients come for help of their own accord.

24.11. The answer is A

Sexual dysfunction is not often found in family members of people with trichotillomania, a chronic disorder characterized by hair pulling. However, it is believed that self-stimulation is the primary goal of hair pulling. Family members of patients with trichotillomania often have a history of *tics, impulse-control disorders, and obsessive-compulsive symptoms*, further supporting a possible genetic predisposition. Trichotillomania is increasingly being viewed as having a biologically determined substrate that may reflect inappropriately released motor activity or excessive grooming behaviors. Biological theories have also pointed to metabolic differences in the serotonin and opioid systems.

24.12. The answer is B

Kleptomania—the impulse to steal objects that are not needed for personal use or monetary value—is not a commonly associated feature of pyromania, although petty stealing is often noted in female fire setters. Persons with pyromania often regularly watch fires in their neighborhoods, frequently set off false alarms, and show interest in firefighting paraphernalia. Their curiosity is evident, but they show no remorse and may be indifferent to the consequences for life or property. Fire setters may gain satisfaction from the resulting destruction; frequently, they leave obvious clues. Commonly associated features include *alcohol intoxication, sexual dysfunctions, below-average IQ, chronic personal frustration, and resentment toward authority figures*. Some fire setters become sexually aroused by the fire.

tion, sexual dysfunctions, below-average IQ, chronic personal frustration, and resentment toward authority figures. Some fire setters become sexually aroused by the fire.

24.13. The answer is A

Onionmania is a term recognized by Emil Kraepelin and Eugen Bleuler in reference to *compulsive buying* (Table 24.1). Compulsive buying is estimated to affect 1.1 to 5.9 percent of the general population. It is more common in women than in men. The onset of the disorder is usually about 18 years of age; however, patients do not seek treatment until their 20s or 30s, usually because they have developed serious financial problems. Compulsive buyers usually buy with credit and have many credit cards. Serious financial problems are usual, and some persons must declare bankruptcy. The disorder may be chronic with urges to buy occurring hourly or as infrequently as once a month. Patients often try to limit their behavior but are unsuccessful.

Internet compulsion, also called internet addiction, is when a person spends almost all of their waking hours at the computer terminal. Their patterns of use are repetitive and constant, and they are unable to resist strong urges to use the computer or to “surf the Web.” Internet addicts may gravitate to certain sites that meet specific needs (e.g., shopping, sex, and interactive games, among others).

Trichobezoars are *hairballs accumulating in the alimentary tract* from hair pulling. An estimated 33 to 40 percent of patients with trichotillomania—a chronic disorder characterized by hair pulling—chew or swallow the hair that they pull out at one time or another.

The term *epileptoid personality* has been used to convey the *seizure-like quality of characteristic outbursts* in intermittent explosive disorder. The outbursts are not typical of patient’s usual behavior, and can convey the suspicion of an organic disease process, for example, damage to the central nervous system. Several associated features suggest the possibility of an epileptoid state: the presence of auras; postictal-like changes in the sensorium, including partial or spotty amnesia; and hypersensitivity to photic, aural, or auditory stimuli.

Cellular or *mobile phone compulsion* is when a person compulsively uses mobile phones to call others—friends,



Table 24.1
Diagnostic Criteria for Compulsive Buying

-
- A. Maladaptive preoccupation with buying or shopping or maladaptive buying or shopping impulses or behavior, as indicated by at least one of the following:
1. Frequent preoccupation with buying or impulses to buy that are experienced as irresistible, intrusive, or senseless.
 2. Frequent buying of more than can be afforded, frequent buying of items that are not needed, or shopping for longer periods of time than intended.
- B. The buying preoccupations, impulses, or behaviors cause marked distress, are time consuming, significantly interfere with social or occupational functioning, or result in financial problems (e.g., indebtedness or bankruptcy).
- C. The excessive buying or shopping behavior does not occur exclusively during periods of hypomania or mania.
-

From McElroy SL, Keck PE Jr, Pope HG Jr, Smith JM, Strakowski SM. Compulsive buying: A report of 20 cases. *J Clin Psychiatry*. 1994;55:242, with permission.

acquaintances, or business associates. They justify their need to contact others by giving plausible reasons for calling, but underlying conflicts may be expressed in the behavior, such as fear of being alone, the need to satisfy unconscious dependency needs, or undoing a hostile wish toward a loved one, among others (e.g., “I just want to make sure you are okay.”)

Answers 24.14–24.19

24.14. The answer is B

24.15. The answer is C

24.16. The answer is C

24.17. The answer is D

24.18. The answer is A

24.19. The answer is D

Both pyromania and trichotillomania have their *onset in childhood* and are characterized by a *sense of gratification or release during the act*. *Trichotillomania* is apparently *more common in females than in males*. *Pyromania* is associated with antisocial traits, such as *truancy*, running away from home, and delinquency. *Neither disorder is treated with lithium (Eskalith), and according to the DSM-IV-TR diagnostic criteria, neither can be a response to an auditory hallucination.*

Answers 24.20–24.24

24.20. The answer is C

24.21. The answer is B

24.22. The answer is C

24.23. The answer is C

24.24. The answer is C

Kleptomania is a chronic illness, generally beginning in late adolescence and continuing over many years. The spontaneous remission rate and long-term prognosis are unknown.

Compulsive buying is a chronic condition that can have devastating financial, marital, and vocational consequences. Although individuals frequently attempt to stop the behavior on their own, they are usually unsuccessful. Limiting access to shopping, including credit cards, home catalogs, the Internet, and home shopping networks, has met with some success for people with this disorder.

Kleptomania has been recognized as a discrete disease entity by the DSM-III, DSM-III-R, DSM-IV, and DSM-IV-TR. The dis-

order was excluded from the second edition of the DSM (DSM-II) and was mentioned in the first edition of the DSM (DSM-I) as an accessory term only. Features include a recurrent impulse to steal objects that are not needed for personal use or monetary value. The DSM-IV-TR diagnostic criteria stipulate that the stealing is not an expression of anger or revenge; is not associated with a delusion or hallucination; and is not attributable to a conduct disorder, manic episode, or antisocial personality disorder.

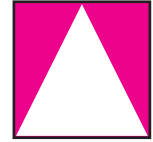
Compulsive buying is not recognized by the DSM-IV-TR as a unique subcategory, but some attempts have been made recently to develop a more formal definition of diagnostic criteria. Table 24.1 lists some proposed diagnostic criteria for compulsive buying. The onset of the disorder appears to be approximately 18 years of age, but frequently a decade passes before the buying pattern is recognized as a problem. Information from case reports points to a *preponderance of both compulsive buying and kleptomania in women*, although women are more likely to present for psychiatric evaluation than men.

Patients with kleptomania have an increased lifetime rate of major mood disorders, anxiety disorders, and eating disorders. They frequently have a history of sexual dysfunction. Persons with kleptomania do not meet the criteria for antisocial personality disorder. Those with a psychiatric disorder in addition to kleptomania generally state that of all their difficulties, stealing causes them the greatest grief.

Patients with kleptomania and compulsive buying show a high comorbidity with other Axis I conditions. *All of these patients meet criteria for some form of mood disorder*, most commonly bipolar I or bipolar II disorder. Symptoms seemed to increase when individuals felt more dysphoric and to decrease when patients were hypomanic. Many of these individuals stated that buying relieved their depressive symptoms.

Information regarding treatment of compulsive buying is based on case reports; no formal, rigorously controlled treatment studies exist for compulsive shopping. *Treatment of compulsive buying has included both psychological and pharmacological modalities*. Some patients receiving cognitive behavioral, supportive, or insight-oriented therapy report gaining some control over their buying compulsions. Others have been helped by supportive self-help groups such as Debtors Anonymous. Pharmacological data are limited, with mixed results.

Other methods include the use of psychodynamic psychotherapy, behavioral techniques, and somatic interventions, with variable outcomes. Effective pharmacological interventions have been described in case reports, including the use of fluvoxamine (Luvox), amitriptyline (Elavil), imipramine (Tofranil), nortriptyline (Pamelor), trazodone (Desyrel), fluoxetine (Prozac), lithium (Eskalith), and valproate (Depakote). The use of electroconvulsive therapy has also met with some success in case reports.



Adjustment Disorders

The diagnostic category of adjustment disorders is characterized by an emotional response to a stressful event. Typically, the stressor involves financial issues, medical illness, or relationship problems. It is one of the few diagnostic categories in which an external stressful event is linked to the development of symptoms. An adjustment disorder is expected to remit soon after the stressor ceases or, if it persists, a new level of adaptation is achieved.

The development of symptoms as a result of difficult events is widely considered part of the general human experience. Thus, the diagnosis of adjustment disorder is often seen as far less stigmatizing than other psychiatric disorders because symptoms develop in response to an event and are often short lived. Furthermore, the diagnosis is not viewed by medical insurance carriers as a preexisting illness the same way that other diagnoses are.

The diagnostic category of adjustment disorders is widely used among clinicians in practice. However, adjustment disorders can be seen as problematic. The diagnostic criteria describe a syndrome in which a stressful event leads to the development of a symptom complex. However, there are no criteria within the diagnostic construct to qualify or quantify the stressor that leads to the adjustment disorder. It is also difficult to in clinical practice to link an event to the development of a symptom complex. Issues such as these raise questions about the diagnosis of adjustment disorder in general and have contributed to the lack of academic investigation.

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

Students should know these terms and types (including case examples) of adjustment.

- | | | | |
|-------------------------------|--|---------------------------------|----------------------------|
| ▶ acute stress reaction | ○ with mixed anxiety and depressed mood | ▶ bereavement | ▶ psychosocial stressor |
| ▶ adjustment disorder | ○ with mixed disturbance of emotions and conduct | ▶ crisis intervention | ▶ recovery rate |
| ○ with anxiety | | ▶ good-enough mother | ▶ resilience |
| ○ with depressed mood | | ▶ maladaptive reaction | ▶ secondary gain |
| ○ with disturbance of conduct | | ▶ mass catastrophes | ▶ severity of stress scale |
| | ▶ adolescent onset | ▶ posttraumatic stress disorder | ▶ vulnerability |
| | | ▶ psychodynamic factors | ▶ Donald Winnicott |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the one that is *best* in each case.

25.1. Adjustment disorders

- occur in men twice as often as women
- are least likely in single women
- are one of the most common psychiatric diagnoses in hospitalized patients with medical problems
- are more severe if the stressor is of high severity
- none of the above

25.2. The rate of reliability in the diagnosis of adjustment disorders is

- increased by the absence of any impairment criteria in the diagnostic algorithm that defines maladaptation to stress
- consistent with the fact that measurement of psychosocial stress on Axis IV has been found to be questionable
- improved by the variability produced by cultural expectations regarding reactions to and management of stressful events
- considered good
- none of the above

- 25.3.** Which of the following is *not* a classification of adjustment disorder in the text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR)?
- With anxiety
 - With depressed mood
 - With disturbance of conduct
 - With mixed disturbance of emotions and conduct
 - With psychotic features
- 25.4.** Factors affecting the relationship of stress to the development of psychopathology include
- preexisting mood symptomatology
 - preexisting adaptive skills
 - genetic influence
 - the nature of the preexisting event
 - all of the above
- 25.5.** Which of the following stressors most often leads to psychological impairment that could be diagnosed as an adjustment disorder?
- Loss of a job
 - A plane crash
 - Rape
 - All of the above
 - None of the above
- 25.6.** The symptomatic profile and level of impairment in adjustment disorders with depressed mood has been found to be quite similar to
- bipolar I disorder
 - dysthymic disorder
 - major depressive disorder
 - all of the above
 - none of the above
- 25.7.** Adjustment disorders
- must remit within 6 months after the cessation of the stressor
 - are in response, most often, to everyday events rather than rare, catastrophic events
 - have subtypes indicating that almost any subthreshold condition associated with a psychosocial stressor may meet criteria for the disorder
 - as a diagnosis may be used excessively and incorrectly by clinicians
 - all of the above
- 25.8.** A 22-year-old man has just been offered a job overseas and will be leaving home for the first time. He is very worried about living in another country, not knowing the language, and being unfamiliar with a new culture. For the past 2 months, he has been unable to sleep and feels edgy. This has been impacting his performance at work as he is exhausted all day long. What is the most likely diagnosis?

- Major depressive disorder
- Adjustment disorder with disturbance of conduct
- Adjustment disorder with depressed mood
- Adjustment disorder with anxiety
- Generalized anxiety disorder

Directions

Each set of lettered headings below is followed by a list of numbered phrases. For each numbered phrase, select:

- if the item is associated with A only.
- if the item is associated with B only.
- if the item is associated with both A and B.
- if the item is associated with neither A nor B.

Questions 25.9–25.13

- Adolescents
- Adults

- 25.9.** A common precipitating stressor for an adjustment disorder may be divorce
- 25.10.** Females are diagnosed with adjustment disorders twice as often as males
- 25.11.** Males and females are equally diagnosed with adjustment disorders
- 25.12.** Often require a longer recovery time from an adjustment disorder
- 25.13.** The age group in which adjustment disorders are most frequently diagnosed

Questions 28.14–28.18

- The text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR)
- The tenth edition of the *International Classification of Diseases* (ICD-10)

- 25.14.** Places adjustment disorders in the same category as reactions to severe stress
- 25.15.** Notes that after a stressor (or its consequences) has ceased, an adjustment disorder may not persist for more than 6 more months
- 25.16.** Stipulates that onset of symptoms of an adjustment disorder must occur within 1 month of exposure to a psychosocial stressor
- 25.17.** Notes that the criteria of another disorder (e.g., antisocial personality disorder) may be fulfilled in an adjustment disorder
- 25.18.** Includes adjustment disorders with depressed mood, anxiety, and disturbance of conduct

ANSWERS

25.1. The answer is C

Adjustment disorders are one of the most common psychiatric diagnoses for disorders of patients hospitalized for medical

and surgical problems. *Women* are diagnosed with adjustment disorders *twice as often as men*, and *single women* are generally overtly represented as *most at risk*.

By definition, an adjustment disorder is precipitated by one or more stressor. The *severity of the stressor or stressors does not always predict the severity of the disorder*; the stressor severity is a complex function of degree, quantity, duration, reversibility, environment, and personal context. For example, the loss of a patient is different for a 10-year-old child than for a 40-year-old adult. Personality organization and cultural or group norms and values also contribute to the disproportionate response to stressors.

25.2. The answer is B

The low reliability of adjustment disorders is consistent with the fact that *measurement of psychosocial stress on Axis IV* has repeatedly been found to be *questionable*. The few extant *studies of reliability in adjustment disorders have produced unimpressive results*. Other sources of poor (not improved) reliability include (1) difficulties in determining when subjective distress or observable symptomatology exceeds what would normally be expected for a given stressor in an “average” individual, (2) *the absence of any impairment criterion in the diagnostic algorithm that defines maladaptation to stress*, and (3) *the variability produced by cultural expectations regarding the reaction to and management of stressful events*.

25.3. The answer is E

Maladjustment with some subthreshold psychotic features would most likely fall into the adjustment disorder unspecified category because *adjustment disorder with psychotic features* is not an adjustment disorder classification specified by the DSM-IV-TR.

The clinical presentations of adjustment disorder can vary widely. The *DSM-IV-TR* lists six adjustment disorders: (1) *adjustment disorder with depressed mood*; (2) *adjustment disorder with anxiety*; (3) *adjustment disorder with mixed anxiety and depressed mood*; (4) *adjustment disorder with disturbance of conduct*; (5) *adjustment disorder with mixed disturbance of emotions and conduct*; and (6) *adjustment disorder unspecified*. In adjustment disorder with depressed mood, the predominant manifestations are depressed mood, tearfulness, and hopelessness, and it must be distinguished from major depressive disorder and uncomplicated bereavement. Symptoms of anxiety, such as palpitations, jitteriness, and agitation, are present in adjustment disorder with anxiety, which must be differentiated from anxiety disorders. In adjustment disorder with mixed anxiety and depressed mood, patients exhibit features of both anxiety and depression that do not meet the criteria for an already established anxiety or depressive disorder. In adjustment disorder with disturbance of conduct, the predominant manifestation involves conduct in which the rights of others are violated or age-appropriate societal norms and rules are disregarded. Examples of behavior in this category are truancy, vandalism, reckless driving, and fighting, and it must be differentiated from conduct disorder and antisocial personality disorder. Adjustment disorder unspecified is a residual category for atypical maladaptive reactions to stress. Examples include inappropriate responses to

the diagnosis of physical illness, such as massive denial, severe noncompliance with treatment, and social withdrawal, without significant depressed or anxious mood.

25.4. The answer is E (all)

The results of studies that have examined the relationship of stress to the development of psychopathology provide additional information to be considered in evaluating the model of stress–disease interaction in adjustment disorders. *Preexisting mood symptomatology* was the only factor that predicted a prolonged course of adjustment disorders after cardiac surgery.

Other studies have focused on factors that protect individuals from developing stress-related symptoms. For example, *preexisting adaptive skills* decrease the likelihood of symptoms developing in the face of stress. In child and adolescent populations, a warm and supportive relationship with the primary caregiver, an easy and adaptable temperament, and healthier adjustment of the family to stress all predict a more positive response to stress within the child. Finally, *the nature of preexisting life events* has important implications for the level of adjustment. Control over life events has generally been associated with improved adjustment even though it may increase stress.

Another twin study that examined *genetic contributions* to the development of symptoms of posttraumatic stress disorder (not necessarily at the level of full disorder and therefore relevant to adjustment disorders) similarly concluded that the likelihood of developing symptoms in the context of traumatic life events is partially under genetic control. The findings of these studies suggest that the occurrence of adverse life events and their consequences are not necessarily random. Certain individuals appear to be at increased risk both for the occurrence of these events and for the development of pathology after they occur.

25.5. The answer is A

By definition, an adjustment disorder is precipitated by one or more stressors. The severity of the stressor or stressors does not always predict the severity of the disorder; the stressor severity is a complex function of degree, quantity, duration, reversibility, environment, and personal context. The nature and severity of stressors that may lead to an adjustment disorder are not specified by the DSM-IV-TR. Stressors may be single, such as a divorce or the *loss of a job*, or multiple, such as the death of a person important to a patient, which coincides with the patient’s own physical illness and loss of a job. Specific developmental stages, such as beginning school, leaving home, getting married, becoming a parent, failing to achieve occupational goals, having the last child leave home, and retiring, are often associated with adjustment disorders.

In adjustment disorders, a precipitating stress need not be severe or unusual in order to lead to impairment; however, in acute stress disorder or posttraumatic stress disorder (PTSD), symptoms develop after a traumatic event or events that are “outside the range of normal human experience.” In other words, the stressors producing PTSD are expected to cause a psychological reaction in the average person, but persons who develop adjustment disorders are responding maladaptively to a relatively common event. Stressors that can lead to PTSD often contain a

psychological component and frequently a concomitant physical component that may directly damage persons' nervous systems. Persons may experience these stressors alone, as in *rape* or assault, or in groups, as in military combat or death camps. Mass catastrophes—such as hurricanes, floods, *airplane crashes*, and atomic bombings—are also identified stressors that can lead to PTSD or acute stress disorder.

25.6. The answer is B

The symptomatic profile and level of impairment in patients with adjustment disorders with depressed mood was quite *similar to that found in dysthymic disorder* and atypical (minor) depression, although it was *distinct from major depressive disorder* and *bipolar I disorder*, suggesting poor discriminative validity of adjustment disorders with depressed mood with respect to minor depressive disorders. Adjustment disorders have also been described as an admission diagnosis or initial diagnosis for many adolescent and adult psychiatric inpatients.

25.7. The answer is E (all)

One of the most problematic diagnostic categories in the DSM-IV-TR is adjustment disorders. The fact that the relationship between stress and psychiatric disorder is both complex and uncertain has caused many to question the theoretical basis of adjustment disorders. In addition, the absence of operationalized, symptom-based criteria and a threshold level of symptomatology required for diagnosis have resulted in the use of this category for patients who might otherwise fulfill criteria for another, more specific mental disorder. Because incorrect diagnosis may result in inadequate treatment, inappropriately conceptualizing a patient's problem as constituting an adjustment disorder may result in delays or errors in treatment planning. Misdiagnosis of other, more specific disorders when an adjustment disorder should be diagnosed is also a problem. For example, in one study, medical residents frequently diagnosed major depressive disorder when adjustment disorder with depressed mood was considered the correct diagnosis by an attending psychiatrist.

Problems with the use of the adjustment disorders category among child and adolescent psychiatrists were highlighted in a survey conducted as a means of informing the DSM-IV-TR work groups about the use of psychiatric disorders in clinical practice. Of those who responded to the survey, 55 percent indicated that they used adjustment disorders to avoid stigmatization of patients. Many of those who favored the use of this category were not trained formally in the revised third edition of the DSM (DSM-III-R) and were not inclined to use not otherwise specified categories. More than half of these psychiatrists did not consider the temporal-onset criterion for adjustment disorders or the relevant exclusionary criteria in applying this diagnosis. *The survey results indicate that adjustment disorders diagnoses may be used excessively and incorrectly by some clinicians.*

Adjustment disorders are characterized in the DSM-IV-TR by the development of emotional or behavioral symptoms in the context of one or more identified psychosocial stressors. The resultant symptomatology is deemed to be clinically significant by virtue of either impairment in social, occupational, or educational function or the subjective experience of distress in excess

of what would normally be expected for the given stressors. The nature and severity of the stressors are not specified. *However, the stressors are more often everyday events that are ubiquitous* (e.g., loss of a loved one, change of employment or financial situation) *rather than rare, catastrophic events*, such as natural disasters or lethal crimes. The symptomatology must, by definition, occur within 3 months of the occurrence of the stressor and *must remit within 6 months after the cessation of the stressor*. Finally, the disturbance must not fulfill the criteria for another major psychiatric disorder or bereavement (not considered a mental disorder, although it may be a focus of clinical attention). A variety of symptomatic presentation subtypes of adjustment disorders are identified. The scope of symptomatology covered by these subtypes indicates that *virtually any subthreshold condition deemed to be associated with a psychosocial stressor may potentially meet the criteria for adjustment disorders.*

25.8. The answer is D

The most likely diagnosis for this patient is *adjustment disorder with anxiety*. In adjustment disorder with anxiety, symptoms such as palpitations, jitteriness, and agitation present within 3 months of the stressor. Adjustment disorder with anxiety must be differentiated from anxiety disorders such as *generalized anxiety disorder* in which patients worry about a wide variety of issues in their lives for a period of at least 6 months. In generalized anxiety disorder, the intense worry results in irritability, decreased sleep, concentration impairment, and fatigue.

In *adjustment disorder with depressed mood*, the predominant manifestations are depressed mood, tearfulness, and hopelessness. This type must be distinguished from *major depressive disorder* and uncomplicated bereavement. Adolescents with this type of adjustment disorder are at increased risk for major depressive disorder.

In *adjustment disorder with disturbance of conduct*, the predominant manifestation involves conduct in which the rights of others are violated or age-appropriate norms and rules are disregarded. Examples include truancy, vandalism, reckless driving, and fighting. This category must be differentiated from conduct disorder and antisocial personality disorder.

Answers 25.9–25.13

25.9. The answer is C

25.10. The answer is B

25.11. The answer is A

25.12. The answer is A

25.13. The answer is A

According to the DSM-IV-TR, *women are diagnosed with adjustment disorders twice as often as men*, and single women are generally overrepresented as most at risk. In children and adolescents, *boys and girls are equally diagnosed with adjustment disorders*. The disorders may occur at any age but *are most frequently diagnosed in adolescents*. Among adolescents of either

gender, common precipitating stresses are school problems, parental rejection and *divorce*, and substance abuse. Among *adults*, common precipitating stresses are marital problems, *divorce*, moving to a new environment, and financial problems.

With appropriate treatment, the overall prognosis for patients with an adjustment disorder is generally favorable. Most patients return to their previous level of functioning within 3 months. Some persons (particularly adolescents) who receive a diagnosis of an adjustment disorder later have mood disorders or substance-related disorders. *Adolescents usually require a longer time to recover than adults.*

Answers 25.14–25.18

25.14. The answer is B

25.15. The answer is C

25.16. The answer is B

25.17. The answer is D

25.18. The answer is C

The text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) and the 10th revision of the *International Statistical Classification of Diseases and Related Health Problems* (ICD-10) both include adjustment disorders, which are classified into categories such as adjustment disorder *with depressed mood*, *with anxiety*, and *with disturbance of conduct*. Similar to the DSM-IV-TR, the ICD-10 notes that the symptoms of an adjustment disorder must *not meet or fulfill the criteria for any other disorder*. The ICD-10 time pattern for adjustment disorders differs from that of DSM-IV-TR, with an *onset usually within 1 month of the stressful event or life change* instead of the 3-month window prescribed by the DSM-IV-TR. However, similar to the DSM-IV-TR, the ICD-10 notes that *symptoms of an adjustment disorder may not persist for more than 6 months after a stressor or its consequences have ceased*. The ICD-10 places adjustment disorders in the same category as reactions to severe stress and includes acute stress reaction and posttraumatic stress disorder in this category.



Personality Disorders

Personality refers to all the ways in which an individual shapes and adapts uniquely to internal and external environments. No psychiatric assessment is adequate without a description of the person's personality and its development across the lifespan. Personality disorders are characterized by inflexible, deeply ingrained, maladaptive patterns of adjustment to life. These patterns can cause distress or significant impairment of adaptive functioning. Personality disorders are common and chronic disorders. They occur in 10 to 20 percent of the general population and in about half of psychiatric patients. Personality disorders are divided into three categories. Cluster A includes disorders with odd, aloof features (paranoid, schizoid, and schizotypal). Cluster B includes disorders with dramatic, impulsive, and erratic features (borderline, antisocial, narcissistic, and histrionic). Cluster C includes disorders with anxious and fearful features (avoidant, dependent, and obsessive-compulsive).

Patients with personality disorders typically blame other people for unfavorable circumstances for their own problems. Most of these patients perceive their own deviant behaviors as appropriate and adequate. In light of this, patients with personality disorders try to change others, not themselves, and most people with these disorders seldom seek or accept treatment. Typically, they seek help when their maladaptive behaviors culminate in severe

marital, family, and career problems or for comorbid anxiety, depression, substance abuse, or eating disorders.

It is hard to find a psychotherapeutic method that has not been tried to treat personality disorders. Each school of psychotherapy provides a specific understanding of behavior and a particular method of intervention. In practice, many of these schools overlap or complement each other.

A growing body of evidence demonstrates that pharmacotherapy is at least equally important to psychotherapy in the overall treatment of patients with these disorders. Pharmacotherapy is aimed at correcting neurobiological dispositions to underlying deviant traits or at correcting target symptoms of these disorders.

The terms *personality*, *temperament*, *motivation*, *character*, and *psyche* are often used interchangeably. This is misleading, and students are encouraged to review and distinguish these terms with more clarity. Students should also familiarize themselves with the complicated questions surrounding these disorders, including (1) Are they clinical or social diagnoses? (2) What is the categorical versus dimensional approach to these disorders? And (3) How are they measured?

Students should study the questions and answers below for a useful review of all these disorders.

HELPFUL HINTS

Students should be able to define the terms that follow.

- | | | | |
|------------------------|-----------------------|-----------------------------|-----------------------------|
| ▶ acting out | ▶ depressive | ▶ internal object relations | ▶ paranoid |
| ▶ alloplastic | ▶ dissociation | ▶ introversion | ▶ passive-aggressive |
| ▶ ambulatory | ▶ ego dystonic | ▶ isolation | ▶ platelet MAO |
| ▶ schizophrenia | ▶ ego syntonic | ▶ macropsia | ▶ projective identification |
| ▶ antisocial | ▶ endorphins | ▶ magical thinking | ▶ saccadic movements |
| ▶ as-if personality | ▶ extroversion | ▶ mask of sanity | ▶ sadistic personality |
| ▶ autoplasmic | ▶ free association | ▶ micropsychotic | ▶ sadomasochistic |
| ▶ avoidant | ▶ goodness of fit | ▶ episodes | ▶ personality |
| ▶ borderline | ▶ histrionic | ▶ narcissistic | ▶ schizoid |
| ▶ Briquet's syndrome | ▶ hypochondriasis | ▶ obsessive-compulsive | ▶ schizotypal |
| ▶ castration anxiety | ▶ idealization or | ▶ organic personality | ▶ self-defeating |
| ▶ chaotic sexuality | ▶ devaluation | ▶ disorder | ▶ personality |
| ▶ clusters A, B, and C | ▶ ideas of reference | ▶ panambivalence | ▶ splitting |
| ▶ counterprojection | ▶ identity diffusion | ▶ pananxiety | |
| ▶ dependent | ▶ inferiority complex | ▶ panphobia | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the one that is *best* in each case.

- 26.1.** Which of the following is *not* recommended in psychotherapeutic treatment of patients with borderline personality disorder?
- The therapist is a passive listener.
 - The patient and therapist mutually develop a hierarchy of priorities.
 - Clear roles of patient and therapist are established.
 - Mutually agreed limit setting is used.
 - Concomitant individual and group approaches are used.
- 26.2.** A pervasive pattern of grandiosity, lack of empathy, and need for admiration suggests the diagnosis of which of the following personality disorders?
- Borderline
 - Narcissistic
 - Paranoid
 - Passive-aggressive
 - Schizotypal
- 26.3.** Traits that have been identified as forming the stylistic components of behavior known as *temperament* include all of the following *except*
- harm avoidance
 - novelty seeking
 - persistence
 - reward dependence
 - shyness
- 26.4.** The defense mechanism most often associated with paranoid personality disorder is
- splitting
 - projection
 - isolation
 - hypochondriasis
 - dissociation
- 26.5.** Which of the following biological factors pertaining to personality disorders is *true*?
- Smooth pursuit eye movements are saccadic in persons who are introverted.
 - Low platelet monoamine oxidase levels have been noted in some patients with histrionic personality disorder.
 - Compulsive traits are associated with high levels of testosterone.
 - Antisocial personalities may have fast wave activity on electroencephalography.
 - 5-HIAA levels have been found to be high in suicide attempters.
- 26.6.** True statements about diagnosing specific personality disorders include
- The diagnosis may not be made in children.
 - Antisocial personality disorder may be diagnosed in individuals younger than 18 years of age.
 - There is a potential sex bias in diagnosing personality disorders.
 - Real gender differences do not exist in the prevalence of personality disorders.
 - None of the above
- 26.7.** Borderline personality disorder is associated with
- a decreased risk for psychotic symptoms
 - an increased risk for premature death
 - a decreased risk for other coexisting personality disorders
 - a decreased risk for bulimia
 - a decreased risk for posttraumatic stress disorder
- 26.8.** Antisocial personality disorder is associated with an increased risk for
- anxiety disorders
 - borderline personality disorder
 - major depressive disorder
 - somatization disorder
 - all of the above
- 26.9.** True statements about paranoid personality disorder include
- It may be a prepsychotic antecedent of delusional disorders, paranoid type.
 - The disorder is not complicated by brief psychotic disorder.
 - Patients are at decreased risk for major depression.
 - Impairment is frequently severe.
 - All of the above
- 26.10.** Persons with narcissistic personality disorders
- are easy to treat
 - handle aging well
 - are unlikely to feel depressed
 - are usually immune to criticism
 - may benefit from a psychoanalytic treatment approach
- 26.11.** True statements about the aspects of personality called *temperament* include all of the following *except*
- they are heritable
 - they are relatively stable in time
 - they are inconsistent in different cultures
 - they are observable early in childhood
 - they are predictive of adolescent and adult behavior

- 26.12.** The etiology of borderline personality disorder involves
- childhood trauma
 - vulnerable temperament
 - biological vulnerabilities
 - familial aggregation
 - all of the above
- 26.13.** Otto Kernberg's borderline level of personality organization involves
- a lack of anxiety tolerance
 - a blurring of boundaries between the self and other
 - is centered around splitting
 - alternating perceptions of the self and other as all good or all bad
 - all of the above
- 26.14.** Defense mechanisms
- are unconscious processes
 - are implemented to abolish anxiety and depression
 - are used to resolve internal conflicts
 - in personality disorder patients are often rigid and intractable
 - all of the above
- 26.15.** Mr. S was a 45-year-old postal service employee who was evaluated at a clinic specializing in the treatment of depression. He claimed to have felt constantly depressed since the first grade without a period of normal mood for more than a few days at a time. His depression was accompanied by lethargy; little or no interest or pleasure in anything; trouble in concentrating; and feelings of inadequacy, pessimism, and resentfulness. His only periods of normal mood occurred when he was home alone, listening to music or watching TV. On further questioning, Mr. S revealed that he could never remember feeling comfortable socially. Even before kindergarten, if he was asked to speak in front of a group of family friends, his mind would go blank. He felt overwhelming anxiety at children's social functions, such as birthday parties, which he either avoided or attended in total silence. He could answer questions in class only if he wrote down the answers in advance; even then, he frequently mumbled and could not get the answer out. He met new children with his eyes lowered, fearing their scrutiny, expecting to feel humiliated and embarrassed. He was convinced that everyone around him thought he was "dumb or a jerk."
- The *best* diagnosis in the patient above is
- adjustment disorder with anxiety
 - avoidant personality disorder
 - schizoid personality disorder
 - schizotypal personality disorder
 - social phobia
- 26.16.** A 33-year-old woman presents for psychiatric evaluation after making suicidal threats. She reports a long-standing pattern of self-mutilation, impulsiveness, and no relation-

ship lasting longer than 1 month. Which of the following is the most likely diagnosis?

- Histrionic personality disorder
- Antisocial personality disorder
- Narcissistic personality disorder
- Borderline personality disorder
- None of the above

Directions

Each group of questions consists of lettered headings followed by a list of numbered statements. For each numbered phrase or statement, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 26.17–26.22

- Paranoid personality disorder
- Schizoid personality disorder
- Schizotypal personality disorder

- 26.17.** It is most similar to schizophrenia.
- 26.18.** Patients tend to attribute thoughts that they cannot accept in themselves onto others.
- 26.19.** An enormous amount of affective energy is invested in nonhuman interests.
- 26.20.** It is frequently diagnosed in females with fragile X syndrome.
- 26.21.** Patients have the normal capacity to recognize reality.
- 26.22.** Patients pride themselves on being rational and objective.

ANSWERS

26.1. The answer is A

In psychotherapy for borderline personality patients, it is important that the therapist be an active and directive, not *passive* listener. Table 26.1 summarizes the American Psychiatric



Table 26.1
Common Features of Recommended Psychotherapy for Borderline Personality Disorder

Therapy is not expected to be brief.
A strong helping relationship develops between the patient and therapist.
Clear roles and responsibilities of the patient and therapist are established.
The therapist is active and directive, not a passive listener.
The patient and therapist mutually develop a hierarchy of priorities.
The therapist conveys empathic validation plus the need for patient to control his or her behavior.
Flexibility is needed as new circumstances, including stresses, develop.
Limit setting, preferably mutually agreed upon, is used.
Concomitant individual and group approaches are used.

From Oldham JM. A 44-year-old woman with borderline personality disorder. *JAMA*. 2002;287:1034, with permission.)

Association's guidelines for treating patients with borderline personality disorder. Psychotherapy is difficult for the patient and therapist alike. Patients regress easily; act out their impulses; and show labile or fixed negative or positive transferences, which are difficult to analyze.

26.2. The answer is B

A pervasive pattern of grandiosity (in fantasy or behavior), lack of empathy, and need for admiration suggests the diagnosis of *narcissistic* personality disorder. The fantasies of narcissistic patients are of unlimited success, power, brilliance, beauty, and ideal love; their demands are for constant attention and admiration. Patients with narcissistic personality disorder are indifferent to criticism or respond to it with feelings of rage or humiliation. Other common characteristics are interpersonal exploitiveness and a sense of entitlement, surprise, and anger that people do not do what the patient wants.

Schizotypal personality disorder is characterized by various eccentricities in communication or behavior coupled with defects in the capacity to form social relationships. The term emphasizes a possible relation with schizophrenia. The manifestation of aggressive behavior in passive ways—such as obstructionism, pouting, stubbornness, and intentional inefficiency—typifies *passive-aggressive* personality disorder. *Borderline* personality disorder is marked by instability of mood, interpersonal relationships, and self-image. *Paranoid* personality disorder is characterized by rigidity, hypersensitivity, unwarranted suspicion, jealousy, envy, an exaggerated sense of self-importance, and a tendency to blame and ascribe evil motives to others.

26.3. The answer is E

Temperament traits of *harm avoidance*, *novelty seeking*, *reward dependence*, and *persistence* are defined as heritable differences underlying one's automatic response to danger, novelty, and various typed of reward, respectively (Table 26.2). These four

 **Table 26.2**
Descriptors of Individuals Who Score High or Low on the Four Temperament Dimensions

Temperament Dimension	Descriptors of Extreme Variants	
	High	Low
Harm avoidance	Pessimistic Fearful Shy Fatigable	Optimistic Daring Outgoing Energetic
Novelty seeking	Exploratory Impulsive Extravagant	Reserved Deliberate Thrifty
Reward dependence	Irritable Sentimental Open Warm	Stoical Detached Aloof Cold
Persistence	Affectionate Industrious Determined Enthusiastic Perfectionist	Independent Lazy Spoiled Underachiever Pragmatist

Courtesy of C. Robert Cloninger, MD, and Dragan M. Svrakic, MD, PhD.

temperament traits are closely associated with the four basic emotions of fear (harm avoidance), anger (novelty seeking), attachment (reward dependence), and ambition (persistence).

The four temperament traits are understood to be genetically independent dimensions that occur in all factorial combinations rather than mutually exclusive categories.

Persons who are harm avoidant are often shy, but *shyness* is only one variant of many that contributes to a harm avoidant temperament.

26.4. The answer is B

The defense mechanism most often associated with paranoid personality disorder is *projection*. The patients externalize their own emotions and attribute to others impulses and thoughts that they are unable to accept in themselves. Excessive fault finding, sensitivity to criticism, prejudice, and hypervigilance to injustice can all be understood as examples of projecting unacceptable impulses and thoughts onto others.

Hypochondriasis is a defense mechanism in patients with some personality disorders, particularly in borderline, dependent, and passive-aggressive personality disorders. Hypochondriasis disguises reproach; that is, the hypochondriac complaint that others do not provide help often conceals bereavement, loneliness, or unacceptable aggressive impulses. The mechanism of hypochondriasis permits covert punishment of others with the patient's own pain and discomfort.

Splitting is used by patients with borderline personality disorder in particular. With splitting, the patient divides ambivalently regarded people, both past and present, into all good or all bad rather than synthesizing and assimilating less-than-perfect caretakers.

Isolation is the defense mechanism characteristic of the orderly controlled person, often labeled an obsessive-compulsive personality. Isolation allows the person to face painful situations without painful affect or emotion and thus to remain always in control.

Dissociation consists of a separation of consciousness from unpleasant affects. It is most often seen in patients with histrionic or borderline personality disorder.

26.5. The answer is A

Smooth pursuit eye movements are often noted to be saccadic, or jumpy in persons who are introverted, have low self-esteem, tend to withdraw, and have schizotypal personality disorder. Persons with *impulsive, not compulsive, traits* often show high levels of testosterone, 17-estradiol, and estrone. *Low platelet monoamine oxidase (MAO) levels* have been associated in schizotypal disorders, not histrionic personalities. Changes in electrical conductance on electroencephalography (EEG) occur in some patients with personality disorders, most commonly antisocial and borderline types; these changes appear as *slow-wave activity on EEG*. *Levels of 5-hydroxyindoleacetic acid (5-HIAA)*, a metabolite of serotonin, are low in persons who attempt suicide and in patients who are impulsive and aggressive.

26.6. The answer is C

Clinical experience points to a *potential sex bias in diagnosing personality disorders*. Certain personality disorders are

diagnosed more frequently in men (e.g., antisocial and schizoid), but some disorders are diagnosed more frequently in women (e.g., borderline, histrionic, and dependent). Even though *real gender differences likely exist* in the prevalence of these disorders, clinicians are cautioned not to over- or underdiagnose certain personality disorders in men and women because of social stereotypes about typical gender roles and behaviors.

The diagnosis of specific personality disorders may be made in children or adolescents when observed maladaptive personality traits are pervasive, persistent, and unlikely to be limited to a particular developmental stage or an episode of an Axis I disorder. The diagnosis of a personality disorder in an individual younger than 18 years of age requires that the features be present for more than 1 year. The only exception to this is *antisocial personality disorder, which cannot be diagnosed in individuals younger than 18 years of age*.

26.7. The answer is B

The hallmarks of borderline personality disorder are pervasive and excessive instability of affects, self-image, and interpersonal relationships as well as marked impulsivity.

The disorder may be complicated by *psychotic-like symptoms* (hallucinations, body image distortions, hypnagogic phenomena, ideas of reference) in response to stress and an increased risk for *premature death* (or physical handicap) from suicide and suicidal gestures, failed suicide, and self-injurious behavior. Frequent and severe impairment may lead to job losses, interrupted education, and broken marriages.

These patients are at *increased (not decreased) risk* for major depression, substance abuse or dependence, *eating disorders (notably bulimia)*, *posttraumatic stress disorder*, and attention-deficit/hyperactivity disorder. Borderline personality disorder may be associated with *other personality disorders*.

26.8. The answer is E (all)

Antisocial patients are at increased risk for impulse control disorders, *major depression*, substance abuse or dependence, pathological gambling, *anxiety disorders*, and *somatization disorder*. The most common co-occurring personality disorders are narcissistic, *borderline*, and *histrionic*.

26.9. The answer is A

The hallmarks of paranoid personality disorder are excessive suspiciousness and distrust of others expressed as a pervasive tendency to interpret actions of others as deliberately demeaning, malevolent, threatening, exploiting, or deceiving. *Frequently, impairment is mild, not severe*, but the disorder typically includes occupational and social difficulties.

These patients are at *increased (not decreased) risk* for *major depressive disorder*, obsessive-compulsive disorder, agoraphobia, and substance abuse or dependence. The most common co-occurring personality disorders are schizotypal, schizoid, narcissistic, avoidant, and borderline personality disorders. The disorder *may be complicated by brief psychotic disorder*, particularly in response to stress. Paranoid personality disorder has been *postulated to be a prepsychotic antecedent of delusional disorder, paranoid type*.

26.10. The answer is E

Heinz Kohut advocated using a *psychoanalytic approach* to effect change in the treatment of patients with narcissistic personality disorder. This said, because patients must renounce their narcissism to progress, *the treatment of these patients is difficult*. Their sense of entitlement is striking, and they are particularly *vulnerable to feeling criticized* even if they appear immune to it. They handle criticism poorly and become enraged when criticized. They are constantly dealing with blows to their senses of self, *and age is handled poorly*; they often value beauty, strength, and youthful attributes, to which they cling inappropriately. Because of their fragile self-esteem, *they are prone to depression*.

26.11. The answer is C

Four major temperament traits have been identified: harm avoidance, novelty seeking, reward dependence, and persistence. These traits are defined as *heritable differences* underlying one's automatic response to danger, novelty, and various types of reward, respectively. These four temperament traits are associated closely with the four basic emotions of fear (harm avoidance), anger (novelty seeking), attachment (reward dependence), and mastery (persistence). Individual differences in temperament and basic emotions modify the processing of sensory information and critically shape early learning characteristics, especially associative conditioning of unconscious behavior responses. In other words, temperament is conceptualized as heritable biases in emotionality and learning that underlie the acquisition of emotion-based, automatic behavior traits and habits *observable early in life and that are relatively stable over one's life span*.

The four dimensions have been shown repeatedly to be *universal across different cultures*, ethnic groups, and political systems on five continents. In summary, these aspects of personality are called "temperament" because they are heritable, observable early in childhood, relatively stable in time, *moderately predictive of adolescent and adult behavior*, and consistent in different cultures.

26.12. The answer is E (all)

Numerous studies have pointed to *early traumatic experiences* as a cause of borderline personality disorder. Recently, a tripartite etiological model, including childhood trauma, *vulnerable temperament*, and a series of triggering events, has been formulated. Dynamic and biological psychiatry agree that a combination of early traumatic events and *certain biological vulnerabilities* (mostly in the emotional domain) represent primary etiological factors. Physical and sexual abuse, neglect, hostile conflict, and early parental loss or separation are common in childhood histories of patients with this disorder. *Familial aggregation* of borderline personality disorder has been demonstrated repeatedly. Borderline personality disorder is five times more common among relatives of probands with this disorder than in the general population. The disorder is also associated with increased familial risk for antisocial personality disorder, substance abuse, and mood disorders.

26.13. The answer is E (all)

As defined by Otto Kernberg, the borderline level of personality organization is characterized by nonspecific manifestations of

ego weakness, such as a lack of impulse control, and a *lack of anxiety tolerance*. There are specific ego defects, such as partially *blurred boundaries* between the self and other. Object relations often *alternate between all-good and all-bad perceptions* of the self and external object. The defense mechanisms are primitive and *center on splitting* and identity disturbance.

26.14. The answer is E (all)

Defense mechanisms are *unconscious processes* used to resolve the conflicts of our inner lives. When they are most effective, especially in those with personality disorders, they can *abolish anxiety and depression*. Thus, abandoning a defense increases conscious anxiety and depression. Patients with personality disorders may be characterized by their defenses, which are most *rigid and intractable*.

26.15. The answer is B

The best diagnosis is *avoidant personality disorder*. Although feeling constantly depressed caused Mr. S to seek treatment, the pervasive pattern of social avoidance, fear of criticism, and lack of close peer relationships was of equal importance. Persons with avoidant personality show an extreme sensitivity to rejection, which may lead to social withdrawal. They are not asocial but are shy and show a great desire for companionship; they need unusually strong guarantees of uncritical acceptance. In the case presented, the patient exhibited a long-standing pattern of difficulty in relating to others. Persons with *schizoid personality disorder* do not evince the same strong desire for affection and acceptance; they want to be alone. *Schizotypal personality disorder* is characterized by strikingly odd or strange behavior, magical thinking, peculiar ideas, ideas of reference, illusions, and derealization. The patient described does not exhibit those characteristics. *Social phobia* is an irrational fear of social or performance situations such as public speaking and eating in public. A social phobia is anxiety concerning socially identified situations, not relationships in general.

A person with a personality disorder can have a superimposed adjustment disorder but only if the current episode includes new clinical features not characteristic of the individual's personality. No evidence in the case described indicates that the anxiety was qualitatively different from what the patient always experienced in social situations. Thus, an additional diagnosis of *adjustment disorder with anxiety* is not made.

26.16. The answer is D

Borderline personality disorder is characterized by a long-standing pattern of impulsiveness, recklessness, unstable relationships, and suicidal and self-mutilating behaviors. It may also be associated with kleptomania. *Histrionic personality disorder* involves exaggerated emotional displays, attention-seeking

behavior, and often seductive behavior. *Antisocial personality disorder* involves a disregard for the rights of others, including criminal activity, substance abuse, deceitfulness, and destruction of property. To make the diagnosis, the individual must be at least 18 years old. *Narcissistic personality disorder* involves excessive arrogance, a hyperinflated self image, sensitivity to criticism, and a lack of empathy.

Answers 26.17–26.22

26.17. The answer is C

26.18. The answer is A

26.19. The answer is B

26.20. The answer is C

26.21. The answer is B

26.22. The answer is A

The lettered terms above compile the Cluster A or odd or eccentric personality disorders. *Paranoid personality disorder* is characterized by long-standing suspiciousness and mistrust of persons in general. Persons with this disorder externalize their own emotions and use the defense of projection; they *attribute to others the impulses and thoughts that they cannot accept in themselves*. They are often hostile, irritable, and angry. Persons with paranoid personality disorder are affectively restricted and appear unemotional. They *pride themselves on being rational and objective*, but such is not the case. Bigots, injustice collectors, pathologically jealous spouses, and litigious cranks often have the disorder.

Schizoid personality disorder is diagnosed in patients who display a lifelong pattern of social withdrawal. Their discomfort with human interaction; their introversion; and their bland, constricted affect are noteworthy. Even though they appear self-absorbed and lost in daydreams, patients with schizoid personality disorder *have the normal capacity to recognize reality*. Patients can *invest enormous affective energy into nonhuman interests*, such as mathematics or astronomy, and they may be very attached to animals.

Persons with *schizotypal personality disorder* are strikingly odd or strange, even to laypersons. Magical thinking, peculiar notions, ideas of reference, illusions, and derealization are part of a schizotypal person's everyday world. Patients with schizotypal personality disorder are most *similar to patients with schizophrenia* in oddities of perception, thought, behavior, and communication. The sex ratio for the disorder is unknown, but it is *frequently diagnosed in females with fragile X syndrome*.



Psychosomatic Medicine and Consultation-Liaison Psychiatry

Psychosomatic medicine has been an area of concern in psychiatry for more than 50 years. The term *psychosomatic* derives from the Greek *psyche* (soul) and *soma* (body) and literally refers to how the mind affects the body. Today the term is used to describe individuals with medical complaints that have no physical cause. The primary focus of psychosomatic medicine is clinical problems that occur in patients being treated in medical settings, including primary psychiatric disorders such as delirium or dementia. The majority of practice is within the general hospital setting, but they can occur in outpatient settings as well. The basic approach is to make a psychiatric assessment; provide psychotherapeutic, behavioral, or pharmacological interventions to patients; and work closely with other medical professionals as a liaison.

Psychosomatic concepts have contributed many approaches to medical care. Concepts derived from the field of psychosomatic medicine influenced the emergence of complementary and alternative medicine (CAM). They have also influenced the field of holistic medicine with its emphasis on examining and treating the whole patient, not just his or her disease or disorder. Psychosomatic medicine has also influenced the field of behavioral medicine, which integrates the behavioral sciences and the biomedical approach to the prevention, diagnosis, and treatment of disease.

Consultation-liaison (C-L) psychiatry is the study, practice, and teaching of the relationship between medical and psychiatric disorders. In C-L psychiatry, the psychiatrist serves as a consultant to medical colleagues (either another psychiatrist or, more commonly, a nonpsychiatric physician) or to other mental health professions (psychologist, social worker, or psychiatric nurse). C-L psychiatrists also consult regarding patients in medical or surgical settings and provide follow-up psychiatric treatment as needed. C-L psychiatry is associated with all of the diagnostic, therapeutic, research, and teaching services that psychiatrists perform in the general hospital and serves as a bridge between psychiatry and other specialties. Virtually every major system of the body has been investigated with regard to the relationship between psychological factors and disease. Psychological factors affecting the cardiovascular, respiratory, immune, endocrine, gastrointestinal, and dermatologic systems are well known. Even the apparently simple act of correctly following a medication regimen can be complicated, and perhaps undermined, by unaddressed or unrecognized psychological factors.

Students should study the questions and answers below for a useful review of these factors.

HELPFUL HINTS

These terms relating to psychophysiological medicine should be defined.

- ▶ alexithymia
- ▶ atopic
- ▶ autoimmune diseases
- ▶ behavior modification deconditioning program
- ▶ C-L psychiatry
- ▶ congestive heart failure
- ▶ conversion disorder
- ▶ coronary artery disease
- ▶ Crohn's disease
- ▶ diabetes mellitus
- ▶ dialysis dementia
- ▶ dysmenorrhea
- ▶ fibromyalgia
- ▶ general adaptation syndrome
- ▶ gun-barrel vision
- ▶ hay fever
- ▶ hemodialysis units
- ▶ hyperhidrosis
- ▶ hyperthyroidism
- ▶ hyperventilation syndrome
- ▶ hypothyroidism
- ▶ ICUs
- ▶ idiopathic amenorrhea
- ▶ menopausal distress
- ▶ migraine
- ▶ myxedema madness
- ▶ neurocirculatory asthenia
- ▶ organ transplantation
- ▶ pain threshold and perception
- ▶ Papez circuit
- ▶ peptic ulcer
- ▶ pheochromocytoma
- ▶ PMS
- ▶ postcardiotomy delirium
- ▶ premenstrual dysphoric disorder
- ▶ pruritus
- ▶ psychogenic cardiac nondisease
- ▶ psychophysiological
- ▶ psychosomatic
- ▶ Raynaud's phenomenon
- ▶ relaxation therapy
- ▶ rheumatoid arthritis
- ▶ skin disorders
- ▶ somatization disorder
- ▶ systemic lupus erythematosus
- ▶ tension headaches
- ▶ tension myositis syndrome
- ▶ thyrotoxicosis
- ▶ type A and type B personalities
- ▶ ulcerative colitis
- ▶ vasomotor syncope
- ▶ vasovagal attack
- ▶ Wilson's disease

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the one that is *best* in each case.

- 27.1.** All of the following are cardiovascular effects of tricyclic antidepressants in patients with heart disease *except*
- tachycardia
 - bradycardia
 - arrhythmias
 - hypotension
 - heart block
- 27.2.** True statements about research in psychocardiology include
- The most consistent psychological correlates of hypertension are inhibited anger expression and excessive anger expression.
 - Stress leads to excess secretion of epinephrine, which increases cardiac contractility and conduction velocity.
 - Cardiac surgery patients at greatest risk for complications are depressed and in denial about their anxiety.
 - Mental stress leads to diminished cardiac perfusion.
 - All of the above
- 27.3.** Antidepressants should be used cautiously in cardiac patients because of increased risk of which of the following?
- Conduction side effects
 - Hypertension
 - Noncompliance
 - Suicide
 - All of the above
- 27.4.** Phantom limb occurs after leg amputation in what percentage of patients?
- 10 percent
 - 50 percent
 - 80 percent
 - 90 percent
 - 98 percent
- 27.5.** Which of the following is *not* a physiological response of the gastrointestinal (GI) system to acute stress?
- Increased resting tone of the upper esophageal sphincter
 - Decreased contraction amplitude in the distal esophagus
 - Decreased antral motor activity in the stomach
 - Reduced migrating motor function in the small intestine
 - Increased myoelectrical motility in the large intestine
- 27.6.** The most frequent functional GI disorder is
- globus
 - irritable bowel syndrome
 - functional abdominal bloating
 - functional heartburn
 - functional chest pain
- 27.7.** Which of the following is *not* a sign of overt hypothyroidism?
- Normal thyroid hormone concentrations
 - Patients are symptomatic
 - Thyroid-stimulating hormone (TSH) is elevated
 - Low thyroid hormone concentrations
 - None of the above
- 27.8.** Which of the following statements regarding psychogenic excoriations is *true*?
- Freud believed the skin is susceptible to unconscious sexual urges.
 - Lesions are typically found in hard-to-reach areas.
 - Scratching does not occur in response to an itch.
 - The behavior never becomes ritualistic.
 - All of the above
- 27.9.** Which of the following statements about psychoneuroimmunology is *true*?
- Immunological reactivity is not affected by hypnosis.
 - Lymphocytes cannot produce neurotransmitters.
 - The immune system is affected by conditioning.
 - Growth hormone does not affect immunity.
 - Marijuana does not affect the immune system.
- 27.10.** In evaluating patients with complaints of chronic pain of whatever cause, the physician must be alert to
- use of over-the-counter medications
 - alcohol dependence
 - withdrawal symptoms during the evaluation
 - an underlying medical illness
 - all of the above
- 27.11.** Psoriasis has been shown to be
- triggered by external factors such as cold weather and physical trauma
 - rarely associated with personality disorders
 - unaffected by such psychosocial interventions as meditation or relaxation
 - associated with lower levels of anxiety and depression than in the general population
 - none of the above
- 27.12.** Dialysis dementia
- is a common occurrence
 - can cause seizures and dystonias
 - can occur after a patient's first dialysis treatment

- D. often leads to suicide
E. all of the above
- 27.13.** A decrease in T lymphocytes has been reported in all of the following *except*
- A. bereavement
B. nonpsychotic inpatients
C. medical students during final examinations
D. women who are having extramarital affairs
E. caretakers of patients with dementia of the Alzheimer's type
- 27.14.** A review of the impact of biobehavioral factors on adult cancer pain concluded that
- A. the relationship to affective states was major
B. environmental influences were strong
C. there was a consistent role of personality factors
D. all of the above
E. none of the above
- 27.15.** True statements about the effects of psychosocial interventions in cancer outcomes and prognosis include
- A. There is no evidence that psychotherapy influences the outcome of metastatic breast cancer.
B. The mortality rates and recurrence rates in patients with malignant melanoma have been shown to be greater in patients who did not receive a structured group intervention than in those who did.
C. Group behavioral intervention in patients with breast cancer does not appear to have any effect on lymphocyte mitogen responses.
D. A lack of social support and depression has not been shown to be linked to diminished immune responses in women with breast cancer.
E. Hypothalamic-pituitary-adrenal axis hypoactivity induced by exposure of rats to stress is associated with increased tumor growth.
- 27.16.** A highly emetogenic anticancer agent is
- A. bleomycin
B. cisplatin
C. doxorubicin
D. vinblastine
E. vincristine
- 27.17.** In the psychotherapeutic treatment of patients with psychosomatic disorders, the most difficult problem is patients'
- A. positive response to the interpretation of the physiological meaning of their symptoms
B. overemphasis of the psychological component of their physiological symptoms
C. erotic transference to the psychotherapist
D. resistance to entering psychotherapy
E. none of the above
- 27.18.** Antidepressants have been shown to be helpful in the treatment of
- A. glossodynia
B. idiopathic pruritus
C. urticaria
D. vulvodynia
E. all of the above
- 27.19.** Psychogenic pruritus differs from neurologic pruritus in that psychogenic pruritus is characterized by
- A. a chronic course
B. a greater intensity
C. accompanied pain in the same location
D. unlikely occurrence at night
E. insomnia
- 27.20.** Which of the following is the most common reason for a C-L psychiatrist to be consulted?
- A. Anxiety
B. Depression
C. Disorientation
D. Sleep disorders
E. Adverse effects of medication
- 27.21.** You are the C-L psychiatrist called to consult on a patient who is scheduled for a liver transplant. You learn the patient now needs a transplant after he was infected with hepatitis C because of promiscuous sexual activity. Which of the following is this patient at increased risk for?
- A. Adjustment disorder
B. Major depression
C. Medication noncompliance
D. Organ rejection
E. Suicide
- 27.22.** A 53-year-old male patient is found to have an occipital lobe tumor. He would be *least likely* to exhibit which of the following symptoms and complaints?
- A. Headache
B. Homonymous hemianopsia
C. Papilledema
D. Paranoid delusions
E. Visual hallucinations
- 27.23.** An 83-year-old woman presents with a chief complaint, "It takes me up to 45 minutes to sleep after going to bed." The patient further states that she sometimes wakes up a few times in the night after falling asleep. She has no toxic habits, does not have obstructive sleep apnea, and does not feel unrefreshed upon waking. She reports that her energy level has decreased since her dog passed away 3 years ago, but she continues to see her friends every Sunday for bingo. What disorder does she most likely have?

- A. Alzheimer's dementia
- B. Major depressive disorder
- C. Normal bereavement
- D. Normal age-related sleep patterns
- E. None of the above

Directions

Each set of lettered headings below is followed by a list of numbered phrases. For each numbered phrase, select:

- A. if the item is associated with A only.
- B. if the item is associated with B only.
- C. if the item is associated with both A and B.
- D. if the item is associated with neither A nor B.

Questions 27.24–27.29

- A. Ulcerative colitis
- B. Crohn's disease

- 27.24. Symptoms include diarrhea, abdominal pain, and weight loss
- 27.25. Patchy inflammation that may affect any part of the gastrointestinal tract
- 27.26. Smoking increases risk
- 27.27. Increase risk of colonic carcinoma
- 27.28. Is high among some ethnic groups
- 27.29. 21 to 35 percent of patients have anxiety and depressive disorders

Questions 27.30–27.34

- A. Hyperthyroidism
- B. Hypothyroidism

- 27.30. Graves disease
- 27.31. Dysphoria
- 27.32. Myxedema madness
- 27.33. Treatment-refractory depression
- 27.34. Visual hallucinations

Questions 27.35–27.38

- A. Rheumatoid arthritis
- B. Fibromyalgia

- 27.35. Is often present in chronic fatigue syndrome
- 27.36. Pain from inflammation of the joints
- 27.37. Pain and stiffness of soft tissue
- 27.38. Comorbid depression commonly leads to poor functional status

Directions

Each group of questions below consists of lettered headings followed by a list of numbered words or phrases. For each numbered word or phrase, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 27.39–28.43

- A. Acquired immune deficiency syndrome (AIDS)
- B. Pancreatic cancer
- C. Pheochromocytoma
- D. Systemic lupus erythematosus
- E. Wilson's disease

27.39. Dementia syndrome with global impairment and seropositivity

27.40. Resemblance to steroid psychosis

27.41. Explosive anger and labile mood

27.42. Symptoms of a classic panic attack

27.43. Sense of imminent doom

Questions 27.44–27.48

- A. Migraine headaches
- B. Cluster headaches
- C. Tension headaches

27.44. Are associated with miosis, ptosis, and diaphoresis

27.45. Bilateral

27.46. Occur up to eight times a day

27.47. Usually occur during periods of emotional stress

27.48. Lasts from 4 to 72 hours

ANSWERS

27.1. The answer is B

Approximately 15 to 20 percent of patients with coronary artery disease (CAD) meet criteria for current major depression. Selective serotonin reuptake inhibitors (SSRIs) (not tricyclic antidepressants [TCAs]) cause *bradycardia* in patients with CAD (Table 27.1). TCAs cause orthostatic *hypotension* and cardiac conduction disturbances. In combination with diuretics, vasodilators, and benzodiazepines, their effect on blood pressure



Table 27.1
Cardiovascular Effects of Antidepressants in Patients with Heart Disease

Agent	Effects
Tricyclic antidepressants	Orthostatic hypotension Delayed cardiac conduction, heart block Type 1A antiarrhythmic effect Ventricle arrhythmias in overdose Tachycardia
Selective serotonin reuptake inhibitors	Bradycardia Increased ejection fraction
Monoamine oxidase inhibitors	Hypotension Peripheral edema
Bupropion (Wellbutrin)	Hypotension
Nefazodone (Serzone), trazodone (Desyrel)	Hypotension Premature ventricular contractions
Venlafaxine (Effexor)	Hypotension, especially at doses > 300 mg per day

Courtesy of Peter A. Shapiro, MD, and Lawson R. Wulsin, MD.

is exaggerated. In toxic levels, they may precipitate ventricular *arrhythmias*, but at therapeutic doses, they exhibit type 1A antiarrhythmic properties. Consequently, TCAs are no longer recommended as first-line drugs in treatment of depression in patients with ischemic heart disease.

27.2. The answer is E (all)

Psychocardiology encompasses the spectrum of interactions of psychiatric disorders, cardiac symptoms, and cardiac disease, including associated complicating health behavior. For the past several decades, attention to the psychosocial and behavioral factors in cardiovascular disease has increased significantly. The research has taken two primary pathways: one has examined hypertension, and the other has looked generally at coronary artery disease (CAD), including myocardial infarction and sudden cardiac death.

Hypertension, one of the originally hypothesized psychosomatic illnesses, is a major risk factor for CAD and cerebrovascular disease. Psychological factors have been studied closely as part of the pathogenesis of the condition. Some research examining *psychological aspects of hypertension* has focused on personality traits or coping styles. Traits such as submissiveness and distorted expression of anger have emerged as correlates of hypertension. The most consistent correlates have involved anger-coping styles, both *inhibited anger expression and excessive anger expression*.

Stress causes a sympatheticoadrenal medullary alarm reaction characterized by excess catecholamine secretion. Specifically, excess epinephrine is secreted under what the body interprets as stressful conditions. The *outpouring of epinephrine* increases blood pressure and heart and respiratory rates; enhances neuromuscular transmission; elevates the concentration of blood sugar by glycogenolysis; mobilizes fat; redirects hemodynamic patterns to suit muscular activity; and while increasing blood oxygenation, increases oxygen consumption. More specific β -adrenergically mediated cardiac effects include increased heart rate, *contractility*, and *conduction velocity* and a short arteriovenous refractory period. These catecholamine-mediated cardiac effects are thought to be pathogenically related to adverse cardiac events.

Studies of stress-induced cardiac changes and studies examining stress, arrhythmias, and sudden cardiac death suggest a significant relation in the pathophysiology of CAD. One study found that the *cardiac surgery patients at greatest risk for complications*, including arrhythmias and sudden death, were depressed, anxious, and in denial of their anxiety.

Other studies have *documented diminished cardiac perfusion during mental stress* via positron emission tomography and radionucleotide ventriculography in patients with CAD.

27.3. The answer is A

Consultation-liaison psychiatrists must make a careful assessment of drug-drug interactions before prescribing medications, and this should be undertaken in collaboration with the patient's primary physician. Antidepressants should be used cautiously in cardiac patients because of *conduction side effects and orthostatic hypotension* (not hypertension). It is typically depressed patients who may be at increased risk for *suicide* after they are

started on antidepressants, not cardiac patients. *Noncompliance*, although an issue with all patients for various reasons, is not specifically troublesome with cardiac patients.

27.4. The answer is E

Phantom limb occurs in *98 percent* of patients—not 10 percent, 50 percent, 80 percent, or 90 percent—who have undergone leg amputation. The experience may last for years. Sometimes the sensation is painful, and a neuroma at the stump should be ruled out. The condition has no known cause or treatment and usually stops spontaneously.

27.5. The answer is B

Acute stress can induce physiological responses in several GI target organs. In the esophagus, acute stress *increases the resting tone of the upper esophageal sphincter* and *increases (not decreases) contraction amplitude in the distal esophagus*. Such physiological responses may result in symptoms that are consistent with globus or esophageal spasm syndrome. In the stomach, acute stress induces *decreased antral motor activity*, potentially producing functional nausea and vomiting. In the small intestine, *reduced migrating motor function* can occur, and in the large intestine, there can be *increased myoelectrical and motility activity* under acute stress. These effects in the small and large intestine may be responsible for bowel symptoms associated with irritable bowel syndrome.

27.6. The answer is D

Functional disorders are common syndromes associated with significant subjective distress and abnormalities of bowel function without evidence of structural abnormalities. Functional GI disorders frequently have high rates of psychiatric comorbidity.

Functional heartburn is the most common functional GI disorder. Functional heartburn needs to be distinguished from gastroesophageal reflux disease. In functional heartburn, symptoms of acid reflux are present (i.e., heartburn, regurgitation of food), but there is no evidence of anatomical abnormality or esophagitis on endoscopy or radiography.

Emotional distress and anxiety disorders may result in abnormal respiration and air swallowing or aerophagia. Swallowed air produces distension of the stomach and feelings of *abdominal fullness* or *bloating* along with belching.

Chest pain frequently prompts attention for potential cardiac causes. However, functional esophageal motility disorders can produce chest pain and need to be considered in patients with chest pain and no evidence of cardiac abnormalities. Psychiatrists need to be aware of the possible GI causes of chest pain, particularly when there is limited evidence for a psychiatric disorder in an unexplained chest pain presentation (Table 27.2).

Irritable bowel syndrome is the prototypical functional GI disorder characterized by abdominal pain and diarrhea or constipation. *Globus*, the Latin word for lump, indicates a sensation of having a lump in the throat. Alternate terms for globus include *globus pharyngeus*, *globus hystericus*, and *globus syndrome*. Globus must be distinguished from *dysphagia*, or difficulty swallowing. Patients complaining of globus may also report dysphagia and fear of choking, but most patients with globus report neither of these other symptoms.



Table 27.2
Common Gastrointestinal Diseases

Disorders of the esophagus
Reflux esophagitis (GERD)
Infectious esophagitis
Esophageal motility disorders
Disorders of the stomach and intestines
Peptic ulcer disease
Gastroparesis
Malabsorption and maldigestion
Inflammatory bowel disease
Crohn's disease
Ulcerative colitis
Diverticular disease
Diseases of the anorectum
Hemorrhoids
Anal fissures
Perirectal abscess
Diseases of the pancreas
Acute pancreatitis
Chronic pancreatitis
Diseases of the liver and gallbladder
Infectious hepatitis
Toxic and drug-induced hepatitis
Primary biliary cirrhosis
Primary sclerosing cholangitis
Metabolic liver disease
Gallstones and cholecystitis
Cancer of the gastrointestinal tract
Colon and rectal cancer
Pancreatic cancer
Esophageal cancer
Stomach cancer
Liver cancer

GERD, gastroesophageal reflux disease.

27.7. The answer is A

Hypothyroidism is the diminished production of thyroid hormone leading to clinical manifestations of thyroid insufficiency (i.e., low metabolic rate, somnolence, weight gain). It is categorized as either overt or subclinical. In overt hypothyroidism, *thyroid hormone concentrations are abnormally low (not normal), the thyroid-stimulating hormone (TSH) level is elevated, and patients are symptomatic*. In subclinical hypothyroidism, patients have *normal thyroid hormone concentrations*, have elevated TSH levels, and are asymptomatic. Subclinical hypothyroidism can produce depressive symptoms and cognitive defects, although they are less severe than those produced by overt hypothyroidism. The lifetime prevalence of depression in patients with subclinical hypothyroidism is approximately double that in the general population. These patients display a lower response rate to antidepressants and a greater likelihood of responding to liothyronine (Cytomel) augmentation than euthyroid patients with depression.

27.8. The answer is A

Psychocutaneous disorders encompass a wide variety of dermatological diseases that may be affected by the presence of psychiatric symptoms or stress and psychiatric illnesses in which the skin is the target of disordered thinking, behavior, or perception.

Psychogenic excoriations (also called psychogenic pruritus) are lesions caused by scratching or picking *in response to an itch or other skin sensation* or because of an urge to remove an irregularity on the skin from preexisting dermatoses such as acne. Lesions are typically found in *areas that the patient can easily reach* (e.g., the face, upper back, and the upper and lower extremities). The behavior in psychogenic excoriation sometimes resembles obsessive-compulsive disorder in that it is *repetitive, ritualistic, and tension reducing*, and patients attempt (often unsuccessfully) to resist excoriating. The skin is an important erogenous zone, and *Freud believed it susceptible to unconscious sexual impulses*.

27.9. The answer is C

The immune system is affected by *conditioning*. According to Robert Ader, immunological reactivity is affected by *hypnosis, lymphocytes* can produce neurotransmitters, *growth hormone* affects immunity, and *marijuana* affects the immune system. Ader has summarized the psychoneuroimmunology factors (Table 27.3).

27.10. The answer is E (all)

Most patients with chronic pain attempt to treat themselves before resorting to medical help. Billions of dollars are spent annually by people seeking relief through *over-the-counter preparations* or other nonmedical means. These persons often have *alcohol dependence* and other substance-related disorders. Therefore, physicians should be alert for substance toxicity (especially overmedication) and *withdrawal symptoms during the evaluation* and treatment of patients with chronic pain. Explaining to the patient and family that sensitivity to pain may greatly increase during substance withdrawal may partially decrease anxiety and increase pain sensitivity. A physician should always remember that a psychiatric diagnosis does not preclude the existence of *an underlying medical illness*. Finally, the clinician should recognize that the patient's pain is not imaginary. It is real and cannot be "willed away."

27.11. The answer is A

Psoriasis is a chronic, relapsing disease of the skin with variable clinical features. Characteristic lesions involve both the vasculature and the epidermis and have clear-cut borders and noncoherent silvery scales with a glossy, homogeneous erythema under the scales. Some patients also develop nail dystrophy and arthritis. *Common triggers of psoriasis include cold weather, physical trauma, acute bacterial and viral infections, and drug-related effects associated with corticosteroid withdrawal and with the use of β -adrenergic receptor antagonists and lithium*. Lithium-induced psoriasis typically occurs within the first few years of treatment, is resistant to treatment, and resolves after discontinuation of lithium treatment.

Controlled studies have found psoriatic patients to have *high (not low) levels of anxiety and depression and significant (not rare) comorbidity with a wide array of personality disorders* from the DSM-IV-TR, including schizoid, avoidant, and obsessive-compulsive personality disorders, as well as tendencies toward passive-aggressive traits. Patients' self-reports of psoriasis severity correlated directly with depression and suicidal



Table 27.3
Summary of Psychoneuroimmunology Factors by Robert Ader

Nerve endings have been found in the tissues of the immune system. The CNS is linked to both the bone marrow and the thymus, where immune system cells are produced and developed, and to the spleen and the lymph nodes, where those cells are stored.

Changes in the CNS (the brain and the spinal cord) alter immune responses, and triggering an immune response alters CNS activity. Animal experiments dating back to the 1960s show that damage to different parts of the brain's hypothalamus can either suppress or enhance the allergic-type response. Recently, researchers have found that inducing an immune response causes nerve cells in the hypothalamus to become more active and that the brain cell anxiety peaks at precisely the same time that levels of antibodies are at their highest. Apparently, the brain monitors immunological changes closely.

Changes in hormone and neurotransmitter levels alter immune responses and vice versa. The stress hormones generally suppress immune responses. But other hormones, such as growth hormone, also seem to affect immunity. Conversely, when experimental animals are immunized, they show changes in various hormone levels.

Lymphocytes are chemically responsive to hormones and neurotransmitters. Immune system cells have receptors—molecular structures on the surface of their cells—that are responsive to endorphins, stress hormones, and a wide range of other hormones.

Lymphocytes can produce hormones and neurotransmitters. When an animal is infected with a virus, lymphocytes produce minuscule amounts of many of the same substances produced by the pituitary gland.

Activated lymphocytes—cells actively involved in an immune response—produce substances that can be perceived by the CNS. The interleukins and interferons—chemicals that immune system cells use to talk to each other—can also trigger receptors on cells in the brain, more evidence that the immune system and the CNS speak the same chemical language.

Psychosocial factors may alter the susceptibility to or the progression of autoimmune disease, infectious disease, and cancer. Evidence for those connections comes from many researchers.

Immunological reactivity may be influenced by stress. Chronic or intense stress, in particular, generally makes immune system cells less responsive to a challenge.

Immunological reactivity can be influenced by hypnosis. In a typical study, both of a subject's arms are exposed to a chemical that normally causes an allergic reaction. But the subject is told, under hypnosis, that only one arm will show the response—and that, in fact, is often what happens.

Immunological reactivity can be modified by classical conditioning. As Ader's own key experiments showed, the immune system can learn to react in certain ways as a conditioned response.

Psychoactive drugs and drugs of abuse influence immune function. A range of drugs that affect the CNS—including alcohol, marijuana, cocaine, heroin, and nicotine—have all been shown to affect the immune response, generally suppressing it. Some psychiatric drugs, such as lithium (prescribed for bipolar I disorder), also modulate the immune system.

CNS, central nervous system.

Adapted from Goleman D, Guerin J. *Mind Body Medicine*. Yonkers, NY: Consumer Reports; 1993.

ideation, and comorbid depression reduced the threshold for pruritus in psoriatic patients. Heavy alcohol drinking (>80 grams of ethanol daily) by male psoriatic patients may predict a poor treatment outcome.

These possible links between mental state and psoriasis have led to the development of *psychosocial interventions* in its treatment. Controlled studies have shown *meditation*, hypnosis, *relaxation training*, cognitive-behavioral stress management, and symptom control imagery training to be *effective in reducing psoriasis activity*.

27.12. The answer is B

Patients undergoing dialysis cope with lifelong, debilitating, and limiting disease; they are totally dependent on a multiplex group of caretakers for access to a machine controlling their well-being. Dialysis dementia is a *rare condition* characterized by loss of memory, disorientation, *dystonias*, and *seizures*. The dementia occurs in patients who have been receiving *dialysis treatment for many years*. The cause is unknown. Other characteristics of dialysis dementia can include problems such as *depression*, and, rarely, *suicide*.

27.13. The answer is D

There are no studies on the T cells of *women who are having extramarital affairs*. Investigators have found a decrease in lymphocytic response in *bereavement* (conjugal and anticipatory), the *caretakers of patients with dementia of the Alzheimer's type*, in *nonpsychotic inpatients*, in resident physicians, in *medical students during final examinations*, in women who were separated or divorced, in elderly people with no social support, and in unemployed persons. Table 27.4 lists some of the common behavioral states associated with in vitro immune suppression.

27.14. The answer is E (none)

Patients with pain have a significantly higher incidence of depression and anxiety. It has been suggested that chronic pain may be a depressive equivalent, that pain may cause psychiatric syndromes, and that pain may coexist with psychopathology in vulnerable subjects. In cancer patients, the evidence suggests that these emotional reactions both result from and contribute to the experience of pain and that treatment of one improves the other. However, *a review of the impact of biobehavioral factors on*



Table 27.4
Behavioral States Associated with in Vitro Immune Suppression

Disturbed sleep function
Examination stress
Loneliness
Unemployment
Marital discord
Divorce
Alzheimer's disease—caregivers' stress
Bereaved spouses (including anticipatory bereavement)
Clinical anxiety
Major depressive disorder

adult cancer pain concluded that the role of personality factors was inconsistent (not consistent), the relationship to affective states was minimal (not major), the environmental influences were weak (not strong), and the role of cognitive factors was unexplored. Hence, the psychiatric consultant is wise to avoid diagnostic inferences that minimize the patient's complaints. Patients with significant psychopathology are indeed more difficult to evaluate, so the consultant must help the staff make the same aggressive efforts at symptom relief for these patients as for other patients. The incidence of psychiatric complications is particularly high when pain is underestimated and undermedicated by caretakers, an event that recurs with a regularity that cries out for explanations.

27.15. The answer is B

The growing interface between the social sciences and oncology between the 1930s and 1950s was the foundation for the emergence of the subspecialty called *psychosocial oncology* or *psycho-oncology*. This area, which has become a major contender in psychosomatic medicine research, seeks to study both the impact of cancer on psychological functioning and the role that psychological and behavioral variables may play in cancer risk and survival. A hallmark of psycho-oncology research has been intervention studies that attempt to influence the course of illness in patients with cancer. Important clinical observations have emerged that focus on such variables as cancer outcome and psychoneuroimmunology. For example, one landmark study demonstrated that *women with metastatic breast cancer* who received weekly group psychotherapy survived an average of 18 months longer than control patients randomly assigned to routine care. In their study of *patients with malignant melanoma*, one group of investigators found that control patients who did not receive a structured group intervention had a statistically significant recurrence of cancer and a greater mortality rate than patients who did receive such therapy. Another group of investigators used a *group behavioral intervention* (relaxation, guided imagery, and biofeedback training) in *patients with breast cancer* to demonstrate increased natural killer (NK) cell activity and lymphocyte mitogen responses in patients receiving treatment compared with controls.

Investigators have found that psychosocial variables such as *lack of social support and depressive symptoms* may be linked to reduced NK cell activity in women with breast cancer and that more metastatic nodes and decreased NK cell activity are associated with depressive symptoms. Hypothalamic-pituitary-adrenal hyperactivity in depressed cancer patients may have important prognostic implications, particularly because *hypothalamic-pituitary-adrenal hyperactivity* induced by exposure of rats to stress is associated with increased tumor growth, especially in older rats. Psychosocial treatment of patients with malignant melanoma has been shown to improve prognoses and enhance certain immune parameters.

27.16. The answer is B

Emetogenicity is a measure of the ability to induce vomiting. *Cisplatin* (Platinol) is highly emetogenic. *Doxorubicin* (Adriamycin) is moderately emetogenic, and *vincristine* (Oncovin),



Table 27.5
Emetogenic Potential of Some Commonly Used Anticancer Agents

Highly emetogenic	Cisplatin Dacarbazine Streptozocin Actinomycin Nitrogen mustard
Moderately emetogenic	Doxorubicin Daunorubicin Cyclophosphamide Nitrosoureas Mitomycin-C Procarbazine
Minimally emetogenic	Vincristine Vinblastine 5-Fluorouracil Bleomycin

Courtesy of Marguerite S. Lederberg, MD, and Jimmie C. Holland, MD.

vinblastine (Velban), and *bleomycin* (Blenoxane) are minimally emetogenic. Table 27.5 summarizes the emetogenic problems with various chemotherapeutic agents.

27.17. The answer is D

The most difficult problem in the treatment of psychosomatically ill patients is patients' *resistance to entering psychotherapy* and to recognizing the psychological factors in their illness. Generally, clinicians have difficulty in forming a positive transference with these patients. *An erotic transference to the psychotherapist* usually does not develop, nor is it relevant to the treatment of these patients. The patients *usually react negatively to the interpretation of the physiological meaning of their symptoms and do not recognize the psychological correlation with their physiological symptoms*.

27.18. The answer is E (all)

Pruritus, or itching, is the most common symptom of dermatological disorders and of several systemic diseases, including chronic renal disease, hepatic disease, hematopoietic disorders, endocrine disorders, malignant neoplasms, drug toxicity, and neurological syndromes (e.g., multiple sclerosis).

Chronic *idiopathic pruritus* and *idiopathic pruritus ani* (itching in the anal area), *vulvae* (itching in the vaginal area), and *scroti* (itching in the scrotum) frequently have been called psychogenic, but more study is needed to determine how psychiatric and other central nervous system disorders contribute to the development of pruritus. *Antidepressant medications, particularly the tricyclic drugs, can relieve pruritus of many origins*.

Urticaria (also known as *hives*) is characterized by circumscribed, raised, erythematous, usually pruritic areas of edema that involve the superficial dermis.

Glossodynia (also called *burning mouth syndrome*) is an unexplained, prolonged sensation of pain, burning, or both inside the oral cavity, most frequently at the tip and lateral borders of the tongue, and often accompanied by other symptoms such as dryness, paresthesia, and changes in taste and smell.

Vulvodinia is chronic vulvar and perineal discomfort of variable severity with burning, stinging, irritation, or rawness.

27.19. The answer is D

Pruritus is a common unpleasant sensation that provokes a desire to scratch. It can be caused by numerous cutaneous, medical, neurological, and psychiatric disorders. Psychogenic pruritus is characterized by (1) temporal association with psychiatric symptoms (i.e., anxiety disorder, obsessive-compulsive disorder, psychosis); (2) *unlikely occurrence at night*; and (3) paroxysmal nature with increased severity, sudden onset and resolution, and intervening symptom-free periods. Neurological pruritus, on the other hand, is characterized by (1) a lack of sudden onset; (2) *a chronic course*; (3) *greater severity or intensity*; (4) unilateral or bilateral location; (5) association of pruritus with other sensory phenomena such as allodynia, dysesthesia, and hyperpathia; (6) paroxysmal course, often starting and ending abruptly, lasting seconds to minutes, and recurring frequently; (7) pruritus accompanied by paroxysmal constant *pain in the same area*; or (8) awakenings from sleep or *insomnia*.

27.20. The answer is E

C-L psychiatrists must deal with a broad range of psychiatric disorders. The most common reason for consultation is *treatment problems*, which account for 50 percent of the consultation requests made of psychiatrists. Other common symptoms are *anxiety, depression, and disorientation*. Although sleep disorders are common complaints among hospitalized patients, treatment problems clearly surpass these disorders as a reason for consultation.

27.21. The answer is C

Transplantation programs have expanded over the past decade, and C-L psychiatrists play an important role in helping patients and their families deal with the many psychosocial issues involved: (1) which and when patients on a waiting list will receive organs, (2) anxiety about the procedure, (3) fear of death, (4) organ rejection, and (5) adaptation to life after successful transplantation. Posttransplant patients require complex aftercare, and achieving *compliance with medication* may be difficult without supportive psychotherapy. This is particularly relevant to patients who have received liver transplants as a result of hepatitis C brought on by promiscuous sexual behavior and to drug addicts who use contaminated needles.

Although all of the remaining choices are of concern for any transplant patient, they are not particularly relevant in this patient because the primary concern should be his medication compliance. Within 1 year of transplant, almost 20 percent of patients experience a *major depression* or an *adjustment disorder* with depressed mood. In such cases, evaluation for *suicidal ideation* and risk is important. In addition to depression, another 10 percent of patients experience signs of posttraumatic stress disorder, with nightmares and anxiety attacks related to the procedure.

27.22. The answer is D

A patient with an occipital lobe tumor would be least likely to exhibit *paranoid delusions*. *Visual hallucinations, headache,*

papilledema, and homonymous hemianopsia are all reported symptoms and complaints of occipital lobe tumors. Papilledema (edema of the optic disk) may be caused by increased intracranial pressure. Homonymous hemianopsia is blindness in the corresponding (right or left) field of vision of each eye.

27.23. The answer is D

As individuals age, the amount of time spent in stage four sleep decreases. Daytime napping and decreased overall sleep in the evening are not unusual nor is waking up after going to bed at night. As such, it is unlikely that this patient has a sleep pathology. She has *normal age-related sleep patterns*. *Alzheimer's dementia* is characterized by a progressive loss of memory and may result in sleep disturbance. This patient's clinical history does not indicate that she has Alzheimer's dementia. Although *major depressive disorder* does result in sleep disturbance, frequently in the form of increased sleep latency and early morning awakening, this patient does not have the symptoms required for a diagnosis of depression. In addition, she continues to enjoy spending time with her friends on a regular basis. The patient's dog passed away 3 years ago, and it is unlikely that she is experiencing *bereavement*.

Answers 27.24–27.29

27.24. The answer is C

27.25. The answer is B

27.26. The answer is B

27.27. The answer is C

27.28. The answer is A

27.29. The answer is C

Inflammatory bowel disease (IBD) includes *ulcerative colitis* and *Crohn's disease*. Both cause inflammation of the gastrointestinal (GI) tract; the most common symptoms are *diarrhea* (often with blood), *abdominal pain, and weight loss*. Ulcerative colitis is characterized by diffuse mucosal inflammation limited to the colon and rectum; in Crohn's disease, the *inflammation is patchy and may affect any part of the GI tract*. The prevalence of ulcerative colitis is approximately 100 to 200 per 100,000. There are marked differences between *ethnic groups*, with some (e.g., Ashkenazi Jews) having a particularly *high incidence*. The prevalence of Crohn's disease is 50 to 100 per 100,000.

The etiologies of both ulcerative colitis and Crohn's disease are unknown. Both are thought to be a response to environmental triggers (e.g., infection, drugs, or other agents) in genetically susceptible individuals. *Smoking increases the risk of Crohn's disease*. Both diseases may have life-threatening acute exacerbations, and *both increase the risk of colonic carcinoma* (colon cancer).

The relationship between psychiatric disorders and IBD is unclear. Clinic studies have indicated that *21 to 35 percent* of patients with IBD have *anxiety and depressive disorder*; this is

greater than the general population but lower than patients with functional bowel disorder.

Answers 27.30–27.34

27.30. The answer is A

27.31. The answer is A

27.32. The answer is B

27.33. The answer is B

27.34. The answer is A

Of all endocrine disorders, disorders of the thyroid are the most common. Disorders of the thyroid gland fall into two general categories: *hyperthyroidism* and *hypothyroidism*. Hyperthyroidism, or thyrotoxicosis, results from overproduction of thyroid hormone by the thyroid gland. The most common cause is *Graves disease*. Psychiatric features include nervousness, fatigue, insomnia, mood lability, and *dysphoria*. Speech may be pressured, and patients may demonstrate a heightened activity level. Cognitive symptoms include a short attention span, impaired recent memory, and an exaggerated startled response. In severe cases, there may be *visual hallucinations*, paranoid ideation, and delirium. Although some symptoms of hyperthyroidism resemble those of a manic episode, an association between hyperthyroidism and mania has rarely been observed.

Hypothyroidism results from inadequate synthesis of thyroid hormone. Psychiatric symptoms of hypothyroidism include depressed mood, apathy, impaired memory, and other cognitive defects. Also, hypothyroidism can contribute to *treatment-refractory depression*, which is when a patient with major depressive disorder does not respond to the adequate course of at least two antidepressants. A psychotic syndrome of auditory hallucinations and paranoia, named “*myxedema madness*,” has been described in some patients.

Answers 27.35–27.38

27.35. The answer is B

27.36. The answer is A

27.37. The answer is B

27.38. The answer is A

Rheumatoid arthritis is a disease characterized by chronic musculoskeletal pain arising from *inflammation of the joints*. It is a systemic, chronic, inflammatory, and progressive disease. Although no joint is necessarily spared, symmetrical polyarthritis of the peripheral joints is most common. Depression is comorbid with rheumatoid arthritis in about 20 percent of individuals. Those who get depressed are more likely to have a longer duration of the illness and a higher occurrence of medical comorbidity. Individuals with rheumatoid arthritis and depression commonly demonstrate *poorer functional status*, and they report more of the following: painful joints, pronounced experience

of pain, health care use, bed stays, and inability to work than do patients with similar objective measures of arthritic activity without depression.

Fibromyalgia is characterized by *pain and stiffness of the soft tissue*, such as muscles, ligaments, and tendons. Local areas of tenderness are referred to as “trigger points.” The cervical and thoracic areas are affected most often, but the pain may be located in the arms, shoulders, low back, or legs. It is more common in women than in men. Fibromyalgia is difficult to diagnose because it is really a syndrome rather than an entity with clear signs and symptoms, laboratory findings, specific treatments. It is often confused with a number of other conditions; however, it is not a diagnosis of exclusion, and diagnosis should be made from a careful history and physical examination. Psychological abnormalities, especially anxiety and depression, often develop and aggravate the condition. Fibromyalgia is often present in individuals with *chronic fatigue syndrome* and depressive disorders.

Answers 27.39–27.43

27.39. The answer is A

27.40. The answer is D

27.41. The answer is E

27.42. The answer is C

27.43. The answer is B

Wilson’s disease, hepatolenticular degeneration, is a familial disease of adolescence that tends to have a long-term course. Its cause is defective copper metabolism leading to excessive copper deposits in tissues. The earliest psychiatric symptoms are *explosive anger and labile mood*—sudden and rapid changes from one mood to another.

Pheochromocytoma is a tumor of the adrenal medulla that causes headaches, paroxysms of severe hypertension, and the physiological and psychological *symptoms of a classic panic attack* (intense anxiety, tremor, apprehension, dizziness, palpitations, and diaphoresis). The tumor tissue secretes catecholamines that are responsible for the symptoms.

Systemic lupus erythematosus is an autoimmune disorder in which the body makes antibodies against its own cells. The antibodies attack cells as if the cells were infectious agents, and depending on which cells are being attacked, give rise to various symptoms. Frequently, the arteries in the cerebrum are affected, causing a cerebral arteritis, which alters the blood flow to various parts of the brain. The decreased blood flow can give rise to psychotic symptoms, such as a thought disorder with paranoid delusions and hallucinations. The symptoms can *resemble steroid psychosis* or schizophrenia.

The diagnosis of *acquired immune deficiency syndrome* (AIDS) includes a *dementia syndrome with global impairment and seropositivity*. The dementia can be caused by the direct attack on the central nervous system by the human immunodeficiency virus (HIV) or by secondary infections, such as toxoplasmosis.



Table 27.6
Clinical Features of Episodic and Chronic Tension-Type Headache Compared with Migraine without Aura

Feature	Episodic Tension-Type Headache	Chronic Tension-Type Headache	Migraine without Aura
Duration	30 min to 7 days	>15 days/mo	4 to 72 hr
Nausea or vomiting	Rare nausea	Occasional nausea	Nausea or vomiting
Pain	Bilateral or pressing, tightening, mild to moderate	Bilateral or pressing, tightening, moderate	Unilateral, pulsates, moderate to severe
Worse on activity	No	Occasionally	Yes
Age at onset	Usually older than 18 yr	Usually older than 18 yr	25% before 10 yr
Onset on waking	Uncommon	Common	Common
Medication overuse	No	Occasional opiate or barbiturate	No
Prevalence	Up to 80%	2% to 4%	11%

From Welch KM. A 47-year-old woman with tension-type headaches. *JAMA*, with permission. 2001;286:960.

Although any chronic illness can give rise to depression, some diseases, such as *pancreatic cancer*, are more likely causes than are others. The depression of pancreatic cancer patients is often associated with a *sense of imminent doom*.

Answers 27.44–27.48

27.44. The answer is B

27.45. The answer is C

27.46. The answer is B

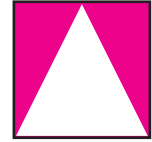
27.47. The answer is C

27.48. The answer is A

Migraine (vascular) *headache* is a paroxysmal disorder characterized by recurrent unilateral headaches with or without related visual and gastrointestinal disturbances (e.g., nausea, vomiting, and photophobia). They are probably caused by functional disturbance in the cranial circulation. Migraines can last from 4 to

72 hours (Table 27.6). Migraines can precipitated by cycling estrogen, which may account for their higher prevalence in women. Stress is also a precipitant, and many persons with migraine are overtly controlled, perfectionists, and unable to suppress anger. *Cluster headaches* are related to migraines. They are unilateral; occur up to eight times a day; and are associated with *miosis* (constriction of the pupil), *ptosis* (a sinking down or prolapsed of an organ), and *diaphoresis*.

Tension headaches are characterized by a dull, aching pain, sometimes feeling like a tightening band, which often begins suboccipitally and may spread over the head. It is the most common type of headache. The scalp may be tender to touch and, in contrast to a migraine, the headache is usually *bilateral* and not associated with prodromata, nausea, or vomiting. Tension headaches are frequently associated with anxiety and depression and occur to some degree in about 80 percent of persons during periods of emotional stress. They may be episodic or chronic and need to be differentiated from migraine headaches, especially with and without aura.



Nonconventional Approaches in Mental Health Care

In the United States, Canada, Europe, and other industrialized world regions, increasing numbers of patients are using nonconventional approaches to treat both medical and psychiatric disorders. Most people who use nonconventional treatments are well educated, committed to personal growth, satisfied with the conventional medical care provided by their family physician, and use both prescription medications and nonconventional treatments for the same problems. Psychiatrists and psychologists commonly refer patients to nonconventional medical practitioners, including acupuncturists, homeopaths, herbalists, massage therapists, naturopaths, and chiropractors. Because nonconventional treatments are widely used in mental health care, it is important to carefully examine the evidence to determine when it is reasonable and appropriate to recommend these nonpharmacological modalities to patients.

Despite increasing acceptance of nonconventional approaches in mental health care, the effectiveness of most nonconventional treatments has not been established. Nevertheless, the majority of individuals who receive nonconventional treatments for mental health problems believe that they are as effective as conventional medications. Although research findings

confirm the efficacy of certain nonconventional treatments, the evidence for most nonpharmacological treatments is not strong. Emerging evidence for nonconventional treatments in the context of unresolved concerns about conventional pharmacological treatments has resulted in the use of nonconventional biological, mind–body, and so-called energy healing modalities by increasing numbers of patients and growing interest in these approaches among psychiatrists and psychologists. Increasing use of nonpharmacological treatments is taking place in the context of recent systematic review findings of studies on conventional pharmacological treatments that point to significant placebo effects and are raising concerns about serious unresolved safety issues. Although certain medicinal herbs and acupuncture have been used for millennia to treat symptoms of mental illness, for the most part, their use is supported by anecdotal evidence. Because the majority of nonconventional treatments are not supported by compelling evidence, they are often dismissed by Western medicine before outcomes studies are done.

Students should study Table 28.1 and the questions and answers below for a useful review of this field.

HELPFUL HINTS

Students should know the following terms.

- | | | | |
|-----------------------|--------------------------|--|--------------------------|
| ▶ acupressure | ▶ complementary medicine | ▶ hypnosis | ▶ prana |
| ▶ acupuncture | ▶ dance therapy | ▶ light therapy | ▶ psychosomatic approach |
| ▶ Alexander technique | ▶ diet and nutrition | ▶ macrobiotics | ▶ reflexology |
| ▶ allopathy | ▶ endorphins | ▶ massage | ▶ Reiki |
| ▶ aromatherapy | ▶ environmental medicine | ▶ meditation | ▶ Ida Rolf |
| ▶ Ayurveda | ▶ essential oils | ▶ moxibustion | ▶ scientific method |
| ▶ Bates method | ▶ Moshe Feldenkrais | ▶ naturopathy | ▶ shamanism |
| ▶ bioenergetics | ▶ Max Gerson | ▶ nutritional supplements | ▶ sound therapy |
| ▶ biofeedback | ▶ Samuel Hahnemann | ▶ Office of Alternative Medicine (OAM) | ▶ Rudolf Steiner |
| ▶ chelation therapy | ▶ herbal medicine | ▶ osteopathy | ▶ yin and yang |
| ▶ chiropractic | ▶ holistic medicine | ▶ ozone therapy | ▶ yoga |
| ▶ color therapy | ▶ homeopathy | ▶ past life | |



Table 28.1
Complementary and Alternative Medicine Practices

Whole Medical Systems	–Ginkgo biloba extract
Anthroposophically extended medicine	–Ginseng root
Ayurveda	–Garlic supplements
Environmental medicine	–Peppermint
Homeopathy	Metabolic therapy
Kampo medicine	Megavitamin
Native American medicine	Nutritional supplements
Naturopathic medicine	Oxidizing agents (ozone, hydrogen peroxide)
Tibetan medicine	
Mind-Body Interventions	Manipulative and Body-Based Practice
Art therapy	Acupressure or acupuncture
Biofeedback	Alexander technique
Dance therapy	Aromatherapy
Guided imagery	Biofield therapeutics
Humor therapy	Chiropractic medicine
Meditation	Feldenkrais method
Mental healing	Massage therapy
Past life therapy	Osteopathic medicine
Prayer and counseling	Reflexology
Psychotherapy	Rolfing
Sound, music therapy	Therapeutic touch
Yoga exercise	Trager method
Traditional Chinese medicine	
Biologically Based Practices	Energy Medicine
Cell treatment	Blue light treatment and artificial treatment
Chelation therapy	Electroacupuncture
Diet	Electromagnetic field Therapy
–Atkins diet	Electrostimulation and neuromagnetic stimulation
–Macrobiotic diet	Magneto-resonance therapy
–Ornish diet	Qi Gong
–Pritikin diet	Reiki
–Vegetarian diet	Therapeutic touch
–Zone diet	Zone therapy
Dietary supplements	
Gerson therapy	
Herbal products	
–Echinacea	
–St. John's Wort	

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five responses or completions. Select the *one* that is *best* in each case.

- 28.1.** Which of the following statements regarding herbal medicines is *true*?
- They are subjected to Food and Drug Administration approval.
 - Uniform standards for quality control do exist.
 - At least 25 percent of current medicines are derived from the ingredients of plants.
 - Toxic results caused by overdose are extremely rare.
 - Herbal medicines originated in the United States.

- 28.2.** Massage therapy is believed to affect the body in all of the following ways *except*

- circadian rhythm regulation
- increased blood circulation
- improved lymph flow
- improved muscle tone
- tranquilizing effect on the mind

- 28.3.** The Alexander technique focuses on improvement of which of the following for better health?

- Creativity
- Posture
- Nutrition
- Sleep habits
- Hygiene

Directions

Each of the three incomplete statements below refers to one of the six lettered terms. Choose the most appropriate term for each statement.

Questions 28.4–28.6

- Allopathy
- Homeopathy
- Osteopathy
- Biomedicine
- Technomedicine
- Herbal medicine

- 28.4.** Similar methods of practice to those of allopathy

- 28.5.** A term coined by Samuel Hahnemann, MD

- 28.6.** The medicine taught in U.S. schools

ANSWERS

28.1. The answer is C

Herbal medicine relies on plants to cure illness and to maintain health. It is probably the oldest known system of medicine, and it *originated in China* (not the United States) about 4,000 BC. Similar to most prescription medicines, these plants contain active compounds that produce physiological effects. As a result, they *must be used in appropriate doses if toxic results are to be prevented*. About \$1.5 billion a year is spent on herbal medicines, which are classified as dietary supplements. They are *not subjected to Food and Drug Administration approval*, and there are *no uniform standards for quality control or potency* in herbal preparations. Indeed, some preparations have no active ingredients or are adulterated.

The decline of herbal medicine in the late 20th century was related to scientific and technological advances that led to the use of synthetic pharmaceuticals; nevertheless, according to some estimates, *at least 25 percent of current medicines are derived from the active ingredients of plants*. The examples are many and include digitalis from foxglove, ephedrine from ephedra, morphine from the opium poppy, paclitaxel (Taxol) from the yew tree, and quinine from the bark of the cinchona tree.

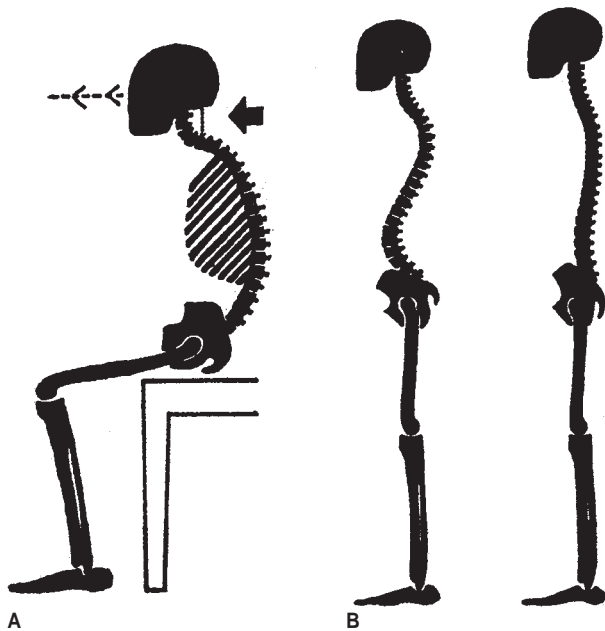


FIGURE 28.1

A. Position of pelvis, back, neck, and head in slumped position. **B.** Standing in hunched position (left) and well balanced (right). (Reprinted with permission from Barlow W. *The Alexander Principle*. London: Gollancz; 1973.)

28.2. The answer is A

Massage is a treatment that involves manipulation of the soft tissues and the surfaces of the body. It was prescribed for the treatment of diseases more than 5,000 years ago by Chinese physicians, and Hippocrates considered it to be a method of maintaining health. Massage is believed to affect the body in several ways: *it increases blood circulation, improves the flow of lymph through the lymphatic vessels, improves the tone of the musculoskeletal system, and has a tranquilizing effect on the mind.* Most people who experience massage find it physically and mentally restorative. *Circadian rhythm disturbances* are often treated through the use of light and melatonin therapy, not massage therapy.

28.3. The answer is B

The Alexander technique (Figure 28.1) was developed by F.M. Alexander (1869–1955), who was born in Tasmania and eventually became a well-known stage actor. After developing aphonia, he experimented on himself by changing his body posture and eventually regained his voice. Alexander developed a theory of

the proper use of body musculature to help alleviate somatic and mental illness. Techniques involve corrective manipulation of the muscles involving the head and neck, torso, pelvis, and extremities to improve posture. Treatment improves cardiovascular, respiratory, and gastrointestinal functioning as well as mood. A small, devoted group of Alexander practitioners is found in the United States and throughout the world. The Alexander technique may deserve consideration if for no other reason than so many persons in the United States have poor posture.

Answers 28.4–28.6

28.4. The answer is C

28.5. The answer is B

28.6. The answer is A

Allopathy, from the Greek *Allos* (“other”), is the term for traditional medicine of the kind taught in U.S. medical schools. It is based on the scientific method, the use of experiments to validate a theory or to determine the validity of a hypothesis. In allopathy, the body is a biological and physiological system, and disorders have causes that can be treated with medications, surgery, and other complex methods to produce cures.

Traditional medicine incorporates *biomedicine* and *technomedicine*. *Allopathy* refers to the use of medicine to counteract signs and symptoms of diseases; it remains the most prevalent form of medicine in the Western world.

Homeopathy was derived from the Greek *homos* (“same”); it refers to a form of medicine in which special medicinal remedies, different from allopathic remedies, are used. Homeopathic healing was developed in Germany in the early 1800s by Samuel Hahnemann, MD, who coined the term *homeopathy*. It is based on the concept that the medicine whose effects in normal people most closely resemble the illness being treated is the one most likely to cure the illness. It treats a disease by the administration of minute doses of a remedy that in healthy persons would produce symptoms similar to those of the disease. Although traditional medical practitioners doubt its efficacy, homeopathy is increasingly used in the United States, in Europe, and throughout the world.

Osteopathy is similar to traditional medicine; doctors of osteopathy are licensed to practice in every state, are qualified to practice in every branch of clinical medicine, and take the same licensure examinations as do medical doctors. Their medical education is identical except that doctors of osteopathy have additional training in musculoskeletal system disorders.



Psychiatry and Reproductive Medicine

Reproductive events have both physiological and psychological concomitants. Likewise, psychological states affect reproductive physiology and modulate reproductive events. *Reproductive medicine* is an inclusive term used to evoke a more holistic conceptualization of core fields such as obstetrics, gynecology, infertility, gynecologic oncology, breast health and disease, contraception, menopause, developmental biology, steroid biology, implantational biology, and the like. It may connote women's health for some, but men also experience reproductive events and display sex-specific reproductive physiology, so technically, the term should not evoke only women's health. Nonetheless, given the importance for women of reproduction-related events, especially childbearing, there is a tendency to think of reproductive medicine and women's health as overlapping or even merged fields. This cultural bias gives short shrift to the role of reproductive medicine and psychiatry as it relates to men.

The fields of psychiatry and reproductive medicine continue to define the multiple mechanisms by which the psyche and soma interact to determine a woman's gynecological and psychological health. For instance, premenstrual dysphoric disorder (PMDD)—the mood, cognitive, and behavioral changes

that occur in some women in association with the menstrual cycle—exemplifies a somatopsychic disorder in which biological changes trigger alterations in the psychological state. In contrast, functional forms of hypothalamic anovulation represent psychosomatic illness that originates in the brain but alter somatic functioning.

Unfortunately, traditional medicine separates the treatment of reproductive events and processes from that of psychological functioning. This imposed dichotomy between mind and body undermines the understanding and treatment of both reproductive and psychiatric dysfunction in women. For example, postpubertal women are approximately twice as likely as men are to experience major depression, with depression rates peaking during the female reproductive years, yet few obstetricians in the United States routinely screen for depression among their patients. Hence, depression during pregnancy and the postpartum period often goes unidentified and undertreated, leading to negative consequences for women, children, men, and society in general.

Students should study the questions and answers below for a useful review of these issues.

HELPFUL HINTS

Each of the following terms should be defined by students.

- | | | | |
|-----------------------------------|--|---------------------------------------|-----------------------------------|
| ▶ amenorrhea | ▶ Food and Drug Administration rating of drug safety | ▶ hormone replacement therapy | ▶ postpartum depression |
| ▶ anovulation | ▶ fetal sex steroids | ▶ hyperemesis gravidarum | ▶ postpartum psychosis |
| ▶ artificial insemination | ▶ functional hypothalamic anovulation | ▶ hypothalamic–pituitary–adrenal axis | ▶ pregnancy and labor |
| ▶ “baby blues” | ▶ GnRH secretion | ▶ infertility | ▶ premenstrual dysphoric disorder |
| ▶ disorders of sexual development | ▶ gonadotropins | ▶ lesbian and gay parents | ▶ psychogenic stress |
| ▶ dyspareunia | | ▶ pelvic pain | ▶ sexual response cycle |
| ▶ estrogen replacement | | | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 29.1.** Which of the following is *not* a stage of the human sexual response cycle?
- Initiation
 - Excitement
 - Refractory period
 - Orgasm
 - Resolution
- 29.2.** Which of the following statements regarding the changes in sexual response that occur with aging is *true*?
- Less stimulation is required to achieve an erection.
 - There is a shorter phase of sexual excitement.
 - There is no change in the length of the refractory period after orgasm.
 - Increased intensity of ejaculation occurs.
 - Many changes begin before the fifth decade of life.
- 29.3.** Fetal sex steroid exposure exerts organizational effects upon the fetal
- central nervous system
 - testes
 - ovary
 - neuromuscular system
 - cardiovascular system
- 29.4.** Pseudocyesis is
- another name for Braxton-Hicks contractions (i.e., false labor)
 - when the father of a child undergoes a simulated labor as if he were giving birth
 - the development of the classic symptoms of pregnancy in a nonpregnant woman
 - falsely elevated human chorionic gonadotropin levels occurring with choriocarcinoma and hydatidiform moles
 - masking of the symptoms of postpartum depression
- 29.5.** Which of the following terms refers to a condition in which the muscles around the outer third of the vagina have involuntary spasms?
- Anorgasmia
 - Vaginismus
 - Dyspareunia
 - Vulvodynia
 - None of the above
- 29.6.** It is generally considered safest to perform a tubal ligation at which of the following times?
- Immediately postpartum
 - Laparoscopically several weeks after delivery

- As an open procedure several weeks after delivery
- As an open procedure 6 months after delivery
- Hysterectomy is the safest method of sterilization

- 29.7.** Premenstrual dysphoric disorder (PMDD) affects what percentage of reproductive age women?
- 1 percent
 - 3 percent
 - 5 percent
 - 7 percent
 - 9 percent
- 29.8.** Hyperemesis gravidarum
- may be associated with women who have histories of anorexia nervosa or bulimia nervosa
 - has a poor prognosis for the mother and fetus
 - is rarely chronic or persistent
 - is definitively caused by psychological factors
 - none of the above

Directions

Each group of questions below consists of lettered headings followed by a list of numbered statements. For each numbered statement, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be used once, more than once, or not at all.

Questions 29.9–29.15

- Postpartum depression
 - “Baby blues”
 - Both
 - Neither
- 29.9.** Occurs in 10 percent of women who give birth
- 29.10.** Can last months to years if untreated
- 29.11.** No association with history of a mood disorder
- 29.12.** Causes tearfulness
- 29.13.** Often associated with thoughts of hurting the baby
- 29.14.** Often associated with anhedonia
- 29.15.** May include suicidal thoughts

ANSWERS

29.1. The answer is A

The human sexual response has been described as a cycle with four stages—*desire*, *excitement*, *orgasm*, and *resolution*—and in men, a *refractory period* during which they cannot be restimulated to arousal. The sexual response cycle is not simply a mechanical chain of events, however; it involves specific biological responses to psychological and sensory inputs. Thus, the transition from one stage of the human sexual response to another is not automatic, even if it is stereotypical. The human sexual response also depends on important biological events. First, there must be vasocongestion, a process in which an increased amount of blood concentrates in the tissues of the genitals. Second,

muscle tone must increase. For these two processes to occur, the nervous system must function appropriately, and there can be no significant peripheral nerve impairments. If these biological processes cannot take place because of injury or illness, a person may have sexual feelings, but these feelings may not lead to a classical sexual response, such as vaginal lubrication or full penile erection.

29.2. The answer is E

Aging may be associated with changes in sexuality. *Many changes begin before the fifth decade of life.* In men, significant changes in erections and ejaculation occur with age. As men get older, it *usually takes more* (not less) *stimulation* to achieve an erection. In addition, the *phase of sexual excitement is longer* (not shorter) and may not end in ejaculation. When ejaculation occurs, the force of expulsion of semen and the *intensity of ejaculation are lower.* After ejaculation, the erection resolves more quickly, and the *refractory period increases.* Many of these changes start gradually and can begin when men are in their 40s. Age-associated changes should be anticipated and viewed as normal. Although sexual interest declines to some degree with aging, older men and women who live together are more sexually active than those who are not in relationships. Because women tend to live longer than men, many elderly women are without partners and have limited opportunities for sexual expression, other than masturbation, even if sexual drive is present.

29.3. The answer is A

Sexual differentiation of the central nervous system (CNS) is believed to depend on the presence or absence of circulating levels of testosterone. The *fetal testes* begin to secrete testosterone in the late first trimester in response to placental human chorionic gonadotropin (hCG); the *fetal ovary* does not. The organizational effects of testosterone on the developing CNS are thought

to depend primarily upon in situ aromatization (the conversion of androgens to estrogens by the enzyme aromatase) of testosterone to estradiol. In contrast, estrogens from fetal or placental sources do not cross the blood-brain barrier and are not thought to imprint the developing CNS. Also, testosterone may bind directly (without conversion to estradiol) to androgen receptors in the CNS. The behavioral consequences that early exposure to testosterone has upon the developing brain are not clear. In summary, the *fetal sex steroid exposure exerts organizational effects on the fetal CNS*, not the neuromuscular or cardiovascular systems.

29.4. The answer is C

Pseudocyesis is the *development of the classic symptoms of pregnancy*—amenorrhea, nausea, breast enlargement and pigmentation, abdominal distention, and labor pains—in *a nonpregnant woman* (Figure 29.1). Pseudocyesis demonstrates the ability of the psyche to dominate the soma, probably via central input at the level of the hypothalamus. Predisposing psychological processes are thought to include a pathological wish for and fear of pregnancy; ambivalence or conflict regarding gender, sexuality, or childbearing; and a grief reaction to lost potential after a miscarriage, tubal ligation, or hysterectomy. The patient may have a true somatic delusion that is not subject to reality testing, but often, a negative pregnancy test result or pelvic ultrasound scan leads to resolution. Psychotherapy is recommended during or after a presentation of pseudocyesis to evaluate and treat the underlying psychological dysfunction. A related event, *couvade*, in which the father of the child undergoes a simulated labor as if he were giving birth, occurs in some cultures.

29.5. The answer is B

Vaginismus refers to a condition in which the muscles around the outer third of the vagina have involuntary spasms in response

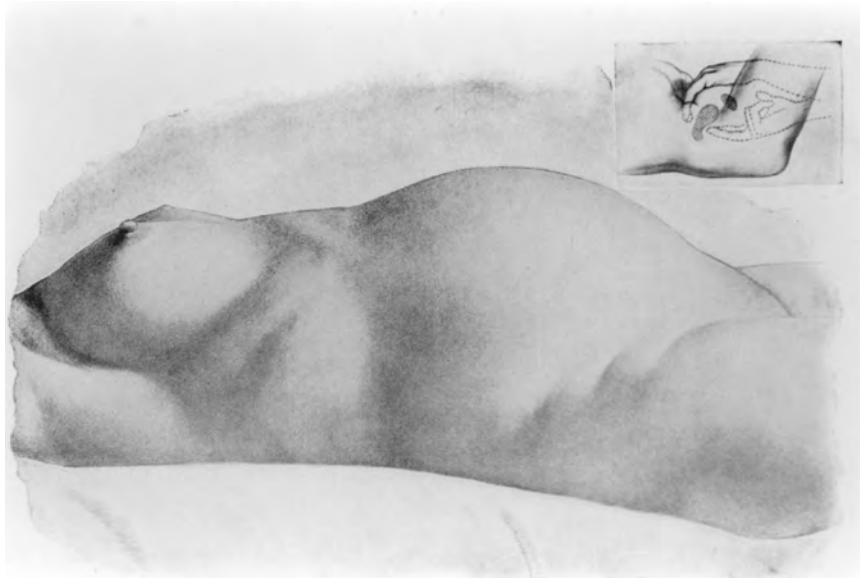


FIGURE 29.1

Patient at the 36th (?) gestational week. Bimanual examination revealed that the uterus was normal in size and position.

to attempts at vaginal penetration. Although this condition is generally thought to be psychological, women with vaginismus typically enjoy foreplay and can become sexually aroused and have orgasms.

Anorgasmia, or *orgasmic dysfunction*, refers to the inability to achieve an orgasm. This is not always viewed as a problem by women who report it. Anorgasmia is thought to be the most common sexual dysfunction, but it must be viewed in the context of each partner's desires and expectations.

Dyspareunia, or painful intercourse, can result from vaginal atrophy caused by inadequate estrogen exposure, from endometriosis, from pelvic infections, from other anatomical conditions, or from lack of sexual lubrication. Functional dyspareunia is the result of psychological conflicts.

Vulvodynia is characterized by pain in the area around the opening of the vagina (vulva). The pain, burning, or irritation associated with vulvodynia may be moderate to severe.

29.6. The answer is B

Sterilization can be accomplished by several methods of tubal ligation by hysterectomy with or without oophorectomy in women and by vasectomy in men. *Hysterectomy for sterilization alone is associated with more morbidity and mortality than any method of tubal ligation*; vasectomy is safer than are any of the present methods of tubal ligation. Most studies do not support the contention that tubal ligation carries an increased incidence of gynecological sequelae, but failure rates are high in the first year after tubal ligation. In general, *it is safest to perform a tubal ligation by laparoscopy at least several weeks after delivery*. Tubal ligations immediately after delivery are done because of convenience or because of a woman's unwillingness or inability to return for a later tubal ligation.

29.7. The answer is C

The incidence of premenstrual dysphoric disorder (PMDD) is approximately 5 percent. The somatic changes associated

with PMDD disturb psychological functioning in predisposed women. In PMDD, menstrual cycles are hormonally normal, and the soma is preserved at the expense of the psyche.

29.8. The answer is A

Hyperemesis gravidarum is differentiated from morning sickness in that vomiting is *chronic, persistent*, and frequent, leading to ketosis, acidosis, weight loss, and dehydration. *Women with histories of anorexia nervosa or bulimia nervosa may be at risk*. The *prognosis is excellent* for both the mother and fetus with prompt treatment. Most women can be treated as outpatients with change to smaller meals, discontinuation of iron supplements, and avoidance of certain foods. In severe cases, hospitalization may be necessary. Although the cause is unknown, *there may be a psychological component*.

Answers 29.9–29.15

29.4. The answer is A

29.5. The answer is A

29.6. The answer is B

29.7. The answer is C

29.8. The answer is A

29.9. The answer is A

29.10. The answer is A

About 20 to 40 percent of women report some emotional disturbance or cognitive dysfunction in the postpartum period. Many experience so-called "*baby blues*," a normal state of sadness, dysphoria, frequent *tearfulness*, and clinging dependence. These feelings, which may last several days, have been ascribed to rapid changes in women's hormonal levels, the stress of childbirth, and

 **Table 29.1**
Comparison of "Baby Blues" and Postpartum Depression

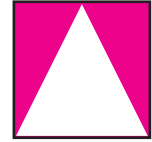
Characteristic	"Baby Blues"	Postpartum Depression
Incidence	50% of women who give birth	10% of women who give birth
Time of onset	3–5 days after delivery	Within 3–6 months after delivery
Duration	Days to weeks	Months to years, if untreated
Associated stressors	No	Yes, especially lack of support
Sociocultural influence	No; present in all cultures and socioeconomic classes	Strong association
History of mood disorder	No association	Strong association
Family history of mood disorder	No association	Some association
Tearfulness	Yes	Yes
Mood lability	Yes	Often present but sometimes mood is uniformly depressed
Anhedonia	No	Often
Sleep disturbance	Sometimes	Nearly always
Suicidal thoughts	No	Sometimes
Thoughts of harming the baby	Rarely	Often
Feelings of guilt, inadequacy	Absent or mild	Often present and excessive

Reproduced with permission from Miller LJ. How "baby blues" and postpartum depression differ. *Women's Psychiatric Health*, 1995:13.

the awareness of the increased responsibility that motherhood brings.

Postpartum depression is characterized by a depressed mood, *anhedonia*, excessive anxiety, and insomnia. The onset is within 3 to 6 months after delivery. Table 29.1 differentiates postpartum “baby blues” from postpartum depression. In rare cases (one to two in 1,000 deliveries), a woman’s postpartum depression is characterized by depressed feelings and *suicidal ideation*. In severe cases, the depression may reach psychotic proportions, with hallucinations, delusions, and *thoughts of infanticide*. Although

previous psychiatric problems put women at risk for postpartum disturbances, evidence suggests that postpartum mood disorder is a specific concept that is distinct from other psychiatric diagnoses. Others argue that these mood disorders are not a distinct entity but are part of a bipolar spectrum as reflected in the text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) classification. Women with severe postpartum depressions are at high risk for future episodes, and *failure to treat may contribute to long-term, treatment-refractory mood disorders*.



Relational Problems

An individual's psychological health and well-being depend to a degree on the quality of his or her important relationships (i.e., with parents, siblings, children, partner, friends, and colleagues). Problems within these relationships can often lead to clinical symptoms and impaired functioning among one or more members of the relationship. The relationships themselves may also be affected by a member's general medical or psychiatric illness. Although it is normal for persons in relationships to experience problems, the classification of relational problem is used when the problem is associated with clinically significant impairment. A relational problem may be the focus of clinical attention when (1) a relational unit is distressed and dysfunctional or threatened with dissolution and (2) the relational problems precede, accompany, or follow other psychiatric or medical disorders. There are five categories of relational problems: (1) relational problem

related to a mental disorder or general medical condition, (2) parent-child relational problem, (3) partner relational problem, (4) sibling relational problem, and (5) relational problem not otherwise specified.

Relational problems are enduring and may become chronic. They involve painful and potentially life-threatening patterns that are unresponsive to available family, religious, and community supports. Relational problems require a different clinical approach than other disorders. Instead of focusing primarily on the links among signs, symptoms, and the workings of the individual mind, the clinician must also focus on interactions between the individuals involved and how these interactions are related to the general medical or psychiatric symptoms.

Students should study the questions and answers below for a useful review of these problems.

HELPFUL HINTS

Each of the following terms should be defined by students.

- | | | | |
|--------------------------|------------------------------|----------------------------------|--|
| ▶ communication problems | ▶ family characteristics | ▶ physician's responsibility | ▶ relational problem due to mental disorder or medical condition |
| ○ negative | ▶ family system | ▶ polysomnographic findings | ▶ sibling relational problem |
| ○ distorted | ▶ family therapy | ▶ premature child | ▶ sibling rivalry |
| ○ noncommunication | ▶ marital roles | ▶ psychotic symptoms | |
| ▶ divorce and remarriage | ▶ parent-child problem | ▶ racial and religious prejudice | |
| ▶ dual obligation | ▶ partner relational problem | | |
| ▶ environmental factors | ▶ physician marriages | | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the one that is *best* in each case.

- 30.1. Which of the following does *not* usually define sibling sexual abuse?
- A sexual act with a sibling younger than the age of 13 years with a perpetrator at least 5 years older
 - The showing or touching of one another's genitalia for brief periods of same-aged children

- The use of any kind of deceit, force, or threat to obtain sexual gratification
- Sexual contact by a perpetrator at least 10 years older than a 13- to 16-year old child or adolescent
- All of the above

- 30.2. Mr. K is a 43-year-old man who owns his own contracting company and loves his job. His father recently helped him expand his business by giving him a generous financial contribution. Because of this contribution, his father now feels he is entitled to more of a say in the day-to-day activities of the company. Mr. K is beginning to feel smothered and questions whether he should have accepted the gift from his father. He now dreads going to work because

he knows his father will call with even more changes he would like implemented. He tells you he feels like he is being treated like a child.

Mr. K is being challenged by his father in which of the following areas?

- A. Achievement
- B. Autonomy
- C. Financially
- D. Identity
- E. Triangulation

- 30.3.** A 15-month-old toddler is observed in a playroom with her mother. The toddler is actively playing with toys and occasionally engages her mother in the play as well. A stranger enters the room, and the child appears hesitant initially but ultimately plays with the stranger also. When her mother leaves the room, the toddler is visibly upset and cries. When her mother returns to the room, she is happy to see her and gives her mother a hug before returning to play.

This child is exhibiting which type of attachment?

- A. Anxious-avoidant attachment
- B. Anxious-resistant attachment
- C. Insecure attachment
- D. Secure attachment
- E. Intermediary attachment

- 30.4.** Chris is a 13-year-old boy who lives with his parents and 6-year-old sister. His sister was recently diagnosed with leukemia and has begun chemotherapy treatments. Chris's parents are extremely worried about their daughter and give her constant attention. Chris feels anger toward his sister for getting all the attention and begins playing roughly with her whenever he gets the chance.

Which of the following defense mechanisms best describes this behavior?

- A. Acting out
- B. Denial
- C. Projection
- D. Repression
- E. Sublimation

- 30.5.** A 26-year-old married woman has recently learned she is pregnant. Her husband is an alcoholic and has a history of childhood attention-deficit/hyperactivity disorder (ADHD) for which he still takes medication. This is his second marriage. They both work as lawyers in a prestigious law firm and are financially well off. The woman is concerned about her husband's temper, which she believes stems from his father's physically abusing him.

Which of the following does not put this woman at an increased risk of domestic violence at this time?

- A. Alcoholic husband
- B. History of ADHD
- C. History of child abuse
- D. History of divorce
- E. Pregnancy

Directions

Each group of questions below consists of lettered headings followed by a list of numbered words or phrases. For each numbered word or phrase, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 30.6–30.10

- A. Authoritative parents
- B. Authoritarian parents
- C. Permissive parents
- D. Neglectful parents

- 30.6.** Expect the child to obey without mutual discussions

- 30.7.** Are highly demanding but do not intend on producing blindly obedient children

- 30.8.** Very preoccupied with their own problems

- 30.9.** Every decision is discussed mutually and everyone has a vote

- 30.10.** Also called the “democratic” parent

Questions 30.11–30.14

- A. Parent–child relational problem
- B. Partner relational problem
- C. Sibling relational problem
- D. Relational problem linked to a mental disorder or general medical condition
- E. Relational problem not otherwise specified

- 30.11.** A 32-year-old recently married man has remained good friends with one of his ex-girlfriends; the man's wife resents this relationship and always starts arguments with the ex-girlfriend whenever she calls their house. Otherwise, things have been very good between the couple.

- 30.12.** A teenage girl is angry with her parents for snooping in her room and is becoming increasingly withdrawn and rebellious.

- 30.13.** A 60-year-old woman with breast cancer has a radical mastectomy; she and her husband now get into constant fights because she is no longer interested in sex.

- 30.14.** The youngest son in a family of four has a personality just like his oldest brother; as a result, the two have always bickered and gotten into fist fights since they were children.

Questions 30.15–30.19

- A. Mood-dependent discipline
- B. Irritable and explosive discipline
- C. Inflexible and rigid discipline
- D. Parental overprotection
- E. Low supervision and involvement

- 30.15.** Lacks assertiveness with toddlers but issues nonempathic directives toward older children

- 30.16.** Has the highest associations with conduct disorder

- 30.17.** Caregiving is affectionate but highly controlling

30.18. May end in physical child abuse

30.19. An extreme version of the authoritarian parenting style

ANSWERS

30.1. The answer is B

All sibling incest is not sexual abuse. It is important that sibling sexual abuse be distinguished from sibling “sex play,” which is defined as the mutual activities of *same-aged children showing or touching each other’s genitalia for brief time periods*. Specific definitions of sibling sexual abuse vary depending on state and federal law, but it is usually defined as (1) any *sexual act with a sibling younger than the age 13 years with a perpetrator at least 5 years older*; (2) *sexual contact by a perpetrator at least 10 years older than a 13- to 16-year old child or adolescent*; or (3) *the use of any kind of deceit, force, or threat to obtain sexual gratification*. Sibling sexual abuse may be severe, prolonged, and associated with a high level of force and coercion.

30.2. The answer is B

Autonomy is a developmental milestone. Generally, autonomy involves a person’s ability to make independent choices. There is no reason to believe Mr. K did not adequately establish autonomy earlier in his life, but his father’s insistence on having control of his life and business is now challenging this concept. Mr. K, by becoming a self-sufficient, successful businessman, has mastered the development of *achievement*, and this concept is not being challenged here. His *identity* is also not being challenged in this case because that would indicate that Mr. K does not have a clear sense of his own values, beliefs, goals, and expectations. Identity is usually established in adolescence. *Triangulation* refers to the process in which conflicted parents attempt to win the sympathy and support of their child, who is recruited by one parent as an ally in the struggle with the partner. Triangulation is not related to the case in question. *Financially*, Mr. K’s father is contributing to the support of his business and has made possible the expansions that recently occurred. However, Mr. K does not feel challenged in this respect but rather by the changes which have occurred since the financial contribution.

30.3. The answer is D

A child who is *securely attached* to his or her mother will explore freely while the mother is present, will interact with strangers, will be visibly upset when the mother departs, and will be happy to see the mother return. A child with an *anxious-resistant attachment* style is anxious of exploration and of strangers even when the mother is present. When the mother departs, the child is extremely distressed. The child will be ambivalent when she returns, seeking to remain close to the mother but resentful and resistant when the mother initiates attention. A child with an *anxious-avoidant attachment* style will avoid or ignore the mother, showing little emotion when the mother departs or returns. The child will not explore very much regardless of who is there. Strangers will not be treated much differently from the mother. There is not much emotional range displayed regardless of who is in the room or if it is empty. Both the anxious-resistant style and the anxious-avoidant style are types of *insecure attach-*

ment. *Intermediary attachment* is not a recognized attachment style.

30.4. The answer is A

Acting out is the defense mechanism of an action rather than verbal response to an unconscious instinctual drive or impulse that brings about the temporary, partial relief of inner tension. Chris is acting out against his sister in response to not getting attention from his parents. *Sublimation* is an unconscious defense mechanism in which the energy associated with unacceptable impulses or drives is diverted into personally and socially acceptable channels. *Projection* is the unconscious defense mechanism in which a person attributes to another person unconscious ideas, thoughts, feelings, and impulses that are personally undesirable or unacceptable. *Denial* is a mechanism in which the existence of unpleasant realities is disavowed. *Repression* is a mechanism in which unacceptable mental contents are banished or kept out of consciousness.

30.5. The answer is D

A *history of divorce* is not associated with an increased likelihood of violence. However, relational problems are often accompanied by violence. Wife beating is found in every socioeconomic class and culture and at every income level. A pattern of wife beating can indicate individual impulse-control problems (e.g., *history of ADHD*), impaired socialization, being a *victim of child abuse*, and usually *alcohol and substance abuse*, the latter enabling impulse dyscontrol to surface. *Pregnancy* is the highest risk time for domestic violence toward women. Being subjected to violence often results in depression and learned helplessness across the life cycle.

Answers 30.6–30.10

30.6. The answer is B

30.7. The answer is A

30.8. The answer is D

30.9. The answer is C

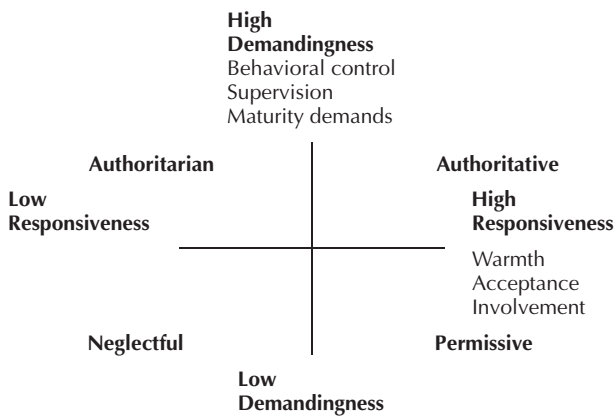
30.10. The answer is C

The most common system of classifying parenting styles uses the two orthogonal dimensions of parental demandedness (behavioral control, supervision, maturity demands) and responsiveness (warmth, acceptance, involvement), with subclassification into four parenting styles: (1) *authoritative*, with high demandingness and high responsiveness; (2) *authoritarian*, with high demandingness and low responsiveness; (3) *permissive*, with low demandingness and high responsiveness; and (4) *neglectful*, with low demandingness and low responsiveness (Table 30-1).

Authoritative parents establish and enforce firm rules for socially responsible behavior; monitor behavior; and use a firm, fair, nonpunitive disciplinary style. Although they expect their child to comply with high standards, *their intent is not to produce a child who is blindly obedient*. Their intent is to help the child develop the necessary skills for self-regulation,



Table 30.1
Baumrind's Parenting Styles Diagram



Adapted from Maccoby EE, Martin JA: Socialization in the context of the family: Parent-child interaction. In: *Handbook for Child Psychology*. Volume IV. Mussen PH. New York, NY: John Wiley Sons; 1983.

self-directedness, and independent thinking. The parent and child engage in mutual discussions that validate the child's point of view while recognizing the vantage points of others.

Parents with an *authoritarian* style are also highly demanding, but unlike authoritative parents, they lack responsiveness to the child's need for warmth and validation. Instead, they expect the child to submit to external direction from authorities. They do not see a need for an age-appropriate dialectic about rules, and they *expect obedience without further discussion*.

Permissive parents are very high in responsiveness. They are extremely committed to their children, and their high levels of warmth and acceptance produce self-competent, self-reliant, and socially competent children. Permissive parents so lack demandingness that this parental style has been called the "*democratic*," in which *everything is discussed before it is decided*, and *all members have a vote*.

Neglectful parents are low in demandingness and responsiveness. They do not set standards for proper behavior and do not monitor it. They seem *so preoccupied with their problems* that they appear to be, and frequently are, disengaged from their children.

Answers 30.11–30.14

30.11. The answer is E

30.12. The answer is A

30.13. The answer is D

30.14. The answer is C

The woman who does not get along with her husband's ex-girlfriend is classified as having a *relational problem not otherwise specified*. The teenage girl who is rebelling after her parents snooped in her room is classified as a *parent-child relational*

problem. The classification of *relational problem linked to a general medical condition* is best for the woman who is no longer interested in sex after her radical mastectomy. A *sibling relational problem* is the best diagnosis for the son who cannot get along with his brother because of their similar personalities.

Answers 30.15–30.19

30.15. The answer is A

30.16. The answer is E

30.17. The answer is D

30.18. The answer is B

30.19. The answer is C

Mood-dependent discipline results in parents acting on the basis of their negative moods when correcting their child. If the mood is depressive, the parent may *lack assertiveness with toddlers but issue nonempathic, irritable directives toward older children*. A parent whose discipline is mood dependent is less likely to plan strategies that avoid the need for discipline in situations in which power struggles and acting out are likely.

Irritable and explosive discipline involves high levels of sudden and severe threats, punishments, and humiliating criticisms of the child. Such coercive commands without rationales may provoke the child to be defiant and counterattack, creating a cycle in which the parent's punitive behavior amplifies and prolongs conflict between the parent and child. The pattern of meeting rage with rage can quickly spiral out of control and *may end in physical child abuse*.

Inflexible and rigid discipline is an *extreme version of the authoritarian parenting style*. A parent whose discipline style is inflexible and rigid relies on a very restricted repertoire of strategies for all types of misbehavior without taking into account extenuating circumstances or the child's developmental level. The parent does not explain why the child is being disciplined or adjust the severity of the discipline to the seriousness of the offense.

Parental overprotection (specifically, maternal overprotection) includes key maternal behaviors such as excessive social contact (e.g., continuous companionship), excessive physical contact (e.g., stroking, holding), prolonged infantile care (e.g., prolonged nursing or sleeping with the child), interference with independent behavior, and inappropriate levels of control. Overprotective parents are oversolicitous. Their caregiving is *affectionate but highly controlling* and not based on the child's needs for attention. Such parents may intrude into the child's free play, but they may also withdraw, failing to provide incremental guidance in structured tasks that the child finds frustrating.

Low supervision and involvement has the *highest associations with conduct disorder* and delinquency. Parents who use this disciplinary style rarely engage their children in joint activities, are not engaged with the child's teachers and friends, and are usually unaware of the child's school performance and social adjustment. They may not know where children are or with whom they spend their time. Their supervision is lax.



Problems Related to Abuse or Neglect

Physical and sexual abuse occurs in girls and boys of all ages, in all ethnic groups, and at all socioeconomic levels. The abuses vary widely with respect to their severity and duration, but any form of continued abuse constitutes an emergency situation for the child. Fear, guilt, anxiety, depression, and ambivalence regarding disclosure commonly surround children who have been abused.

In child neglect, a child's physical, mental, or emotional condition has been impaired because of a parent's or caretaker's inability to provide adequate food, shelter, education, or supervision. In its extreme form, neglect can contribute to failure to thrive. Failure to thrive typically occurs under circumstances in which adequate nourishment is available yet a disturbance within the relationship between the caretaker and the child results in a child who does not eat enough to grow and develop. More than 50 percent of abused or neglected children were born prematurely or had low birth weight. Many abused children are perceived by their parents as difficult, slow in development or mentally retarded, bad, selfish, or hard to discipline. More than 80 percent of abused children are living with married parents at the time of the abuse, and 90 percent of abusing parents were abused by their own parents.

The only sure way of proving infant abuse or neglect, other than catching the perpetrator in the act, is to show that significant recovery occurs when the caretaking is altered. All markedly deprived infants should warrant an investigation of the social and environmental conditions of the family and the psychological

status of the parent to determine the factors responsible for inadequate and destructive treatment. Parents who abuse substances, who have psychotic or pronounced mood disorders, or who have severe personality disorders are at higher risk for impaired judgment and potentially abusive behavior.

Child abuse and neglect may be suspected when a child appears unduly afraid (especially of the parents); is kept confined for overly long periods of time; shows evidence of repeated skin or other injuries; is undernourished; is dressed inappropriately for the weather; cries often; or has bruising, pain, or itching in the genital or anal region or repeated urinary tract infections and vaginal discharge. Unusually precocious knowledge of sexual acts may indicate sexual abuse. Clinicians are required to report suspected cases of child abuse or neglect and must be familiar with the current laws and regulations in their individual states.

Sexual or physical abuse of adults, including elderly adults, is also a major problem in the United States. Spouse abuse, for example, is thought to occur in as many as 12 million families in this country, and there are estimated to be almost 2 million battered wives. About 10 percent of rapes are perpetrated by close relatives, and 50 percent are committed by men known to varying degrees by the victims. Elder abuse is seen in nursing homes and other institutions, as well as in some private households where the demands of caring for a frail, helpless, or demented person can lead individuals to commit acts of physical or sexual abuse.

Students should study the questions and answers below for a useful review of these problems.

HELPFUL HINTS

Students should know the following words and terms.

- ▶ child abuse
- ▶ child pornography
- ▶ emotional deprivation
- ▶ environmental factors
- ▶ family characteristics
- ▶ functional impairment
- ▶ genetic factors
- ▶ hyperactivity
- ▶ incest
 - father–daughter
 - mother–son
- ▶ irritable versus depressed mood
- ▶ learning disability
- ▶ low-birth-weight child
- ▶ National Committee for the Prevention of Child Abuse
- ▶ physician's responsibility to detect and report abuse
- ▶ polysomnographic findings
- ▶ precocious sexual behavior
- ▶ premature child
- ▶ prevention
- ▶ retinal hemorrhages
- ▶ secondary complications
- ▶ symmetrical injury patterns

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 31.1.** Secondary victimization is characterized by all of the following *except*
- disbelief and denial
 - discounting
 - blaming the victim
 - verbal abuse
 - stigmatization
- 31.2.** Workplace violence is documented to be increased in all of the following professions *except*
- law enforcement
 - computer specialists
 - mental health workers
 - taxi drivers
 - bartenders
- 31.3.** Which of the following statements about rape is *incorrect*?
- Rapes are usually premeditated.
 - Rape most often occurs in a woman's own neighborhood.
 - Fifty percent of all rapes are perpetrated by close relatives of the victim.
 - The age range reported for rape cases in the United States is 15 months to 82 years.
 - According to the Federal Bureau of Investigation, more than 80,000 rapes are reported each year.
- 31.4.** Carol, 4 years of age, had a change in her behavior at preschool approximately 3 months after the birth of her sister. Her teacher saw Carol push other children and hit a classmate with a wooden block, causing a laceration of the child's lip. When Carol's teacher took her aside to talk about her behavior, she noticed what seemed to be belt marks on Carol's abdomen and forehead. Carol has also been reluctant to run outside with the other kids when it is time to go home.
- Which of the following is the most likely diagnosis in this case?
- Child abuse
 - Child neglect
 - Normal behavior
 - Conduct disorder
 - Oppositional defiant disorder
- 31.5.** True statements about typical physical injuries related to abuse include all of the following *except*
- Fewer than 50 percent of serious intracranial injuries sustained in the first year of life result from physical abuse.
 - Subdural bleeding ranks among the most dangerous inflicted injuries.
 - Retinal tearing can be caused by shaking injuries.
 - Falls from 1 to 3 feet rarely result in subdural hematomas or clavicle fractures.
 - A person's having bilateral black eyes immediately after facial trauma generally indicates intentional injury.
- 31.6.** Spouse abuse is
- carried out by men who tend to be independent and assertive
 - a recent phenomenon
 - least likely to occur when the woman is pregnant
 - directed at specific actions of the spouse
 - an act that is self-reinforcing
- 31.7.** Which of the following forms of incest is most common?
- Father–daughter
 - Mother–daughter
 - Father–son
 - Brother–brother
 - Uncle–niece
- 31.8.** Which of the following statements regarding torture is *false*?
- It is the infliction of physical or mental suffering.
 - It is practiced in 111 countries around the world.
 - It is always used to get victims to reveal compromising information.
 - It is an underrecognized problem.
 - Survivors of torture experience symptoms associated with posttraumatic stress disorder (PTSD) and major depressive disorder.
- 31.9.** Which of the following is the correct order of the five phases of child sexual abuse?
- Engagement, secrecy, sexual interaction, suppression, disclosure
 - Sexual interaction, secrecy, disclosure, suppression, engagement
 - Engagement, sexual interaction, secrecy, disclosure, suppression
 - Secrecy, engagement, sexual interaction, suppression, disclosure
 - Secrecy, sexual interaction, engagement, disclosure, suppression
- 31.10.** Which of the following statements about incest is *true*?
- About 15 million women in the United States have been the victims of incestuous attacks.
 - One-third of incest cases occur before 9 years of age.
 - It is most frequently reported in families of low socioeconomic status.
 - Father–daughter incest is the most common type.
 - All of the above

31.11. The parents of a 9-year-old boy were divorced, and he spent the summers visiting his father. When he returned from visitation, the mother noticed injuries: a healing cut on the boy's right ear and a collection of superficial, vertical scratches from his umbilicus to his pubis. She told the therapist that she was concerned that the boy had been physically and sexually abused.

What is the most appropriate next step of the psychotherapist?

- A. Notify child protective services.
- B. Talk to the boy about where the injuries came from.
- C. Call the boy's father and inquire about abuse.
- D. Refer the family to a general internist.
- E. Tell the mother she has nothing to worry about.

31.12. Which of the following provides the best proof that child abuse is occurring?

- A. Significant recovery when the caretaking is altered
- B. Child shows evidence of repeated skin injuries
- C. Failure to thrive
- D. Child is dressed inappropriately for the weather
- E. Unusual knowledge of sexual acts

31.13. Which of the following statements about rape is *false*?

- A. About 10 to 25 percent of rapes are reported to authorities.
- B. The greatest danger of rape exists for women 16 to 24 years of age.
- C. Most men who commit rape are between 25 and 44 years of age.
- D. Alcohol is involved in at least 75 percent of forcible rapes.
- E. About 50 percent of rapes are committed by strangers.

ANSWERS

31.1. The answer is D

Secondary victimization occurs when family, friends, colleagues, or employers respond to a victim of abuse in one of the following ways: (1) *Disbelief and denial*. The incident's description or details provided by the victim(s) are not believed. (2) *Discounting*. The magnitude of the incident and its results are poorly understood or minimized. (3) *Blaming the victim*. Responsibility for the incident is attributed to the victim(s). (4) *Stigmatization*. A judgment is made concerning the psychological consequences for a victim of a traumatic event, such as ridicule for experiencing symptoms or a belief that symptoms result from malingering or for attention or sympathy. *Verbal abuse* is not considered a characteristic of secondary victimization, although it may occur in response to these other characteristics.

31.2. The answer is B

Law enforcement is the most common occupation for nonfatal workplace violence, with an average of 234,200 victimizations a year followed by corrections officers (217.9 per 1,000),

taxi drivers (183.8 per 1,000), private security guards (117.3 per 1,000), *bartenders* (91.3 per 1,000), mental health professionals (79.5 per 1,000), gas station attendants (79.1 per 1,000), *mental health custodial workers* (63.3 per 1,000), and junior high and middle school teachers (57.4 per 1,000). There is no documented evidence that *computer specialists* are at increased risk for workplace violence.

31.3. The answer is C

About 10 percent, not 50 percent, of rapes are perpetrated by close relatives. About half of rapes are committed by strangers and half by men known in varying degrees (but unrelated) to the victim. *Rapes are usually premeditated*, although rape often accompanies another crime such as mugging. A rapist frequently threatens a victim with his fists or a weapon and often harms her in nonsexual as well as sexual ways. *Rape most often occurs in a woman's own neighborhood*. The age range reported for rape cases in the United States is 15 months to 82 years. According to the Federal Bureau of Investigation (FBI), more than 80,000 rapes are reported each year.

31.4. The answer is A

The stress of having a newborn can cause many changes in household functioning. Physical abuse of other children in the house may be a result of such changes. In many cases, the physical examination and radiological evaluation show evidence of repeated suspicious injuries. These can include belt marks, cigarette burns, and scalding water burns. *Abused children* display behaviors that should arouse the suspicions of the health professional. For example, these children may be unusually fearful, docile, distrustful, and guarded. On the other hand, they may be disruptive and aggressive (e.g., hitting another classmate with a wooden block). They may be wary of physical contact and show no expectation of being comforted by adults, they may be on the alert for danger and continually size up the environment, and they may be afraid to go home. *Conduct disorder* is a childhood behavioral condition involving a pattern of repetitive and persistent conduct that infringes on the basic rights of others or does not conform to established societal norms or rules that are appropriate for a child of that age. *Oppositional defiant disorder* is a recurring pattern of negative, hostile, disobedient, and defiant behavior in a child or adolescent, lasting for at least 6 months without serious violation of the basic rights of others.

31.5. The answer is A

More than 95 percent (not fewer than 50 percent) of serious intracranial injuries sustained in the first year of life result from physical abuse. The cause of injury, typically, is violent shaking to-and-fro whiplash, or slamming. *Subdural bleeding* ranks among the most dangerous inflicted injuries, often resulting in death or serious disabling sequelae. *Retinal tearing* and hemorrhage may be caused by shaking injuries. *Falls* are often blamed for injuries, and a fall from 1 to 3 feet can result in linear skull fracture and epidural hematoma. Such falls, however, rarely result in subdural hematomas or clavicle or humerus fractures.

Inflicted black eyes are more common than serious eye injuries. Victims smacked about the eyes with an open or closed

hand have both eyelids swollen, with massive bruising. Generally, black eyes sustained from accidents involve trauma to one eye. Although other scenarios are possible, the onset of *bilateral black eyes* immediately after facial trauma generally indicates intentional injury.

31.6. The answer is E

Spouse abuse is an *act that is self-reinforcing*; after a man has beaten his wife, he is likely to do so again. Abusive husbands *tend to be* immature, *dependent*, and *nonassertive* and to have strong feelings of inadequacy. Spouse abuse is *not a recent phenomenon*; it is a problem of long standing that is *most likely (not least likely) to occur when women are pregnant*. Fifteen to 25 percent of women are physically abused while pregnant, and the abuse often results in birth defects. *The abuse is not directed at specific actions of the spouse*; rather, impatient and impulsive abusive husbands physically displace aggression provoked by others onto their wives.

31.7. The answer is A

Incest may be defined strictly as sexual relations between close blood relatives, that is, between a child and his or her father, uncle, or sibling. Because of increased reporting, sibling incest is an area of growing concern. In its broader sense, incest includes sexual intercourse between a child and a stepparent or stepsibling. Incest can involve a father and son, mother and daughter, and uncle and niece; however, *father–daughter incest is the most common form*.

31.8. The answer is C

Although public perception may be that torture is used to elicit information, more commonly, the purpose of torture is to break the will of the victim and, ultimately, to destroy his or her humanity through the infliction of severe physical or mental suffering in the context of political repression. Torture is defined as the deliberate, systematic, or wanton infliction of *physical or mental suffering*. In its 2009 annual report, Amnesty International reported that torture is practiced in *111 countries around the world*. Those who provide services and treatment for refugees and asylum seekers are aware of the extent of this *underrecognized problem* and of the dearth of funding for services for torture survivors. Survivors of torture experience all of the *symptoms associated with posttraumatic stress disorder (PTSD) and major depressive disorder*. The most common psychiatric symptoms found in survivors of torture include memory and concentration impairment, nightmares, intrusive memories, increased startle response, amnesia, flashbacks, sleep disturbance, irritability, and avoidance.

31.9. The answer is C

Child sexual abuse that occurs over a period of time evolves through five phases in this sequence: *engagement, sexual interaction, secrecy, disclosure, and suppression*.

1. *Engagement phase*: The perpetrator induces the child into a special relationship.
2. *Sexual interaction phase*: The sexual behaviors progress from less to more intrusive forms of abuse.

3. *Secrecy phase*: The perpetrator threatens the victim not to tell.
4. *Disclosure phase*: The abuse is discovered accidentally (when another person walks in the room and sees it), through the child's reporting it to a responsible adult, or when the child is brought for medical attention and an alert clinician asks the right questions.
5. *Suppression phase*: The child often retracts the statements of the disclosure because of family pressure or because of the child's own mental processes. That is, the child may perceive that violent or intrusive attention is synonymous with interest or affection.

31.10. The answer is E (all)

About 15 million women in the United States have been the victims of incestuous attacks, and *one-third of incest cases occur before the age of 9 years*. Incest is *most frequently reported in families of low socioeconomic status*. That finding may be the result of these families' greater than usual contact with welfare workers, public health personnel, law enforcement agents, and other reporting officials; it may not be a true reflection of a higher incidence in that demographic group. *Father–daughter incest* is the most common type.

31.11. The answer is B

Consider the following ending to this case:

The therapist interviewed the boy individually, who explained in a matter-of-fact and believable manner that his ear was cut accidentally when he had his hair cut and that his abdomen was scratched when he went body surfing at a North Carolina beach. The therapist concluded the boy had not been abused and reassured the mother. The therapist did not notify child protective services.

Physicians are required to report abuse when they have reason to believe or to suspect (depending on the jurisdiction) that it occurred; however, they are not required to report other people's beliefs or suspicions. Some clinicians have the mistaken idea that if a mother expresses a concern that her child may have been abused, the suspected abuse must be reported even when the clinician has investigated and has no suspicion at all that abuse occurred (e.g., an overly anxious mother who imagines that her child was sexually abused at day care even though an objective examiner found no indications that abuse had occurred). The negative consequences of overreporting include increasing the load on an already overburdened child protective system and an unnecessary invasion into the lives of families, who are subjected to investigation, suspicion, and criticism.

31.12. The answer is A

Other than catching the perpetrator in the act, showing that *significant recovery occurs when the caretaking is altered* can prove a child is being abused or neglected. *Repeated skin injuries* may be the result of physical abuse, but careless play or a medical abnormality such as thrombocytopenia or a dermatologic problem may be the cause as well. *Failure to thrive* may also be the result of abuse, but organic causes must also be investigated. Likewise, *inappropriate dress for the weather* and *unusual knowledge of sexual acts* are suspicious for abuse but are not definitive because alternative explanations are always possible.

31.13. The answer is D

Alcohol is involved in about 35 percent, not 75 percent, of forcible rapes. The greatest danger of rape exists for women ages 16 to 24 years, although victims of rape can be any age. Most men who commit rape are between the ages of 25 and

44 years of age. It has been estimated that 10 to 25 percent of rapes are reported to authorities. About 50 percent of rapes are committed by strangers to the victims, and the remaining 50 percent are committed by men known by them to varying degrees.



Additional Conditions That May Be a Focus of Clinical Attention

Certain conditions may be the focus of clinical attention leading to contact with the mental health care system but lack sufficient evidence for a diagnosis. Sometimes these conditions may be noted during the course of a psychiatric evaluation even though no mental disorder has been found. Other times there is a need to note the primary reasons for contact with the mental health care system even though diagnostic evaluation reveals no mental disorder. A mental disorder may eventually be found, but the focus of attention is on a condition that is not caused by a mental disorder. For example, a patient with an anxiety disorder may receive treatment for a marital problem that is unrelated to the anxiety disorder itself.

Thirteen conditions make up the category of additional conditions that may be a focus of clinical attention: malingering, bereavement, occupational problems, adult antisocial behavior, religious or spiritual problem, acculturation problem, phase-of-life problem, noncompliance with treatment for a mental disorder, academic problem, identity problem, age-related cognitive decline, borderline intellectual functioning, and child or adolescent antisocial behavior.

Malingering is the intentional production of false or overly exaggerated physical or psychological symptoms motivated by external gains. Clinically, it is often crucial to distinguish malingering from true mental illnesses such as factitious, somatoform, or dissociative disorders. Malingering may be associated with child, adolescent, or adult antisocial behavior,

which is characterized by engaging in illegal or immoral activities. However, the antisocial behavior in these conditions never reaches the level necessary to diagnose an antisocial personality disorder.

Bereavement is a condition that can become the focus of clinical attention even if it does not progress to the outright acute mental disorder of depression. Clinicians must be aware of the difference between normal bereavement and depression and be alert for the development of more serious symptoms.

Examples of an occupational problem include job dissatisfaction and uncertainty about career choices. A phase-of-life problem might be associated with such major life-cycle changes as starting college, getting married, or having children. Stress during times of cultural transitions, such as moving to a new country or entering the military, can lead to an acculturation problem. Young people who join cults might provide examples of religious or spiritual problems. Age-related cognitive decline must be distinguished from dementia, and borderline intellectual functioning must be distinguished from diagnosable developmental delays or specific learning disorders. Academic problems, identity problems, and noncompliance with treatment are the remaining conditions addressed in this chapter, and students should be able to describe and recognize their characteristics.

Students should study the questions and answers below for a useful review of these conditions.

HELPFUL HINTS

Students should know the following terms.

- | | | | |
|---------------------------------|-----------------------------|---------------------------------------|----------------------------------|
| ▶ acculturation problem | ▶ cultural transition | ▶ medicolegal context of presentation | ▶ religious or spiritual problem |
| ▶ adoption studies | ▶ culture shock | ▶ noncustodial parent | ▶ sociopathic |
| ▶ age-associated memory decline | ▶ kleptomania | ▶ normal grief | ▶ stress |
| ▶ antisocial behavior | ▶ malingering | ▶ occupational problem | ▶ superego lacunae |
| ▶ brainwashing | ▶ marital problems | ▶ patient–doctor match | ▶ white collar crime |
| ▶ coping mechanisms | ▶ mature defense mechanisms | ▶ phase-of-life problem | |
| ▶ cults | | | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

32.1. White collar crime

- A. is a term coined by Robert Merton
- B. occurs mainly by people who deem themselves to be decent
- C. is not influenced by technological advances
- D. does not include violations of environmental and health laws
- E. costs society less than robbery, burglary, car theft, and larceny

32.2. Borderline intellectual functioning

- A. is present in approximately 14 percent of the general population
- B. is usually diagnosed after completion of school
- C. is essentially the same as mental retardation
- D. is defined as an IQ below 70
- E. none of the above

32.3. Academic problems

- A. can be diagnosed only if they are the result of factors external to the student, such as family difficulties or social stressors.
- B. are evidenced by a pattern of academic underachievement or a decline from a previous level of functioning.
- C. are rarely diagnosed with the use of intelligence tests.
- D. cannot be diagnosed if attributable to a mental disorder.
- E. none of the above

32.4. Occupational problems as defined by the text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) can be associated with

- A. domestic violence
- B. loss of a job
- C. suicide risk
- D. working teenagers
- E. all of the above

32.5. Which of the following statements involving women in the work force is *false*?

- A. Managers often ignore the stress placed on a worker by the illness of a child.
- B. Managers are more sensitive to crises in women employees' lives than in men employees' lives.
- C. More than 50 percent of all mothers in the work force have preschool-aged children.
- D. Specific issues that should be addressed are provisions for child care or for care of elderly parents.

- E. Ninety percent of women and girls alive today in the United States will have to work to support themselves.

32.6. Antisocial behavior is generally characterized by

- A. heightened nervousness with neurotic manifestations
- B. lack of remorse or shame
- C. often successful suicide attempts
- D. poor intelligence
- E. all of the above

32.7. Adult antisocial behavior differs from antisocial personality disorder in that:

- A. Antisocial behavior does not require a previous diagnosis of conduct disorder.
- B. Antisocial behavior occurs more often in females.
- C. Antisocial behavior is considered a mental disorder.
- D. Antisocial behavior must begin before age 25 years.
- E. None of the above

32.8. Malingering should be strongly suspected in all of the following cases *except*

- A. when the patient is incarcerated
- B. when an attorney refers the patient to the clinician
- C. when the patient has antisocial personality disorder
- D. when there is a lack of cooperation during examination and treatment
- E. with a marked discrepancy exists between the claimed stress and objective findings

32.9. Malingered amnesia is

- A. easy to detect
- B. difficult to feign
- C. probably the least common clinical presentation of malingering
- D. more convincing when global rather than spotty and episode specific
- E. none of the above

32.10. Brainwashing

- A. is the deliberate creation of cultural shock
- B. relies on both mental and physical coercion
- C. is often followed by guilt and depression
- D. was first practiced on U.S. prisoners
- E. all of the above

32.11. Exit therapy is designed to help people

- A. in bereavement
- B. who are involved in cults
- C. with acculturation problems
- D. with occupational problems
- E. with adult antisocial behavior

Directions

Each group of questions below consists of lettered headings followed by a list of numbered words or phrases. For each

numbered word or phrase, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 32.12–32.16

- A. Malingering
- B. Factitious disorder
- C. Somatoform disorder

- 32.12.** Intentionally feigned signs and symptoms are for primary gains
- 32.13.** Intentionally feigned signs and symptoms are for secondary gains
- 32.14.** Only physical symptoms are present
- 32.15.** Is often significantly self-injurious
- 32.16.** Symptoms are not intentionally feigned

ANSWERS

32.1. The answer is B

Most individuals who commit white collar crime think of themselves as basically *decent*, and most of the time, they probably are. The term *white collar crime* was coined by *Edwin Sutherland* (not *Robert Merton*) at a 1939 meeting of the American Sociological Society. He defined white collar crime in his 1949 book *White Collar Crime* as “a crime committed by a person of respectability and high social status in the course of his occupation.” For statistical purposes, the Federal Bureau of Investigation (FBI) has defined white collar crime as illegal acts characterized by deceit, concealment, or violation of trust that are not dependent on the application or threat of physical force or violence. Individuals and organizations commit these acts to obtain money, property, or services; to avoid the payment or loss of money or services; or to secure personal or business advantages.

During the final decade of the twentieth century, as violent crime rates diminished, government and private lawsuits for fraud and other financial violations greatly increased. Scholars and law enforcement personnel have speculated that the surge in high-stakes white collar crime is a result, at least in part, of *technological advances* (e.g., the Internet, automated teller machines) that facilitate certain kinds of offenses (e.g., identity theft, embezzlement) and provide opportunities for new kinds of white collar crime (e.g., hacking into computer databases; disseminating computer viruses). The scope of white collar crime is ever widening. It has come to include criminal acts in *violation of environmental and health laws*. Financially, white collar crime costs society approximately *37.5 times as much* (not less than) as *robbery, burglary, car theft, and larceny* put together.

32.2. The answer is A

Borderline intellectual functioning is *defined by an IQ in the 71 to 84 range (not an IQ below 70)*. *Approximately 14 percent of the general population* has an IQ within this range. Because individuals within this IQ range tend to have little impairment outside of educational settings, *the diagnosis is often overlooked after completion of school*. The condition may continue to be a focus of clinical attention if it compromises social function-

ing, vocational adjustment, or compliance with medical management.

The 1959 edition of *Classification in Mental Retardation* defined anyone with an IQ less than one standard deviation below the mean (IQ below 85) as mentally retarded. This definition was applied without regard to functional impairment, and many individuals who fell within this range had no discernible adaptive difficulties. The 1973 edition of *Classification in Mental Retardation* redefined mental retardation as an IQ less than two standard deviations below the mean (70 or below) with associated impairments in adaptive functioning.

32.3. The answer is B

The diagnosis of an academic problem is when the focus of clinical attention is on an *academic problem that is not due to a mental disorder*, or if it is *due to a mental disorder*, the problem must be sufficiently severe enough to warrant independent clinical focus. *Academic problems can result from factors intrinsic as well as external to the student*. Psychiatric conditions can impair learning or lead to performance decline.

Academic problems are evidenced by a pattern of *academic underachievement or a decline* from a previous level of functioning. A comprehensive biopsychosocial assessment is fundamental to identification of causal factors. Particular focus should be given to past academic functioning and family and social stressors; concurrent psychopathology must be ruled out. *Intelligence tests, measures of academic achievement, and language evaluation may be useful in differentiating academic problems from specific learning or communication disorders*. Review of the medical history and physical examination may be of value in identifying general medical conditions that may adversely affect academic performance, such as hearing loss, poor vision, and chronic illness.

32.4. The answer is E (all)

The DSM-IV-TR includes the following statement about occupational problem: “This category can be used when the focus of clinical attention is an occupational problem that is not due to a mental disorder or, if it is due to a mental disorder, is sufficiently severe to warrant independent clinical attention. Examples include job dissatisfaction and uncertainty about career choices.” Occupational psychiatry and its expansion to include organizational psychiatry are focused specifically on the psychiatric aspects of work problems, including vocational maladjustment. Symptoms of employment dissatisfaction are varied and include blatant work errors; perceived and verbalized unhappiness and disinterest; absenteeism and tardiness; and passive-aggressive behaviors, including accidents and uncooperativeness.

Occupational problems often arise during stressful changes in work, namely, at initial entry into the work force or when making job moves within the same organization to a higher position because of good performance or to a parallel position because of corporate need. Distress occurs particularly if these changes are not sought and no preparatory training has taken place, as well as during layoffs and at retirement, especially if retirement is mandatory and the person is unprepared for it.

Some occupations both attract persons with a high *suicide risk* and involve increased chronic distress that may lead to higher

suicide rates. Included are health professionals, financial service workers, and police, the first and latter groups because of easier access to lethal drugs and weapons.

Many teenagers work part time while attending high school. Stress can arise because of reduced parent–teenager interaction and constructive parental control issues about use of earnings and time spent away from home.

Although occurring in the home, signs and symptoms that interfere with work often trigger identification of *domestic violence* victims. All employees experiencing work distress must be questioned about domestic violence by trained professionals.

Regardless of the reason *for job loss*, most people experience distress, including symptoms of normal grief, loss of self-esteem, anger, and reactive depressive and anxiety symptoms, as well as somatic symptoms and possibly substance abuse and increased (or the onset of) domestic violence. Timely education, support programs, and vocational guidance should be instituted.

32.5. The answer is B

Studies reveal that managers are more sensitive to crises in men's than in women's lives (not vice versa). Managers respond to such major events as divorce and death of a family member but *ignore the stress placed on a worker by the illness of a child* or a school closing because of a snow day. *More than 50 percent of mothers in the work force have preschool-aged children.* *Specific issues that should be addressed are provisions for child care or for the care of elderly parents.* *Ninety percent of women and girls alive today in the United States will have to work to support themselves and probably one or two other people.*

32.6. The answer is B

Antisocial behavior is generally characterized by *lack of remorse or shame*. Other characteristics are *good (not poor) intelligence, an absence of nervousness and neurotic manifestations, (not heightened), and rarely (not often) successful suicide attempts.*

32.7. The answer is A

The diagnosis of antisocial personality disorder, *in contrast to adult antisocial behavior*, requires evidence of preexisting psychopathology, such as *previous diagnosis of conduct disorder with onset before age 15 years*, and a long-standing pattern of irresponsible and antisocial behavior since the age of 15 years. Illegal behavior is not considered the equivalent of psychopathology, and without evidence of preexisting psychological disturbance, it is not deemed secondary to antisocial personality disorder.

Adult antisocial behavior is *not considered a mental disorder*, but antisocial personality disorder is. Both adult antisocial behavior and antisocial personality disorder *occur more often in males than in females*. Familial patterns for each of the two diagnostic classes have also been reported.

32.8. The answer is A

Malingering is characterized by the voluntary production and presentation of false or grossly exaggerated physical or psychological symptoms for some secondary gain. Malingering should

be strongly suspected if any combination of the following is noted:

1. Medicolegal context of presentation (e.g., the *person is referred by an attorney* to the clinician for examination)
2. *Marked discrepancy* between the person's claimed stress or disability and the objective findings.
3. *Lack of cooperation* during the diagnostic evaluation and in complying with the prescribed treatment regimen
4. Presence of *antisocial personality disorder*

Although malingering is possible with any patient, incarceration alone should not automatically lead to strong suspicions for malingering, and clinicians should be aware of these sorts of biases.

32.9. The answer is D

Amnesia, probably the most (not the least) common clinical presentation of malingering, is claimed by 30 to 55 percent of perpetrators of homicide. *It is easy (not difficult) to feign and is particularly difficult (not easy) to detect.*

At least six possible causes have been suggested for amnesia: (1) conversion disorder, (2) psychosis, (3) alcoholism, (4) head injury, (5) epilepsy, and (6) malingering. Before malingering is ascribed, the clinician should review and eliminate the other five potential causes. A good diagnostic battery would include negative results on skull radiography, head computed tomography or magnetic resonance imaging, and electroencephalography and normal findings on a neurological examination.

The timing of onset and recovery and correlation of the alleged amnesic episode with convenience are other clues to the presence of malingering. *Global amnesia is somewhat more convincing than spotty, patchy, episode-specific*, and self-serving amnesia. There have been several reported epidemics of copy-cat amnesias after famous or highly publicized cases; an eye to recent sensational litigation is prudent. Table 32.1 summarizes some guidelines on detecting malingered amnesia.

32.10. The answer is E (all)

First practiced by the Chinese Communists on *U.S. prisoners during the Korean War*, brainwashing is the *deliberate creation of cultural shock*. A condition of isolation, alienation, and intimidation is developed to assault ego strengths and leave the person to be brainwashed vulnerable to the imposition of alien ideas and behavior that he or she would usually reject. Brainwashing *relies on both mental and physical coercion*. All persons are vulnerable to brainwashing if they are exposed to it long enough, if they are alone and without support, and if they are without hope



Table 32.1
Clues to the Detection of Malingered Amnesia

1. No history of amnesic episodes
2. Antisocial personality traits more prominent than histrionic personality traits
3. Spotty, episode-specific amnesia rather than global amnesia
4. Self-serving timing of onset and recovery
5. Recent, widely publicized, suspiciously familiar cases involving amnesia



Table 32.2
Differentiating Malingering from Factitious and Somatoform Disorders

	Malingering	Factitious	Somatoform
Presentation	Psychological or physical symptoms	Psychological or physical signs and symptoms	Physical symptoms
Deliberate feigning	Yes	Yes	No
Inferred motivation	Conscious desire for tangible gain	Unconscious need to assume sick role	Unconsciously determined

of escape from the situation. Help from the mental health system, in the form of deprogramming, is usually necessary to help persons readjust to their usual environments after the brainwashing experience. Supportive therapy is offered, with emphasis on reeducation, restitution of ego strengths that existed before the trauma, and alleviation of the *guilt and depression that are remnants* of the frightening experience and the lost confidence and confusion in identity that resulted from it.

32.11. The answer is B

Exit therapy is designed to help people *who are involved in cults*; it works only if their lingering emotional ties to persons outside the cult can be mobilized. Most potential cult members are in their adolescence or otherwise struggling with establishing their own identities. Cults hold a false promise of emotional well-being and purport to offer the sense of direction for which the persons are searching.

Exit therapy is not designed to help people with *adult antisocial behavior*, with *acculturation* or *occupational* problems, or in *bereavement*. Occupational problems may bring a person into contact with the mental health field, and psychotherapy may aid in working through some occupational problems.

Answers 32.12–32.16

32.12. The answer is B

32.13. The answer is A

32.14. The answer is C

32.15. The answer is B

32.16. The answer is C

Malingering is the intentional feigning of physical or psychological symptoms consciously motivated by *secondary gains*, such as financial gain or avoiding jail time. Malingering has been contrasted primarily with *factitious disorders* and *somatoform disorders* (Table 32.2). Factitious disorder is characterized by feigning of physical, psychological, or mixed symptoms to satisfy a need that the *primary gain* from an illness serves, mainly to assume the sick role. The patient with factitious disorder is often *significantly self-injurious*. Feigned symptoms are often accompanied by dangerous, self-disabling signs. Malingering and factitious disorder may not be diagnosed together. Somatoform disorder is characterized by the presence of *physical symptoms* that are *not intentionally feigned* and are not under voluntary control. Patients with somatoform disorder appear to believe that their symptoms are real. Malingering and somatoform disorders may exist together. However, somatoform disorder may also exist with factitious disorder; therefore, if factitious disorder is diagnosed, malingering may not be added to Axis I as an additional condition.



Emergency Psychiatric Medicine

A psychiatric emergency is any disturbance in thoughts, feelings, or actions for which immediate therapeutic intervention is necessary. Intervention is necessary to avoid permanent harm or further psychiatric or situational deterioration. Emergency psychiatry goes beyond general psychiatric practice to include other problems such as substance abuse, domestic and parental abuse, suicide, homicide, rape, homelessness, aging, and acquired immune deficiency syndrome (AIDS). Most emergency psychiatric evaluations are done by nonpsychiatrists in general medical emergency department settings, but specialized psychiatric services are increasingly favored. Although the emergency department is a poor substitute for continuing care by a mental health professional in an outpatient setting, many individuals without a usual source of care, particularly uninsured persons, use emergency care clinicians for primary care.

Psychiatric emergencies arise when mental disorders impair people's judgment, impulse control, or reality testing. Such mental disorders include all the psychotic disorders, manic and depressive episodes in mood disorders, substance abuse, borderline and antisocial personality disorders, and dementias. There may also be emergencies related to particularly severe reactions to psychiatric medications, such as neuroleptic malignant syn-

drome or acute agranulocytosis, which must be recognized, diagnosed, and treated immediately.

Suicide is the primary emergency for mental health professionals. More than 30,000 persons commit suicide each year in the United States with more than 60,000 suicide attempts. Psychiatrists are, however, expected to carefully evaluate and document any suicidal risks in patients and to have acted accordingly. Suicide also needs to be considered in terms of the devastating legacy that it leaves surviving loved ones, as well as the ramifications for the clinicians who care for the decedents. Perhaps the most important concept in regards to suicide is that it is almost always a result of a mental illness and is amenable to psychological and pharmacological treatments.

Psychiatrists must learn how to evaluate suicidal and homicidal patients and must learn how to ask the questions that will help reveal suicidal or homicidal plans or intent. A skilled clinician will combine this information with a sense of the person's overall risk based on detailed knowledge of the person's history as well as overall knowledge of suicidal and homicidal behaviors in the context of mental impairment.

Students should study the questions and answers below for a useful review of this subject.

HELPFUL HINTS

These terms relate to psychiatric emergencies and should be defined.

- | | | | |
|-------------------------|--------------------------------------|-----------------------------------|---------------------------------|
| ▶ acute intoxication | ▶ 5-HIAA in CSF | ▶ opioid withdrawal | ▶ suicidal depression |
| ▶ akinetic mutism | ▶ hyperthermia | ○ anxiolytic | ▶ suicidal thoughts and threats |
| ▶ alcohol dependence | ▶ hypertoxic | ○ hypnotic | |
| ▶ alcohol withdrawal | ▶ schizophrenia | ○ sedative | ▶ suicide |
| ▶ alkalosis | ▶ hyperventilation | ▶ platelet MAO activity | ○ altruistic |
| ▶ amnesia | ▶ hypothermia | ▶ posttraumatic stress disorder | ○ anomic |
| ▶ anniversary suicide | ▶ inpatient vs. outpatient treatment | ▶ mania | ○ egoistic |
| ▶ copycat suicides | ▶ lethal catatonia | ▶ premenstrual dysphoric disorder | ▶ suicide belt |
| ▶ ECT | ▶ "mourning and melancholia" | ▶ prevention center | ▶ Thanatos |
| ▶ exhaustion syndrome | ▶ nystagmus | ▶ psychotic withdrawal | ▶ Wernicke's encephalopathy |
| ▶ grief and bereavement | | ▶ restraints | ▶ Werther's syndrome |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 33.1.** Which of the following disorders is the Axis II diagnosis most closely associated with suicide?
- Mood disorders
 - Antisocial personality disorder
 - Borderline personality disorder
 - Substance abuse disorders
 - Schizophrenia
- 33.2.** Suicidal behavior
- occurs more frequently in the biological relatives of adoptees who commit suicide than in the adoptive relatives
 - has been found to have the same concordance rate in dizygotic as in monozygotic twins
 - is not associated with a family history of suicide
 - tends not to be familial
 - none of the above
- 33.3.** Suicide rates
- have remained relatively stable except for 15- to 24-year-olds, whose rates have decreased two- to three-fold
 - make suicide the 11th leading cause of death in the United States
 - reflect about 10,000 suicides each year in the United States
 - have averaged five per 1,000,000 in the 20th century
 - none of the above
- 33.4.** True statements about suicide in elderly individuals include
- Compared with other age groups, people 65 years of age and older have the highest risk of committing suicide.
 - The suicide rate for elderly people is more than 10 times that of young persons.
 - The least frequent means of committing suicide in elderly individuals is with a firearm.
 - Alcoholism is less likely to be associated with suicide in elderly individuals than in younger people.
 - All of the above
- 33.5.** Suicide among schizophrenic patients
- is most frequently secondary to command hallucinations
 - occurs most often in the later years of the illness
 - occurs most often in older female patients
 - is approximately 10 percent
 - is low
- 33.6.** Which of the following statements about gender differences in suicide is *false*?
- The suicide completion rate for males is three times higher than that of females.
 - Males attempt suicide three times as often as females.
 - Females choose methods that are less painful.
 - Males choose methods of higher lethality.
 - Females have a greater margin of safety after suicide attempts than men.
- 33.7.** True statements about patients with parasuicidal behavior include
- About 50 percent are found to have a personality disorder at psychiatric assessment.
 - About 40 percent have made previous attempts.
 - About 1 percent of persons who attempt suicide will commit suicide during the following year.
 - Suicide risk is particularly high during the first year after a suicide attempt.
 - All of the above
- 33.8.** The first task in evaluating violent behavior should be
- admission to a hospital
 - ascertaining degree of injuries
 - determination of the cause
 - establishing a treatment plan
 - obtaining information from observers
- 33.9.** Which of the following is *not* an indication for the use of psychotropic medication in the psychiatric emergency department?
- Anticholinergic intoxication
 - Assaultive behavior
 - Extrapyramidal reactions
 - Massive anxiety
 - None of the above
- 33.10.** The presence of medical illness should be strongly considered when
- psychiatric symptoms appear suddenly in a previously well-functioning person
 - there is a reported personality change or marked lability of mood
 - psychotic symptoms appear for the first time after the age of 30 years
 - temperature, pulse, or respiratory rate is increased
 - all of the above
- 33.11.** Which of the following statements regarding emergency department visits is *true*?
- More psychiatric emergency visits occur during the nighttime hours.
 - Married persons use psychiatric emergency departments more often.
 - Approximately 50 percent of the persons using emergency departments are violent.

- D. There are more psychiatric emergency visits on week-ends.
- E. All of the above

33.12. Restraints

- A. are contraindicated in patients with unstable medical conditions
- B. may worsen symptoms of delirium
- C. should be removed one at a time after the patient is under control
- D. should be applied by a minimum of four persons
- E. all of the above

33.13. Your patient is a 25-year-old female graduate student in physical chemistry who was brought to the emergency department by her roommates, who found her sitting in her car with the motor running and the garage door closed. The patient had entered psychotherapy 2 years before, complaining of long-standing unhappiness, feelings of inadequacy, low self-esteem, chronic tiredness, and a generally pessimistic outlook on life. While she was in treatment, as before, periods of well-being were limited to a few weeks at a time. During the 2 months before her emergency department visit, she had become increasingly depressed, had had difficulty falling asleep and trouble in concentrating, and had lost 10 pounds. The onset of those symptoms coincided with a rebuff she had received from a chemistry instructor to whom she had become attracted.

The treatment of the patient could include

- A. antidepressants
- B. electroconvulsive therapy
- C. hospitalization
- D. outpatient psychotherapy
- E. all of the above

33.14. A 36-year-old female patient with schizophrenia presents to the emergency department after experiencing auditory hallucinations commanding her to kill herself. She reports that the hallucinations have become more frequent over the course of the past week. The patient has previously attempted to take her life on two occasions when she overdosed on sleeping pills. She is also an alcoholic and recently divorced her husband of 4 years. Of the following factors, which poses the *greatest* risk factor for suicide in this patient?

- A. Alcoholism
- B. Divorce
- C. Age
- D. Gender
- E. Previous suicide attempts

Directions

Each group of questions below consists of lettered headings followed by a list of numbered words or phrases. For each num-

bered word or phrase, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 33.15–33.18

- A. Egoistic suicide
- B. Altruistic suicide
- C. Anomic suicide

33.15. A Japanese soldier sacrifices his life in battle

33.16. Those who are not strongly integrated into any social group

33.17. The integration into society is so disturbed that customary norms cannot be followed

33.18. An individual is excessively integrated into a social group

Questions 33.19–33.24

- A. Acetaminophen (Tylenol) OD
- B. Barbiturates
- C. Monoamine oxidase inhibitors (MAOIs)
- D. Opioid OD
- E. Phencyclidine (PCP) OD

33.19. Treated with propranolol (Inderal)

33.20. Toxic interaction with meperidine hydrochloride (Demerol)

33.21. Phenothiazines contraindicated

33.22. Fever, pancytopenia, hypoglycemic coma, renal failure

33.23. Pale, cyanotic, respiratory depression, pinpoint pupils

33.24. Seizure with withdrawal

ANSWERS**33.1. The answer is C**

Borderline personality disorder (which has suicidal behavior as one of its diagnostic criteria) is the Axis II diagnosis most closely associated with suicide. The self-injurious behavior (e.g., superficial wrist cuttings) so frequently seen in these patients is generally viewed as reflecting a wish to relieve anxiety rather than a wish to die. However, this does not mean that these patients do not kill themselves. They do, and they warrant careful monitoring, consequently. Although patients with *antisocial personality disorder* are believed to have too little guilt (and therefore, perhaps, a low likelihood of hurting themselves), they, in fact, have elevated rates of suicide. A tendency toward impulsivity appears to be the common denominator relating suicidal tendencies to Axis II disorders.

Mood disorders, which are an Axis I diagnosis, are most closely linked to suicide. Sixty to 70 percent of suicide victims are reported as suffering from a significant depression at the time of their deaths. It is estimated that the lifetime risk for death by suicide is around 15 to 20 percent for individuals with bipolar disorder (generally in their depressed rather than their manic periods) and about 10 to 15 percent in people with other mood disorders.

Patients with *schizophrenia* also have high rates of suicide, with a lifetime prevalence of death by suicide estimated at 10 percent. Patients with schizophrenia appear to be particularly vulnerable when they first become aware of having a severe mental illness and appear more vulnerable if they become depressed after recovery from an exacerbation of their illness. Common hallucinations in schizophrenia and psychotic depressions in which one hears voices telling one to kill oneself are particularly high risk.

Other Axis I disorders, particularly *substance abuse disorders* and panic disorder, appear to be more important as cofactors rather than primary factors in themselves. That is, coexistent panic or substance-related disorders accompanying major depressive disorder or schizophrenia considerably increases the risk of suicide.

33.2. The answer is A

Suicidal behavior, similar to other psychiatric disorders, tends to run in families. In psychiatric patients, a family history of suicide increases the risk both of attempted suicide and of completed suicide in most diagnostic groups. In medicine, the strongest evidence for the possibility of genetic factors comes from twin and adoption studies and from molecular genetics.

Although monozygotic and dizygotic twins may have some differing developmental experiences, studies show that *monozygotic twin pairs have significantly greater concordance for both suicide and attempted suicide*, which suggests that genetic factors may play a role in suicidal behavior.

The strongest evidence suggesting the presence of genetic factors in suicide comes from the adoption studies carried out in Denmark. A screening of the registers of causes of death revealed that 57 of 5,483 adoptees in Copenhagen eventually committed suicide. They were matched with adopted control subjects. Searches of the causes of death revealed that 12 of the 269 biological relatives of these 57 adopted suicide victims had themselves committed suicide compared with only two of the 269 biological relatives of the 57 adopted control subjects. This is a highly significant difference for suicide between the two groups of relatives. *None of the adopting relatives of either the suicide or control group had committed suicide.*

33.3. The answer is B

Suicide is a major public health problem: approximately 0.9 percent of all deaths are the result of suicide. About 1,000 persons are estimated to commit suicide each day worldwide. *In the United States, suicide ranks as the eleventh leading cause of death*, and there are approximately 75 suicides per day, or one every 20 minutes, and *more than 30,000 (not 10,000) each year.* The suicide rate in the United States has averaged *12.5 per 100,000 (not five per 1,000,000) in the 20th century.* From 1983 to 1998, the overall suicide rate remained relatively stable, but the rate for *15- to 24-year-olds increased (not decreased) two- to threefold.* The number one suicide site in the world is the Golden Gate Bridge in San Francisco.

33.4. The answer is A

Compared with other age groups, *those 65 years and older have the highest risk of committing suicide.* For example, the suicide

rate for *elderly individuals* is more than three (not 10) times that of young persons. In the United States, 18 elderly persons commit suicide each day, one every 80 minutes. The majority of elderly suicides are *committed using a firearm.* Some older individuals have a higher suicide risk than others: most at risk are males, whites, the recently widowed, and those ages 75 years and older. *The two psychiatric conditions most associated with suicide in elderly individuals are depression and alcoholism.*

33.5. The answer is D

The suicide risk is high (not low) among patients with schizophrenia, and up to 10 percent of them die by committing suicide. Most persons with schizophrenia who commit suicide do so *during the first few years of their illness.* Thus, *people with schizophrenia who commit suicide tend to be relatively young (not old), and about 75 percent are unmarried men (not older women);* approximately 50 percent have made a previous suicide attempt. Depressive symptoms are closely associated with suicide in this group; studies have reported that depressive symptoms were present during the last period of contact in up to two-thirds of schizophrenia patients who committed suicide; *only a small (not a high) percent commit suicide because of hallucinated instructions* or to escape persecutory delusions. Up to one-third of suicides in people with schizophrenia occur during the first few weeks and months after discharge from a hospital; another third commit suicide while they are inpatients.

33.6. The answer is B

Males have suicide completion rates roughly *three times higher than those of females*, regardless of race, in the United States even though *females attempt suicide approximately three times as often as males.* Completed suicide is not clearly understood but is usually explained as attributable to methodology—i.e., *females* are more inclined to choose methods with lower lethality, such as taking pills—consequently, there is a *greater margin of safety after suicide attempts for women than for men* (who are more apt to choose methods of *higher lethality*, such as guns). It should be noted, however, that there is an increasing use of guns among women.

33.7. The answer is E (all)

Attempted suicide is in many ways an unsatisfactory term. For example, most attempters do not actually wish to commit suicide; their motives are different. Thus, the Edinburgh group introduced the term *parasuicide* in an effort to signify that suicide attempts are not just failed suicides.

Hospital studies show that about 40 percent of those who attempt suicide have a history of psychiatric treatment. Psychiatric assessments reveal that about *50 percent have a personality disorder*, and up to 40 percent have other psychiatric disorders. The most common diagnoses that are not personality disorders are depressive disorders (up to 40 percent of women and 30 percent of men). *About 40 percent of suicide attempters have made a previous attempt.*

It is recognized that those who attempt and those who commit suicide represent different populations with some overlap. *Approximately 1 percent of persons who attempt suicide will commit suicide during the following year.* The *suicide*

risk is particularly high during the first year after the suicide attempt.

33.8. The answer is C

The first task in evaluating violent behavior is to ascertain its cause. Cause directs treatment. Patients with thought disorders characterized by hallucinations commanding them to kill someone require psychiatric hospitalization and antipsychotic medication. If they are unwilling to accept treatment, certification is necessary to protect the intended victim and the patient.

Violence and aggressive behavior are difficult to predict, but the fear with which some persons regard all psychiatric patients is completely out of proportion to the few who are an authentic danger to others. The best predictors of potential violent behavior are excessive alcohol intake, a history of violent acts with arrests or criminal activity, and a history of childhood abuse. Although violent patients can arouse a realistic fear in psychiatrists, they can also touch off irrational fears that impair clinical judgment and may lead to premature and excessive use of sedation or physical restraint. Violent patients are usually frightened by their own hostile impulses and desperately seek help to prevent loss of control. Nevertheless, restraints should be applied if there is a reasonable risk of violence.

33.9. The answer is A

The major indications for the use of psychotropic medication in an emergency department include *violent or assaultive behavior, massive anxiety or panic, and extrapyramidal reactions* (e.g., dystonia and akathisia as adverse effects of psychiatric drugs). Laryngospasm is a rare form of dystonia, and psychiatrists should be prepared to maintain an open airway with intubation if necessary. Conservative measures may suffice for intoxication from drugs of abuse. Benzodiazepines may be used instead of, or in addition to, antipsychotics; however, when a recreational drug has strong anticholinergic properties, *benzodiazepines are more appropriate than antipsychotics*.

33.10. The answer is E (all)

The presence of medical illness should be strongly considered when *psychiatric symptoms appear suddenly in a previously well-functioning person. A patient older than the age of 30 years with psychotic symptoms appearing for the first time, an awareness or conviction that these symptoms are foreign, and especially with concomitant symptoms of cognitive dysfunction should be considered to have a possible organic illness. Clinicians should consider medical and substance-related causes when a patient has a history of a recently diagnosed medical illness, a new prescription, or a change in dosage. A personality change or marked lability of mood noticed by friends or relatives also suggests the onset of a serious medical condition.*

Elevation of temperature, pulse, or respiratory rate suggests an underlying medical condition. Certain physical findings strongly suggest an organic disorder, including lateralizing neurological symptoms, confusion, and incontinence.

33.11. The answer is A

Psychiatric emergency departments are used equally by men and women and *more often by single than by married persons*. About

20 percent of these patients are suicidal, and *about 10 percent are violent*. The most common diagnoses are mood disorders (including depressive disorders and manic episodes), schizophrenia, and alcohol dependence. About 40 percent of all patients seen in psychiatric emergency departments require hospitalization. *Most visits occur during the nighttime hours, but there is no usage difference based on the day of the week or the month of the year*. Contrary to popular belief, studies have not found that use of psychiatric emergency departments increases during a full moon or the Christmas season.

33.12. The answer is E (all)

Restraints are used when patients are too dangerous to themselves or others that they pose a severe threat that cannot be controlled in any other way. Patients may be restrained temporarily to receive medication or for long periods if medication cannot be used. After the decision has been made to restrain a patient, the restraints process should be implemented immediately and without negotiation but with rigorous attention to the patient's safety. Restraints *are contraindicated in patients with unstable medical conditions*, including infection, cardiac illness, body temperature instability, metabolic illness, or orthopedic problems. Patients with *delirium* or dementia may experience *worsening symptoms* secondary to the sensory isolation induced by restraints and seclusion. See Table 33.1 for a summary of the use of restraints.



Table 33.1
Use of Restraints

Preferably five or a minimum of four persons should be used to restrain the patient. Leather restraints are the safest and surest type of restraint.

Explain to the patient why he or she is going into restraints. A staff member should always be visible and reassuring the patient who is being restrained. Reassurance helps alleviate the patient's fear of helplessness, impotence, and loss of control.

Patients should be restrained with their legs spread eagle and one arm restrained to one side and the other arm restrained over the patient's head.

Restraints should be placed so that intravenous fluids can be given, if necessary.

The patient's head is raised slightly to decrease the patient's feelings of vulnerability and to reduce the possibility of aspiration.

The restraints should be checked periodically for safety and comfort.

After the patient is in restraints, the clinician begins treatment using verbal intervention.

Even in restraints, most patients still take antipsychotic medication in concentrated form.

After the patient is under control, one restraint at a time should be removed at 5-minute intervals until the patient has only two restraints on. Both of the remaining restraints should be removed at the same time because it is inadvisable to keep a patient in only one restraint.

Always thoroughly document the reason for the restraints, the course of treatment, and the patient's response to treatment while in restraints.

Data from Dubin WR, Weiss KJ. Emergency psychiatry. In: Michaels R, Cooper A, Guze SB, et al., eds. *Psychiatry*. Vol. 2. Philadelphia: JB Lippincott; 1991.

33.13. The answer is E (all)

Treatment of the depressed, suicidal 25-year-old female graduate student described could include *hospitalization or outpatient treatment, antidepressants, or electroconvulsive therapy* (ECT). Whether to hospitalize the patient with suicidal ideation is a crucial clinical decision. Not all such patients require hospitalization; some may be treated as outpatients. Indications for hospitalization include a lack of a strong social support system, a history of impulsive behavior, and a suicidal plan of action. Most psychiatrists believe that the young woman described should be hospitalized because she had made a suicide attempt and so was clearly at increased risk. Other psychiatrists believe they could treat the patient on an outpatient basis provided certain conditions were met, such as (1) reducing the patient's psychological pain by modifying her stressful environment through the aid of a friend, a relative, or her employer; (2) building realistic support by recognizing that the patient may have legitimate complaints and offering alternatives to suicide; (3) securing commitment on the part of the patient to agree to call when she reached a point beyond which she was uncertain of controlling further suicidal impulses; and (4) assuring commitment on the part of the psychiatrist to be available to the patient 24 hours a day until the risk has passed. Because it is difficult to meet many of these conditions, hospitalization is often the safest route.

Many depressed suicidal patients require treatment with antidepressants or ECT. The young woman described had a recent sustained and severely depressed mood that was associated with insomnia, trouble in concentrating, weight loss, and a suicide attempt. Those factors indicate a major depressive episode. There was also evidence of long-standing mild depressive symptoms (pessimism, feelings of inadequacy, and low energy level) that although insufficient to meet the diagnostic criteria for a major depressive episode, do meet the criteria for dysthymic disorder. With those clinical features, the indication for the use of antidepressants is clear; ECT may be necessary if the patient was unresponsive to antidepressants or so severely depressed and suicidal that she required faster acting treatment than is possible with antidepressants. ECT is a safe and effective procedure.

33.14. The answer is E

The risk factor posing the greatest risk for *committing* suicide is a *previous suicide attempt*. Although *male patients are more likely to commit suicide*, females attempt it more frequently. *Alcoholism* and a recent stressor such as *divorce* make a patient vulnerable to suicidal ideation, but these risk factors are not as strong as actual prior attempts. *Age* also increases the risk for suicide, especially in those older than 45 years of age. Male patients in their 60s have a higher risk of suicide; however, this is still not as significant a risk factor as a reported previous attempt.

Answers 33.15–33.18**33.15. The answer is B****33.16. The answer is A****33.17. The answer is C****33.18. The answer is B**

French sociologist Emile Durkheim divided suicides into three social categories: *egoistic*, *altruistic*, and *anomic*. *Egoistic suicide* applies to those who are *not strongly integrated into any social group*. The lack of family integration explains why unmarried persons are more vulnerable to suicide than married ones and why couples with children are the best protected group. Rural communities have more social integration than urban areas and thus fewer suicides.

Altruistic suicide applies those susceptible to suicide stemming from their *excessive integration into a group*, with suicide being the outgrowth of the integration—for example, *a Japanese soldier who sacrifices his life in battle*. *Anomic suicide* applies to persons whose *integration into society is so disturbed* so that they *cannot follow customary norms of behavior*. Anomie explains why a drastic change in economic situation makes persons more vulnerable than they were before their change in fortune.

Answers 33.19–33.24**33.19. The answer is E****33.20. The answer is C****33.21. The answer is E****33.22. The answer is A****33.23. The answer is D****33.24. The answer is B**

Substance abuse is one of the many reasons for visits to psychiatric emergency departments. Patients who take overdoses of *opioids* (e.g., heroin) tend to be *pale and cyanotic* (a dark bluish or purplish coloration of the skin and mucous membranes) with *pinpoint pupils* and absent reflexes. After blood is drawn for a study of drug levels, those patients should be given intravenous naloxone hydrochloride (Narcan), a narcotic antagonist that reverses the opiate effects, *including respiratory depression*, within 2 minutes of the injection.

The use of *barbiturates* and anxiolytics is widespread, and withdrawal from sedative-hypnotic drugs is a common reason for psychiatric emergencies. The first symptom of withdrawal can start as soon as 8 hours after the last pill has been taken and may consist of anxiety, confusion, and ataxia. *As withdrawal progresses, the patient may have seizures*; occasionally, a psychotic state erupts, with hallucinations, panic, and disorientation. Barbiturates are cross-tolerant with all antianxiety agents, such as diazepam (Valium). In the treatment of sedative, hypnotic, or anxiolytic withdrawal, one must take into account the usual daily substance intake.

Phencyclidine (PCP or angel dust) is a common cause of psychotic drug-related hospital admissions. The presence of dissociative phenomena, nystagmus (ocular ataxia), muscular rigidity, and elevated blood pressure in a patient who is agitated, psychotic, or comatose strongly suggests PCP intoxication. In the treatment of PCP overdose, the patient should have gastric

lavage to recover the drug; diazepam to reduce anxiety; an acidifying diuretic program consisting of ammonium chloride and furosemide (Lasix), which will enhance PCP excretion; and the treatment of hypertension with *propranolol* (*Inderal*). Acidification is not recommended with hepatic or renal failure or when barbiturate use is suspected. *Phenothiazines are contraindicated* because muscle rigidity and seizures, side effects of PCP, can be exacerbated by phenothiazines, as can the anticholinergic effects of PCP.

Monoamine oxidase inhibitors (MAOIs) are useful in treating patients with depression, but a hypertensive crisis can occur if patients have eaten food with a high tyramine content while on their medication. Hypertensive crisis is characterized by severe occipital headaches, nausea, vomiting, sweating, pho-

tophobia, and dilated pupils. When a hypertensive crisis occurs, the MAOI should be discontinued, and therapy should be instituted to reduce blood pressure. Chlorpromazine (Thorazine) and phentolamine (Regitine) have both been found useful in hypertensive crises. MAOIs have a *toxic interaction with meperidine hydrochloride* (*Demerol*), which can be fatal. When patients combine the two drugs, they become agitated, disoriented, cyanotic, hyperthermic, hypertensive, and tachycardic.

Acetaminophen (*Tylenol*) is an analgesic and antipyretic. Overdose with acetaminophen is characterized by *fever, pancytopenia, hypoglycemic coma, renal failure*, and liver damage. Treatment should begin with the induction of emesis or gastric lavage followed by administration of activated charcoal. Early treatment is critical to protect against hepatotoxicity.



Psychotherapies

A variety of psychotherapies are used in the field of psychiatry from psychoanalysis to psychodrama. Clinicians should be aware of all available therapies, but in practice, they may either choose one therapy in which to focus their treatment or use different aspects of therapies across the spectrum, depending on the situation of the patient in treatment. Students should not only know the indications and contraindications of each therapy but also the theories that underlie each one.

Psychoanalysis is a method used to discover the meaning and motivation of behavior. It is based on the theory of sexual repression and traces the unfulfilled infantile libidinal wishes in the individual's unconscious memories. Although at times it is difficult to distinguish the between the two, psychoanalysis differs from psychoanalytic psychotherapy, and it is important to understand the differences between the treatments, including their different goals, techniques, and interventions.

Cognitive therapies or cognitive behavioral therapies are usually short-term structured treatments that aim to correct illogical

or irrational thinking, which can lead to dysfunctional attitudes and behaviors. Behavioral therapies focus on overt, observable behaviors and are unconcerned with underlying causes. These therapies are based on learning theory, which posits that learned behavior is reinforced and conditioned in a variety of ways.

Family therapies are based on general systems theory and focus on patterns of family communication and interaction. Group therapies run the theoretical gamut and may be supportive, psychoanalytic, cognitive, or behavioral in their orientation. Dialectical behavior therapy (DBT) a manualized treatment that is cognitive-behavioral in theoretical background, is designed to treat the destructive behaviors associated with borderline personality disorder. There are many other therapies with which students should be familiar, including biofeedback, eye-movement desensitization and reprogramming (EMDR), and interpersonal psychotherapy.

Students should study the questions and answers below to test their knowledge of the subject.

HELPFUL HINTS

The names of the workers, their theories, and the therapy techniques should be known to students.

- | | | | |
|---|---|----------------------------------|-------------------------------|
| ▶ abreaction | ▶ ego psychology | ▶ implosion | ▶ rule of abstinence |
| ▶ analyst incognito | ▶ eye-roll sign | ▶ insight-oriented psychotherapy | ▶ schemata |
| ▶ autogenic therapy | ▶ family group therapy | ▶ interpersonal psychotherapy | ▶ self-analysis |
| ▶ aversive therapy | ▶ family therapy | ▶ Jacobson's exercise | ▶ self-help groups |
| ▶ behavioral medicine | ▶ flexible schemata | ▶ mirror technique | ▶ structural theory |
| ▶ cognitive behavioral psychotherapy | ▶ flooding | ▶ narrative psychotherapy | ▶ <i>Studies on Hysteria</i> |
| ▶ cognitive triad of depression | ▶ genogram | ▶ operant conditioning | ▶ supportive therapy |
| ▶ combined individual and group psychotherapy | ▶ Gestalt group therapy | ▶ parapraxes | ▶ systematic desensitization |
| ▶ countertransference | ▶ graded exposure | ▶ participant modeling | ▶ tabula rasa |
| ▶ crisis intervention | ▶ group psychotherapy | ▶ positive psychology | ▶ token economy |
| ▶ crisis theory | ▶ guided imagery | ▶ psychodrama | ▶ transactional group therapy |
| ▶ dialectical behavior therapy | ▶ hierarchy construction | ▶ psychodynamic model | ▶ transference |
| ▶ dyad | ▶ homogeneous versus heterogeneous groups | ▶ psychotherapy | ▶ ventilation and catharsis |
| ▶ early therapy | ▶ hypnosis | ▶ reciprocal inhibition | |
| | ▶ hypnotic capacity and induction | ▶ relaxation response | |
| | | ▶ role reversal | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 34.1.** Cotherapy is most often used with
- mood disorders
 - schizophrenia
 - substance abuse
 - sleep disorders
 - pain disorders
- 34.2.** Which of the following methods is *not* used in biofeedback?
- Strain gauge
 - Galvanic skin response
 - Electromyography
 - Electroencephalography
 - All of the above
- 34.3.** Flooding
- involves relaxation exercises
 - works best with specific phobias
 - is synonymous with “explosion”
 - is a hierarchical exposure technique
 - is indicated in anxious patients who are psychologically fragile because of its rapid response rate
- 34.4.** Dialectical behavior therapy
- focuses on patient insight
 - is a cognitive behavioral treatment
 - does not directly target suicidal behavior
 - has not been empirically evaluated for efficacy
 - favors inpatient treatment when self-destructive risk is high
- 34.5.** Which of the following is *not* part of the initial phase of interpersonal psychotherapy?
- Give a name and information on the prevalence and characteristics of the disorder.
 - Describe the rationale and nature of the therapy.
 - Identify the current interpersonal problem area(s) associated with the onset of symptoms.
 - Implement strategies specific to identified problem areas.
 - Review significant relationships, past and present.
- 34.6.** Supportive psychotherapy
- involves deep exploration of the past
 - facilitates a regressive transference
 - involves the judicious suspension of therapeutic neutrality
 - places major etiological emphasis on intrapsychic events
 - is indicated primarily for patients whose potential for decompensation is low
- 34.7.** Brief focal psychotherapy
- is very helpful for self-destructive acting-out patients
 - involves setting a termination date in advance
 - usually lasts less than 10 to 12 sessions
 - does not focus on transference
 - involves a detached therapist
- 34.8.** An interpersonal psychotherapist is presented with a patient who was married 9 months prior and is having difficulty adapting to married life. The goals of therapy for this patient include
- accepting the loss of the single life
 - recognizing the positive as well as the negative aspects of being married
 - developing a sense of mastery regarding the demands of married life
 - understanding the cause of the distress
 - all of the above
- 34.9.** A spiritual assessment
- involves learning about the patient’s beliefs
 - addresses issues of meaninglessness
 - empowers the patient to find inner resources of strength
 - is completed during the social history section of the history and physical examination
 - all of the above
- 34.10.** In combined individual and group therapy, patients with which of the following disorders are at a higher risk of playing off one therapy against the other?
- Borderline personality disorder
 - Paranoid personality disorder
 - Obsessive-compulsive personality disorder
 - Schizoid personality disorder
 - Schizotypal personality disorder
- 34.11.** Systematic desensitization is applicable in the treatment of
- bronchial asthma
 - obsessive-compulsive disorder
 - sexual disorders
 - stuttering
 - all of the above
- 34.12.** The goals of social skills training include all of the following *except*
- decreasing social anxiety
 - generalization of the acquired skills to similar situations
 - acquisition of conversational skills

- D. acquisition of insight into the social deficit
- E. relearning of social skills

34.13. A physician who practices positive psychology gives a patient the following exercise:

Every night for 1 week, set aside 10 minutes before you go to bed. Use that time to write down three things that went really well on that day and why they went well. You may use a journal or your computer to write about the events, but it is important that you have a physical record of what you wrote. It is not enough to do this exercise in your head. The three things listed can be relatively small in importance or relatively large in importance. Next to each positive event in your list, answer the question, “Why did this good thing happen?”

In positive psychology, this exercise is used to

- A. increase meaning and purpose
 - B. increase positive feelings
 - C. increase awareness
 - D. develop talents and strengths
 - E. increase engagement
- 34.14.** Charles was a 70-year-old retired business executive. Throughout his life, his work consumed him. Although he was married and had a family, his job was his primary focus. He went to the office early and came home late. But as he got older, his performance at work was not what it used to be, and he decided it was time to retire. However, his mood was pretty low when he no longer had a job. The therapist spent some time with Charles talking about the kinds of activities that used to make him feel good and some of the things he used to enjoy. They then put together a list of things he might be able to do—even if he did not feel much like it—just to see what would happen. The list included looking for volunteer work where he could use his job skills, spending more time with his wife doing some of the activities they once had enjoyed (e.g., watching movies, taking walks), and rejuvenating an old hobby from his college days—fishing. Charles initially agreed to do some easy activities—go to one movie a week, take one walk a week, and contact his church activity leader about possible volunteer activities.
- This case illustrates which type of behavior therapy technique?
- A. Exposure therapy
 - B. Contingency management
 - C. Aversion-based approach
 - D. Behavior activation
 - E. Self-control approach

Directions

Each set of lettered headings below is followed by a list of numbered words or statements. For each numbered word or statement, select the *one* lettered heading most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 34.15–34.19

- A. Supportive group therapy
 - B. Psychodynamic group therapy
 - C. Cognitive-behavioral group therapy
- 34.15.** Transference is not analyzed
- 34.16.** Indicated for people with neuroses and mild personality disorders
- 34.17.** Group focuses on training in methods that control symptoms
- 34.18.** Group is composed of a balance of similarities and differences among members
- 34.19.** Extragroup contacts are prohibited

Questions 34.20–34.23

- A. The Bowen model
 - B. The general systems model
 - C. The psychodynamic-experiential model
 - D. The structural model
- 34.20.** Focuses on a person’s differentiation from his or her family of origin
- 34.21.** Emphasizes individual freedom from unconscious patterns of anxiety and projection rooted in the past in the context of the family system
- 34.22.** Every action in a family produces a reaction in one or more of its members
- 34.23.** Families are viewed as single interrelated systems

Questions 34.24–34.28

- A. Free association
 - B. Free-floating attention
 - C. Fundamental rule
 - D. Resistance
 - E. Working alliance
- 34.24.** Patient’s agreement to tell the therapist everything without selection
- 34.25.** Saying whatever comes to mind
- 34.26.** Analyst’s way of listening to the patient
- 34.27.** The relationship between two adults entering into a joint venture
- 34.28.** Unconscious ideas are prevented from reaching awareness

ANSWERS

34.1. The answer is C

Cotherapy is often used in groups treating *substance abuse*. There are many problems that involve the family of substance abusers and require attention on the part of the group leader. Extragroup issues, including legal problems, debt, housing, and employment, are all factors that affect conducting a group composed of substance abusers. Staff burnout is high among those who work exclusively with the problems of substance abuse. Team leadership is advantageous in allowing for the sharing of

leadership tasks in the group. Having more than one leader increases options for identification, interaction, and the exploration of intragroup relationships. The leader's therapeutic load is then lightened as a result, and the pace of the group can be accelerated.

34.2. The answer is A

A *strain gauge* is a device for measuring nocturnal penile tumescence that is used to determine whether erections occur during sleep. It has no biofeedback applications. In *electromyography*, muscle fibers generate electrical potentials that can be measured on an electromyograph. Electrodes placed in or on a specific muscle group can be monitored for relaxation training. In *electroencephalography* (EEG), the evoked potential of the EEG is monitored to determine relaxation. In *galvanic skin response*, skin conductance of electricity is measured as an indicator of autonomic nervous system activity.

34.3. The answer is B

Flooding works best with specific phobias, such as a social fear of eating in public. *It is sometimes called "implosion" and is similar to graded exposure in that it involves exposing the patient to the feared object in vivo; however, there is no hierarchy.* It is based on the premise that escaping from an anxiety-provoking experience reinforces the anxiety through conditioning. Thus, clinicians can extinguish the anxiety and prevent the conditioned avoidance behavior by not allowing the patient to escape the situation. Patients are exposed to the feared situation with no buildup, and *no relaxation techniques are used.* Patients experience fear, which gradually subsides over time. Many patients refuse it because of the psychological discomfort involved, and it is *contraindicated when intense anxiety would be hazardous to a patient, such as those who are psychologically fragile.*

34.4. The answer is B

Dialectical behavior therapy is a cognitive behavioral treatment program that also draws on methods from supportive therapies, as well as some Eastern philosophical schools, such as Zen Buddhism. It does not focus on insight. It has been developed to treat suicidal patients who meet criteria for borderline personality disorder and has been evaluated empirically. *A recent study has demonstrated that it directly targets suicidal behavior.* An important strategy of dialectical behavior therapy is to encourage outpatient use of behavioral skills over inpatient treatment even when self-destructive or suicidal risk is high.

34.5. The answer is D

The initial phase is dedicated to identifying the problem area that will be the target for treatment. The intermediate phase is devoted to *working on the target problem area(s).* The termination phase is focused on consolidating gains made during treatment and preparing the patient for future work on his or her own (Table 34.1).

34.6. The answer is C

Supportive psychotherapy aims at the creation of a therapeutic relationship as a temporary bridge for the deficient patient. Techniques are designed to focus on conscious external events and on the therapist as a largely nontransferential figure. As



Table 34.1
Phases of Time-Limited Interpersonal Psychotherapy

Initial phase: Sessions 1–5

- Give the syndrome a name; provide information about the prevalence and characteristics of the disorder.
- Describe the rationale and nature of the therapy.
- Conduct the interpersonal inventory to identify the current interpersonal problem area(s) associated with the onset or maintenance of the psychiatric symptoms.
- Review significant relationships, past and present.
- Identify interpersonal precipitants of episodes of psychiatric symptoms.
- Select and reach consensus about the interpersonal problem area(s) and treatment plan with patient.

Intermediate phase: Sessions 6–15

- Implement strategies specific to the identified problem area(s).
- Encourage and review work on goals specific to the problem area.
- Illuminate connections between symptoms and interpersonal events during the week.
- Work with the patient to identify and manage negative or painful affects associated with his or her interpersonal problem area.

Termination phase: Sessions 16–20

- Discuss termination explicitly.
- Educate the patient about the end of treatment as a potential time of grieving; encourage the patient to identify associated emotions.
- Review progress to foster feelings of accomplishment and competence.
- Outline goals for remaining work; identify areas and warning signs of anticipated future difficulty.
- Formulate specific plans for continued work after termination of treatment.

Courtesy of Robert W. Guynn, MD.

such, *therapeutic neutrality is judiciously suspended* with much greater direction, disclosure, and gratification offered than would be appropriate in other approaches. The global perspective of supportive psychotherapy *places major etiological emphasis on external rather than intrapsychic events*, particularly on stressful environmental and interpersonal influences on a damaged self. It is indicated generally for those whose *potential for decompensation is high (not low)*. It focuses on the here and now of the patient's problems; *genetic interpretations relating to the patient's past may cause decompensation* and are generally contraindicated in this treatment. The therapist works to *diminish the breakthrough of regressive transferences.*

34.7. The answer is B

Brief focal psychotherapy was originally developed in the 1950s at the Tavistock Clinic in London. In it, the therapist formulates a circumscribed focus and *sets a termination date in advance.* *Contraindications to this treatment include grossly destructive acting-out patients, patients who are chronically dependent on alcohol or other substances of abuse, and patients with a history of serious suicide attempts.* The therapist *identifies the transference early and interprets it. Both the patient and the therapist become deeply involved, and the therapist does not remain detached.* An experienced therapist *allows about 20 sessions as an average length for the therapy.*

34.8. The answer is E (all)

In the initial phase of interpersonal psychotherapy, the problem area for the patient is identified, and specific goals for treatment of the problem area are set. The identified problem area for the aforementioned patient is role transition. Role transition includes any difficulties resulting from a change in life status. For this patient, the change is marriage. The goals of therapy include (1) mourning and *accepting the loss of the old role* (in this case, the patient's *life as a single person*), (2) *recognizing the positive and negative aspects* of both the old role (being single) and the new role (*being married*), and (3) restoring the patient's self-esteem by *developing a sense of mastery in the demands of the new role (married life)*.

34.9. The answer is E (all)

The spiritual history is taken during the *social history section of the history and physical examination*. The goals of the spiritual history are to invite the patient to share spiritual and religious beliefs if he or she chooses to do so; *to learn about the patient's beliefs and values*; to assess for spiritual distress, such as *meaninglessness* as well as for *spiritual resources of strength*; to provide an opportunity for compassionate care whereby the health care professional connects to the patient in a deep and profound way; *to empower the patient to find inner resources of healing and acceptance*; and to learn about the patient's spiritual and religious beliefs that might affect health care decision making.

34.10. The answer is A

In combined individual and group therapy, a patient with a *borderline* or narcissistic personality disorder is at higher risk to play off one therapy against the other as a resistance to change. Astute uses of combined therapy can identify this dysfunctional behavior and offer more-adaptive alternatives. Specifically, a personality-disordered patient in combined therapy may use individual therapy to focus on intrapsychic issues and can apply the insights gained in therapy and experiment with new modes of behavior in the safe and controlled interpersonal setting of the group.

Paranoid personality disorder is characterized by rigidity, hypersensitivity, unwarranted suspicion, jealousy, envy, an exaggerated sense of importance, and a tendency to blame and ascribe evil motives. *Obsessive-compulsive personality disorder* is characterized by perfectionism, overconscientiousness, and excessive inhibition with regard to self-expression and relaxation. *Schizoid personality disorder* is diagnosed for persons who are unable to form social relationships but without other striking communicative or behavioral eccentricities. *Schizotypal personality disorder* is diagnosed for persons who exhibit various eccentricities in communication or behavior coupled with defects in the capacity to form social relationships.

34.11. The answer is E (all)

Systematic desensitization is applicable in the treatment of *obsessive-compulsive disorder (OCD)*, *sexual disorders*, *stuttering*, *bronchial asthma*, and other conditions. Joseph Wolpe first described systematic desensitization, a behavioral technique in which the patient is trained in muscle relaxation, and then a

hierarchy of anxiety-provoking thoughts or objects is paired with the relaxed state until the anxiety is systematically decreased and eliminated.

Through systematic desensitization, patients with *OCD* can be conditioned not to feel anxious when around those objects or situations causing anxiety. Desensitization has been used effectively with some *stutterers* by deconditioning the anxiety associated with a range of speaking situations. Some *sexual disorders*—such as male orgasmic disorder, female orgasmic disorder, and premature ejaculation—are amenable to desensitization therapy.

34.12. The answer is D

Social skills are interpersonal behaviors required for community survival; independence; and establishing, maintaining, and deepening supportive, socially rewarding relationships. Severe mental disorders such as schizophrenia disrupt one or more affective, cognitive, behavioral, and verbal domains of functioning and impair the patient's potential for enjoying and sustaining interpersonal relationships. Social skills training is a psychosocial rehabilitative treatment designed to remediate deficits in social behaviors. *It does not address understanding or insight* and focuses on the behaviors themselves. The major goals of social skills training include *improved social skills in specific situations*, *generalization of the acquired skills* to similar situations, *acquisition or relearning of social and conversational skills*, and *decreased social anxiety*.

34.13. The answer is C

Positive psychologists have demonstrated that brief interventions in the short term can increase happiness, satisfaction, and fulfillment. For example, patients can be asked to count their blessings, as in this case, to *increase life satisfaction*. In some cases, there is also evidence that brief interventions can alleviate depression. Table 34.2 provides examples of positive psychology techniques and interventions.

34.14. The answer is D

Behavioral activation postulates that depression persists because depressed behavior is more highly reinforced than nondepressed behavior. Positive reinforcement from participation in pleasurable activities results in an increase in positive mood. In this process, the therapist works with the patient in setting weekly behavioral goals, as with the case of Charles. Each week, the patient carries out these goals and reports back on the results at the next session. The more weekly goals are accomplished, the more positive reinforcement reduces the depressive symptoms. As Charles performed the activities in his weekly list, he found himself feeling better.

Exposure therapy postulates that fears are acquired through associative learning (classical and operative conditioning). Interventions to eliminate fear use the same conditioning principles, and elimination of maladaptive fears requires exposure (contact) with the feared object, event, or situation. Similar to exposure therapies, *aversion-based approaches* consist of different interventions. Some are based on operant principles, and others are based on counterconditioning strategies.



Table 34.2
Examples of Positive Psychology Techniques and Interventions

Exercises to increase positive feelings
Perform acts of kindness
Savoring
Writing a gratitude letter
Exercise to decrease negative feelings
Turning one's head to see the positive
Exercise to increase life satisfaction
Counting one's blessings
Exercise to develop talents and strengths
Using talents or signature strengths of character in novel ways
Exercise to increase engagement
Finding a challenging hobby
Exercises to increase social connectedness
Being a good teammate
Active-constructive responding
Exercises to increase meaning and purpose
Performing secret good deeds
Writing one's own legacy
Working for a valued institution
Exercise to increase health and safety
Worrying about the right things

Courtesy of Christopher Peterson, PhD, and Nansook Park, PhD.

Contingency management is defined as the general application of operant principles (e.g., reinforcement, punishment) in the process of behavior change. When used efficiently, contingency management procedures can terminate negative reinforcement cycles, clarify behavioral expectations, and teach people how to bargain and compromise rather than resort to coercive procedures and how to define and clarify what they want and expect.

Although many behavioral treatments involve some elements of self-control, as patients take responsibility for changing

behaviors, more direct *self-control approaches* are defined by the use of stimuli, behaviors, and consequences with oneself to achieve a desired outcome. Common self-control strategies include physically restraining oneself, chaining the stimuli conditions, depriving or satiating oneself, and administering self-reinforcement or self-punishment.

Answers 34.15–34.19

34.15. The answer is A

34.16. The answer is B

34.17. The answer is C

34.18. The answer is B

34.19. The answer is B

There are three major types of leader-led group psychotherapy: *supportive, psychodynamic, and cognitive behavioral*. Although there are similarities common to all, there are important differences that are listed in Table 34.3.

Answers 34.20–34.23

34.20. The answer is A

34.21. The answer is C

34.22. The answer is B

34.23. The answer is D

The hallmark of the Bowen model is a person's differentiation from his or her family of origin. This involves the person's ability to be his or her true self in the face of familial or other pressures



Table 34.3
Comparison of Major Group Therapy Orientations

	Supportive	Psychodynamic	Cognitive Behavioral
Frequency (times/wk)	1–5	1 or 2	1–3
Individual screening	Usually	Always	Always
Group size	8–15	5–9	5–10
Goals	Better adaptation to daily living	Reconstruction of personality dynamics	Relief of specific symptoms
Indications	Crisis situations; severe emotional disorders	Neuroses; mild personality disorders	Phobias; anxiety disorders
Group composition	Homogeneous for level of psychopathology	Balance of similarities and differences	Homogeneous for similar symptoms
Group focus	“Here and now”; family, vocational, environmental factors	Past and present; intragroup and extragroup dynamics	Training in methods that control symptoms
Use of confrontation	No	Yes	Rarely
Therapist activity	Actively structures and leads group	Active around interpretation	Very active in teaching skills
Extragroup contacts	Encouraged	Prohibited or discouraged	Discouraged
Transference	Not analyzed	Used extensively	Not relevant to the group work
Therapeutic factors	Cohesion, universality, reality testing	Cohesion, catharsis, family replay	Cohesion, universality, education

Courtesy of Henry I. Spitz, MD.

that threaten the loss of love or social position. In a *structural model*, families are viewed as single, interrelated systems, assessed in terms of significant alliances and splits among family members, hierarchy of power, boundaries among generations, and family tolerance for each other. *Psychodynamic-experiential models* emphasize individual maturation in the context of the family system and freedom from unconscious patterns of anxiety and projection rooted in the past. The *general systems model* is based on general systems theory, a model that holds that families are systems and that every action in a family produces a reaction in one or more of its members.

Answers 34.24–34.28

34.24. The answer is C

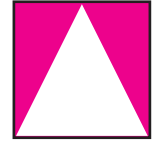
34.25. The answer is A

34.26. The answer is B

34.27. The answer is E

34.28. The answer is D

In *free association*, patients say whatever comes to mind. This is in compliance with the *fundamental rule* of psychoanalysis, in which the patient agrees to be completely honest with the analyst and to tell everything without selection. Inevitably, the patient cannot accomplish this task, and these constitute resistances to the process. *Resistances* prevent unconscious ideas or feelings from being experienced consciously. The analyst's counterpart to the patient's free association is a *particular way of listening*, referred to as *free-floating* or evenly suspended attention. The *therapeutic or working alliance* refers to the relationship established by the patient and analyst that involves two adults embarking on a joint venture, involving mutual trust, cooperation, and an endeavor to explore the patient's symptoms to achieve amelioration of those symptoms.



Biological Therapies

The knowledge about the biological process related to normal and abnormal brain function continues to expand. Pharmacological approaches to the treatment of mental illness have grown immensely in recent years. The emergence of new medications for specific disorders is a very promising aspect in the field of psychiatry. Treatment response and the potential emergence of side effects need to be monitored very carefully. Students also need to be aware of the pharmacokinetics, pharmacodynamics, and pharmacogenetics of patients, especially how drugs interact with each other in the body.

The practice of pharmacotherapy in psychiatry should not be oversimplified—for example, it should not be reduced to a one diagnosis, one drug approach. Many variables affect the practice of psychopharmacology, including drug selection and administration, the psychodynamic meaning to the patient, and family and environmental influences. Some patients may view drug treatment as a panacea; others may view it as an assault. The patient, the patient's relatives, and the nursing staff must be

instructed on the reasons for the drug treatment as well as the expected benefits and potential risks. In addition, the clinician may find it useful to explain the theoretical basis for pharmacotherapy to the patient and other involved parties.

Drugs must be used in effective dosages for sufficient periods, as determined by previous clinical investigations and clinical experience. Subtherapeutic doses and incomplete therapeutic trials should not be used simply because the psychiatrist is excessively concerned that the patient will develop adverse effects. The use of dosages that are too low or durations that are too short merely exposes patients to some risk without providing them the maximum chance of therapeutic benefit. Treatment response and the emergence of adverse effects must be monitored closely; drug dosage should be adjusted accordingly, and appropriate treatments for emergent adverse effects must be instituted as quickly as possible.

Students should study the questions and answers below for a useful review of these therapies.

HELPFUL HINTS

Students should be able to define these terms.

- | | | | |
|---|---|---|--|
| ▶ acute dystonia | ▶ carbamazepine (Tegretol) | ▶ meta-analysis | ▶ selective serotonin-norepinephrine reuptake inhibitors (SNRIs) |
| ▶ akathisia | ▶ cholinesterase inhibitors | ▶ methadone (Dolophine, Methadose) | ▶ serotonin-dopamine antagonists (SDAs) |
| ▶ α -adrenergic receptor antagonists | ▶ cytochrome P450 | ▶ mirtazapine (Remeron) | ▶ sympathomimetics |
| ▶ anticonvulsants | ▶ deep brain stimulation | ▶ monoamine oxidase Inhibitors | ▶ tardive dyskinesia |
| ▶ antidepressants | ▶ disulfiram (Antabuse) | ▶ naltrexone (ReVia) | ▶ tetracyclics |
| ▶ antipsychotics | ▶ efficacy | ▶ nefazodone | ▶ therapeutic index |
| ▶ anxiolytics | ▶ electroconvulsive stimulation | ▶ neuroleptic malignant syndrome | ▶ thyrotrophin |
| ▶ atypical neuroleptics | ▶ first-generation antipsychotics | ▶ pharmacodynamics | ▶ topiramate (Topamax) |
| ▶ barbiturates | ▶ gabapentin (Neurontin) | ▶ pharmacogenetics | ▶ trazodone (Desyrel) |
| ▶ benzodiazepines | ▶ GABA receptors | ▶ pharmacokinetics | ▶ tricyclics |
| ▶ β -adrenergic receptor antagonists | ▶ hormonal therapy | ▶ pregabalin (Lyrica) | ▶ vagus nerve stimulation |
| ▶ biotransformation | ▶ lamotrigine (Lamictal) | ▶ second-generation antipsychotics | ▶ valproate acid (Depakene) |
| ▶ bupropion (Wellbutrin, Zyban) | ▶ lithium (Eskalith, Lithobid, Lithonate) | ▶ seizure threshold | |
| ▶ buspirone (Buspar) | ▶ lithium augmentation | ▶ selective serotonin reuptake inhibitors (SSRIs) | |
| ▶ calcium channel inhibitors | ▶ lithium tremor | | |
| | ▶ melatonin | | |

QUESTIONS

Each of the questions or incomplete statements below is followed by five suggested responses. Select the *one* that is *best* in each question.

- 35.1.** The time, course, and intensity of a drug's effect are referred to as:
- pharmacokinetics
 - pharmacodynamics
 - pharmacogenetics
 - placebo effect
 - idiosyncratic reaction
- 35.2.** Neuroleptic-induced movement disorders include which of the following movement disorders?
- Acute dystonia
 - Neuroleptic malignant syndrome
 - Akathisia
 - Tardive dyskinesia
 - All of the above
- 35.3.** Clonidine (Catapres) is known to be effective in
- Tourette's disorder
 - attention-deficit/hyperactivity disorder
 - opiate withdrawal
 - posttraumatic stress disorder
 - all of the above
- 35.4.** Therapeutic indications of β -adrenergic receptor antagonists such as propranolol (Inderal), atenolol (Tenormin), metoprolol (Lopressor), nadolol (Corgard), and pindolol (Visken) are effective in the treatment of
- lithium tremor
 - substance use disorders
 - violence
 - performance anxieties
 - all of the above
- 35.5.** In the elderly population, anticholinergic medications can produce
- improvement of positive symptoms of psychosis
 - improved storage of new information into long-term memory
 - worsening ideational apraxia
 - impairment in cognitive functioning
 - worsening of orientation subscales
- 35.6.** Newer anticonvulsants such as gabapentin (Neurontin), levetiracetam (Keppra), pregabalin (Lyrica), tiagabine (Gabitril), topiramate (Topamax), and zonisamide (Zonegran) have demonstrated which of the following characteristics?
- Enhancing neuronal inhibition
 - Analgesic effects
 - Increased risk of suicidality
 - Decreasing glutamic function
 - All of the above
- 35.7.** H₂ receptor antagonist nizatidine (Axid) is efficacious as a secondary prevention strategy for associated weight gain in which one of the following antipsychotic drugs?
- Olanzapine (Zyprexa)
 - Quetiapine (Seroquel)
 - Risperidone (Risperdal)
 - Clozapine (Clozaril)
 - Ziprasidone (Geodon)
- 35.8.** Which of the following is usually the first-line agent for anesthesia during electroconvulsive therapy?
- Methohexital (Brevital)
 - Propofol (Diprivan)
 - Ketamine
 - Thiopental (Pentothal)
 - All of the above
- 35.9.** Which of these benzodiazepines is not completely absorbed after oral administration?
- Midazolam (Versed)
 - Clorazepate (Tranxene)
 - Alprazolam (Xanax)
 - Triazolam (Halcion)
 - Estazolam (ProSom)
- 35.10.** Which is the only antidepressant that has received approval from the U.S. Food and Drug Administration for the preventive treatment of seasonal affective disorder?
- Imipramine (Tofranil)
 - Mirtazapine (Remeron)
 - Citalopram (Celexa)
 - Bupropion (Wellbutrin)
 - Trazodone (Desyrel)
- 35.11.** In which of the following psychiatric disorders did buspirone (Buspar) not demonstrate any clear efficacy?
- Generalized anxiety disorder
 - Major depressive disorder
 - Sexual dysfunction
 - Psychosis
 - Premenstrual syndrome
- 35.12.** Which of the following drugs produces calcium channel inhibition?
- Verapamil (Calan, Isoptin)
 - Gabapentin (Neurontin)
 - Pregabalin (Lyrica)
 - Carbamazepine (Tegretol)
 - All of the above

- 35.13.** Carbamazepine can be useful in the treatment of
- A. trigeminal neuralgia
 - B. temporal lobe epilepsy
 - C. bipolar affective disorder
 - D. acute mania
 - E. all of the above
- 35.14.** The prevalence of dementia in cross-sectional studies among patients suffering from Parkinson's disease is approximately
- A. 10 percent
 - B. 20 percent
 - C. 30 percent
 - D. 40 percent
 - E. 50 percent
- 35.15.** Which of the following agents is *not* a first-generation antipsychotic?
- A. Haloperidol (Haldol)
 - B. Thioridazine (Mellaril)
 - C. Risperidone (Risperdal)
 - D. Perphenazine
 - E. Chlorpromazine (Thorazine)
- 35.16.** Lamotrigine (Lamictal) is *not* found to be efficacious in which of the following conditions?
- A. Partial seizures
 - B. Bipolar I disorder
 - C. Acute mania
 - D. Pain syndromes
 - E. None of the above
- 35.17.** Tolerance to lithium (Eskalith) can sometimes be overcome by the addition of
- A. divalproex (Depakote)
 - B. carbamazepine
 - C. lamotrigine
 - D. atypical antipsychotic
 - E. all of the above
- 35.18.** Which one of the following is the *most* frequently prescribed agent for insomnia therapies?
- A. Benzodiazepines
 - B. Sedating antidepressants
 - C. First-generation antipsychotics
 - D. Second-generation antipsychotics
 - E. Antihistamines
- 35.19.** Among the following newer antidepressants, which is the only one that is a potent antagonist of histamine-1 receptors?
- A. Mirtazapine (Remeron)
 - B. Mianserin (Bolvidon, Norval, Tolvan)
 - C. Citalopram (Celexa)
 - D. Paroxetine (Paxil)
 - E. Trazodone (Desyrel)
- 35.20.** Among the following antidepressants, which one is a monoamine oxidase inhibitor (MAOI)?
- A. Tranylcypromine (Parnate)
 - B. Amitriptyline (Elavil, Endep)
 - C. Mirtazapine (Remeron)
 - D. Fluvoxamine (Luvox)
 - E. Clomipramine (Anafranil)
- 35.21.** Which of the following conditions is a contraindication for the use of nefazodone (Serzone)?
- A. Tuberculosis
 - B. Hepatic disease
 - C. Renal illnesses
 - D. Diabetes mellitus
 - E. Hypertension
- 35.22.** Among the common side effects of opioids, the one that tends to persist after methadone (Dolophine) treatment is
- A. nausea
 - B. dizziness
 - C. sedation
 - D. constipation
 - E. hypotension
- 35.23.** How many hours does the blockade of exogenous ingested opioids in the central nervous system by naltrexone (ReVia) last?
- A. Up to 12 hours
 - B. Up to 24 hours
 - C. Up to 36 hours
 - D. Up to 48 hours
 - E. Up to 72 hours
- 35.24.** Which of the following drugs are considered "dual reuptake inhibitors"?
- A. Clomipramine (Anafranil)
 - B. Imipramine (Tofranil)
 - C. Amitriptyline (Elavil, Endep)
 - D. Venlafaxine (Effexor)
 - E. All of the above
- 35.25.** Which of the following antidepressants is a selective serotonin reuptake inhibitor (SSRI)?
- A. Fluoxetine (Prozac)
 - B. Venlafaxine (Effexor)
 - C. Duloxetine (Cymbalta)
 - D. Imipramine (Tofranil)
 - E. Tranylcypromine (Parnate)
- 35.26.** Which one of the following reflects second-generation antipsychotics or serotonin-dopamine antagonists?
- A. Clozapine (Clozaril)
 - B. Risperidone (Risperdal)
 - C. Olanzapine (Zyprexa)

- D. Quetiapine (Seroquel)
E. All of the above
- 35.27.** Sympathomimetics are of use in which of the following conditions?
A. Narcolepsy
B. Acquired immune deficiency syndrome
C. Attention deficit/hyperactivity disorder
D. Closed head injury
E. All of the above
- 35.28.** Which of the following disorders is most closely associated with thyroid disease?
A. Schizophrenia
B. Alcoholism
C. Depression
D. Phobia
E. Borderline personality disorder
- 35.29.** Trazodone (Desyrel) is best reflected in which one of the following categories?
A. Tricyclics
B. SSRIs
C. SNRIs
D. Second-generation antidepressants
E. All of the above
- 35.30.** Which one of the following is an indication for valproic acid?
A. Acute manic episodes
B. Complex partial seizures
C. Prophylaxis for migraine
D. Simple and complex absence seizures
E. All of the above
- 35.31.** Electroconvulsive therapy is the *most* effective treatment in which of the following mental disorders?
A. Panic disorder
B. Bipolar disorder
C. Obsessive-compulsive disorder
D. Major depression
E. Borderline personality disorder
- 35.32.** Which one of the following areas of the brain has been implicated in depression?
A. Amygdala
B. Hippocampus
C. Striatum
D. Thalamus
E. All of the above
- 35.33.** A 28-year-old man diagnosed with psychosis not otherwise specified was started on haloperidol 2 mg by mouth twice a day. On the sixth day of treatment, he developed a high white blood cell count, hyperthermia, severe muscular rigidity, confusion, and increased blood pressure and pulse rate. You suspect he has neuroleptic malignant syndrome. Which of the following about this condition is *true*?
A. Antiparkinsonian agents have been used to reduce the muscle rigidity.
B. It is not associated with low-potency neuroleptics.
C. It usually occurs when patients are neuroleptic naïve.
D. Women are affected more frequently than men.
E. It is more common in elderly individuals.
- 35.34.** Sildenafil
A. is rapidly absorbed after a fatty meal
B. is mostly excreted in the urine
C. is a nitric oxide enhancer
D. decreases levels of cyclic guanosine monophosphate
E. carries a high risk of priapism
- 35.35.** An internist calls you to ask about selecting a selective serotonin reuptake inhibitor (SSRI) for a patient of hers who is depressed. She tells you that the patient has never been treated with an antidepressant before, is taking no other medications, and has no serious medical problems. Which of the following is *true*?
A. The SSRIs have a narrow therapeutic index.
B. Paroxetine has significant anticholinergic activity at higher dosages.
C. Most of the SSRIs have similar serum half-lives.
D. Not all the SSRIs are equally effective in treating depression.
E. The metabolites of citalopram have significant pharmacologic activity.
- 35.36.** A 32-year-old woman with a first episode of depression and no prior treatment history is started on thyroid hormone after 3 weeks of partial response to nortriptyline 75 mg/day. Which of the following is *true*?
A. She should be advised not to become pregnant while taking thyroid hormones because they are associated with multiple serious congenital malformations.
B. The doctor waited the correct amount of time before beginning the augmentation strategy.
C. Fifty percent of antidepressant nonresponders become treatment responders using thyroid hormone.
D. Levothyroxine the thyroid hormone most often used for this purpose.
E. Laboratory values of thyroid hormone help in assessing response to the hormone.
- 35.37.** Which of the following drugs or foods is *not* contraindicated for concurrent administration with triazolobenzodiazepines such as alprazolam (Xanax) based on inhibition of the hepatic enzyme cytochrome P450 (CYP) 3A4?
A. Venlafaxine (Effexor)
B. Nefazodone (Serzone)

- C. Cisapride (Propulsid)
- D. Grapefruit juice
- E. All of the above

35.38. A 28-year-old woman is brought to the emergency department heavily sedated with a suspected overdose on sleeping medications. Flumazenil is considered as treatment. Which of the following is *true*?

- A. She should be given at least 10 minutes of a cumulative dose of flumazenil before you rule out a benzodiazepine as the cause of her sedation.
- B. Your biggest concern about giving her flumazenil is that it may precipitate the onset of seizures.
- C. Flumazenil will reverse the effects if she took barbiturates.
- D. Flumazenil will have no effect if she overdosed on zolpidem.
- E. Flumazenil is administered as a rapid bolus injection.

35.39. Zolpidem

- A. is solely indicated as a hypnotic
- B. is not contraindicated for use by nursing mothers
- C. is generally associated with rebound insomnia after discontinuation of its use for short periods
- D. may be used as a muscle relaxant
- E. reaches peak plasma levels in about 4 to 6 hours

35.40. Increased lithium concentrations are associated with all of the following *except*

- A. ibuprofen
- B. salt restriction
- C. furosemide
- D. indomethacin
- E. theophylline

35.41. True statements about gabapentin include

- A. Gabapentin is metabolized almost exclusively in the liver.
- B. Gabapentin overdose is associated with serious toxicity.
- C. Abrupt discontinuation of gabapentin may cause a withdrawal syndrome
- D. Gabapentin interacts with hepatic enzymes and may both inhibit and induce them depending on the dose.
- E. Studies suggest that gabapentin may be less useful in the treatment of bipolar II disorder than of bipolar I disorder.

35.42. Dantrolene is a potentially effective treatment for each of the following disorders *except*

- A. acute mania
- B. catatonia
- C. malignant hyperthermia
- D. neuroleptic malignant syndrome
- E. serotonin syndrome

35.43. Which of the following statements regarding transcranial magnetic stimulation (TMS) is *true*?

- A. It does not require general anesthesia.
- B. Seizures do not appear to be required for therapeutic effects.
- C. Optimal stimulation patterns for TMS in psychiatric disorders are not yet known.
- D. It is a noninvasive central nervous system stimulant.
- E. All of the above

35.44. Factors that predict a better response to carbamazepine (Tegretol) than to lithium (Eskalith) in bipolar I disorder include each of the following *except*

- A. first episode of mania
- B. dysphoric mania
- C. comorbid seizure disorder
- D. negative family history
- E. rapid cycling

Directions

Each group of questions below consists of lettered headings followed by a list of numbered words or phrases. For each numbered word or phrase, select the *one* lettered heading that is most closely associated with it. Each heading may be selected once, more than once, or not at all.

Questions 35.45–35.49

- A. Bupropion
- B. Olanzapine
- C. Ziprasidone
- D. Carbamazepine
- E. Valproate

35.45. Diabetes

35.46. Stevens-Johnson syndrome

35.47. QTc prolongation

35.48. Ovarian cysts

35.49. Seizures

ANSWERS

35.1. The answer is B

The time course and intensity of a drug and its effects are referred to as its *pharmacodynamics*. Major pharmacodynamics considerations include receptor mechanisms; the dose-response curve; the therapeutic index; and the development of tolerance, dependence, and withdrawal phenomena. Drugs' mechanisms of action are subsumed under pharmacodynamics. The clinical response to a drug, including adverse reactions, results from an interaction between that drug and a patient's susceptibility to those actions.

Pharmacokinetics refers to the way in which the body processes a drug. Pharmacokinetics are divided into drug absorption, distribution, metabolism, and excretion. The field of *pharmacogenetics* grew out of observations of significant ethnic differences

in response to drugs, in differential development, and in adverse effect profiles, leading to the discovery of defects or deficiencies in the genetically controlled activity of enzyme systems responsible for the metabolism of psychotropic medications and toxins such as alcohol. Pharmacogenetic studies are beginning to identify genetic polymorphisms linked to individual differences in treatment response and sensitivity to side effects.

The *placebo effect* is when a person exhibits a clinically significant response to a pill containing a therapeutically inert substance or a treatment without specific effect on the person's condition. Placebo effects are not limited to subjective reports; physiologic functions may be objectively influenced. *Idiosyncratic reaction* is an unpredictable, non-dosage-related drug response. For example, diazepam (Valium) administered as a sedative paradoxically causes agitation in some persons.

35.2. The answer is E (all)

In general, the newer psychotropic agents cause less frequent and less severe movement disorders than their first-generation counterparts. In sensitive individuals, however, these syndromes can still occur with second-generation antipsychotics. Furthermore, the general reduction in the incidence and severity of these syndromes may delay recognition when they are present. Included in these categories are parkinsonism, *neuroleptic malignant syndrome*, *acute dystonia*, *acute akathisia*, *tardive dyskinesia*, postural tremor, and medication-induced movement disorder not otherwise specified.

35.3. The answer is E (all)

Clinically, clonidine (Catapres) has been useful and effective in a series of medical and psychiatric conditions. Among them are *Tourette's disorder*, other tic disorders, *opiate withdrawal*, nicotine withdrawal, autism spectrum disorders, *posttraumatic stress disorder (PTSD)*, and other anxiety disorders. Clonidine was synthesized in the early 1960s and was found to produce vasoconstriction mediated by α -receptors. Clonidine is well absorbed after oral administration, and its bioavailability is nearly 100 percent.

35.4. The answer is E (all)

Indications for β -adrenergic receptor antagonists are *lithium tremor*, major depressive disorders, *substance use disorders*, *performance anxiety*, and neuroleptic-induced akathisia. The five β -adrenergic receptor antagonists most frequently studied for psychiatric applications are propranolol, metoprolol, atenolol, and pindolol. Propranolol is the most commonly used β -adrenergic receptor antagonist and is not known to exert a teratogenic effect in humans; however, some infant born to mothers taking propranolol during pregnancy have exhibited hypoglycemia or bradycardia.

35.5. The answer is D

Anticholinergic medications can lead to *impairment in cognitive functions*, particularly in elderly individuals. These agents have also been implicated in worsening (not improving) *positive symptoms of psychoses*. These agents also impair (not improve) *storage of new information into long-term memory*. Significant improvement has also been demonstrated in the cognitive

total score, as well as in the ideational *apraxia* and *orientation subscales*.

35.6. The answer is E (all)

The newer anticonvulsants such as gabapentin, levetiracetam, pregabalin, tiagabine, topiramate, and zonisamide have a variety of structures and mechanisms; among them, the *enhancement of neuronal inhibition* by increasing γ -amino butyric acid (GABA)ergic function, and decrease of neuronal excitation by *decreasing glutaminergic function*; they also *increase the risk of suicidality* and have *analgesic effects*. The risk for suicidality was higher among patients with epilepsy compared with patients with psychiatric disorders.

35.7. The answer is A

The use of H_2 receptor antagonists in psychiatric practice has primarily been for weight loss in overweight individuals and persons experiencing antipsychotic-associated weight gain. Initial studies indicated that the H_2 receptor antagonist nizatidine (Axid) was efficacious as a secondary prevention strategy for weight gain associated with the use of *olanzapine (Zyprexa)*.

35.8. The answer is A

In general, the brief duration of electroconvulsive therapy (ECT) requires shorter acting agents. *Methohexital (Brevital)* is usually the first-line agent for anesthesia during ECT. The rapid onset and offset of action of etomidate make it an appropriate choice. *Thiopental (Pentothal)* is longer acting, and its anticonvulsant properties can interfere with induction of therapeutic seizures. *Propofol (Diprivan)* may also shorten seizure duration. The proconvulsant action of *ketamine* makes it useful when seizures are difficult to induce, and ketamine may have acute antidepressant effects, but it can cause psychosis and may also have cardiovascular side effects. A randomized comparison of etomidate, propofol, and thiopental found all of them to be relatively free of important cardiovascular effects in otherwise healthy patients undergoing ECT. Etomidate raises the seizure threshold less than propofol, and its use is associated with a requirement for a lower stimulant dose to produce adequate seizures.

35.9. The answer is B

All benzodiazepines except *clorazepate (Tranxene)* are completely absorbed after oral administration and reach peak serum levels within 30 minutes to 2 hours. Metabolism of clorazepate in the stomach converts it to desmethyldiazepam, which is then completely absorbed. Intra muscular absorption of benzodiazepines other than lorazepam is slower than oral absorption. The onset of action is nearly immediate with IV administration of high-potency benzodiazepines, such as midazolam.

35.10. The answer is D

Bupropion (Wellbutrin) is the only antidepressant to receive Food and Drug Administration (FDA) approval for the preventive treatment of seasonal affective disorder. Bupropion was originally introduced in the 1980s and has become one of the more commonly prescribed antidepressants in the United States.

As a result of a unique pharmacology, bupropion is often used as an alternative to SSRIs and serotonin–norepinephrine reuptake inhibitors (SNRIs). In addition to its FDA approval in the treatment of depression, bupropion is also approved for smoking cessation (Zyban). Additionally, bupropion is used for numerous off-label indications, including the treatment of patients with attention-deficit/hyperactivity disorder, sexual dysfunction, obesity, and fatigue related to nonpsychiatric medical conditions. Currently, all formulations of bupropion are generically available, and the major metabolite of bupropion, hydroxybupropion, is being investigated as a potential antidepressant.

35.11. The answer is D

Buspirone (Buspar) has not demonstrated any clear efficacy in the treatment of *psychosis*. In the context of schizophrenia, efficacy has not been observed in the treatment of either positive or negative symptoms. Some studies have shown improvement of cognitive functions among patients with schizophrenia taking buspirone but no significant improvement in psychotic symptomatology.

35.12. The answer is E (all)

Carbamazepine (Tegretol) inhibits calcium channels on a comparable basis to *verapamil* (Calan, Isoptin). Lamotrigine (Lamictal) also has calcium channel blocking properties, as also do valproate (Depakene), *gabapentin* (Neurontin), *pregabalin* (Lyrica), and lithium (Eskalith). All of these medications are useful to the treatment of patients with bipolar disorders.

35.13. The answer is E (all)

Carbamazepine is an iminostilbene drug possessing some structural similarity to the tricyclic antidepressant imipramine. Carbamazepine was approved for use in the United States for the treatment of *trigeminal neuralgia* in 1968 and for *temporal lobe epilepsy* (complex partial seizures) in 1974. It is now recognized in most guidelines as a second-line mood stabilizer useful in the treatment and prevention of both phases of *bipolar affective disorder*.

35.14. The answer is D

Dementia commonly occurs in patients with Parkinson's disease in an average prevalence of about 40 percent in cross-sectional studies. The cholinesterase inhibitors and memantine (Namenda) are currently the only types of medications approved by the FDA to treat Alzheimer's disease and other dementias. Recently, the efficacy of the cholinesterase inhibitors has expanded to include severely ill patients with Alzheimer's disease, patients with Lewy body disease, and patients with dementia associated with Parkinson's disease.

35.15. The answer is C

Risperidone (Risperdal) is a second-generation antipsychotic. Other second-generation antipsychotics include clozapine (Clozaril), olanzapine (Zyprexa), quetiapine (Seroquel), ziprasidone (Geodon), and aripiprazole (Abilify). Second-generation antipsychotics have gradually replaced the first-generation an-

tipsychotics as the most widely prescribed agents for schizophrenia and other psychotic disorders in the United States; however, the first-generation antipsychotics still remain the most commonly prescribed antipsychotics in many parts of the world. The first-generation antipsychotics represent the first group of effective agents for schizophrenia and other psychotic illness. They include all of the antipsychotics in the following groups: phenothiazines (i.e., *chlorpromazine* [Thorazine], *thioridazine* [Mellaril], and *perphenazine*), butyrophenones (i.e., *haloperidol* [Haldol]), thioxanthenes (i.e., chlorprothixene [Taractan]), dibenzoxazepines (i.e., loxapine [Loxitane]), dihydroindoles (i.e., molindone [Moban]), and diphenylbutylpiperidines (i.e., pimozide [Orap]). All of these agents are antipsychotics that are associated with extrapyramidal side effects at their clinically effective dosages.

35.16. The answer is C

Lamotrigine (Lamictal) does not appear to be effective as a main intervention in *acute mania*. Lamotrigine appears to lack significant antifolate effects in humans. Lamotrigine has proven to be effective in several animal models of epilepsy and is marketed for the adjunctive treatment of *partial seizures* in the United States in 1995. Lamotrigine also appears effective as maintenance treatment for bipolar disorders and was approved for maintenance treatment of *bipolar I disorders* in 2003. Lamotrigine may have analgesic effects because it was effective in placebo-controlled studies of several *pain syndromes* such as posttransurethral prostatectomy pain, central poststroke pain, and human immunodeficiency virus (HIV), and painful distal sensory polyneuropathy.

35.17. The answer is E (all)

Some patients appear to develop a tolerance to lithium after several years of successful use. This tolerance can sometimes be overcome by the addition of *divalproex* (Depakote), *carbamazepine* (Tegretol), *lamotrigine* (Lamictal), or an *atypical antipsychotic*. The maximum benefits of lithium therapy may not be immediate; with continued treatment, relapses sometimes become less severe and less frequent. Similarly, patients who are only partial responders to lithium maintenance may benefit from the additional of one of these drugs. Just as patients with breakthrough depression may respond to a temporary increase in serum lithium concentration, so too may those with breakthrough mania. At such times, however, supplementing lithium with an antipsychotic drug or a benzodiazepine may be necessary.

35.18. The answer is B

Before the FDA's approval of the first melatonin receptor agonist, *ramelteon* (Rozerem), the *benzodiazepine* receptor agonists was the only class of drugs specifically approved for use in insomnia. Although not specifically approved for this disorder, *sedating antidepressants are the most frequently prescribed insomnia therapies*. This choice appears to be partially driven by the strong association of insomnia with depression as well as safety issues resulting from the use of what is now understood to be supratherapeutic doses of the benzodiazepine receptor agents when they originally become available. Unfortunately, although

sedating antidepressants are widely used to treat insomnia, the clinical evidence supporting this treatment choice is somewhat limited, especially in nondepressed patients. Trazodone is one of the most commonly prescribed agents for the treatment of insomnia. Most of the studies of its effects in individuals with insomnia used small populations of depressed patients and did not include objective measures of efficacy. Only short-term insomnia efficacy trials with trazodone have been performed in nondepressed patients, and these did not demonstrate continued benefits in improving sleep. Other sedating antidepressants (e.g., mirtazapine, amitriptyline) have been virtually unstudied in chronic insomnia.

35.19. The answer is A

Mirtazapine (Remeron) is the only newer antidepressant that is a potent antagonist of histamine-1 receptors, which adds to sedative and appetite-enhancing properties. Mirtazapine is a tetracyclic piperazinoazepine compound that was approved by the FDA in 1995 for the treatment of depression. Unlike many of the newer antidepressants, mirtazapine has virtually no effect on monoamine uptake. Rather, therapeutic effects are thought to be mediated by inhibition of the α_2 -adrenergic receptors and blockade of postsynaptic serotonin type 2 (5-HT₂) and type 3 (5-HT₃) receptors.

35.20. The answer is A

The monoamine oxidase inhibitors (MAOIs) were the first class of licensed antidepressant drugs. They also played an important role in the evolution of the monoamine hypothesis of depression. Iproniazid first became available as an antidepressant in 1954. Its associated hepatotoxicity led to its withdrawal from the market in 1961. However, *tranlycypromine* (launched in 1961) and phenelzine (also launched in 1961) are still considered important third-line agents, particularly for patients who have failed to respond to currently available first- and second-line agents. A third irreversible MAOI, isocarboxazid, was reintroduced into the United States in 1998, but it has not been included in clinical trials over recent years.

35.21. The answer is B

Nefazodone should not be used with patients who also have *hepatic disease*. Pharmacokinetic studies have shown reduced drug clearance in patients with hepatic cirrhosis; a dose reduction may be considered in such patients because the steady-state concentrations of nefazodone and hydroxynefazodone are 25 percent higher than in normal control subjects.

35.22. The answer is D

During methadone maintenance, most adverse effects disappear over the course of several weeks. However, *constipation* and excessive sweating often persist even with long-term methadone administration. Because methadone shares the adverse effects and toxic potential of other opioid agonists, the usual precautions of opioid agonist therapy should be observed. Common side effects of opioids include *sedation*, *constipation*, sweating, *nausea*, dizziness, and *hypotension*. Recent case reports also indicate that methadone, especially in high doses (and occasionally

in moderate doses) can impair cardiac conduction; prolong the QT interval; and, in rare instances, such as with the use of *Levo- α -acetylmethadol* (Laam), lead to torsade de pointes.

35.23. The answer is E

As an opioid antagonist, naltrexone (ReVia) selectivity competes with exogenously ingested opioids for central nervous system (CNS) and non-CNS opioid receptors and blocks their activity. This blockade lasts for *up to 72 hours* after naltrexone administration and prevents patients from achieving sought-after reinforcement from opioid use and from resuming physical dependence if prolonged opioid use is resumed. Several clinical trials have examined the combined use of opioid antagonists with other agents. Preliminary small placebo-controlled studies have suggested that the combination of the 5-HT₃ antagonist ondansetron and naltrexone, when compared with placebo, may produce greater suppression of drinking outcomes in early-onset alcoholics. Combined use of naltrexone with disulfiram (Antabuse) has shown modest efficacy in increasing abstinence rates in patients with concurrent axis I psychiatric disorders and alcohol dependence. A recent large multisite trial indicated no significant advantage of using naltrexone in combination with acamprostate (Campral) for the treatment of patients with alcohol dependence.

35.24. The answer is E (all)

The selective serotonin–norepinephrine reuptake inhibitors (SNRIs) are a group of medications that have therapeutic effects that are presumably mediated by concomitant blockade of neuronal serotonin (5-HT) and norepinephrine uptake transporters. Medications in this group include *venlafaxine* (*Effexor*) and *duloxetine* (*Cymbalta*). The SNRIs are also sometimes referred to as dual reuptake inhibitors, a broader functional class of antidepressant medications that includes tricyclic antidepressants (TCAs) such as *clomipramine* (*Anafranil*) and, arguably, *imipramine* (*Tofranil*) and *amitriptyline* (*Elavil*, *Endep*). What distinguishes the SNRIs from the TCAs is selectivity, which in this context refers to a relative lack of affinity for other receptors, especially muscarinic, histaminergic, and the families of α - and β -adrenergic receptors.

35.25. The answer is A

The selective serotonin reuptake inhibitors (SSRIs) are the most widely used psychopharmacological agents for depression and anxiety. *Fluoxetine* (*Prozac*) was approved in 1988 as the first SSRI in the United States. It rapidly captured the favor of both clinicians and the general public as reports quickly emerged of dramatic responses to treatment. All of the SSRIs, starting with fluoxetine and followed by sertraline (*Zoloft*), paroxetine (*Paxil*), fluvoxamine (*Luvox*), citalopram (*Celexa*), and escitalopram (*Lexapro*), are equally effective.

The selective serotonin–norepinephrine reuptake inhibitors (SNRIs) are a group of medications that have therapeutic effects that are presumably mediated by concomitant blockade of neuronal serotonin (5-HT) and norepinephrine uptake transporters. Medications in this group include *venlafaxine* (*Effexor*), *duloxetine* (*Cymbalta*), and the newer *desvenlafaxine*

succinate (Prestiq). The TCAs block serotonin and norepinephrine as well and are used in the treatment of patients with panic disorder, generalized anxiety disorder, posttraumatic stress disorder, obsessive-compulsive disorder, and pain syndromes as well as depression. These drugs include *imipramine* (Tofranil), clomipramine (Anafranil), and desipramine (Norpramin, Petrofrane) among others. Although the SNRIs have a more favorable tolerability and newer agents such as SSRIs have sharply decreased prescriptions of TCAs, they remain extremely useful.

The monoamine oxidase inhibitors (MAOIs) are effective in treating both depression and panic disorder. Despite their effectiveness, prescription of MAOIs as a first-line agent has always been limited by concern about the development of potentially lethal hypertension and the consequent need for a restrictive diet. The currently available MAOIs include phenelzine (Nardil), isocarboxazid (Marplan), *tranylcypromine* (Parnate), and selegiline (Eldepryl).

35.26. The answer is E (all)

The second-generation antipsychotics are a group of antipsychotic agents that were introduced into clinical psychiatry during the early 1990s. In the United States and most parts of the world, these agents are the most widely prescribed agents for schizophrenia and other illnesses associated with psychotic symptoms. Examples of second-generation antipsychotics are *clozapine* (Clozaril), *risperidone* (Risperdal), *olanzapine* (Zyprexa), *quetiapine* (Seroquel), ziprasidone (Geodon), and aripiprazole (Abilify).

35.27. The answer is E (all)

Sympathomimetics, also known as psychostimulants, have been widely used in *attention-deficit/hyperactivity disorder* (ADHD) and *narcolepsy* because no equally effective agents have been available, and they have been found effective in certain cognitive disorders that result in secondary depression or profound apathy (e.g., *acquired immunodeficiency syndrome*), poststroke depression and dementia, and *closed head injury*, as well as in the augmentation of antidepressant medications in specific treatment-resistant depressions. The use of sympathomimetics persists and may be increasing in medicine and psychiatry in specific clinical situations. Stimulants may be of great help if they are appropriately prescribed and monitored because of their clinical effectiveness when no other medication has been helpful.

35.28. The answer is C

Depressive symptoms have been known to be one of the most prominent features of clinical thyroid disease, particularly hypothyroidism. Beginning in the late part of the 19th century, depression was seen as prominent component of clinical hypothyroidism, although other psychiatric symptoms were often present. As a result of the inverse relationship between thyroid function and depression observed in endocrine patients, it was hoped that thyroid hormones—particularly thyroid hormone deficiency—might be a biological factor in the etiology of unipolar and bipolar mood disorders. Thyroid hormones are used in psychiatry, either alone or as augmentation, to treat persons with

depression or rapid-cycling bipolar I disorder. They can convert an antidepressant-nonresponsive person into an antidepressant-responsive person.

35.29. The answer is D

Developed in Italy in 1966, trazodone (Desyrel) is considered the first of the *second-generation antidepressants*, possessing a novel triazolopyridine chemical structure that distinguished it from the *tricyclic antidepressants* (TCAs) that preceded it. Its improved safety and tolerability compared with the TCAs was most likely responsible for trazodone's rapid increase in clinical use after its introduction. However, with the increased popularity of *selective serotonin reuptake inhibitor* (SSRI) antidepressants, trazodone has fallen out of favor as a first-line treatment for depression in the United States.

35.30. The answer is E (all)

Valproic acid (Depakene) and its formulation derivatives divalproex sodium (Depakote), extended-release (ER) divalproex sodium (Depakote ER), and valproate sodium injection (Depacon) represent the first-generation mood stabilizing anticonvulsants. Valproate is currently approved by the U.S. Food and Drug Administration (FDA) for (1) monotherapy or adjunctive therapy for *complex partial seizures*, (2) monotherapy or adjunctive therapy for *simple and complex absence seizures*, (3) adjunctive therapy for patients with multiple seizures that include absence seizures, (4) *prophylaxis of migraine*, and (5) treatment of *acute manic episodes* associated with bipolar disorder.

35.31. The answer is D

Electroconvulsive therapy (ECT) is the most effective treatment for *major depression*. It is commonly used as the standard against which other treatments, including innovative treatments such as repetitive transcranial magnetic stimulation (rTMS), are compared. No treatment has been found to be superior to ECT in the treatment of major depression in a controlled trial.

Only the American Psychiatric Association (APA) recommends ECT use as a maintenance treatment for *bipolar disorder*. Prospective work demonstrated acute response in *obsessive-compulsive disorder*, but patients soon relapsed, and ECT is not recommended for this disorder. Because of the frequent presence of symptoms of panic in depressed patients undergoing ECT, the question of the effect of the treatment of these symptoms should be raised, but there have been no studies of the effect of ECT on *panic disorder*. ECT is not considered to be a treatment for any personality disorder (i.e., *borderline personality disorder*).

35.32. The answer is E

Many areas of the brain have been implicated in depression, including the prefrontal cortex, *amygdala*, *hippocampus*, and *thalamus*. All of these brain areas contain estrogen receptors that are modulated by estradiol. It is biologically plausible that reproductive steroids might display psychotropic properties because their pattern of neuroregulatory effects is highly convergent with those presumed to underlie psychotropic efficacy. Indeed, whenever one finds a system believed to play a role in the etiology on treatment of depression, modulatory effects of gonadal

steroids are observed as well. The neurotransmitters systems implicated in depression—serotonin, norepinephrine, dopamine, acetylcholine, γ -amino butyric acid (GABA), glutamate—are all regulated by estradiol.

35.33. The answer is A

Neuroleptic malignant syndrome (NMS) is a potentially fatal side effect of the dopamine receptor antagonists. The *antiparkinsonian agents may reduce some of the muscle rigidity*, and dantrolene, a skeletal muscle relaxant, may be useful in the treatment of patients with this disorder. *NMS can occur at any time during the course of treatment with dopamine receptor antagonist medications, not just in neuroleptic-naïve patients*, and it may also be caused by *low-potency drugs. Men are affected more frequently than women, and young people are affected more commonly than elderly people.*

35.34. The answer is C

Sildenafil (Viagra) is a phosphodiesterase-5 (PDE-5) inhibitor. Sexual stimulation causes the release of nitric oxide, which increases the synthesis of cyclic guanosine monophosphate (cGMP), causing smooth muscle relaxation in the corpus cavernosum that allows blood to flow into the penis, resulting in turgidity and tumescence. When the enzyme PDE-5 is inhibited, *there is an increase in cGMP*. This drug works only when there is sexual stimulation; it inhibits PDE-5, allowing an increase in cGMP and enhancing the vasodilatory effects of nitrous oxide. *It is known as a nitric oxide enhancer*. It is highly lipophilic, *so its absorption is delayed after the ingestion of a fatty meal*. *Excretion of 80 percent of the dose is via feces. There are no cases of priapism reported in premarketing trials.*

35.35. The answer is B

Paroxetine has significant anticholinergic activity at higher dosages, but all of these drugs exert their therapeutic effects through serotonin (5-HT) reuptake inhibition. *The most significant difference among the selective serotonin reuptake inhibitors (SSRIs) is their broad range of serum half-lives*. Although they are each structurally and chemically distinct from each other, *the SSRIs are all equally effective in the treatment of major depressive disorder*. Citalopram and escitalopram are the most selective inhibitors of serotonin reuptake. Fluoxetine has an active metabolite with a half-life of 7 to 9 days. Sertraline's active metabolite has a half-life of 3 to 5 days. *Citalopram does not have metabolites with significant pharmacologic activity. These medications have a wide therapeutic index, making them relatively easy to administer.*

35.36. The answer is C

The major indication for thyroid hormones in psychiatry is as an adjuvant to antidepressants. *Liothyronine (T_3), not levothyroxine (T_4)*, is the thyroid hormone used as an augmentation agent. *It converts about 50 percent of antidepressant nonresponders to responders. There is no clear correlation between the laboratory measures of thyroid function and the response to thyroid hormone supplementation of antidepressants*. Usually, at least a 6-week course of an antidepressant at an adequate dose is tried

before beginning supplementation. *Thyroid hormones can be administered safely to pregnant women, provided that laboratory thyroid indexes are monitored*. Thyroid hormones are minimally excreted in breast milk but have not been shown to cause problems in nursing babies.

35.37. The answer is A

Venlafaxine (Effexor) may be given with drugs such as alprazolam. Most psychotherapeutic drugs are oxidized by the hepatic cytochrome P450 (CYP) enzyme system.

The CYP genes may be induced by alcohol; certain drugs (barbiturates, anticonvulsants); or smoking, which increases the metabolism of certain drugs and precarcinogens. Other agents may directly inhibit the enzymes and slow the metabolism of other drugs. In some cases, if one CYP enzyme is inhibited, when the precursor accumulates to a sufficiently high level within the cell, another CYP enzyme may begin to act. Cellular pathophysiology, such as that caused by viral hepatitis or cirrhosis, may also affect the efficiency of the CYP system. With the DNA sequence data available, several genetic polymorphisms in the CYP genes are now recognized, some of which are manifested in a decreased rate of metabolism. Patients with an inefficient version of a specific CYP enzyme are considered "poor metabolizers."

With respect to CYP 2D6, for which 7 percent of whites are poor metabolizers, tricyclic antidepressants, antipsychotics, and type 1C antiarrhythmics should be used cautiously or avoided with selective serotonin reuptake inhibitors. Because of inhibition of the CYP 3A4 enzyme, *nefazodone, cisapride, grapefruit juice*, and fluoxetine should not be used with terfenadine (Seldane), astemizole (Hismanal), carbamazepine (Tegretol), or the triazolobenzodiazepines alprazolam (Xanax) and triazolam (Halcion). Inhibition of CYP 2C9/10 and CYP 2C19 warrants caution for combinations such as fluoxetine plus phenytoin (Dilantin) and sertraline plus tolbutamide (Orinase). It is also important to consider the long half-lives of certain psychiatric drugs, especially fluoxetine, which may extend their inhibition of the CYP enzymes.

35.38. The answer is B

Flumazenil is used to reverse the adverse psychomotor, amnesic, and sedative effects of the benzodiazepine receptor agonists. *The most common serious side effect associated with its use is the precipitation of seizures*, which is likely to occur in people with seizure disorders, those who are physically dependent on benzodiazepines, and those who have ingested large quantities of benzodiazepines. *It does work to reverse the side effects associated with an overdose of zolpidem (Ambien) and zaleplon (Sonata)* because they both have benzodiazepine receptor agonistic properties. It does not reverse the effects of ethanol, barbiturates, or opioids. *Clinicians should not rush its administration, and it should be administered as an initial dose of 0.2 mg intravenously over 30 seconds*. Most people with a benzodiazepine overdose respond to a cumulative dose of 1 to 3 mg. If a person has not responded within 5 minutes of a cumulative dose of 5 mg of flumazenil, the major cause of sedation is probably not a benzodiazepine agonist.

35.39. The answer is A

Zolpidem is a hypnotic that acts at the GABA–benzodiazepine complex as the benzodiazepines do, but it is not itself a benzodiazepine. The drug *lacks* the *muscle relaxant effects* that are common to the benzodiazepines.

Zolpidem is rapidly and well absorbed after oral administration, and it reaches peak plasma levels in about 2 to 3 hours (not 4 to 6 hours). Zolpidem has a half-life of about 2.5 hours and is metabolized primarily by conjugation.

The sole indication at this time for zolpidem is as a hypnotic. Several studies have found an absence of rebound rapid eye movement (REM) sleep after the use of the compound for the induction of sleep. The comparatively few data available indicate that *zolpidem may not be associated with rebound insomnia* after the discontinuation of its use for short periods.

Because of the short half-life of zolpidem, clinicians may reasonably evaluate a patient for the possibility of anterograde amnesia and anxiety the day after its administration, although neither of these adverse effects has been reported. Emesis and dysphoric reactions have been reported as adverse effects. Tolerance and dependence have been reported in fewer than 1 percent of patients, and the withdrawal symptoms are similar to those described for the benzodiazepines. Zolpidem is secreted in breast milk and is therefore *contraindicated for use by nursing mothers*. The dosage of zolpidem should be reduced in patients with renal and hepatic impairment.

35.40. The answer is E

Increased lithium concentrations are associated with interactions, including furosemide, salt restriction, indomethacin, and ibuprofen, but not theophylline, which decreases lithium concentrations.

35.41. The answer is C

Case reports and uncontrolled trials suggest that gabapentin facilitates stabilization of mood cycling and helps control manic episodes. In almost all reports, gabapentin is used adjunctively. These reports involve patients with different bipolar disorders (bipolar I disorder, bipolar II disorder, cyclothymic disorder, and bipolar disorder not otherwise specified) who have failed to achieve adequate control with lithium (Eskalith, Lithobid), valproate, or carbamazepine. Although there are reports that gabapentin may treat the depressive phase of bipolar disorder with a lower liability for induction of mania or mood cycling than with an antidepressant, apparent mania or cycling has been reported after initiation of gabapentin treatment. *Gabapentin may be more useful in patients with bipolar II disorder than in those with bipolar I disorder.*

Gabapentin is mildly sedating and normalizes sleep. It can be given at bedtime as an alternative to benzodiazepine agonists or other hypnotic drugs. Withdrawal symptoms and craving that accompany discontinuation of benzodiazepines, alcohol, and cocaine may be helped by gabapentin. *Abrupt discontinuation of gabapentin does not cause a withdrawal syndrome.*

The most frequent side effects of gabapentin are sedation, dizziness, and ataxia, which tend to be mild and transient. Lower extremity edema has been noted. Because gabapentin is almost

exclusively *eliminated through the kidneys*, patients with renal impairment should be monitored closely. *No serious toxicity is associated with gabapentin overdose.*

Gabapentin does not interact with hepatic enzymes and neither inhibits nor induces them.

35.42. The answer is A

Dantrolene (Dantrium) is a direct-acting skeletal muscle relaxant. The only indication for dantrolene in contemporary clinical psychiatry is as one of the potentially effective treatments for *neuroleptic malignant syndrome (NMS), catatonia, and serotonin syndrome*. It is also used to treat *malignant hyperthermia*, an adverse effect of general anesthesia that bears a clinical resemblance to NMS. Dantrolene has no other uses in psychiatry and *is not used to treat acute mania*.

35.43. The answer is E (all)

Electroconvulsive therapy (ECT) has multiple effects on brain function that are responsible for both its therapeutic and adverse actions. If changes in only certain regions of the central nervous system (CNS) are required for therapeutic benefits, it may be possible to develop stimulation paradigms that target these areas. Such treatments could have great advantages in avoiding many of the unwanted effects of ECT, perhaps including cognitive impairment. Transcranial magnetic stimulation (TMS) is one such treatment. In neurology, TMS has been *developed as a way to stimulate the CNS noninvasively* by application of a focal magnetic field over regions of the cortex. Refinements of magnetic stimulators, including the development of stimulators capable of discharging at frequencies up to 60 Hz (referred to as rapid-rate TMS [rTMS]) have allowed focal stimulation of the CNS to estimate motor thresholds and determine hemispheric language dominance. Interestingly, rTMS was found to benefit some patients with Parkinson's disease, and some patients with Parkinson's disease exhibited improved mood after rTMS. Additionally, subjects exposed to rTMS for purposes of determining hemispheric language dominance exhibited affective responses after stimulation of the left frontal cortex.

These observations suggest that rTMS may have therapeutic potential in psychiatry and may allow focal stimulation of areas most involved in affective states. Although experience with rTMS in psychiatry is limited, some evidence suggests that depending on the placement of the magnetic coil, rTMS can improve or worsen affective state. In one of the best studies to date, left dorsolateral prefrontal cortex stimulation significantly improved depression ratings in 11 of 17 patients with psychotic major depression. rTMS appears to be well tolerated and *does not require general anesthesia*. *Seizures* may be a side effect in some patients but *do not appear to be required for therapeutic effects*.

TMS is performed using a high-speed magnetic stimulator that generates a 1.5- to 2.5-Tesla field for brief periods. This field is similar to that used for nuclear magnetic resonance imaging. rTMS stimulus is delivered at frequencies of 10 to 60 Hz using a figure 8–shaped coil that is placed over the desired region of the skull and cooled continuously with water to prevent overheating. Patients and staff usually wear earplugs because of the noise

generated by the stimulator. Stimulation is typically given several times per session and is repeated over several days to weeks. *At present, optimal stimulation patterns for rTMS in psychiatric disorders are not known.*

35.44. The answer is A

Lithium is the most commonly used agent for the treatment of patients with a *first manic episode* because it is generally the most effective drug for this purpose. Almost two dozen well-controlled studies, however, have shown that carbamazepine is effective in the treatment of acute mania, with efficacy comparable to lithium and antipsychotics. About 10 studies have also shown that carbamazepine is effective in the prophylaxis of both manic and depressive episodes in patients with bipolar I disorder when it is used for prophylactic treatment. Carbamazepine is an effective antimanic agent in 50 to 70 percent of all patients. Additional evidence from those studies indicates that carbamazepine may be effective in some patients who are not responsive to lithium, such as patients with *dysphoric mania, rapid cycling, or a negative family history of mood disorders*. However, a few clinical and basic science data indicate that some patients may experience a tolerance for the antimanic effects of carbamazepine. Because lithium toxicity may produce convulsions, carbamazepine may be a preferred drug for patients with *comorbid seizure disorders*.

Answers 35.45–35.49

35.45. The answer is B

35.46. The answer is D

35.47. The answer is C

35.48. The answer is E

35.49. The answer is A

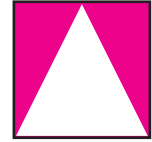
Seizures may occur with *bupropion* at doses above 400 mg per day. However, the risk is no worse than with other antidepressants.

Cases of *polycystic ovary disease* have been reported in women using *valproate*.

Prolongation of the QTc complex occurs with ziprasidone and should not be used in patients with a history of cardiac arrhythmias.

Diabetes and weight gain may occur with *olanzapine*, so periodic assessment of blood sugar should be obtained.

About 10 to 15 percent of people who take carbamazepine develop a benign maculopapular rash within the first 3 weeks of treatment. Stopping the medication usually leads to resolution of the rash. Some patients may develop life-threatening dermatologic syndromes, like toxic epidermal necrolysis or *Stevens-Johnson syndrome*.



Child Psychiatry: Assessment, Examination, and Psychological Testing

A comprehensive evaluation of a child is composed of interviews with the parents, the child, and other family members; gathering information regarding the child's current school functioning; and often, a standardized assessment of the child's intellectual level and academic achievement. In some cases, standardized measures of developmental level and neuropsychological assessments are useful. Children can be excellent informants about symptoms related to mood and inner experiences, such as psychotic phenomena, sadness, fears, and anxiety, but they often have difficulty with the chronology of symptoms and are sometimes reticent about reporting behaviors that have gotten them into trouble. Very young children often cannot articulate their experiences verbally and do better showing their feelings and preoccupations in play situations.

The first step in the comprehensive evaluation of a child or adolescent is to obtain a full description of the current concerns and a history of the child's previous psychiatric and medical problems. This is often done with the parents for school-aged children. Adolescents may be seen alone first to get their perception of the situation. Direct interview and observation of the child is usually next followed by psychological testing when indicated.

Clinical interviews offer the most flexibility in understanding the evolution of problems and in establishing the role of

environmental factors and life events, but they may not systematically cover all psychiatric diagnostic categories. To increase the breadth of information generated, the clinician may use semistructured interviews such as the *Kiddie Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS)*; structured interviews such as the *National Institute for Mental Health Diagnostic Interview Schedule for Children Version IV (NIMH DISC-IV)*; and rating scales, such as the *Child Behavior Checklist* and *Connors Parent or Teacher Rating Scale for ADHD*.

It is common for interviews from different sources, such as parents, teachers, and school counselors, to reflect different or even contradictory information about a given child. When faced with conflicting information, the clinician must determine whether apparent contradictions actually reflect an accurate picture of the child in different settings. After a complete history has been obtained from the parents, the child has been examined, the child's current functioning at home and at school has been assessed, and psychological testing has been completed, the clinician can use all the available information to make a best-estimate diagnosis and can then make recommendations.

Students should study the questions and answers below for a useful review of this field.

HELPFUL HINTS

Students should be able to define these terms.

- | | | | |
|---------------------------------------|---|--|---|
| ▶ AAMD | ▶ chromosomal abnormality | ▶ intelligence quotient (IQ) | ▶ PKU |
| ▶ achievement tests | ▶ <i>cri-du-chat</i> syndrome | ▶ K-SADS (Kiddie Schedule for Affective Disorders and Schizophrenia) | ▶ Prader-Willi syndrome |
| ▶ adaptive functioning | ▶ developmental tests | ▶ Lesch-Nyhan syndrome | ▶ rubella |
| ▶ Bayley Infant Scale of Development | ▶ DISC-R (Diagnostic Interview Schedule for Children—Revised) | ▶ mental retardation | ▶ Turner's syndrome |
| ▶ borderline intellectual functioning | ▶ Down syndrome | ▶ neurofibrillary tangles | ▶ Vineland Adaptive Behavior Scales |
| ▶ Cattell Infant Scale | ▶ fragile X syndrome | ▶ neurofibromatosis | ▶ WISC-III (Wechsler Intelligence Scale for Children—Third Edition) |
| ▶ Child Behavior Checklist | | | |

QUESTIONS

Directions

Each question or incomplete statement below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

36.1. At what age does a normally developing child reach half of his or her potential adult height?

- A. 1 year old
- B. 2 years old
- C. 3 years old
- D. 4 years old
- E. 5 years old

36.2. Which of the following tools is considered most appropriate to facilitate the play component of an interview?

- A. Chess
- B. Puppets
- C. Video games
- D. Elaborate toys
- E. Stock characters (e.g., Barbie or Disney figures)

36.3. Which statement is *true* of a person who has acquired a second language during childhood?

- A. There is only one language center in the cortical region.
- B. Both language centers appear in the cortical region.
- C. There are no language centers in the cortical region.
- D. Language centers do not appear in the cortical region.
- E. Second language centers only appear in an adult's cortical region.

36.4. Structured assessment instruments for infants and young children

- A. yield diagnoses
- B. show only fair reliability and validity
- C. are highly reliable in predicting later performance on IQ assessment
- D. include the Denver Developmental Screening Test (Denver II) and the Bayley Scales
- E. all of the above

36.5. Of the following diagnostic laboratory tests used in evaluation of children presenting with psychiatric problems, the one most likely to impact ultimate diagnosis is:

- A. computed tomography (CT)
- B. thyroid function test
- C. magnetic resonance imaging (MRI)
- D. positron emission tomography (PET)
- E. chromosomal analysis

36.6. Techniques that are helpful in eliciting information and feelings from a school-aged child include all of the following *except*

- A. asking multiple-choice questions
- B. asking the child to draw a family

- C. using Donald Winnicott's "squiggle game"
- D. using only open-ended questions
- E. using indirect commentary

36.7. Which of the following statements about personality tests for children is *true*?

- A. Personality tests and tests of ability have equal reliability and validity.
- B. Both the Children Apperception Test (CAT) and the Thematic Apperception Test (TAT) use pictures of people in situations.
- C. The Rorschach test has not been developed for children or adolescents.
- D. The Mooney Problem Checklist is a self-report inventory.
- E. None of the above

36.8. Figure 36.1 is part of a series of drawings used to test children for

- A. response to frustration
- B. psychosis
- C. depression
- D. impulsivity
- E. anxiety

36.9. Neurological soft signs include all of the following *except*

- A. contralateral overflow movements
- B. learning disabilities
- C. asymmetry of gait
- D. nystagmus
- E. poor balance

36.10. Physical anomalies with associated mental retardation include all of the following *except*

- A. multiple hair whorls
- B. low-set ears



FIGURE 36.1

Courtesy of Saul Rosenzweig.

- C. high-arched palate
- D. flattened philtrum
- E. persistent Babinski reflex

- 36.11.** A 2-year-old boy presents with his father because of the family's concern that he is not developing appropriately. The child is poorly related to others, often unable to engage using eye contact, and does not play with other children during play dates. He has trouble expressing himself and continuously bangs his chin against a chair. What is the most likely diagnosis?
- A. Fetal alcohol syndrome
 - B. Tourette's disorder
 - C. Schizotypal personality disorder
 - D. Autism
 - E. None of the above

Directions

The questions below consist of lettered headings followed by a list of numbered statements. For each numbered statement, select:

- A. if the item is associated with A only.
- B. if the item is associated with B only.
- C. if the item is associated with both A and B.
- D. if the item is associated with neither A nor B.

Questions 36.12–36.15

- A. Structured interviews
- B. Semi-structured interviews

- 36.12.** Resemble clinical interviews more closely
36.13. K-SADS and Child Assessment Scale (CAS)
36.14. Particularly appropriate for clinically based research in which subtle diagnostic distinctions may be critical for defining samples
36.15. Investigate issues of prevalence of disorders, developmental patterns of psychopathology, and psychosocial correlates of disorders

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 36.16–36.20

- A. Vineland Adaptive Behavior Scales
- B. Children's Apperception Test (CAT)
- C. Wide-Range Achievement Test-Revised (WRAT-R)
- D. Peabody Picture Vocabulary Test-Revised (PPVT-R)
- E. Wechsler Intelligence Test for Children-Third Edition (WISC-III)

- 36.16.** Measures receptive word understanding, with resulting standard scores, percentiles, and age equivalents
36.17. Measures communication, daily living skills, socialization, and motor development, yielding a composite expressed in a standard score, percentile, and age equivalents
36.18. Generates stories from picture cards of animals that reflect interpersonal functioning
36.19. Measures functioning in reading, spelling, and arithmetic, with resulting grade levels, percentiles, and standard scores
36.20. Measures verbal, performance, and full-scale ability, with scaled subset scores permitting specific skill assessment

Questions 36.21–36.25

Which test would be most helpful in the psychiatric evaluation of a child presenting with the symptoms described in the cases below?

- A. Wechsler Intelligence Test for Children-Third Edition (WISC-III)
 - B. Child Behavior Checklist (CBCL)
 - C. Children's Apperception Test (CAT)
 - D. Woodcock-Johnson Psycho-Educational Battery-Revised (W-J)
 - E. Bayley Scales of Infant Development II
- 36.21.** A 6-year-old boy is highly aggressive and becomes very angry when he does not get his way. He has always been prone to severe tantrums and has difficulty with his behavior and mood in school. At home, he is considered manageable, although he seems to have a short attention span. He breaks new toys in a matter of minutes. He is unable to play with peers because of frequent fights.
- 36.22.** A 9-year-old girl is clingy with her mother and will not speak to strangers. She is willing to answer specific questions but not to describe her thoughts or feelings. When she is stressed, she tends to withdraw and become tearful. She seems to be unusually sensitive to criticism and will not join in a group activity.
- 36.23.** A 7-year-old boy has a poor vocabulary, is noted to be unable to follow directions, and is clumsy and slow. Although he is friendly and good-natured, he has been brutally picked on by peers, who say that he does not understand the rules of games. His teacher is concerned about his comprehension.
- 36.24.** A 2-year-old boy has not yet begun to walk, speaks only two or three words, and often seems disinterested in his surroundings.
- 36.25.** An 11-year-old girl is increasingly struggling with academic performance, manifesting particular difficulty with mathematics concepts. She is otherwise functioning well, with excellent social skills and warm relationships with friends and family members. She recently had intelligence testing and scored within normal range in all subsets and in full-scale IQ.

ANSWERS

36.1. The answer is B

By the time a normally developing child reaches the age of 2 years, his or her has reached half of his or her adult height potential. Especially important, however, is the astounding maturation that occurs in the central nervous system (CNS). This development allows children to acquire several paramount skills, including the development of motor abilities, the maturation of perceptual abilities and pathways, and the acquisition of language.

36.2. The answer is B

Children younger than 7 years of age have limited capacities to verbally recount their feelings or interpersonal interactions. For these younger children as well as a number of older ones, play is a useful adjunct to direct questioning and discussion and is often a less challenging mode for children. Some children find it easier to communicate in displacement; thus, *imaginative play with puppets*, small figures, or dolls can provide the interviewer with useful inferential material about the child's concerns, perceptions, and characteristic modes of regulating affects and impulses.

The skilled interviewer will facilitate the child's engagement in play without prematurely introducing speculations or reactions that might distort or cut short the presentation of certain types of material. During the course of play, the clinician follows the sequences of play content, noting themes that emerge, points at which a child backs away from a story or shifts to a new activity, and situations in which the child gets "stuck" or falls into a repetitive loop. To facilitate the play components of an interview, the interview room should have a supply of human and animal figures or dolls and appropriate props. These should be relatively simple because *elaborate toys can serve as distractions* rather than as vehicles for expression. *Stock characters (e.g., Barbie or Disney figures) may impose their own specific story lines and thus limit access to the child's own concerns.*

The content of the child's play provides important details of the mental status examination. During imaginative play, the clinician observes the child's coordination and motor skills, speech and language development, attention, ability to relate, capacity for complex thought, and affective state. Absence of imaginative play or limited, concrete, non-interactive play may indicate a pervasive developmental disorder.

More complex games such as chess should be avoided given their demand for concentration, which precludes conversation. Video games likewise tend to serve as an impediment to meaningful interaction.

36.3. The answer is B

In children with a first and second language, the language centers appear in the same *cortical region*, but when a second language is acquired in adult life, the new language center is not represented in the same cortical region as the first language.

36.4. The answer is D

A variety of instruments exist for the structured assessment of infants and young children, and each has somewhat different goals, theoretical orientation, and psychometric properties. *These*

instruments do not yield diagnoses but rather detail the child's developmental progress in various areas relative to a normative population. For example, the *Denver Developmental Screening Test (Denver II)* is suitable for screening use by pediatricians and trained paraprofessionals to help identify children with significant motor, social, or language delays requiring more complete evaluation. Population-specific norms are also available for assessing children from families of various ethnic or educational backgrounds. The *Bayley Scales of Infant Development II*, which are administered by a trained assessor, can be used to evaluate children 1 to 42 months of age and include a mental scale (assessing information processing, habituation, memory, language, social skills, and cognitive strategies), a motor scale (assessing gross and fine motor skills), and a Behavior Rating Scale for assessing qualitative aspects of the child's behavior during the assessment. This well-standardized instrument yields standard scores for a Mental Development Index and Psychomotor Development index.

Although these kinds of tests show good (not fair) reliability and validity, their ability to predict later performance on IQ assessment or later adaptive functioning is highly variable. Among the reasons for this weakness of prediction are the intervening effects of social and family environment and the heavy emphasis infant tests place on perceptual and motor skills that may have relatively little to do with information-processing abilities.

The mental status examination of infants and young children may be organized using a schema such as that shown in Table 36.1.

36.5. The answer is E

The clinical utility and cost effectiveness of routine laboratory and imaging studies of children presenting with psychiatric symptoms has not been thoroughly studied. Most guidelines for performing these tests for children derive from data from adult studies. Adult studies generally suggest that routine laboratory tests such as *thyroid function tests* are not clinically useful in settings such as outpatient psychiatry clinics or most inpatient units. Diagnostic tests are of greater utility in certain psychiatric settings where patients are at higher risk for medical illness, such as emergency departments, substance abuse treatment settings, AIDS clinics, and geriatric clinics.

Additionally, these tests are considered to be worthwhile in patients with first-onset psychosis, depression, mania, or dementia. Furthermore, routine laboratory screening is more likely to yield clinically useful information when signs or symptoms of physical illness are present.

More specialized diagnostic evaluations (CT, MRI, electroencephalography) also appear to provide low yield of clinically useful information. In a study of 200 consecutive child psychiatric inpatients, these evaluations were done only when "clinically indicated." However, despite their judicious use, the tests provided clinically relevant information in only seven of 200 patients (3.5 percent). In the same sample population, *chromosomal analysis proved to be the most informative test*, yielding new medical diagnoses in five of 32 children on whom these analyses were performed (15.6 percent). *More specialized neuroimaging techniques, such as PET*, single photon emission computed tomography (SPECT), and functional magnetic resonance



Table 36.1
Infant and Toddler Mental Status Exam by Anne L. Benham, MD

-
- I. Appearance
Size, level of nourishment, dress and hygiene, apparent maturity compared with age, dysmorphic features (e.g., facies, eye and ear shape and placement, epicanthal folds, digits), abnormal head size, cutaneous lesions)
- II. Apparent reaction to situation
Note where evaluation takes place and with whom.
- A. Initial reaction to setting and to strangers: explores; freezes; cries; hides face; acts curious, excited, apathetic, or anxious (describe)
- B. Adaptation
1. Exploration: when and how child begins exploring faces, toys, strangers
 2. Reaction to transitions: from unstructured to structured activity; when examiner begins to play with infant; cleaning up; leaving
- III. Self-regulation
- A. State regulation: an infant's state of consciousness ranges from deep sleep through alert stages to intense crying. Predominant state and range of states observed during session; patterns of transition (e.g., smooth vs. abrupt capacity for being soothed and self-soothing; capacity for quiet alert state). Some of these categories also apply to toddlers.
- B. Sensory regulation: reaction to sounds, sights, smells, light and firm touch; hyperresponsiveness or hyporesponsiveness (if observed) and type of response, including apathy, withdrawal, avoidance, fearfulness, excitability, aggression or marked behavioral change; excessive seeking of particular sensory input
- C. Unusual behaviors: mouthing after 1 year of age; head banging; smelling objects; spinning; twirling; hand flapping; finger flicking; rocking; toe walking; staring at lights or spinning objects; repetitive, perseverative, or bizarre verbalizations or behaviors with objects or people; hair pulling; ruminating; or breath-holding
- D. Activity level: overall level and variability (note that toddlers are often incorrectly called hyperactive); describe behavior, e.g., squirming constantly in parent's arms; sitting quietly on floor or in infant seat; constantly on the go; climbing on desk and cabinets; exploring the room; pausing to play with each of six to eight toys
- E. Attention span: capacity to maintain attentiveness to an activity or interaction; longest and average length of sustained attention to a given toy or activity; distractibility. Infants: visual fixing and following at 1 month; tracking at 2 to 3 months; attention to own hands or feet and faces; duration of exploration of object with hands or mouth
- F. Frustration tolerance: ability to persist in a difficult task despite failure; capacity to delay reaction if easily frustrated (e.g., aggression, crying, tantrums, withdrawal, avoidance)
- G. Aggression: modes of expression; degree of control of or preoccupation with aggression; appropriate assertiveness
- IV. Motor
Muscle tone and strength; mobility in different positions; unusual motor pattern (e.g., tics, seizure activity), intactness of cranial nerves (e.g., movement of face, mouth, tongue, and eyes, including feeding, swallowing, and gaze [note excessive drooling])
- A. Gross motor coordination. Infants: pushing up; head control; rolling; sitting; standing. Toddlers: walking; running; jumping; climbing; hopping; kicking; throwing and catching a ball. (It is useful to have something for the child to climb on, such as a chair.)
- B. Fine motor coordination. Infants: grasping and releasing; transferring from hand to hand; using pincer grasp; banging; throwing. Toddlers: using pincer grasp; stacking; scribbling; cutting. Both fine motor and visual-motor coordination can be screened by observing how the child handles puzzles, shape boxes, a ball and hammer toy, small cars, and toys with connecting parts.
- V. Speech and language
- A. Vocalization and speech production: quality, rate, rhythm, intonation, articulation, volume
- B. Receptive language: comprehension of others' speech as seen in verbal or behavioral response (e.g., follows commands); points in response to "where is?" questions; understands prepositions and pronouns (include estimate of hearing, especially in a child with language delay, e.g., response to loud sounds and voice; ability to localize sound).
- C. Expressive language: level of complexity (e.g., vocalization, jargon, number of single words, short phrases, full sentences); overgeneralization (e.g., uses "kitty" to refer to all animals); pronoun use, including reversal; echolalia, either immediate or delayed; unusual or bizarre verbalizations. Preverbal children: communicative intent (e.g., vocalizations, babbling, imitation, gestures, such as head shaking and pointing); caregiver's ability to understand infant's communication; child's effectiveness in communication
- VI. Thought
The usual categories for thought disorder almost never apply to young children. Primary process thinking, as evidenced in verbalizations or play, is expected in this age group. The line between fantasy and reality is often blurred. Bizarre ideation; perseveration; apparent loose associations; and the persistence of pronoun reversals, jargon, and echolalia in an older toddler or preschooler may be noted in a variety of psychiatric disorders, including pervasive developmental disorders.
- A. Specific fears: feared object; worry about being lost or separated from parent
- B. Dreams and nightmares: content is sometimes obtainable in children 2 to 3 years of age; Children do not always perceive it as a dream (e.g., "A monster came in the front door")
- C. Dissociative state: sudden episodes of withdrawal and inattention; eyes glazed; "tuned out"; failure to track ongoing social interaction. Dissociative state may be difficult to differentiate from an absence seizure, depression, autism, or deafness. The context may be helpful (e.g., child with a history of neglect freezes in a dissociative state as mother leaves room). Neurological or audiological evaluation may be warranted.
- D. Hallucinations: extremely rare except in the context of a toxic or medical disorder; then usually visual or tactile

(continued)



Table 36.1
(continued)

VII. Affect and mood

The assessment of mood and affect may be more difficult in young children because of limited language; lack of vocabulary for emotions; and use of withdrawal in response to a variety of emotions from shyness and boredom to anxiety and depression.

- A. Modes of expression: facial; verbal; body tone and positioning
- B. Range of expressed emotions: affect, especially in parent–child relationship
- C. Responsiveness: to situation, content of discussion, play, and interpersonal engagement
- D. Duration of emotional state: need history or multiple observations
- E. Intensity of expressed emotions: affect, especially in parent–child relationship

VIII. Play

Play is a primary mode of information gathering for all sections of the Infant and Toddler Mental Status Exam. In very young children, play is especially useful in the evaluation of the child's cognitive and symbolic functioning, relatedness, and expression of affect. Themes of play are helpful in assessing older toddlers. The management and expression of aggression are assessed in play as in other areas of behavior. Play may be with toys or with child's own or another's body (e.g., peek-a-boo, roughhousing), verbal (e.g., sound imitation games between mother and infant), interactional, or solitary. It is important to note how the child's play varies with different familiar caregivers and with parents versus the examiner.

A. Structure of play (ages approximate)

- 1. Sensorimotor play
 - a. 0 to 12 months: mouthing, banging, dropping, and throwing toys or other objects
 - b. 6 to 12 months: exploring characteristics of objects (e.g., moving parts, poking, pulling)
- 2. Functional play
 - a. 12 to 18 months: child's use of objects shows understanding and exploration of their use or function (e.g., pushes car, touches comb to hair, puts telephone to ear)
- 3. Early symbolic play
 - a. 18 months and older: child pretends with increasing complexity; pretends with own body to eat or sleep; pretends with objects or other people (e.g., "feeds" mother); child uses one object to represent another (e.g., a block becomes a car); child pretends a sequence of activities (e.g., cooking and eating)
- 4. Complex symbolic play
 - a. 30 months and older: child plans and acts out dramatic play sequences, uses imaginary objects; later, child incorporates others into play with assigned roles
- 5. Imitation, turn taking, and problem solving as part of play

B. Content of play. Toddlers' choice and use of toys often reflect emotional themes. It is desirable to have on hand toys that tap different developmental and emotional domains. An overfull playroom may be overwhelming or overstimulating and reduce meaningful observations. Young toddlers of both genders often gravitate to dolls, dishes, animals, and moving toys (e.g., cars). The examiner's choice of specific materials may facilitate the expression of pertinent emotional themes. For example, a child traumatized by a dog bite may more likely reenact the trauma if dog and doll figures are available. The child's reaction to scary toys, such as sharks, dinosaurs, or guns, should be noted, especially if they are avoided or dominate the session. Does aggressive pretend play become "real" and physically hurtful? By age 2.5 to 3 years, a child's animal or doll play can reveal important themes about family life, including reactions to separation, parent–child and sibling relationships, experiences at day care, quality of nurturance and discipline, and physical or sexual abuse. The examiner must use caution in interpreting play, viewing it as a possible combination of reenactment, fears, and fantasy.

IX. Cognition

Using information from all above areas, especially play, verbal and symbolic functioning, and problem-solving, roughly assess the child's cognitive level in terms of developmental intactness, delays, or precocity.

X. Relatedness

- A. To parents: how in tune do the child and parent seem? Does the child make and maintain eye, verbal, or physical contact? Is there active avoidance by child? Note infant's level of comfort and relaxation being held, fed, "molding" into caregiver's body. Does toddler move away from caregiver and check back or bring toys to show, to put into his or her lap, to play with together or near caregiver? Comment on physical or verbal affection, hostility, reaction to separation and reunion, and use of transitional objects (blanket, toy, caregiver's possession). Describe differences in relating if more than one caregiver is present.
- B. To examiner: young children normally show some hesitancy to engage with a stranger, especially after 6 to 8 months of age. Appropriate wariness in young children may result in a period of watching the examiner; staying physically close to a familiar caregiver before engaging; or showing some constriction of affect, vocalization, or play. After initial wariness, does the child relate? Does the child engage too soon or not at all? How does relatedness with a stranger compare with that with a parent? Is the child friendly versus indiscriminately attention seeking or guarded versus overanxious? Can the examiner engage the child in play or structured activities to a degree not seen with the caregiver? Does the child show pleasure in successes if the examiner shows approval?
- C. Attachment behaviors: observe for showing affection, comfort seeking, asking for and accepting help, cooperating, exploring, controlling behavior, and reunion responses. Describe age-related disturbances in these normative behaviors. Disturbances often are seen in abused and neglected children (e.g., fearfulness, clinginess, overcompliance, hypervigilance, impulsive overactivity, and defiance; restricted or hyperactive and distractible exploratory behavior; and restricted or indiscriminate affection and comfort seeking).

imaging (fMRI), currently have no routine clinical or diagnostic utility in child and adolescent psychiatric populations.

36.6. The answer is D

Open-ended questions can overwhelm school-aged children and result in withdrawal or shrugging of the shoulders; multiple-choice questions may elicit more information from children in this age group. If a child is not adept with verbal skills, asking the child to draw a family is often a way to break the ice and to gain information about the child's emotional experience. Activities such as Winnicott's "squiggle game," in which the examiner draws a curved line and then takes turns with the child in continuing the drawing, may also open communication with the child. Using *indirect commentary*, such as, "I once knew a boy about your age who felt very sad when he moved away from all his friends," helps elicit feelings from the child, although the clinician must be wary of leading children into confirming what they believe the clinician wants to hear.

36.7. The answer is D

The Mooney Problem Checklist is a checklist of personal problems and is a self-report inventory, a series of questions concerning emotional problems, worries, interests, motives, values, and interpersonal traits. The primary utility of personality inventories is in the screening and identification of children in need of further evaluation. Personality tests have lower reliability and validity than tests of ability.

The Children Apperception Test (CAT) is different from the Thematic Apperception Test (TAT) in that the CAT uses cards depicting animals and the TAT uses images of people. The Rorschach test, one of the most widely used projective techniques, has been developed in versions for children between the ages of 2 and 10 years and for adolescents between the ages of 10 and 17 years.

36.8. The answer is A

Figure 36.1 is part of the Rosenzweig Picture-Frustration Study, in which a series of cartoons is presented in which one character frustrates another. In the blank space provided, the child writes the reply of the frustrated character. From that reply, the clinician assesses the child's *response to frustration*; the response can range from passivity to violence. *The test is not used to measure psychosis, depression, impulsivity, or anxiety.*

36.9. The answer is B

The term "neurological soft signs" was first used by Lauretta Bender in reference to nondiagnostic abnormalities that are seen in some children with schizophrenia. It is now evident that these signs do not indicate a specific neurological or psychiatric disorder but are relatively common in children with a wide variety of developmental disabilities. *Learning disabilities are not neurological soft signs*, although children with low intellectual function or learning disabilities often demonstrate these signs. Soft signs refer to both behavioral findings, such as severe impulsivity or mood instability, and physical findings, such as persistence of infantile reflexes, mild incoordination, *poor balance, contralateral overflow movements, asymmetry of gait, nystagmus*, and mild choreiform movements.

36.10. The answer is E

Physical anomalies or dysmorphic features are most frequently seen in children with in utero exposure to toxic substances, chromosomal abnormalities, developmental disabilities, speech and language disorders, learning disorders, and severe hyperactivity. As with neurological soft signs, they are rarely specific in determining a psychiatric or neurological diagnosis, but they are important to document in the evaluation of a child and may prompt further genetic, neurological, and psychiatric investigation. *Physical anomalies include multiple hair whorls, low-set ears, a high-arched palate, a flattened philtrum, epicanthal folds, hypertelorism, transverse palmar creases, and increased head circumference. The persistence of the Babinski reflex is a neurological sign rather than a physical anomaly.*

36.11. The answer is D

Features of *autism* include impaired speech and nonverbal communication. These patients' ability to interact with others is impaired. They frequently present with repetitive behaviors and poor eye contact. Autism is a diagnosis that is typically made before the age of 3 years. Although mental retardation results from *fetal alcohol syndrome*, one would also observe epicanthal folds, midfacial hypoplasia, palpebral fissures, and other dysmorphic facial anomalies. Features of *Tourette's disorder* include both motor and verbal tics. Patients with odd, magical thinking who tend to be socially withdrawn may have *schizotypal personality disorder*.

Answers 36.12–36.15

36.12. The answer is B

36.13. The answer is B

36.14. The answer is B

36.15. The answer is A

Instruments used in interviews range from highly structured instruments that specify the exact order and wording of all components to semi-structured interviews that delineate the symptoms to be covered and suggest phrases that may be used but permit much more latitude in the order and phrasing of questions.

Semi-structured interviews resemble clinical interviews more closely than do structured interviews, but they nevertheless differ substantially in style and content from a typical clinical assessment. The flexible structure of the interview allows the clinically informed interviewer some freedom in the manner of inquiry and permits judgments about whether a reported behavior or expression of distress is of the quality and severity required to be considered a symptom.

Interviews of this type include the Kiddie Schedule for Affective Disorders and Schizophrenia (K-SADS) and Child Assessment Scale (CAS). Semi-structured interviews are particularly appropriate for clinically based research in which subtle diagnostic distinctions may be critical for defining samples.

Structured interviews, on the other hand, provide highly specified protocols that are particularly useful for epidemiological studies with large sample sizes in which nonclinician



Table 36.2
Commonly Used Child and Adolescent Psychological Assessment Instruments

Test	Age/Grades	Data Generated and Comments
<i>Intellectual ability</i>		
Wechsler Intelligence Scale for Children—Third Edition (WISC-III-R)	6–16	Standard scores: verbal, performance and full-scale IQ; scaled subtest scores permitting specific skill assessment.
Wechsler Adult Intelligence Scale—(WAIS-III)	16–adult	Same as WISC-III-R.
Wechsler Preschool and Primary Scale of Intelligence—Revised (WPPSI-R)	3–7	Same as WISC-III-R.
Kaufman Assessment Battery for Children (K-ABC)	2.6–12.6	Well grounded in theories of cognitive psychology and neuropsychology. Allows immediate comparison of intellectual capacity with acquired knowledge. Scores: Mental Processing Composite (IQ equivalent); sequential and simultaneous processing and achievement standard scores; scaled mental processing and achievement subtest scores; age equivalents; percentiles.
Kaufman Adolescent and Adult Intelligence Test (KAIT)	11–85+	Composed of separate Crystallized and Fluid scales. Scores: Composite Intelligence Scale; Crystallized and Fluid IQ; scaled subtest scores; percentiles.
Stanford-Binet, 4th Edition (SB:FE)	2–23	Scores: IQ; verbal, abstract/visual, and quantitative reasoning; short-term memory; standard age.
Peabody Picture Vocabulary Test—III (PPVT-III)	4–adult	Measures receptive vocabulary acquisition; standard scores, percentiles, age equivalents.
<i>Achievement</i>		
Woodcock-Johnson Psycho-Educational Battery—Revised (W-J)	K–12	Scores: reading and mathematics (mechanics and comprehension), written language, other academic achievement; grade and age scores, standard scores, percentiles.
Wide Range Achievement Test—3, Levels 1 and 2 (WRAT-3)	Level 1: 1–Level 2: 12–75	Permits screening for deficits in reading, spelling, and arithmetic; grade levels, percentiles, stanines, standard scores.
Kaufman Test of Educational Achievement, Brief and Comprehensive Forms (K-TEA)	1–12	Standard scores: reading, mathematics, and spelling; grade and age equivalents, percentiles, stanines. Brief Form is sufficient for most clinical applications; Comprehensive Form allows error analysis and more detailed curriculum planning.
Wechsler Individual Achievement Test (WIAT)	K–12	Standard scores: basic reading, mathematics reasoning, spelling (constituting Screener); reading comprehension, numerical operations, listening comprehension, oral expression, written expression. Conormal with WISC-III-R.
<i>Adaptive behavior</i>		
Vineland Adaptive Behavior Scales	Normal: 0–19 Retarded: All ages	Standard scores: adaptive behavior composite and communication, daily living skills, socialization and motor domains; percentiles, age equivalents, developmental age scores. Separate standardization groups for normal, visually disabled, hearing impaired, emotionally disturbed, and retarded.
Scales of Independent Behavior—Revised	Newborn–adult	Standard scores: five adaptive (motor, social interaction, communication, personal living, community living) and three maladaptive (internalized, asocial, and externalized) areas; General Maladaptive Index and Broad Independence cluster.
<i>Attentional capacity</i>		
Trail Making Test	8–adult	Standard scores, standard deviations, ranges; corrections for age and education.
Wisconsin Card Sorting Test	6.6–adult	Standard scores, standard deviations, T-scores, percentiles, developmental norms for number of categories achieved, perseverative errors, and failures to maintain set; computer measures.
Behavior Assessment System for Children (BASC)	4–18	Teacher and parent rating scales and child self-report of personality permitting multireporter assessment across a variety of domains in home, school, and community. Provides validity, clinical, and adaptive scales. ADHD component avails.
Home Situations Questionnaire—Revised (HSQ-R)	6–12	Permits parents to rate child's specific problems with attention or concentration. Scores for number of problem settings, mean severity, and factor scores for compliance and leisure situations.

(continued)



Table 36.2
(continued)

Test	Age/Grades	Data Generated and Comments
ADHD Rating Scale	6–12	Score for number of symptoms keyed to DSM cutoff for diagnosis of ADHD; standard scores permit derivation of clinical significance for total score and two factors (Inattentive-Hyperactive and Impulsive-Hyperactive).
School Situations Questionnaire (SSQ-R)	6–12	Permits teachers to rate a child's specific problems with attention or concentration. Scores for number of problem settings and mean severity.
Child Attention Profile (CAP)	6–12	Brief measure allowing teachers' weekly ratings of presence and degree of child's inattention and overactivity. Normative scores for inattention, overactivity, and total score.
<i>Projective tests</i>		
Rorschach Inkblots	3–adult	Special scoring systems. Most recently developed and increasingly universally accepted is John Exner's Comprehensive System (1974). Assesses perceptual accuracy, integration of affective and intellectual functioning, reality testing, and other psychological processes.
Thematic Apperception Test (TAT)	6–adult	Generates stories which are analyzed qualitatively. Assumed to provide especially rich data regarding interpersonal functioning.
Machover Draw-A-Person Test (DAP)	3–adult	Qualitative analysis and hypothesis generation, especially regarding subject's feelings about self and significant others.
Kinetic Family Drawing (KFD)	3–adult	Qualitative analysis and hypothesis generation regarding an individual's perception of family structure and sentient environment. Some objective scoring systems in existence.
Rotter Incomplete Sentences Blank	Child, adolescent, and adult forms	Primarily qualitative analysis, although some objective scoring systems have been developed.
<i>Personality tests</i>		
Minnesota Multiphasic Personality Inventory-Adolescent (MMPI-A)	14–18	1992 version of widely used personality measure, developed specifically for use with adolescents. Standard scores: three validity scales, 14 clinical scales, additional content and supplementary scales.
Million Adolescent Personality Inventory (MAPI)	13–18	Standard scores for 20 scales grouped into three categories: personality styles; expressed concerns; behavioral correlates. Normed on adolescent population. Focuses on broad functional spectrum, not just problem areas. Measures 14 primary personality traits, including emotional stability, self-concept level, excitability, and self-assurance.
Children's Personality Questionnaire	8–12	Generates combined broad trait patterns, including extraversion and anxiety.
<i>Neuropsychological screening tests and test batteries</i>		
Developmental Test of Visual-Motor Integration (VMI)	2–16	Screening instrument for visual motor deficits. Standard scores, age equivalents, percentiles.
Benton Visual Retention Test	6–adult	Assesses presence of deficits in visual-figure memory. Mean scores by age.
Benton Visual Motor Gestalt Test	5–adult	Assesses visual-motor deficits and visual-figural retention. Age equivalents.
Reitan-Indiana Neuropsychological Test Battery for Children	5–8	Cognitive and perceptual-motor tests for children with suspected brain damage.
Halstead-Reitan Neuropsychological Test Battery for Older Children	9–14	Same as Reitan-Indiana.
Luria-Nebraska Neuropsychological Battery: Children's Revision (LNNB:C)	8–12	Sensory-motor, perceptual, cognitive tests measuring 11 clinical and two additional domains of neuropsychological functioning. Provides standard scores.
<i>Developmental status</i>		
Bayley Scales of Infant Development—Second Edition	16 days–42 mos	Mental, motor, and behavior scales measuring infant development. Provides standard scores.
Mullen Scales of Early Learning	Newborn–5 yrs	Language and visual scales for receptive and expressive ability. Yields age scores and T scores.

ADHD, attention-deficit/hyperactivity disorder; DSM, Diagnostic and Statistical Manual of Mental Disorders.

Adapted from Racusin G, Moss N. Psychological assessment of children and adolescents. In: Lewis M, ed. *Child and Adolescent Psychiatry: A Comprehensive Textbook*. Baltimore: Williams & Wilkins; 1991.

interviewers are used. *These studies investigate issues of prevalence of disorders, developmental patterns of psychopathology, and psychosocial correlates of disorders*, topics that often require large sample to provide enough statistical power to test study hypotheses.

Answers 36.16–36.20

36.16. The answer is D

36.17. The answer is A

36.18. The answer is B

36.19. The answer is C

36.20. The answer is E

The Vineland Adaptive Behavior Scales are used to measure communication, daily living skills, socialization, and motor development, yielding a composite expressed in a standard score, percentile, and age equivalents. The scales are standardized for normal intelligence and for mentally retarded individuals. A measure of adaptive functioning such as that derived from the Vineland Scales, as well as a standardized measure of intelligence, is required when a diagnosis of mental retardation is being considered.

The *Children's Apperception Test (CAT)* is an adaptation for children of the *Thematic Apperception Test (TAT)*. *The CAT generates stories from picture cards of animals that reflect interpersonal functioning.* The cards show ambiguous scenes related to family issues and relationships. The child is asked to describe what is happening in the scene and to tell a story about the outcome of the scene.

The Wide-Range Achievement Test-Revised (WRAT-R) measures functioning in reading, spelling, and arithmetic, with resulting grade levels, percentiles, and standard scores. It can be used in children 5 years of age and older, and the scores on the test can be compared with the average expected score for the child's chronological age and grade level.

The Peabody Picture Vocabulary Test-Revised (PPVT-R) measures receptive word understanding, with resulting standard scores, percentiles, and age equivalents. It can be used for children 4 years of age and older.

The Wechsler Intelligence Test for Children-Third Edition (WISC-III) measures verbal, performance, and full-scale ability, with scaled subset scores permitting specific skill assessment. In a full-scale intelligence quotient (IQ), 70 to 80 indicates borderline intelligence, 80 to 90 indicates low-average intelligence, 90 to 109 indicates average intelligence, and 110 to 119 indicates high-average intelligence. Table 36.2 (see p. 307–308) lists some commonly used child and adolescent assessment instruments.

Answers 36.21–36.25

36.21. The answer is B

36.22. The answer is C

36.23. The answer is A

36.24. The answer is E

36.25. The answer is D

The Child Behavior Checklist (CBCL) can be very helpful in the evaluation of a child with multiple behavioral problems, especially if the child presents with different symptoms in different settings, such as at school and at home. The CBCL assesses for a broad range of symptoms that relate to academic and social competence. The CBCL can help to systematically identify the problem symptoms related to mood, frustration tolerance, hyperactivity, oppositional behavior, and anxiety.

The *Children's Apperception Test (CAT)* consists of cards with pictures of animals in ambiguous situations that show scenes related to parent-child and sibling issues. The child is asked to describe what is happening in the scenes. Animals are believed to be less threatening to children who have difficulties speaking about emotional issues. *For this 9-year-old girl who is inhibited and has difficulty disclosing her thoughts and feelings, the use of a projective but structured test such as the CAT can often be a conduit to facilitating these disclosures.*

For a 7-year-old child who appears to be globally delayed, unable to understand directions, follow rules, or comprehend tasks in the classroom, a test of intellectual function is indicated. *The Wechsler Intelligence Scale for Children—Third Edition (WISC-III) is the most widely used test of intellectual function.* Used in children from 6 to 17 years old, it provides information in a variety of verbal areas (vocabulary, similarities, general information, arithmetic, and comprehension), as well as testing abilities in the areas of performance (block design, picture completion, picture arrangement, object assembly, coding, and mazes).

A 2-year-old child manifesting delays in motor skills, language, and social interaction should be screened for developmental delay. One available screening instrument is the *Bayley Scales of Infant Development II*, which are for children 1 to 42 months of age, and include a mental scale (assessing information processing, habituation, memory, language, social skills, and cognitive strategies); a motor scale (assessing gross and fine motor skills), and a behavior rating scale.

A school-aged child with emerging difficulties in academic performance should receive academic achievement testing in conjunction with intelligence testing to delineate a possible learning disorder. *In an 11-year-old girl who has recently had intelligence testing, an achievement test such as the Woodcock-Johnson Psycho-Educational Battery-Revised (W-J), which evaluates reading and mathematics mechanics and comprehension, written language, and other academic achievement, is indicated.*



Mental Retardation

According to the text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR), a diagnosis of mental retardation can be made only when both the intelligence quotient (IQ) as measured by a standardized test, is subaverage and a measure of adaptive function reveals deficits in at least two of the areas of adaptive function. Mental retardation diagnoses are coded on Axis II in the DSM-IV-TR.

Approximately 85 percent of persons who are mentally retarded fall within the mild mental retardation category (IQ between 50 and 70). The adaptive functions of mildly retarded persons are affected in several areas, such as communications, self-care, social skills, work, leisure, and safety. Mental retardation is influenced by genetic, environmental, and psychosocial

factors, and in past years, the development of mild retardation was often attributed to severe psychosocial deprivation. More recently, however, researchers have increasingly recognized the contribution of a host of subtle biological factors, including chromosomal abnormalities; subclinical lead intoxication; and prenatal exposure to drugs, alcohol, and other toxins. Furthermore, evidence is increasing that subgroups of persons who are mentally retarded, such as those with fragile X syndrome, Down syndrome, and Prader-Willi syndrome, have characteristic patterns of social, linguistic, and cognitive development and typical behavioral manifestations.

Students should study the questions and answers below for a useful review of this topic.

HELPFUL HINTS

Students should define these terms.

- | | | | |
|---------------------------------------|--|------------------------------|---|
| ▶ adaptive functioning | ▶ CVS (chorionic villi sampling) and amniocentesis | ▶ intelligence quotient (IQ) | ▶ prenatal exposure |
| ▶ Bayley Infant Scale of Development | ▶ degrees of mental retardation (mild, moderate, severe, profound) | ▶ Lesch-Nyhan syndrome | ▶ primary, secondary, and tertiary prevention |
| ▶ borderline intellectual functioning | ▶ Down syndrome | ▶ mental deficiency | ▶ rubella |
| ▶ Cattell Infant Scale | ▶ fetal alcohol syndrome | ▶ mental retardation | ▶ Special Olympics |
| ▶ causative factors | ▶ fragile X syndrome | ▶ neurofibrillary tangles | ▶ Turner's syndrome |
| ▶ chromosomal abnormality | | ▶ neurofibromatosis | ▶ Vineland Adaptive Behavior Scales |
| ▶ <i>cri-du-chat</i> syndrome | | ▶ PKU | ▶ WHO |
| | | ▶ Prader-Willi syndrome | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

37.1. Which of the following is *not* a text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) criterion for mental retardation?

- A. Onset before the age of 18 years
- B. Severe verbal learning delays
- C. An IQ of approximately 70 or below

- D. Concurrent deficits or impairment in social or interpersonal skills
- E. All of the above

37.2. Profound mental retardation is defined as

- C. an IQ of 70 or below
- D. an IQ between 40 and 55
- E. an IQ of 25 or below
- F. an IQ of 25 to 40
- G. an IQ of 55 to 70

37.3. A decline in IQ begins at approximately 10 to 15 years in which of the following disorders?

- A. Down syndrome
 - B. Fragile X syndrome
 - C. Cerebral palsy
 - D. Nonspecific mental retardation
 - E. Fetal alcohol syndrome
- 37.4.** Which of the following disorders is *least* often associated with fragile X syndrome?
- A. Autistic disorder
 - B. Schizotypal personality disorder
 - C. Attention-deficit/hyperactivity disorder
 - D. Bipolar disorder
 - E. Social anxiety disorder
- 37.5.** Among all known causes of mental retardation, which of the following syndromes is *least* associated with comorbid Axis I psychiatric disorder?
- A. Down syndrome
 - B. Fragile X syndrome
 - C. Nonspecific type
 - D. Fetal alcohol syndrome
 - E. Prader-Willi syndrome
- 37.6.** A microdeletion on chromosome 7 is the primary cause of
- A. Prader-Willi syndrome
 - B. fragile X syndrome
 - C. Williams' syndrome
 - D. Rett syndrome
 - E. none of the above
- 37.7.** All of the following chromosomal aberrations associated with Down syndrome lead to a phenotypic expression of the disorder *except*
- A. patients have 45 chromosomes
 - B. patients have three copies of chromosome 21
 - C. patients have 47 chromosomes
 - D. patients have 46 chromosomes, but two, usually 15 and 21, are fused
 - E. patients have mosaicism, with normal and trisomic cells in various tissues
- 37.8.** The genetic finding most closely linked to advancing maternal age is
- A. translocation between chromosomes 14 and 21
 - B. mitotic nondisjunction of chromosome 21
 - C. partially trisomic karyotype
 - D. meiotic nondisjunction of chromosome 21
 - E. all of the above
- 37.9.** Which of the following chromosomal abnormalities is most likely to cause mental retardation?
- A. Extra chromosome 21 (trisomy 21)
 - B. Fusion of chromosomes 21 and 15
 - C. XO (Turner's syndrome)
 - D. XXY (Klinefelter's syndrome)
 - E. XXYY and XXXY (Klinefelter's syndrome variants)

**FIGURE 37.1**

Courtesy of Ludwik S. Szymanski, MD.

- 37.10.** The mentally retarded child shown in Figure 37.1 demonstrates the characteristic facial features and high degree of social responsiveness suggestive of which of the following etiologies?
- A. Autosomal dominant inheritance
 - B. Prenatal substance exposure
 - C. Trisomy 21
 - D. Enzyme deficiency
 - E. Abnormality in sex chromosomes
- 37.11.** The physical phenotype shown in Figure 37.2, including long facial contour, large anteverted ears, and macroorchidism (not shown) in this young adult with mental retardation is consistent with which of the following diagnoses?
- A. Prader-Willi syndrome
 - B. Down syndrome
 - C. Klinefelter's syndrome
 - D. Fetal alcohol syndrome
 - E. Fragile X syndrome

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 37.12–37.16

- A. Prader-Willi syndrome
- B. Down syndrome



FIGURE 37.2

Courtesy of Ludwik S. Szymanski, MD.

- C. Fragile X syndrome
- D. Phenylketonuria (PKU)

- 37.12. Attributed to a deletion in chromosome 15
- 37.13. Most commonly occurs via autosomal recessive transmission
- 37.14. Abnormalities involving chromosome 21
- 37.15. Occurs via a chromosomal mutation at Xq27.3
- 37.16. Example of a genomic imprinting

Questions 37.17–37.20

- A. Trisomy 21
- B. Autosomal dominant
- C. Autosomal recessive
- D. X-linked semidominant

- 37.17. Neurofibromatosis
- 37.18. Tuberous sclerosis
- 37.19. Crouzon's syndrome
- 37.20. Cockayne's syndrome

Questions 37.21–37.26

- A. Adrenoleukodystrophy
 - B. Rett syndrome
 - C. Acquired immune deficiency syndrome (AIDS)
 - D. Rubella
 - E. Cytomegalic inclusion disease/cytomegalic virus (CMV)
 - F. Toxoplasmosis
- 37.21. Mental retardation with periventricular intracerebral calcifications, jaundice, microcephaly, and hepatosplenomegaly
 - 37.22. Progressive encephalopathy and mental retardation in 50 percent of children born to mothers with this disorder

- 37.23. An X-linked mental retardation syndrome that is degenerative and affects only females
- 37.24. Diffuse demyelination of cerebral cortex leading to visual and intellectual impairment, seizures, and spasticity; accompanied by adrenocortical insufficiency
- 37.25. Mental retardation, microcephaly, microphthalmia, congenital heart disease, deafness, and cataracts
- 37.26. Mental retardation, diffuse intracerebral calcifications, hydrocephalus, seizures, and chorioretinitis

Questions 37.27–37.30

- A. Nonspecific mental retardation
 - B. Boys with fragile X syndrome
 - C. Down syndrome
 - D. Williams' syndrome
- 37.27. May have particular weakness in expressive communication and grammar
 - 37.28. Particular difficulties in visual-spatial processing skills
 - 37.29. Weaker in sequential processing than in simultaneous processing
 - 37.30. Even or near-even performance across various cognitive domains

Questions 37.31–37.35

- A. Fetal alcohol syndrome
 - B. Down syndrome
 - C. Lesch-Nyhan syndrome
 - D. Prader-Willi syndrome
 - E. Neurofibromatosis
- 37.31. High rates of temper tantrums, aggression, excessive daytime sleepiness, emotional lability, obsessions, and compulsions
 - 37.32. Microcephaly, short stature, midface hypoplasia, mild to moderate mental retardation
 - 37.33. Associated with increased incidence of thyroid abnormalities, congenital heart disease, leukemia, and early-onset Alzheimer's disease
 - 37.34. Ataxia, chorea, renal dysfunction, gout, self-mutilation
 - 37.35. Café-au-lait spots, short stature, macrocephaly

ANSWERS

37.1. The answer is B

Severe verbal learning delays are not listed as one of the criteria for identifying mental retardation. According to the DSM-IV-TR, there are three criteria for diagnosing mental retardation. First, onset of the disorder must occur *before the age of 18 years*. Second, in order to make a diagnosis of mental retardation, the patient's IQ must be significantly below average (*IQ of 70 or below*). Finally, the patient must have *concurrent impairments in adaptive functioning* (meeting the standards of the individual's particular age or cultural group) in two or more of the following areas: social and interpersonal skills, the ability to care for oneself, functional academic skills, work, health, leisure, and safety.

37.2. The answer is C

Profound mental retardation involves an *IQ of 25 or below*. The condition affects only 1 to 2 percent of people with mental retardation and involves pervasive deficits in all areas of functioning.

An *IQ ranging between 55 and 70* is classified as mild mental retardation. This is the largest group of people with mental retardation, encompassing as many as 85 percent of all mentally retarded people. An *IQ between 40 and 55* indicates moderate mental retardation. About 10 percent of all mentally retarded people fall into this category. Most individuals with moderate mental retardation also have impaired cognitive functioning. An *IQ of 25 to 40* indicates severe mental retardation. Between 3 and 4 percent of all mentally retarded people are severely impaired. These individuals also have concurrent motor, ambulatory, and neurological problems.

37.3. The answer is B

Children with *Down syndrome show their highest IQ scores during the first year of life and then decline in IQ* over the early to middle childhood years. *Boys with fragile X syndrome also decline in IQ, but their declines seem to begin at approximately 10 to 15 years of age*. Conversely, *children with cerebral palsy (half of whom have mental retardation) remain remarkably stable in their IQ scores over time, similar to groups with mixed or nonspecific etiologies of mental retardation*.

37.4. The answer is D

Fragile X syndrome is associated with shyness, gaze aversion, and social difficulties. *A number of psychiatric diagnoses commonly co-occur with fragile X, including autistic disorder, schizotypal personality disorder, attention-deficit/hyperactivity disorder, and social anxiety disorder*. These difficulties vary in severity in this population and are found in individuals with fragile X syndrome across the IQ spectrum, from those with moderate mental retardation to those with mild learning disabilities. *Bipolar disorder* is less commonly associated with fragile X syndrome than these other disorders.

37.5. The answer is A

Compared with other individuals with mental retardation, persons with Down syndrome appear to suffer less often and less severely from psychopathology. Rates of psychiatric disorders in children and adolescents with Down syndrome exceed those in the general population but are significantly lower than in persons with mental retardation caused by other etiologies, *such as fragile X syndrome, fetal alcohol syndrome, Prader-Willi syndrome, and nonspecific type*. Commonly noted psychiatric problems among individuals with mental retardation include attention problems, impulsivity, hyperactivity, and aggression. In contrast to these problems, depression seems to be less common in persons with mental retardation than in the general population.

37.6. The answer is C

Williams' syndrome is caused by a microdeletion of the gene responsible for the body's production of elastin, a protein that provides strength and elasticity to vital tissues of the body (e.g., blood vessels and lungs). This gene is located on chromosome 7. Persons with Williams' syndrome often show hyperacusis, hy-

percalcemia, neuromusculoskeletal and renal abnormalities, and cardiovascular disease (especially supraaortic stenosis). Characteristic facial features are described as elfin-like, cute and appealing.

Prader-Willi syndrome is the only known human disease that is affected by genomic imprinting, in which genes are modified and expressed differently depending on whether the mutation, which occurs on chromosome 15, is inherited from the mother or the father.

Fragile X syndrome is the most common inherited form of mental retardation. Fragile X syndrome occurs when the *fmr1p* (or fragile X gene) becomes methylated as a result of amplification (repetition) of the trinucleotide sequences (CGG) that make up DNA.

Rett syndrome is caused by mutations in the gene *MECP2* located on the X chromosome and can arise (1) sporadically or (2) from germline mutations. Rett syndrome is exclusively a female disorder because male fetuses with this syndrome rarely survive to term, and those who do die shortly after birth. Males cannot survive with Rett syndrome because they lack the second X chromosome, which in females compensates for the damage to the other X chromosome.

37.7. The answer is A

Three types of chromosomal aberrations are recognized in Down syndrome. First, patients with trisomy 21 (*three copies of chromosome 21 rather than the usual two*) represent the overwhelming majority of individuals with Down syndrome. *They have 47 chromosomes with an extra copy of 21*. The mother's karyotypes are normal. A nondisjunction during meiosis is responsible for the trisomy.

Second, nondisjunction occurring after fertilization in any cell division results in *mosaicism, with both normal and trisomic cells found in various tissues*.

Third, in translocations, there is a fusion of two chromosomes, usually 15 and 21, resulting in a total of 46 chromosomes, despite the presence of an extra chromosome 21. This version of the disorder, unlike trisomy 21, is usually inherited, and the translocated chromosome may be found in unaffected parents and siblings, who would have only 45 chromosomes.

37.8. The answer is D

Meiotic nondisjunction of chromosome 21 produces approximately 85 percent of cases of Down syndrome and *has been most closely linked to advancing maternal age*. Paternal age has also been implicated as a factor in some studies.

Translocation events constitute only 5 percent of Down syndrome cases. In cases in which an asymptomatic parent carries the aberrant chromosome in his or her genome, subsequent Down syndrome in an offspring is unrelated to parental age. If the translocation occurs between *chromosomes 14 and 21*, the proband carries 46 chromosomes, including two normal 21 chromosomes; one normal 14 chromosome; and the 14/21 translocation, which carries parts of both chromosomes. Any asymptomatic parent or sibling who is a carrier of the translocation has only 45 chromosomes, with one 21 chromosome missing, and is thus spared the excessive genetic complement.

Mitotic nondisjunction of chromosome 21, which occurs in 1 percent of all Down syndrome cases, occurs after fertilization

of a presumably healthy ovum and may therefore be considered independent of maternal age. *Partially trisomic karyotype* may refer to the mosaicism—some cells normal, others with trisomy 21—seen in mitotic nondisjunction or to the excessive complement of chromosome 21 produced by translocation. Neither case is as closely tied to maternal age as is meiotic nondisjunction.

37.9. The answer is A

An extra chromosome 21 is the most common genetic abnormality found in Down syndrome, and the abnormality most likely to cause mental retardation. Abnormalities in autosomal chromosomes are, in general, associated with mental retardation. *The chromosomal aberration represented by 46 chromosomes with fusion of 15 and 21 produces a type of Down syndrome that, unlike trisomy 21, is usually inherited. Aberrations in sex chromosomes are not always associated with mental retardation, such as in XO (Turner's syndrome), XXY (Klinefelter's syndrome), and XXYY and XXXY (Klinefelter's syndrome variants) genotypes.* Some children with Turner's syndrome have normal to superior intelligence.

Girls with Turner's syndrome have gonadal agenesis and do not develop secondary sexual characteristics without medical intervention. Another hallmark feature is a webbed neck. In Klinefelter's syndrome and its variants, individuals have underdeveloped male genitalia and infertility and may develop gynecomastia beginning in adolescence.

37.10. The answer is C

The child in Figure 37.1 demonstrates the characteristic facial features (epicanthal folds, flattened nasal bridge) and high degree of social responsiveness of Down syndrome. *In the overwhelming majority of cases, the etiology of Down syndrome is an abnormality of chromosome 21, known as trisomy 21.*

Autosomal dominant inheritance as the etiology of mental retardation is demonstrated in a number of disorders, including tuberous sclerosis and Sturge Weber syndrome. *Prenatal substance exposure* as the etiology of mental retardation is demonstrated in fetal alcohol syndrome, which occurs in up to 15 percent of babies born to women who regularly ingest large amounts of alcohol. *Enzyme deficiency* as the etiology of mental retardation is demonstrated in phenylketonuria (PKU). *Abnormality in sex chromosomes* as the etiology of mental retardation is demonstrated in fragile X syndrome, the second most common cause of mental retardation, which results from a mutation on the X chromosome.

37.11. The answer is E

Figure 37.2 shows a young adult with fragile X syndrome, the second most common single cause of mental retardation (after trisomy 21, the predominant form of Down syndrome) and the leading inherited cause of mental retardation. The physical phenotype of Down syndrome includes epicanthal folds; high cheekbones; a protruding tongue; a single transverse palmar crease; and a number of other associated features, including congenital heart defects and gastrointestinal malformations. *Prader-Willi syndrome, caused by a microdeletion on chromosome 15, is characterized by mental retardation, hyperphagia, obesity, hy-*

pogonadism, and short stature. Fetal alcohol syndrome consists of mental retardation and a typical phenotypic picture of facial dysmorphism, including hypertelorism, microcephaly, short palpebral fissures, a smooth philtrum, and a thin upper lip. *Klinefelter's syndrome* is a condition caused by XXY genotype, characterized by male habitus with hypogonadism because of low androgen production.

Answers 37.12–37.16

37.12. The answer is A

37.13. The answer is D

37.14. The answer is B

37.15. The answer is C

37.16. The answer is A

Prader-Willi syndrome results from a microdeletion in chromosome 15 and usually occurs sporadically, with prevalence of less than one in 10,000. Its clinical manifestations include compulsive eating behaviors, obesity, mental retardation, hypogonadism, hypotonia, and short stature. Disruptive behaviors, including oppositional and defiant behavior with frequent temper tantrums, are also common. *Prader-Willi provides an example of genomic imprinting, the process whereby specific genes are differentially marked during parental gametogenesis, resulting in differential expression in the individual; Prader-Willi syndrome results when the microdeletion of chromosome 15 occurs in the chromosome inherited from the father.* Angelman syndrome, a clinically distinct entity, occurs when the deletion occurs in the chromosome inherited from the mother.

Several chromosomal aberrations may result in *Down syndrome*. Trisomy 21 is the most common of these, and it results from nondisjunction during meiosis. Nondisjunction after fertilization in any cell division results in mosaicism, in which both normal and trisomic cells can be found. In translocation, usually occurring between *chromosomes 15 and 21*, fusion of two chromosomes occurs.

Fragile X syndrome is the second most common single cause of mental retardation, and it results from a mutation on the X chromosome at the fragile site Xq27.3. There is much variation in both the genetic and phenotypic expression. Prevalence rates are one per 1,000 males and one per 2,000 females, but rates of fully affected individuals are likely closer to one per 4,000 males and one per 8,000 females. Behaviorally, those with fragile X syndrome often have attention problems, pervasive developmental disorders, and other learning disorders. Intellectual function may deteriorate in adolescence in individuals with fragile X syndrome. *Phenylketonuria (PKU)* is transmitted via *autosomal recessive inheritance* of a defect found on chromosome 12, and it occurs in one in 10,000 births. The defect transmitted is an inability to convert phenylalanine, an essential amino acid, to paratyrosine because of an absence or inactivity of the liver enzyme phenylalanine hydroxylase. The majority of patients with PKU are severely retarded, but some have borderline or normal

intelligence. Eczema, hypopigmented hair and eyes, and seizures are other common symptoms. Early detection is crucial because a low-phenylalanine diet significantly improves both cognitive development and behavior.

Answers 37.17–37.20

37.17. The answer is B

37.18. The answer is B

37.19. The answer is B

37.20. The answer is C

Neurofibromatosis manifests as neurofibromas, café-au-lait spots, seizures, optic and acoustic gliomas, and bone lesions. *Its transmission is autosomal dominant.*

Tuberous sclerosis presents with seizures, intracranial calcifications, pink-brown skin lesions, and bone lesions. *Transmission is autosomal dominant.*

Crouzon's syndrome, also known as craniofacial dysostosis, is manifested by proptosis with shallow orbits, maxillary hypoplasia, and craniosynostosis. *Its transmission is autosomal dominant.*

Cockayne's syndrome presents with hypotrichosis, photosensitivity, thin skin, diminished subcutaneous fat, and impaired hearing. Craniofacial findings include pinched facies, sunken eyes, a thin nose, prognathism, and retinal degeneration. Skeletal abnormalities include long limbs with large hands and feet and flexion deformities. *Transmission is autosomal recessive.*

Answers 37.21–37.26

37.21. The answer is E

37.22. The answer is C

37.23. The answer is B

37.24. The answer is A

37.25. The answer is D

37.26. The answer is F

Infants who are exposed to *cytomegalovirus (CMV)* in utero may be stillborn; those born alive may be *affected by mental retardation with periventricular intracerebral calcifications, jaundice, microcephaly, and hepatosplenomegaly.* Up to half of infants born to mothers with AIDS develop progressive encephalopathy and mental retardation. *Rett syndrome is a syndrome with X-linked dominant inheritance that affects only girls and is characterized by developmental arrest and loss of milestones, autistic-like features, mental retardation, and stereotyped hand movements.* *Adrenoleukodystrophy* is an X-linked recessive disorder characterized by diffuse *demyelination of the cerebral cortex, leading to visual and intellectual impairment, seizures, and spasticity accompanied by adrenocortical insufficiency.* The onset of the disease typically occurs between the ages of 3 and 10

years, and the course is usually rapidly progressive and fatal. *Rubella infection in a pregnant woman* leads to grave consequences for the developing fetus, particularly when exposure occurs in the first trimester: *mental retardation, microcephaly, microphthalmia, congenital heart defects, deafness, and cataracts may develop.* *Congenital toxoplasmosis is associated with mental retardation, diffuse intracerebral calcifications (as opposed to the strictly periventricular lesions seen in congenital CMV), hydrocephalus, seizures, and chorioretinitis.*

Answer 37.27–37.30

37.27. The answer is C

37.28. The answer is D

37.29. The answer is B

37.30. The answer is A

Normally developing children have a specific, possibly universal, order to their development. For example, in Piagetian cognitive development, children proceed from sensorimotor, to preoperational, to concrete operational, to formal operational thought. Even within these four larger stages, smaller orderings hold; within sensorimotor development, normal infants proceed through Piaget's six substages in each of several subdomains.

Do children with mental retardation also follow a similar sequence in development? Parallel sequences have been identified for children of various cognitive abilities for a variety of developmental tasks. These sequences generally hold for children with genetic or other organic causes for their retardation. The only possible exceptions include some children with uncontrollable seizures (which make accurate testing difficult) and some children with autism, who may show altered development because of their particular disabilities on certain social tasks. These sequences have been noted in many areas: in almost 20 Piagetian domains, in symbolic play, and in linguistic grammar and pragmatics. Across the board, it seems that children with mental retardation and other children develop along similar pathways. *With a few exceptions, children with nonspecific mental retardation do show even or near-even performance across various intellectual domains.*

Some important differences are noted in children with various organic forms of mental retardation show specific intellectual strengths and weaknesses. For example, *several groups are weaker in sequential (i.e., serial) processing than in simultaneous (i.e., holistic) processing or achievement abilities.* *Such sequential deficits are found in boys with fragile X syndrome and children with Prader-Willi syndrome.* *Children with Down syndrome may have particular weaknesses in expressive (versus receptive) communication and special problems in grammatical abilities.* *Children with Williams' syndrome show particular difficulties with visual-spatial processing skills,* and some subsets of these children show heightened abilities in language and music. Different causes of mental retardation thus result in different characteristic intellectual strengths and weaknesses.

Answers 37.31–37.35**37.31. The answer is D****37.32. The answer is A****37.33. The answer is B****37.34. The answer is C****37.35. The answer is E**

Prader-Willi syndrome, which occurs because of a defect on chromosome 15, is best known for its symptoms of hyperphagia and obesity. Babies with the disorder show hypotonia and feeding or suckling difficulties. Then between ages 2 and 6 years, they develop hyperphagia, food seeking, and food hoarding. Hyperphagia is probably related to a hypothalamic abnormality resulting in a lack of satiety. *A high proportion of these children also manifest high rates of temper tantrums, aggression, excessive daytime sleepiness, emotional lability, obsessions, and compulsions.* Often, these symptoms are associated with distress and adaptive impairment, indicating the need to consider a diagnosis of obsessive-compulsive disorder (OCD) when symptoms are severe.

Fetal alcohol syndrome is caused by maternal alcohol consumption during gestation, and prominent symptoms *include physical features such as microcephaly; short stature; midface hypoplasia; short palpebral fissure; a thin upper lip; a smooth philtrum; and emotional and cognitive features, including mild to moderate mental retardation, irritability, inattention, and hyperactivity.*

Down syndrome predisposes individuals to *thyroid abnormalities, congenital heart disease, leukemia, and early-onset Alzheimer's disease.*

Lesch-Nyhan syndrome, a rare X-linked recessive disorder that involves an inability to metabolize uric acid, causes *ataxia, chorea, renal failure, and gout*, as well as striking *self-mutilatory* (particularly self-biting) behavior and mild to moderate mental retardation.

Neurofibromatosis (type 1) is an autosomal dominant disorder caused by a defect in chromosome 17, with a variety of clinical manifestations, including cutaneous neurofibromas, *café-au-lait spots, short stature, macrocephaly, Lisch nodules, and bony dysplasias.* Ten percent of affected individuals have moderate to profound mental retardation, and half manifest speech and language difficulties. Distractibility, impulsivity, anxiety, and depression are also prominent features.



Learning Disorders

Learning disorders in a child or adolescent are characterized by academic underachievement in reading, written expression, or mathematics compared with the overall intellectual ability of the child. Children with learning disorders often find it difficult to keep up with their peers in certain academic subjects, but they excel in others. Learning disorders result in underachievement that is unexpected based on the child's potential as well as the opportunity to have learned more. When academic achievement testing is administered along with a measure of intellectual capability, this psychoeducational assessment can identify learning problems. Learning problems in a child or adolescent that are identified in this manner can establish eligibility for academic services through the public school system.

Learning disorders affect at least 5 percent of school-age children. This represents approximately half of all public school children who receive special education services in the United States. In 1975, Public Law 94-142 (the Education for All Handicapped Children Act) mandated all states to provide free and appropriate educational services to all children. Since that time, the number of children identified with learning disorders has increased, and a variety of definitions of learning disabilities has arisen.

Learning disorders often make it agonizing for a child to succeed in school and, in some cases, lead to eventual demoralization, low self-esteem, chronic frustration, and poor peer relationships. Learning disorders are associated with higher than average risk of a variety of comorbid disorders, including attention-deficit/hyperactivity disorder (ADHD), communication disorders, conduct disorders, and depressive disorders. Adolescents with learning disorders are about 1.5 times more likely to drop out of school, approximating rates of 40 percent. Adults with learning disorders are at increased risk for difficulties in employment and social adjustment. Learning disorders may be associated with other developmental disorders, major depressive disorder, and dysthymic disorder.

Genetic predisposition, perinatal injury, and neurological and other medical conditions can contribute to the development of learning disorders, but many children and adolescents with learning disorders have no specific risk factors. Learning disorders, nevertheless, are frequently found in association with conditions such as lead poisoning, fetal alcohol syndrome, and in utero drug exposure.

Students should study the questions and answers below for a useful review of this topic.

HELPFUL HINTS

Students should be able define these terms related to learning disorders.

- | | | | |
|-----------------------------|--------------------------------|------------------------------|--------------------|
| ▶ academic skills disorders | ▶ hearing and vision screening | ▶ right-left confusion | ▶ word additions |
| ▶ dyslexia | ▶ phoneme | ▶ spatial relations | ▶ word distortions |
| | | ▶ visual-perceptual deficits | ▶ word omissions |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

38.1. Which of the following is *not* a sign of spelling disorder?

- Same word spelled in different ways within one piece of written work
- Difficulty remembering how to spell common words
- Excessive problems generating text

- Inability to select correct spelling from two plausible alternatives
- None of the above

38.2. A recently proposed definition of dyslexia includes which of the following components?

- It is one of several distinct learning disabilities not characterized by difficulties in single-word decoding.
- It does not usually reflect insufficient phonological processing.
- It is not the result of sensory impairment.

- D. It rarely includes a conspicuous problem with acquiring proficiency in writing and spelling.
E. None of the above
- 38.3.** A child must be at least how old for a diagnosis of written expression disorder to be made?
A. 5 years old
B. 6 years old
C. 7 years old
D. 8 years old
E. 9 years old
- 38.4.** Reading disorder is characterized by all of the following *except*
A. impairment in recognizing words
B. poor reading comprehension
C. increased prevalence among family members
D. occurrence in three to four times as many girls as boys
E. omissions, additions, and distortions of words in oral reading
- 38.5.** Which of the following statements does *not* characterize mathematics disorder?
A. It is more common in boys than girls.
B. The prevalence is estimated to be about 6 percent in school-age children with normal intelligence.
C. It includes impairment in addition, subtraction, multiplication, and division.
D. It is usually apparent by the time a child is 8 years old.
E. All of the above
- 38.6.** Disorder of written expression
A. presents earlier than do reading disorder and communication disorders
B. occurs only in children with reading disorder
C. is not diagnosed until the teenage years
D. includes disability in spelling, grammar, and punctuation
E. is always self-limited
- 38.7.** Which form of instruction helps to reinforce orthographic representations of letters and spellings, thereby acting as an effective preventative measure for disorder of written expression?
A. Spelling
B. Grammar
C. Penmanship
D. Writing
E. All of the above
- 38.8.** Janet, age 11 years, has a long history of school problems. She failed first grade and was removed from a special classroom in second grade after arguing and fighting repeatedly with her peers. She is currently in a regular sixth grade class and is struggling academically; she is failing reading and English and is barely passing in math and science; her performance in art and sports is significantly better. Her teacher describes Janet as “a slow learner with a poor memory” and notes that Janet does poorly in group settings and requires considerable individual attention in class.
- Janet has no history of medical problems, and her developmental history was unremarkable—she sat up at 6 months, walked at 12 months, and began speaking at 16 months. Examination revealed an open and friendly girl who bristled at questions about her academic difficulties. She complained of being “teased” and “bossed around” by children at school but described a number of friendships with peers in her neighborhood. Intelligence testing revealed a full-scale IQ of 97. Wide-range achievement testing produced grade-level scores of 2.8 for reading, 3.3 for spelling, and 4.3 for arithmetic.
- The most likely diagnosis is
A. disorder of written expression
B. expressive language disorder
C. phonological disorder
D. reading disorder
E. none of the above
- 38.9.** Which of the following is *not* true about dyslexia?
A. Dyslexia is neurobiologic in nature.
B. Dyslexia is characterized by difficulty in word recognition.
C. Dyslexia is a phonological deficit.
D. Dyslexia causes people to read words backwards.
E. All of the above
- 38.10.** Which is the correct definition of the term *quantitative literacy*?
A. An understanding of basic numerical law
B. A diagnostic label used to refer to impairment in the development of arithmetic skills
C. The ability to apply different aspects of mathematics to events in daily life
D. To effectively use quantitative information to guide health behavior
E. None of the above
- 38.11.** What is the prevalence rate for mathematics disorder that is comorbid with attention-deficit/hyperactivity disorder?
A. 1 percent
B. 2 percent
C. 3 percent
D. 4 percent
E. 5 percent

Directions

The questions below consist of lettered headings followed by a list of numbered statements. For each numbered statement, select:

- A. if the item is associated with A only.
- B. if the item is associated with B only.
- C. if the item is associated with both A and B.
- D. if the item is associated with neither A nor B.

Questions 38.12–38.16

- A. Reading disorder
 - B. Mathematics disorder
- 38.12.** The study of this disorder has been neglected even though it appears to occur with the same frequency as learning disorders in other areas.
- 38.13.** The etiology is unknown.
- 38.14.** There are higher monozygotic than dizygotic concordance rates.
- 38.15.** The diagnosis is generally not made until the second or third grade.
- 38.16.** Brain anomalies are inferred but not demonstrated conclusively.

Directions

Each group of questions below consists of lettered headings followed by a list of numbered words or phrases. For each numbered word or phrase, select the *one* lettered heading that is most closely associated with it. Each heading may be selected once, more than once, or not at all.

Questions 38.17–38.20

- A. Reading disorder
 - B. Mathematics disorder
 - C. Disorder of written expression
 - D. Learning disorder not otherwise specified
- 38.17.** Used to be known as dyslexia
- 38.18.** Spelling skills deficit is an example
- 38.19.** Usually diagnosed later than the other learning disorders
- 38.20.** Reported to occur frequently in children born in May, June, and July

ANSWERS

38.1. The answer is C

Excessive problems generating text is a sign of a written expression disorder, but it does not apply to spelling disorder. Refer to Table 38.1 for a list of signs indicating disorders in written expression or spelling.

38.2. The answer is C

Dyslexia is one of several distinct learning disabilities. It is a language-based disorder characterized by *difficulties in single-*



Table 38.1
Common Signs of Disorder of Written Expression

Signs of severe problems in written expression

Avoidance of written work
 Excessive problems generating text (output failure)
 Excessive technical errors of punctuation, capitalization, grammar, word usage, sentence structure, and paragraph structure
 Frequent omission of words in sentences or incomplete sentences
 Use of limited vocabulary in writing (perhaps secondary to spelling problems)
 Poor organization of written work (e.g., poor paragraph organization; poor story composition, including missing story elements, such as settings, characters, and themes; poor cohesion within and between sentences, as indicated by unclear referents, no sentence starters, and abrupt endings)
 Failure to edit work
 Disordered and illegible handwriting (e.g., letter forms that are not decipherable; admixture of printing and cursive writing; inappropriate admixture of upper- and lower-case letters)

Common spelling problems in disorder of written expression or specific spelling disorder

Confusion of similar letters or sounds (may result from problems in morphology) (e.g., “jump” for “jumped”; “caterpault” for “catapult”)
 Inability to select correct spelling from two plausible alternatives (e.g., “successful” vs. “succesfull”; “necessary” vs. “necessery”)
 Frequent use of nonpermissible letter strings (e.g., “egszak” for “exact”; “freeeqwnt” for “frequent”)
 Same word spelled in different ways within one piece of written work
 Difficulty remembering how to spell common words
 Can learn for spelling tests but fails to remember correct spelling in written work

word decoding, usually reflecting insufficient phonological processing. These difficulties are unexpected in relation to age and other cognitive and academic abilities. The difficulties are not the result of generalized developmental disability or of *sensory impairment*. Dyslexia is manifested by variable difficulty with different forms of language, often (not rarely) including *problems with reading, writing, and spelling*. This recently proposed definition reflects two important advances. First, instead of defining reading disorders generally, it focuses on one type of reading disorder. Second, it localizes the difficulty associated with dyslexia at the single-word level and pinpoints the cause as *insufficient phonological processing*. Although this definition has not gained universal acceptance, it represents a significant step forward in addressing some of the previous confusion and disagreement surrounding previous definitions of learning disabilities.

38.3. The answer is D

A diagnosis of disorder of written expression is not usually made before the child is at least *8 years old* because normal difficulties in motor, spelling, and handwriting skills in younger children (e.g., letter reversals, invented spelling, inability to copy printed material) cannot be reliably differentiated from atypical problems. Mental retardation, impaired fine motor coordination, impaired vision or hearing, communication disorders, and attention-deficit/hyperactivity disorder (ADHD) are all associated with difficulties in various aspects of written expression. In a

child with mental retardation, disorder of written expression may only be diagnosed if the child's writing skills are significantly below those expected of children with that level of general intellectual functioning. Impaired vision and hearing can be ruled out through screening tests. Impaired motor coordination, arising from developmental coordination disorder or neurological damage, may produce illegible handwriting, but in the absence of additional impairments in spelling and expression of thought in writing, a disorder of written expression is ruled out. ADHD is frequently associated with difficulties in producing written work. A concurrent diagnosis is permissible, but caution is needed to determine whether the symptoms of ADHD have arisen *de novo* in the intermediate grades and are restricted to writing situations only, in which case a diagnosis of ADHD may be ruled out. Conversely, in the presence of a confirmed diagnosis of ADHD, caution is needed to determine whether the writing problems are reflected solely by careless spelling or punctuation errors and messy handwriting (as opposed to disordered handwriting), in which case a disorder of written expression may be ruled out. Language disorders frequently precede or may co-occur with a disorder of written expression.

38.4. The answer is D

Reading disorder occurs in three to four times as many boys as girls (not vice versa). This rate in boys may be falsely elevated because boys with reading disorders commonly also have behavioral problems, and the latter symptoms often prompt scrutiny of boys' psychological and learning issues.

Reading disorder is characterized by *impairment in recognizing words, slow and inaccurate reading, and poor reading comprehension. Omissions, additions, and distortions of words are made in oral reading.* Reading achievement is below that expected for the individual's age on standardized testing. Although no causal factor has been identified in the disorder, *increased prevalence in family members* suggests a genetic contribution.

38.5. The answer is A

Unlike reading disorder, in which the prevalence appears to be higher in boys, there is *no demonstrated gender difference* in mathematics disorder, and the problem may be more common in girls than in boys. The *prevalence of mathematics disorder is estimated at 6 percent of school-age children with normal intelligence.* Mathematics disorder includes *impairment in addition, subtraction, multiplication, and division.* The disorder is usually *apparent by age 8 years*, although it may present as early as 6 or as late as 10 years of age. Mathematics disorder commonly coexists with reading disorder.

38.6. The answer is D

Disorder of written expression includes *disability in spelling, grammar, and punctuation.* The disorder is characterized by writing skills that are significantly below the expected level given the child's age and intelligence (as measured by standardized testing). Because children learn to speak and read before learning to write, disorder of written expression *presents later (not earlier)* than do reading disorder and communication disorders. Disorder of written expression *can occur in children both with and*

without concomitant reading disorder. The disorder should be diagnosed in the school-age years; in severe cases, problems are evident by age 7 years, but in milder cases, the disorder may not be apparent until age 10 years or later. *The disorder is not self-limited;* children with mild to moderate problems do well with timely remedial work around writing skills, but more severely affected children may require ongoing, extensive remediation through high school and even into college. Remedial treatment involves direct practice in spelling, sentence construction, and rules of grammar.

38.7. The answer is C

Penmanship (handwriting) is not just a motor process. Rather, handwriting draws on letter knowledge and in turn may reinforce orthographic representations of letters and spellings, so that practicing a word's spelling appears to reinforce phonemic awareness and facilitate word reading. Also, because transcription skills (spelling, handwriting) uniquely predict compositional fluency throughout the elementary grades, it is not surprising that writing instruction in kindergarten facilitates the development of both the content and fluency of written expression in the later grades.

38.8. The answer is D

The most likely diagnosis for Janet is *reading disorder.* Reading disorder is characterized by marked impairment in the development of word recognition skills and reading comprehension that cannot be explained by mental retardation, inadequate schooling, visual or hearing defect, or a neurological disorder. Children with reading disorders make many errors in their oral reading, including omissions, additions, and distortions of words. Janet's difficulties, apparently, were limited to reading and spelling. She had average intelligence and normal scores on achievement tests of arithmetic but markedly low scores for spelling and reading.

Disorder of written expression is characterized by poor performance in writing and composition. *Expressive language disorder* is characterized by serious impairment in age-appropriate expressive language. *Phonological disorder* is characterized by frequent and recurrent misarticulations of speech sounds, resulting in abnormal speech. The case described does not meet the criteria for any diagnosis other than reading disorder.

38.9. The answer is D

Dyslexia is a specific learning disability that is *neurobiological in origin. It does not cause backwards reading.* It is characterized by difficulties with accurate or dysfluent *word recognition* (or both) and poor spelling and decoding abilities. These difficulties typically result from a *deficit in the phonological component* of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction.

38.10. The answer is C

Numeracy or quantitative literacy is the ability to apply different aspects of mathematics to understand, predict, and control routine. *Health numeracy* is typically defined as the individual-level skills needed to understand and *effectively use quantitative health information to guide health behavior* and decision making.

It is essential to understand the distinctions and relationships among mathematics, arithmetic, and numeracy (also known as quantitative literacy) to create an operational definition of *mathematics disorder*. The related sciences that collectively fall under the term *mathematics* (e.g., algebra, calculus, arithmetic geometry, analytical geometry, chaos theory, number theory, set theory) are concerned with the study of number, quantity, shape and space, and the interrelationships using rules and a specialized notation. In contrast to the term *mathematics* is the term *arithmetic*, which is based on numerical calculations and quantitative number theory. *Arithmetic* requires an understanding of *basic numerical law* and the rules that govern the four basic operations of addition, subtraction, multiplication, and division, as well as decoding and manipulating symbols. The basic skills of arithmetic are an essential foundation to the learning of more complex mathematics.

Mathematics disorder is a diagnostic label that is generally used to refer to impairment in the development of arithmetic skills, including but not restricted to computational procedures used to solve arithmetic problems and the representation and retrieval of basic arithmetic facts from long-term memory. To warrant classification as a disorder, the individual's performance in arithmetic must be substantially below that expected for age, measured intellectual abilities, and education. Also, the impairment must be sufficiently serious to interfere with academic achievement or daily living.

38.11. The answer is D

In general, population studies find that the majority of mathematics disorder patients manifest with comorbid reading disorder or attention-deficit/hyperactivity disorder (ADHD) (4 percent), and only a minority have pure mathematics disorder or dyscalculia (e.g., 2 percent). According to the text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR), mathematics disorder is a relatively rare learning disorder (i.e., estimated prevalence of 1 percent in the general school-age population) compared with reading disorder. However, this may be an underestimate because general school population studies conducted in the United States, England, Germany, Switzerland, and Israel provide prevalence estimates of mathematics disorder ranging from 3 to 11 percent (average of 6 percent) and high rates of various comorbidities, such as ADHD, reading disorder (also known as dyslexia), or anxiety disorder. It is important to note that prevalence estimates typically refer to disorders of arithmetic rather than disorders of mathematics.

Answers 38.12–38.16

38.12. The answer is B

38.13. The answer is C

38.14. The answer is C

38.15. The answer is C

38.16. The answer is C

Although not definitively studied, the prevalence of mathematics disorder in school-age children has been estimated at 6 percent. *The study of mathematics disorder has been neglected despite a prevalence that is similar to other learning disorders.* Several researchers have asserted that this reflects a cultural bias that prioritizes literacy skills over mathematics skills.

The etiologies of reading disorder and mathematics disorder are unknown. Both likely involve biological dysfunctions that results in impairment of or delay in development of cognitive skills required for these operations. Many of the theories of brain dysfunction in children with reading disorder are based on observations of associated symptoms. For example, because language and speech problems are often related, abnormalities in the left hemisphere and in the frontal speech regions in both hemispheres have been cited as possible etiological factors. Similarly, insofar as motor problems with balance and equilibrium are often linked with reading difficulties, abnormalities in cerebellar-vestibular function have been postulated. *Thus, brain anomalies are inferred but have not been definitively demonstrated in reading disorder.* In mathematics disorder, the finding that adults with acquired right parietal-occipital hemispheric lesions developed a loss of arithmetical skills has prompted *speculation that abnormalities in the same region might underlie mathematical disorder in children; this, too, remains to be convincingly demonstrated.*

Twin studies have consistently found higher concordance rates for reading disorder in monozygotic twin pairs than in dizygotic pairs; estimates of genetic influence on acquisition of reading disorder have been between 30 and 60 percent, with environmental factors also contributing significantly. Mathematics disorder also has evidence of genetic influence, with higher rates of concordance in monozygotic versus dizygotic twins.

Although symptoms of reading disorder may appear as early as age 5 years, as manifested by an inability to distinguish among letters or to associate phonemes with letter symbols, referral for evaluation and formal diagnosis typically occur later. *Many children are first diagnosed when they fail to respond to formal instruction in second grade.* Others, especially those with high intelligence, may not be diagnosed until fourth or fifth grade. Similarly, although difficulties with counting and number concepts may be apparent in kindergarten, a *diagnosis of mathematics disorder is not often made before second or third grade.*

Answers 38.17–38.20

38.17. The answer is A

38.18. The answer is D

38.19. The answer is C

38.20. The answer is A

Reading disorder used to be known as dyslexia. As described in the answer to question 38.2, the term dyslexia has recently taken on a more specific meaning. *Reading disorder is reported to occur most frequently in children born in May, June, and July,*

a finding that has sparked theories of a relationship between the disorder and maternal infections during the winter months that might affect developing fetuses' brains. *Disorder of written expression is usually diagnosed later than other learning disorders* because writing skills are acquired at a later age than are reading skills. Learning disorder not otherwise specified is a category of learning disorders that do not meet criteria for any of

the specific learning disorders; *spelling skills deficit is an example of a condition that would fall under the heading of learning disorder not otherwise specified*. Mathematics disorder includes deficits in linguistic skills related to understanding mathematical terms, converting written problems into mathematical symbols, and perceptual skills such as the ability to recognize and understand symbols and to order clusters of numbers.



Motor Skills Disorder: Developmental Coordination Disorder

Children with developmental motor coordination struggle to perform accurately the motor activities of daily life, such as jumping, hopping, running, or catching a ball. Children with coordination problems may also agonize to use utensils correctly, tie their shoelaces, or write. A child with developmental coordination disorder may exhibit delays in achieving motor milestones, such as sitting, crawling, and walking, because of clumsiness and yet excel at verbal skills.

Developmental coordination disorder thus may be characterized by either clumsy gross or fine motor skills, resulting in poor performance in sports and even in academic achievement because of poor writing skills. A child with developmental coordination disorder may bump into things more often than siblings or drop things.

Children with developmental coordination disorder may resemble younger children because of their inability to master motor activities typical for their age group. For example, children with developmental coordination disorder in elementary school may not be adept at bicycle riding, skateboarding, running, skip-

ping, or hopping. In the middle school years, children with this disorder may have trouble in team sports, such as soccer, baseball, or basketball. Fine motor skill manifestations of developmental coordination disorder typically include clumsiness using utensils and difficulty with buttons and zippers in the preschool age group. In older children, using scissors and more complex grooming skills, such as styling hair or putting on makeup, is difficult. Children with developmental coordination disorder are often ostracized by peers because of their poor skills in many sports, and they often have long-standing difficulties with peer relationships. Developmental coordination disorder is the sole disorder in the text revision of the fourth edition of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) category motor skills disorder. Gross and fine motor impairment in this disorder cannot be explained on the basis of a medical condition, such as cerebral palsy, muscular dystrophy, or any other neuromuscular disorder.

Students should study the questions and answers below for a useful review of this disorder.

HELPFUL HINTS

Students should be able to define the terms listed here.

- | | | | |
|---|--|--|----------------------------|
| ▶ attention-deficit/hyperactivity disorder | ▶ conduct disorder | ▶ Gerstmann syndrome | ▶ psychoeducational tests |
| ▶ Bender Visual Motor Gestalt test | ▶ deficits in handwriting | ▶ graphemes | ▶ remedial treatments |
| ▶ Bruininks-Oseretsky Test of Motor Development | ▶ delayed motor milestones | ▶ gross motor skills | ▶ shoelace tying |
| ▶ catching a ball | ▶ expressive language disorder | ▶ informal motor skills screening | ▶ social ostracism |
| ▶ cerebral palsy | ▶ eye-hand coordination | ▶ learning disorders | ▶ temperamental attributes |
| ▶ clumsiness | ▶ fine motor skills | ▶ linguistic, perceptual, mathematical, and attentional skills | ▶ unsteady gait |
| | ▶ finger tapping | ▶ perceptual motor training | |
| | ▶ Frostig Movement Skills Test Battery | | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 39.1.** In children with developmental coordination disorder, unintentional muscle movements are identified using which of the following terms?
- Dyskinesia
 - Glossolalia
 - Dyspraxia
 - Synkinesia
 - Hypotonia
- 39.2.** Developmental coordination disorder without evidence of underlying pathology is estimated to occur in what percentage of school age children?
- 1 percent
 - 2 percent
 - 3 percent
 - 4 percent
 - 5 percent
- 39.3.** Which of the following is a risk factor for developmental coordination disorder?
- Birth in May, June, or July
 - Borderline intellectual functioning
 - Frequent episodes of *otitis media* in the first 2 years of life
 - Prematurity
 - Dysfunctional family
- 39.4.** Which of the following is *not* a manifestation of developmental coordination disorder?
- Balance problems
 - Difficulty speaking
 - Abnormal gait
 - Illegible writing
 - None of the above

Directions

The group of questions below consists of lettered headings followed by a list of numbered words or statements. For each numbered word or statement, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 39.5–39.8

- Dyspraxia
- Synkinesia
- Impersistence
- Asymmetries
- Hypertonus

- Facial grimaces when child is asked to make hand movements
- Clinician tracks how long a child can stick out his or her tongue
- Child tends to throw a ball too hard and inaccurately at short distances
- Inability to follow directions to hold a comb with the right hand, pass it to the left hand and use it to comb hair from front to back

ANSWERS

39.1. The answer is D

Movements identified as *synkinesia* are best described as unintentional muscle movements, also termed *motor overflow*. Mirror movements, such as finger twitching on the opposite hand when the child is asked to perform a finger opposition task or facial grimaces when the child is asked to make hand movements, are examples of synkinetic motor actions.

Dyspraxia describes a child's difficulty in exhibiting sequenced, coordinated motor movements when presented with an oral request. *Hypotonia* can be observed in all parts of the body and is characterized by a flaccid or sleepy quality in the child's facial expression and general muscle tone. *Dyskinesia* is defined as difficulty in performing movements. *Glossolalia* is defined as unintelligible jargon that has meaning to the speaker but not to the listener.

39.2. The answer is E

Developmental coordination disorder is estimated to occur in up to *5 percent* of school-aged children without evidence of underlying pathology. Children exhibiting developmental coordination disorder fail to acquire adequate age-appropriate motor skills, leading to impairment in gross motor skills such as jumping, hopping, and running; fine motor skills, including handwriting; tying their shoelaces; using utensils; and balance. Motor coordination disorder often occurs in conjunction with attention deficit/hyperactivity disorder (ADHD), communication disorders, and learning disorders. In the absence of intervention, developmental coordination disorder often continues to cause impairment throughout childhood and adolescence, leading to significant consequences physically, educationally, socially, and psychiatrically.

39.3. The answer is D

Risk factors postulated to contribute to developmental coordination disorder include *prematurity*; perinatal hypoxia; neonatal malnutrition; low birth weight; and prenatal exposure to nicotine, alcohol, and cocaine. *Although reading disorder has been associated with birth in May, June, or July*, suggesting a possible link between winter maternal infectious illness and reading disorder in the child, no such link has been found in developmental coordination disorder. *Borderline intellectual functioning* (an IQ between 70 and 90) is not an identified risk factor for developmental coordination disorder *nor is a dysfunctional family*. *There is no documented relationship between frequent episodes of otitis media and onset of developmental coordination disorder*.



Table 39.1
Manifestations of Developmental Coordination Disorder

Gross motor manifestations

Preschool age

Delays in reaching motor milestones, such as sitting, crawling, and walking

Balance problems: falling, getting bruised frequently, and poor toddling

Abnormal gait

Knocking over objects, bumping into things, and destructiveness

Primary-school age

Difficulty with riding bikes, skipping, hopping, running, jumping, and doing somersaults

Awkward or abnormal gait

Older

Poor at sports, throwing, catching, kicking, and hitting a ball

Fine motor manifestations

Preschool age

Difficulty learning dressing skills (tying, fastening, zipping, and buttoning)

Difficulty learning feeding skills (handling knife, fork, or spoon)

Primary-school age

Difficulty assembling jigsaw pieces, using scissors, building with blocks, drawing, or tracing

Older

Difficulty with grooming (putting on makeup, blow-drying hair, and doing nails)

Messy or illegible writing

Difficulty using hand tools, sewing, and playing piano

39.4. The answer is B

Difficulty speaking is not listed as a manifestation of developmental coordination disorder. For a complete list of manifestations of developmental coordination disorder, refer to Table 39.1.

Answers 39.5–39.8

39.5. The answer is B

39.6. The answer is C

39.7. The answer is E

39.8. The answer is A

The essential feature of developmental coordination disorder is poor motor coordination. Motor skills tend to be imprecise or clumsy rather than globally impaired. Impairments affect fine and gross motor coordination skills and can be observed clinically when the patient is engaged in tasks requiring the use of various muscle groups. There are seven diagnostic categories that describe these impairments: dyspraxia, synkinesia, hypotonus, hypertonus, tremors, impersistence, and asymmetries.

Dyspraxia describes a child's inability to produce correctly sequenced, coordinated motor movements when presented with a demonstration or oral command; *an example is the inability to follow directions to hold a comb with the right hand, pass it to the left hand, and use it to comb hair from front to back*. Synkinesia is a phenomenon involving unintentional muscle movements, or muscle overflow; *a child with synkinesia might make a facial grimace when asked to make hand movements*.

Hypotonus and hypertonus describe abnormalities in muscle tone. Hypotonus is characterized by flaccid muscle tone; these children often appear lazy and sleepy. *Hypertonus* involves excessive muscle tone, leading to poor modulation of muscle activity and observed *behaviors such as throwing a ball too hard and inaccurately at short distances*.

Tremors are characterized by irregular unsteadiness in muscle movements, leading to difficulties in activities such as writing or walking. *Impersistence* refers to the child's inability to sustain body postures for reasonable periods of time; clinicians may determine *how long a child is able to stick out his or her tongue* to check for this symptom. Asymmetries are motor behaviors affecting only one side of the body, such as weakness or abnormal muscle flexion or extension.



Communication Disorders

Communication disorders are among the most common disorders in childhood. To communicate effectively, children must have a mastery of language—that is, the ability to understand and express ideas—using words and speech. Whereas language disorders include expressive and mixed receptive-expressive language disorder, speech disorders include phonological disorder and stuttering. Children with expressive language disorders have difficulties expressing their thoughts with words and sentences at a level of sophistication expected for their age and developmental level in other areas. These children may struggle with limited vocabularies; speak in sentences that are short or ungrammatical; and often present descriptions of situations that are disorganized, confusing, and infantile. They may be delayed in developing an understanding and a memory of words compared with others their age.

Language competence spans four domains: phonology, grammar, semantics, and pragmatics. *Phonology* refers to the ability to produce sounds that constitute words in a given language and the skills to discriminate the various phonemes (sounds that are made by a letter or group of letters in a language). To imitate

words, a child must be able to produce the sounds of words. *Grammar* designates the organization of words and the rules for placing words in an order that makes sense in that language. *Semantics* refers to the organization of concepts and the acquisition of words themselves. A child draws from a mental list of words to produce sentences. Children with language impairments exhibit a wide range of difficulties with semantics that include acquiring new words, storage and organization of known words, and word retrieval. Speech and language evaluations that are sufficiently broad to test all of the above skill levels are more accurate in evaluating a child's remedial needs. *Pragmatics* has to do with skill in the actual use of language and the "rules" of conversation, including pausing so that a listener can answer a question and knowing when to change the topic when a break occurs in a conversation. By age 2 years, toddlers may know up to 200 words, and by age 3 years, most children understand the basic rules of language and can converse effectively (Table 40.1).

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

These terms relate to communication disorders and should be known by students.

- | | | | |
|--|---------------------------------|--|------------------------------|
| ▶ ambilaterality | ▶ dysarthria | ▶ mixed receptive-expressive language disorder | ▶ sound distortion |
| ▶ articulation problems | ▶ encoding | ▶ neurodevelopmental delays | ▶ spastic dysphonia |
| ▶ audiogram | ▶ expressive language disorder | ▶ omissions | ▶ speech therapy |
| ▶ baby talk | ▶ fluency of speech | ▶ phoneme | ▶ standardized language test |
| ▶ cluttering | ▶ language acquisition | ▶ phonological disorder | ▶ stuttering |
| ▶ comprehension | ▶ lateral lisp and palatal lisp | ▶ semantogenic theory of stuttering | ▶ substitution |
| ▶ decoding | ▶ maturational lag | | ▶ time patterning of speech |
| ▶ developmental coordination disorders | ▶ misarticulation | | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five responses or completions. Select the *one* that is *best* in each case.

40.1. Selective mutism is defined as:

- refusal to speak in learning situations
- inability to speak in specific social situations
- occasional refusal to speak in school
- consistent refusal to speak in specific social situations
- none of the above



Table 40.1
Normal Development of Speech, Language, and Nonverbal Skills in Children

Speech and Language Development	Nonverbal Development
<p>1 year Recognizes own name Follows simple directions accompanied by gestures (e.g., bye-bye) Speaks one or two words Mixes words and jargon sounds Uses communicative gestures (e.g., showing, pointing)</p>	<p>Stands alone Takes first steps with support Uses common objects (e.g., spoon, cup) Releases objects willfully Searches for object in location where last seen</p>
<p>2 years Uses 200 to 300 words Names most common objects Uses two-word or longer phrases Uses a few prepositions (e.g., "in," "on"), pronouns (e.g., "you," "me"), verb endings (e.g., -ing, -s, -ed), and plurals (-s) but not always correctly Follows simple commands not accompanied by gestures</p>	<p>Walks up and down stairs alone but without alternating feet Runs rhythmically but is unable to stop or start smoothly Eats with a fork Cooperates with adult in simple household tasks Enjoys playing with action toys</p>
<p>3 years Uses 900 to 1,000 words Creates three- to four-word sentences, usually with subject and verb but simple structure Follows two-step commands Repeats five- to seven-syllable sentences Speech is usually understood by family members</p>	<p>Rides tricycle Enjoys simple "make-believe" play Matches primary colors Balances momentarily on one foot Shares toys with others for short periods</p>
<p>4 years Uses 1,500 to 1,600 words Recounts stories and events from recent past Understands most questions about immediate environment Uses conjunctions (e.g., "if," "but," "because") Speech is usually understood by strangers</p>	<p>Walks up and down stairs with alternating feet Hops on one foot Copies block letters Role-plays with others Categorizes familiar objects</p>
<p>5 years Uses 2,100 to 2,300 words Discusses feelings Understands most prepositions referring to space (e.g., "above," "beside," "toward") and time (e.g., "before," "after," "until") Follows three-step commands Prints own name</p>	<p>Dresses self without assistance Cuts own meat with knife Draws a recognizable person Plays purposefully and constructively Recognizes part-whole relationships</p>
<p>6 years Defines words by function and attributes Uses a variety of well-formed complex sentences Uses all parts of speech (e.g., verbs, nouns, adverbs, adjectives, conjunctions, prepositions) Understands letter-sound associations in reading</p>	<p>Rides a bicycle Throws a ball well Sustains attention to motivating tasks Enjoys competitive games</p>
<p>8 years Reads simple books for pleasure Enjoys riddles and jokes Verbalizes ideas and problems readily Understands indirect requests (e.g., "It's hot in here" understood as request to open window) Produces all speech sounds in an adult-like manner</p>	<p>Understands conservation of liquid, number, length, and so on Knows left and right of others Knows differences and similarities Appreciates that others have different perspectives Categorizes same object into multiple categories</p>

Adapted from Owens RE. *Language Development: An Introduction*. 4th ed. Needham Heights, MA: Allyn & Bacon; 1996.

40.2. Which of the following is a true statement about diagnosis of communication disorders?

- A. Substantial deficits in receptive language do not preclude the diagnosis of expressive language disorder.
- B. Substantial deficits in nonverbal intelligence do not preclude the diagnosis of expressive language disorder.

- C. If both expressive and receptive deficits occur in the absence of nonverbal deficits, the diagnosis of mixed receptive-expressive language disorder is not appropriate.
- D. If language and nonverbal functioning are both substantially below age-level expectations, the diagnosis of mental retardation should be made.
- E. None of the above

- 40.3.** Which of the following is a true statement about presentation and course of developmental expressive language deficits?
- Fewer than 20 percent of “late talkers” achieve language skills within the normal range during the preschool years.
 - Most “late talkers” who recover during preschool appear to be at relatively high risk for severe learning and behavioral problems during their early school years.
 - Expressive language disorder often appears in the absence of comprehension problems, but receptive dysfunction generally diminishes proficiency in expressive language.
 - Intervention to improve expressive language should only be provided for children whose problems persist to age 4 or 5 years.
 - None of the above
- 40.4.** Which percentage of children with selective mutism also suffer from a social phobia?
- 55 percent
 - 65 percent
 - 75 percent
 - 85 percent
 - 95 percent
- 40.5.** A 4-year-old boy presents to the clinic just 1 month after beginning preschool. His father is concerned about reports from instructors that his son refuses to talk, play, or participate in activities. The father is worried because the boy’s developmental milestones have been normal and he is quite talkative and playful at home. However, the boy’s father admits that he becomes very quiet during gatherings with extended family members. What is the most likely diagnosis?
- Autism
 - Selective mutism
 - Separation anxiety
 - Stranger anxiety
 - None of the above

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 40.6–40.10

- Expressive language disorder
- Phonological disorder
- Voice disorder
- Verbal apraxia
- None of the above

- 40.6.** Disturbance in the programming of speech movements associated with a primary insult to the left cerebral hemisphere
- 40.7.** Organic causes include endocrine dysfunction and laryngeal papillomas
- 40.8.** Use of sentences that are short, incomplete, or ungrammatical
- 40.9.** In the text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR), this category encompasses speech sound problems that have no known cause and presumably reflect developmental difficulties in acquiring the sound system of a language
- 40.10.** Associated with cleft lip and palate

Questions 40.11–40.13

- A child sings normally
- A child cannot understand language
- A child has an abnormally loud voice
- A child substitutes and omits speech sounds
- None of the above

40.11. Phonological disorder

40.12. Stuttering disorder

40.13. Mixed receptive-expressive language disorder

Questions 40.14–40.18

- Expressive language disorder
- Mixed receptive-expressive language disorder
- Phonological disorder
- Stuttering
- All of the above

40.14. This disorder may include dysarthria and apraxia when occurring in the context of neurological disorders such as cerebral palsy or head injury.

40.15. A child with this disorder may appear to be deaf.

40.16. This disorder is most commonly seen in males.

40.17. Cluttering, a dysrhythmic speech pattern with jerky spurts of words, is often an associated feature of this disorder.

40.18. This disorder has two peaks of onset: between 2 and 3.5 years and between 5 and 7 years.

ANSWERS

40.1. The answer is D

Selective mutism is defined as a *consistent failure to speak in specific social situations* (e.g., school) where speaking is expected despite speaking in other situations. For the diagnosis to be made, the lack of speech must interfere with achievement or communication, must last at least 1 month, and must not be attributable to a lack of knowledge or comfort with the language required.

40.2. The answer is D

Differential diagnosis of developmental expressive language disorder requires standardized evaluations of expressive language,

receptive language, and nonverbal intellectual functioning. Expressive language development must fall significantly below (1) the range of normal expressive performance expected for a child's age, (2) the child's receptive language performance, and (3) the child's nonverbal intellectual performance. Furthermore, the expressive language difficulties must be severe enough to impair academic performance or social communication. This severity criterion is assessed by direct observation of the child and analysis of spontaneous language use, supplementing standardized testing.

Substantial deficits in either receptive language or nonverbal intelligence preclude the diagnosis of expressive language disorder. If both expressive and receptive deficits occur in the absence of nonverbal deficits, the diagnosis of mixed receptive-expressive language disorder is appropriate. However, if language and nonverbal functioning are both substantially below age-level expectations, the diagnosis of mental retardation should be made.

40.3. The answer is C

Developmental expressive language disorder is characterized by considerable variability in severity, course, and outcome. *Whereas expressive language disorder commonly appears in the absence of comprehension problems, receptive language dysfunction generally diminished proficiency in expressive language.* Experts disagree on whether "late talkers," children with normal cognitive functioning who use fewer than 50 words and no word combinations at age 2 years, meet criteria for a diagnosis of expressive language disorder. Irrespective of diagnosis, language delays often provoke parental concern and professional referral. Studies indicate that *50 to 80 percent* (not fewer than 20 percent) *of these children achieve language skills within the normal range during the preschool years.* Additionally, *"late talkers" who "catch up" during the preschool years are at low* (not high) *risk for severe learning and behavioral problems during their early school years.* The prognosis tends to be less favorable for children whose expressive language problems persist into late preschool or early school-age years. Language development proceeds at a slower rate in these children than in their normally developing peers, and they are also at elevated risk of associated problems, including reading disorder and attention-deficit/hyperactivity disorder. By adolescence, most children with expressive language disorder acquire sufficient language skills to function reasonably well in daily communication activities, although subtle residual deficits may be apparent in demanding speaking tasks.

Experts disagree on when intervention is warranted for expressive language disorder. Some favor a wait-and-see approach for young children with early expressive delays ("late talkers") because most acquire language functioning within the normal range during their preschool years. According to this view, intervention to improve expressive language should only be provided to children whose problems persist to age 4 or 5 years. However, others argue that earlier intervention may serve to prevent or minimize long-term language, academic, and behavioral difficulties.

40.4. The answer is E

More than *95 percent* of children with selective mutism also meet the DSM-IV-TR criteria for social phobia. Additional ev-

idence comes from the finding that pharmacologic agents used to treat adult social phobia are also effective in treating selective mutism. The conceptualization of selective mutism has undergone a considerable shift over the past several years. Previously, it was often suggested that selective mutism was related to a variety of conditions, including oppositionality, trauma, or family neuroses. However, current conceptualizations view the disorder as closely related to, or even a developmental expression of, social phobia.

40.5. The answer is B

When a child is normally talkative and interactive at home but quiet in other settings such as preschool, the diagnosis of *selective mutism* is very likely. Symptoms present in the absence of a learning disorder and must be present for at least 1 month. Children with *autism* have language and social impairments that do not vary based on the setting in which symptoms present. *Separation anxiety* is more frequently characterized by refusal to be separated from loved ones (e.g., to attend school). Children often feign illnesses to avoid leaving home. *Stranger anxiety* typically does not persist beyond age 3 years.

Answers 40.6–40.10

40.6. The answer is D

40.7. The answer is C

40.8. The answer is A

40.9. The answer is B

40.10. The answer is B

Verbal apraxia (also called apraxia of speech) is a *disturbance in the programming of movements that produce speech.* It is differentiated from voice disorder by its association with a *primary insult to the left cerebral hemisphere.* Additionally, verbal output in apraxic patients is often normal in automatic or overlearned speech (e.g., automatic social greetings, singing "Happy Birthday").

A *voice disorder*, as described in the DSM-IV-TR, is any "abnormality of vocal pitch, loudness, quality, tone or resonance." Given the complexity and sensitivity of the process of voice production, it is unsurprising that these disorders may arise from myriad factors, including medical disease and psychological distress. *Voice disorders of organic cause among children and adolescents include laryngeal papillomas, vocal fold nodules, laryngomalacia, laryngeal webbing (congenital or traumatic), vocal polyps, vocal hemorrhage, vocal fold paralysis or paresis, endocrine dysfunction, and laryngeal cancer.* Premature infants and children with a history of prolonged endotracheal intubation are at high risk for development of a number of laryngeal pathologies. Reflux esophagitis and irritation of the larynx are observed in patients with bulimia and may be accompanied by hoarse voice. Because persistent hoarseness in a child or adolescent may be a sign of malignancy or another serious medical condition, otolaryngologic evaluation is warranted.

Children with *expressive language disorders* have difficulty communicating via spoken language. They commonly (1) have limited speaking vocabularies; (2) *speak in short, incomplete, or ungrammatical sentences*; and (3) relate stories and events in a disorganized or unsophisticated manner. These problems are evident despite performance within normal ranges on measures of hearing acuity, nonverbal intelligence, and comprehension of spoken language.

Children with *phonological disorders* have difficulties producing speech sounds that are appropriate for their ages and dialects. They may omit sounds, substitute sounds for other sounds, or distort sounds by producing them incorrectly. Typically, the abnormal sounds occur in systematic patterns (e.g., omitting final consonants, pronouncing /s/ or /z/ sounds with the tongue protruded). Listeners may be unable to understand the speech of children with severe phonological disorders.

The DSM-IV-TR uses terminology for speech sound production disorders that differs from what is commonly used in the clinical and scientific literature. *In the DSM-IV-TR, the category of phonological disorders includes difficulties in speech sounds production that have no known cause as well as those that arise from hearing impairment, structural abnormalities of the speech mechanism (e.g., cleft lip or palate), or neurological conditions (e.g., head injury, cerebral palsy).* In the literature, the terms *articulation disorder* and *speech sound production disorder* may be used to label this inclusive group of disorders. The terms *dysarthria* and *dyspraxia* are typically used to refer to speech sound production difficulties that have a neurological basis. The term *phonological disorder* is usually reserved for speech sound problems that have no known cause and presumably reflect developmental difficulties in acquiring the regularities of phonology (the sound system of a language).

Answers 40.11–40.13

40.11. The answer is D

40.12. The answer is A

40.13. The answer is B

In phonological disorder, children substitute and omit speech sounds. The misarticulation of speech in this disorder may resemble baby talk. The omissions, substitutions, and distortions typically occur with late-learned phonemes. *A child who stutters may sing normally. A child with mixed receptive-expressive language disorder cannot understand language.* Although his or her nonverbal intellectual performance is age appropriate, a child with this disorder struggles with speech and cannot mimic sounds.

Answers 40.14–40.18

40.14. The answer is C

40.15. The answer is B

40.16. The answer is E

40.17. The answer is A

40.18. The answer is D

Phonological disorder is characterized by poor sound production or articulation. There may be substitutions of one sound for another, omissions of certain sounds, or an inability to reproduce a sound accurately. Often, children with phonological disorder appear to be using “baby talk.” *In certain neurological conditions, phonological disorder may be characterized by dysarthria and apraxia.*

Mixed receptive-expressive language disorder is an impairment both in the understanding and production of language. Deficits in receptive language are most often accompanied by impairments in expressive language. Children with mixed receptive-expressive language disorder show a markedly delayed ability to comprehend verbal or sign language despite normal intellectual functioning. *Children with this disorder may appear to be deaf* because they do not respond normally to language; however, they do tend to respond to non-language sounds in their environment. When these children begin to use language, their speech contains numerous errors in articulation and substitutions of phonemes. *All of the communication disorders are two to four times more common in boys than girls.* This striking gender difference implies a genetic basis for these disorders.

Cluttering is a disordered speech pattern in which speech is erratically produced, with bursts of rapid and jerky words and phrases. Children with this speech pattern are typically unaware that their speech is abnormal. *Cluttering is often an associated feature of expressive language disorder.* Cluttering differs from stuttering in that the disturbance in fluency in stuttering is characterized by sound repetitions, pauses within words, prolongations, and audible or silent word blocking. Stutterers are generally aware of their stuttering, and many experience anxiety before speaking. *Stuttering usually appears before the age of 12 years; two peaks of onset exist at 2 to 3.5 years and 5 to 7 years.* In the preschool age group, children tend to stutter most often when they are excited or have a lot to say; stuttering at this age is often a passing phase. In the elementary school years, stuttering may become more chronic and may characterize the child’s everyday speech. Later in childhood, stuttering is often an intermittent event that manifests itself in the course of a specific situation. Stutterers often display fear, embarrassment, and anxious anticipation of speaking in public or avoid certain words and phrases that they associate with their stuttering.



Pervasive Developmental Disorders

The pervasive developmental disorders include a group of conditions in which there is impairment in the development of social skills, language and communication, and behavioral repertoire. Children with pervasive developmental disorders often exhibit idiosyncratic intense interest in a narrow range of activities, resist change, and are not appropriately responsive to the social environment. These disorders affect multiple areas of development, manifest early in life, and cause persistent dysfunction. Autistic disorder, the best known of these disorders, is characterized by sustained impairment in comprehending and responding to social cues; aberrant language development and usage; and restricted, stereotypical behavioral patterns. More than two-thirds of children with autistic disorder have mental retardation, although it is not required for the diagnosis.

There are five pervasive developmental disorders: autistic disorder, Rett syndrome, childhood disintegrative disorder, Asperger's disorder, and pervasive developmental disorder not

otherwise specified. Rett syndrome is characterized by normal development for at least 6 months. The deterioration that follows includes stereotyped hand movements, a loss of purposeful motions, diminishing social engagement, poor coordination, and decreasing language use. In childhood disintegrative disorder, development progresses normally for the first 2 years, after which the child shows a loss of previously acquired skills in two or more of the following areas: language use, social responsiveness, play, motor skills, and bladder or bowel control. Asperger's disorder is a condition in which the child is markedly impaired in social relatedness and shows repetitive and stereotyped patterns of behavior without a delay in language development. In Asperger's disorder, a child's cognitive abilities and adaptive skills are normal.

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

Students should know the following terms related to pervasive developmental disorders.

- | | | | |
|-------------------------------------|-------------------------------|------------------------------------|--------------------------------------|
| ▶ acquired aphasia | ▶ grand mal seizure | ▶ parental rage and rejection | ▶ seizures |
| ▶ Asperger's disorder | ▶ Heller's syndrome | ▶ perinatal complications | ▶ self-injurious behavior |
| ▶ autistic disorder | ▶ "idiot savant" | ▶ pervasive developmental disorder | ▶ sex distribution |
| ▶ childhood disintegrative disorder | ▶ language deviance and delay | ▶ Purkinje's cells | ▶ splinter function |
| ▶ echolalia | ▶ monotonous repetition | ▶ Rett syndrome | ▶ stereotypy |
| ▶ ego-educative approach | ▶ organic abnormalities | ▶ rote memory | ▶ tardive and withdrawal dyskinesias |
| ▶ enuresis | | | ▶ voice quality and rhythm |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 41.1.** In which disorder or syndrome does head growth begin to decelerate between the ages of 6 months and 1 year?
- Fragile X syndrome
 - Autistic disorder
 - Rett syndrome
 - Learning disorder
 - Asperger's disorder

- 41.2.** Neurological-biochemical abnormalities associated with autistic disorder include

- grand mal seizures
- ventricular enlargement on computed tomography (CT) scan
- electroencephalogram (EEG) abnormalities
- increased total brain volume
- all of the above

- 41.3.** True statements about autistic disorder include which of the following?

- Prevalence rates may be as high as one in 1,000 children.

- B. Girls outnumber boys in individuals with autism without mental retardation.
- C. Abnormalities in functioning must be present by age 2 to meet the text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) diagnostic criteria.
- D. There is an established and conclusive association between autism and upper socioeconomic status.
- E. All of the above
- 41.4.** True statements about the role of genetics in autistic disorder include which of the following?
- A. Unaffected siblings are not at increased risk for language problems.
- B. The role of genetic factors in autistic disorder is not well established.
- C. Family studies show a prevalence of approximately 2 to 3 percent of autism among siblings of children with autism.
- D. Twin studies indicate only moderate concordance for monozygotes.
- E. It is clear that what is inherited is a specific predisposition to autistic disorder.
- 41.5.** The most frequent *presenting* complaint of parents about their child with autism is
- A. their lack of usual play skills
- B. delays in the acquisition of language
- C. stereotyped movements
- D. their lack of interest in social interaction
- E. their difficulty tolerating change and variations in their routines
- 41.6.** Relative strengths of children with autism in psychological testing include which of the following?
- A. Abstract reasoning
- B. Integration skills
- C. Block design and digit recall
- D. Verbal concept formulation
- E. Similarities and comprehension
- 41.7.** What percentage of individuals with autism exhibits special abilities or splinter (savant) skills?
- A. 80 percent
- B. 50 percent
- C. 25 percent
- D. 10 percent
- E. Fewer than 1 percent
- 41.8.** Rett syndrome
- A. is seen only in boys
- B. does not involve motor abnormalities
- C. is associated with normal intelligence
- D. shows no loss of social skills
- E. none of the above
- 41.9.** The onset of childhood disintegrative disorder occurs during which age range?
- A. 1 to 2 years
- B. 2 to 3 years
- C. 3 to 4 years
- D. 4 to 5 years
- E. 5 to 6 years
- 41.10.** Which of the following is *not* a characteristic of Asperger's disorder?
- A. Visible awkwardness
- B. Inappropriate affect
- C. Poor coordination
- D. Odd posture
- E. Bouncy gait
- 41.11.** Tom was an only child. Birth, medical, and family histories were unremarkable. His motor development was somewhat delayed, but his communicative milestones were within normal limits. His parents became concerned about him at age 4 years when he was enrolled in a nursery school and was noted to have marked difficulties in peer interaction that were so pronounced that he could not continue in the program. In grade school, he was enrolled in special education classes and was noted to have some learning problems. His greatest difficulties arose in peer interaction—he was viewed as markedly eccentric and had no friends. His preferred activity, watching the weather channel on television, was pursued with great interest and intensity. On examination at age 13 years, he had markedly circumscribed interests and exhibited pedantic and odd patterns of communication with a monotonic voice quality. Psychological testing revealed an IQ within the normal range with marked scatter evident. Formal communication examination revealed age-appropriate skills in receptive and expressive language but marked impairment in pragmatic language skills. (From Volkmar F: Autism and the pervasive developmental disorders. In: Lewis M, ed. *Child and Adolescent Psychiatry: A Comprehensive Approach*. 2nd ed. Baltimore: Williams and Wilkins; 2002:489, with permission.)
- Which of the following is the most likely diagnosis in the case described above?
- A. Asperger's disorder
- B. Autistic disorder
- C. Childhood schizophrenia
- D. Down syndrome
- E. Fetal alcohol syndrome
- 41.12.** What is the most likely cause of Tom's difficulties?
- A. Autosomal recessive inheritance
- B. Chromosomal nondisjunction
- C. Lead poisoning
- D. Maternal neglect
- E. Neurodevelopmental abnormalities

- 41.13.** Based on the case above, which of the following interventions is most likely to be helpful?
- A. Psychodynamic play therapy
 - B. Social skills training
 - C. Risperidone therapy
 - D. Interpersonal psychotherapy
 - E. Methylphenidate therapy

Directions

Each set of lettered headings below is followed by a list of numbered phrases. For each numbered phrase, select:

- A. if the item is associated with A only.
- B. if the item is associated with B only.
- C. if the item is associated with both A and B.
- D. if the item is associated with neither A nor B.

Questions 41.14–41.18

- A. Autistic disorder
- B. Asperger's disorder

- 41.14.** Motor clumsiness is more common
41.15. Withdrawn in the presence of others
41.16. Aggression and self-injurious behaviors are more common
41.17. Onset is usually later, and the outcome involves less impairment
41.18. Qualitative impairments in social interaction and restricted patterns of interest

Directions

Each group of questions below consists of lettered headings followed by a list of numbered statements. For each numbered word or statement, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 41.19–41.23

- A. Asperger's disorder
- B. Autistic disorder
- C. Rett syndrome
- D. Childhood disintegrative disorder
- E. Pervasive developmental disorder not otherwise specified

- 41.19.** Normal development for the first 6 months followed by progressive encephalopathy
41.20. A better prognosis than other pervasive developmental disorders because of the lack of delay in language and cognitive development
41.21. Residual diagnostic category
41.22. Several years of normal development followed by a loss of communication skills, a loss of reciprocal social interaction, and a restricted pattern of behavior

- 41.23.** Occurrence at a rate of two to 10 cases per 10,000 and characterized by impairment in social interaction, communicative language, or symbolic play before age 3 years.

Questions 41.24–41.27

- A. Haloperidol (Haldol)
- B. Naltrexone (ReVia)
- C. Risperidone (Risperdal)
- D. Selective serotonin reuptake inhibitors (SSRIs)

- 41.24.** This opiate antagonist is being investigated in the treatment of autism by reducing stereotypic behavior.
41.25. This drug has both dopamine (D₂) and serotonin (5-HT) antagonist properties.
41.26. This drug has a high risk of extrapyramidal signs.
41.27. This drug is used to decrease obsessive-compulsive and stereotypic behaviors.

ANSWERS

41.1. The answer is C

Rett syndrome is a progressive condition that develops after some months of apparently normal development. Head circumference is normal at birth, and early developmental milestones are unremarkable. Between 5 and 48 months (usually between 6 months and 1 year), head growth begins to decelerate. Purposeful hand movements are lost, and characteristic midline hand wringing or hand washing stereotypies develop. Expressive and receptive language skills become severely impaired and are associated with marked mental retardation. In the preschool years, gait apraxia and truncal apraxia and ataxia develop.

Fragile X syndrome is the second most common cause of mental retardation. It is characterized by a long jaw, prominent ears, and macroorchidism. *Asperger's disorder* is characterized by impairment in social relatedness. Patients also exhibit stereotyped behaviors but do not have language impairment. *Autistic disorder* and *learning disorders* do not include changes in head growth.

41.2. The answer is E (all)

An abundance of evidence exists demonstrating associations between autistic disorder and a variety of biological abnormalities. Estimates of lifetime occurrence of *grand mal seizures* ranges between 4 and 32 percent. Recent neuroimaging studies suggest a pattern of increased and then decreased rate of brain growth over time; *increased total brain volume* is noted in many individuals with autism. *Ventricular enlargement on CT scan* is observed in 20 to 25 percent of individuals with autism. Although no EEG findings are specific for autism, abnormalities are common in the disorder; *estimates of prevalence of EEG abnormalities range from 10 to 83 percent*, and failure of cerebral lateralization is a typical finding. One-third of children with autism demonstrate elevated serum serotonin levels; the significance of this finding is uncertain, particularly given similar rates of hyperserotoninemia in children with severe mental retardation.

41.3. The answer is A

Autistic disorder is characterized by marked and sustained impairment in social interaction, delayed and aberrant communication skills, and a restricted repertoire of activities and interests. To meet criteria for diagnosis, *abnormal functioning in at least one of these areas must begin by age 3 (not 2) years*. Mental retardation is the most common comorbid condition with autism: approximately 75 percent of children with autism are also mentally retarded. Accumulating evidence indicates that *prevalence rates for autistic disorder may be as high as one in 1,000 children*.

Autistic disorder is four to five times more likely in boys than in girls. Girls with autism are more likely to have severe mental retardation than boys with autism. *Among children with autism with normal intelligence, the ratio of boys to girls may be as high as 6 to 1*, but among children with autism with moderate to severe mental retardation, the ratio of boys to girls may be as low as 1.5 to 1. There is no clear explanation for girls' underrepresentation among children with autism who do not have mental retardation; one hypothesis suggests that more severe brain dysfunction is required to cause autism in girls.

Although early work on the epidemiology of autism suggested an association between the disorder and higher socioeconomic status, more recent and methodologically sophisticated studies have failed to confirm this relationship. Nevertheless, families from disadvantaged backgrounds appear underrepresented in clinically referred samples.

41.4. The answer is C

Although early theories focused on now-discredited theories of faulty parenting as etiologic factors in autism, current evidence strongly supports biological and genetic factors as causal. *Studies of twins indicate high (not moderate) concordance among monozygotic twins*, with reduced concordance for dizygotic twins. However, environmental influences are also important because concordance in monozygotic twins is less than 100 percent, and the phenotypic expression of the disorder varies widely, even within monozygotic twins.

Family studies have shown a prevalence of approximately 2 to 3 percent of autism in siblings of children with autism, which represents a 50- to 100-fold increase in risk compared with the general population. Even when not affected with autism, *siblings of children with autism are at increased risk for various developmental problems, particularly language and cognitive difficulties*. It is unclear whether what is inherited is a specific predisposition to autism or a more general predisposition to developmental issues. Family studies reveal increased rates of mood disorders, anxiety disorders, and social difficulties among first-degree relatives of individuals with autism. Although *the influence of genetic factors on autistic disorder is now well established*, specific modes of inheritance are unknown. Current research seeks to elucidate further details of the genetics of the disorder.

41.5. The answer is B

As many as 50 percent of all individuals with autism never develop speech. *Delays in the acquisition of language are the most frequent presenting complaints of parents of children later diagnosed with autism*. Usual patterns of language acquisition (e.g.,

babbling, practicing sounds) are often absent. Infants and young children with autism may take a parent's hand to obtain a desired object without initiating eye contact (as though the hand, and not the person, is responsible for obtaining the item). In contrast to children with language disorder, these children do not appear to be very motivated to engage in communication or exclusively attempt to communicate via nonverbal means. When individuals with autism do use speech, their language is remarkable. They often echo words and sounds they have heard (echolalia). They struggle with flexibility in language; for example, they do not recognize that changes in perspective of speaker require pronoun changes, leading to pronoun reversal ("You want juice," rather than "I want juice"). Speech is often *nonreciprocal*, a term that indicates speech not intended to produce communication with another person.

Deficits in play may include a failure to develop usual patterns of symbolic-imaginative play. Children with autism may preferentially explore nonfunctional aspects of play materials (e.g., taste or smell) or use elements of toys exclusively for self-stimulation (e.g., spinning the wheels on a toy truck rather than "driving" the truck).

Children with autism fail to develop social relatedness to their parents and other people. They may lack a social smile as infants, and their eye contact is limited. Human faces hold little interest for infants and children with autism, which likely relates to *disturbances in development of joint attention, attachment, and other aspects of social interaction*.

Children with autistic disorder often have difficulty tolerating changes and variations in routine. For example, an attempt to alter the sequence of some activity may be met with what appears to be catastrophic distress on the part of the child. Parents may report that children insist on engaging in activities in very particular ways. Meanwhile, children with autism do not tend to engage in spontaneous exploratory play. Toys and objects are not used in symbolic play, and the play they do initiate tends to be rigid and monotonous. The child may develop an interest in a repetitive activity such as collecting strings, memorizing numbers, or repeating certain words and phrases. In younger children, attachment to objects, when they occur, tends to differ from more normative transitional objects. They often spin, bang, or line up their favored objects.

Movement abnormalities are common in children with autism, particularly in those who are also mentally retarded. *Stereotyped movements* may include toe walking, finger flicking, body rocking, arm flapping, and other mannerisms, which are engaged in for pleasurable or self-soothing purposes. They may be intensely preoccupied with spinning objects, and may, for example, spend long periods of time watching a ceiling fan rotate.

41.6. The answer is C

Approximately 75 percent of children with autism are mentally retarded; 30 percent are in the mild to moderate range, and 45 percent are severely to profoundly mentally retarded. On psychological testing, typical profiles of children with autism reveal *significant deficits in abstract reasoning, verbal concept formulation, integration skills*, and tasks requiring social understanding. Therefore, on the Intelligence Scale for Children, for example, *weaknesses are observed on the Similarities and Comprehension subtests*. In contrast, relative strengths tend to exist in areas of rote learning, memory skills, and visual-spatial

problem solving, particularly on tasks that can be completed piecemeal and do not require understanding of the context of the task. Therefore, *performance on the Block Design and Digit Recall subtests of the Wechsler scales are usually the areas of highest achievement* for children with autism.

41.7. The answer is D

One of the most fascinating cognitive phenomena in autistic disorder is the presence of so-called “islets of precocity” or “splinter skills,” preserved or highly developed skills in particular areas that contrast with the individual’s overall cognitive deficits. For example, children with autism may have great facility in decoding numbers and letters, sometimes at early stages of development (hyperlexia) despite very limited comprehension of what is read. *Approximately 10 percent of individuals with autism exhibit splinter skills*—high performance on a specific skill in the presence of mild or moderate mental retardation. This phenomenon tends to occur among a narrow range of skills—memorizing lists or other trivial information, calculations, visual-spatial skills such as drawing, or musical skills such as perfect pitch or ability to memorize a piece of music after hearing it once.

41.8. The answer is E (none)

Rett syndrome is a progressive condition that develops after 6 months of apparently normal development after birth. Head circumference at birth is normal, and early developmental milestones, including social interactions, are unremarkable. Between 6 and 48 months, most commonly between 6 and 12 months, a progressive encephalopathy develops. Head growth begins to decelerate, with resultant microcephaly. *Motor abnormalities occur*: purposeful hand movements are lost, and characteristic midline hand movements, such as hand wringing, emerge. Gait and truncal apraxia, ataxia, and poor coordination develop in the preschool years. Expressive and receptive language skills deteriorate and are associated with *marked mental retardation (not normal intelligence)*. *A loss of social interactional skills* is observed during the preschool years. The etiology of the disease is unknown. A genetic basis for the condition is likely; *Rett syndrome occurs only in girls*, and case reports indicate complete concordance in monozygotic twins. Associated features include seizures (occurring in up to 75 percent of affected patients) and irregular respiration with episodes of hyperventilation, apnea, and breath holding.

41.9. The answer is C

The onset of childhood disintegrative disorder is usually between the ages of 3 and 4 years and may be either abrupt or gradual. There may be nonspecific agitation or anxiety before developmental deterioration. The loss of social and communicative skills is, understandably, of great concern to parents. Stereotyped behaviors, problems with transitions and change, and nonspecific overactivity often develop. Deterioration in self-help skills can be striking and is in contrast to autism, in which such skills are acquired somewhat later than usual but typically are not lost.

41.10. The answer is B

Inappropriate affect is not a characteristic of Asperger’s disorder. Individuals with Asperger’s syndrome are often *visibly awkward*

and *poorly coordinated* and may exhibit a stilted or *bouncy gait* patterns and *odd posture*. Neuropsychologically, there is often a pattern of relative strengths in auditory and verbal skills and rote learning and significant deficits in visual-motor and visual-perceptual skills and conceptual learning. Many children exhibit high levels of activity in early childhood, and the most commonly reported comorbid symptoms in adolescence and young adulthood are anxiety and, particularly, depression, sometimes with suicidal ideation.

41.11. The answer is A

Fetal alcohol syndrome and *Down syndrome* include characteristic facial and other features that Tom does not have. *Schizophrenia in children* can be difficult to diagnose because of their limitations in describing their inner experiences and the difficulty in distinguishing normal childhood fantasy from hallucinations and delusions. However, unlike Tom, children who have schizophrenia almost always develop symptoms after a period of normal childhood development. Tom showed impaired social interactions from very early on. This is a core feature of both *autistic disorder* and *Asperger’s disorder*. The difference between them is that language is impaired in autistic disorder and normal in Asperger’s disorder. Tom’s language is normal except for impairment in pragmatic language.

41.12. The answer is E

There is a growing consensus among clinicians and researchers that both autism and Asperger’s disorder *are the result of neurodevelopmental abnormalities*, but no specific neuroanatomic or neurofunctional deficit has been identified. There is *no evidence that Asperger’s disorder is caused by parental neglect* or any other pattern of parenting. There is a slight familial trend to the disorder—the prevalence among first- and second-degree relatives is greater than the prevalence for the population at large—but whether or not this represents a genetic factor is not established.

41.13. The answer is B

There is no definitive treatment for Asperger’s disorder. *Pharmacotherapy will not treat the underlying disorder* but may be helpful for ancillary symptoms such as aggression or depression. *Psychodynamic and interpersonal psychotherapy are inappropriate* because of the problems with social understanding and empathy. *Therapy that focuses on social and communications skills, problem solving, and deriving strategies for dealing with novel situations has the greatest likelihood of being helpful*. In addition, many adults with Asperger’s disorder benefit from self-support groups in which they can meet and learn from other people with similar disabilities.

Answers 41.14–41.18

41.14. The answer is B

41.15. The answer is A

41.16. The answer is A

41.17. The answer is B**41.18. The answer is C**

Most children with autism have significant early delays and disruption in language acquisition and cognitive development. *The differential diagnosis between autistic disorder without mental retardation and Asperger's disorder can be difficult but is made clearer by the findings that the latter condition tends to have a later onset and less overall impairment.* In addition, Asperger's disorder is distinguished by less severe social and communication deficits, *less prominent aggression and self-injurious behaviors*, absent or minor stereotypes, more conspicuously circumscribed interests, and *more frequent motor clumsiness* compared with autistic disorder.

Diagnosis of Asperger's disorder requires demonstration of qualitative impairments in social interaction and restricted patterns of interest, identical criteria to those for autistic disorder. In contrast to autism, however, criteria differ in that there should be no clinically significant delay in language acquisition, cognitive development, or self-help skills. *Although children with autism tend to be socially withdrawn, children with Asperger's do not tend to withdraw socially* but nevertheless struggle socially because of their tendency to approach and interact with others in awkward or inappropriate ways.

Answers 41.19–41.23**41.19. The answer is C****41.20. The answer is A****41.21. The answer is E****41.22. The answer is D****41.23. The answer is B**

Rett syndrome is characterized by normal development for at least the first 6 months followed by a progressive encephalopathy. *Asperger's disorder may have a better prognosis than other pervasive developmental disorders* because of the preservation of normal language and cognitive development. *Pervasive developmental disorder not otherwise specified is a residual diagnostic*

category that is used to denote a subthreshold form of autism or a manifestation of autism that is atypical (i.e., atypical autism) in terms of onset patterns or symptomatology. *Childhood disintegrative disorder is characterized by several years of normal development* followed by a loss of communication skills, a loss of reciprocal social interaction, and a restricted pattern of behavior. *Autistic disorder occurs at a rate of two to 10 cases per 10,000* and is characterized by impairment in social interaction, communicative language, or symbolic play before age 3 years.

Answers 41.24–41.27**41.24. The answer is B****41.25. The answer is C****41.26. The answer is A****41.27. The answer is D**

No specific medications exist to target the core symptoms of autistic disorder. However, a number of drugs have proven useful in ameliorating associated behavioral symptoms, including aggression, self-injurious behaviors, mood lability, irritability, obsessive-compulsive behaviors, hyperactivity, stereotypic behaviors, and social withdrawal. *Naltrexone, an opiate antagonist*, has been tried with the hope that by blocking endogenous opioid activity, stereotypic behaviors in autism will decrease. *Risperidone, an antipsychotic medication with blocking activity at both dopamine (D₂) and serotonin (5-HT) receptors*, has been shown to be effective in diminishing aggression, irritability, and self-injurious behaviors in individuals with autism. *Haloperidol*, a high-potency dopamine-blocking antipsychotic, has been useful in reducing irritability and improving sociability among children with autism. Approximately 25 percent of children given haloperidol develop withdrawal dyskinesias, a troubling but generally self-limited symptom, when this drug is stopped. The *selective serotonin reuptake inhibitors*, which are effective medications for obsessive-compulsive symptoms among adults, have also been used for the treatment of *obsessions, compulsions, and stereotypic behaviors* among children and adolescents with autism.



Attention-Deficit Disorders

Attention-deficit/hyperactivity disorder (ADHD) is the most common behavioral disorder among children in the United States. It is a behavioral and neurocognitive condition characterized by inattention, hyperactivity, or both lasting for at least 6 months. The onset is typically before age 7 years. Although ADHD begins in childhood, fewer than 40 percent of such children continue to meet diagnostic criteria in their teenage years. In studies, adults with childhood histories of ADHD were found to have higher rates of accidents, injuries, health problems, pregnancies, and job and marital problems. Although prevalence estimates for ADHD vary by country and region, as well as by age, a pooled estimate of worldwide prevalence is 5.29 percent. This figure showed the most variation geographically between Europe and North America.

The disorder has been identified in the literature for many years under a variety of terms. In the early 1900s, impulsive, disinhibited, and hyperactive children—many of whom had

neurological damage caused by encephalitis—were grouped under the label *hyperactive syndrome*. In the 1960s, a heterogeneous group of children with poor coordination, learning disabilities, and emotional lability but without specific neurological damage were described as having minimal brain damage. Since then, other hypotheses have been put forth to explain the origin of the disorder, such as genetically based condition involving abnormal arousal and poor ability to modulate emotions. This theory was initially supported by the observation that stimulant medications help produce sustained attention and improve these children's ability to focus on a given task. Currently, no single factor is believed to cause the disorder, although many environmental variables may contribute to it, and many predictable clinical features are associated with it.

Students should test their knowledge by addressing the following questions and answers.

HELPFUL HINTS

Students should know the following terms.

- | | | | |
|----------------------------|-----------------------------|-----------------------------|-----------------------------|
| ▶ adult manifestations | ▶ EEG findings | ▶ matching familiar faces | ▶ right–left discrimination |
| ▶ ambidexterity | ▶ genetic-familial factors | ▶ minimal brain damage | ▶ school history |
| ▶ body anxiety | ▶ growth suppression | ▶ nonfocal (soft) signs | ▶ secondary depression |
| ▶ clonidine (Catapres) | ▶ hyperactivity-impulsivity | ▶ perceptual-motor problems | ▶ sympathomimetic |
| ▶ disinhibition | ▶ hyperkinesia | ▶ PET scan | |
| ▶ disorganized EEG pattern | ▶ locus ceruleus | ▶ rebound effect | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 42.1.** Which of the following statements regarding tricyclic antidepressant (TCAs) is *not* true?
- The TCAs are known to slow cardiac conduction.
 - A common side effect of TCAs is constipation.
 - The TCAs are more effective than stimulants.

- The TCAs are often administered in divided doses to reduce side effects.
- The TCAs are rarely used to treat children with ADHD.

- 42.2.** Findings from neuroimaging studies of subjects with ADHD include which of the following?
- Reduced perfusion in bilateral frontal areas on positron emission tomography (PET)
 - Increased perfusion in prefrontal, striatal, and thalamic regions in response to methylphenidate administration on PET scan

- C. Dorsal anterior cingulate cortex (DACC) dysfunction on functional magnetic resonance imaging (fMRI)
- D. Abnormalities in frontostriatal brain regions on various imaging techniques
- E. All of the above
- 42.3.** Which of the following statements describing the genetics of ADHD is *true*?
- A. The risk of ADHD for a sibling of a child proband with ADHD increases up to five times in some studies.
- B. Children with ADHD are at no greater risk of developing conduct disorder than children of similar ages without ADHD.
- C. Concordance rates for ADHD range from 25 to 40 percent for monozygotic twins.
- D. Concordance rates for ADHD range from 5 to 10 percent for dizygotic twins.
- E. The heritability of inattention-related behaviors is estimate to range between 40 and 55 percent.
- 42.4.** Possible acquired etiological influences in ADHD include
- A. low socioeconomic status
- B. elevated intake of sugar-containing foods during early childhood
- C. high birth weight (above 4,000 g)
- D. prenatal exposure to alcohol or nicotine
- E. all of the above
- 42.5.** Which of the following statements about ADHD is *false*?
- A. Children with ADHD can have inattention with no hyperactivity or impulsivity.
- B. Children with ADHD may have symptoms of hyperactivity but not inattention.
- C. The disturbance in behavior must occur in at least two settings.
- D. Children can meet the criteria for ADHD with impulsive symptoms only.
- E. Many children with ADHD have many symptoms of inattention, hyperactivity, and impulsivity.
- 42.6.** The first symptom of ADHD to remit is usually
- A. hyperactivity
- B. distractibility
- C. careless mistakes in schoolwork
- D. impulsivity
- E. learning difficulties
- 42.7.** Hyperactive and impulsive children are often
- A. accident prone
- B. explosively irritable
- C. unable to resist blurting out answers
- D. excessively talkative
- E. all of the above
- 42.8.** Diana is a 9-year-old girl brought in for her first psychiatric consultation by her parents, who were troubled by Diana's behavior during the Thanksgiving holiday. Diana's mother described Diana's propensity toward interrupting others' conversations, her inability to stay seated at the dinner table for longer than several minutes at a time, and her frequent and brief but very noticeable bouts of sullen mood.
- Both parents reported that Diana's "quirks" have been observable throughout her life. They described her as "moody," "stubborn," "turbo-charged," "impulsive," and "a bit aggressive with others," traits that they have noticed since she was an infant. Academically, Diana thrived in certain classes, particularly those in which she was immediately engaged with the material, but she also struggled mightily with certain subjects, particularly reading and writing. Distractibility also caused significant problems; teachers frequently commented on the need to seat Diana away from the windows and at the front of the class in an effort to maintain her focus on the lesson. The teacher also commented that Diana rarely stayed in her seat for more than a few minutes at a time and made frequent visits to the bathroom and drinking fountain.
- Diana was resistant to meeting with the psychiatrist and was feeling "grouchy" when the interview began. During the interview, after initially sitting in a chair with her arms crossed, she walked around the psychiatrist's office, examining objects within reach, at one point perching perilously on the edge of an end table in an effort to reach a book, responding only to the psychiatrist's repeated insistence that she not climb on the furniture.
- The diagnosis in the case above is
- A. ADHD
- B. anxiety disorder
- C. bipolar I disorder
- D. conduct disorder
- E. expressive language disorder

Directions

Each set of lettered headings below is followed by a list of numbered words or statements. For each numbered word or statement, select the *one* lettered heading most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 42.9–42.13

- A. Methylphenidate (Ritalin)
- B. Dextroamphetamine (Dexedrine)
- C. Bupropion (Wellbutrin)
- D. Clonidine (Catapres)
- E. None of the above

- 42.9.** This drug is favored in children with ADHD and a history of severe tic disorders and may be particularly helpful when ADHD symptoms are pronounced in the late afternoon or evening.

- 42.10.** This drug has a short half-life and has been shown to improve symptoms in approximately 75 percent of ADHD-diagnosed children.
- 42.11.** This drug may be favored in children who experience significant rebound symptoms from stimulants or in children with comorbid ADHD and depression.
- 42.12.** This drug has a half-life of 8 to 12 hours and is approved in children as young as 3 years old for treatment of ADHD.
- 42.13.** Growth suppression occurs during treatment with this drug, but studies indicate that children recoup the growth when given “drug holidays” over weekends and vacations.

Questions 42.14–42.17

- A. ADHD, inattentive type
 B. ADHD, hyperactive-impulsive type
 C. ADHD, combined type
 D. All of the above
 E. None of the above

- 42.14.** Most common
42.15. Least common
42.16. Most children identified as having this subtype were 3 to 4 years younger than children diagnosed with other subtypes.
42.17. These children are often described as sluggish, anxious, and sleepy.

ANSWERS

42.1. The answer is C

The fact that the TCAs are less effective than stimulants for ADHD and have a much more serious side effect profile (with fatigue, sedating, and cardiovascular side effects) have made them much less popular with patients and clinicians. Cardiovascular adverse events are the most serious adverse events of these medications and are thought to explain why these medications are rarely used in children with ADHD. Several cases of sudden death have been reported in children taking TCAs. Cardiovascular adverse events include the slowing of cardiac conduction, increasing the electrocardiographic (ECG) reading of the PR and QRS intervals. For that reason, many clinicians monitor the PR interval and do not enroll patients in the treatment if that interval exceeds 0.2 second. Such slowing increases the risk of cardiac arrhythmias and heart block. Although the TCAs have not proven to be the cause of these deaths, ECGs at baseline and after each dose adjustment need to be taken in routine monitoring of the PR interval.

Other side effects might be commonly experienced. These include cholinergic side effects, such as constipation, dry mouth, or blurred vision. To minimize side effects, the TCAs are given to children and adolescents in divided doses.

42.2. The answer is E (all)

Structural and functional neuroimaging techniques have contributed significantly to the evolving understanding of the etiology of ADHD. Across a range of techniques, including positron

emission tomography (PET), single photon emission computed tomography (SPECT), functional magnetic resonance imaging (fMRI), and magnetic resonance spectroscopy (MRS), a consistent finding has been *abnormalities in frontostriatal brain regions*. These discoveries are in keeping with clinical observations of ADHD patients that suggest deficits in attention, self-regulation, cognition, working memory, motor control, and other functions that are principally mediated by frontostriatal structures, particularly DACC. In general, underactivity in implicated areas, for example, *reduced perfusion in bilateral frontal areas on PET scan* and *DACC dysfunction on fMRI scan* is thought to correspond to key behavioral and emotional difficulties that characterize ADHD. Further evidence for the connection between frontostriatal dysfunction and ADHD symptoms and treatment is provided by the observation of *increased perfusion in prefrontal, striatal, and thalamic regions in response to methylphenidate administration*, as measured on PET scan.

42.3. The answer is A

There is ample and compelling evidence for a genetic basis for ADHD. Most published controlled family studies report significantly higher risks of ADHD in first- and second-degree relatives of probands with ADHD compared with normal control subjects. For example, *the risk of ADHD in siblings of child probands is increased by between 1.8 and 5 times*. Analyses of twin studies have provided further evidence of a genetic influence in ADHD: *concordance rates for monozygotic twins range from 51 to 80 percent (not 25 to 40 percent) and for dizygotic twins range from 29 to 33 percent (not 5 to 10 percent)*. Individual symptom domains of inattention and hyperactivity have also been tracked in terms of heritability. *The heritability of inattention-related behaviors is estimated to range between 76 and 98 percent (not 40 and 55 percent)*, and the heritability of hyperactivity-related behaviors is judged to range between 64 and 77 percent. These very high rates of behavioral trait heritability provide convincing evidence that the cardinal behaviors of ADHD are highly influenced by genetics. The presence of ADHD in a proband indicate an increase risk of other disorders in both the proband and biological relatives; one example of this increased risk is the *significant increase in risk of developing conduct disorder in children with ADHD compared with normal controls subjects*.

42.4. The answer is D

A number of acquired influences have been identified as etiologic factors in the development of ADHD in some individuals, including pregnancy and delivery complications; *low birth weight (not high birth weight)*; traumatic brain injury; and *prenatal exposure to substances, including alcohol and nicotine*. The impact of these factors appears to be more limited than familial or genetic factors within groups of subjects with ADHD; they likely are most salient in the etiology of nonfamilial forms of ADHD.

Substance exposure in utero has long been implicated in childhood problems with behavioral control and emotional regulation. Prenatal exposure to alcohol and nicotine has been strongly associated with the development of ADHD, as well as other difficulties with cognition and behavior. Although these exposures to substances may often co-occur with other environmental factors that influence development, alcohol and nicotine

have generally been found to independently increase the risk of ADHD. Meanwhile, *low socioeconomic status does not independently increase the risk of developing ADHD*. Similarly, despite the common misperception in the public, *sugar intake at any age has not been found to play a role in the etiology of ADHD*.

42.5. The answer is D

Children cannot meet criteria for ADHD with impulsive symptoms alone; they must exhibit either hyperactivity or inattention as well. Children with ADHD can have inattention with no hyperactivity or impulsivity if at least six symptoms of inattention are present. Children with ADHD may have hyperactivity without inattention, but they must have four symptoms of hyperactivity or four symptoms of a combination of hyperactivity and impulsivity. The disturbance must be present in at least two settings. Many children with ADHD have multiple symptoms, including inattentive, hyperactive, and impulsive symptoms.

42.6. The answer is A

Hyperactivity is usually the first symptom of ADHD to remit in the natural course of the disorder. Overall, the course of ADHD is highly variable: for example, symptoms may remit at puberty, or they may persist into adolescence and adulthood; alternatively, hyperactivity may remit, but decreased attention span, careless mistakes in school work, poor impulse control, and learning difficulties often persist. Remission before age 12 years is rare; when remission does occur, it tends to do so between the ages of 12 and 20 years. Studies suggest, however, that the majority of individuals with ADHD experience only partial improvement in symptoms, contributing to vulnerabilities in adult life to professional and vocational difficulties, mood disorders, and substance abuse disorders.

42.7. The answer is E (all)

Hyperactive children are often accident prone, explosively irritable, excessively talkative, and reluctant to engage quietly in leisure activities. In school, they may begin an assignment eagerly but then quickly lose interest; they blurt out answers prematurely, have difficulty waiting for their turn, and struggle socially as a result of their tendency toward interrupting conversations and intruding on the activities of their peers. At home, they are demanding and impatient, and irritable reactions may be provoked by seemingly innocuous stimuli; these reactions often seem to puzzle and dismay the child as well as the parents. They are emotionally labile, and their performances at various tasks tend to be variable and unpredictable.

42.8. The answer is A

Many children with ADHD have secondary depression in reaction to their continuing frustration over their failure to learn and their consequent low self-esteem. This condition must be distinguished from a primary depressive disorder, which is likely to be characterized by hypoactivity and withdrawal. Mania and ADHD share many core features such as excessive verbalization, motoric hyperactivity, and high levels of distractibility. Additionally, in children with mania, irritability seems to be more common than euphoria. Although mania and ADHD can coexist, children with

bipolar I disorder exhibit more waxing and waning of symptoms than those with ADHD. Recent follow-up data for children who met the criteria for ADHD and subsequently developed bipolar disorder suggest that certain clinical features occurring during the course of ADHD predict future mania. Children with ADHD who had developed bipolar I disorder at 4-year follow-up had a greater co-occurrence of additional disorders and a greater family history of bipolar disorders and other mood disorders than children without bipolar disorder.

Frequently, conduct disorder and ADHD coexist, and both must be diagnosed. Learning disorders of various kinds must also be distinguished from ADHD; a child may be unable to read or do mathematics because of a learning disorder rather than because of inattention. ADHD often coexists with one or more learning disorders, including reading disorder, mathematics disorder, and disorder of written expression.

Answers 42.9–42.13

42.9. The answer is D

42.10. The answer is A

42.11. The answer is C

42.12. The answer is B

42.13. The answer is A

Central nervous system (CNS) stimulants have long records of significant efficacy and excellent safety profiles in the treatment of patients with ADHD. These medications, including methylphenidate, dextroamphetamine, and mixed amphetamine salts, exist in both short-acting and sustained-release preparations; the longer-acting versions are increasingly preferred both for ease of dosing (especially because children no longer have to take second doses in the middle of the school day) and for decreased concerns about rebound symptoms. Tic disorders can be exacerbated by stimulant use; therefore clonidine, an agent effective both in treating ADHD symptoms and in diminishing tic symptoms, is a good choice when these conditions coexist. Clonidine commonly causes sedation, a beneficial effect in children who become particularly hyperactive in the evening. Methylphenidate reaches peak blood level 1 to 2 hours after administration and has a half-life of 3 to 4 hours, the shortest of the stimulant medications. Efficacy rates of methylphenidate are approximately 75 percent in most studies. This short duration of action may lead to rebound symptoms, including irritability and enhanced hyperactivity, in some children. These symptoms are intolerable in some children; bupropion may be a good choice for these patients, and is also useful in patients with comorbid depression who benefit from the antidepressant effects of this medication. Dextroamphetamine is approved by the U.S. Food and Drug Administration (FDA) for use in the treatment of ADHD in children 3 years old and older. Its half-life is 8 to 12 hours, after which significant rebound may be experienced. Growth suppression may occur in children taking methylphenidate. Although growth may be suppressed when the drug is being taken, evidence suggests that the final height of children prescribed



Table 42.1
Medications for the Treatment of Attention-Deficit/Hyperactivity Disorder and Suggested Monitoring

Medication	Preparation	Approximate Dosage Range
First-line agents		
Methylphenidate (Ritalin)	5-, 10-, and 20-mg scored tablets SR: 20-mg tablet	0.3–1.0 mg/dose TID; total daily dose <60 mg
Dextroamphetamine (Dexedrine)	5- and 10-mg scored tablets Spansules (SR): 5-, 10-, and 15-mg capsules	0.15–0.5 mg/kg/dose BID; total daily dose <40 mg
Dextroamphetamine and amphetamine salts (Adderall)	5-, 10-, 20-, 30-mg tablets	0.15–0.5 mg/kg dose every AM or BID; total daily dose <4 mg
Second-line agents		
Pemoline (Cylert)	18.75-, 37.5-, and 75-mg tablets; 37.5-mg chewable tablets	1–3 mg/kg/day
Bupropion (Wellbutrin; Zyban)	50-, 75-, 150-mg tablets, 150 mg	150–300 mg/day (3–6 mg/kg)
Venlafaxine (Effexor)	25-, 37.5-, 50-, 100-mg tablets	25–150 mg/day BID
Clonidine (Catapres)	0.1-, 0.2-, and 0.3-mg scored tablets	3–10 μg/kg given TID or QID (average, 0.1 mg QID)
Monitoring		
Baseline	Physical examination within 6 months Height, weight, blood pressure, and pulse	
Every 3–4 mo	Height, weight, blood pressure, and pulse	
Annual	Physical examination, laboratory studies as indicated	

BID, twice a day; QID, four times a day; SR, sustained release; TID, three times a day.

methylphenidate is unchanged, provided that “drug holidays” are given on weekends and summer vacations. Table 42.1 presents commonly prescribed medications for ADHD.

Answers 42.14–42.17

42.14. The answer is C

42.15. The answer is B

42.16. The answer is B

42.17. The answer is A

The text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) subtypes of ADHD describe some of the symptom variability found in ADHD: the inattentive, hyperactive-impulsive, and combined types. Among children referred to clinics for diagnosis and treat-

ment, *the combined type is most common* followed by the inattentive type; *the hyperactive-impulsive type is least common*. Although by definition, individuals diagnosed with ADHD must present with a history of symptoms before the age of 7 years, the average age at diagnosis is approximately 7 to 9 years old. Among the subtypes, *the hyperactive-impulsive subtype is notable in that most children with this subtype were diagnosed 3 to 4 years before children diagnosed with other subtypes*. ADHD children with the inattentive subtype tends to be diagnosed later, perhaps because they tend to exhibit fewer of the oppositional, defiant, and aggressive behavior that often occurs in the hyperactive-impulsive subtype and that tends to prompt early referral for evaluation. Although symptoms often overlap across subtypes of ADHD, and although there is significant correlation between hyperactive-impulsive and inattentive behaviors, some notable differences are observed among the subtypes. For example, *children with the inattentive subtype are often described as sluggish, anxious, sleepy, and prone to daydreaming*.



Disruptive Behavior Disorders

The disruptive behavior disorders are heterogeneous conditions that are associated with very high rates of psychiatric comorbidity. These disorders are very costly and come with a much greater rate of public expenditure than similar neuropsychiatric disorders that occur in children and adolescents. Many societal institutions that serve children and adolescents, including the family—the educational system, juvenile justice systems, community and public health systems, and mental health systems—experience the impact of children with disruptive behavior disorders.

The origin of disruptive behavior disorder is widely accepted as multifactorial: biological, temperamental, learned, and psychological. One controversial issue that has arisen is whether “voluntary” maladaptive behaviors can be misconstrued as a psychiatric disorder or can be better accounted for as maladaptive

responses to overly harsh or punitive parenting. Longitudinal studies have demonstrated that for some children and adolescents, early patterns of disruptive behavior may become a life-long pervasive repertoire culminating in adult antisocial personality disorder.

Disruptive behavior disorders can be divided into two distinct constellations of symptoms categorized as oppositional defiant disorder and conduct disorder, both of which result in impaired social or academic function in children. Some defiance and refusal to comply with adult requests is developmentally appropriate and marks growth in all children, but children with certain disorders are themselves impaired by the frequency and severity of their disruptive behaviors.

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

Students should know the following terms.

- ▶ CNS dysfunction
- ▶ comorbid disorders
- ▶ harsh child-rearing structure
- ▶ negativistic relationships
- ▶ normative oppositional stages
- ▶ parental psychopathology
- ▶ poor peer relationships
- ▶ poor self-esteem
- ▶ socioeconomic deprivation
- ▶ temperamental predispositions
- ▶ terrible twos
- ▶ truancy
- ▶ violation of rights

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 43.1.** To be diagnosed with childhood-onset conduct disorder, at least one criterion for the disorder must be met before what age?
- A. 10 years
 - B. 11 years
 - C. 12 years
 - D. 13 years
 - E. 14 years

- 43.2.** In oppositional defiant disorder,

- A. the average age of onset is 3 years
- B. boys always outnumber girls, regardless of age range
- C. occurrence is mostly in cohorts of middle to higher socioeconomic status
- D. point prevalence has been reported to average around 6 percent
- E. all of the above

- 43.3.** What is the lifetime prevalence rate of oppositional defiance disorder in the United States?

- A. 2.5 percent
- B. 4.5 percent
- C. 6.5 percent
- D. 8.5 percent
- E. 10.5 percent

- 43.4.** The most common comorbidity with oppositional defiant disorder is
- anxiety disorders
 - attention-deficit/hyperactivity disorder (ADHD)
 - dysthymic disorder
 - early-onset bipolar I disorder
 - major depressive disorder
- 43.5.** In conduct disorder,
- symptoms are clustered in two areas
 - subtyping is allowed based on the age of onset of symptoms
 - at least five of a list of 15 antisocial behaviors must be present
 - all behaviors must have been present in the past 6 months
 - all of the above
- 43.6.** Factors associated with conduct disorder include
- chronic illness
 - temperament
 - disturbed laterality and language performance
 - viewing televised or other media violence
 - all of the above
- 43.7.** The most common comorbid condition of conduct disorder is considered to be
- attention-deficit/hyperactive disorders
 - major depressive disorder
 - paranoid psychotic disorders
 - oppositional defiant disorder
 - substance use disorders
- 43.8.** Oppositional defiant disorder is characterized by all of the following *except*
- negativistic behavior
 - placing blame on others
 - physical aggression
 - difficulty in school
 - none of the above

Directions

These lettered headings are followed by a list of numbered statements. For each numbered statement, select the *one* lettered heading most closely associated with it. Each lettered heading may be used once, more than once, or not at all.

Questions 43.9–43.11

- Conduct disorder
- Oppositional defiant disorder

- 43.9.** It may be diagnosed when symptoms occur exclusively with ADHD, learning disorders, and mood disorders.

- 43.10.** It may be equally prevalent in adolescent boys and adolescent girls.

- 43.11.** The patient often bullies, threatens, or intimidates others.

ANSWERS

43.1. The answer is A

Childhood-onset type refers to the presence of one criterion behavior prior to the age of *10 years*. In the adolescent-onset type, all the constituent behaviors for diagnosis begin after 10 years old. It has been known for some time that age of onset of antisocial behavior has important implications. The current text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR)* subtyping reflects evidence from studies reporting that a relatively small group of children (generally boys) with onset of aggressive and antisocial behaviors (i.e., harming animals, stealing, destroying property) in childhood (as contrasted with onset in adolescence) display many features suggestive of chronic psychopathology and neuropsychiatric disease. This early onset conduct disorder subgroup has an especially poor prognosis over the lifespan.

43.2. The answer is D

The epidemiological data for oppositional defiant disorder needs to be regarded with some caution because of the recent modifications of the diagnostic criteria. *The point prevalence* of the disorder has been reported to vary between 1.7 to 9.9, with a *weighted average of around 6 percent*. *The average age of onset is about 6 (not 3) years*. *Boys outnumber girls in the prepubertal age range, after which the two genders are more equal*. *The disorder occurs mostly in cohorts of lower (not middle to higher) socioeconomic status*.

43.3. The answer is D

The lifetime prevalence of oppositional defiant disorder in the United States is *8.5 percent*. Good data on the prevalence of oppositional defiant disorder in the preschool population are presently lacking. The disorder is diagnosed more often in boys than girls. However, the prevalence rates of oppositional defiant disorder in girls noted above suggest that the disorder may be quite common in girls. No firm conclusions can be reached regarding the prevalence of oppositional defiant disorder as a function of age.

43.4. The answer is B

Differentiation of oppositional defiant disorder from normative oppositional behavior, transient antisocial acts, and conduct disorder is of paramount importance. Oppositional defiant disorder is not transient and leads to significant impairment, but it does not involve major violations of the law and the rights of others. *Attention-deficit/hyperactivity disorder (ADHD) is the most common comorbidity*: Between 25 to 60 percent of children with oppositional defiant disorder also have fulfill criteria for ADHD by parental report, and half of children with ADHD have oppositional defiant disorder. As with conduct disorder, the association of oppositional defiant disorder and ADHD confers a poor prognosis. Youngsters tend to be more aggressive, show a greater range and persistence of problem behaviors, are rejected at higher

rates by peers, and underachieve more severely in the academic domain. Furthermore, ADHD facilitates the early appearance of oppositional defiant disorder and conduct disorder. Antagonistic behavior is commonly found in internalizing disorders in this age group; *dysthymic disorder*, *major depressive disorder*, and *early-onset bipolar I disorder* should be considered. Children with *anxiety disorders*, especially separation anxiety disorder, can present with predominant temper control problems. Children with pervasive developmental disorders also can demonstrate oppositionality, but the underlying bizarre problems with relating to others are usually absent in children with oppositional defiant disorder.

43.5. The answer is B

Conduct disorder is a clinical term referring to the clustering of persistent antisocial acts of children and adolescents. The condition is thought to be caused by underlying psychopathology leading to significant impairment in one or more domains of functioning. *The symptoms are clustered in four (not two) areas*: aggression to people and animals, destruction of property, deceitfulness and theft, and serious violations of rules. *Subtyping is allowed based on the age of onset of symptoms*. Severity can be specified as mild, moderate, or severe. The current criteria require that *at least three (not five) of a list of 15 antisocial behaviors be present over a period of 12 months; one of them (not all) has to be present in the past 6 months*.

43.6. The answer is E (all)

One important model of conduct disorder posits that it is the gradual accumulation of risk as well as the absence or weak presence of protective factors. These interactions ultimately lead to conduct disorder rather than single risk factors operating in isolation. Figure 43.1 portrays the predominance of risks in ecological (e.g., poverty), constitutional (e.g., difficult temperament), and parenting (e.g., poor response to coercive behaviors, abuse) factors. This results in poor internal self-regulation, which becomes manifest especially during school age. School performance is also affected because these children lack skills needed to deal with authority and cannot fulfill their academic potential. Peer relationships suffer because children tend to find acceptance only from similarly socially inept peer groups. Because there is an

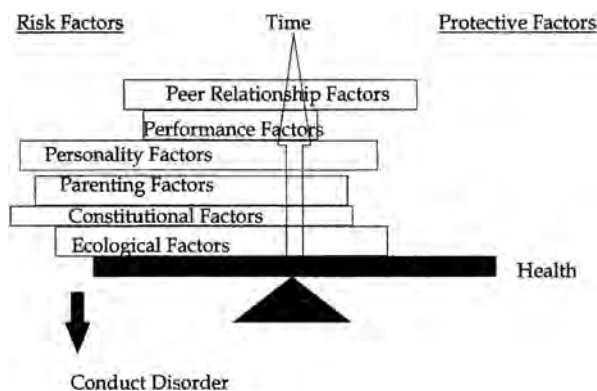


FIGURE 43.1

Developmental pathways to disruptive behavior disorders.

increasing aggregation of risk, it requires stronger protection to offset the risk, and more domains may be adversely affected.

Difficult *temperament has been repeatedly implicated* in the genesis of the disorder. It may work in at least two ways: It can make children more likely targets of parental anger and thus of poor parenting, or it may be linked directly to behavior problems later on. Inappropriate aggression at an early age, especially in combination with shyness, predicts later conduct disorder. *Chronic illness* and disability also have been known to increase the prevalence of conduct disorder, especially if the primary illness affects the central nervous system.

Conduct disorder is more likely to be paired with diverse and complex disturbances in psychological domains. Academic underachievement, learning disabilities, and problems with attention span and hyperactivity are all associated with conduct disorder. *Laterality and language performance are disturbed*. Higher personality functions are also affected: In complex social situations, children with conduct disorder have been shown to perceive fewer appropriate responses, lack the skills to negotiate conflict, and lose their ability to restrain themselves when stressed emotionally.

There is substantial evidence that *viewing televised or other media violence* and violence in the child's community contributes to conduct disorder problems, especially in children who are at special risk for other reasons. Socioeconomic disadvantage as manifested in poor housing, crowding, and poverty all exert consistently negative influences.

43.7. The answer is A

Conduct disorder has to be distinguished, first and foremost, from antisocial behavior without underlying psychopathology, *oppositional defiant disorder*, antisocial personality disorder, and impulse-control disorders. *Substance use disorders* are extremely common in individuals with conduct disorder and can be the primary diagnostic reason for antisocial conduct. However, *ADHD is considered the most common comorbid condition* because it facilitates the early appearance of conduct disorder, which is a strong predictor of adverse outcome. The association with conduct disorder has been so frequent that there has been a debate over combining the diagnoses, but empirical data find that the disorders differ in terms of premorbid risk and their respective predictive power for adult criminal outcomes. *Psychotic disorders, especially those with paranoid processes*, can be mistaken for conduct disorder. Internalizing disorders, such as mood disorders, posttraumatic stress disorder, and dissociative disorder, can be confused with conduct disorder, although less commonly. *Depression* in particular affects people of both genders, but especially young women after they have reached pubertal maturation. Evidence on the prognostic impact of internalizing comorbidity and conduct disorder is mixed.

43.8. The answer is C

Oppositional defiant disorder is characterized by *enduring patterns of negativistic, disobedient, and hostile behavior* toward authority figures as well as an inability to take responsibility for mistakes, leading to *placing blame on others*. Children with oppositional defiant disorder frequently argue with adults and become easily annoyed by others, leading to a state of anger and

resentment. Children with oppositional defiant disorder may have *difficulty in classrooms* and with peer relationships but *generally do not resort to physical aggression* or significantly destructive behavior.

Answers 43.9–43.11

43.9. The answer is A

43.10. The answer is B

43.11. The answer is A

Conduct disorder may be diagnosed when symptoms occur exclusively with attention-deficit/hyperactivity disorder, learning disorders, and mood disorders, but oppositional defiant disorder cannot be diagnosed when symptoms occur solely during a mood disorder. *Oppositional defiant disorder* may be equally prevalent in adolescent boys and adolescent girls, but conduct disorder is generally present more often in adolescent boys than adolescent girls. In *conduct disorder*, the patient often bullies, threatens, or intimidates others.



Feeding and Eating Disorders of Infancy or Early Childhood

Feeding disorders during infancy and early childhood highlight the interactive nature between the infant and caregiver. In broad terms, *feeding disorder* is characterized by a variety of conditions, including food refusal, food avoidance, active attempts to reject the feeding process, or a delay in self-feeding. Feeding disorder has been an underlying process in some children who have been described as picky eaters or poor eaters or who demonstrate feeding resistances. A feeding disorder may or may not be accompanied by physical sequelae of maladaptive eating patterns, but without well-defined criteria, the term has been used interchangeably with *failure to thrive*, which refers to inadequate weight gain based on standard growth charts. Failure-to-thrive syndromes, in some cases, are caused by a medical disease process; however, this term is often applied to children without medical illnesses who have been exposed to parental

deprivation or neglect. The text revision of the fourth edition of *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) includes three distinct disorders of feeding and eating in this age group: pica, rumination disorder, and feeding disorder of infancy or early childhood. A high rate of spontaneous recovery from all of these feeding disorders occurs, although a subset of infants refuses to eat and has persistent eating problems throughout childhood. Additional maladaptive feeding patterns that cause impaired nutritional intake that are not included in the DSM-IV-TR include (1) infantile anorexia, (2) feeding disorder of caregiver–infant reciprocity, (3) sensory food aversions, and (4) posttraumatic feeding disorder.

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

Students should know the following terms.

- ▶ amylophagia
- ▶ anemia
- ▶ esophageal reflux
- ▶ failure to thrive
- ▶ geophagia
- ▶ hiatal hernia
- ▶ intestinal parasites
- ▶ iron deficiency
- ▶ lead poisoning
- ▶ nutritional deficiencies
- ▶ parental neglect and deprivation
- ▶ pica
- ▶ psychosocial dwarfism
- ▶ regurgitation
- ▶ self-stimulation
- ▶ spontaneous remission
- ▶ zinc deficiency

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five responses or completions. Select the *one* that is *best* in each case.

44.1. Pica

- A. is usually diagnosed most easily when the child is younger than 2 years of age
- B. decreases in prevalence with increasing severity of mental retardation
- C. is not diagnosed if symptoms occur in the context of another disorder, including schizophrenia and autistic disorder

- D. is diagnosed even if symptoms are culturally accepted
- E. none of the above

44.2. A diagnosis of rumination disorder

- A. is commonly made in older children and adolescents
- B. cannot be made in individuals with mental retardation or a pervasive developmental disorder
- C. cannot be attributable to an associated gastrointestinal condition
- D. is not made in children with a prior period of normal functioning
- E. occurs more often in females than in males

44.3. Behaviors which may be related to pica include

- A. nail biting
- B. thumb sucking
- C. delays in speech and psychosocial development
- D. bulimia nervosa
- E. all of the above

44.4. Feeding disorder of infancy or early childhood

- A. has narrow DSM-IV-TR diagnostic criteria that address the specificity of various feeding disorders
- B. has been reported in 1 to 2 percent of infants and toddlers
- C. may have an age of onset after 6 years
- D. does not necessarily result in significant failure to gain weight
- E. none of the above

44.5. Susan was admitted to the hospital at age 6 months for evaluation of failure to gain weight. She had been born into an impoverished family after an unplanned, uncomplicated pregnancy. During her first 4 months of life, she gained weight steadily. Beginning in her fifth month, she was noted to regurgitate milk after feedings. She would then vigorously suck her thumb and other fingers, and milk would continue to be regurgitated into her mouth. Her weight leveled off and then began to decrease during this time. In the 2 months before the onset of this behavior, Susan had multiple caregivers and received little attention from her parents. Nevertheless, she smiled often and was responsive to all of her caregivers.

The most likely diagnosis is

- A. rumination disorder
- B. reactive attachment disorder
- C. pica
- D. failure to thrive
- E. none of the above

44.6. The diagnosis of the case above is associated with all of the following behaviors *except*

- A. sucking noises
- B. rechewing food
- C. reswallowing food
- D. mutism
- E. appearance of satisfaction

44.7. Thomas was 3 months old when he was referred for a psychiatric evaluation because of his feeding difficulties and poor weight gain since birth. His parents were college educated, and both had pursued their professional careers until Thomas was born. Although Thomas was full term and weighed 7 pounds at birth, he had difficulty drinking from the breast. When he was 4 weeks old, his mother had reluctantly switched him to bottle feedings because he was losing weight. Although his intake improved somewhat on bottle feedings, he gained weight very slowly and was still less than 8 pounds at 3 months

of age. His mother appeared tired and described how Thomas would drink only 1, 2, or 3 oz at a time, wiggle and cry, and refuse to continue with the feeding. The observation of mother–infant interactions during feeding and play revealed that Thomas was a very alert and wiggly baby who had difficulty settling in his mother’s arms. Thomas would most likely be characterized with

- A. pica
- B. rumination disorder
- C. feeding disorder of state regulation
- D. feeding disorder of caregiver–infant reciprocity
- E. infantile anorexia

44.8. The diagnosis in the case above is frequently associated with

- A. prematurity
- B. gastrointestinal disease
- C. pulmonary disease
- D. cardiac disease
- E. all of the above

Directions

The questions below consist of lettered headings followed by a list of numbered statements. For each numbered statement, select:

- A. if the item is associated with A only.
- B. if the item is associated with B only.
- C. if the item is associated with both A and B.
- D. if the item is associated with neither A nor B.

Questions 44.9–44.16

- A. Rumination disorder
- B. Pica

- 44.9.** May lead to lead poisoning and toxoplasmosis
- 44.10.** This disorder falls under the tenth edition of the *International Classification of Diseases* (ICD-10) diagnostic category of “Feeding Disorders of Infancy and Childhood” but forms its own diagnostic category in the DSM-IV-TR
- 44.11.** The onset may occur at any age in life, including adolescence and adulthood
- 44.12.** High rate of spontaneous remission
- 44.13.** Reinforcement by pleasurable self-stimulation
- 44.14.** Associated with failure to thrive
- 44.15.** Associated with adolescent- and adult-onset eating disorders
- 44.16.** Associated with pregnant women

Directions

These lettered headings are followed by a list of numbered statements. For each numbered statement, select the *one* lettered heading most closely associated with it. Each lettered heading may be used once, more than one, or not at all.

Questions 44.17–44.21

- A. Infantile anorexia
- B. Sensory food aversions
- C. Posttraumatic feeding disorder

- 44.17.** Toddlers with the disorder have a high level of physiological arousal.
- 44.18.** Refusal to eat is associated with fear.
- 44.19.** Food refusal is more global than selective.
- 44.20.** It is characterized by an inconsistent pattern of food refusal.
- 44.21.** The child may present with delay in oral motor development.

ANSWERS**44.1. The answer is E (none)**

The DSM-IV-TR describes pica as the persistent eating of non-nutritive substances for at least 1 month. The behavior must be developmentally inappropriate, not culturally sanctioned, and sufficiently severe to merit clinical attention. Under these circumstances, *pica is diagnosed even when symptoms occur in the context of another mental disorder*, such as schizophrenia, autistic disorder, or Kleine-Levin syndrome.

Pica occurs more frequently in young children than in adults and is more common in individuals with mental retardation. Forms of pica, including geophagia (clay eating) and amylophagia (starch eating), do occur among adults, particularly pregnant women. *According to DSM-IV-TR criteria, if such practices are culturally sanctioned, diagnostic criteria for pica are not met.*

Because infants commonly mouth objects as part of their exploration of their environment, it is *difficult to diagnose pica in children younger than age 2 years*. Among individuals with mental retardation, *the prevalence of pica appears to increase with the severity of the retardation.*

44.2. The answer is C

The DSM-IV-TR describes rumination disorder as behavior by an infant or child in which food is repeatedly regurgitated or rechewed. The behavior must occur *after a period of normal functioning*, take place for at least 1 month, and *not be attributable to a gastrointestinal or other medical condition*. The onset of the disorder typically occurs after 3 months of age. Infants who ruminate are observed to strain to bring food back into their mouths and appear to derive pleasure from the behavior. After regurgitation, the food is swallowed, chewed, or spit out.

The infants often come to clinical attention because of failure to thrive. *Even in the context of other mental disorders, such as mental retardation or pervasive developmental disorders, the diagnosis of rumination disorder may be made if the symptoms are sufficiently severe to warrant clinical attention.* The disorder is *rare in older children and adolescents* and occurs *more often in males than in females* and individuals with mental retardation.

44.3. The answer is E (all)

Many children with pica engage in other oral activities that likely have self-soothing effects, including *thumb sucking* and *nail biting*.

ing. Typically, pica occurs for several months and then remits. However, a minority of cases continues through childhood and adolescence and even into adulthood. Several authors have highlighted significant impact associated with long-standing pica, including *delays in speech and psychosocial development*, depression, ongoing disturbed oral activities (thumb sucking, nail biting), and tobacco and other substance abuse. Additionally, some authors have identified a relationship between pica during early childhood and *bulimia nervosa* during adolescence.

44.4. The answer is B

According to DSM-IV-TR criteria, feeding disorder of infancy or early childhood is a persistent failure to eat adequately, *resulting in significant failure to gain weight* or in significant weight loss over at least 1 month. The symptoms are not better accounted for by a medical condition, another mental disorder, or lack of food, and *the disorder's onset must occur before (not after) age 6 years*. The *DSM-IV-TR criteria are broad (not narrow)* and do not address the specificity of feeding disorders that are not separately included in the DSM-IV or ICD-10.

An estimated 15 to 35 percent of infants and young children have feeding difficulties; common problems include eating too little, refusing certain foods, objectionable mealtime behaviors, and bizarre food habits. However, these problems tend to be mild and do not significantly impact the child's growth. Severe feeding problems associated with poor weight gain are reported in *1 to 2 percent of infants and toddlers*.

Answers 44.5–44.6**44.5. The answer is A****44.6. The answer is D**

Failure to gain weight or weight loss in an infant, after general medical conditions have been ruled out, suggests rumination disorder of infancy, feeding disorder of infancy or early childhood, or reactive attachment disorder of infancy or early childhood. The child in this case is not gaining weight because of the regurgitation of food after each feeding, indicating *a diagnosis of rumination disorder of infancy*. Typically, the child strains and makes *sucking noises* with the tongue to regurgitate food and *then rechews or reswallows the food*. *Often, the child gives the impression of deriving considerable satisfaction from the behavior*. The disorder usually occurs between 3 and 12 months of age. There is a suggestion in this case that parental care may be inadequate, but the absence of evidence of inappropriate social relatedness rules out the diagnosis of reactive attachment disorder of early childhood. Because the cause of the weight loss is the regurgitation, the general diagnosis of feeding disorder of infancy or early childhood is not made. *Pica* is the craving and eating of nonfood substances, such as paint, clay, or dirt. In *failure to thrive*, an infant shows physical signs of malnourishment and does not exhibit the expected developmental motor and verbal milestones.

44.7. The answer is C

Judging by his inability to relax and stay still long enough to feed and the irregularity of his feedings, Thomas can be

diagnosed with *feeding disorder of state regulation*. Feeding disorder of state regulation begins in the postnatal period and is characterized by irregular, poor feeding and inadequate food intake by the infant. Infants with this disorder have difficulty reaching and maintaining a state of calm alertness necessary for feeding. Some infants are too irritable and cry excessively and cannot calm themselves for feeding, and others are too sleepy and cannot wake up or stay awake long enough to feed adequately. The parent may be anxious or depressed or may present with more severe psychopathology. Mother–infant interactions during feeding are characterized by irritability or sleepiness of the infant, maternal tension, and poor engagement between the mother and infant.

Young children with *pica* typically eat plaster, paper, paint, cloth, hair, insects, animal droppings, sand, pebbles, or dirt. *Rumination disorder* is defined as repetitive regurgitation of gastric contents that are subsequently rechewed and then swallowed or ejected by the mouth. *Feeding disorder of caregiver–infant reciprocity* is characterized by a lack of engagement between the mother and infant, leading to inadequate food intake and growth failure of the infant. The onset of the growth failure is usually between 2 and 8 months of age. The infant shows a lack of age-appropriate social responsivity (i.e., lack of smiling response, lack of vocal reciprocity). *Infantile anorexia* is characterized by a lack of appetite of the infant and inadequate food intake leading to poor weight gain and slow growth. Observation of mother–infant interactions during feeding reveal that mothers and infants with this feeding disorder engage in more conflict and struggle for control during feeding and use more talk and distraction during feeding than mothers of infants without feeding problems.

44.8. The answer is E (all)

Feeding disorder of state regulation can be seen in infants without any organic problems, but it is frequently associated with *prematurity* or *dysmaturity*, and *gastrointestinal, cardiac, or pulmonary disease*.

Answers 44.9–44.16

44.9. The answer is B

44.10. The answer is A

44.11. The answer is C

44.12. The answer is C

44.13. The answer is A

44.14. The answer is C

44.15. The answer is C

44.16. The answer is B

Young children with *pica* typically eat plaster, paper, paint (which may cause *lead poisoning*), cloth, hair, animal droppings (which may cause *toxoplasmosis*), sand, pebbles, or dirt.

Rumination disorder is included under “Feeding Disorders of Infancy and Childhood” in ICD-10 but forms its own diagnostic

category in DSM-IV-TR. *Pica* is a diagnosis under both the ICD-10 and DSM-IV-TR.

Although rumination disorder and *pica* most commonly occur in infancy and early childhood, *both may have their onset at any age in life, including adolescence and adulthood*. Rumination disorder has been reported to start later in life in adults with eating disorders. In individuals with mental retardation and developmental disorders, these conditions may have onset later in life.

Both rumination disorder and pica have high rates of spontaneous remission. Rumination disorder appears to be reinforced by pleasurable self-stimulation. Frequently, vomiting secondary to acute illness or to gastroesophageal reflux precedes the onset of rumination. *Both pica and rumination are associated with failure to thrive*; in severe cases, life-threatening malnutrition may occur with rumination. *Both rumination and pica are associated with adolescent- and adult-onset eating disorders. Pica may occur in pregnant women* and is especially prevalent during pregnancy in certain cultures.

Answers 44.17–44.22

44.17. The answer is A

44.18. The answer is C

44.19. The answer is C

44.20. The answer is A

44.21. The answer is B

Infantile anorexia is characterized by a lack of appetite (anorexia) of the infant and inadequate food intake leading to poor weight gain and slow growth. The *pattern of food refusal is usually inconsistent*, depending on the mood of the child. Some mothers report that even within the first 6 months of life, the infant is very responsive to environmental stimuli and stops feeding if someone enters the room, if the telephone rings, or even if the mother sneezes. *Toddlers with infantile anorexia have been found to have a higher level of physiological arousal* and more difficulty downregulating their level of arousal. This may explain why these children have so little awareness of hunger because they seem very excited by their play and are talkative and have difficulty turning away from pleasurable activities.

Sensory food aversions are common. However, whereas some children refuse to eat only a few specific foods, others may refuse most foods and take in only a limited diet of a few foods. Within this disorder, food refusal is related to the taste, texture, temperature, or smell of particular foods. Children who refuse to eat vegetables and fruits usually develop vitamin deficiencies, and those who refuse to drink milk or eat meats may develop protein, zinc, or iron deficiencies. In addition, children who refuse to eat foods that require more chewing (e.g., meats or hard vegetables), *may present with delay in oral motor development*, which may be associated with articulation difficulties.

The observation of infants with *posttraumatic feeding disorder* reveals that their *food refusal seems to be caused by fear*. This feeding disorder may present with total food refusal,

refusal to swallow solid foods, or refusal to drink from the bottle, depending on what mode of feeding the child associates with a traumatic event. The onset of the food refusal is frequently rather sudden and occurs after traumatic experiences that involve the oropharynx or gastrointestinal tract (i.e., severe gagging, choking, vomiting, insertion of a feeding or endotracheal tube). Us-

ually, *food refusal is more global* in posttraumatic feeding disorder than sensory food aversions, which is more *selective*. However, sometimes children with sensory food aversions develop posttraumatic feeding disorder if they experience a strong aversive reaction or if they are force fed aversive foods that trigger gagging and vomiting.



Tic Disorders

Tic disorders are distinguished by the type of tic symptoms, their frequency, and the pattern in which they emerge over time. Tics are defined as rapid and repetitive muscle contractions resulting in movements or vocalizations that are experienced as involuntary. Children and adolescents may exhibit tic behaviors that occur after a stimulus or in response to an internal urge. Tic disorders, a group of neuropsychiatric disorders, generally begin in childhood or adolescence with a stable or fluctuating course in childhood and generally wane by adolescence. Although tics are not volitional, in some individuals, they may be suppressed for periods.

The most widely known and most severe tic disorder is Gilles de la Tourette syndrome, also known as Tourette's disorder. The text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) includes several other tic disorders, such as chronic motor or vocal tic disorder, transient tic disorder, and tic disorder not otherwise specified. Although tics have no particular purpose, they often consist of motions that are used in volitional movements. One-half to two-thirds of children with Tourette's disorder exhibit a reduction or complete remission of tic symptoms during adolescence. Obsessive-compulsive symptoms or disorder (OCD) has been found to coexist in one-third to two-thirds of children and adolescents with Tourette's disorder, and about one-third of adults with Tourette's disorder have persistent OCD into adulthood. Whereas the obsessive-compulsive symptoms most likely to occur in those individuals with Tourette's disorder are characteristically related to ordering, symmetry, counting, and repetitive

touching, OCD in the absence of tic disorders are characterized by symptoms more often associated with fears of contamination and fears of harming others. A recent study has found that the risk of developing OCD symptoms in children with Tourette's disorder by early adulthood was significantly higher in those children with higher intellectual quotients (IQ), that is, above 120, compared with those with an average IQ of 100.

Motor and vocal tics are divided into simple and complex types. *Simple motor tics* are those composed of repetitive, rapid contractions of functionally similar muscle groups (e.g., eye blinking, neck jerking, shoulder shrugging, and facial grimacing). Common *simple vocal tics* include coughing, throat clearing, grunting, sniffing, snorting, and barking. *Complex motor tics* appear to be more purposeful and ritualistic than simple tics. Common *complex motor tics* include grooming behaviors, the smelling of objects, jumping, touching behaviors, echopraxia (imitation of observed behavior), and copropraxia (display of obscene gestures). *Complex vocal tics* include repeating words or phrases out of context, coprolalia (use of obscene words or phrases), palilalia (a person's repeating his or her words), and echolalia (repetition of the last-heard words of others).

Some persons with tic disorders can suppress the tics for minutes or hours, but others, especially young children, either are not cognizant of their tics or experience their tics as irresistible. Tics may be attenuated by sleep, relaxation, or absorption in an activity. Tics often, but not always, disappear during sleep.

Students should study the following questions and answers for a useful review of these disorders.

HELPFUL HINTS

Students should know the following terms.

- | | | | |
|--|---------------------------------------|------------------------------|---------------------------------|
| ▶ attention-deficit/hyperactivity disorder | ▶ coprolalia | ▶ eye blinking | ▶ Lesch-Nyhan syndrome |
| ▶ barking | ▶ copropraxia | ▶ facial grimacing | ▶ motor tic |
| ▶ behavioral treatments | ▶ dopamine antagonists and stimulants | ▶ Gilles de la Tourette | ▶ neck jerking |
| ▶ benztropine (Cogentin) | ▶ dystonia | ▶ grunting | ▶ obsessive-compulsive disorder |
| ▶ Jean Charcot | ▶ echokinesis | ▶ Hallervorden-Spatz disease | ▶ palilalia |
| ▶ clonidine (Catapres) | ▶ echolalia | ▶ hemiballism | ▶ Pelizaeus-Merzbacher disease |
| ▶ compulsions | ▶ echopraxia | ▶ Huntington's chorea | ▶ pimozide (Orap) |
| | ▶ encephalitis lethargica | ▶ hyperdopaminergia | |

- | | | | |
|-------------------------------|----------------------|--------------------------|--------------------|
| ▶ poststreptococcal syndromes | ▶ stereotypy | ▶ torsion dystonia | ▶ tremor |
| ▶ shoulder shrugging | ▶ Sydenham's chorea | ▶ Tourette's disorder | ▶ vocal tic |
| ▶ simple or complex tic | ▶ tardive dyskinesia | ▶ transient tic disorder | ▶ Wilson's disease |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five responses or completions. Select the *one* that is *best* in each case.

- 45.1.** Family studies have shown a relationship between OCD and what other group of disorders?
- Mood disorder
 - Tic disorder
 - Learning disorder
 - Elimination disorder
 - Phobic disorder
- 45.2.** Which of the following statements about the epidemiology of Tourette's disorder is true?
- The lifetime prevalence of Tourette's disorder is estimated at one per 10,000.
 - The average age of onset of the motor component of the disorder is 7 years old.
 - The average age of onset of the vocal component of the disorder is 7 years old.
 - The prevalence of Tourette's disorder is similar in boys and girls.
 - All of the above
- 45.3.** In Tourette's disorder, the initial tics are in the
- face and neck
 - arms and hands
 - body and lower extremities
 - respiratory system
 - alimentary system
- 45.4.** True statements about Tourette's disorder include which of the following?
- The most frequent initial symptom is mental coprolalia.
 - Coprolalia usually begins around 6 to 8 years of age and occurs in about 5 percent of cases.
 - Most complex motor and vocal symptoms emerge virtually simultaneously with the initial symptoms.
 - Attention-deficit/hyperactivity disorder (ADHD) is rarely diagnosed in children who are later diagnosed with Tourette's disorder.
 - Typically, behavioral symptoms, such as hyperactivity, are evident several years before or concurrent with the initial symptoms.
- 45.5.** If the onset is after age 18 years, which of the following tic disorders may be diagnosed?
- Transient tic disorder
 - Chronic motor or vocal tic disorder
 - Tourette's disorder
 - Tic disorder not otherwise specified
 - All of the above
- 45.6.** The dopamine system has been hypothesized to be involved in the development of tic disorders because
- haloperidol (Haldol) suppresses tics
 - pimozide (Orap) suppresses tics
 - methylphenidate (Ritalin) exacerbates tics
 - pemoline (Cylert) exacerbates tics
 - all of the above
- 45.7.** Which of the following statements concerning evidence supporting genetic factors as likely to play a role in the development of Tourette's disorder is *false*?
- Concordance for Tourette's disorder is significantly higher in monozygotic than in dizygotic twins.
 - Sons of men with Tourette's disorder are at highest risk of developing the disorder.
 - First-degree relatives of probands with Tourette's disorder are at higher-than-average risk for developing Tourette's disorder and chronic tic disorder.
 - First-degree relatives of probands with Tourette's disorder are at higher-than-average risk for developing OCD, and up to 40 percent of patients with Tourette's disorder also have OCD.
 - None of the above
- 45.8.** Which of the following distinguishes transient tic disorder from chronic motor or vocal tic disorder and Tourette's disorder?
- Age of onset
 - The presence of motor tics only
 - The presence of vocal tics only
 - The presence of both motor and vocal tics
 - Temporal progression of the tic symptoms

Directions

Each group of lettered headings below is followed by a list of numbered phrases. For each numbered phrase, select

- if the item is associated with A only.
- if the item is associated with B only.

- C. if the item is associated with both A and B.
- D. if the item is associated with neither A nor B.

Questions 45.9–45.13

- A. Tourette's disorder
- B. Sydenham's chorea

- 45.9. Associated with obsessive-compulsive behavior
- 45.10. Possible autoimmune response to streptococcal antigens
- 45.11. Self-limiting syndrome
- 45.12. Chronic illness with a waxing and waning course
- 45.13. More common in males

Questions 45.14–45.17

- A. Tic disorders
- B. Non-tic movement disorders

- 45.14. Repetitive vocalizations
- 45.15. Premonitory sensation
- 45.16. Description of movements as intentional in response to urges or sensations
- 45.17. Association with mental retardation or dementing process

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases. For each numbered phrase, select the *one* lettered heading most associated with it. Each heading may be used once, more than once, or not at all.

Questions 45.18–45.20

- A. Tonic tic
- B. Dystonic tic
- C. Clonic tic
- D. Simple phonic tic
- E. Complex tic

- 45.18. May be mistaken for a volitional act
- 45.19. Sniffing, grunting, or yelping
- 45.20. Brisk movements

ANSWERS

45.1. The answer is B

The relation between obsessive-compulsive disorder (OCD) and *tic disorders*, including Tourette's syndrome, has emerged from family studies. Tic disorders and some cases of OCD appear to share some susceptibility factors, leading to arguments that OCD may be an alternative expression of the risk factors underlying tic disorders. Some suggest an autosomal dominant model of inheritance with incomplete penetrance. In other words, the phenotypic expression varies in expression from OCD symptoms to tic disorders.

Mood disorder is defined as any of a group of psychiatric disorders, including depression and bipolar disorder, character-

ized by a pervasive disturbance of mood that is not caused by an organic abnormality.

Learning disorder is defined as a childhood disorder characterized by difficulty with certain skills such as reading or writing in individuals with normal intelligence.

Elimination disorder is defined as disorders that concern the elimination of feces or urine from the body. The causes of these disorders may be medical or psychiatric.

45.2. The answer is B

The lifetime prevalence of Tourette's disorder is estimated to be *four to five per 10,000* (not one per 10,000). *The motor component of the disorder has an average age at onset of 7 years old; the onset of the vocal component occurs later, at an average of 11 years of age* (not 7 years). Tourette's disorder is at least *three times as common in boys as in girls* (not equal prevalence).

45.3. The answer is A

In Tourette's disorder, the most commonly observed tics affect the face and head, arms and hands, trunk and lower extremities, and respiratory and alimentary systems. *The first tics tend to appear in the face and neck*. Tics may take the following forms: grimacing; forehead puckering; eyebrow raising; eye blinking; eye winking; nose wrinkling; nostril trembling; mouth twitching; displaying the teeth; biting the lips or tongue; extruding the tongue; protracting the lower jaw; nodding, jerking, or shaking the head; twisting the neck; looking sideways; head rolling; hand shaking; arm jerking; finger plucking; finger writhing; fist clenching; shoulder shrugging; foot, knee or toe shaking; peculiar walking; body writhing; jumping; hiccupping; sighing; yawning; grunting; blowing through the nostrils; whistling; belching; making sucking or smacking sounds; and clearing the throat.

45.4. The answer is E

Prodromal behavioral symptoms (irritability, hyperactivity, inattention, and poor frustration tolerance) very commonly precede or coincide with the onset of tics. Attention-deficit/hyperactivity disorder (ADHD) is *commonly (not rarely) diagnosed* in children who are later diagnosed with Tourette's disorder. The most frequent initial symptoms of Tourette's disorder are eye-blink tics, facial grimaces, and head tics (*it is not mental coprolalia*, a later-occurring symptom of Tourette's disorder in which a patient experiences a sudden, intrusive thought of a socially unacceptable word or idea). Most complex motor and vocal symptoms emerge several years after (*not simultaneously with*) the initial symptoms. Coprolalia (speaking obscene words or phrases) usually begins in adolescence (*not around 6 to 8 years of age*) and occurs in approximately one-third (*not 5 percent*) of cases of Tourette's disorder.

45.5. The answer is D

All tic disorders with onset after age 18 years must be diagnosed as tic disorder not otherwise specified, a residual category for tics that do not meet the criteria for a specific tic disorder. Transient tic disorder, chronic motor or vocal tic disorder, and Tourette's disorder all specify onset before age 18 years.

45.6. The answer is E (all)

Evidence that supports a role for the dopamine system in the etiology of tic disorders includes dopamine antagonists such as *haloperidol and pimozide suppress tics*, and agents that increase central dopamine activity, such as cocaine, dextroamphetamine, *methylphenidate, and pemoline, exacerbate tics*. However, there is not a straightforward relationship between dopamine and tics because dopamine antagonists do not always suppress tics, and agents that increase central dopamine activity, such as stimulants, may not exacerbate tics. Complex interactions between dopamine and other neurotransmitters, particularly norepinephrine, as well as the contribution of other neurochemical systems, such as endogenous opiates, likely contribute to the phenomenon of tics.

45.7. The answer is B

There is convincing evidence of genetic factors influencing risk of Tourette's disorder. *Sons of women (not men) with Tourette's disorder appear to be at highest risk of developing the disorder*; there is evidence of transmission in a bilinear mode, indicating an autosomal pattern intermediate between dominant and recessive. *Concordance for Tourette's disorder is significantly higher in monozygotic versus dizygotic twins. First-degree relatives of probands with Tourette's disorder are at increased risk for developing Tourette's disorder and for developing chronic tic disorder and OCD*; this finding, in conjunction with the observation that up to 40 percent of patients with Tourette's disorder also have OCD, strongly suggests a genetic link between these conditions.

45.8. The answer is E

Transient tic disorder cannot be distinguished from chronic tic disorders or from Tourette's disorder on the basis of age of onset, presence of motor tics or vocal tics alone, or presence of both motor and vocal tics. Only the temporal progression of the tic symptoms is significant in differentiating among these conditions. All three diagnoses specify onset before age 18 years. Transient tic disorder refers to single or multiple motor or vocal tics occurring for up to 1 year. Chronic motor or vocal tic disorder specifies that only one type of tic be involved and must occur for longer than 1 year. Tourette's disorder refers to multiple motor and at least one vocal tic occurring for over 1 year.

Answers 45.9–45.13**45.9. The answer is C****45.10. The answer is C****45.11. The answer is B****45.12. The answer is A****45.13. The answer is A**

Sydenham's chorea is a self-limiting syndrome consisting of a variety of abnormal movements, including choreiform movements, tics, and compulsive behavior, which occurs as a result of autoimmune response to streptococcal antigens. Recent evidence has emerged linking autoimmune response to streptococcal in-

fection with Tourette's disorder and with obsessive-compulsive disorder (OCD); in these patients, elevated titers of autoantibodies may be detected. The proposed autoimmune process in these cases of Tourette's disorder and OCD, which likely represent a significant minority of the overall prevalence of these conditions, may suggest an environmental insult exposing an underlying genetic vulnerability. Obsessive-compulsive behaviors are common in both Sydenham's chorea and in Tourette's disorder; up to 40 percent of patients with Tourette's disorder also meet diagnostic criteria for OCD. Tourette's disorder is more common in males, and Sydenham's chorea is more common in females. Although Sydenham's chorea is a self-limited illness, Tourette's disorder is chronic, with waxing and waning symptoms, and the condition often persists into adulthood.

Answers 45.14–45.17**45.14. The answer is A****45.15. The answer is A****45.16. The answer is A****45.17. The answer is B**

Differentiating tics from abnormal movements associated with non-tic movement disorders is accomplished by clinical history and examination. *Repetitive vocalizations are characteristic of tic disorders and occur rarely in non-tic movement disorders. Premonitory sensations are very commonly described by patients with tic disorders, who report a variety of sensations or experiences, including urges, itches, feelings of tightness or tingling, and feelings of irritation or worry. Patients often describe a crescendo of urge or discomfort leading up to the tic and may report feelings of relief after the tic. Another common feature is the perceived need to repeat tic behaviors until relief is achieved or until the individual feels "just right." Patients with tics often acknowledge their tic movements as intentional, carried out in response to an urge or sensation.* The complex mental processes before and after tics often make it difficult to distinguish tics from obsessive-compulsive thoughts and behaviors, which are likely closely linked biologically. *All of these features are very uncommon in non-tic movement disorders.*

Additional features that assist in differentiating tics from non-tic movement disorders include the age of onset (average age of 7 years in Tourette's and other tic disorders; younger in autistic disorder, athetoid cerebral palsy, Pelizaeus-Merzbacher disease, and Lesch-Nyhan syndrome; older in Huntington's disease, Wilson's disease, and spastic torticollis) and the *lack of a common association between tic disorders and mental retardation or de-menting processes* (in contrast to autistic disorder, cerebral palsy, Lesch-Nyhan syndrome, Wilson's disease, and Huntington's disease).

Answers 45.18–45.20**45.18. The answer is E****45.19. The answer is D**

45.20. The answer is C

Tics are defined as rapid, repetitive muscle contractions or sounds that are usually experienced as beyond volitional control and that often resemble aspects of normal movement or behavior. They can be elicited by particular stimuli and are often preceded by an urge or sensation. Tics are classified as motor or vocal and as simple or complex. Simple motor tics involve one or several muscle groups and include eye blinking, facial grimacing, and shoulder shrugging. Simple motor tics can be further divided into clonic, tonic, or dystonic subtypes. *Clonic tics are very brisk movements*; tonic and dystonic tics involve more sustained muscle

contractions such as arm extension, muscle tensing, oculogyric movements, and torticollis.

Complex motor tics may be mistaken for volitional acts; they may involve multiple muscle groups and mimic normal coordinated movements, such as jumping, hopping, knee bends, simultaneous extension of the upper and lower extremities, and (less commonly) obscene gesturing or copropraxia.

Phonic tics may also take simple form (as in coughing, *sniffing, grunting, or yelping*) or complex form, including words and phrases that uncommonly include coprolalia.



Elimination Disorders

The developmental milestones of mastering control over bowel and bladder function are complex processes that occur over a period of months for typical toddlers. Infants generally void small volumes of urine approximately every hour, commonly stimulated by feeding, and may have incomplete emptying of the bladder. As an infant matures to be a toddler, bladder capacity increases, and between 1 and 3 years of age, cortical inhibitory pathways develop allowing the child to have voluntary control over reflexes that control the bladder muscles. The ability to have muscular control over the bowel occurs even before bladder control for most toddlers, and the assessment of fecal soiling includes determining whether the clinical presentation occurs with or without chronic constipation and overflow soiling. The normal sequence of developing control over bowel and bladder functions is the development of nocturnal fecal continence, diurnal fecal continence, diurnal bladder control, and nocturnal bladder control. Bowel and bladder control develops gradually over time. Toilet training is affected by many factors, such as a child's intellectual capacity and social maturity, cultural determinants, and the psychological interactions between the child and parents.

Enuresis and encopresis are the two elimination disorders described in the text revision of the fourth edition of *Diagnostic and*

Statistical Manual of Mental Disorders (DSM-IV-TR). These disorders are considered after age 4 years for encopresis and after age 5 years for enuresis, when a child is chronologically, developmentally, and physiologically expected to be able to master these skills. Normal development encompasses a range of time in which a given child is able to devote the attention, motivation, and physiological skills to exhibit competency in elimination processes. *Encopresis* is defined as a pattern of passing feces in inappropriate places, such as in clothing or other places, at least once per month for 3 consecutive months, whether the passage is involuntary or intentional. Children with encopresis typically exhibit dysregulated bowel function, for example, with infrequent bowel movements, constipation, or recurrent abdominal pain and sometimes pain on defecations. Encopresis is a nonorganic condition in children who are chronologically at least 4 years old. *Enuresis* is the repeated voiding of urine into clothes or bed, whether the voiding is involuntary or intentional. The behavior must occur twice weekly for at least 3 months or must cause clinically significant distress or impairment socially or academically. The child's chronological or developmental age must be at least 5 years.

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

Students should know the following terms.

- | | | | |
|-----------------------------------|---|--|---------------------------|
| ▶ abnormal sphincter contractions | ▶ functionally small bladder | ▶ laxatives | ▶ olfactory accommodation |
| ▶ aganglionic megacolon | ▶ genitourinary pathology and other organic disorders | ▶ low nocturnal antidiuretic hormone | ▶ overflow incontinence |
| ▶ behavioral reinforcement | ▶ Hirschsprung's disease | ▶ neurodevelopmental problems | ▶ poor gastric motility |
| ▶ bell (or buzzer) and pad | ▶ imipramine | ▶ nocturnal bowel control | ▶ psychosocial stressors |
| ▶ diurnal bowel control | ▶ intranasal desmopressin (DDAVP) | ▶ obstructive urinary disorder abnormality | ▶ rectal distention |
| ▶ ego-dystonic enuresis | | | ▶ regression |
| ▶ fluid restriction | | | ▶ thioridazine |
| | | | ▶ toilet training |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

46.1. What is the prevalence rate of enuresis among 5-year-old boys?

- A. 3 percent
- B. 5 percent
- C. 7 percent
- D. 9 percent
- E. 10 percent

- 46.2.** True statements about enuresis include
- The majority of enuretic children wet intentionally.
 - There is a correlation between enuresis and psychological disturbance that increases with age.
 - Children with enuresis are no more likely to have developmental delays than other children.
 - There is no evidence for a genetic component to enuresis.
 - Children living in socially disadvantaged environments do not have an increased incidence of enuresis.
- 46.3.** To make a diagnosis of enuresis in an 8-year-old child who wets the bed, at least how often must the child wet the bed?
- Once an hour
 - Once a day
 - Once a week
 - Once a month
 - Once a year
- 46.4.** Before issuing a diagnosis of enuresis, a urinalysis must be done to rule out which common condition?
- A bladder infection
 - Structural malformation
 - The common cold
 - A urinary tract infection
 - Urethral stenosis
- 46.5.** True statements about enuresis include
- The vast majority of enuretic children experience spontaneous resolution of the problem.
 - Medications are generally the first step in the treatment of childhood enuresis.
 - Psychotherapy is never indicated as part of the treatment of enuresis.
 - The success rate for behavioral interventions is nearly 40 percent.
 - Classical conditioning methods (bell and pad) are ineffective in children with concomitant psychiatric disorders.
- 46.6.** True statements about encopresis include
- No significant relationship exists between encopresis and enuresis.
 - Fewer than 25 percent of children with encopresis have constipation.
 - Psychological factors are often relevant when encopresis occurs after a previous period of fecal continence.
 - The symptom must occur at least once weekly for 3 months as part of DSM-IV-TR criteria for the diagnosis of encopresis.
 - None of the above

- 46.7.** Tim, age 6 years, was referred to the clinic by his pediatrician because of persistent soiling. Tim's mother reported that he had never gained control of his bowel habits. After a febrile illness at age 2 years, he developed constipation and required laxatives and suppositories as treatment. After this episode, there was an alternating pattern of constipation, when he did not move his bowels for several days, and diarrhea, when he soiled his pants many times a day. At age 4 years, he again took laxatives for a period of time, and his stools became softer and more regular. His mother began to toilet train him at that time. He was made to sit on the toilet each evening until he "performed." Although he usually managed to produce a tiny amount of stool during these sessions, he continued to soil his pants frequently during the day. This pattern continued until the time of referral.

Tim himself had been distressed about his soiling since starting school, fearing that others would notice when he stained his clothes or when he smelled after a soiling episode. He was anxious when sitting on the toilet in the evenings and insisted that his mother stay in the bathroom with him. He was also enuretic at night. He became dry by day at age 3 years but continued to wet at night; because waking him at night had not prevented his wetting, his mother still put him in diapers to sleep.

Apart from the problems of soiling and wetting, his mother believed that Tim was a normal little boy who was happy and outgoing. His developmental milestones were all a little behind those of his older sisters. He sat at 7 months, walked at 18 months, and spoke his first words at about 18 months as well.

In the interview, Tim was shy at first, clinging to his mother. However, he allowed her to leave the room after a short period and became more assertive and outgoing in her absence. He played with family figures in the dollhouse and portrayed the little boy figure on the toilet and all the other members of the family observing his efforts.

The pediatrician's report indicated that a full medical workup revealed no general medical condition that could account for the soiling. On physical examination, a fecal mass was palpated in Tim's lower abdomen, and soft feces were present in his rectum.

The diagnosis in this case is

- encopresis
- enuresis
- conduct disorder
- Hirschsprung's disease
- childhood schizophrenia

Directions

The lettered headings below are followed by a list of numbered phrases. For each numbered phrase, select

- if the item is associated with A only.
- if the item is associated with B only.
- if the item is associated with both A and B.
- if the item is associated with neither A nor B.

Questions 46.8–46.9

- A. Primary encopresis
- B. Secondary encopresis

- 46.8.** More likely to have developmental delays and associated enuresis
- 46.9.** More often diagnosed with conduct disorder

Questions 46.10–46.16

- A. Encopresis
- B. Enuresis

- 46.10.** This disorder is more common in girls.
- 46.11.** Psychopharmacological intervention for this disorder often provides symptomatic improvement but is of limited utility as relapse tends to occur as soon as the drug is withdrawn.
- 46.12.** Although physiological factors likely play a significant role in this disorder, structural abnormalities are rarely the cause of symptoms.
- 46.13.** At age 7 years, approximately 1.5 percent of boys have this disorder.
- 46.14.** At age 5 years, approximately 7 percent of boys have this disorder.
- 46.15.** To be diagnosed with this disorder, a child must have a chronological or developmental age of 5 years.
- 46.16.** To be diagnosed with this disorder, a child must have a chronological or developmental age of 4 years.

ANSWERS**46.1. The answer is C**

The point prevalence figures for enuresis cited in the DSM-IV-TR are 7 percent of boys and 3 percent of girls at 5 years of age, decreasing to 3 percent of boys and 2 percent of girls by 10 years of age. Only 1 percent of boys still wet at age 18 years of age, and still fewer girls wet at this age. The DSM-IV-TR also cites a spontaneous remission rate of between 5 and 10 percent per year after 5 years of age. Secondary enuresis may occur at any time, but it most commonly begins between 5 and 8 years of age.

46.2. The answer is B

There is a correlation between enuresis and psychological disturbance that increases with age. Additionally, there is increasing evidence for the role of physiological factors in enuresis. Although the DSM-IV-TR definition of enuresis includes both voluntary and unintentional wetting, the vast majority of enuretic children do not wet intentionally. Bladder control is achieved gradually and is influenced by neuromuscular and cognitive development, as well as by emotional factors and toilet training; difficulties in one or more of these areas may delay acquisition of urinary continence. There is also accumulating evidence for a genetic role in enuresis; one large study found that a child's risk of being enuretic was increased 5.2 times if the mother had been enuretic as a child and 7.1 times if the father had been enuretic. Additionally, the concordance rate is higher in monozygotic than in dizygotic twins, and 75 percent of enuretic

children have a first-degree biological relative with enuresis. A small minority of children with enuresis wet intentionally; these children often manifest oppositional defiant disorder or a psychotic disorder. *Children living in socially disadvantaged circumstances and children experiencing significant psychosocial stress have a greater incidence of enuresis than other children.* The behavioral disturbances that co-occur with enuresis are quite variable and nonspecific and may represent either coincidental rather than causal correlations with enuresis. *Children with enuresis have significantly higher rates of developmental delays than nonenuretic children,* including both children in psychiatric clinic populations and normal control subjects.

46.3. The answer is D

To make a proper diagnosis of enuresis in an 8-year-old child using the tenth edition of the *International Classification of Diseases* (ICD-10), the child must wet the bed or otherwise intentionally or unintentionally void urine inappropriately at least once a month. In children younger than 7 years old, they must void their urine, intentionally or unintentionally in an inappropriate manner, at least twice a month. These symptoms must persist at least 3 months with no evidence of a nonpsychiatric medical condition, such as epilepsy. Also, there must be no evidence of any other psychiatric disorder that meets the criteria for other ICD-10 categories.

46.4. The answer is D

Because *urinary tract infections* can produce enuresis, a urinalysis should be part of every evaluation. Using radiographic procedures with contrast media to detect an anatomical or physiological cause for the enuresis is more problematic because the procedures are invasive and painful, and the diagnostic yield is low. A large study carried out in a pediatric primary care setting found a 3.7 percent incidence of obstructive lesions in children with enuresis.

46.5. The answer is A

The natural history of enuresis is significant because it impacts treatment decisions, insofar as *enuresis is a self-limiting disorder that will eventually spontaneously remit.* Diagnosis is not made until age 5 years to account for children who undergo toilet training at a later stage in the accepted age range (2 to 5 years of age). The prevalence of enuresis is relatively high between the ages of 5 and 7 years and then substantially declines. By age 14 years, only 1.1 percent of boys wet once a week or more, and very few persist into adulthood with the problem.

Behavioral and pharmacological treatments have well established efficacy in treating patients with enuresis, but *medications are not the first line of treatment* given the risks of side effects and high likelihood of recurrence of the problem when the drugs are discontinued. *Psychotherapy is often useful for ameliorating behavioral disturbances that often accompany enuresis, especially secondary enuresis;* however, studies indicate that psychotherapy alone does not tend to have a high success rate in the treatment of patients with enuresis.

A comprehensive review of several studies determined the success rate for behavioral treatment of enuresis to be 75 percent (not 40 percent). The primary method of behavioral treatment

is the bell and pad method of conditioning. A pad is placed on the bed with a wire connected to a bell. When the child wets, the moisture completes a circuit in the pad, ringing the bell and waking the child. With repeated use, the child learns to awaken before wetting occurs. This treatment is equally effective in children with and without concomitant psychiatric disorders.

46.6. The answer is C

Encopresis may be precipitated by stressful life events; when the disorder begins after a prior sustained period of fecal continence, the behavior may represent a regression precipitated by stressors such as birth of a sibling, parental separation, or the start of school. A significant relationship exists between encopresis and enuresis; the two disorders commonly co-occur. Encopresis involves a complicated interplay between physiological and psychological factors. Inadequate or inappropriate toilet training, ineffective sphincter control, and a variety of emotional reasons may all contribute to the development of the disorder. Regardless of the origin of the symptom in a given individual, bowel functioning tends to be disturbed: up to 75 percent of children with encopresis are constipated and have excessive fluid overflow. The DSM-IV-TR specifies one event per month for at least 3 months as part of the criteria for encopresis.

46.7. The answer is A

Encopresis is defined by DSM-IV-TR as a pattern of passing feces into inappropriate places, whether the passage is involuntary or intentional. The pattern must be present for at least 3 months; the child's chronological age must be at least 4 years.

Enuresis is the repeated voiding of urine into clothes or bed, whether the voiding is involuntary or intentional. The behavior must occur twice weekly for at least 3 months or must cause clinically significant distress or impairment socially or academically. The child's chronological or developmental age must be at least 5 years.

Conduct disorder is an enduring set of behaviors that evolves over time, usually characterized by aggression and violation of the rights of others. Conduct disorder is associated with many other psychiatric disorders, including attention-deficit/hyperactivity disorder, depression, and learning disorders, and it is also associated with several psychosocial factors such as low socioeconomic level; harsh, punitive parenting; family discord; lack of appropriate parental supervision; and lack of social competence. The DSM-IV-TR criteria require three specific behaviors of the 15 listed, which include bullying, threatening, or intimidating others and staying out at night despite parental prohibitions, beginning before 13 years of age.

Hirschsprung's disease, also known as congenital megacolon, is congenital dilation and hypertrophy of the colon caused by an absence (aganglionosis) or marked reduction (hypoganglionosis) in the number of ganglion cells of the myenteric plexus of the rectum.

Schizophrenia in prepubertal children is exceedingly rare; it is estimated to occur less frequently than autistic disorder. In adolescents, the prevalence of schizophrenia is estimated to be 50 times that in younger children, with probable rates of one to two per 1,000.

Answers 46.8–46.9

46.8. The answer is A

46.9. The answer is B

In both enuresis and encopresis, the distinction between primary and secondary has bearing upon the likelihood of associated psychopathology. One study of 63 boys found that boys with primary encopresis were more likely to have developmental delays and associated enuresis, and those with secondary encopresis were more likely to have experienced high levels of psychosocial stress and to have been diagnosed with conduct disorder.

Answers 46.10–46.16

46.10. The answer is D

46.11. The answer is B

46.12. The answer is C

46.13. The answer is A

46.14. The answer is B

46.15. The answer is B

46.16. The answer is A

Both enuresis and encopresis are three to four times more common in boys than girls. Several medications have been used with some success in the treatment of enuresis. Imipramine (Tofranil) has U.S. Food and Drug Administration (FDA) approval for the treatment of children with enuresis on a short-term basis. However, tolerance typically develops within 6 weeks of beginning treatment, and relapse at former frequencies of wetting predictably occurs after discontinuing the drug. Desmopressin (DDAVP), an antidiuretic hormone available in intranasal spray form, is useful in preventing enuresis while being used, but it also does not seem to maintain its effect after discontinuation. Thus, behavioral techniques are the first line of treatment for children with enuresis. For treatment of encopresis, combined behavioral and family intervention is the recommended treatment. Accurate evaluation of the patterns of encopresis is necessary for successful treatment. The degree to which the child is aware of the passage of feces is significant as well. If encopresis is a behavior through which the child expresses anger or attracts negative parental attention, the treatment approach is altered. Psychopharmacological interventions are not typically part of the treatment of encopresis, although they may be indicated in cases of chronic constipation to regulate stool consistency and improve bowel regularity.

Although structural abnormalities are rare causes of enuresis or encopresis, physiological factors are important contributors to both conditions. For example, children with encopresis who have chronic constipation and overflow incontinence are often found to have abnormal sphincter contractions. Physiological characteristics, some of which are likely heritable, also contribute to

enuresis: 75 percent of children with enuresis have a first-degree relative with enuresis. Furthermore, children with enuresis are twice as likely to have concomitant developmental delay as other children.

Bowel control is established in 95 percent of children by the fourth birthday and in 99 percent of children by the fifth birthday. *At age 7 years, the frequency of encopresis is 1.5 percent*

in boys and 0.5 percent in girls. The prevalence of enuresis declines with age: 82 percent of 2-year-olds, 49 percent of 3-year-olds, 26 percent of 4-year-olds, and 7 percent of 5-year-olds have enuresis. To be diagnosed as having enuresis, a child must have a chronological or developmental age of 5 years; the cut-off for encopresis is a chronological or developmental age of 4 years.



Other Disorders of Infancy, Childhood, or Adolescence

Based on observations of a young child and parents during a brief separation and reunion, designated the “strange situation procedure” pioneered by Mary Ainsworth and colleagues, researchers have designated a child’s basic pattern of attachment to be characterized as secure, insecure, or disorganized. Children who exhibit secure attachment behavior are believed to experience their caregivers as emotionally available and appear to be more exploratory and well adjusted than children who exhibit insecure or disorganized attachment behavior. Whereas insecure attachment is believed to result from a young child’s perception that the caregiver is not consistently available, a child with disorganized attachment behavior is believed to be experiencing the need for proximity to the caregiver with apprehension in approaching the caregiver. These early patterns of attachment are believed to influence a child’s future complex capacities for affect regulation, self-soothing, and relationship building. According to the text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR)*, reactive attachment disorder of infancy or early childhood is marked by an inappropriate social relatedness that occurs in most contexts. The disorder appears before the age of 5 years and is associated

with “grossly pathological care.” It is not accounted for solely by a developmental delay and does not meet the criteria for pervasive developmental disorder. The pattern of care may exhibit lasting disregard for a child’s emotional or physical needs or repeated changes of caregivers as when a child is frequently relocated during foster care. The pathological care pattern is believed to cause the disturbance in social relatedness.

Stereotypic movements are repetitive voluntary, often rhythmic movements that occur in normal children and occur with increased frequency in children carrying the diagnoses of pervasive developmental disorder and mental retardation syndromes. These movements appear to be purposeless, but in some cases, such as body rocking, head rocking, or hand flapping, they may be either self-soothing or self-stimulating. In other cases, stereotypic movements such as head banging, face slapping, eye poking, or hand biting may cause significant self-harm. Nail biting, thumb sucking, and nose picking are generally not included as symptoms of stereotypic movement disorder because they rarely cause impairment.

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

Students should know the following terms.

- ▶ anticipatory anxiety
- ▶ behavioral inhibition
- ▶ delayed language acquisition
- ▶ desensitization
- ▶ driven, nonfunctional behavior
- ▶ dyskinetic movements
- ▶ emotional and physical neglect
- ▶ external life stressors
- ▶ failure to respond socially
- ▶ failure to thrive
- ▶ generalized anxiety
- ▶ head banging and nail biting
- ▶ indiscriminate familiarity
- ▶ inhibition to speak
- ▶ lack of stable attachment
- ▶ Lesch-Nyhan syndrome
- ▶ major attachment figure
- ▶ multimodal treatment approach
- ▶ nonverbal gestures
- ▶ panic disorder
- ▶ pathogenic caregiving
- ▶ psychopharmacologic interventions
- ▶ “psychosocial dwarfism”
- ▶ school phobia
- ▶ school refusal
- ▶ selective mutism
- ▶ self-injurious stereotypic acts
- ▶ sensory impairments
- ▶ separation anxiety
- ▶ shyness
- ▶ social anxiety
- ▶ social phobia
- ▶ specific phobia
- ▶ stereotypic movements
- ▶ stress anxiety
- ▶ temperamental constellation

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 47.1.** Which of the following is *true* about stereotypic movement disorder?
- Stereotypic movement disorder includes trichotillomania.
 - It includes stereotypy that is part of a pervasive developmental disorder.
 - It is not diagnosed if mental retardation is present.
 - It includes tics and compulsions.
 - None of the above
- 47.2.** Which of the following is an accurate description of head banging?
- It occurs in approximately 1 percent of children.
 - Head banging is three times more common in boys.
 - The age of onset is usually 12 months or older.
 - It is relatively common after the age of 3 years.
 - It is rarely self-limiting.
- 47.3.** The most widely used intervention in the treatment of stereotypic movements is
- clomipramine (Anafranil)
 - desipramine (Norpramin)
 - haloperidol (Haldol)
 - chlorpromazine (Thorazine)
 - behavioral modification

Directions

Each group of lettered headings below is followed by a list of numbered phrases. For each numbered phrase, select

- if the item is associated with A only.
- if the item is associated with B only.
- if the item is associated with both A and B.
- if the item is associated with neither A nor B.

Questions 47.4–47.5

- Reactive attachment disorder, inhibited type
- Reactive attachment disorder, disinhibited type

- 47.4.** Linked to institutionalization or exposure to multiple caregivers before age 5 years
- 47.5.** Linked to early childhood maltreatment

Questions 47.6–47.9

- Reactive attachment disorder
- Stereotypic movement disorder

- 47.6.** Pervasive developmental disorder must be ruled out in order for the diagnosis to be made.
- 47.7.** It includes some symptoms, such as rocking or thumb sucking, that are considered developmentally normal self-comforting behaviors in very young children.
- 47.8.** It may be associated with multiple foster care placements in early childhood.
- 47.9.** It clearly indicate an increased risk of future psychotic disorder.

ANSWERS

47.1. The answer is E (none)

Stereotypic movement disorder has undergone some modification with the evolution of the DSM system. The DSM-III contained a broader definition of the disorder than does the DSM-IV-TR. The DSM-III criteria described voluntary, nondistressing, nonspasmodic movements and specified that the behaviors were associated with psychosocial deprivation, mental retardation, or pervasive developmental disorder but could occur independently of these conditions. In the DSM-III-R, *the diagnosis was re-named stereotypy/habit disorder and was a broadened category that included periodic and persistent nonfunctional behaviors, such as nail biting*. The DSM-III-R also specified functional impairment—the behavior had to either cause physical injury or interfere with normal activities—and excluded the diagnosis in the presence of tic disorder or pervasive developmental disorder. *The DSM-IV-TR continues with these specifications and further excludes specific behaviors such as trichotillomania (hair pulling), tics, and compulsions because they are thought to fit more coherently into other diagnostic categories.*

When stereotypic movements occur as part of another general neurological, medical, or psychiatric condition, an additional diagnosis of stereotypic movement disorder is not required. *Stereotypic movement disorder can be diagnosed in the presence of mental retardation when the movements are severe enough to warrant clinical attention.*

47.2. The answer is B

Although the prevalence of stereotypic movement disorders in the general population is unknown, some data exist on the prevalence of individual stereotyped behaviors in certain populations. The prevalence of self-injurious behaviors is higher among children with mental retardation than among the general population. *Head banging is estimated to have a prevalence of approximately 5 percent (not 1 percent) in child populations, with boys affected three times more frequently than girls*. The behavior is *usually (not rarely) self-limiting* and typically occurs in the first 3 years of life, with a *typical age of onset between 5 and 12 months (not after 12 months)*. It is *relatively rare (not relatively common) after age 3 years*. Similarly, breath-holding is rare after the third birthday and occurs most commonly between 12 and 18 months of age; this behavior is also more common in boys than girls.

47.3. The answer is E

No specific treatment has been shown to be effective for stereotypic movement disorder in general; however, a small number of

double-blind studies have investigated the efficacy of pharmacological treatments for specific behaviors. For example, investigations have suggested the superiority of *clomipramine* over *desipramine* for severe nail biting; more recent clinical practice has favored selective serotonin reuptake inhibitors over tricyclic antidepressants for these symptoms given their more benign side effect profile. Neuroleptics are also frequently used and may demonstrate significant clinical benefit; both *haloperidol* and *chlorpromazine* have demonstrated efficacy in randomized placebo-controlled trials of patients with stereotyped movements associated with mental retardation and autistic disorder.

Despite some established efficacy of pharmacological agents, *behavioral modification techniques have been the most widely used interventions* for the treatment of stereotypic movements. These techniques include both positive and negative reinforcement and have shown success in diminishing the severity and frequency of the movements.

Answers 47.4–47.5

47.4. The answer is B

47.5. The answer is A

Reactive attachment disorder (RAD) of infancy and early childhood is described in the DSM-IV-TR as behavior characterized by “markedly disturbed and developmentally inappropriate social relatedness in most contexts.” These findings must be consistent with “grossly pathogenic care.” *The disorder must begin before 5 years of age to meet criteria and cannot be accounted for “solely by developmental delay.”* Children who are mentally retarded are thus difficult to diagnose; those who meet criteria for pervasive developmental disorder are explicitly excluded from consideration for RAD.

Two subtypes are spelled out in the DSM-IV-TR criteria. The first pattern, generally linked in the literature to early childhood maltreatment, is characterized by inhibition of the normal developmental tendency to seek comfort from a select group of

caregivers. Responses to social interactions are “excessively inhibited, hypervigilant, or highly ambivalent,” reflecting the overall inhibition of the attachment system in affected children. The second pattern, linked to institutionalization or exposure to multiple caregivers before age 5 years, is characterized by a relative hyperactivation of the attachment system, resulting in “diffuse” and nonselective attachments and patterned behavior labeled “indiscriminate sociability.”

Answers 47.6–47.9

47.6. The answer is C

47.7. The answer is B

47.8. The answer is A

47.9. The answer is D

Pervasive developmental disorders are marked by significant impairments in social interactions as well as repetitive and stereotyped movements; as a result, *neither RAD nor stereotypic movement disorder diagnoses are made in the presence of a pervasive developmental disorder. Neither reactive attachment disorder nor stereotypic movement disorder has been established as a risk factor for future development of a psychotic disorder.*

As many as 80 percent of normal children show rhythmic activities such as thumb sucking or rocking that seem purposeful and soothing and tend to disappear by 3 to 4 years of age; it is only when these symptoms persist beyond normal developmental expectations and markedly interfere with normal activities or cause bodily injury that a diagnosis of stereotypic movement disorder is considered.

RAD results from grossly pathogenic care of an infant or young child. The likelihood of the disorder increases with a variety of circumstances, including parental mental retardation, parenthood during adolescence, institutionalization, repeated lengthy hospitalizations, and *multiple foster care placements.*



Mood Disorders and Suicide in Children and Adolescents

Mood disorders among children and adolescents have been increasingly diagnosed and treated with a variety of modalities. Although clinicians and parents have always recognized that children and adolescents may experience transient sadness and despair, it has become clear that persistent disorders of mood occur in children of all ages and under many different circumstances. Two criteria for mood disorders in childhood and adolescence are a disturbance of mood, such as depression or elation, and irritability.

Mood disorders appear in children of all ages and may consist of enduring patterns of disturbed mood; diminished enthusiasm in play activities, sports, friendships, or school; and a general feeling of worthlessness. The core features of major depression are similar in children, adolescents, and adults, with the expression of these features modified to match the age and maturity of the individual.

Young, depressed children commonly show symptoms that appear less often as they grow older, including mood-congruent auditory hallucinations, somatic complaints, withdrawn and sad appearance, and poor self-esteem. Symptoms that are more common among depressed youngsters in late adolescence than in

young childhood are pervasive anhedonia, severe psychomotor retardation, delusions, and a sense of hopelessness. Symptoms that appear with the same frequency regardless of age and developmental status include suicidal ideation, depressed or irritable mood, insomnia, and diminished ability to concentrate.

Depressive disorders and bipolar I disorder are generally episodic, although their onset may be insidious. Manic episodes are rare in prepubertal children but fairly common in adolescents. Attention-deficit/hyperactivity disorder (ADHD), oppositional defiant disorder, and conduct disorder may occur among children who later experience depression. In some cases, conduct disturbances or disorders may occur in the context of a major depressive episode and resolve with the resolution of the depressive episode. Clinicians must clarify the chronology of the symptoms to determine whether a given behavior (e.g., poor concentration, defiance, or temper tantrums) was present before the depressive episode and is unrelated to it or whether the behavior is occurring for the first time and is related to the depressive episode.

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

Student should study the following terms.

- | | | | |
|---|--------------------------------------|---------------------------|----------------------|
| ▶ academic failure | ▶ developmental symptoms | ▶ insidious onset | ▶ sad appearance |
| ▶ anhedonia | ▶ double depression | ▶ irritable mood | ▶ social withdrawal |
| ▶ antisocial behavior and substance abuse | ▶ environmental stressors | ▶ lethal methods | ▶ somatic complaints |
| ▶ bereavement | ▶ family history | ▶ poor concentration | ▶ temper tantrums |
| ▶ boredom | ▶ hallucinations | ▶ poor problem solving | ▶ toxic environments |
| ▶ copycat suicides | ▶ inpatient vs. outpatient treatment | ▶ precipitants of suicide | |
| ▶ cortisol hypersecretion | | ▶ psychosocial deficits | |
| | | ▶ REM latency | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

48.1. Alterations in which area(s) of the brain are most highly associated with known deficits for suicidal individuals?

- The frontal lobe and cerebellum
- The occipital lobe
- The prefrontal cortex and hippocampus

- D. The limbic system
E. The somatosensory cortex and the corpus callosum
- 48.2.** True statements about the phenomenology of bipolar disorder in children and adolescents include all of the following *except*
- A. Prepubertal children very rarely exhibit discrete episodes of mania or depression.
B. Some clinicians ascribe symptoms such as extreme mood variability, aggressive behavior, and high rates of distractibility and impulsivity to pediatric bipolar disorder, although controversy exists over this diagnosis.
C. Psychotic symptoms such as hallucinations and delusional thought content are rare in adolescent mania.
D. Among adolescents, depressive episodes characterized by severely depressed mood, psychosis, psychomotor retardation, and hypersomnia may be predictive of later development of bipolar disorder.
E. Antidepressant medications may trigger hypomania or mania in children and adolescents with no known history of bipolar disorder.
- 48.3.** Major depressive disorder in school-aged children
- A. may present as irritable mood rather than depressed mood
B. usually includes pervasive anhedonia
C. includes mood-congruent auditory hallucinations less commonly than in adults with the same disorder
D. is never diagnosed in the context of bereavement
E. none of the above
- 48.4.** Approximately what percent of adolescent suicide victims had a mood disorder at the time of their death?
- A. 25 percent
B. 60 percent
C. 75 percent
D. 40 percent
E. 92 percent
- 48.5.** Which is the only medication that has been approved by the U.S. Food and Drug Administration (FDA) for the treatment of depression in children?
- A. Sertraline (Zoloft)
B. Escitalopram (Lexapro)
C. Paroxetine (Paxil)
D. Fluoxetine (Prozac)
E. Citalopram (Celexa)
- 48.6.** Which of the following symptoms presents with similar frequency among children, adolescents, and adults with major depressive disorder?
- A. Suicidal ideation
B. Somatic complaints
C. Mood-congruent auditory hallucinations
D. Pervasive anhedonia
E. None of the above
- 48.7.** Which of the following treatments have demonstrated efficacy in treating adolescent depression based on controlled clinical trials?
- A. Cognitive behavioral psychotherapy
B. Interpersonal psychotherapy
C. Fluoxetine
D. All of the above
E. None of the above

ANSWERS

48.1. The answer is C

Postmortem studies in adolescents who completed suicide have demonstrated the greatest degree of alteration in *the prefrontal cortex and hippocampus*, areas associated with known deficits for suicidal individuals, namely emotion regulation and problem solving. These studies have shown alteration in 5-HT_{2A} binding, decreased activity of protein kinase A and C, downregulation in cyclic adenosine monophosphate (cAMP) response element-binding (CREB) protein, and increased activity of brain-derived neurotrophic factor (BDNF), which are involved in signaling and protection from the neurotoxic effects of stress.

48.2. The answer is C

Bipolar disorder is being diagnosed with increasing frequency in prepubertal children even though in this age group, “classic” manic episodes are extremely rare, and *prepubertal children very infrequently exhibit discrete episodes of mania or depression*. Although an ongoing controversy exists over the diagnosis of bipolar disorder in this age group, *increasing numbers of clinicians diagnose bipolar disorder based on findings of extreme mood variability, aggression, distractibility, impulsivity, and depressive symptoms, particularly in the context of a family history of bipolar disorder*. Whether these children will go on to develop more discrete mood cycling later as they mature or whether their presentations will differ from adult bipolar disorder remains under investigation. Adolescent-onset bipolar disorder much more closely parallels in its presentation the characteristics of bipolar disorder in adults. *Psychotic symptoms, such as hallucinations and delusions, are common (not rare) in adolescent mania*; indeed, some authors suggest that psychosis as part of a manic state is more common in adolescents than in adults. *Adolescents with depressive episodes characterized by severely depressed mood, psychosis, psychomotor retardation, and hypersomnia may be at increased risk of going on to develop bipolar disorder compared with adolescents whose major depressive episodes are not so characterized*. As in adults, *antidepressant medications may trigger hypomania or mania in children and adolescents with no known history of bipolar disorder*.

48.3. The answer is A

Major depression in school-aged children does not commonly present with findings typical among adults, such as depressed mood and neurovegetative symptoms; instead, somatic

complaints, psychomotor agitation, and *irritable mood* are more common. Additionally, *mood-congruent auditory hallucinations* are much more (not less) common among prepubertal children with major depression than among adults with the same condition. *Pervasive anhedonia*, a common finding in depressed adults, is less typical (not usually present) among school-aged children with major depression. A diagnosis of major depressive disorder is not usually made within 2 months of the loss of a loved one; however, in the event of marked functional impairment, morbid preoccupation with worthlessness or guilt, psychomotor retardation, suicidal ideation, or psychosis, a diagnosis of major depression and appropriate treatment are indicated.

48.4. The answer is B

Mood disorders are strongly associated with suicidal ideation, attempts, and completions. Approximately 60 percent of adolescent suicide victims had a mood disorder at the time of death. Bipolar disorder appears to convey a particularly high risk for suicidal attempts and completions, particularly at times when patients are experiencing rapid cycling or a mixed state, both of which are more common conditions in pediatric than in adult bipolar disorder. One study found that nearly 20 percent of adolescent suicide victims had bipolar spectrum disorder, although other studies did not. The rate of suicidal behavior in clinical samples of pediatric bipolar disorder is quite high, with around one-third reporting a lifetime history of suicide attempt. Among the symptoms of depression most closely associated with suicidal ideation and behavior are insomnia, agitation, and irritability.

48.5. The answer is D

Fluoxetine (Prozac) is the only medication to have FDA approval for the treatment of major depression in children and adolescents. In two double-blind, placebo-controlled trials, significantly more of the patients treated with fluoxetine were much or very much improved (56 and 52 percent, respectively) than the placebo group (33 and 37 percent, respectively). Fluoxetine alone, fluoxetine with cognitive behavioral therapy (CBT), CBT alone, and placebo were compared in a large multicenter trial of

439 adolescent outpatients with major depression. Significantly more of the fluoxetine-treated patients were much or very much improved compared with the placebo group. The combination of fluoxetine plus CBT had the highest response rate. Remission rates were also significantly higher in the combination group than in the fluoxetine, CBT, and placebo groups. Predictors of treatment response included a younger age, higher functioning, less chronicity, less suicidal ideation, less hopelessness, fewer comorbidities, and higher expectation for improvement.

48.6. The answer is A

Although the core symptoms of major depressive disorder overlap considerably among children, adolescents, and adults, different symptoms predominate in each age group. *Suicidal ideation* is a symptom that occurs with similar frequency among depressed individuals of all ages. Psychomotor agitation, irritable mood, somatic complaints, and mood-congruent auditory hallucinations are common manifestations of major depression among school-age children. *Pervasive anhedonia* is less common among children but is frequently present in depressed adolescents and adults. Adolescents with depression also present more commonly with irritability, aggression, sulkiness, withdrawal from social activities, and a desire to leave home than do depressed patients from other age groups. Changes in sleep and appetite are more common in adults with major depression than in children or adolescents with the disorder.

48.7. The answer is D (all)

A number of studies have demonstrated the efficacy of cognitive-behavioral psychotherapy in treating major depressive disorder in adolescents. *Interpersonal therapy* has also shown good results in the treatment of depressed adolescents. Recent controversies surrounding potential side effects of the selective serotonin reuptake inhibitors among children and adolescents, including the possible increase in suicidal ideation, have complicated the use of these medications to treat adolescents with major depressive disorder; nevertheless, *fluoxetine* has been shown to effectively treat the condition in this age group.



Anxiety Disorders of Infancy, Childhood, and Adolescence

There are four categories of anxiety disorders in children. The first is obsessive-compulsive disorder (OCD). OCD is characterized by the presence of recurrent intrusive thoughts associated with anxiety or tension and/or repetitive purposeful mental or physical actions aimed at reducing fears and tensions caused by obsessions. It has become increasingly clear that the majority of cases of OCD begin in childhood or adolescence. The clinical presentation of OCD in childhood and adolescence is similar to that in adults, and the only alteration in diagnostic criteria in the text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) for children is that they do not necessarily demonstrate awareness that their thoughts or behaviors are unreasonable.

The second category is posttraumatic stress disorder (PTSD). PTSD is characterized by a set of symptoms such as reexperiencing symptoms, distressing recollections, persistent avoidance, and hyperarousal in response to exposure to one or more traumatic events. Many children and adolescents are exposed to traumatic events ranging from direct experiences with physical or sexual abuse, domestic violence, motor vehicle accidents, severe medical illnesses or natural or human-created disasters, leading to full PTSD in some and at least some PTSD symptoms in many others. Although the presence of posttraumatic stress symptoms has been described among adults for more than a cen-

tury, it was first officially recognized as a psychiatric disorder in 1980 with the publication of the DSM-III. Recognition of its frequent emergence in children and adolescence has broadened over the past decade.

The third category includes separation anxiety disorder, generalized anxiety disorder (GAD), and social phobia. Separation anxiety disorder is diagnosed when developmentally inappropriate and excessive anxiety emerges related to separation from the major attachment figure. GAD is characterized by chronic generalized anxiety not limited to any particular idea, object, or event.

The fourth category is selective mutism. Selective mutism is characterized in a child by persistent failure to speak in one or more specific social situations, most typically including the school setting. The most recent conceptualization of selective mutism highlights the relationship between underlying social anxiety and the resulting failure to speak. Most children with the disorder are completely silent during the stressful situations, but some may verbalize almost inaudibly single-syllable words. Children with selective mutism are fully capable of speaking competently when not in a socially anxiety-producing situation.

Students should study the questions and answers below for a useful review of these disorders.

HELPFUL HINTS

Students should be able to define the following terms.

- | | | | |
|---|--------------------------------|-------------------------------|-----------------------|
| ▶ adoption studies | ▶ central noradrenergic system | ▶ neurochemical | ▶ situational |
| ▶ age of onset | ▶ cognitive-behavioral | ▶ neuroimaging | ▶ startle reflex |
| ▶ anticipatory | ▶ comorbid disorders | ▶ panic disorder | ▶ stranger |
| ▶ aphonia | ▶ EEG | ▶ performance | ▶ striatum |
| ▶ asthma | ▶ exposure therapy | ▶ psychotherapy | ▶ substance abuse |
| ▶ attention-deficit/hyperactivity disorder (ADHD) | ▶ family studies | ▶ rating scales | ▶ temperament |
| ▶ β -adrenergic receptor antagonists | ▶ free-floating | ▶ religious ritual | ▶ thalamus |
| ▶ cannabis-induced | ▶ genetics | ▶ self-cutting | ▶ Tourette's disorder |
| | ▶ impulse control | ▶ separation | ▶ trait |
| | ▶ kleptomania | ▶ separation anxiety disorder | |
| | ▶ life events | ▶ serotonergic system | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 49.1.** Which of the following is *not* a true statement about the genetics of OCD?
- There is an increased risk of OCD in first degree relatives.
 - Subclinical syndromes occur in family pedigrees.
 - OCD is related to Tourette's disorder.
 - There is a linkage to chromosome 21.
 - Tics are highly correlated to OCD.
- 49.2.** According to clinical trials, child OCD patients taking clomipramine (Anafranil) showed significant improvement after how many weeks?
- 4 to 6 weeks
 - 6 to 8 weeks
 - 8 to 10 weeks
 - 10 to 12 weeks
 - 12 to 14 weeks
- 49.3.** Developmentally appropriate separation anxiety usually begins around what age?
- 3 months
 - 4 months
 - 5 months
 - 6 months
 - 7 months
- 49.4.** Separation anxiety in children is characterized by
- fears that a loved one will be hurt
 - fears about getting lost
 - irritability
 - animal and monster phobias
 - all of the above
- 49.5.** An 8-month-old infant who is separated from his mother for the first time goes through three well-defined sequential stages. In order, they are
- despair, protest, and detachment
 - detachment, despair, and protest
 - detachment, protest, and despair
 - protest, despair, and detachment
 - protest, detachment, and despair
- 49.6.** Before the publication of DSM-IV, children with GAD were diagnosed as having which of the following disorders?
- Obsessive-compulsive disorder
 - Overanxious disorder
 - Social phobia
 - Separation anxiety
 - None of the above
- 49.7.** There is clinical evidence to support which of the following as predisposing toward overanxious disorders in children?
- First-born children
 - Large families
 - Last-born children
 - Low socioeconomic status
 - Low expectations
- 49.8.** Which of the following statements is *not* true about separation anxiety in infants?
- It is not a universal phenomenon in infants.
 - It emerges in infants younger than 1 year of age.
 - It has survival value.
 - It peaks between 9 months and 18 months of age.
 - It is pathological in about 15 percent of infants.
- 49.9.** Which of the following is *not* a common physical symptom of generalized anxiety disorder in children?
- Gastrointestinal distress
 - Headaches
 - Heart palpitations
 - Bed wetting
 - Restlessness
- 49.10.** Symptoms of GAD in children often mirror the symptoms of which other disorder?
- Obsessive-compulsive disorder
 - Social phobia
 - Posttraumatic stress disorder
 - Learning disorder
 - Elimination disorder
- 49.11.** Childhood PTSD was officially recognized as a psychiatric disorder in what year?
- 1978
 - 1979
 - 1980
 - 1981
 - 1982
- 49.12.** PTSD is the only disorder in DSM-IV-TR where the first diagnostic criterion is
- Biochemical changes
 - Hyperarousal
 - An identified etiologic factor
 - Night terrors
 - None of the above
- 49.13.** In the differential of PTSD, the clinician should consider which of the following conditions?
- Bereavement
 - Disruptive behavior disorder

- C. Obsessive-compulsive disorder
- D. Social phobia
- E. All of the above

49.14. Young children with PTSD tend to experience frightening dreams that lack which of the following characteristics?

- A. Audible content
- B. Color content
- C. Specific content
- D. Emotional content
- E. Recognizable content

49.15. Selective mutism

- A. has an age of onset from 2 to 3 years old
- B. rarely manifests outside of the home
- C. may develop gradually or suddenly
- D. is unrelated to temper tantrums
- E. all of the above

Directions

Each set of lettered headings below is followed by a list of numbered words or statements. For each numbered word or statement, select the *one* lettered heading most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 49.16–49.19

- A. Cognitive processing
- B. Gradual exposure
- C. Parental treatment
- D. Stress inoculation

49.16. Thought stopping

49.17. Physical sensations experienced

49.18. Inaccurate thought processing

49.19. Support

ANSWERS

49.1. The answer is D

OCD is a heterogeneous disorder that has been recognized for decades to run in families. Family studies have documented an *increased risk of at least fourfold in the first-degree relatives of early-onset OCD*. In addition, the presence of *subclinical symptom constellations in family members appears to breed true*. Molecular genetic studies have suggested *linkage to regions of chromosomes 2 and 9 (not 21)* in certain pedigrees with multiple members exhibiting early-onset OCD. Candidate gene studies have been inconclusive thus far. Family studies have pointed to a *relationship between OCD and tic disorders such as Tourette's disorder*. OCD and tic disorders are believed to share susceptibility factors. The concept of a broader "obsessive-compulsive spectrum" including eating disorders, and somatoform disorders may account for the expression of repetitive and stereotyped symptoms.

49.2. The answer is C

Clomipramine (Anafranil), a tricyclic antidepressant (TCA), is the most researched medication in the treatment of children with OCD. In a double-blind, *8-week*, placebo-controlled study, 60 percent of pediatric patients showed significant improvement. Patients treated with clomipramine reported a 37 percent mean reduction in OCD symptoms compared with 8 percent for the placebo group (with an effect size approaching 1.0). In another *10-week* controlled trial, a significant difference was found between clomipramine and placebo, with 75 percent of pediatric patients showing at least moderate improvement. Other research found that clomipramine was superior to the noradrenergic reuptake inhibiting TCA desipramine (Norpramin). This crossover trial found that 64 percent of patients who initially received clomipramine during their first treatment showed relapse of OCD symptoms during desipramine treatment.

49.3. The answer is D

Developmentally appropriate separation anxiety typically presents around age *6 months* and declines between ages 2 and 3 years. Children with separation anxiety disorder have either persistent and worsening or new onset separation anxiety in the school-aged years (i.e., ages 6 to 12 years).

49.4. The answer is E (all)

Morbid fears, preoccupations, and ruminations are characteristic of separation anxiety in children. Children become fearful that *someone close to them will be hurt* or that something terrible will happen to them when they are away from important caring figures. Many children worry that accidents or illness will befall their parents or themselves. *Fears about getting lost* and about being kidnapped and never again finding their parents are common. Young children express less specific, more generalized concerns because their immature cognitive development precludes the formation of well-defined fears. In older children, fears of getting lost may include elaborate fantasies around kidnappings, being harmed, being raped, or being made into slaves.

Animal and monster phobias are common, as are concerns about dying. When threatened with separation, children may become fearful that events related to muggers, burglars, car accidents, or kidnapping may occur.

When separation from an important figure is imminent, children show many premonitory signs; *irritability*, difficulty in eating, and complaints such as vomiting and headaches are common when separation is anticipated or actually happens. These difficulties increase in intensity and organization with age because older children are able to anticipate anxiety in a more structured fashion. Thus, there is a continuum between mild anticipatory anxiety before a threatened separation and pervasive anxiety after the separation has occurred.

49.5. The answer is D

Attachment disorder of the anaclitic type may be seen in any infant between the ages of 6 and 36 months of age. The primary symptoms consist of depressive-anxious affect and the dropping out of attachment behaviors that had been achieved before separation from the mother.

The infant's reaction to such a loss occurs in several well-defined stages after the age of 6 months. In order, these stages are *protest*, *despair*, and *detachment*. The attitude of detachment refers to the infant's failure to make new attachments after the loss of the mother; detachment occurs generally a few days after such a loss. Other major symptoms include psychosocial retardation, avoidance of others, gastrointestinal disturbances without organic cause, and depressive withdrawal.

49.6. The answer is B

Until publication of DSM-IV, children and adolescents were not eligible for a diagnosis of GAD because the diagnosis required an individual be 18 years or older. Before publication of the DSM-IV, children with multiple fears and worries could be diagnosed with *overanxious disorder*. Overanxious disorder was characterized by excessive or unrealistic worry for a period of at least 6 months. However, because of the poor reliability and validity of this diagnostic category and symptomatic overlap and continuity with adult generalized anxiety, overanxious disorder was incorporated into the DSM-IV GAD diagnosis. Research comparing cases diagnosed by DSM-III-R and DSM-IV criteria found that the change in terminology did not affect the characteristics of cases.

49.7. The answer is A

Some clinical evidence suggests that overanxious disorder is most common in small families of upper socioeconomic status, *in first-born children*, and in situations in which there is unusual concern about performance, even when the child is functioning at an adequate level. In such families, children who develop the overanxious disorder come to believe that they must earn their acceptance in the family by high-level, conforming behavior. They tend to be "goody-two-shoes" children. Although both boys and girls develop this disorder, it has been seen more frequently in girls than in boys.

49.8. The answer is A

Anxiety disorders are among the most common disorders in youth, affecting more than 10 percent of children and adolescents at some point in their development. *Separation anxiety is a universal human developmental phenomenon emerging in infants younger than 1 year of age* and marking a child's awareness of a separation from his or her mother or primary caregiver. Normative separation anxiety *peaks between 9 and 18 months and diminishes by about 2.5 years of age*, enabling young children to develop a sense of comfort away from their parents in preschool. Separation anxiety or stranger anxiety, as it has been termed, most likely *evolved as a human response that has survival value*. The expression of transient separation anxiety is also normal in young children entering school for the first time. *Approximately 15 percent of young children display intense and persistent fear, shyness, and social withdrawal when faced with unfamiliar settings and people*. Young children with this pattern of behavioral inhibition are at a higher risk for the development of separation anxiety disorder, generalized anxiety disorder, and social phobia. Behaviorally inhibited children, as a group, exhibit characteristic physiologic traits that include higher than average

resting heart rates, higher morning cortisol levels than average, and low heart rate variability.

49.9. The answer is D

Bed wetting is not a common physical symptom of GAD in children. Common physical symptoms include *headaches*, *tension*, *restlessness*, *gastrointestinal distress*, and *heart palpitations*. Cognitive characteristics of GAD include negative thinking errors such as catastrophizing (i.e., expecting the worst possible outcome) or overestimation of the likelihood that something undesirable will occur. Generalized worries cover a range of everyday issues, such as being on time, upcoming activities, failure of loved ones or friends to meet basic expectations, or whether unexpected events (e.g., inclement weather) will change daily plans or schedules. Children and adolescents with GAD are often described as perfectionistic and overly sensitive.

49.10. The answer is A

Individuals with GAD and perfectionism may superficially resemble those with *OCD*. For example, a child with GAD and concern about academic performance may routinely check over homework for accuracy or study material repeatedly for the purpose of improving the work product or getting it "perfect." In contrast, children with *OCD* know the work product is good or perfect but experience doubt that their perception is accurate and then recheck for the purpose of rechecking. Also, individuals with GAD may have recurrent uncontrollable worries that could be mistaken for obsessions; however, worries of GAD do not appear senseless, intrusive, or unwanted; rather, they are described as powerful bona fide concerns and are usually tied to events or situations that would stimulate normal concerns. For example, normal children may worry about bad weather as it happens, but children with GAD may worry that bad weather may happen on a cloudless day, and children with *OCD* may worry that if they do not count to three in sets of three, then a loved one may die in a weather-related incident.

49.11. The answer is D

PTSD, which is defined as a severe anxiety disorder that can develop after exposure to any event that results in psychological trauma, was officially recognized as a psychiatric disorder in 1980 with the publication of DSM-III. Childhood PTSD was not recognized until the publication of the DSM-III-R, which was published in 1981.

49.12. The answer is C

PTSD is one of the few conditions in the DSM-IV-TR in which the presence of *an identified etiologic factor*, such as exposure to an extreme traumatic stressor involving a threat to life, safety, or physical integrity, either experienced or witnessed directly by the child or affecting someone close to the child, is the first diagnostic criterion for the disorder. In addition to such exposure, the child must have at least one reexperiencing symptom such as recurrent intrusive and distressing recollections or dreams about the event or intense psychological or physiological reactions to reminders of the event, at least three symptoms of persistent avoidance of trauma-related stimuli or affective numbing, and at least two

hyperarousal symptoms. The duration of these symptoms must be more than 1 month, and the disturbance must cause clinically significant distress or functional impairment. *Biochemical changes* such as changes in cortisol levels have also been found.

49.13. The answer is E (all)

OCD, phobias, bereavement, and disruptive behavior disorder all have to be considered in children who are being worked up for posttraumatic stress disorder (PTSD) because many of the symptoms overlap.

OCD is an anxiety disorder that is characterized by the persistent recurrence of obsessions and compulsions. A *phobia* is the persistent, pathological, unrealistic, intense fear of an object or situation; a person with a phobia may realize that the fear is irrational but is nonetheless unable to dispel it. Some examples are acrophobia (high places), agoraphobia (open places, leaving familiar setting of home), algophobia (pain), claustrophobia (closed or confined places), and zoophobia (animals).

Bereavement is the feeling of grief or desolation, especially at the death or loss of a loved one.

Disruptive behavior disorder is characterized by inattention, overaggressiveness, delinquency, destructiveness, hostility, feelings of rejection, negativism, or impulsiveness.

Finally, the clinician should remember that PTSD can be superimposed on any of the above disorders.

49.14. The answer is E

In the case of younger children, there may be frequent frightening dreams without any *recognizable content*. Children may have periods when they act or feel as if the event were reoccurring in the present moment (a flashback). In young children, trauma-specific reenactment may occur (e.g., sexually abused children may insert objects into their own or other children's private parts or otherwise recreate abusive acts perpetrated against them). Children may experience intense psychological distress or physiological reactivity when exposed to triggering events, people, or situations that remind them of the original traumatic event (e.g., children who witnessed a drive-by shooting may become terrified and have difficulty breathing when they hear thunder or a backfiring car). These reminders may be highly idiosyncratic to individual children. School-aged and preteen children may exhibit omen formation in which they believe they can foresee approaching adverse events.

49.15. The answer is C

The diagnosis of selective mutism is not difficult to make after it is clear that a child has adequate language skills in some environ-

ments but not in others. The mutism *may have developed gradually or suddenly* after a disturbing experience. *The age of onset can range from 4 to 8 years*. Mute periods are *most commonly manifested in school or outside the home*; in rare cases, a child is mute at home but not in school. Children who exhibit selective mutism may also have symptoms of separation anxiety disorder, school refusal, and delayed language acquisition. Because social anxiety is almost always present in children with selective mutism, behavioral disturbances, such as *temper tantrums and oppositional behaviors, may also occur in the home*.

Answers 49.16–49.19

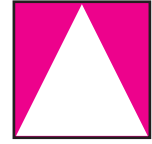
49.16. The answer is D

49.17. The answer is B

49.18. The answer is A

49.19. The answer is C

Various treatments exist for posttraumatic stress disorder (PTSD) in children. In *stress inoculation*, children are guided to use muscle relaxation, focused breathing, affective modulation, thought stopping, and cognitive coping techniques to diminish feelings of helplessness and distress. *Gradual exposure* is a technique for a child to recall, first in small segments and then in increasing amounts, the details of the traumatic exposure and describe the thoughts, feelings and physical sensations experienced during the trauma as well as in the retelling of the event. *Cognitive processing* is used in identifying associated thoughts, feelings and ideas that may be inaccurate and serving to cause additional impairment to the victim, so that reframing of the thoughts and feelings can help the sense of being incapacitated by them. The *parental treatment component* provides parent management strategies for the parent to enhance the child's ability to communicate proactively and elicit support from the parents. This set of therapeutic strategies is designated by experts as the currently accepted first line of treatment for PTSD symptoms. They can be adapted for use in group settings in school, with entire families who have been traumatized, and in groups of adolescents. A variant of trauma-focused cognitive-behavioral therapy for PTSD is called eye movement desensitization and reprocessing in which an exposure and cognitive reprocessing interventions are paired with directed eye movements. This technique is not as well accepted as the more extensive trauma-focused cognitive behavior therapy detailed above.



Early-Onset Schizophrenia

Childhood-onset schizophrenia (COS) is rare, and the reported rate of occurrence is fewer than one case in every 10,000 children. Among adolescents ages 13 to 18 years, the rate of occurrence for schizophrenia is significantly increased. Although the core phenomenological features are the same across the ages, extremely high rates of comorbid psychiatric disorders, such as attention-deficit/hyperactivity disorder, depressive disorders, and separation anxiety disorder (ADHD), are seen in children and adolescents with COS. It is possible that certain psychosocial stressors play a role in the early stages and initial presentation of schizophrenia by interacting with biological risk factors; these same psychosocial stressors are known to influence the course of the disorder as well as playing a role in its emergence. Children who are diagnosed with COS have marked neuropsychological deficits in many basic brain functions, such as working memory, attention, and executive functions.

The clinical presentation of schizophrenia is similar in all age groups. However, a certain difficulty lies with diagnosing

children who report hallucinations and apparent thought disorders, particularly when they occur in conjunction with developmental immaturity in the ability to differentiate reality from fantasy as well as immature language. Such phenomena as reported by young children can likely be attributable to immaturity rather than psychosis. The diagnostic criteria for schizophrenia in children are identical to the criteria for the adult form except that instead of showing deteriorating functioning, children may fail to achieve their expected levels of social and academic functioning. Schizophrenia in prepubertal children includes the presence of at least two of the following: hallucinations, delusions, grossly disorganized speech or behavior, and severe withdrawal for at least 1 month. Social or academic dysfunction must be present, and continuous signs of the disturbance must persist for at least 6 months.

Students should study the questions and answers below for a useful review of the condition.

HELPFUL HINTS

Students should understand these terms.

- | | | | |
|-----------------------------|---|-------------------------------------|-----------------------------------|
| ▶ agranulocytosis | ▶ developmental level and age-appropriate presentations | ▶ haloperidol (Haldol) | ▶ risperidone (Risperdal) |
| ▶ autistic disorder | ▶ diagnostic stability | ▶ high-risk children | ▶ schizotypal personality |
| ▶ childhood psychosis | ▶ disturbed communication | ▶ hypersalivation | ▶ sedation |
| ▶ clozapine (Clozaril) | ▶ expressed emotion | ▶ persecutory delusions | ▶ social rejection |
| ▶ comorbidity | ▶ family support | ▶ pervasive developmental disorders | ▶ tardive dyskinesia |
| ▶ delayed motor development | | ▶ premorbid disorders | ▶ transient phobic hallucinations |
| | | ▶ premorbid functioning | ▶ visual hallucinations |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

50.1. Which of the following is *not* a negative psychotic symptom?

- A. Flat affect
- B. Apathy
- C. Disorganized thinking

- D. Avolition
- E. Poverty of thought

50.2. Predictors of poor prognosis in schizophrenia with childhood onset include all of the following *except*

- A. onset before 10 years of age
- B. premorbid diagnoses of ADHD and learning disorders
- C. lack of family support
- D. delayed motor milestones and delayed language acquisition
- E. misdiagnosed schizophrenia in a child with bipolar I disorder

- 50.3. Which of the following is helpful in distinguishing COS from autistic disorder?
- Intelligence
 - Family history of schizophrenia
 - Age of onset of symptoms
 - Presence of formal thought disorder
 - All of the above
- 50.4. All of the following statements regarding hallucinations in prepubertal children are true *except*
- Auditory and visual hallucinations occur commonly in childhood-onset schizophrenia.
 - Childhood-onset schizophrenia cannot be diagnosed in the absence of hallucinations.
 - Visual hallucinations are not common in childhood schizophrenia.
 - Auditory hallucinations may occur in children exposed to extreme stress.
 - Auditory hallucinations occur in childhood mood disorders.
- 50.5. Patients with which illness are most likely to have chromosomal abnormalities or mutations involving genes in neurodevelopmental pathways?
- Adult-onset schizophrenia
 - Early-onset bipolar disorder
 - Obsessive-compulsive disorder
 - Adult-onset bipolar disorder
 - Early-onset schizophrenia
- 50.6. Which of the following statements regarding COS is *true*?
- Command hallucinations do not occur among children with schizophrenia.
 - Patients with COS are usually mildly to moderately mentally retarded.
 - Rates of schizophrenia are less common among parents of patients with COS than among parents of patients with adult-onset schizophrenia.
 - Among children with schizophrenia, there is often a premorbid history of behavioral disturbances, delayed motor milestones, and delayed language acquisition.
 - Symptoms of childhood schizophrenia respond more robustly to antipsychotic medication than do symptoms of adult-onset schizophrenia.
- 50.7. All of the following are true statements about the course and prognosis of depression in children and adolescents *except*
- early onset predicts a poorer prognosis.
 - depressive disorders are associated with long-term peer relationship difficulties.
 - risk of suicide is significant among adolescents with major depressive disorder.
 - short-term complications include poor academic achievement.

E. there is no increased risk of later developing bipolar disorder among adolescents with a major depressive episode compared with nondepressed teens.

- 50.8. Which of the following statements regarding velocardio-facial syndrome (VCFS) is *false*?

- Approximately 25 percent of patients with VCFS become psychotic in adolescence.
- Approximately 5 percent of people with schizophrenia may have VCFS.
- The incidence of VCFS is approximately one in 4,000 live births.
- Individuals with VCFS frequently have mild mental retardation.
- Individuals with VCFS commonly have a history of feeding problems in infancy.

ANSWERS

50.1. The answer is C

Positive psychotic symptoms consist of hallucinations, delusions, and bizarre or *disorganized thinking* and behavior. Negative psychotic symptoms consist of *flat affect*, *apathy*, *avolition* (difficulty making choices), poverty of speech, and *poverty of thought content*. Youth with schizophrenia, similar to adults with the disorder, are required to demonstrate positive or negative symptoms for at least 6 months and to have significant social or occupational dysfunction or failure to achieve expected levels of social development. In addition, although not yet formally part of the fourth edition revised text version of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) criteria, schizophrenia is associated with marked neurocognitive declines in general cognition, executive functioning, social cognition, and memory. Indeed, these symptoms, not positive symptoms, seem most closely related to long-term functional outcome.

50.2. The answer is E

In children with bipolar I disorder, mania with psychotic features, with no prior history of depressive episodes, may be mistaken for schizophrenia; the distinction is crucial because *bipolar I disorder has a better prognosis than schizophrenia in children*. Factors that appear to be related to poor prognosis in childhood schizophrenia include *onset before 10 years of age; premorbid ADHD and learning disorders; lack of family support; and developmental delays, including delays in acquiring motor milestones and language*.

50.3. The answer is E (all)

Schizophrenia with childhood onset can be differentiated from autistic disorder based on a number of key diagnostic and epidemiological features. The *age of onset* distinguishes the two. Whereas autistic children must display delays or abnormal functioning before age 3 years, schizophrenia is considered not to present before age 5 years. *Intelligence* is another factor to consider; autistic children most often have impaired intelligence, but COS is usually associated with normal-range IQ. *The presence of a formal thought disorder* is one of several core symptoms

of schizophrenia but is not characteristic of autistic disorder. *Family history of schizophrenia* is an important risk factor for COS but has not been shown to contribute to the risk for autistic disorder.

50.4. The answer is B

Childhood-onset schizophrenia can be diagnosed in the absence of hallucinations; patients must have at least two of the following symptoms: hallucinations, delusions, grossly disorganized speech or behavior, and severe social withdrawal. These symptoms must cause a disturbance in the child's functioning characterized by deterioration in function or failure to achieve developmental milestones lasting at least 6 months. *Auditory hallucinations commonly occur in children with schizophrenia*, and their content may be characterized by ongoing critical commentary or commands. *Visual hallucinations are also commonly experienced by children with schizophrenia* and often have frightening content. *Hallucinations, particularly auditory hallucinations, commonly occur in children with mood disorders*; these tend to be mood-congruent and tend to be less bizarre than hallucinations occurring in children with schizophrenia. *Both auditory and visual hallucinations may occur in children exposed*

to extreme stress and do not necessarily indicate the presence of a psychotic or mood disorder.

50.5. The answer is E

Individuals with *early-onset schizophrenia* are significantly more likely than those with *adult-onset schizophrenia* to have chromosomal abnormalities or mutations involving genes in neurodevelopmental pathways. Genetic vulnerabilities also appear more prominent in those with early-onset schizophrenia. Youth with early-onset schizophrenia are at least twice as likely as individuals with adult-onset schizophrenia to have a parent with the disorder, and the morbid risk of schizophrenia for parents of individuals with early-onset schizophrenia ranges from 14 to 25 percent.

50.6. The answer is D

Children diagnosed with schizophrenia commonly have a history of premorbid behavioral disturbances, delayed motor milestones, and delayed language acquisition. Command auditory hallucinations, as well as other types of auditory hallucinations and visual hallucinations, commonly occur in children with schizophrenia. Rates of schizophrenia are more common (not less



FIGURE 50.1

Facial features of three youth with velocardiofacial syndrome. Note the elongated face, tubular nose with wide nasal bridge, bulbous tip, and small lateral nares.

common) among parents of patients with COS compared with parents of patients with adult-onset schizophrenia. Although antipsychotic medications, particularly second-generation or atypical antipsychotics, are indicated for the treatment of patients with COS, *symptoms in these patients tend to respond less robustly (not more robustly) to these medications* than among patients with adult-onset schizophrenia. Epidemiological data indicate that *patients with COS are usually not (rather than mildly to moderately) mentally retarded* but rather function in the low-average to average range of intelligence.

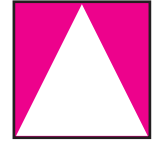
50.7. The answer is E

Several factors are known to worsen the prognosis of depression in children and adolescents, including *early onset, multiple recurrent episodes*, family history of significantly impairing depressive illness, and living in families with sustained and severe interpersonal conflict. *Depressive disorders are associated with short- and long-term peer relationship difficulties, poor academic achievement, and low self-esteem*; additionally, there is a

well-established *increase in risk of suicide among adolescents with major depression. Adolescents who have a major depressive episode are at significantly increased risk of going on to develop bipolar disorder* compared with nondepressed teens.

50.8. The answer is B

There is a high reported prevalence of genetic abnormalities in early-onset schizophrenia. One abnormality is chromosome 22q11 deletion syndrome or velocardiofacial syndrome (VCFS). *Approximately 25 percent of individuals with VCFS become psychotic during adolescence*, with most experiencing schizophrenia. Because the *incidence of VCFS is estimated at one in 4,000 live births, as many as 10 percent (not 5 percent) of individuals with schizophrenia may have VCFS* (see Figure 50.1 on p. 374). Frequently, individuals with VCFS have low facial tone, small mouths, learning disabilities, or *mild mental retardation* and a variety of congenital malformations, especially of the heart and palate. *A history of feeding problems in infancy is common.*



Adolescent Substance Abuse

Adolescent substance use and abuse includes a wide range of substances, including alcohol, marijuana, nicotine, cocaine, heroin, inhalants, phencyclidine (PCP), lysergic acid diethylamide (LSD), dextromorphan, anabolic steroids and various club drugs, 3,4-methylenedioxyamphetamine (MDMA or Ecstasy), flunitrazepam (Rohypnol), γ -hydroxybutyrate (GHB), and ketamine (Ketalar). It is estimated that approximately 20 percent of eighth graders in the United States have tried illicit drugs and about 30 percent of tenth through twelfth graders have used an illicit substance. Alcohol remains the most common substance used and abused by adolescents. Binge drinking occurs in about 6 percent of adolescents, and teens with alcohol use disorders are at greater risk of problems with other substances as well.

Many risk and protective factors influence the age of onset and severity of substance use among adolescents. Psychosocial risk factors mediating the development of substance use disorders include parent modeling of substance use, family conflict, lack of

parental supervision, peer relationships, and individual stressful life events. Protective factors that mitigate substance use among adolescents include variables such as a stable family life, strong parent–child bond, consistent parental supervision investment in academic achievement, and a peer group that models prosocial family and school behaviors. Interventions that diminish risk factors are likely to mitigate substance use.

Approximately one of five adolescents has used marijuana or hashish. Approximately one-third of adolescents have used cigarettes by age 17 years. Studies of alcohol use among adolescents in the United States have shown that by 13 years of age, one-third of boys and almost one-fourth of girls have tried alcohol. By 18 years of age, 92 percent of young men and 73 percent of young women reported trying alcohol, and 4 percent reported using alcohol daily. Of high school seniors, 41 percent reported using marijuana; 2 percent reported using the drug daily.

Students should study the questions and answers below for a useful review of these abuses.

HELPFUL HINTS

Students should be able to define the following terms.

- | | | | |
|-----------------------------|--|----------------------------|-----------------------------------|
| ▶ aerosols | ▶ comorbidity | ▶ high-risk behaviors | ▶ severity-oriented rating scales |
| ▶ Al-Anon | ▶ demographic drinking patterns | ▶ inhalants | ▶ substance abuse |
| ▶ Alateen | ▶ gateway drug | ▶ marijuana | ▶ substance dependence |
| ▶ Alcoholics Anonymous (AA) | ▶ genetic contributions and adoption studies | ▶ Narcotics Anonymous (NA) | ▶ substance intoxication |
| ▶ Antabuse | ▶ glue | ▶ polysubstance abuse | ▶ substance withdrawal |
| ▶ cocaine | | | ▶ 12-step program |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five responses or completions. Select the *one* that is *best* in each case.

- 51.1. It is estimated that what percent of eighth graders have tried illicit drugs?
- 10 percent
 - 20 percent
 - 30 percent

- 40 percent
- 50 percent

- 51.2. Which of the following statements about adolescent substance abuse is *true*?
- Substance use among adolescents does not differ between males and females.
 - White and Hispanic students are less likely than African American students to report lifetime alcohol use and heavy episodic use.
 - White and Hispanic students are less likely than African-American students to report both lifetime and current marijuana use.

- D. “Experimenters” who are more likely to progress to substance use disorders are youth with multiple risk factors.
E. None of the above
- 51.3.** Which of these psychiatric disorders is most commonly associated with substance abuse in adolescents?
A. Conduct disorder
B. Attention-deficit/hyperactivity disorder
C. Schizophrenia
D. Generalized anxiety disorder
E. None of the above
- 51.4.** Which of the following psychiatric symptoms commonly co-occur with adolescent substance use disorders?
A. Suicidal ideation and suicide attempts
B. Panic attacks
C. Reexperiencing, numbing, and avoidance
D. Bingeing and purging
E. All of the above
- 51.5.** Which of the following statements regarding adolescent substance abuse is *true*?
A. Use of marijuana is the strongest predictor of future cocaine use.
B. Prevalence rates for cocaine use are currently lower among adolescents than among adolescents in the 1990s.
C. Children of alcohol abusers have a 25 percent chance of themselves developing alcohol abuse.
D. Inhalants are most commonly used by younger adolescents, and their use declines with age.
E. All of the above
- 51.6.** Which of the following statements about adolescents and adults with substance use disorders is *true*?
A. Relapse in adults is primarily influenced by social pressure for use, but in adolescents, situations involving negative affect more strongly contribute to relapse.
B. Compared with adults, adolescents have a lower level of return to substance use after treatment.
C. Adolescents are no likelier to experience noxious or adverse reactions to substances than more experienced adult users.
D. Comorbid conduct disorder in adolescents with substance use disorders predicts lower rates of treatment completion and future abstinence.
E. None of the above
- 51.7.** Successful substance abuse prevention programs appear to be those that
A. target salient risk factors
B. teach skills
C. have follow-up
- D. take into account the socioeconomic and cultural realities of targeted communities
E. all of the above
- 51.8.** The treatments of choice for alcohol abuse in adolescents includes all of the following *except*
A. drug-specific counseling
B. self-help groups
C. relapse prevention programs
D. treatment with disulfiram or acamprosate
E. individual psychotherapy
- 51.9.** Risk factors for the development of adolescent substance abuse include all of the following *except*
A. early onset of cigarette smoking
B. diminished parental supervision
C. pervasive developmental disorder
D. parental substance abuse
E. conduct disorder
- 51.10.** The four leading causes of death among young people age 15 to 24 years, all of which are correlated with substance abuse, include all of the following *except*
A. motor vehicle accidents (MVAs)
B. cancer
C. homicide
D. suicide
E. non-MVA accidents
- 51.11.** For 10- to 18-year old students, most diverted opiates analgesics come from
A. teachers
B. family
C. friends
D. doctors
E. none of the above

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 51.12–51.16

- A. Substance abuse
- B. Substance dependence
- C. Substance intoxication
- D. Substance withdrawal

- 51.12.** The only category in the text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) in which caffeine is included

- 51.13.** A maladaptive pattern of substance use causing clinically significant impairment or distress manifested by tolerance, withdrawal, and inability to decrease use
- 51.14.** A reversible syndrome caused by a substance involving behavioral or psychological changes
- 51.15.** A maladaptive pattern of substance use causing impairment manifested by diminished performance in school or work, recurrent use in hazardous situations, substance-related legal issues, and continued use despite recurrent social and interpersonal problems
- 51.16.** A substance-specific syndrome caused by the cessation or reduction in use of a substance causing distress and impairment

ANSWERS

51.1. The answer is B

It is estimated that approximately 20 percent of eighth graders in the United States have tried illicit drugs, and about 30 percent of tenth through twelfth graders have used an illicit substance. Alcohol remains the most common substance used and abused by adolescents. Binge drinking occurs in about 6 percent of adolescents, and teens with alcohol use disorders are at greater risk of problems with other substances as well.

51.2. The answer is D

“Experimenters” who are more likely to progress to substance use disorders are youth with multiple risk factors. The literature on the development of substance use and substance use disorders in adolescents has identified an assortment of individual, peer, family, and community risk factors. Within a developmental context, genetic predispositions to affective, cognitive, and behavioral dysregulation are exacerbated by family and peer factors in addition to the normative developmental issues of puberty, leading to substance use and pathological use. Both temperament and social interactions (i.e., family, peer relations) have a critical role in outcomes of adolescent substance use disorder. A number of family factors have been implicated as increasing the risk of substance use disorder in children and adolescents. Family environment and the extent to which youth feel supported and connected to their families of origin can have protective influences on treatment outcomes for teens. Some of the most widely recognized familial risk factors include the nature of bonding, parental supervision, discipline style, and adherence to religious practices. Affiliation with socially deviant peers has been shown in many studies to promote substance use. Affiliation with older peers may be especially hazardous because of premature exposure to risky situations, including drugs, sex, automobile travel, and otherwise problematic social settings without adult supervision. Although general indices of peer support suggest a detrimental effect on teen substance use, having nonusing social supports in youth social networks has been shown to be predictive of abstinence posttreatment.

51.3. The answer is A

A number of psychiatric disorders are commonly comorbid with adolescent substance abuse, including conduct disorder,

oppositional-defiant disorder, attention-deficit/hyperactivity disorder (ADHD), dysthymia, major depressive disorder, bipolar disorder, posttraumatic stress disorder, social phobia, bulimia nervosa, and schizophrenia. Of these, *conduct disorder is most commonly associated with substance use disorders in adolescents*, with studies suggesting rates of conduct disorder ranging from 50 to 80 percent among adolescents with substance abuse or dependence. *Although ADHD is commonly observed in adolescents who abuse drugs or alcohol, the observed association is likely attributable to the high comorbidity between conduct disorder and ADHD.* Early onset of conduct disorder and comorbidity with ADHD likely increases the risk for later substance abuse. *Generalized anxiety disorder and schizophrenia*, although less common than conduct disorder and ADHD in the adolescent population, are also associated with adolescent substance abuse.

51.4. The answer is E (all)

Substantial evidence supports the presence of substance use disorder as a risk factor for *adolescent suicidal ideation, suicide attempts, and completed suicides*. This relationship may be partly explained by the acute and chronic effects of substances; adolescents who attempt or complete suicide are often under the influence of substances when engaging in suicidal behavior. Acute effects of substances may include intensely dysphoric states, disinhibition, impaired judgment, increased impulsivity, and may exacerbate underlying anxiety, mood, or psychotic symptoms. Aggressive behaviors are also manifest in many adolescents with substance use disorders. Consumption of particular substances, such as alcohol, amphetamines, cocaine, and phencyclidine (PCP), may increase the likelihood of aggression. The direct pharmacological effects of these substances may be enhanced by preexisting psychopathology, mixing of substances, and relative inexperience of adolescent substance users.

Studies of clinical populations indicate high rates of anxiety disorders among adolescent substance abusers, with estimated rates ranging from 7 to 40 percent. The temporal relationship between anxiety symptoms and substance abuse varies; whereas social phobia symptoms often precede substance use, *panic attacks* may follow the onset of substance use. Adolescents with substance abuse are commonly found to have histories of traumatic exposure and symptoms such as *reexperiencing, emotional numbing, and avoidance*, underlining the relationship between substance use disorders and posttraumatic stress disorder. The *bingeing and purging* behaviors of bulimia nervosa are also common in teens with substance use disorders.

51.5. The answer is E (all)

Marijuana is often referred to as a “gateway drug” because it is the most widely used illicit drug among adolescents, and marijuana use increases the likelihood of using additional drugs; for example, *marijuana use is the strongest predictor of future cocaine use*. The Monitoring the Future 2010 Survey indicates that *prevalence rates of cocaine use among adolescents remain at lower levels than were reported in the 1990s*. Unlike most other substances, *inhalants are most commonly used by younger adolescents, and their use declines with age*. Commonly used

inhalants include glue, aerosols, and gasoline. Family transmission of risk for alcoholism is well established; *children of alcohol abusers have been reported to have a 25 percent chance of developing alcohol abuse themselves.*

51.6. The answer is D

Adolescents in substance abuse treatment programs as a group tend to have begun substance use at early ages, progress rapidly to use of “hard” drugs, and use multiple substances. Other clinical features of adolescents entering treatment often include high rates of comorbid psychiatric disorders; deviant behavior; school difficulties, including truancy; family disruption; and substance abuse in family members.

Data indicate that many adolescents return to some level of alcohol or drug abuse after treatment. Specific predictors of outcome after treatment have been identified, including patient characteristics, social support system variables, and treatment program characteristics. Psychopathology that predated the onset of substance abuse, particularly *conduct disorder, predicts lower rates of treatment completion and future abstinence.* Although factors such as the severity of substance use may predict short-term treatment outcomes, longer term outcomes may depend more on social and environmental factors. For example, studies suggest that *relapse in adolescence is frequently associated with social pressure to use, but in adults, relapse is commonly tied to situations involving negative affect* (not vice versa). Attendance at support or aftercare groups, which can be sources of peer support as teens attempt abstinence, is associated with higher rates of abstinence and other measures of positive outcome among adolescents compared with youth who do not attend such groups.

Adolescents have higher rates of return to substance use after treatment than adults (not vice versa). Nevertheless, treatment has been demonstrated to have beneficial effects on teens, with positive outcomes including decreased interpersonal conflict, improved academic achievement, and increased participation in social and occupational activities.

Adolescent substance users are more likely than adults to have minimal tolerance to substances; thus, *they may experience more noxious or adverse reactions to substances compared with more experienced adult users.* Inexperienced teen users may not appreciate the extent of their intoxication or the deleterious effects of substance use on their overall functioning.

51.7. The answer is E (all)

Prevention efforts are based on theoretical models of the etiology of adolescent substance use and abuse. Most prevention interventions are based on social learning models, or changing what young people see and learn in their environments produces behavioral changes. These interventions often include educational approaches, addressing three primary factors: (1) knowledge and attitude, (2) values and decision making, and (3) social competency and skills. Family-based outreach (e.g., parent training) and community-based projects (advocacy groups, media campaigns, and regulatory changes) are also critical aspects of comprehensive prevention efforts. Successful prevention programs seem to be those that *target salient risk*

factors, teach skills, provide adequate follow-up, and take into account the socioeconomic and cultural realities of targeted communities.

51.8. The answer is D

Treatment programs for adolescents with alcohol abuse contain a number of basic components, including *individual psychotherapy, a self-help group setting, drug-specific counseling, and relapse prevention efforts.* These may be combined in any of a number of inpatient or outpatient programs. *Disulfiram and acamprosate are not current treatments of choice for adolescents with alcohol abuse.*

51.9. The answer is C

Risk factors for the development of alcohol or drug abuse include *an early onset of cigarette smoking, diminished parental supervision, parental substance abuse, and conduct disorder.* *Pervasive developmental disorder is not thought to be a risk factor for substance abuse.*

51.10. The answer is B

The leading causes of death among young people ages 15 to 24 years are, in order, *motor vehicle accidents (MVA) (37 percent), homicide (14 percent), suicide (12 percent), and non-MVA accidents (12 percent).* These events are frequently correlated with both the acute and chronic effects of alcohol and drug use among teenagers and young adults. Thirty percent of adolescents brought to a pediatric trauma center have evidence of involvement with drugs and alcohol. *Cancer is not one of the four leading causes of death in this age group and does not commonly correlate with substance abuse in adolescents and young adults.*

51.11. The answer is B

In a study of 10- to 18-year old children and adolescents, students reported the sources of diverted opiate analgesics are greater than 33 percent from *family* and approximately 17 percent from *friends.* Diversion and misuse are common in both high school and college populations. Opioid analgesics are the most widely prescribed and the most widely abused drugs. Stimulants and sedative or anxiety medications have the highest ratios of illicit versus medical use.

Answers 51.12–51.16

51.12. The answer is C

51.13. The answer is B

51.14. The answer is C

51.15. The answer is A

51.16. The answer is D

Substance dependence refers to a cluster of cognitive, behavioral, and sometimes physiological symptoms that accompany the continued heavy use of a substance. There is a pattern of

repeated use that results in tolerance, withdrawal, and compulsive self-administration. *Substance abuse* refers to a maladaptive pattern of substance use leading to a clinically significant amount of distress within a 12-month period. The impairment may take the form of decreased performance in school or work, or it may lead to physical danger or legal problems. *Substance intoxication*

is a reversible syndrome caused by use of a substance in which clinically significant behavioral or psychological changes occur. The only DSM-IV-TR disorder that includes caffeine is substance intoxication. *Substance withdrawal* refers to a substance-specific syndrome caused by the cessation or reduction in use of a substance causing distress and impairment.



Child Psychiatry: Additional Conditions That May Be a Focus of Clinical Attention

Borderline intellectual functioning is a category that can be used when the focus of clinical attention is on a child or adolescent's IQ in the 71 to 84 range. The intellectual functioning of children plays a major role in their adjustment to school, social relationships, and family function. Children who cannot quite understand class work and are slow in understanding rules of games and the "social" rules of their peer group are often bitterly rejected. Some children with borderline intellectual functioning can mingle socially better than they can keep up academically in class. In these cases, the strengths of these children may be peer relationships, especially if they excel at sports, but eventually, their academic struggles will take a toll on their self-esteem if they are not appropriately remediated.

An academic problem is a problem that is not caused by a mental disorder or, if caused by a mental disorder, is severe enough to warrant clinical attention. This diagnostic category is used when a child or adolescent is having significant academic difficulties that are not deemed to be attributable to a specific learning disorder or communication disorder or directly related to a psychiatric disorder. Nevertheless, intervention is necessary because the child's achievement in school is significantly impaired. Therefore, a child or adolescent who is of normal intelligence and is free of a learning disorder or a communication disorder but is failing in school or doing poorly falls into this category.

Child or adolescent antisocial behavior refers to behavior that is not caused by a mental disorder and includes isolated

antisocial acts, not a pattern of behavior. This category covers many acts by children and adolescents that violate the rights of others, such as overt acts of aggression and violence and covert acts of lying, stealing, truancy, and running away from home. Certain antisocial acts, such as fire setting, possession of a weapon, or a severe act of aggression toward another child, require intervention for even a single occurrence. Sometimes children without a pattern of recurrent aggression or antisocial behavior become involved in occasional, less severe behavior that nevertheless requires some intervention. The text revision of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR)* definition of conduct disorder requires a repetitive pattern of at least three antisocial behaviors for at least 6 months, but childhood or adolescent antisocial behavior may consist of isolated events that do not constitute a mental disorder but do become the focus of clinical attention.

Identity problem refers to uncertainty about issues such as goals, career choice, friendships, sexual behavior, moral values, and group loyalties. An identity problem can cause severe distress for a young person and can lead a person to seek psychotherapy or guidance. It sometimes manifests in the context of such mental disorders as mood disorders, psychotic disorders, and borderline personality disorder.

Students should study the questions and answers below for a useful review of these conditions.

HELPFUL HINTS

Students should be able to define the following terms.

- | | | | |
|------------------------|---------------------------------|------------------------|-----------------------|
| ▶ abulia | ▶ Erik Erikson | ▶ mental retardation | ▶ substance use |
| ▶ academic failure | ▶ hyperactivity and impulsivity | ▶ parental criminality | ▶ superego |
| ▶ achievement tests | ▶ identity formation | ▶ performance anxiety | ▶ tutoring |
| ▶ adaptive function | ▶ irreconcilable conflicts | ▶ physical abuse | ▶ underachievement |
| ▶ adolescent turmoil | ▶ juvenile delinquent | ▶ role diffusion | ▶ "V" code |
| ▶ comorbid disorders | ▶ learning disorder | ▶ sense of self | ▶ violation of rights |
| ▶ dysfunctional family | | ▶ sexual orientation | |

QUESTIONS

Directions

The incomplete statement below is followed by five suggested completions. Select the *one* that is *best*.

- 52.1.** When evaluating for identity problems, which of the following aspects of a child's peer relationships should be assessed?
- A. Number of friends
 - B. Quality of friendships
 - C. Behavioral and emotional difficulties of friends
 - D. Friends' attitudes toward school and achievement
 - E. All of the above
- 52.2.** The disorder most commonly mistaken for borderline intellectual functioning is
- A. Asperger's disorder
 - B. antisocial personality disorder
 - C. attention-deficit/hyperactivity disorder
 - D. early-onset schizophrenia
 - E. conduct disorder

Directions

The group of lettered headings below is followed by a list of numbered phrases. For each numbered phrase, select

- A. if the item is associated with A only
- B. if the item is associated with B only
- C. if the item is associated with both A and B
- D. if the item is associated with neither A nor B

Questions 52.3–52.5

- A. Identity problem
- B. Normal adolescence

- 52.3.** Deterioration in occupational, school, or social functioning
- 52.4.** Subjective anxiety and confusion
- 52.5.** Disturbances in thinking processes, such as flight of ideas or thought blocking

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 52.6–52.9

- A. Academic problem
- B. Childhood or adolescent antisocial behavior
- C. Borderline intellectual functioning

- 52.6.** Coded on Axis II in DSM-IV-TR nosology
- 52.7.** Must be differentiated from conduct disorder
- 52.8.** Consists of isolated events rather than a pattern of behavior
- 52.9.** Normal intelligence and no learning disorder or communication disorder, but the child is failing in school

ANSWERS

52.1. The answer is E (all)

In evaluating possible identity problems in children, the following aspects of the child's relationships with friends should be considered: (1) *the number of friends*, (2) *the quality of friendships* (e.g., most girls show an increasing capacity for self-disclosure and intimacy in their friendships during the preadolescent years), (3) *the behavioral and emotional difficulties of friends* (a major predictor of antisocial behavior in adolescence is having a peer group composed of friends who smoke, drink, use drugs, or have a negative attitude toward education), and (4) *friends' attitudes toward school and achievement* (children who are attracted to friends with positive outlooks are more likely to develop positive school-related attitudes, career aspirations, and achievements).

52.2. The answer is C

Table 52.1 summarizes the differential diagnosis of borderline intellectual functioning. The most frequently encountered disorders that mask and may be mistaken for borderline intellectual functioning are *attention-deficit/hyperactivity disorder (ADHD)*, attention-deficit disorder (ADD), and learning disorder. Common features of all of these are attentional and sustained concentration difficulties that prevent adequate learning from occurring along with impaired age-appropriate, self-dependent organizational abilities and skills for task completion. Although there may be diagnostic overlap, ADHD, ADD, and learning disorder are often, although not necessarily, found in those with average or higher IQ scores (above 85). In addition to significant attentional deficits, those with ADHD and ADD are presumed to have impairments in executive functions, the simultaneous regulation and modulation of sustained, organized, and prioritized problem-solving strategies. Whereas ADHD and ADD may require psychotropic medication as one part of a comprehensive management plan that includes psychotherapies, behavior modification, and specialized academic programming, treatments for learning disorder and borderline intellectual functioning do not include a medication component.



Table 52.1
Differential Diagnosis of Borderline Intellectual Functioning

1. Attention-deficit/hyperactivity disorder; attention-deficit disorder
2. Learning disorders
3. Asperger's disorder
4. Nonverbal learning disabilities
5. Conduct disorder
6. Antisocial personality disorder
7. Mental retardation or intellectual disability

Courtesy of Frank John Ninivaggi, MD.

Asperger's disorder is a developmental disorder characterized by severe and sustained impairment in social interaction. IQ is average or higher unlike in borderline intellectual functioning. Those with Asperger's disorder may appear dysmorphic and "quirky" because of difficulties modulating affect in response to social cues and to irregularities in prosody and one-sided, egocentric, long-winded conversational style. Children with borderline intellectual functioning, however, appear typical, often quiet and exhibiting a subtle smile unlike the more rigid facial expressions of those with Asperger's disorder.

Conduct disorder is characterized by aggression to people and animals, destruction of property, deceitfulness or theft, and serious violation of rules. Borderline intellectual functioning may be comorbid and a contributing factor to the impaired ability to understand and comply with expected norms in youth with conduct disorder. *Antisocial personality disorder* is a pervasive pattern of disregard for and violation of the rights of others that begins in childhood or early adolescence and continues into adulthood. Borderline intellectual functioning may be associated with antisocial personality disorder and impaired cognitive skills in adults, and its comorbidity, if present, needs to be identified.

Answers 52.3–52.5

52.3. The answer is A

52.4. The answer is C

52.5. The answer is D

Identity problem can be differentiated from the normal conflicts of adolescence and from adjustment disorders. *Normal adolescence is not associated with deterioration in occupational, school, or social functioning.* Adjustment disorders, by definition, occur because of a specific stressor and are time limited. Although identity problems may coincide with stressors, concerns relating to identity issues such as career choice, gender identity, and group identification are less prominent in adjustment disorders than in identity problems.

Identity problem must be differentiated from identity concerns that may represent the prodromal manifestations of schizophrenia, schizoaffective disorder, schizophreniform disorder, and mood disorders. Psychotic symptoms, such as hallucinations, delusions, or *disturbances in thinking processes, such as thought blocking or flight of ideas, are not present in identity problem or in normal adolescence. Adolescents who are struggling with identity issues may have subjective anxiety and confusion, as do virtually all normal adolescents at various times.*

Answers 52.6–52.9

52.6. The answer is C

52.7. The answer is B

52.8. The answer is B

52.9. The answer is A

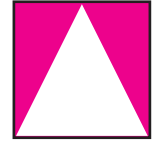
Borderline intellectual functioning is defined as having an intelligence quotient (IQ) ranging from 71 to 84, with accompanying impairments in adaptive functioning leading to difficulties in academic, vocational, or social areas. *Borderline intellectual functioning is coded on Axis II.*

In the DSM-IV-TR, *academic problem* describes a child or adolescent who has *normal intelligence and no learning disorder or communication disorder but is failing or doing poorly in school.*

Childhood and adolescent antisocial behavior covers many acts that violate the rights of others, including acts of aggression, lying, stealing, truancy, and running away from home. *This condition consists of isolated events that become a focus of clinical attention rather than a pattern of behavior, thereby allowing childhood and adolescent antisocial behavior to be distinguished from conduct disorder, which is defined as a repetitive pattern of at least three antisocial acts over at least 6 months.*

Isolated antisocial behavior and transgressions, first within families and then outside in the world, are one way in which children learn about societal rules and limitations. Although more serious instances of antisocial behavior are viewed as delinquent, they are also commonplace during adolescence. Up to one-quarter of youth are apprehended by police at some point in their lives, and the incidence of self-reported antisocial behavior is much higher than numbers of police arrests.

The relationship of antisocial behavior to psychopathology is complex. Not all antisocial behavior is pathological and therefore may not require treatment. Although most forms of juvenile antisocial behavior do not progress to criminality, distinguishing youths with a good prognosis from those who will end up committing more severe criminal acts is very difficult. Careful differentiation of normative risk-taking behavior and isolated antisocial acts from syndromal clustering of behavior problems is crucial. Antisocial behavior must also be differentiated from behavior representative of more severe psychopathology, and behavioral disturbances may indicate psychiatric disturbance in many children and adolescents. Because there appears to be a fairly consistent progression from certain antisocial behaviors to more severe forms of pathology, antisocial behavior that comes to the attention of a clinician should be regarded as a marker or risk factor for more severe problems, such as oppositional defiant disorder, conduct disorder, and antisocial personality disorder.



Psychiatric Treatment of Children and Adolescents

Children and adolescents are the most accurate informants of their own thoughts, feelings, moods, and perceptual experiences. External behavior problems are often identified by others, yet children's internal experiences may be largely unknown. Children often can describe their feelings in a particular situation but cannot execute therapeutic changes without an advocate's help. Thus, child psychotherapists function as advocates for their child patients in interactions with schools, legal agencies, and community organizations. Child psychotherapists may be called on to make recommendations that affect various aspects of children's lives.

Treatment reflects an understanding of children's developmental levels and shows cultural sensitivity toward families and environments in which children live. Most children do not seek psychiatric treatment; rather, they are taken to psychotherapists because of a disturbance noted by a family member, a schoolteacher, or a pediatrician. Children often believe that they are being taken for treatment because of their *misbehavior* or as a punishment for *wrongdoing*.

Group formats have been demonstrated to be useful in randomized clinical trials using cognitive behavioral techniques to treat childhood anxiety disorders. Groups have been used for a

wide range of clinical situations, including anger management for aggressive adolescents, social skills improvement, survivors of childhood sexual abuse and other traumatic events such as the trauma of the September 11, 2001, World Trade Center tragedy, adolescents with social phobia and obsessive-compulsive disorder (OCD), children with psychotic disorders, interventions for adolescents with substance abuse, and children and adolescents with learning disorders. Group therapy can be done with children of all ages using developmentally appropriate formats. Group therapy can be structured to address a variety of communication skills, including issues of interpersonal competence, peer relationships, and social skill. Group psychotherapy can be modified to suit groups of children of various ages and can focus on behavioral, educational, and social skills and psychodynamic issues. The mode in which the group functions depends on children's developmental levels, intelligence, and problems to be addressed. In behaviorally and cognitive behavioral groups, the group leader is a directive, active participant who facilitates prosocial interactions and desired behaviors.

Students should study the questions and answers below for a useful review of these treatments.

HELPFUL HINTS

These terms should be known and defined by students.

- | | | | |
|--------------------------------------|--------------------------------|---|--|
| ▶ acting out | ▶ compliance | ▶ liver to body weight ratio | ▶ regression |
| ▶ action-oriented defenses | ▶ confidentiality | ▶ masked depression | ▶ relationship therapy |
| ▶ ADHD | ▶ conflict resolution skills | ▶ milieu therapy | ▶ remedial and educational psychotherapy |
| ▶ atypical puberty | ▶ developmental lines | ▶ modeling theory | ▶ sequential psychosocial capacities |
| ▶ behavioral contracting | ▶ dietary manipulation | ▶ mood disorders | ▶ supportive therapy |
| ▶ bell-and-pad conditioning | ▶ ECT | ▶ obsessive-compulsive disorder | ▶ sympathomimetics |
| ▶ child guidance clinics | ▶ family systems theory | ▶ parental attitudes | ▶ therapeutic interventions |
| ▶ child psychoanalysis | ▶ filial therapy | ▶ play group therapy | ▶ therapeutic playroom |
| ▶ classical and operant conditioning | ▶ group living | ▶ psychoanalytic theories | ▶ violence |
| ▶ cognitive therapy | ▶ group therapy | ▶ puberty and adolescence (differentiation) | |
| ▶ combined therapy | ▶ hospital treatment | | |
| | ▶ learning-behavioral theories | | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 53.1.** The systems approach to family therapy
- places more emphasis on the meaning of a child's symptoms for the larger family than on the child's specific symptoms
 - maintains that all things are interdependent and nothing changes without everything else changing
 - sees symptoms as serving a purpose for the family system
 - views each family member as acting in a way that opposes symptomatic improvement in the presenting patient
 - all of the above
- 53.2.** With regard to adverse effects of medications in children and adolescents,
- tardive dyskinesia has not been observed in this age group
 - withdrawal dyskinesias do occur in this age group
 - anticholinergic and cardiovascular side effects are rarely seen in this age group
 - there is less risk for adverse effects in this age group compared with adults
 - none of the above
- 53.3.** Which theorist described a series of "developmental pathways," for example, a pathway that connects a child's capacity to play to the adult's capacity to work?
- Sigmund Freud
 - Anna Freud
 - Donald Winnicott
 - Melanie Klein
 - Margaret Mahler
- 53.4.** Cognitive behavioral therapy (CBT) is useful in the treatment of which of the following disorders or situations?
- Conduct disorder
 - Adolescent depression in a group setting
 - Obsessive-compulsive disorder
 - Socially rejected children
 - All of the above
- 53.5.** In attention-deficit/hyperactivity disorder (ADHD),
- treatment with stimulant medication alone is maximally effective in older children and adolescents
 - stimulant medication equally improves the full range of symptoms of children with the disorder, including comorbid behavioral disturbances

- treatment with stimulant medication alone tends to significantly improve outcomes for children with oppositional and aggressive behavior, academic underachievement, and poor peer relationships
- the presence of aggression in children and parents is a strong predictor of poor outcome in treatment of ADHD
- all of the above

53.6. Parent-child conflict is a risk factor for

- depression
- poor treatment outcome in depression
- relapse after treatment for depression
- cognitive distortions that negatively bias perceptions
- all of the above

53.7. In terms of pharmacokinetics, compared with adults, children have

- lower hepatic capacity
- lower glomerular filtration rates
- more fatty tissue
- increased half-lives of medications
- none of the above

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 53.8–53.15

- Interpersonal, cognitive, or psychodynamic therapy plus fluoxetine
 - Response prevention plus sertraline
 - Guanfacine
 - Social skills group plus methylphenidate
 - Desmopressin (DDAVP) nasal spray plus behavioral conditioning
 - Family therapy
 - Partial hospital plus risperidone
 - Inpatient unit with psychodynamic, family, and behavioral interventions
- 53.8.** A 12-year-old boy performs 3 hours of daily compulsive hand washing and has extreme difficulty going to school because of contamination fears.
- 53.9.** A 10-year-old girl became oppositional and defiant shortly after her mother married a man with three children.
- 53.10.** A 15-year-old girl has lost 25 percent of her body weight and cannot control her purging behaviors.
- 53.11.** A 17-year-old girl has recently been discharged from an inpatient unit after a suicide attempt in the midst of a severe depression.

- 53.12.** A 14-year-old girl has not been in school for several weeks because she has been bothered by derogatory auditory hallucinations; she is not suicidal or homicidal.
- 53.13.** An 8-year-old boy will not attend sleepover parties because of his bedwetting.
- 53.14.** A 7-year-old boy is about to be suspended from school because of his inability to sit in his seat and stay on task as well as his provocative behavior toward his classmates.
- 53.15.** A 9-year-old boy has chronic vocal and motor tics, as well as significant impulsivity and frequent aggressive behavior toward his peers at school and siblings; this patient's tics were severely exacerbated during a prior trial of methylphenidate.

ANSWERS

53.1. The answer is E (all)

The systems approach, a departure from so-called “linear theories,” uses cybernetics and general systems theory. Whereas cybernetics holds that systems maintain an equilibrium, general systems theory describes all living systems as existing in tension between homeostasis and change. *All components of a family are interdependent, and nothing changes without everything else changing accordingly.* In this approach to family problems, symptoms are seen not as residing within the child but *rather as serving a purpose for the entire family system.* These symptoms provide systemic survival and maintain homeostasis. *Each family member is presumed to act in a way that opposes symptomatic improvement in the presenting patient.* Family-systems theorists attempt to counteract this hypothetical process in treatment; they believe that one must destabilize the family system to promote change. *The formulation for a family-systems therapist emphasizes the meaning that symptoms have for the family.* Problem-maintaining patterns are observed, and these patterns are interrupted.

53.2. The answer is B

Even though they may metabolize medications more rapidly than adults, children are at no less risk than adults for adverse effects of medications and in some cases are at increased risk. Clinicians must therefore know the adverse-effect profiles of all medications being prescribed, as well as how to manage adverse effects should they arise.

Many of the adverse effects of antipsychotic, antidepressant, and mood-stabilizing medications seen in adults are also seen in children and adolescents. Of particular concern are the anticholinergic and cardiovascular effects of the tricyclic medications and the extrapyramidal effects of the antipsychotics. *Withdrawal dyskinesias are more common than tardive dyskinesia among children and adolescents, although both have been observed in this age group.*

The best policy is usually to start with low dosage and titrate slowly upward to therapeutic effect. Use of the lowest possible maintenance doses in the therapeutic range can minimize adverse effects. Monotherapy is preferable. Targeted combined pharmacotherapy may be necessary in children with multiple disorders but should be used with caution to minimize adverse effects. Table 53.1 lists common adverse effects of medications.

53.3. The answer is B

Child psychotherapy began with *Sigmund Freud's* case of Little Hans, a 5-year old boy with phobia. Published in 1909, the case was the first description of the psychotherapeutic treatment of a child. The therapy in the case was actually rendered by Hans's father, who reported to Freud and received guidance from him. Significant interest in the mental and emotional lives of children was generated by Freud's theory of psychosexual development, which posited that symptoms in adulthood could be traced to conflicts arising at earlier stages of development.

Decades later, Anna Freud and *Melanie Klein* developed the field of child psychoanalysis. Klein understood play to be the childhood equivalent of free association in adults. She explored early object relations; the role of primitive defenses such as projection, projective identification, and omnipotent control; the process of early identifications; and the role of envy and guilt in these early relationships. *Anna Freud* looked at play from a psychoanalytic perspective and learned about the child from the play but did not view play as a substitute for free association. Her work concerned the development of the ego, the evolution of defenses, and *the developmental pathway of various ego functions.* *In one example of a developmental pathway, she described a continuity from the child's capacity to play to the adult's capacity to work.*

There were several other major early contributors to the field. *Donald Winnicott* emphasized the importance of the mother–infant relationship. His understanding of the transitional object, for instance, as playing a role in the child's ability to separate from the maternal figure instilled a new appreciation of the meaning of commonly observed childhood behaviors. *Margaret Mahler* observed mother–toddler interactions in a systemized way and described the evolution of early object relations from the perspective of separation and individuation. August Aichorn first extended psychoanalytic work to delinquent adolescents. Jean Piaget focused on children's cognitive development.

53.4. The answer is E (all)

Cognitive behavioral therapy (CBT) is the most extensively, thoroughly researched therapy in use today for the treatment of psychological problems in children and adolescents. *CBT can be used in both individual and group settings.*

Children with conduct disorder may be impulsive, oppositional, defiant, moody, and angry. During assessment, the therapist gauges the child's thought processes in addressing a variety of situations. The child is then taught a step-by-step approach to solving problems. In this training, the child is guided to develop skills in appraising situations and making appropriate decisions for action. This technique may be adapted to accommodate children ages 4 years through young adulthood. The treatment uses structured tasks such as games, academic activities, and other age-appropriate tools. The therapist plays an active role in the treatment, encouraging modeling via practice and role playing. Punishment or withdrawal of privileges is used when necessary.

Individual CBT has been demonstrated to be an effective treatment for depression in adolescents. Additionally, Peter Lewinsohn and colleagues developed the “Adolescents Coping



Table 53.1
Adverse Effects and Their Management in Children and Adolescents

Drug Category	Common Adverse Effects	Clinical Management
Antipsychotics (dopamine receptor antagonists and serotonin-dopamine antagonists)	Short term	
	Autonomic nervous system	
	Dry mouth	In general, lower dosage if possible or switch drug if persistent; child may equilibrate after several weeks
	Urinary retention	Bethanechol (Urecholine) only if severe and persistent
	Constipation	Dioctyl sodium sulfosuccinate (Colace) tablets or bisacodyl (Dulcolax) suppositories
	Orthostatic hypotension	Avoid sudden postural changes; dosage reduction if severe
	Extrapyramidal	
	Acute dystonia	Diphenhydramine (Benadryl) or benztropine (Cogentin) IM; then switch to oral form
	Parkinsonism	Anticholinergic or antiparkinsonian medication PRN
	Akathisia	Lower dosage; sometimes an anticholinergic agent can help
	Other	
	Hypersensitivity or rash	Discontinue use
	Drowsiness	Child usually becomes tolerant; if persistent, switch to less sedating class
Photosensitivity	Avoid sun exposure	
LFTs	May not have clinical significance; follow-up indicated	
Blood dyscrasias		
	Long term	
Weight gain	Lower dosage; consider switch to another class	
Dyskinesias (tardive and withdrawal)	Prevention is best; use lowest possible dose for maintenance	
Psychosympathomimetic stimulants	Short term	
	Anorexia, nausea, abdominal pain	Reduce dose; give most of dosage in the AM; consider switch
	Insomnia	Move PM dose to earlier in the day; reduce dosage and then reintroduce
	Dysphoria	Consider another stimulant if persistent or tricyclic drug
	Long term	
	Weight loss	Supplement diet; institute drug holidays or change drug
Tics	Discontinue; if stimulant is effective, consider rechallenge; consider tricyclic drug	
Tricyclic drugs	Autonomic nervous system	See antipsychotic agents
	Cardiovascular (blood pressure, HR, PR, T-wave changes, ↑ QTc, and arrhythmias)	Monitor ECGs serially; most changes have little clinical significance in healthy child
	CNS (seizures)	Discontinue medication gradually, EEG; may need anticonvulsant
Anxiolytics and sedative-hypnotic agents		
Antihistamines	Oversedation	Decrease total dosage; administer most at bedtime
Benzodiazepines	Rash	Discontinue medication
	Disinhibition	Discontinue medication
	Cognitive decrements	Reduce dosage or discontinue
Lithium	Gastrointestinal: nausea, vomiting, abdominal pain, diarrhea, metallic taste	Consider dose reduction if persistent
	CNS: tremor, memory lapses, fatigue	Consider dose reduction if persistent
	Endocrine: goiter	Discontinue medication and follow with laboratory studies
	Renal: polyuria and polydipsia	Monitor BUN, creatinine, electrolytes, and urinalysis on a regular basis (every 2–3 months)
	Hematologic: leukocytosis	Monitor; may not be of clinical significance

BUN, blood urea nitrogen; CNS, central nervous system; ECG, electrocardiogram; EEG, electroencephalogram; HR, heart rate; IM, intramuscular; LFTs, liver function tests; PRN, as needed; TCA, tricyclic antidepressant.

with Depression Course,” which consists of 16 2-hour sessions conducted over an 8-week period for groups of up to 10 adolescents. The program includes a psychoeducational component that aims to destigmatize depression, emphasize skills training to promote control over one’s mood, and enhance adolescents’ abilities to cope with problematic situations. The group activities include role playing. Social skills training occurs throughout the

treatment to facilitate and enhance communication and includes teaching conversational techniques, planning social activities, and developing strategies for making friends. Sessions are designed to increase participation in pleasant activities based on the assumption that depressed adolescents have few positively reinforcing activities in their lives. Relaxation training is provided to enhance comfort in social settings and to offset anxiety. Focus on

changing depressogenic cognitions is provided by identifying, challenging, and changing negative thoughts and irrational beliefs. The teens are also taught negotiating and problem-solving techniques.

John March and colleagues developed the CBT treatment, "How I Ran OCD Off My Land," a manualized treatment for obsessive-compulsive disorder (OCD) in children and adolescents. The treatment uses a variety of methods including exposure, response prevention, extinction, anxiety-management training, reinforcement, modeling and shaping, and habit reversal. After the initial assessment, the child and family are first educated about OCD, placing the disorder in a neurobiological framework that identifies OCD as a medical condition. Thereafter, the child learns to make OCD the "enemy" and is taught to "boss back" the OCD in order to gain a sense of agency in managing the anxiety that characterizes the disorder. The parameters of symptoms are "mapped" to fully identify obsessions, compulsions, triggers, and avoidance behaviors. The majority of subsequent sessions deal with anxiety-management techniques (e.g., relaxation, diaphragmatic breathing, and constructive self-talk) and exposure with response-prevention. Exposure involves therapist-assisted imaginal and in vivo exposure, and response prevention consists of exercises in session coupled with weekly homework assignments. Parents are trained to ally with the child to "boss back" OCD.

With regard to socially rejected children, Fred Frankel and colleagues developed the 12-session CBT called "Parent Assisted Social Skills Training." First, the child's social network is examined, taking into account the family, home, school, and neighborhood to develop an integrated approach to treatment. Children are seen in groups where they learn rules of peer etiquette. They are also offered training skills to expand their peer networks, and parents and children are taught how to work together to promote more successful play dates and how to improve the child's competence with non-aggressive responses to teasing and conflict with other children and adults. Coached play is incorporated, and makes use of positive reinforcement and time outs as feedback for behaviors. Child socialization homework is assigned, and didactic presentations are made to parents to inform them of their part in helping their children to gain peer acceptance, ensure that the parents adhere to assigned roles in the children's homework assignments, and provide supportive feedback for the principles being taught. Table 53.2 lists some of the techniques of CBT.

53.5. The answer is D

The best treatment of attention-deficit/hyperactivity disorder (ADHD) and its associated behavioral, academic, and social disruptions combines stimulant medication with cognitive behavioral therapy (CBT). *Treatment with stimulant medication alone is effective but may not be maximally effective for ADHD, particularly in older children and adolescents.* Many children experience a reduction in symptoms, but impairment persists at clinically significant levels. *Although many children improve substantially with pharmacotherapy, many do not achieve full remission of symptoms even with adequate doses and trials of medication.* More children achieve remission with combination therapy.

Stimulant medication may not equally affect the full range of symptoms of children with ADHD and associated behavioral disturbances. Although the primary symptoms of ADHD (inattention, impulsivity, and hyperactivity) may be greatly improved with medication, other primary or comorbid characteristics of the syndrome (e.g., oppositional and aggressive behavior, academic underachievement, and poor peer relationships) often do not respond to medication alone. *Because these associated features, together with family function, robustly predict long-term outcome of children with ADHD, treatment with stimulants alone may not significantly improve outcomes for these children.* These features are most effectively addressed with psychosocial interventions, particularly CBT. Additionally, psychosocial treatments are sometimes the only therapies available to patients who do not respond to medications for primary symptoms of ADHD, who cannot tolerate medications because of side effects, or whose parents oppose the use of medications.

An additional limitation of stimulant treatment involves the complicating issue of home environment and home behavioral issues. Stimulants cover 6 to 12 hours of the day, typically the times when children are in school or other organized activities outside the home. This leaves parents on their own to manage impulsive, oppositional, and disruptive behaviors in the afternoons, evenings, weekends, and vacations. When no other treatment is made available to them, parents may develop coercive, hostile, and overly punitive approaches to dealing with their children's behaviors, which may in turn exacerbate the behavioral issues. *Child and parent aggression are among the best predictors of poor outcome in children with ADHD. For all of these reasons, CBT continues to be used and evaluated both alone and in combination with medications in the treatment of children with ADHD.*

53.6. The answer is E (all)

Parent-child conflict is a risk factor for depression, poor treatment outcome in depression, relapse after treatment for depression, and cognitive distortions that negatively bias perceptions. As a result, including a parent-child relational component in treatment for depression is well justified. Preliminary evidence suggests that addressing the parent-child relationship in treatment is more effective than treating the child alone. Parents can be taught contingency management procedures along with alternative effective methods for parenting and creating a positive family environment. Additionally, family interactions are targeted to shape and reinforce effective communication and to increase pleasant activities and positive affect in the home.

This parent-child treatment can be incorporated into cognitive behavioral treatment (CBT) of children and adolescents with depression, the psychotherapy modality most supported in the literature for treatment of this those with disorder. CBT for depression is a skill-based treatment centered around the assumption that depression is caused and maintained by inadequate cognitive skills for coping with stress. CBT posits that changes in behavior and cognition will lead to changes in emotions. Among the behavioral and cognitive skills deficits that may characterize depressed youths are low involvement in pleasant activities, poor problem-solving and assertion skills, cognitive distortions that negatively bias perceptions, negative automatic thoughts, negative views of self and future, and failure to attribute positive



Table 53.2
Techniques of Cognitive-Behavioral Therapy

Term	Definition	Examples
Cognitive restructuring	Actively altering maladaptive thought patterns and replacing those negative thoughts with more constructive adaptive cognitions and beliefs	Challenging aberrant risk appraisal in a patient with panic disorder or helplessness in a patient with depression
Contrived exposure	Exposure in which the patient seeks out and confronts anxiety-provoking situations or triggers	Intentionally touching a “contaminated” toilet seat
Differential reinforcement of appropriate behavior	Attending to and positively rewarding appropriate behavior, especially when incompatible with inappropriate behavior	Praising (and maybe paying) a child with OCD who has contamination fears and washes the dinner dishes in a nonritualized fashion
Exposure	The exposure principle states that anxiety will decrease after prolonged contact with the phobic stimulus in the absence of real threat; exposure may be contrived (sought-out contact with feared stimuli) or uncontrived (unavoidable contact with feared stimuli)	A patient with fear of heights goes up a ladder; the first time it is scary; the tenth time, it is boring
Extinction	By convention, extinction is usually defined as the elimination of problem behaviors through removal of parental positive reinforcement; technically, extinction often means removing the negative reinforcement effect of the problem behavior so it no longer persists	Refusal to reassure an anxious patient; refusal by the mother to cave in to an oppositional child’s tantrum by withdrawing a command
Generalization training	Moving the methods and success of problem-focused interventions to targets not specifically addressed in treatment	Exposure and response prevention for all toilets and sinks in the universe
Negative reinforcement	Self-reinforcing, purposeful removal of an aversive stimulus; termination of an aversive stimulus, which when stopped, increases or stamps in the behavior that removed the aversive stimulus	Compulsions in OCD provide short-term relief of obsessional anxiety via negative reinforcement, blocking the negative reinforcement property of rituals is the job of response prevention
Positive reinforcement	Imposition of a pleasurable stimulus to increase a desirable behavior	Praise after successfully obeying a command
Prompting, guiding, and shaping	External commands and suggestions that increasingly direct the child toward more adaptive behavior that is then reinforced; typically, shaping procedures are rapidly faded in preference to generalization training	Gradually encouraging and helping a youngster with social phobia to talk in class and with other children
Punishment	Imposition of an aversive stimulus to decrease an undesirable behavior	“Time out” because of unacceptable behavior or overcorrection (e.g., extra chores to make restitution for aggressive behavior)
Relapse prevention	Interventions designed to anticipate triggers for reemergence of symptoms; practicing skillful coping in advance	Imaginal exposure to a contamination fear followed by cognitive therapy and response prevention to resist the incursion of OCD
Response cost	Removal of positive reinforcer as a consequence of undesirable behavior	Loss of points in a token economy
Response prevention	The response prevention principle states that adequate exposure is only possible in the absence of rituals or compulsions	Not doing an OCD ritual (e.g., washing) after either contrived or uncontrived exposure (e.g., touching a toilet seat)
Restructure the environment	Changes in setting or stimuli that decrease problem behaviors, facilitate adaptive behavior, or both	Seating a child with ADHD toward the front of the classroom
Stimulus hierarchy	A list of phobic stimuli ranked from least to most difficult to resist using fear thermometer rating scores	Unique list of OCD-specific contamination fears ranked by fear thermometer score; an individual patient may have one or more hierarchies, depending on the complexity of the disorder (e.g., a particular patient may have separate hierarchies for contamination fears and for touching and repeating rituals)
Token economy	A systematic set of contingencies that involve earning objects or symbols consequent on behaviors, which are then exchanged for meaningful positive reinforcers	A “star chart” linked to rewards that are meaningful to the child

ADHD, attention-deficit hyperactivity disorder; OCD, obsessive-compulsive disorder.

outcomes to internal causes. The therapist works with children or adolescents to help them reverse these patterns of thought and behavior. Treatment is designed to improve the patients' problem-solving ability when faced with stressful situations, including conflicts in their relationships with family members, particularly parents.

53.7. The answer is E (all)

Pharmacokinetics in children differ from those in adults because children have greater (not lower) hepatic capacity, greater (not lower) glomerular filtration rates (GFR), less (not more) fatty tissue, and decreased (not increased) half-lives of many medications. As a result of differences in hepatic capacity, GFR, and fatty tissue content, children tend to eliminate medications more rapidly than adults and to store less drug in fat. Meanwhile, for many medications, there is little evidence that blood level corresponds in any predictable way to drug effect. As a result, medications have to be dosed carefully in children, and dosing patterns and predicted responses in adults often do not apply to children and adolescents.

Answers 53.8–53.15

53.8. The answer is B

53.9. The answer is F

53.10. The answer is H

53.11. The answer is A

53.12. The answer is G

53.13. The answer is E

53.14. The answer is D

53.15. The answer is C

The majority of children who present for psychiatric treatment are brought in by family members who are concerned about the child's functioning or who have followed up on suggestions from teachers or pediatricians. Often, children do not express a desire for treatment, nor do they understand the degree to which they have caused concern in others. Occasionally, an adolescent will ask a parent for help, but more often, distress in this age group is manifested by troubling behaviors. To synthesize a useful treatment approach, it is generally necessary to understand the views of both the child and the parents. In most cases, treatment consists of multiple modalities through which to manipulate the child's environment positively as well as to influence the feelings and behaviors of the child. The brief vignettes that follow exemplify the combined approach to addressing children's and adolescents' psychiatric needs.

A 12-year-old boy who presents with impairment caused by compulsive hand washing and obsessions regarding fears of contamination is a candidate for combined treatment with medication and behavioral therapy. *Several drugs from the selective serotonin reuptake inhibitor (SSRI) class of medications, in-*

cluding sertraline (Zoloft), have established efficacy in reducing obsessions and compulsions in children and adolescents with obsessive-compulsive disorder. The benefit of medication is enhanced when combined with *response prevention*, a form of behavioral therapy that diminishes compulsive behaviors by challenging the patient to tolerate the feared situation (e.g., fear that his hands are dirty) without carrying out the compulsion (e.g., washing). In this way, the child learns that the exposure to the situation will not have the feared negative effects, and anxiety thereby diminishes.

A 10-year-old girl who responds to a new family constellation with oppositional and defiant behaviors is expressing her discomfort about a major change in the family's functioning. *Family therapy is a useful modality to understand the triggers, responses, and meanings of these behaviors to the family and to the child.* It is likely that when the child is given a forum in which to express her discomfort, the behaviors will diminish.

A 15-year-old girl who has lost 25 percent of her body weight and cannot control her purging behaviors generally requires an *inpatient setting* in which to initiate treatment, to establish refeeding, and to observe her continuously to prevent purging. Given the complex effects of starvation, a malnourished adolescent is not a good candidate for outpatient treatment. The treatment approaches for the restricting and purging type of anorexia nervosa are multimodal. A behavioral component is necessary to systematically address nutritional needs and to prevent behaviors that further increase malnutrition. *A family approach is needed to probe the family's role in the disorder. A psychodynamic approach may be beneficial to work with the adolescent in identifying the meaning of the disorder and the psychological forces that drive the behaviors.* Medications are sometimes used to treat concurrent anxiety and depression and to ameliorate bingeing and purging.

A 17-year-old girl who has been discharged from an inpatient unit presumably is stable, not posing an imminent danger to herself, and is ready to engage in outpatient treatment. Evidence suggests that *fluoxetine (Prozac) is effective in the treatment of major depression in adolescents.* Medications are most effective when combined with psychotherapy; particularly after the potentially jarring effects of a suicide attempt and hospitalizations, *psychotherapy (interpersonal, cognitive behavioral, or psychodynamic) is certainly indicated in this case.*

A 14-year-old girl who has recently stopped attending school because of an increase in auditory hallucinations is in crisis. *Because she is not suicidal, she may not need the containment of an inpatient unit, but she would be a good candidate for a partial hospitalization program in which she can receive daily monitoring of antipsychotic medication as well as daily support and therapy from staff.* A return to an appropriate school setting would be a primary goal of the treatment.

Enuresis (in this case, in an 8-year-old boy) is much more common in boys than girls and may cause psychological distress and social difficulties for children who continue to have this problem into the school-age years. *Desmopressin (DDAVP) nasal spray is effective in some children with enuresis and may be useful in the short term. The most effective treatment, however, is a behavioral approach using methods such as the bell-and-pad conditioning treatment.*

A 7-year-old boy who cannot stay on task and who is hyperactive and socially provocative is exhibiting typical symptoms of attention-deficit/hyperactivity disorder (ADHD). *The treatment for the core symptoms is a stimulant medication such as methylphenidate (Ritalin). Most children with ADHD also have social difficulties and may be rejected by their peers. Thus, it is often beneficial to include social skills groups as an additional therapeutic intervention.*

A 9-year-old boy with both motor and vocal tics lasting longer than 1 year meets criteria for Tourette's disorder; this diagnosis is very commonly comorbid with ADHD, which likely also

exists in this patient, as evidenced by his hyperactive, impulsive, and aggressive behavior. Treatment of comorbid ADHD and Tourette's disorder is complicated by the fact that stimulant treatment can exacerbate tics in these patients. Although recent data suggest that stimulants are safe and effective in the majority of patients with these two diagnoses, some patients are unable to tolerate stimulants because of effects on their tics. *In these patients, α_2 -agonists, such as guanfacine (Tenex), are indicated for their effectiveness in both reducing tics and in treating some symptoms of ADHD, particularly impulsivity, hyperactivity, and associated aggression.*



Forensic Issues in Child and Adolescent Psychiatry

Traditionally, forensic child and adolescent psychiatrists have dealt largely with custody evaluation and recommendations and with the ramifications of child abuse and neglect. Child and adolescent psychiatrists are increasingly being sought out by patients and attorneys for evaluations and expert opinions related to child sexual and physical abuse and criminal behaviors perpetrated by minors and to evaluate the relationships between traumatic life events and the emergence of psychiatric symptoms in children and adolescents. As more youth enter the juvenile justice system, an increasing need exists for forensic psychiatrists with expertise in evaluation and treatment for detainees and committed youths. The American Academy of Child and Adolescent Psychiatry (AACAP) provided *Practice Parameters for the Forensic Evaluation of Children and Adolescents Who May Have Been Physically or Sexually Abused* for custody evaluations and for children with posttraumatic stress disorder (PTSD).

Society's view of children and their rights evolved dramatically in the 20th century. The institution of a juvenile court system about 100 years ago was an acknowledgment that

children must be protected and provided for differently than adults. In 1980, the AACAP published a code of ethics that was developed to publicly endorse the ethical standards of this discipline. The code is based on the assumption that children are vulnerable and unable to take adequate care of themselves; as they mature, however, their capacity to make judgments of and choices about their well-being develop as well. The code has several caveats: From the standpoint of child and adolescent psychiatrists, issues of consent, confidentiality, and professional responsibility must be seen in the context of overlapping and potentially conflicting rights of children, parents, and society.

In general, no way exists to simplify the many difficult, complex confidentiality issues that may emerge in treating children and adolescents. Child and adolescent psychiatrists function as advocates for their patients and must always remain aware of minors' vulnerabilities and of the importance of maintaining trust in the treatment relationship.

Students should study the questions and answers below for a useful review of basic issues.

HELPFUL HINTS

These terms should be known and defined by students.

- | | | | |
|---------------------------------|----------------------------|-----------------------------------|-----------------------------|
| ▶ adjudicated delinquent | ▶ child custody evaluation | ▶ joint custody | ▶ rehabilitation |
| ▶ adjudication | ▶ confidentiality | ▶ juvenile court | ▶ status offenses |
| ▶ "best interests of the child" | ▶ delinquent act | ▶ mediation | ▶ "tender-years" doctrine |
| ▶ breach of confidentiality | ▶ disposition | ▶ proof beyond a reasonable doubt | ▶ waiver of confidentiality |
| ▶ intake | | | |

QUESTIONS

Directions

The incomplete statement below is followed by five suggested completions. Select the *one* that is *best*.

- 54.1. According to the Children's Bureau of the Department of Health and Human Services, which is the most common form of abuse suffered by children?

- A. Emotional
- B. Physical

- C. Neglect
- D. Sexual
- E. Ritual

Directions

Each set of lettered headings below is followed by a list of numbered statements. For each numbered statement, select

- A. if the item is associated with A only
- B. if the item is associated with B only
- C. if the item is associated with both A and B
- D. if the item is associated with neither A nor B

Questions 54.2–54.7

- A. Juvenile court system
- B. Adult court system

- 54.2.** Rights to legal counsel, Fifth Amendment privilege, and notice of charges
- 54.3.** Pretrial hearing, trial, sentencing
- 54.4.** Trial by jury
- 54.5.** Intake, adjudication, disposition
- 54.6.** Disposition occurs immediately after confession
- 54.7.** Trial only by judge, without a jury

Questions 54.8–54.10

- A. “Tender-years” doctrine
- B. “Best interests of the child” doctrine

- 54.8.** Young children are usually better off with their mothers.
- 54.9.** This is the current law in the United States.
- 54.10.** There may be a situation in which custody should reside with a nonparent.

Directions

The group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 54.11–54.14

- A. “In re Gault” case
- B. “In re Winship” case
- C. Tarasoff I and Tarasoff II rulings
- D. Education for All Handicapped Children Act of 1975

- 54.11.** Specified that the standard “beyond a reasonable doubt” must be followed in delinquency hearings
- 54.12.** Specified that juveniles have the right to confront witnesses in delinquency trials
- 54.13.** Identified clinicians’ duties to warn third parties of imminent danger
- 54.14.** Determined that all handicapped children should be provided a free and appropriate public education in the least restrictive environment

ANSWERS**54.1. The answer is C**

According to the Children’s Bureau of the Department of Health and Human Services, of the 3.6 million child abuse cases reported each year, 78 percent are cases of *neglect*. The results are published in an annual document called *Child Maltreatment*. The agency estimated that approximately 3.6 million alleged victims were reported to child protective services. Of those reports, approximately 22.1 percent were substantiated. The substantiated cases were distributed as follows: 78 percent neglect,

18 percent *physical abuse*, 9.5 percent *sexual abuse*, and 7.6 percent *emotional* or psychological maltreatment. The Children’s Bureau estimated that 1,770 children died as the result of maltreatment in 2009. Approximately 46 percent of these deaths were children younger than 1 year of age. Approximately 12 percent of the fatalities had been identified as victims and received family preservation services in the prior 5 years, and 2 percent had been removed from foster care and reunited with their families in the prior 5 years.

Answers 54.2–54.7**54.2. The answer is C****54.3. The answer is B****54.4. The answer is B****54.5. The answer is A****54.6. The answer is A****54.7. The answer is A**

Both the juvenile court and the adult court systems must conform to the same rights of due process, which include the right to notice of charges, right to legal counsel, the Fifth Amendment privilege against self-incrimination, and the right to confront witnesses. The adult court system uses the following process: pretrial hearing, trial, and sentencing. The juvenile court system differs and includes intake, adjudication, and disposition. If a juvenile makes a confession, disposition may proceed without the trial. The adult court system uses both trial by jury and trial by judge without a jury in its decision making, but in juvenile court, all trials are decided by a judge without a jury.

Answers 54.8–54.10**54.8. The answer is A****54.9. The answer is B****54.10. The answer is B**

Child custody disputes throughout recorded history have reflected a society’s view of children in families. The practice of courts becoming involved in private family affairs is fairly recent. The history of these issues traces a change from seeing children as essentially owned by their parents to considering what is likely to be in the child’s best interests. Judicial decisions have been informed by various doctrines, including the “tender-years” and the “best interests of the child” doctrines. *The “tender-years” doctrine existed well into the 20th century and held that young children (from birth to about age 7 years) were usually better off with their mothers, who were presumed to be best able to raise and nurture their offspring. With this doctrine in mind, most custody decisions were made in the mother’s favor. This presumption was replaced in the last third of the 20th century*

by the “*best interests of the child*” doctrine, which is the current law in the United States. This doctrine holds that the focus of a child custody case should be the child and that courts should not lean toward one parent or the other based exclusively on gender. Considerations of the optimal parent for the child expanded beyond mother-child relationship and included assessing issues of emotional climate, safety, and educational and social opportunities for the children. *There may be situations in which “best interest of the child” dictates that custody should reside with a nonparent rather than a parent.*

Answers 54.11–54.14

54.11. The answer is B

54.12. The answer is A

54.13. The answer is C

54.14. The answer is D

Knowledge of the juvenile court system and its strengths and weaknesses is essential for forensic child and adolescent psychiatrists. Clinicians must also appreciate the indications for waiver hearings and the grounds for judicial determination that a minor be tried as an adult. Although the juvenile court system operated for decades as supposedly child oriented and protective, the U.S. Supreme Court, in the landmark case “*In re Gault*,” determined that the system sometimes does not accord juveniles rights equal to those of adults. This decision held that in delinquency cases, juveniles must be accorded basic due process rights, including the right to notice of charges, the right to legal counsel, the Fifth Amendment privilege against self-incrimination, and *the right to confront witnesses*. Another important Supreme Court case,

“*In re Winship*,” held that that standard “*beyond a reasonable doubt*” *must be followed in delinquency hearings.*

Child and adolescent psychiatrists may be involved in forensic evaluations outside the more common venues of the family or criminal court. For example, they may be called upon to make certain recommendations for a student with disabilities under the landmark *Education for All Handicapped Children Act of 1975*. *This law requires that all children with disabilities, regardless of the severity of their condition, be provided a free and appropriate public education in the least restrictive environment.* Children with disabilities are defined as those who are mentally retarded, learning disabled, physically disabled, or emotionally disturbed. A treating or evaluating child psychiatrist may be asked to testify at various hearings required under the law. Knowledge of the law’s implications as well as of the particular child will be critical to performing a proper evaluation.

Most clinicians working with children and adolescents spell out the limits of confidentiality to the families they work with at the outset of treatment and clarify how communications with parents are to be handled; they may particularly need to review limits of confidentiality with respect to insurance plans. Additional limits to confidentiality include behavior harmful to self or others. When disclosures need to be made to parents, the patient may be given the option of telling them him- or herself or of having the discussion together with the parents and the patient. Other exceptions to confidentiality include a law on reporting child abuse, which is mandatory in all states. A physician who fails to report suspicion of abuse may be liable for civil as well as criminal sanction. If an abuse report needs to be filed, parents should be informed. In some states, *physicians have a duty to protect third parties, as specified under Tarasoff I and Tarasoff II*, the 1976 and 1982 rulings of the California Supreme Court in the two cases of *Tarasoff v. Regents of University of California*.



Geriatric Psychiatry

Old age is not a disease. It is a phase of the life cycle characterized by its own developmental issues, many of which are concerned with loss of physical agility, mental acuity, friends and loved ones, and status and power. At the same time, old age is associated with the accumulation of wisdom and the opportunity to pass that on to future generations, one of the tasks that informs Erik Erikson's view of healthy old age as a time of integrity and not a time of despair. In contrast to this group of the well-old, there are the sick-old, persons with mental or physical disorders or both, that impair their ability to function or even survive. This group is the concern of geriatric psychiatry.

Geriatric psychiatry is concerned with preventing, diagnosing, and treating psychological disorders in older adults. It is also concerned with promoting longevity; persons with a healthy

mental adaptation to life are likely to live longer than those stressed with emotional problems. Mental disorders in elderly adults often differ in clinical manifestations, pathogenesis, and pathophysiology from disorders of younger adults and do not always match the categories in the text revision of the fourth edition of *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR). Diagnosing and treating older adults can present more difficulties than treating younger persons because older persons may have coexisting chronic medical diseases and disabilities, may take many medications, and may show cognitive impairments.

Students should study the questions and answers below for a useful review of these issues in this field.

HELPFUL HINTS

Each of the following terms relating to geriatric issues should be defined.

- | | | | |
|---|---|---|---------------------------------|
| ▶ adaptational capacity | ▶ cerebral anoxia | ▶ elder abuse | ▶ neurosis |
| ▶ advocacy | ▶ code of ethics | ▶ hypochondriasis | ▶ norepinephrine |
| ▶ agedness | ▶ cognitive functioning | ▶ hypomanic disorder | ▶ nutritional deficiencies |
| ▶ agitation and aggression | ▶ consent for disclosure of information | ▶ ideational paucity | ▶ obsessive-compulsive disorder |
| ▶ akathisia | ▶ conversion disorder | ▶ insomnia | ▶ organic mental disorder |
| ▶ alcohol and other substance use disorders | ▶ delirium | ▶ L-dopa (Larodopa) | ▶ orientation |
| ▶ Alzheimer's disease | ▶ dementia | ▶ late-onset schizophrenia | ▶ overt behavior |
| ▶ anoxic confusion | ▶ dementing disorder | ▶ LH | ▶ paradoxical reaction |
| ▶ anxiety disorder | ▶ depression | ▶ lithium | ▶ paraphrenia |
| ▶ benign senescent forgetfulness | ▶ developmental phases | ▶ loss of mastery | ▶ presbyopia |
| ▶ benzodiazepines | ▶ diabetes | ▶ manic disorder | ▶ psychopharmacology |
| | ▶ disorders of awareness | ▶ MMSE (Mini-Mental Status Examination) | ▶ psychotropic danger |
| | ▶ drug blood level | ▶ mood disorder | ▶ ranitidine (Zantac) |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

55.1. Dementia of the Alzheimer's type accounts for what percentages of old age dementias?

- A. 10 percent
- B. 20 percent

- C. 40 percent
- D. 60 percent
- E. 80 percent

55.2. Anxiety disorders in elderly adults

- A. increase in prevalence with increasing age
- B. are more common in men
- C. most commonly present as panic disorder
- D. most commonly present as phobic disorder
- E. are uncommon

- 55.3.** Which of the following statements about the biology of aging is *false*?
- A. The optic lens thins.
 - B. Brain weight decreases.
 - C. A decrease in melanin occurs.
 - D. The T-cell response to antigens is altered.
 - E. Each cell of the body has a genetically determined replicative capacity.
- 55.4.** Which of the following statements about learning and memory in the elderly is *false*?
- A. Simple recall remains intact.
 - B. IQ remains stable until age 80 years.
 - C. Memory-encoding ability diminishes.
 - D. Complete learning of new material still occurs.
 - E. On multiple-choice tests, recognition of correct answers persists.
- 55.5.** In the physical assessment of elderly adults, which of the following statements is *false*?
- A. Toxins of bacterial origin are common.
 - B. Severe vitamin deficiencies are common.
 - C. Cerebral anoxia often precipitates mental syndromes.
 - D. Nutritional deficiencies may cause mental symptoms.
 - E. The most common metabolic intoxication causing mental symptoms is uremia.
- 55.6.** How many U.S. states have laws making it mandatory to report suspected elder abuse?
- A. 15
 - B. 25
 - C. 35
 - D. 45
 - E. 5
- 55.7.** Visual hallucinations, delusions, fluctuating mental status, and adverse reactions to antipsychotic drugs, are all characteristics of which type of dementia?
- A. Lewy body dementia
 - B. Vascular dementia
 - C. Frontotemporal dementia
 - D. Depressive pseudodementia
 - E. Alzheimer's disease
- 55.8.** Elderly persons taking antipsychotics are especially susceptible to the following side effects *except*
- A. akathisia
 - B. paresthesias
 - C. dry mouth
 - D. tardive dyskinesia
 - E. a toxic confusional state
- 55.9.** Abnormalities of cognitive functioning in elderly persons are most often caused by
- A. medication
 - B. schizophrenia
 - C. hypochondriasis
 - D. depressive disturbances
 - E. cerebral dysfunction or deterioration
- 55.10.** Neuroimaging of brains in Alzheimer's disease
- A. reveals T2 hyperintensities on magnetic resonance imaging (MRI)
 - B. reveals reductions in the entorhinal cortex on volumetric MRI
 - C. reveals reductions in the cerebral metabolic rate for glucose (CMRgl)
 - D. all of the above
 - E. none of the above
- 55.11.** Which of the following is *true*?
- A. The prevalence of major depression is higher in elderly than in younger patients.
 - B. In general, elderly African Americans are less distressed than elderly whites.
 - C. Aging results in a decreased ability to inhibit negative emotions.
 - D. Older adults experience sadness more than younger people.
 - E. Emotional distress increases with age.
- 55.12.** Which of the following statements about the pharmacological treatment of the elderly is *false*?
- A. Elderly persons use more medications than any other age group.
 - B. About 25 percent of prescriptions are for those older than age 65 years.
 - C. In the United States, 250,000 people a year are hospitalized because of adverse reactions to medications.
 - D. About 25 percent of hypnotics dispensed in the United States each year are to those older than age 65 years.
 - E. About 70 percent of elderly adults use over-the-counter medications.
- 55.13.** All of the following risk factors for dementia of the Alzheimer's type are regarded as confirmed *except*
- A. age
 - B. aluminum
 - C. Down syndrome
 - D. family history
 - E. apolipoprotein E genotype
- 55.14.** Possible protective factors against dementia include
- A. red wine
 - B. education
 - C. estrogen replacement therapy
 - D. antiinflammatory drugs
 - E. all of the above

55.15. Which of the following factors is common in victims of elder abuse?

- A. Alcohol abuse
- B. Social isolation
- C. Mental illness
- D. Hostility
- E. Prescription drug abuse

55.16. An 85 year old woman with acute dementia sits on the sofa as her children discuss her medical and financial business. Her son suggests that this discussion should be continued at a later time, away from his mother's presence because he fears upsetting her. To this, her daughter responds by saying "What does it matter, she doesn't understand us anyway? She was always dumb to begin with, but now she's really clueless." As the woman looks on, her son shrugs "I guess you're right. She doesn't know what we are saying," and their conversation continues without further interruption.

The woman is a victim of which type of abuse?

- A. Physical
- B. Financial
- C. Neglect
- D. Sexual
- E. Psychological

55.17. According to Holly Ramsey Klawsnik, all of the following are typologies of perpetrators of elder abuse characterized by personal gain, *except*

- A. impaired perpetrators
- B. narcissistic perpetrators
- C. domineering perpetrators
- D. sadistic perpetrators
- E. none of the above

ANSWERS

55.1. The answer is D

Dementia of the Alzheimer's type accounts for about *60 percent* of old-age dementias. It is estimated to affect from 5 to *10 percent* of people of age 65 years and accounts for the most striking increase in dementia incidence in very old individuals. Dementia of the Alzheimer's type and related dementias cost society an estimated \$100 billion each year, which includes both direct costs (i.e., actual dollar expenditures) and indirect costs (i.e., resource losses not involving dollar expenditures). The greatest risk factor for developing dementia is age. The incidence and prevalence of the disease double every 5 years after age 60 years. An estimated 4 million U.S. citizens have Alzheimer's disease. As the Baby Boom generation (born in the 1950s and 1960s) moves into the age group of 60 years and older, Alzheimer's disease will become an even greater public health problem. The number of Americans Alzheimer's disease is expected to triple by mid-century, growing from 4.5 million to more than 13 million.

55.2. The answer is D

Although epidemiological studies show that anxiety disorders are less prevalent in older adults compared with younger adults, the prevalence of anxiety disorders in this older age group is high compared with that of other disorders. Indeed, anxiety disorders are the most prevalent psychiatric disorders, excluding the dementias, in people older than age 65 years. *The most prevalent anxiety disorder among older adults is phobic disorder. Panic disorder is the least common anxiety disorder in this age group.* Across all age groups, *anxiety disorders are more prevalent in women than in men. The prevalence of anxiety disorders decreases with increasing age.*

55.3. The answer is A

As a person ages, *the optic lens thickens (not thins)* in association with an inability to accommodate (presbyopia), and hearing loss is progressive, particularly at the high frequencies. The process of aging, known as senescence, results from a complex interaction of genetic, metabolic, hormonal, immunological, and structural factors acting on molecular, cellular, histological, and organ levels. The most commonly held theory is that *each cell of the body has a genetically determined life span* during which replication occurs a limited number of times before the cell dies. One study found 50 such replications in human cells. Structural changes in cells take place with age. In the central nervous system (CNS), for example, age-related cell changes occur in neurons, which show signs of degeneration.

A progressive decline in many bodily functions includes a *decrease in melanin* and decreases in cardiac output and stroke volume, glomerular filtration rate, oxygen consumption, cerebral blood flow, and vital capacity. Many immune mechanisms are altered, with *impaired T-cell response to antigens* and an increase in the formation of autoimmune antibodies. These altered immune responses probably play a role in aged persons' susceptibility to infection and possibly even to neoplastic disease. Some neoplasms, most notably cancers of the colon, prostate, stomach, and skin, show a steadily increasing incidence with age.

Variable changes in endocrine function are seen. For example, postmenopausal estrogen levels decrease, producing breast tissue involution and vaginal epithelial atrophy. Testosterone levels begin to decline in the sixth decade of life; however, follicle-stimulating hormone and luteinizing hormone increase. In the CNS, there is a *decrease in brain weight*, ventricular enlargement, and neuronal loss of approximately 50,000 a day, with some reduction in cerebral blood flow and oxygenation.

55.4. The answer is A

In elderly persons, *simple recall* becomes difficult (*does not remain intact*), and *memory-encoding ability diminishes*. These functions decline with age. However, many cognitive abilities are retained in old age. Although elderly persons take longer than young persons to learn new material, *complete learning of new material still occurs*. Old adults maintain their verbal abilities, and their *IQs remain stable until approximately age 80 years. On multiple-choice tests, recognition of correct answers persists.*

55.5. The answer is B

Severe vitamin deficiencies in elderly adults are *rare (rather than common)*. However, a number of conditions and deficiencies are typical and should be considered in the physical assessment of elderly patients. *Toxins of bacterial origin* and metabolic origin are common in old age. Bacterial toxins usually originate in occult or inconspicuous foci of infection, such as suspected pneumonic conditions and urinary infections. In elderly individuals, the most common metabolic intoxication causing mental symptoms is *uremia*, which is an excess of urea and other nitrogenous waste products in the blood. Mild diabetes, hepatic failure, and gout are also known to cause mental symptoms in elderly people and may easily be missed unless they are actively investigated. Alcohol and drug misuse may cause many mental disturbances in late life. These abuses, with their characteristic effects, are usually determined by taking a history.

Cerebral anoxia often precipitates mental symptoms as a result of cardiac insufficiency or emphysema. Anoxic confusion may occur after surgery, a cardiac infarct, gastrointestinal bleeding, or occlusion or stenosis of the carotid arteries. *Nutritional deficiencies may cause mental symptoms* or may be a symptom of a mental disorder.

55.6. The answer is D

At this time, 45 U.S. states have mandatory reporting laws for elder abuse. Varying laws require specific professionals who have reason to suspect elder abuse or neglect to report their observations to designated public health agencies. Criminal enforcement of these laws, which differ in nature from state to state, is nonexistent. Clinical incentives to reporting, such as a having a comprehensive system of services to respond to such reports, providing appropriate follow-up services to victims and overstressed caregivers, and providing reporters with outcome of interventions, are lacking in most jurisdictions. This situation and the relative isolation of most abused elderly persons from society have contributed to making mandatory reporting laws ineffective. In addition, the fact that elder abuse statutes of the 1980s were based on child abuse laws of the 1960s makes the relevance of the elder abuse laws debatable, especially when ethical issues of beneficence, autonomy, and nonmaleficence are under consideration.

55.7. The answer is A

Patients with *Lewy body* dementia may evidence visual hallucinations, delusions, fluctuating mental status, and adverse reactions to antipsychotic drugs.

Vascular dementia is estimated to account for 10 to 20 percent of the dementias of old age. Classically, the disorder is characterized by a sudden onset of illness and stepwise decline in cognitive function rather than the insidious onset and gradually progressive course of Alzheimer's disease.

Even though Alzheimer's disease and vascular dementia constitute the bulk of all dementias, numerous other conditions must be considered and sometimes can be differentiated from Alzheimer's disease by their clinical presentation. For example, *frontotemporal dementia* is characterized by marked personality changes, relative preservation of visuospatial skills, and exec-

utive dysfunction. Alcohol and drugs may cause memory loss and other symptoms of dementia. For elderly patients, drugs deserve special emphasis as a cause of memory impairment because of widespread polypharmacy and age-related changes in body function and pharmacokinetics. An elderly person's brain can be extremely sensitive to change in its environment, and almost any physical illness can effect such a change and produce a dementia-like syndrome. Numerous potentially treatable physical and mental conditions must be considered whenever the diagnosis of dementia is entertained.

The clinical presentation of geriatric depression may mimic that of dementia. The earlier term *depressive pseudodementia* is no longer considered useful because the dementia is real; instead, *dementia syndrome of depression* often is used.

55.8. The answer is B

Paresthesias, which are spontaneous tingling sensations, are not typically a side effect of antipsychotics. Elderly persons, particularly if they have organic brain disease, are especially susceptible to the side effects of antipsychotics, which include *dry mouth*, *tardive dyskinesia*, *akathisia*, and a *toxic confusional state*. Tardive dyskinesia is characterized by disfiguring and involuntary buccal and lingual masticatory movements; akathisia is a restlessness marked by a compelling need for constant motion. Choreiform body movements, which are spasmodic and involuntary movements of the limbs and the face, and rhythmic extension and flexion movements of the fingers may also be noticeable. Examination of the patient's protruded tongue for fine tremors and vermicular (worm-like) movements is a useful diagnostic procedure. A toxic confusional state, also called a *central anticholinergic syndrome*, is characterized by a marked disturbance in short-term memory, impaired attention, disorientation, anxiety, visual and auditory hallucinations, increased psychotic thinking, and peripheral anticholinergic side effects.

55.9. The answer is E

Abnormalities of cognitive functioning in elderly adults are *most often caused by some cerebral dysfunction or deterioration*, although they may also be the result of *depressive disturbances*, *schizophrenia*, or the effects of *medication*. In many instances, intellectual difficulties are not obvious, and a searching evaluation is necessary to detect them. Elderly adults are sensitive to the effects of medication; in some instances, cognitive impairment may result from overmedication. *Hypochondriasis*, the fear that one has a disease or preoccupation with one's health, is not the cause of an abnormality of cognitive functioning.

55.10. The answer is D (all)

Magnetic resonance imaging (MRI) studies in Alzheimer's disease *show an increased number of T2 hyperintensities*, as well as an increased number of hyperintensities in periventricular regions. *Positron emission tomography (PET) studies find abnormalities in the cerebral metabolic rate for glucose (CMRgl)*. Volumetric MRI studies find *reductions in the volume of medial temporal lobe structures*, namely the hippocampus and entorhinal cortex, which are correlated with the severity of cognitive impairment, and increased rates of atrophy in medial temporal structures and the whole brain in patients with Alzheimer's disease.

55.11. The answer is B

Interesting racial differences have been noted between elderly African American and white people when measuring psychological distress. *Elderly African Americans have been noted to be less distressed than elderly whites.* It has been suggested that elderly African Americans may be afforded higher status and stay more engaged within their communities than elderly whites. With the exception of dementing disorders and delirium, *mental disorders are no more common in elderly people than in younger age groups. Prevalence estimates of common disorders such as major depression are lower for those older than the age of 65 years than they are in younger cohorts.* Older adults report experiencing *less negative emotions* such as sadness, anger, and fear than younger adults, and aging is associated with an *increased ability to inhibit negative emotional states and maintain positive emotional states.*

55.12. The answer is D

Psychotropic drugs are among those most commonly prescribed for elderly patients; *40 percent (not 25 percent) of all hypnotics dispensed in the United States each year are to those older than age 65 years. Elderly patients use more medications than any other age group. Indeed, 25 percent of all prescriptions are written for those older than age 65 years.* Many old persons have adverse drug reactions, as evidenced by the fact that, *in the United States, 250,000 people a year are hospitalized because of adverse medication reactions.* Physicians must remember that about *70 percent of elderly people use over-the-counter (OTC) medications.* These preparations can interact with prescribed drugs and lead to dangerous side effects. Physicians should include the use of OTC medications when taking a patient's drug history.

55.13. The answer is B

The power of individual case-control studies of dementia of the Alzheimer's type has been greatly enhanced by an initiative undertaken by the European Consortium on Dementia (EURODEM) established by the European community. The EURODEM carried out a collaborative reanalysis of 11 case-controlled studies, six from the United States and one each from Australia, Finland, Italy, Japan, and the Netherlands. That analysis revealed risk factors that had hitherto been only speculative. From this and other sources, only four risk factors can now be regarded as confirmed.

As for dementia in general, the incidence rises steeply with age, making it the strongest of all risk factors. *Having a parent or sibling with dementia of the Alzheimer's type increases the risk of developing the disease about 3.5 times.* The risk is greater for relatives of early-onset patients than later-onset patients. In interpreting the epidemiological data for individual patients, however, the clinician needs to emphasize that the risk conferred by a positive family history depends on how long that person lives. Those who do not reach old age have a low risk. Even for relatives who live to age 90 years, the probability that they themselves will develop the disease is only about 50 percent.

The much rarer, early-onset dementia of the Alzheimer's type is caused by single genes, such as a mutation of the amyloid precursor gene on chromosome 21 or the presenilin genes on

chromosomes 1 and 14. But in most cases of dementia of the Alzheimer's type, onset is not until the 70s or 80s. In this group, of much greater public health importance, there are multiple genetic and environmental influences. One of the most exciting discoveries is that the apolipoprotein E $\epsilon 4$ allele on chromosome 19 affects the risk of developing the disease. The $\epsilon 4$ allele of this gene increases risk; the $\epsilon 2$ allele may reduce it. Although early research with clinical samples showed a very strong relationship between *apolipoprotein E $\epsilon 4$ genotype* and dementia of the Alzheimer's type, more recent studies with general population samples show a weaker relationship. It is now clear that although all individuals with the $\epsilon 4$ allele are at increased risk, even homozygotes can live to age 90 years with only a 50 percent chance of developing dementia. An interesting proposal is that the apolipoprotein E genotype predicts when (not whether) a person is predisposed to develop this dementia. These epidemiological findings may in time lead to the development of pharmacological methods to slow the deposition of β -amyloid.

Persons with *Down syndrome* may develop the brain changes of dementia of the Alzheimer's type before age 40 years. This is believed to be related to their having an extra copy of the amyloid precursor gene on chromosome 21.

Because *aluminum*, known to be neurotoxic, occurs in neuritic plaques, evidence has been sought for an association between exposure to this metal and the development of dementia of the Alzheimer's type. Aluminum is ingested in food, drinking water, antacids, and toothpaste. It is used in kitchen utensils and is applied to the body in antiperspirants. The widespread use of aluminum as a flocculent in water supplies has led to public concern, although drinking water provides only a tiny percentage of dietary aluminum. The amount absorbed depends on its bioavailability, and considerable uncertainty exists about its subsequent deposition in the brain. From the epidemiological evidence, involvement of aluminum from drinking water or other sources in causing dementia of the Alzheimer's type remains unproven.

55.14. The answer is E (all)

A recurrent finding in field surveys is that rates for dementia and cognitive impairment are higher in elderly persons who have had little *education.* This may be partly attributable to bias in ascertainment, whereby the tests are done better by persons who are more literate. Although such bias may be present in the detection of mild impairment in surveys, it is much less likely to influence the diagnosis of a fully developed dementia. One interpretation is that education may delay the point at which a developing dementia becomes clinically manifest. A longitudinal study of American nuns suggests that education and intelligence may actually protect against the neuropathological processes in dementia of the Alzheimer's type. This means that exposure to education in childhood may conceivably have some protective effect many decades later.

Because an inverse association between rheumatoid arthritis and dementia of the Alzheimer's type was first observed, more than 20 publications have examined the possibility that persons who have taken steroids, aspirin, or other nonsteroidal *antiinflammatory drugs* over long periods have a lower risk of dementia or have slower cognitive decline in late life. The most recent information is that antiinflammatory drugs probably do prevent or attenuate the symptoms of dementia of the Alzheimer's type.

This effect is biologically plausible in terms of the action of these drugs to inhibit the immune and chronic inflammatory pathology suspected to apply in dementia of the Alzheimer's type. But it is premature for physicians to prescribe antiinflammatory drugs for dementia of the Alzheimer's type before their effect is established in a randomized controlled trial and the findings balanced with their risks.

Case-controlled studies suggest possible protection against dementia of the Alzheimer's type afforded to women who take *estrogen*. But because these women also tend to be better educated and to differ in other lifestyle factors, this finding could be misleading. The use of estrogen replacement therapy is currently controversial.

A large population-based prospective study in Bordeaux, France, has found evidence that *moderate consumption of red wine* protects against the onset of dementia.

55.15. The answer is B

A shared living situation, *social isolation*, and dementia are risk factors that are commonly shared by victims of elder abuse. Risk factors that may be common to abusers include *mental illness*, *hostility*, and *alcohol or drug abuse*. Table 55.1 illustrates some characteristics associated with victimization and perpetration of elder mistreatment.

55.16. The answer is E

The woman is a victim of *psychological abuse*. Subtypes of elder mistreatment include the following: (1) *psychological abuse*: conduct inflicting emotional distress or psychological harm; (2) *physical abuse*: physical acts causing pain or injury; (3) *sexual assault*: nonconsensual sexual contact of any kind; (4) *financial exploitation*: illegal taking, misuse, or concealment of funds, property, or assets of a vulnerable elderly person; and (5) *neglect*: committed by a person responsible for the vulnerable older adult.

55.17. The answer is A

Holly Ramsey-Klawnsnik identified five types of perpetrators of elder abuse: impaired, overwhelmed, narcissistic, domineering or bullying, and sadistic. *Impaired perpetrators* are caregivers who mean to provide good care for their elderly loved ones but



Table 55.1
Characteristics of Victims and Perpetrators

Victims	Perpetrators
Living with abusers	Substance abuse
Multiple physical impairments or frailty	Mental illness
Cognitive impairment	Cognitive impairment
Shame	Dependence on victims
Depression	Problems with interpersonal relationships
Social isolation	Social isolation
Lacking control	Need to control
Fear of increased isolation	Financial gain

Courtesy of Elizabeth J. Santos, MD, and Marion Zucker Goldstein, M.D.

are unable to adequately care for the older adults in their care because of their own deficits. Examples include caregivers who have physical or mental illness and are unaware of their limitations. The overwhelmed perpetrators are similarly well meaning but become frustrated and lash out at the older adults in their care. This was the most common perception of early elder abuse research, and preventive interventions were aimed at reducing caregiver stress. Later research has shown, however, that caregiver stress is a much less common cause of mistreatment toward older adults. Instead, recent studies indicate that the frustration associated with caregiver stress becomes directed inward toward the caregivers, and the caregivers' health suffers.

Narcissistic, domineering or bullying, and sadistic perpetrators share the characteristic of personal gain. *Narcissistic perpetrators* put their personal needs ahead of those of the victims. Secondary gain, often financial, is their only goal. *Domineering* or bullying perpetrators believe that their maltreatment of elderly individuals is justified. Control of older adults is rationalized, and often ageism and the belief that older adults are weak and undeserving of respect contribute to the justification and continued victimization. *Sadistic perpetrators* are the most brutal type. These perpetrators lack remorse and derive pleasure from making others experience pain. Older adults are intimidated, tormented, and terrorized to please the perpetrator.



End-of-Life Care and Palliative Medicine

Palliative care is geared toward the relief of pain and suffering when there is no attainable cure. Palliative care physicians must not only be skilled in the administration of powerful opioids, which are the standard medication to treat the physical pain of terminal illness; they must maintain the ability to treat the emotional pain and suffering of dying patients and their loved ones without offering false hope or making promises that cannot be kept. Most importantly, it is the job of the palliative care physician to maintain a sense of dignity amid the physical and emotion insults that come with loss of independence.

One of the most important tasks for a physician caring for a dying patient is to determine when the time for curative care has ceased. It is only then that palliative care can begin. Ideally, physicians should strive to extend life and decrease suffering; at the same time, they must accept death as a defining characteristic of life. Some physicians, however, have developed dysfunctional

attitudes about death, which have been reinforced throughout their lives by their experiences and training. It has been postulated that doctors are more frightened of death than members of other professional group and that many enter the study of medicine so they may gain control of their own mortality using the defense mechanism of intellectualization.

Physicians able to deal with death and dying are able to communicate effectively in several areas, including diagnosis and prognosis, the nature of terminal illness, advance directives about life-sustaining treatment, hospice care, legal and ethical issues, grief and bereavement, and psychiatric care. In 1991, the American Board of Pain Medicine was established to ensure that physicians treating patients in pain were both qualified to do so and were kept up to date on the latest advances in the field.

Students should study the questions and answers below for a useful review of this field.

HELPFUL HINTS

Students should know and define the following terms.

- | | | | |
|--|-----------------------|----------------------------------|--|
| ▶ advance directives | ▶ health care proxies | ▶ opioids | ▶ psychogenic pain |
| ▶ DNI | ▶ hospice | ▶ pain suppression pathways | ▶ psychotoxicity |
| ▶ DNR | ▶ hydromorphone | ▶ Patient Self-Determination Act | ▶ somatic pain |
| ▶ end-of-life symptoms | ▶ living wills | ▶ physician-assisted suicide | ▶ Uniform Rights of the Terminally Ill Act |
| ▶ euthanasia (active, passive, involuntary, voluntary) | ▶ morphine | | ▶ visceral pain |
| | ▶ neuropathic pain | | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

- 56.1.** A risk factor for the development of aversive reactions in physicians is when
- the physician identifies the patient with someone in his or her own life
 - the physician is dealing with a sick family member

- the physician feels professionally insecure
- the physician is fearful of death and disability
- all of the above

- 56.2.** The most common cause of undertreatment in patients is
- noncompliance
 - patients with a high pain threshold
 - lack of knowledge or resources
 - when inexperienced doctors are overanxious
 - lack of communication between the doctor and patient

- 56.3.** Of the following drugs, the *least* likely to cause psychotoxicity is
- hydromorphone (Dilaudid)
 - levorphanol (Levo-Dromoran)
 - methadone (Dolophine)
 - morphine
 - none of the above
- 56.4.** Which of the following is *not* true regarding patients with strong religious beliefs?
- Patients with strong religious beliefs may be strengthened by their illness.
 - Patients with strong religious beliefs have a higher pain threshold.
 - Patients with strong religious beliefs may explain illness as a test of their faith.
 - Patients with strong religious beliefs are often better able to deal with end-of-life issues.
 - Patients with strong religious beliefs may see suffering as having redemptive values.
- 56.5.** Advance directives
- include living wills
 - include health care proxies
 - include DNR and DNI
 - are legally binding in all 50 states
 - all of the above
- 56.6.** When communicating with a severely ill child, all of the following are true *except*
- parents may tell the child about their illness
 - the physician must clarify what the child already knows about his or her illness
 - the doctor must let the ill child know he or she will never be abandoned
 - the physician may tell the child that he or she is going to die
 - a doctor may sedate the child to limit anxiety about bad news
- 56.7.** Which of the following limits anxiety in terminally ill children?
- Adequate relief of physical symptoms
 - Consistent contact with parents
 - Child-friendly hospital environment
 - Avoiding prolonged separation
 - All of the above
- 56.8.** Which of the following is considered a transient passive thought of death?
- “I don’t deserve to live.”
 - “No one cares whether I live or die.”
 - “It’s ok if I don’t wake up.”
 - “Doctor, please help me die.”
 - None of the above
- 56.9.** Adequate palliative pain control should be sought in all of the following conditions *except*
- AIDS
 - advanced multiple sclerosis
 - coma
 - metastatic melanoma
 - pancreatic cancer
- 56.10.** Which of the following statements regarding pain control is *true*?
- Providing patients with medications as needed (PRN) is the best option.
 - Rescue doses of medications should not be made available.
 - Around-the-clock medication administration does not provide the best pain control.
 - Faster pain control is achieved with PRN doses.
 - Maintenance pain dosing allows for an early and preemptive response.
- 56.11.** Which of the following is a pathophysiological symptom of the hypoactive subtype of delirium?
- Fast EEG
 - Overstimulation of GABA systems
 - Normal cerebral metabolism
 - Reduced activity in GABA systems
 - Normal EEG
- 56.12.** Mr. S is a 50-year-old man with newly diagnosed metastatic small cell lung cancer. He was noted by his family to be anxious, to the point of having panic symptoms when his wife would leave his bedside to attend to chores. He would start hyperventilating, would feel short of breath, would become restless and unable to concentrate on anything, and would be overwhelmed with morbid ruminations about his future. He was upset and felt guilty at having become overly dependent on his wife.
- All of the following interventions would help this patient *except*
- clonazepam
 - fluoxetine
 - meditation
 - psychoanalysis
 - relaxation and breathing exercises
- 56.13.** A psychiatric consultation was sought to evaluate depression in a 56-year-old man with pancreatic cancer. His severe back pain was being well treated with morphine. The patient was noted by the inpatient staff to be more withdrawn, disengaged, and quiet, making poor eye contact and sleeping most of the day. On examination, the psychiatric consultant found the man to be difficult to arouse and to be mildly confused and disoriented. His speech was slow and his thought process disorganized. He admitted to intermittently experiencing visual hallucinations that he had been too embarrassed to report

earlier to the nursing staff. The man was diagnosed with a hypoactive delirium secondary to opioid medications.

Which of the following is the most appropriate next step in his management?

- A. Add an antipsychotic
- B. Discontinue morphine
- C. Decrease the dose of morphine
- D. Decrease the frequency of morphine
- E. Do nothing

56.14. When should the transition to palliative care be made?

- A. At the diagnosis of illness
- B. At realization that an illness is not curable
- C. When the physician has no more options to consider
- D. When nearness of death is acknowledged
- E. None of the above

56.15. Which of the following is a legitimate reason to withhold patient-controlled analgesia (PCA) opioid pain medications from children?

- A. Possibility of addiction
- B. Sedation
- C. Injudicious use or overmedication
- D. Nonterminal disease
- E. None of the above

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 56.16–56.20

- A. Delusions
- B. Dysphagia
- C. Dyspnea or cough
- D. Severe Fatigue
- E. Incontinence

56.16. Occurs in 80 percent of terminal lung cancer patients

56.17. May occur after pelvic radiation

56.18. Common in end-state multiple sclerosis

56.19. Most common occurrence in terminal illness

56.20. Opioids may be of use

Questions 56.21–56.25

- A. Physician-assisted suicide
- B. Euthanasia
- C. Both
- D. Neither

56.21. Mercy killing

56.22. Physician withholds artificial life-sustaining measures

56.23. Physician deliberately intends to kill a patient to alleviate or prevent suffering

56.24. Imparting of information or means that enable a person to take his or her own life

56.25. Palliative care designed to alleviate the suffering of a dying patient

Questions 56.26–56.29

- A. Somatic pain
- B. Visceral pain
- C. Neuropathic pain
- D. Psychogenic pain
- E. None of the above

56.26. Bone metastases

56.27. Somatization disorder

56.28. Sense of pain in a limb that has been amputated

56.29. Diaphragmatic pain referred to the shoulder

ANSWERS

56.1. The answer is E (all)

All people are equal in the face of death, yet physicians are expected to put aside their personal reactions and to remain attentively focused on the care of any dying patient. There is evidence that doctors have more death anxiety than other professionals and may have become physicians to conquer that fear. In addition, long exposure to disease and death breeds anxiety despite the appearance of familiarity. The practice of medicine requires and reinforces intellectual coping skills, teaches that disease must be conquered, and expects that doctors function effectively under any circumstance. However, confrontation with death arouses threatening emotions, the deepest being an inchoate fear that is so rapidly submerged that it is barely experienced, much less explored. Beyond that, *all health professionals are at risk for feeling frustrated, helpless, or defeated*. Lowered self-assurance is transmuted into rescue fantasies, cynicism, or anger. Hardest of all is the grief when a *familiar patient* dies, a pain they repeatedly steel themselves to control. Table 56.1 lists risk factors for the development of aversive reactions in physicians.

56.2. The answer is C

The most concrete causes of undertreatment are *lack of knowledge or resources*. Patients in pain require aggressive use of analgesics, and doctors should not be intimidated by criticism about addicting patients. *Lack of communication between the doctor and patient, a patient with a high threshold for pain, and overanxious doctors* are not concrete causes of undertreatment in patients. *Noncompliance* can be a source of undertreatment but not to the extent that a lack of resources account for this phenomenon.

56.3. The answer is A

Opioids commonly cause delirium and hallucinosis. A frequent mechanism of psychotoxicity is the accumulation of drugs or metabolites whose durations of analgesia are shorter than their plasma half-lives (*morphine, levorphanol [Levo-Dromoran]*,



Table 56.1
Risk Factors for the Development of Aversive Reactions in Physicians

The physician:

- Identifies with the patient: looks, profession, age, character, and so on.
- Identifies the patient with someone in his or her own life.
- Is currently dealing with a sick family member.
- Is recently bereaved or dealing with unresolved loss or grief issues.
- Feels professionally insecure.
- Is fearful of death and disability.
- Is unconsciously reflecting feelings felt or expressed by the patient or family.
- Cannot tolerate high and protracted levels of ambiguity or uncertainty.
- Carries a psychiatric diagnosis, such as depression or substance abuse.

Adapted from Meier DE, Back AL, Morris RS. The inner life of physicians and care of the seriously ill. *JAMA*. 2001;286:3007–3014.

and methadone [Dolophine]). Use of drugs such as hydromorphone (Dilaudid), with half-lives closer to their analgesic duration, can relieve the problem without loss of pain control. Cross-tolerance is incomplete between opiates; hence, several may be tried in any patient, with the dosage lowered when switching drugs. Table 56.2 lists opioid analgesics used in the management of pain.



Table 56.2
Opioid Analgesics for Management of Pain

Drug and Equianalgesic Dose Relative Potency	Dose (mg IM or PO)	Plasma Half-Life (hr) ^a	Starting Oral Dose ^b (mg)	Available Commercial Preparations
Morphine	10 IM 60 PO	3–4	30–60	PO: tablet, liquid, slow-release tablet Rectal: 5–30 mg Injectable: SC, IM, IV, epidural, intrathecal
Hydromorphone	1.5 IM 7.5 PO	2–3	2–18	PO: tablets: 1, 2, 4 mg Injectable: SC, IM, IV 2 mg/mL, 3 mg/mL, and 10 mg/mL
Methadone	10 IM 20 PO	12–24	5–10	PO: tablets, liquid Injectable: SC, IM, IV
Levorphanol	2 IM 4 PO	12–16	2–4	PO: tablets Injectable: SC, IM, IV
Oxymorphone	1 IM	2–3	NA	Rectal: 10 mg Injectable: SC, IM, IV
Heroin	5 IM 60 PO	3–4	NA	NA
Meperidine	75 IM 300 PO	3–4 (normeperidine 12–16)	75	PO: tablets Injectable: SC, IM, IV
Codeine	130 PO 200 PO	3–4	60	PO: tablets and combination with acetylsalicylic acid, acetaminophen, liquid
Oxycodone ^c	15 PO 30 PO	—	5	PO: tablets, liquid, oral formulation in combination with acetaminophen (tablet and liquid) and aspirin (tablet)

^aThe time of peak analgesia in nontolerant patients ranges from 0.5 to 1 hour, and the duration is from 4 to 6 hours. The peak analgesic effect is delayed and the duration is prolonged after oral administration.

^bRecommended starting IM doses; the optimal dose for each patient is determined by titration, and the maximal dose is limited by adverse effects.

^cA long-acting sustained-release form of oxycodone (OxyContin) has been abused by drug addicts, and its use has been criticized because of this; however, it is a very useful preparation available in 10-, 20-, 40-, and 160-mg doses that need to be taken once every 12 hours. It is used as a maintenance therapy for severe persistent pain.

IM, intramuscular; IV, intravenous; NA, not applicable; PO, oral; SC, subcutaneous.

Adapted from Foley K. Management of cancer pain. In: DeVita VT, Hellman S, Rosenberg SA, eds. *Cancer: Principles and Practice of Oncology*. 4th ed. Philadelphia: JB Lippincott; 1993:936.

56.4. The answer is B

Patients with well-elaborated faith, especially one that includes a reunion with God in the afterlife, *tend to do better at the end of life*. Some patients *may experience illness as a test of their faith* or *may view suffering as having redemptive value*, and others *gain strength from the belief* that God will not send them more than they can handle. However, they also often ask, “Why me?” and struggle with anger, a sense of betrayal or abandonment, disappointment, self-imposed guilt, and a loss of faith that leaves them truly desolate. Patients with strong religious beliefs *do not have a higher pain threshold*.

56.5. The answer is E (all)

Advance directives are wishes and choices about medical intervention when the patient’s condition is considered to be terminal. *Advance directives are legally binding in all 50 states*. There are three types:

- Living will.** A patient who is mentally competent gives specific instructions that doctors must follow when he or she is unable to communicate with them because of illness. They may include rejection of feeding tubes, artificial airways, or any other measures to prolong life.
- Health care proxy.** Also known as durable power of attorney, the health care proxy gives another person the power to make medical decisions if the patient is unable to do so. That person, also known as the surrogate, is empowered to make all

decisions about terminal care based on what he or she thinks the patient would have wanted.

3. *Do not resuscitate (DNR) and do not intubate (DNI)*. These are orders that prohibit doctors from attempting to resuscitate (DNR) or intubate (DNI) patients who are in extremis. DNR and DNI orders are made by patients who are competent to do so. They can be made part of the living will or expressed by the health care proxy.

56.6. The answer is E

The basis for effective communication with a child is a trusting relationship with the physician and other caregivers. Children quickly learn in whom they can trust and confide. Whether a particular child should be told about his or her prognosis is not a simple matter. Parental wishes must be considered. Some parents do not want the child to be told that he or she is going to die, but other families do. It is useful to discuss with parents how they would respond if the child asked them about possibly dying. If the family has decided that they want their child to be fully informed, one individual should be selected to talk to the child, and all other caregivers, including parents, physicians, and nursing staff, should be instructed to give the same message. Inconsistent explanations can be confusing and even emotionally disabling to a child.

Some families want the physician to give the child the news, so as to protect the parent–child dynamic by not bearing bad news. When the child asks a question about his or her death, it is *important to clarify what the child already knows* and the reasons behind the question because they are often different from what the adults expect. Some children are responding to the anxiety and grief projected by the parents; others are preoccupied with pain, discomfort, mutilation, abandonment, and loneliness. The child should be given ample time and opportunity to express his or her concerns, and any frightening misconceptions should be clarified. Even when the child is told that the illness is fatal, he or she should be comforted and reassured that the physicians will do everything possible to keep him or her comfortable and that *he or she will always be loved and cared for and never abandoned*. Sedation is not used when communicating with a child about his or her illness.

56.7. The answer is E (all)

Anxiety in the face of death is ubiquitous. It may stem from physiological issues such as intractable pain, compromised respiratory state, or medications, as well as from psychological issues such as separation from parents, unfamiliarity of the hospital environment, and fear of death itself. Generally, interventions aimed at the etiology of the anxiety are most effective. Adequate relief of physical symptoms, especially pain and respiratory distress, can significantly allay anxiety. *Ensuring consistent contact with parents, avoiding prolonged separation, addressing the emotional states of caregivers, and making the hospital milieu more child friendly* go a long way toward reducing the child's fears and anxieties.

56.8. The answer is C

"It's ok if I don't wake up" is a transient passive thought of death that can often be easily dissolved with an improved quality of life.

"I don't deserve to live" and *"No one cares whether I live or die"* are examples of suicidal ideation and are likely accompanied by feelings of self-hatred, guilt, and worthlessness. *"Doctor, please help me die"* is a direct request for physician-assisted suicide or euthanasia. Such a request is usually made in the midst of feelings of fear and hopelessness, although such a request is not always associated with depression.

56.9. The answer is C

Adequate pain control is an important component of palliative care. Pain is a component of all of the following conditions: *AIDS, advanced multiple sclerosis, pancreatic cancer, and metastatic melanoma*. Pain is not a component in *patients who slip into coma*. People in coma may well react to pain by moving or even groaning, but most often have no memory of pain. In *cancer*, the overall pain incidence of 51 percent increases to 74 percent in advanced disease. Pain is also frequent in *AIDS* and *advanced multiple sclerosis* and can be expected in almost any advancing illness. Because there are side effects associated with pain medications, the patient and physician must decide together what symptom or side effect is most acceptable. The psychiatrist has a special role to play because psychological symptoms are intimately connected to the experience of pain.

56.10. The answer is E

The need for regular by-the-clock administration of pain medications, as opposed to as-needed (PRN) administration, cannot be overemphasized. It may be counterintuitive, but a *maintenance schedule achieves faster and better pain control* with a smaller total dose. *PRN orders do not allow for an early or preemptive response*. Patients often wait until pain is significant before calling for medication and then wait again for it to be given, during which time increasing pain is worsened by anxiety and growing resentment. Patients ring repeatedly, often annoying genuinely overburdened nurses. *Rescue doses should be available for breakthrough pain*, and their repeated use should signal the need to raise the maintenance dose.

56.11. The answer is B

Overstimulation of the γ -aminobutyric acid (GABA) systems is a pathophysiological symptom of the hypoactive subtype of delirium. Delirium is characterized by an acute decline in both the level of consciousness and cognition with particular impairment in attention. A life-threatening yet potentially reversible disorder of the central nervous system (CNS), delirium often involves perceptual disturbances, abnormal psychomotor activity, and sleep cycle impairment. Because of a high prevalence among inpatient populations, poor recognition, and a high mortality rate, delirium significantly complicates prognosis and the delivery of health care. Table 56.3 lists the different types of delirium.

56.12. The answer is D

Anxious patients are often helped by supportive therapy; cognitive behavioral techniques; and complementary modalities, such as *deep relaxation, meditation, and adapted yoga*. Several classes of effective antianxiety medications can and should be used even in the presence of hepatic or renal impairment, given careful drug



Table 56.3
Subtypes of Delirium

	Hyperactive	Hypoactive
Type	Hyperalert, agitated	Hypoalert, lethargic
Symptoms	Hallucinations, delusions	Sleepy, withdrawn
Examples	Hyperarousal Withdrawal syndromes: alcohol, benzodiazepine	Slowed Hepatic, renal encephalopathies; benzodiazepine intoxication
Pathophysiology	Elevated or normal cerebral metabolism EEG: fast or normal Reduced activity in GABA systems	Decreased global cerebral metabolism EEG: diffuse slowing Overstimulation of GABA systems

EEG, electroencephalogram; GABA, γ -aminobutyric acid.
From Breitbart W, Cohen K: Delirium in the terminally ill. In: Chochinov HM, Breitbart W, eds. *Handbook of Psychiatry in Palliative Medicine*. New York: Oxford University Press; 2000, with permission.

selection, dosage adaptation, and ongoing monitoring. *Benzodiazepines* (e.g., *clonazepam* [Klonopin]) are effective anxiolytics. Their action is immediate and, with careful dosage titration, can almost always be of benefit. They must be chosen with the patient's hepatic function in mind. Habituation can require dosage escalation of all benzodiazepines, but this is acceptable if the drug is improving the patient's quality of life. Several antidepressants, such as *fluoxetine* (Prozac), are also known to have anti-anxiety effects, although these are less immediate in action. Antipsychotics are also frequently used because mild confusional states are common, and they are associated with anxiety. *Psychoanalysis would not be useful for the relief of this man's symptoms in the short term.*

56.13. The answer is A

Adding an antipsychotic is the best option in this case because this accomplishes treatment of his delirium without needing to decrease his much-needed pain medications. Patients frequently experience some disorientation, impaired memory, and concentration loss as they become increasingly ill. *Hypoactive delirium* is a subcategory of delirium with a clinical picture that is different from the recognized hyperactive, hallucinatory state. The patient is hypoactive and withdrawn, with varying levels of somnolence and unresponsiveness. These quiet, undemanding patients do not present any management problems; hence, the diagnosis of a reversible condition is often overlooked, and it goes untreated. Hypoactive delirium should be diagnosed and treated as aggressively as hyperactive delirium. Antipsychotics alone can be effective in controlling symptoms when cognitive impairment and early delirium are present. The weight gain and type II diabetes seen in chronic psychiatric patients treated with antipsychotics are not a problem here, but dyskinesias, akathisia, tremors, parkinsonian rigidity, and (rarely) tardive dyskinesia occur. Benzodiazepines, given alone, worsen delirium and are contraindicated, but they are useful adjuncts to antipsychotic drugs, in which cases they provide sedation for persistently agitated patients.

56.14. The answer is D

Only when the *nearness of death is acknowledged* can thoughtful decisions be made about palliative care. The transition to palliative care is not always clear. As soon as a diagnosis of an incurable disease is made, cure is no longer the goal of care. However, if death is distant or even if some life extension can still be obtained, the patient and family focus on this positive goal. The physician is under no illusion about the future but has the delicate task of promoting short-term gains without obliterating the awareness of what lies ahead.

56.15. The answer is E (none)

Pain assessment in children is more complicated than in adults. Children who lack verbal skills may not be able to communicate pain to caregivers. But with the use of appropriate rating scales, children can be reliable reporters. Most parents recognize their child's pain and are eager to see it relieved. But some parents worry about *addiction*, and others do not like the *sedation and especially the loss of relatedness* that may result from the use of opiates. Some may resist the use of patient-controlled analgesia (PCA) because they fear the child will *overmedicate* him- or herself. Yet one study of PCA epidural versus continuous epidural analgesia in children old enough to understand the technique showed significantly diminished use of opioids with the PCA. Family education around these issues is important, but often a consultant must ease the parents into a realization of how much their reactions are a way of avoiding the truth of their child's condition. Optimal pain management should never be withheld from a child because of *nonterminal disease*, just as in adult pain management.

Answers 56.16–56.20

56.16. The answer is C

56.17. The answer is E

56.18. The answer is B

56.19. The answer is D

56.20. The answer is C

Symptom management is an area of high priority in palliative care. Patients are often more concerned about the day-to-day distress of their symptoms than they are about their impending death, which may not be as real to them. Table 56.4 lists common end-of-life symptoms. A comprehensive approach to palliation involves attending to end-of-life symptoms as well as to pain. Sources of distress include psychiatric symptoms (e.g., severe anxiety) and physical symptoms (e.g., nausea). *Dyspnea or cough* can occur in 80 percent of terminal lung cancer patients and may be responsive to opioid treatment. *Incontinence* commonly occurs after pelvic radiation. *Dysphagia* is common in patients with end-stage multiple sclerosis, and *severe fatigue or weakness* is the most common occurrence in all terminal illness.

Answers 56.21–56.25

56.21. The answer is B



Table 56.4
Common End-of-Life Symptoms and Signs

Symptom or Sign	Comments
Delusions	Occur in 90% of all terminal patients; can be reversed if cause is treatable (e.g., pain, medication); respond to antipsychotic medication
Fatigue or weakness	Most common occurrence in terminal illness; psychostimulants can be used for short-term relief
Dysphagia	Common in neurological disease end states (e.g., multiple sclerosis, amyotrophic lateral sclerosis)
Incontinence	May follow pelvic radiation, which can produce fistulas; use indwelling or condom catheter
Dyspnea or cough	Produces severe anxiety with fear of suffocation; occurs in 80% of terminal lung cancer patients; opioids, bronchodilators of use
Nausea or vomiting	Adverse effect of radiation and chemotherapy; antiemetics (e.g., metoclopramide, prochlorperazine); marijuana cigarettes of use in selected patients
Anorexia	All terminal disease states are associated with cachexia secondary to anorexia and dehydration; feeding tubes do not prevent aspiration
Loss of skin integrity	Decubiti most common on weight-bearing areas (e.g., hips, sacrum, outer ankle); important to turn body frequently and to use elbow and hip pads
Anxiety or depression	Psychological factors (e.g., fear of death, abandonment); physiological factors (e.g., pain, hypoxia); antianxiety and antidepressant medication of use; opioids have strong antianxiety effects

From Mitka M. Suggestions for help when the end is near. *JAMA* 2000;284:2441; adapted from National Coalition on Health Care (NCHC) and the Institute for Health Care Improvement (IHI). *Promises to Keep: Changing the Way We Provide Care at the End of Life*, release, October 12, 2000, with permission.

56.22. The answer is B

56.23. The answer is B

56.24. The answer is A

56.25. The answer is D

Euthanasia is defined as a physician's deliberate act to cause a patient's death by directly administering a lethal dose of medication or another agent or withholding life-sustaining measures. Because such patients are deemed by the treating physician to be hopelessly ill or injured, euthanasia has been called *mercy killing*.

On the basis of the doctor's action and the patient's condition, several types of euthanasia have been described: active euthanasia, in which *a physician deliberately intends to kill a patient to alleviate or prevent uncontrollable suffering*; passive euthanasia, in which *a physician withholds artificial life-sustaining measures*; voluntary euthanasia, in which a person who is to die is competent to give consent and does so; and involuntary euthanasia, in which a person who is to die is incompetent or incapable of giving consent.

Suicide is a deliberate taking of a person's own life. *Assisted suicide* is the *imparting of information or means that enable such an act* to take place. When the assistance is provided by a

physician, the suicide is physician assisted. Assisted suicide and euthanasia should not be confused with *palliative care designed to alleviate the suffering of dying patients*. Palliative care includes giving pain relief and emotional, social, and spiritual support, as well as psychiatric care, if indicated. The intent of palliative care is to relieve pain and suffering, not to end a patient's life, even though death may result from palliative care.

Answers 56.26–56.29

56.26. The answer is A

56.27. The answer is D

56.28. The answer is C

56.29. The answer is B

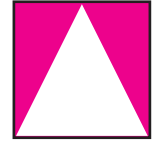
Dying patients are subject to several different kinds of pain, summarized in Table 56.5. The distinctions are important because they call for different treatment strategies. Phantom limb syndrome (*pain in an amputated limb*) is an example of *neuropathic pain*. *Diaphragmatic pain referred to the shoulder* is an example of *visceral pain*. *Somatic pain* is exemplified by the pain of *bone metastases*. *Psychogenic pain* is experienced in *somatization disorder*.



Table 56.5
Types of Pain

Somatic pain	Usually, but not always, constant, aching, gnawing, and well localized (e.g., bone metastases)
Visceral pain	Usually, but not always, constant, deep, squeezing, and poorly localized, with possible cutaneous referral (e.g., pleural effusion leading to deep chest pain and diaphragmatic irritation referred to shoulder)
Neuropathic pain	Burning dysesthetic pain with shock-like paroxysms associated with direct damage to peripheral receptors, afferent fibers, or the CNS leading to loss of central inhibitory modulation and spontaneous firing (e.g., phantom limb pain); may involve sympathetic somatic afferents
Psychogenic pain	Variable characteristics, secondary to psychological factors in the absence of medical factors; vanishingly rare as a pure phenomenon in patients with advanced conditions, in which pain is often present, but often is an additional factor in the presence of organic pain

CNS, central nervous system.



Forensic Psychiatry

Psychiatric practice is influenced by four major factors: (1) the psychiatrist's professional, ethical, and legal duties to provide competent care to patients; (2) the patients' rights of self-determination to receive or refuse treatment; (3) court decisions, legislative directives, governmental regulatory agencies, and licensure boards; and (4) the ethical codes and practice guidelines of professional organizations. All of these issues fall within the realm of forensic psychiatry. The word *forensic* means "belonging to the courts of law," and at various times, psychiatry and the law converge.

Traditionally, psychiatrists' efforts help explain the causes and, through prevention and treatment, reduce the self-destructive elements of harmful behavior. Lawyers, as the agent of society, are concerned that social deviants are potential threats to the safety and security of other persons. Both psychiatry and the law seek to implement their respective goals through the application of pragmatic techniques based on empirical observations.

Psychiatrists can act as either witnesses of fact or expert witnesses. As a witness of fact, a psychiatrist is acting as an ordinary witness, someone who has observed something and is

being called to describe it in open court. This can include simply reading portions of a medical record into the legal record but does not include expressing opinions or reporting others' statements. An expert witness is one who is accepted by the court and by advocates of both sides of the case as qualified to perform expert functions and whose qualifications may include education, publications, and board certifications. Expert witnesses may render opinions, for example, that a patient meets the legal criteria for a guardian appointment. Psychiatrists often act as expert witnesses and may be hired by the defense or prosecution to provide opinions. This may lead to the common situation in which two psychiatrists representing two different sides provide diametrically opposed opinions about the case under dispute. The result can be confusion both on the parts of juries and the public about the value of psychiatric testimony, as well as cynicism and disillusionment. Many experts in forensic psychiatry believe that this problem could be minimized if the testifying psychiatrists were appointed by and reported only to the court.

Students should study the questions and answers below for a useful review of all of these topics.

HELPFUL HINTS

Students should be able to define each of these terms and know each of these cases.

- | | | | |
|-----------------------------|---------------------------|-------------------------------------|--|
| ▶ abandonment | ▶ disclose to safeguard | ▶ judgment | ▶ right-wrong test |
| ▶ <i>actus reus</i> | ▶ discriminate disclosure | ▶ leading questions | ▶ rules of evidence |
| ▶ alliance threat | ▶ documentation | ▶ malpractice | ▶ seclusion and restraint |
| ▶ antisocial behavior | ▶ Durham rule | ▶ mature minor rule | ▶ state training school standards |
| ▶ battery | ▶ duty to warn | ▶ medical expert | ▶ Thomas Szasz |
| ▶ Judge David Bazelon | ▶ emancipated minor | ▶ <i>mens rea</i> | ▶ <i>Tarasoff v Regents of University of California</i> (I and II) |
| ▶ civil commitment | ▶ emergency exception | ▶ mental health information service | ▶ task-specific competence |
| ▶ classical tort | ▶ forced confinement | ▶ M'Naghten rule | ▶ temporary admission |
| ▶ competence to inform | ▶ the four Ds | ▶ model penal code | ▶ testamentary capacity |
| ▶ competency | ▶ Gault decision | ▶ <i>O'Connor v Donaldson</i> | ▶ testator |
| ▶ confidentiality | ▶ going the extra mile | ▶ <i>parens patriae</i> | ▶ testimonial privilege |
| ▶ consent form | ▶ <i>habeas corpus</i> | ▶ peonage | ▶ voluntary admission |
| ▶ conservator | ▶ hearsay | ▶ plea bargaining | ▶ <i>Wyatt v Stickney</i> |
| ▶ court-mandated evaluation | ▶ informal admission | ▶ pretrial conference | |
| ▶ credibility of witnesses | ▶ informed consent | ▶ probationary status | |
| ▶ culpability | ▶ insanity defense | ▶ right to treatment | |
| ▶ custody | ▶ involuntary admission | | |
| | ▶ irresistible impulse | | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

57.1. Of the following, which is the *least* common cause of malpractice claims against psychiatrists by patients?

- A. Suicide attempts
- B. Improper use of restraints
- C. Failure to treat psychosis
- D. Sexual involvement
- E. Substance dependence

57.2. Which of the following is *not* one of the basic elements of the insanity defense?

- A. Presence of a mental disorder
- B. Presence of a defect of reason
- C. Finding of incompetence to stand trial
- D. Lack of knowledge of the nature of the act
- E. Incapacity to refrain from the act

57.3. A 43-year-old prisoner is found to have major depressive disorder. The correctional psychiatrist wants to start him on antidepressant therapy because of the severity of his disease. He was very often in solitary confinement for violent behavior with correctional staff. The prisoner refuses to take any medications, stating he does not want to complicate his life any more by having to take drugs every day. Correctional officers tell you it would be a security risk to have this prisoner out of his cell every day for treatment anyway.

What is the most appropriate next step in his management?

- A. Do not give the prisoner antidepressants because he has the right to refuse.
- B. Do not give the prisoner antidepressants because it is a security risk.
- C. Do not give the prisoner antidepressants because it is not a medical emergency.
- D. Give the prisoner antidepressants because he does not have the right to refuse.
- E. Do nothing and observe the prisoner for worsening symptoms.

57.4. Which of the following statements regarding juvenile detention centers is *true*?

- A. Youth suicide in juvenile detention centers occur four times as often as youth suicide in the general population.
- B. Suicide prevention guidelines are strictly enforced in juvenile detention centers.
- C. Prevalence of mental illness in detention centers is extensively researched.

D. Juvenile detention centers are long-term facilities for juveniles convicted of crimes.

E. More than 80 percent of incarcerated boys meet the criteria for posttraumatic stress disorder.

57.5. A 30-year-old white woman was admitted to a local hospital because of cocaine abuse and major depression with suicidal ideation. She had been referred to the hospital after being arrested for cocaine use.

Which of the following is the most appropriate discharge plan for this patient?

- A. Discharge to the local jail
- B. Discharge to home
- C. Discharge to care of her family
- D. Discharge to a psychiatric ward within a correctional facility
- E. Discharge to a substance abuse detoxification center

57.6. In the case above, the patient cut her wrists 4 days later. The most appropriate next step is

- A. dismiss this act as it is manipulative
- B. treat her as she has documented mental illness
- C. continue to withhold psychiatric medications
- D. continue one-on-one suicidal watch
- E. complete examination by a mental health professional

57.7. In the case above, 2 days later, her family succeeded in obtaining a court order for the patient to get medication for her psychiatric illness. Which medication should this patient be given at this time?

- A. Haloperidol
- B. Imipramine
- C. Lorazepam
- D. Carbamazepine
- E. Lithium

57.8. A 42-year-old single male patient committed suicide while on a 4-hour therapeutic pass from the hospital before anticipated discharge. The patient was hospitalized with a diagnosis of major depression, single episode, and suicidal ideation. The patient steadfastly denied suicidal thoughts or impulses after admission. He experienced moderate to severe depression, anhedonia, global insomnia, hopelessness, agitation, and loss of appetite. The patient signed a suicide prevention contract, promising to inform the psychiatrist immediately of any suicidal ideation or impulses. After antidepressant treatment was started, the patient's energy level improved. The man's family sued the psychiatrist for wrongful death. The expert found no evidence in the psychiatric record that a formal suicide risk assessment was conducted before the pass was issued. During the trial, the psychiatrist testified that he did a formal suicide risk assessment but that it was an oversight that he did not record it.

Which of the following is the most likely outcome of a trial under these circumstances?

- A. The psychiatrist is not liable because a formal assessment of suicide risk was done.
- B. The psychiatrist is not liable because adequate medical treatment was started.
- C. The psychiatrist is not liable because the patient contracted for safety.
- D. The psychiatrist is liable because a formal assessment of suicide risk was not documented.
- E. The psychiatrist is liable because antidepressant therapy is known to increase the risk for suicide.

57.9. A 45-year-old man has a documented history of paranoid schizophrenia. Upon returning home from work one day, he finds his wife in bed with another man. He immediately grabs a butcher knife and kills both his wife and her lover. He then systematically attempts to dispose of the bodies but is caught in the act.

What is the most likely outcome of a trial using the M'Naghten rules under these circumstances?

- A. Guilty charge
- B. Not guilty by reason of insanity
- C. Guilty by mens rea
- D. Guilty by actus reus
- E. Not guilty by reason of diminished capacity

57.10. In the case above, which of the following is the most appropriate placement for this man?

- A. Prison
- B. Mental hospital
- C. Home confinement
- D. Jail facility
- E. Local lockup

57.11. A 34-year-old mentally retarded woman is arrested for killing her mother. At her trial, neither the defense nor the prosecution puts the woman on the stand because her communication skills are poor, and she is never fully evaluated by a psychiatrist before or during the trial. She is found guilty of murdering her mother and is sent to prison. Her father, although devastated, tells a lawyer his daughter is severely mentally retarded and cannot possibly be held responsible for the murder.

Which of the following is the lawyer most likely to claim to appeal the decision?

- A. Automatism defense
- B. Testimonial privilege
- C. Habeas corpus
- D. Parens patriae
- E. Respondeat superior

57.12. If a patient threatens to harm another person,

- A. psychiatrists in all states are required by law to perform some intervention to prevent the harm from occurring
- B. psychiatrists in all states are permitted by law to perform some intervention to prevent the harm from occurring

- C. the duty to protect patients and endangered third parties should be considered a professional obligation and only secondarily a legal issue
- D. the Tarasoff duty applies only in state in which there is a duty to warn and to protect
- E. psychiatrists cannot intervene as they must protect the confidentiality privilege

57.13. Incompetence

- A. is determined by a clinician
- B. is a global assessment of mental function
- C. can be presumed if a patient is psychiatrically institutionalized
- D. is rendered by virtue of a patient having a mental disability
- E. refers to a court adjudication

57.14. A tort is a

- A. wrongdoing
- B. writ
- C. subpoena
- D. judgment
- E. good deed

57.15. An example of a tort is when a doctor

- A. hugs a patient
- B. dates a family member of a former patient
- C. tells a patient that sex with him or her is therapeutic
- D. maintains confidentiality in the face of a subpoena
- E. lists the adverse effects of drugs when prescribing

57.16. Psychiatrists can be sued for

- A. battery
- B. invasion of privacy
- C. misrepresentation
- D. false imprisonment
- E. all of the above

57.17. The most frequent issue involving lawsuits against psychiatrists is

- A. suicide
- B. improper use of restraints
- C. sexual involvement
- D. drug reactions
- E. violence

57.18. Durable Power of Attorney

- A. is an attorney whose main expertise is psychiatric malpractice cases
- B. is power that permits patients to have visitation rights
- C. is a document that permits the doctor to breach confidentiality
- D. is a document that permits persons to make provisions for their decision-making capacity
- E. has a limited duration of time

- 57.19.** Involuntary termination of treatment of a patient by a therapist
- may result in a malpractice claim of abandonment
 - cannot be done during a patient emergency
 - requires careful documentation
 - should include transfer of services to others
 - all of the above
- 57.20.** A person considered competent to be executed
- must be aware of the punishment
 - must know its purpose
 - may come to whatever peace is appropriate with religious beliefs
 - might recall forgotten details of the events
 - all of the above
- 57.21.** Pick the best answer regarding *Dusky v United States*.
- Harmless mental patients cannot be confined against their wills without treatment if they can survive outside.
 - An involuntary patient who is not receiving treatment has a constitutional right to be discharged.
 - A test of competence was approved to see if a criminal defendant can rationally consult with a lawyer and has a factual (and rational) understanding of the proceedings against him or her.
 - Civily committed persons have a constitutional right to adequate treatment.
 - A clinician must notify the intended victim(s) when there is an imminent threat posed by his or her patient.
- 57.22.** In a child custody dispute, which of the following is *not true*?
- A natural parent has the inherent right to be named custodial parent.
 - The best interest of the mother may be served by naming her as the custodial parent.
 - More fathers are asserting custodial claims.
 - Courts presume that a child is best served by maternal custody when the mother is a good and fit parent.
 - In 5 percent of all cases, fathers are named the custodians.
- 57.23.** Confidential communications can be shared with which of the following *without* the patient's consent?
- A medical or psychiatric consultant
 - The patient's family
 - The patient's attorney
 - The patient's previous therapist
 - An insurer of the patient
- 57.24.** Product rule is concerned with
- testimonial privilege
 - involuntary admission
 - criminal responsibility
 - competency to stand trial
 - all of the above
- 57.25.** Negligent prescription practices may include
- prescribing the wrong dosages
 - unreasonable mixing of drugs
 - failure to disclose side effects
 - poor hand writing
 - all of the above
- 57.26.** The Gault decision applies to
- minors
 - habeas corpus*
 - informed consent
 - battery
 - none of the above
- 57.27.** Situations in which there is an obligation on the part of the physician to report to authorities information that may be confidential include
- suspected child abuse
 - the case of a patient who will probably commit murder and can only be stopped by notification of police
 - the case of a patient who will probably commit suicide and can only be stopped by notification of police
 - the case of a patient who has potentially life-threatening responsibilities (e.g., airline pilot) and who shows marked impairment of judgment
 - all of the above

Directions

Each group of questions below consists of lettered headings followed by a list of numbered phrases or statements. For each numbered phrase or statement, select the *one* lettered heading that is most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 57.28–57.31

- Indications for seclusion and restraint
- Contraindications to seclusion and restraint

57.28. Patient voluntarily requests

57.29. Prevent significant disruption to treatment program

57.30. Part of ongoing behavior therapy

57.31. For punishment

Questions 57.32–57.36

- Irresistible impulse
- M'Naghten rule
- Model penal code
- Durham rule
- Diminished capacity

- 57.32.** Known commonly as the right–wrong test
- 57.33.** A person charged with a criminal offense is not responsible for an act if the act was committed under circumstances that the person was unable to resist because of mental disease.
- 57.34.** An accused person is not criminally responsible if his or her unlawful act was the product of mental disease or mental defect.
- 57.35.** As a result of mental disease or defect, the defendant lacked substantial capacity either to appreciate the criminality of his or her conduct or to conform the conduct to the requirement of the law.
- 57.36.** The defendant experienced some impairment (usually but not always because of mental illness) sufficient to interfere with the ability to formulate a specific element of the particular crime charged.

Questions 57.37–57.41

- A. *Rouse v Cameron*
- B. *Wyatt v Stickney*
- C. *O'Connor v Donaldson*
- D. *The Myth of Mental Illness*
- E. None of the above

- 57.37.** Harmless mental patients cannot be confined against their will.
- 57.38.** Standards were established for staffing, nutrition, physical facilities, and treatment.
- 57.39.** The purpose of involuntary hospitalization is treatment.
- 57.40.** A patient who is not receiving treatment has a constitutional right to be discharged.
- 57.41.** All forced confinements because of mental illness are unjust.

ANSWERS

57.1. The answer is D

Sexual involvement with patients accounts for 6 percent of malpractice claims against psychiatrists and is the *least common cause of malpractice litigation*. This fact does not, however, minimize its importance as a problem. (It should be noted that the short statute of limitations for this particular offense may well discourage patients from pursuing litigation because they have not had sufficient time to reach a point of emotional readiness.) Sexual intimacy with a patient is both illegal and unethical. There are also serious legal and ethical questions about a psychotherapist's dating or marrying a patient even after discharging the patient from therapy. Most psychiatrists believe in the adage "Once a patient, always a patient."

For other malpractice claims, the following figures are given: *failure to manage suicide attempts*, 21 percent; *failure to treat psychosis*, 14 percent; and *improper use of restraints*, 7 percent. *Substance dependence* accounts for about 10 percent of claims and refers to the patient's having developed a substance-related disorder as a result of a psychiatrist's not carefully monitoring the prescribing of potentially addicting drugs.

57.2. The answer is C

No precise, generally accepted definition of *legal insanity* exists. Tests of insanity have always been controversial and have undergone much modification and refinement over the years. The insanity defense standard has four basic elements:

1. Presence of a mental disorder
2. Presence of a defect of reason
3. A lack of knowledge of the nature or wrongfulness of the act
4. An incapacity to refrain from the act

The insanity defense is one of the most controversial issues in American jurisprudence. The presence of a mental disorder has remained the consistent core of the insanity defense; the other elements have varied in importance over time. *The finding of incompetence to stand trial* is unrelated to this defense. Defendants with mental impairments who are found competent to stand trial may still seek acquittal on the claim of insanity, alleging that they were not criminally responsible for their actions at the time the offense was committed. The term *insanity* is a legal construct, not a psychiatric diagnosis.

57.3. The answer is D

The law and ethical analysis of informed consent and refusal inside corrections are complicated. The legal rule is that inmates have the right to consent to care but do not necessarily have equally extensive rights to refuse care. Complicating this issue is the reality that distinguishing between a refusal of care and a possible denial of care is often difficult. An additional complication is the fact that other correctional staff may not want to offer appropriate psychiatric treatment for a variety of reasons (e.g., security risks, cost, deservedness). Simultaneously, inmates can be insistent and manipulative and sometimes seek care for inappropriate reasons. Despite these pressures from opposite poles, correctional psychiatric personnel *must ensure that patients get appropriate care*. Medical autonomy means that nonmedical personnel cannot overrule the professional judgment of correctional psychiatrists regarding their patients' needs. Medical autonomy means that only legitimate clinical decisions direct patient care, not patient wishes. Correctional psychiatrists should be neutral in nonmedical matters. Aligning with security staff costs them their rapport with their patients. Alternatively, being inmate advocates for non–health-related issues would cost them their rapport with their correctional coworkers.

57.4. The answer is A

Youth suicide in juvenile detention and correctional facilities have been shown to occur four times more often than youth suicide in the general population. Yet 75 percent of the nation's confined juveniles are in facilities that *fail to conform to even the most basic suicide prevention guidelines*. Several studies note that *25 percent (not 80 percent) of incarcerated boys and 50 percent of incarcerated girls meet criteria for posttraumatic stress disorder (PTSD)*. Juvenile detention centers are *short-term facilities that confine juveniles who are awaiting trial*; juvenile confinement facilities are long-term facilities (e.g., residential treatment centers and training schools) for the confinement of juveniles convicted of crimes. *Mental illness in detention centers has not been extensively researched*.

57.5. The answer is D

The most appropriate placement for this patient is in a *psychiatric facility within a correctional facility*. Because she was arrested for cocaine use before her hospital referral, she still has charges pending against her and cannot be released to her home or the care of her family. Although a substance abuse detoxification center may be helpful in the future, she first must have her legal situation dealt with. Discharge to a local jail is inappropriate in this case as well because the local jail will not be able to adequately address her mental illness (major depression).

57.6. The answer is E

Because self-mutilation is hard to control, it is a serious challenge for correctional officials and psychiatric staff. When self-mutilation is not the product of a mental disorder, mental health professionals often deny admission to the mental health unit. This confuses correctional authorities who view such behavior as a sign of mental instability. It is essential to have clear protocols for self-mutilation when it is (1) a psychiatric symptom, (2) a manipulative gesture to escape a dangerous situation, and (3) an effort to manipulate the system for personal gain. This woman's documented history of major depressive disorder should alert correctional staff to the likelihood that cutting her wrists is a true suicide attempt. She should have a *complete evaluation by a psychiatrist* to determine the extent of her current symptoms. If this woman is indeed having an exacerbation of her symptoms of major depression, continuing to withhold medications and simply putting her on a one-on-one suicidal watch may not be enough and is neglectful. However, a thorough evaluation should precede any treatment.

57.7. The answer is A

Haloperidol (Haldol) is an appropriate treatment for this psychotic patient. Acute psychosis, with significant risk for impulsive behavior such as suicide attempts, is effectively treated with Haldol. *Imipramine*, a tricyclic antidepressant, is lethal in overdose and should be prescribed carefully and not at all in high doses to actively suicidal patients. In a patient with a history of substance abuse, benzodiazepines such as *lorazepam* should be carefully prescribed. Benzodiazepines also work only by sedating without addressing this patient's psychosis. *Carbamazepine* and *lithium* are mood stabilizers indicated for patients with bipolar disorder.

57.8. The answer is D

The failure to adequately document events in the written clinical record is a major reason for lack of credibility to legal testimony. The psychiatrist in this case testified that he completed a formal assessment of suicide risk, but there is no way to prove this is true with no documentation. Although the patient was at a greater risk of suicide after administration of an antidepressant drug, the psychiatrist cannot be held liable for starting treatment with an antidepressant, which is the standard of care. It is also arguable that the psychiatrist had not placed total reliance on the suicide prevention contract but had used it appropriately to assess the working alliance with the patient, that is, the patient's willingness to work toward getting better. *There is an*

adage in legal circles that if it is not documented, it was not done.

57.9. The answer is A

To be found *not guilty by reason of insanity*, the defendant, as a result of a severe mental disease or defect, must be unable to appreciate the nature and quality or the wrongfulness of his acts. In making an insanity determination, the threshold issue is not the existence of a mental disease or defect per se but the lack of substantial capacity caused by it. In this case, the fact that the man tried to dispose of the bodies shows he was aware of the criminal act, negating any insanity plea. For conviction of any crime, a criminal state of mind (*mens rea*) must be accompanied by the commission of a prohibited act (*actus reus*). Both must be present for a guilty verdict, and neither has to do with mental illness. The physical act must be conscious and volitional for a person to be found guilty. The law also recognizes shades of mental impairment that can affect *mens rea*, but not necessarily to the extent of completely nullifying it. The concept of *diminished capacity* allows the defendant to introduce medical and psychological evidence that relates directly to the *mens rea* for the crime charged without having to assert a defense of insanity. For example, in the crime of assault with the intent to kill, psychiatric testimony may be permitted to address whether the offender acted with the purpose of committing homicide at the time of the assault. Mental illness per se is not a defense, and nothing in the case indicates this man did not intend to kill his wife and her lover.

57.10. The answer is D

What happens to a defendant after a judge or jury returns a finding of insanity depends on the crime committed and on the state in which the trial takes place. Usually, those found "not guilty by reason of insanity" are confined for treatment in a *special hospital for severely mentally ill persons who have committed crimes*. After a period of time, the person may request a hearing to determine if he or she is no longer a danger to him- or herself or others or is no longer mentally ill and is therefore eligible to be released. Studies show that persons found not guilty by reason of insanity, on average, are held at least as long as—and often longer than—persons found guilty and sent to prison for similar crimes.

In this case, the person was sent to *jail* because his insanity defense did not prevail. Jails are correctional facilities that confine individuals involved in the criminal justice system who are awaiting trial or serving short sentences for misdemeanors.

A *local lockup* may be a police precinct cell, a sheriff's office, or any other place, including a correctional facility used to detain an arrested individual pending arraignment.

57.11. The answer is C

A writ of *habeas corpus* (literally, "you must have the body") is a legal procedure that asks a court to decide whether a patient has been hospitalized or imprisoned without due process of law. The writ tests only whether a prisoner has been accorded due process, not whether he or she is guilty. The *automatism* (or unconscious) defense recognizes that some criminal acts may be committed involuntarily. *Testimonial privilege* is the right of

the patient to maintain secrecy or confidentiality in the face of a subpoena. *Parens patriae* is the doctrine that allows the state to intervene and act as a surrogate for those who are unable to care for themselves or may harm themselves. *Respondeat superior* is Latin for “let the master answer for the deed of the servant.” This states a person high in the chain of command is responsible for the actions of those under his or her supervision.

57.12. The answer is C

The duty to protect patients and endangered third parties *should be considered primarily a professional and moral obligation and only secondarily a legal duty*. Most psychiatrists acted to protect their patients and threatened others from violence long before Tarasoff. *Psychiatrists should consider the Tarasoff duty to be a national standard of care even if they practice in states that do not have a duty to warn and protect*. Indeed, not all states have duty to warn statutes, so *there is no legal obligation necessarily in all states that permits or requires psychiatrists to prevent the harm from occurring. If a patient gives the psychiatrist sufficient reason to believe that a warning should be issued to an endangered third party, the confidentiality of the communication that gave rise to the warning may be lost*.

57.13. The answer is E

Incompetence is a broad concept that encompasses many different legal issues and contexts. *It refers to a court adjudication Incapacity indicates a functional inability determined by a clinician. It is a legal term that is applied to people who are considered by law not to be mentally capable of performing a particular act or assuming a particular role. Its adjudication is issue specific; someone judged to be incompetent to do one thing is not automatically incompetent to do other things. A lack of competency cannot be presumed from a person's treatment for mental illness or from institutionalization. Mental disability does not necessarily render a person incompetent or incompetent in all areas of functioning*.

57.14. The answer is A

A tort is any *wrongdoing* for which an action for damages may be brought. A *writ* is a written court order directing a person to perform or refrain from performing a specific act. A *subpoena* is a writ commanding a designated person upon whom it has been served to appear (as in court or before a congressional committee) under a penalty (as a charge of contempt) for failure to comply. A *judgment* is a formal decision or determination on a matter or case by a court. A *good deed* is obviously not a tort.

57.15. The answer is C

In a tort, wrongdoers are motivated by the intent to harm another person or should have realized that such harm is likely to result from their actions. For example, *telling a patient that sex with the therapist is therapeutic* perpetrates a fraud.

Although *hugging a patient* and *dating a patient's family member* are both unethical, they are examples of boundary violations, not a tort. Various criminal law statutes have been used against psychiatrists who violate this ethical principle.

Privilege is the right to *maintain confidentiality in the face of a subpoena*. Privileged communications are statements made by

certain persons within a relationship—such as husband–wife, priest–penitent, or doctor–patient—that the law protects from forced disclosure on the witness stand. *Listing the adverse effects of drugs when prescribing drugs* is an example of good medical practice and is not a tort.

57.16. The answer is E (all)

Psychiatrists, similar to other people, can be sued for anything. This includes *battery*, defined as the unlawful and unwanted touching or striking of one person by another with the intention of bringing about a harmful or offensive contact. *Invasion of privacy*, defined as the intrusion into the personal life of another without just cause, can give the person whose privacy has been invaded a right to bring a lawsuit for damages against the person or entity that intruded. *Misrepresentation*, defined as a statement made by a party to a contract, that a thing relating to it is in fact in a particular way when he or she knows it is not so. *False imprisonment*, defined as restraining another person without having the legal right to do so, is a misdemeanor and a tort.

57.17. The answer is A

Suicide and suicide attempts are the most frequent causes for lawsuits against psychiatrists; 50 percent of suicides lead to malpractice actions by relatives. The greatest degree of supervision (inpatient setting) is associated with the most culpability. The *use of restraints, drug reactions, and patients committing violence* are all potential causes of malpractice that can be forestalled with proper documentation of clinical decision making and informed consent. *Sexual involvement* with a patient is both illegal and unethical.

57.18. The answer is D

A modern development that *permits persons to make provisions for their own anticipated loss of decision-making capacity* is called a *durable power of attorney*. The document permits the advance selection of a substitute decision maker who can act without the necessity of court proceedings when the signatory becomes incompetent through illness, progressive dementia, or perhaps a relapse of bipolar I disorder. The term *durable* means that it continues forever and does *not have a limited duration of time*.

57.19. The answer is E (all)

A potential pitfall of involuntary discharge or termination is the *charge of abandonment*. Malpractice litigation is often associated with situations in which there are bad feelings and a bad outcome. Consultation and *careful documentation* are important safeguards. Charges of abandonment can be avoided by referring the patient to another hospital or therapist. Some *authorities recommend giving a patient three names of therapists, clinics, or hospitals. A patient's treatment cannot be terminated while in a state of emergency*. The emergency must be resolved (e.g., by hospitalization in cases of dangerousness) before treatment can be terminated and the patient transferred.

57.20. The answer is E (all)

The requirement for competence to be executed rests on a few general principles. A person's awareness of what is happening is

supposed to heighten the retributive element of the punishment. Punishment is meaningless unless the person *is aware* of it and *knows the punishment's purpose*. A competent person who is about to be executed is believed to be in the best position to *make whatever peace is appropriate with religious beliefs*, including confession and absolution. A competent person who is about to be executed preserves, until the end, the possibility (admittedly slight) of *recalling a forgotten detail* of the events or the crime that may prove exonerating.

57.21. The answer is C

The Supreme Court, in *Dusky v United States* (1960), approved a test of competence that seeks to *ascertain whether a criminal defendant "has sufficient present ability to consult with his lawyer with a reasonable degree of rational understanding and whether he has a rational as well as factual understanding of the proceedings against him."* In the 1976 case of *O'Connor v Donaldson*, the Supreme Court ruled that *harmless mental patients cannot be confined against their wills without treatment* if they can survive outside. In 1966, the District of Columbia Court of Appeals ruled in *Rouse v Cameron* that an involuntary inpatient who is not receiving treatment has a constitutional *right to be discharged*. According to this decision, the purpose of involuntary hospitalization is treatment.

In *Wyatt v Stickney* (1971), it was decided that civilly committed patients have a constitutional right to receive *adequate treatment*. In *Tarasoff I* (the case of *Tarasoff v Regents of the University of California* in 1974), it was ruled that *a psychotherapist or physician who has reason to believe that a patient may injure or kill someone must notify* the potential victim, the patient's relatives or friends, or the authorities.

57.22. The answer is A

The action of a court in a child custody dispute is now predicated on the child's best interests. The maxim reflects the idea that *a natural parent does not have an inherent right to be named a custodial parent*, but the presumption, although a bit eroded, remains in favor of the mother in the case of young children. As a rule, courts presume that the welfare of a child of tender years generally is best served by *maternal custody when the mother is a good and fit parent. The best interest of the mother may be served by naming her as the custodial parent* because a mother may never resolve the effects of the loss of a child, but her best interest is not to be equated ipso facto with the best interest of the child.

More fathers are asserting custodial claims. In about 5 percent of all cases, fathers are named custodians. The movement supporting women's rights is also enhancing the chances of paternal custody. With more women going to work outside the home, the traditional rationale for maternal custody has less force today than it did in the past.

57.23. The answer is A

Confidentiality pertains to the premise that all information imparted to a physician by a patient should be held secret. However, sharing information with other staff members treating the patient, clinical supervisors, and a *medical or psychiatric consultant* does not require the patient's permission. Sharing patient

information with the *patient's family*, the *patient's attorney*, the *patient's previous therapist*, or an *insurer of the patient* does require the patient's permission. Courts may compel disclosure of confidential material (*subpoena duces tecum*). In emergencies, limited information may be released, but after the emergency, the clinician should inform the patient.

57.24. The answer is C

In 1954, in the case of *Durham v United States*, a decision was made by Judge David Bazelon, a pioneering jurist in forensic psychiatry in the District of Columbia Court of Appeals, that resulted in the *product rule of criminal responsibility*. An accused is not criminally responsible if his or her unlawful act was the product of mental disease or defect. Judge Bazelon stated that the purpose of the rule was to get good and complete psychiatric testimony. He sought to break the criminal law out of the theoretical straitjacket of the M'Naghten test.

Testimonial privilege is the right to maintain secrecy or confidentiality in the face of a subpoena. The privilege belongs to the patient, not to the physician, and it is waivable by the patient. *Involuntary admission* involves the question of whether the patient is a danger to him- or herself or others, such as in the suicidal or homicidal patient. Because these individuals do not recognize their need for hospital care, application for admission to a hospital may be made by a relative or friend and is involuntary. *Competency to stand trial* refers to defendants being able to comprehend the nature and the object of the proceedings against them so they can consult with counsel and assist in preparing the defense.

57.25. The answer is E (all)

Negligent prescription practices usually include *exceeding recommended dosages* and then failing to adjust the medication level to therapeutic levels, *unreasonable mixing of drugs, prescribing medication that is not indicated, prescribing too many drugs at one time*, and then failing to disclose medication effects. Although exceeding the recommended dosage may be considered negligent, if it must be done, it should be documented in the patient's chart. Multiple psychotropic medications must be prescribed with special care because of their possible harmful interactions and adverse effects. Psychiatrists must explain the diagnosis, risks, and benefits of the drug. Informed consent should be obtained each time a medication is changed and a new drug is introduced. If patients are injured because they were not properly informed of the risks and consequences of taking a medication, sufficient grounds may exist for a malpractice action. Finally, *poor handwriting* and the misreading of the prescription by nurses or pharmacists is a major source of error.

57.26. The answer is A

The Gault decision applies to minors, those under the care of a parent or guardian and usually younger than 18 years of age. In the case of minors, the parent or guardian is the person legally empowered to give consent to medical treatment. However, most states by statute list specific diseases or conditions that a minor may consent to have treated, such as sexually transmitted infections, pregnancy, substance-related disorders, and contagious

diseases. In an emergency, a physician may treat a minor without parental consent. The trend is to adopt the mature minor rule, allowing minors to consent to treatment under ordinary circumstances. As a result of the Gault decision, the juvenile must now be represented by counsel, be able to confront witnesses, and be given proper notice of any charges. Emancipated minors have the rights of adults when it can be demonstrated that they are living as adults with control over their own lives.

A writ of *habeas corpus* may be proclaimed on behalf of anyone who claims he or she is being deprived of liberty illegally. The legal procedure asks a court to decide whether hospitalization has been accomplished without due process of the law, and the petition must be heard by a court at once, regardless of the manner or form in which it is filed. Hospitals are obligated to submit these petitions to the court immediately. *Informed consent* is knowledge of the risks and alternatives of a treatment method and formal acceptance of treatment.

Under classical tort (a tort is a wrongful act) theory, an intentional touching to which one has given no consent is a *battery*. Thus, the administration of electroconvulsive therapy or chemotherapy, although it may be therapeutic, is battery when done without consent. Indeed, any unauthorized touching outside of conventional social intercourse constitutes a battery. It is an offense to the dignity of the person, an invasion of the right of self-determination, for which punitive and actual damages may be imposed.

57.27. The answer is E (all)

In some situations—such as *suspected child abuse*—the physician must report to the authorities, as specifically required by law. According to the American Psychiatric Association, confidentiality may be broken when the patient will *probably commit murder* and the act can only be stopped by notification of police, when the patient will *probably commit suicide* and the act can only be stopped by notification of police, or when a patient who has *potentially life-threatening responsibilities* (e.g., an airline pilot) shows marked impairment of judgment.

Answers 57.28–57.31

57.28. The answer is A

57.29. The answer is A

57.30. The answer is A

57.31. The answer is B

Most states have enacted statutes that regulate the use of restraints, often specifying the circumstances in which restraints can be used—usually when a risk of harm to self or danger to others is imminent. Statutory regulation of the use of seclusion is much less common. About half of states have laws governing seclusion. Most states with laws regarding seclusion and restraint require some type of documentation of the usage. A number of courts and state statutes outline certain due process procedures that must be followed before restraint or seclusion can be used for nonclinically indicated, disciplinary purposes. These include



Table 57.1
Indications for Seclusion and Restraint

1. Prevent clear, imminent harm to the patient or others.
2. Prevent *significant disruption to treatment program* or physical surroundings.
3. Assist in treatment as *part of ongoing behavior therapy*.
4. Decrease sensory overstimulation.^a
5. At *patient's voluntary reasonable request*.

^aSeclusion only.

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some form of notice, a hearing, and involvement of an impartial decision maker.

The American Psychiatric Association Task Force on the Psychiatric Uses of Seclusion and Restraint has developed guidelines for the appropriate use of seclusion and restraints, and The Joint Commission (formerly the Joint Commission on Accreditation of Healthcare Organizations [JCAHO]) has promulgated guidelines for hospitals regarding seclusion and restraint requirements. Professional opinion concerning the clinical uses of physical restraints and seclusion varies considerably among psychiatrists. Seclusion can be justified on both clinical and legal grounds for a variety of uses unless precluded by state freedom from restraint and seclusion statutes.

Seclusion and restraint raise complex psychiatric legal issues and *have both indications and contraindications* (Tables 57.1 and 57.2). Furthermore, seclusion and restraint have become increasingly regulated over the past decade.

Legal challenges to the use of restraints and seclusion have been brought on behalf of institutionalized mentally ill and mentally retarded persons. Typically, these lawsuits do not stand alone but are part of a challenge to a wide range of alleged abuses.

Generally, courts hold or consent decrees provide that restraints and seclusion can be implemented only when a patient creates a risk of harm to him- or herself or others and no less restrictive alternative is available. Additional restrictions include the following:

1. Restraint and seclusion can only be implemented by a written order from an appropriate medical official.
2. Orders are to be confined to specific, time-limited periods.
3. A patient's condition must be reviewed regularly and documented.
4. Any extension of an original order must be reviewed and reauthorized.



Table 57.2
Contraindications to Seclusion and Restraint

1. Extremely unstable medical and psychiatric conditions
2. Delirious or demented patients unable to tolerate decreased stimulation
3. Overtly suicidal patients
4. Patients with severe drug reactions, overdoses, or requiring close monitoring of drug dosages
5. *For punishment* or convenience of staff

Answers 57.32–57.36**57.32. The answer is B****57.33. The answer is A****57.34. The answer is D****57.35. The answer is C****57.36. The answer is E**

The precedent for determining legal responsibility was established in the British courts in 1843. The *M’Naghten rule* is known commonly as the right–wrong test because the alleged perpetrator is not guilty by reason of insanity if he or she is unable to tell right from wrong because of a mental disease. In 1922, jurists in England reexamined the *M’Naghten rule* and suggested broadening the concept of insanity in criminal cases to include the concept of the *irresistible impulse*—that is, a person charged with a criminal offense is not responsible for an act if the act was committed under circumstances that the person was unable to resist because of mental disease. To most psychiatrists, the law is unsatisfactory because it covers only a small group of those who are mentally ill. However, it was used successfully in Virginia in the 1994 case of *Virginia v Bobbitt* in which the defendant was acquitted of malicious wounding. The wife had cut off her husband’s penis after apparently enduring a prolonged period of sexual, physical, and emotional abuse.

In 1954 in the case of *Durham v United States*, a decision resulted in the product rule of criminal responsibility, or the *Durham rule*, which states that an accused is not criminally responsible if his or her unlawful act was the product of mental disease or mental defect. Judge Bazelon stated that the purpose of the rule was to get good and complete psychiatric testimony. In 1972, the Court of Appeals for the District of Columbia in *United States v Brawner* discarded the rule in favor of the American Law Institute’s (ALI’s) 1962 model penal code test of criminal responsibility.

In its *model penal code*, the ALI recommended the following test of criminal responsibility: (1) persons are not responsible for criminal conduct if at the time of such conduct, as the result of mental disease or defect, they lacked substantial capacity either to appreciate the criminality of their conduct or to conform their conduct to the requirement of the law, and (2) the term “mental

disease or defect” in this test does not include an abnormality manifested only by repeated criminal or otherwise antisocial conduct.

Other attempts at reform have included the defense of *diminished capacity*, which is based on the claim that the defendant experienced some impairment (usually but not always because of mental illness) sufficient to interfere with the ability to formulate a specific element of the particular crime charged. Hence, the defense finds its most common use with so-called specific-intent crimes, such as first-degree murder.

Answers 57.37–57.41**57.37. The answer is C****57.38. The answer is B****57.39. The answer is A****57.40. The answer is A****57.41. The answer is D**

Various landmark legal cases have affected psychiatry and the law over the years. In the 1976 case of *O’Connor v Donaldson*, the U.S. Supreme Court ruled that *harmless mental patients cannot be confined against their will* without treatment if they can survive outside. According to the Court, a finding of mental illness alone cannot justify a state’s confining persons in a hospital against their will; such patients must be considered dangerous to themselves or others before they are confined.

In 1971, in *Wyatt v Stickney* in Alabama Federal District Court, it was decided that persons civilly committed to a mental institution have a constitutional right to receive adequate care, and *standards were established for staffing, nutrition, physical facilities, and treatment*. In 1966, the District of Columbia Court of Appeals in *Rouse v Cameron* ruled that *the purpose of involuntary hospitalization is treatment* and that *a patient who is not receiving treatment has a constitutional right to be discharged from the hospital*.

In *The Myth of Mental Illness*, Thomas Szasz argued that the various psychiatric diagnoses are totally devoid of significance and that therefore *all forced confinements because of mental illness are unjust*. Szasz contended that psychiatrists have no place in the courts of law.



Ethics in Psychiatry

Ethical guidelines and a knowledge of ethical principles help psychiatrists avoid *ethical conflicts* (which can be defined as tension between what one wants to do and what is ethically right to do) and think through *ethical dilemmas* (conflicts between ethical perspectives or values).

Ethics deal with the relations among people in different groups and often entail balancing rights. *Professional ethics* refer to the appropriate way to act when in a professional role. Professional ethics derive from a combination of morality, social norms, and the parameters of the relationship people have agreed to have.

Most professional organizations and many business groups have codes of ethics that reflect a consensus about the gen-

eral standards of appropriate professional conduct. The American Medical Association's *Principles of Medical Ethics* and the American Psychiatric Association's *Principles of Medical Ethics with Annotations Especially Applicable to Psychiatry* articulate ideal standards of practice and professional virtues of practitioners. These codes include exhortations to use skillful and scientific techniques; self-regulate misconduct within the profession; and respect the rights and needs of patients, families, colleagues, and society.

Students should study the questions and answers below for a useful review of this topic.

HELPFUL HINTS

Students should be able to define each of these terms and know each of these cases.

- | | | | |
|----------------------------|--|---------------------------------------|----------------------------------|
| ▶ autonomy theory | ▶ individual paternalism | ▶ especially applicable to psychiatry | ▶ substituted-judgment principle |
| ▶ best-interests principle | ▶ informed consent | ▶ professional standards | ▶ surrogate decision making |
| ▶ confidentiality | ▶ <i>Planned Parenthood v Casey</i> | ▶ right to die | ▶ <i>Tarasoff I and II</i> |
| ▶ <i>Cruzan v Missouri</i> | ▶ <i>Principles of Medical Ethics</i> , with annotations | ▶ right to health care | ▶ utilitarian theory |
| ▶ decisional capacity | | ▶ <i>Roe v Wade</i> | |
| ▶ duty of beneficence | | ▶ state paternalism | |
| ▶ duty to protect | | | |

QUESTIONS

Directions

Each of the questions or incomplete statements below is followed by five suggested responses or completions. Select the *one* that is *best* in each case.

58.1. Double agency conflicts arise when psychiatrists have responsibility to whom?

- The patient and his or her family members
- The hospital staff and the patient
- The patient and the agent who hired them
- The parent and the adolescent patient
- None of the above

58.2. An autonomous choice is

- made with the informed consent of the patient
- made by the family of the patient

- made by the patient after coercion
- made by the patient who is confused
- none of the above

58.3. A boundary violation occurs in all of the following situations *except*

- when a doctor accepts tickets to a football game
- when a doctor hugs a patient after a session
- when confidentiality is breached
- when a doctor's needs are gratified at the expense of the patient
- when a doctor has sexual relations with a former patient

58.4. Which of the following about confidentiality is *true*?

- Confidentiality does not need to be maintained after patients are deceased.

- B. Confidentiality prevents psychiatrists from releasing information about patients to insurance companies.
- C. Videotaped segments of a therapy session cannot be used at a workshop for professionals.
- D. A physician is obligated to report a suspicion of child abuse in a state that requires such reporting.
- E. Informing one's spouse of the identity of one's patient violates the ethical principle of confidentiality.

58.5. Choose the best answer about *Cruzan v Missouri Board of Health*.

- A. All patients hold the right to have life support withdrawn.
- B. Early-stage fetuses have no legal standing.
- C. Only conscious patients can have life-sustaining treatment withdrawn.
- D. All competent patients can refuse medical care.
- E. None of the above

58.6. In the *Tarasoff* case,

- A. the principle of beneficence outweighed the principle of justice
- B. the principle of beneficence outweighed the principle of nonmaleficence
- C. the principle of justice outweighed the principle of nonmaleficence
- D. the principle of nonmaleficence outweighed the principle of justice
- E. none of the above

58.7. *Tarasoff II*

- A. requires that therapists report a patient's fantasies of homicide
- B. reinforces that a therapist has only the duty to warn
- C. expands on the earlier ruling to include the duty to protect
- D. states that usually the patient must be a danger both to a person and property
- E. none of the above

58.8. Which of the following is *not* a basic principle of ethics that psychiatrists must show respect for?

- A. Autonomy
- B. Nonmaleficence
- C. Justice
- D. Prudence
- E. Beneficence

58.9. A psychiatrist was hired to evaluate a law student upon his return from a leave of absence, which the student spent in a rehabilitation facility. It is the psychiatrist's responsibility to determine whether the student is mentally fit to resume his classes.

The psychiatrist in the above situation is acting as a

- A. forensic evaluator
- B. double agent

- C. third party
- D. outside evaluator
- E. none of the above

Directions

The group of lettered headings below is followed by a list of numbered phrases. For each numbered phrase, select

- A. if the item is associated with A only
- B. if the item is associated with B only
- C. if the item is associated with both A and B
- D. if the item is associated with neither A nor B

Questions 58.10–58.14

- A. Ethical dilemma
- B. Ethical conflict

58.10. Preserving patient confidentiality versus protecting endangered third parties

58.11. Patient–therapist sexual relations

58.12. Choice between two ethically legitimate alternatives

58.13. Compromise of an ethical principle, usually because of self-interest

58.14. American Psychiatric Association may expel or suspend members from the organization

Directions

Each set of lettered headings below is followed by a list of numbered words or statements. For each numbered word or statement, select the *one* lettered heading most closely associated with it. Each lettered heading may be selected once, more than once, or not at all.

Questions 58.15–58.20

- A. Yes
- B. No

58.15. Sexual relations with a family member of a patient

58.16. Discussing cases with spouse

58.17. Confidentiality must be maintained after the death of a patient

58.18. The psychiatrist can make a determination of suicide as a result of mental illness for insurance purposes solely from reading the patient's records

58.19. Dating a patient 1 year after discharge is ethical

58.20. The psychiatrist may divulge information about the patient if the patient desires

Questions 58.21–58.24

- A. Rawls
- B. Utilitarian
- C. Kant
- D. Communitarianism

58.21. “The ends justify the means.”

58.22. “Certain behaviors are obligatory, regardless of the consequences.”

58.23. “Veil of ignorance.”

58.24. “The good of the whole take precedence over individual needs.”

ANSWERS

58.1. The answer is C

Double agency conflicts arise when psychiatrists have responsibility both to *the patient and to the agent who hired him or her*. This issue arises when treating patients in correctional settings or the military, police department, or fire department and in a personnel health service. For example, a psychiatrist may be called on to use his or her expertise to make a recommendation on fitness for duty. Some argue that psychiatrists must always act in the best interests of the person they are evaluating and that providing information to an employer that would lead someone to lose a job is inappropriate. This argument is impractical and is not supported by utilitarian ethics. If mental health professionals could not use their expertise to help organizations, the question of who is psychiatrically unfit to work might not be appropriately answered. Many who are competent to hold a job or return to their job would not be allowed to do so, and many who should not be working at a particular job would be. Moreover, helping someone to remain in a position when doing so places both the person and others at risk is not actually helping the person.

58.2. The answer is A

The principle of patient autonomy has central importance and, conceptually, is in many ways coextensive with the legal concept of competence. A patient makes an autonomous choice by *giving informed consent* when that choice is (1) *intentional*, (2) *free of undue outside influence*, and (3) *made with rational understanding*. Usually, when patients respond to a choice by saying, “Yes,” the desire to comply is assumed. However, that assumption may not be valid with a highly confused patient.

58.3. The answer is C

A *boundary* can be considered as crossing a line beyond which the patient is exploited. *It gratifies the doctor’s needs at the expense of the patient*. The doctor is responsible for preserving the boundary and for ensuring that boundary crossings are held to a minimum and that exploitation does not occur.

The issue of whether sexual relations between an ex-patient and a therapist violates an ethical principle remains controversial. Proponents of the view “Once a patient, always a patient” insist that any involvement with an ex-patient—even one that leads to marriage—should be prohibited. According to the American Medical Association’s *Principles of Medical Ethics with Annotations Especially Applicable to Psychiatry*, “Sexual activity with a current or former patient is unethical.” Because of that, *hugging a patient at the end of a session* would most likely fall into that category. Similarly, *accepting football tickets from a patient* might be considered *exploitative*. However, *when confidentiality is breached*, it is not considered a boundary violation because a boundary violation involves the direct relationship between

the doctor and the patient, whereas a breach in confidentiality involves a third party.

58.4. The answer is E

The medical profession overall is bound by rules of confidentiality, but these rules seem to apply especially to the field of psychiatry. Psychiatrists should never discuss their patients outside the office. Patients assume what they tell the psychiatrist stays inside the consulting room. *Merely informing a spouse of the identity of one’s patient violates the ethical principles. Confidentiality survives even the death of one’s patient* and is subsequently owned by the executor, not the psychiatrist. A confidence cannot be broken just because a patient died. *A psychiatrist can break a confidence to give information to an insurance company* as long as it is limited to only that which is needed to process the insurance claim. *If informed, uncoerced consent has been obtained by the patient for segments of videotaped sessions to be used in conferences, these can be used*. Anonymity must be maintained, and the patient must know the purpose of the videotape. *The suspicion of child abuse does not warrant a break of confidentiality*. The psychiatrist must make several assessments before deciding whether to report suspected abuse. One must consider if the abuse is ongoing, whether abuse is responsive to treatment, and whether reporting will cause potential harm. The safety of potential victims must be the top priority.

58.5. The answer is D

In *Cruzan v Missouri Board of Health*, the U.S. Supreme Court upheld *the right of a competent person to have “a constitutionally protected liberty interest in refusing unwanted medical treatment.”* *The Court applied this principle to all patients, conscious or unconscious, who have made their wishes clearly known, whether or not they ever regain consciousness. Life support can be refused or withdrawn provided that the patient made his or her wishes known.* The U.S. Supreme Court permits each state to decide the standards it wishes to apply when asked to withhold or withdraw treatment from a person in a persistent vegetative state who has not previously stated his or her wishes on the subject. *The legal standing of fetuses relates to Roe v Wade, not Cruzan v Missouri.*

58.6. The answer is E (none)

The Tarasoff case is an example of the legal system’s attempt to solve a social problem—the need to safeguard life—by creating an ethical dilemma for the psychiatrist. This case, which began as a civil lawsuit, ended up with the California Supreme Court ruling that a psychotherapist has a duty to warn and protect a potential victim of a potentially dangerous patient. *The court proclaimed that the principles of justice and nonmaleficence outweighed the principle of beneficence.* Most states have agreed with the Tarasoff court and have enacted laws requiring psychotherapists to warn potential victims or to warn the police when an identified person is threatened.

Nonmaleficence is the duty of the psychiatrist to avoid either inflicting physical and emotional harm on the patient or increasing the risk of such harm. That principle is captured by *primum non nocere*, “first, do no harm.”

Similar to the principles of autonomy, nonmaleficence, and beneficence, the principle of justice in psychiatry does not operate in a vacuum but is responsive to the ever-changing social, political, religious, and legal mores of the moment.

58.7. The answer is C

The *Tarasoff I* ruling does not require that therapists report a patient's fantasies of homicide; instead, it requires therapists to report an intended homicide. Furthermore, it is the therapist's duty to exercise good judgment.

In 1982, the California Supreme Court issued a second ruling in the case of *Tarasoff v Regents of University of California* (now known as *Tarasoff II*), which broadened (rather than merely reinforced) its earlier ruling, the duty to warn, *to include the duty to protect*.

The *Tarasoff II* ruling has stimulated intense debates in the medicolegal field. Lawyers, judges, and expert witnesses argue the definition of protection, the nature of the relationship between the therapist and the patient, and the balance between public safety and individual privacy. Clinicians argue that the duty to protect hinders treatment because a patient may not trust a doctor if confidentiality is not maintained. Furthermore, because it is not easy to determine whether a patient is dangerous enough to justify long-term incarceration, unnecessary involuntary hospitalization may occur because of a therapist's defensive practices.

As a result of such heated debates in the field since 1976, the state courts have not made a uniform interpretation of the *Tarasoff II* ruling (the duty to protect). Generally, clinicians should note whether a specific identifiable victim seems to be in imminent and probable danger from the threat of an action contemplated by a mentally ill patient; the harm, in addition to being imminent, should be potentially serious or severe. *Usually, the patient must be a danger to another person, not to property*, and the therapist should take clinically reasonable actions.

In a few cases (none successful so far), claims have already been advanced that a *Tarasoff*-like duty applies to potential infection of partners with human immunodeficiency virus (HIV) by patients under mental health treatment. The breach of confidentiality in *Tarasoff* cases is justified only by the threat of violence. Laws vary confusingly by jurisdiction. Perhaps the ideal solution is to persuade patients to make the disclosure to and report the matter to public health authorities.

58.8. The answer is D

Prudence is not one of the four basic principles of ethics. The four ethical principles that psychiatrists ought to weigh in their work are respect for *autonomy*, *beneficence*, *nonmaleficence*, and *justice*. At times, they are in conflict, and decisions must be made concerning how to balance them. Autonomy requires that a person act intentionally after being given sufficient information and time to understand the benefits, risks, and costs of all reasonable options. It may mean honoring an individual's right not to hear every detail and even choosing someone else (e.g., family or doctor) to decide the best course of treatment. In recent decades, respect for autonomy has increasingly become a key ethical guideline in medical practice.

Beneficence entails promoting the well-being of patients and society in a variety of ways. The requirement for psychiatrists to

act with beneficence derives from their fiduciary relationship to patients and the profession's belief that it also has an obligation to society. Within limits, a physician needs to place a patient's needs above his or her own, including being available to patients when the physician might prefer not to be bothered or seeing someone for a reduced fee.

To adhere to the principle of nonmaleficence (*primum non nocere*, or "above all, do no harm"), psychiatrists must be careful in their decisions and actions and must ensure that they have had adequate training for what they do. Much of what physicians do for patients causes discomfort and carries risk of iatrogenic harm. They need to avoid creating risks for patients by an action or inaction.

The concept of justice concerns the issues of reward and punishment and the equitable distribution of social benefits. Relevant issues include whether resources should be distributed equally to those in greatest need, whether they should go to where they can have the greatest impact on the well-being of each individual served, or whether they should go to where they will ultimately have the greatest impact on society.

58.9. The answer is B

The psychiatrist is acting as a *double agent*. Double agency conflicts arise when psychiatrists have responsibility both to the patient and to the agent who hired them. In this case, the conflict is between the law student and the law school.

When doing *forensic evaluations* it is tempting to selectively present and interpret data in a way that supports the side that hired one or the position that one believes to be correct (if one is a court-appointed neutral). By making speculative interpretations of data and omitting discussion of some data, it is generally relatively easy to create a very powerful report arguing for either side in a case. It is not uncommon for forensic evaluators to do this to create a report supporting their preferred outcome. However, doing so is unethical as enormous damage can be done to people's lives.

When a hospital's wish to involuntarily hold a patient is challenged by an *outside consultant*, some treating psychiatrists refuse to cooperate with the evaluation. Hospital lawyers may advise the hospital psychiatrist not to speak with the consultant. Failing to cooperate with the consultant is unethical. Receiving bad advice from a lawyer does not give a psychiatrist license to behave unethically. A doctor should always be open to hearing qualified opinions and collaborating with a qualified physician selected by the patient. The doctor must always act in the patient's best interest and avoid becoming an advocate for his or her own opinions.

Answers 58.10–58.14

58.10. The answer is A

58.11. The answer is B

58.12. The answer is A

58.13. The answer is B

58.14. The answer is B

The term *ethics* is usually reserved for the moral principles restricted to certain groups, such as those in a profession. That role-bound morality can consist of internal or external standards of ethical conduct. For the psychiatric profession, *The Principles of Medical Ethics with Annotations Especially for Psychiatry*, developed by the American Psychiatric Association (APA), is an example of an internal standard used by the profession's major organization to regulate the behavior of its members. Judicial, legislative, or executive bodies may impose external standards as well.

Distinguishing between an ethical dilemma and an ethical violation or conflict is important. One is faced with an ethical dilemma when asked to choose between *two ethically legitimate alternatives*, such as preserving patient confidentiality or *protecting endangered third parties*. An ethical conflict involves *the compromise of an ethical principle*, usually because of self-interest, such as *patient-therapist sexual relations*.

For ethical violations, the APA may *expel members* from the organization or, for less severe violations, *suspend membership for a time*. During that time, a member may be required to undergo supervision or extra training. For still less severe violations, a member may be reprimanded or admonished with no effect on membership status. Expulsion or suspension from the APA is publicly reported. Furthermore, such actions must be reported to the National Practitioners Data Bank.

Answers 58.15–58.20**58.15. The answer is B****58.16. The answer is B****58.17. The answer is A****58.18. The answer is A****58.19. The answer is B****58.20. The answer is A**

Having sexual relations with a patient's family member is unethical. This is most important when the psychiatrist is treating a child or adolescent. Most training programs in child and adolescent psychiatry emphasize that the parents are patients, too, and that the ethical and legal proscriptions apply to parents (or parent surrogates) as well as to the child.

Psychiatrists should never discuss their patients outside the office. Some psychiatrists believe that it is acceptable to discuss cases at the dinner table with their spouse. "After all," they say, "I trust my spouse." However, trust is beside the point. Patients assume that what they tell the psychiatrist stays inside the consulting room. Merely informing a spouse of the identity of one's patient violates the ethical principles.

Ethically, confidences survive a patient's death. Exceptions include proper legal compulsions and protecting others from imminent harm.

It is *ethical to make a diagnosis of suicide secondary to mental illness* on the basis of reviewing the patient's records. Sometimes

called a *psychological autopsy*, interviews with friends, family, and others who knew the deceased person may also be useful.

Proponents of the view "Once a patient, always a patient" insist that any involvement with an ex-patient—even a date or one that leads to marriage—should be prohibited. They maintain that a transference reaction always exists between the patient and the therapist and that it prevents a rational decision about their emotional or sexual union. Some psychiatrists maintain that a reasonable time should elapse before any such liaison. The length to the "reasonable" period remains controversial; some have suggested 2 years, not 1 year.

The Principles of Medical Ethics with Annotations Especially Applicable to Psychiatry, however, states: "Sexual activity with a current or former patient is unethical."

Patients have the right (known as *privilege*) of insisting that information about their cases be divulged to those who request it. Psychiatrists are allowed to contest that right if they believe that the patient will be harmed by revealing such information. Psychiatrists may stipulate that a report sent to a third party not be shown to the patient; however, in complex cases, proper disposition of records may have to be adjudicated.

Answers 58.21–58.24**58.21. The answer is B****58.22. The answer is C****58.23. The answer is A****58.24. The answer is D**

The *utilitarian* (consequentialist) school of thought originated with Jeremy Bentham (1748–1832) and John Stuart Mill (1806–1873) in nineteenth century England. They argued that the value of an act should be judged solely on its effect. Acts are ethically right if they produce the greatest good for the greatest number of people. Acts are not inherently right or wrong in and of themselves; the consequences of actions are all that matters. For example, lying, stealing, and killing are not inherently wrong, according to utilitarians. For utilitarians, "*the ends justify the means*."

Deontological ethics rejects the utilitarian approach. Emmanuel Kant (1724–1804) argued that *certain ways of behaving are obligatory regardless of the consequences*. For example, it is always wrong to lie and to kill. Kant argued that utilitarian theories actually devalue the people they are designed to help because sacrificing one individual to help others denies the inherent dignity and sacredness of each person.

Writing in the modern day, John Rawls developed his concept of justice as fairness. Rawls asserted that in deciding what to do and what rules and systems to establish, we should place ourselves behind a "*veil of ignorance*" and assume that we do not know who we are in the system. For example, in deciding what welfare benefits a society should offer and how high taxes should be imposed on the rich, we should assume that we do not know whether we will be rich or poor. In deciding what authority doctors have over patients, we should assume that we do not know whether we will be in the role of the doctor or in the role of the patient.

Communitarian approaches are concerned with maintaining the structure and traditions of the community. In communitarianism, the common good takes precedence over individual rights. *Ethical behavior is behavior that supports the overall well-being of the community rather than the desires of individuals.* Communitarianism stands in contrast to the liberal Kantian, utilitarian, and Rawlsian schools, which focus on individual rights, individual autonomy, and freedom. Those

who wish to make it easy to remove people with mental illness from the streets, institutionalize them, and force medications on them are supported by the communitarian perspective. Many people, particularly from Eastern cultures, may see the world through the lens of a communitarian approach rather than the individualistic, Western liberal perspective. Much, if not most, of the world follows a communitarian perspective.



Objective Examinations in Psychiatry

There is a wide variety of objective multiple-choice question formats. They range from case histories followed by a series of questions relating to diagnosis, laboratory findings, treatment complications, and prognosis to the most widely used form, known as the one-best-response type, wherein a question or incomplete statement is followed by four or five suggested answers or completions, with the examinee being directed to select the one best answer. The multiple-choice questions are described as objective because the correct response is predetermined by a group of experts who compose the items, eliminating the observer bias seen in ratings of essay questions. The responses are entered on an answer sheet, which is scored by machine, giving a high degree of reliability. Two basic item types are used with the greatest frequency, one-best-response type (type A) and matching type (type B), which are detailed in Table A.1.

The case history or situation type of item consists of an introductory statement that may be an abbreviated history with or without the results of the physical examination or laboratory tests followed by a series of questions, usually of the A type. In similar fashion, charts, electroencephalograms, pictures of gross or microscopic slides, or even patients' graphs may be presented, again followed by the one-best-response type or matching type.

Present testing procedures using objective multiple-choice items are highly effective in regard to reliability and validity in measuring the examinee's knowledge and its application. Experienced test constructors are able to develop items based on a given content and to word the answers in a neutral fashion. Thus, correct and incorrect responses are similar in style, length, and phrasing. However, no matter how well constructed a test is, with a high degree of reliability and validity for a large group of examinees, it is subject to inaccuracies about individual testees. Some examinees underscore, and others overscore, depending on their experience and test-taking skills, known as *testmanship*. In the final analysis, there is no substitute for knowledge, understanding, and clinical competence when a physician is being evaluated. However, some suggestions and clues inevitably appear in the most carefully composed and edited multiple-choice test. To improve one's testmanship, one should consider the following:

1. There is no penalty for a wrong response in the objective-type multiple-choice question. The testee has a 20 percent chance of guessing correctly when there are five options. Therefore, no question should be left unanswered.
2. In medicine, it is rare for anything to be universally correct or incorrect. Thus, options that imply "always" or "never" are more likely to be incorrect than otherwise.
3. Especially in psychiatry, many words are often needed to include the exceptions or qualifications in a correct statement. Thus, the longest option is likely to be the correct response. Test constructors who are also aware of this fact often try to lengthen the shorter incorrect responses by adding unnecessary phrases, but that tactic can readily be detected by experienced test takers.
4. The use of a word such as "possibly," "may," or "sometimes" in an option often suggests a true statement, but choices with universal negative or positive statements tend to be false.
5. Each distractor that can be ruled out increases the percentage chance of guessing correctly. In a five-choice situation, being able to discard three options increases the percentage from 20 to 50 percent and enables the examinee to focus on only the two remaining choices.
6. With questions in which one cannot rule out any of the distractors and these suggestions do not apply, the testee should always select the same lettered option. The examination constructors try to distribute the correct answers among the five options. In some tests, the middle, or C, response is correct more often than the others.

Examinations are constructed for the most part by persons from the cultural background in which the test originates. Therefore, those who have been trained abroad and whose native languages are not English are often slower in reading the items and have less time to reflect on the options.

A significant contribution to the evaluation of clinical competence is the development of patient management–problem tests. Those tests try to simulate an actual clinical situation with emphasis on a functional problem-solving, patient-oriented approach. From thousands of reported examples of outstandingly good or poor clinical performance, test designers defined the major areas of performance, such as history taking, physical examination, use of diagnostic procedures, laboratory tests, treatment, judgment, and continuing care. Armed with that information, the test designers evolved a type of test known as *programmed testing*. The test provides feedback of information to the examinee, who can use these data in the solution of additional problems about the same patient.



Table A.1
Types of Items Used in Multiple-Choice Questions

Type A: One-best-response type

Each item consists of an introductory statement or question, known as the stem, followed by four or five suggested responses. The incorrect options are known as distractors, as differentiated from the correct response. Some of the distractors may be true in part, but the one *best* response of those offered must be selected to receive full credit.

DIRECTIONS: Each of the statements or questions below is followed by five suggested responses or completions. Select the one that is best in each case.

- | | | |
|--|--|---------------------------|
| <p>1. A 2-year-old boy occasionally plays with his older sister's doll, imitating her activities. This implies</p> <p>A. pathological problems with sibling rivalry</p> <p>B. undue identification with his mother</p> <p>C. future problems with heterosexual orientation</p> <p>D. development of problems with gender identity</p> <p>E. natural exploration of his environment</p> | <p><input type="checkbox"/> Stem</p> <p><input type="checkbox"/> Distractors</p> <p><input type="checkbox"/> Correct response</p> | <p>Choices or options</p> |
| <p>2. Children in the fourth grade in urban area schools who cannot read are most commonly</p> <p>A. isolated from peers</p> <p>B. mentally retarded</p> <p>C. culturally disadvantaged</p> <p>D. brain damaged</p> <p>E. disabled by a major perceptual deficiency</p> | <p><input type="checkbox"/> Stem</p> <p><input type="checkbox"/> Distractor</p> <p><input type="checkbox"/> Correct responses</p> <p><input type="checkbox"/> Distractor</p> | <p>Choices or options</p> |

Type B: Matching type

DIRECTIONS: Each group of questions consists of five lettered headings followed by a list of numbered words or phrases. For each numbered word or statement, select the one lettered heading or component that is most closely associated with it.

Questions 3–8

- A. Mood disorder
- B. Psychotic disorder
- C. Chromosomal abnormality
- D. Cognitive disorder
- E. None of the above

- | | |
|--|--|
| <p>3. Delusional disorder</p> <p>4. Conversion disorder</p> <p>5. Down syndrome</p> <p>6. Bipolar I disorder</p> <p>7. Obsessive-compulsive disorder</p> <p>8. Wernicke's syndrome</p> | <p>Correct responses</p> <p>B</p> <p>E</p> <p>C</p> <p>A</p> <p>E</p> <p>D</p> |
|--|--|

The use of "None of the above" in a type A or B question of 10 makes the item more difficult and tends to lower the percentage of candidates giving correct responses. It should also be noted that the same response may be used more than once.

Type C:

A modified form of the matching type (type C) is also used. It necessitates the ability to compare and contrast two entities, such as diagnostic procedures, treatment modalities, or causes. The association is on an all-or-none basis. For instance, even if a treatment is only occasionally used or associated with a given disorder, it is to be included as a correct response.

DIRECTIONS: Each set of lettered headings below is followed by a list of numbered words or phrases. For each of the numbered words or phrases select

- A. if the item is associated with *A only*
- B. if the item is associated with *A only*
- C. if the item is associated with *both A and B*
- D. if the item is associated with *neither A nor B*

Questions 9–13

- A. Down syndrome (mongolism)
- B. Tuberous sclerosis (epiloia)
- C. Both
- D. Neither

- | | |
|--|---|
| <p>9. Mental deficiency</p> <p>10. Nodular type of skin rash</p> <p>11. Higher than chance association with leukemia</p> <p>12. Chromosomal nondisjunction</p> <p>13. Specific disorder of amino acid metabolism</p> | <p>Correct responses</p> <p>C</p> <p>B</p> <p>A</p> <p>A</p> <p>D</p> |
|--|---|

Adapted from Small SM. Role of examinations in psychiatry. In: Kaplan HI, Sadock BJ, eds. *Comprehensive Textbook of Psychiatry*. 6th ed. Baltimore: Williams & Wilkins; 1995:2734.

The format starts with general patient information, which gives historical data. The section may be followed by a summary of the physical examination and positive elements in the psychiatric status. Then the testees are presented with a series of problems, each with a variable number of options. If the examinees select an option, they receive the results of the laboratory test they requested, the patient's reaction to the medication they ordered, or just a confirmation of the order. The examinees may select as few or as many options as befits good clinical judgment. The testees lose both credit and informational feedback if he or she does not select an important and necessary option. The testees may also lose credit by selecting unnecessary or dangerous options.

Having completed problem 1 about a patient, the testee is usually given some additional follow-up information, and the procedure is repeated for problems 2, 3, and so on. An oversimplified and much abbreviated example is as follows:

A young college student has been hyperactive, has slept poorly, and has lost weight during the past month. He has been known to use cannabis and possibly other substances on many occasions. Last night he became excited, thought he was going insane, and complained of a rapid pounding sensation over his heart. He was taken to the emergency department by his roommate. No history of prior psychiatric difficulty was obtained. Physical examination reveals a temperature of 99.5°F, pulse rate of 108 beats/min, respiration rate of 22 breaths/min, and a blood pressure of 142/80 mm Hg. His pupils are dilated but react to light, his mouth is dry, and the rest of the examination is noncontributory except for a generalized hyperreflexia. On psychiatric examination, he is irritable, restless, and very suspicious. He states that people are after him and wish to harm him. He is well oriented.

1. At this time, you would

- A. order morphine sulfate, 30 mg intramuscularly
- B. inquire about drug usage
- C. order an electrocardiogram
- D. tell the patient that no one wants to harm him and that it is all his imagination
- E. arrange for hospitalization plus many additional options

Of the choices given, the feedback on B could be "Roommate states patient was taking amphetamines." D feedback:

"Patient becomes excited and refuses to answer questions." E feedback: "Arrangements made."

- 2. The following morning, after a restless sleep, the patient continues to express fears of being harmed. You would now order
 - F. chlorpromazine, 100 mg, three times daily
 - G. urine screen for drugs
 - H. projective psychological tests
 - I. imipramine, 50 mg, four times daily and other options

The feedback on F might be "Patient quieter after a few hours." G feedback: "Ordered." H feedback: "Patient uncooperative." I feedback: "Order noted."

Although programmed testing differs from the real-life situation—in which the physician has to originate his or her orders or recommendations rather than selecting them from a given set of options—it does simulate the clinical situation to a great extent. Examinees like this type of test and readily appreciate its clinical significance and relevance.

Various modifications of patient management problems have been introduced. It seems that the format, coupled with other forms of testing, is a favorable development in approaching the goal of a standardized, reliable, and valid means of evaluating some major components of clinical competence.

COMPUTER-BASED CASE STIMULATION (CCS) TEST

The National Board of Medical Examiners (NBME) developed the Computer-based Case Stimulation (CSS) test which is a computerized patient management test using patient cases. Its interactive computer format allows for an assessment of patient management decision-making skills in a realistic and integrated manner. The test includes 8 stimulation cases and each stimulation provides information that is usually found in a patient's chart. The testee manages the case through the computer by gathering data and test information and ordering treatments. The testee is not given any cues as to what information or diagnoses should be considered. The student is referred to the USMLE website (<http://www.usmle.org/Orientation/2009/menu.html>) for further information and practice with sample cases.



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