EPIDIDYMITIS

A MEDICAL DICTIONARY, BIBLIOGRAPHY,
AND ANNOTATED RESEARCH GUIDE TO
INTERNET REFERENCES

JAMES N. PARKER, M.D.
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The collective knowledge generated from academic and applied research summarized in various references has been critical in the creation of this book which is best viewed as a comprehensive compilation and collection of information prepared by various official agencies which produce publications on epididymitis. Books in this series draw from various agencies and institutions associated with the United States Department of Health and Human Services, and in particular, the Office of the Secretary of Health and Human Services (OS), the Administration for Children and Families (ACF), the Administration on Aging (AOA), the Agency for Healthcare Research and Quality (AHRQ), the Agency for Toxic Substances and Disease Registry (ATSDR), the Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), the Healthcare Financing Administration (HCFA), the Health Resources and Services Administration (HRSA), the Indian Health Service (IHS), the institutions of the National Institutes of Health (NIH), the Program Support Center (PSC), and the Substance Abuse and Mental Health Services Administration (SAMHSA). In addition to these sources, information gathered from the National Library of Medicine, the United States Patent Office, the European Union, and their related organizations has been invaluable in the creation of this book. Some of the work represented was financially supported by the Research and Development Committee at INSEAD. This support is gratefully acknowledged. Finally, special thanks are owed to Tiffany Freeman for her excellent editorial support.

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FORWARD

In March 2001, the National Institutes of Health issued the following warning: "The number of Web sites offering health-related resources grows every day. Many sites provide valuable information, while others may have information that is unreliable or misleading."[1] Furthermore, because of the rapid increase in Internet-based information, many hours can be wasted searching, selecting, and printing. Since only the smallest fraction of information dealing with epididymitis is indexed in search engines, such as **www.google.com** or others, a non-systematic approach to Internet research can be not only time consuming, but also incomplete. This book was created for medical professionals, students, and members of the general public who want to know as much as possible about epididymitis, using the most advanced research tools available and spending the least amount of time doing so.

In addition to offering a structured and comprehensive bibliography, the pages that follow will tell you where and how to find reliable information covering virtually all topics related to epididymitis, from the essentials to the most advanced areas of research. Public, academic, government, and peer-reviewed research studies are emphasized. Various abstracts are reproduced to give you some of the latest official information available to date on epididymitis. Abundant guidance is given on how to obtain free-of-charge primary research results via the Internet. **While this book focuses on the field of medicine, when some sources provide access to non-medical information relating to epididymitis, these are noted in the text.**

E-book and electronic versions of this book are fully interactive with each of the Internet sites mentioned (clicking on a hyperlink automatically opens your browser to the site indicated). If you are using the hard copy version of this book, you can access a cited Web site by typing the provided Web address directly into your Internet browser. You may find it useful to refer to synonyms or related terms when accessing these Internet databases. **NOTE:** At the time of publication, the Web addresses were functional. However, some links may fail due to URL address changes, which is a common occurrence on the Internet.

For readers unfamiliar with the Internet, detailed instructions are offered on how to access electronic resources. For readers unfamiliar with medical terminology, a comprehensive glossary is provided. For readers without access to Internet resources, a directory of medical libraries, that have or can locate references cited here, is given. We hope these resources will prove useful to the widest possible audience seeking information on epididymitis.

The Editors

[1] From the NIH, National Cancer Institute (NCI): **http://www.cancer.gov/cancerinfo/ten-things-to-know**.

CHAPTER 1. STUDIES ON EPIDIDYMITIS

Overview

In this chapter, we will show you how to locate peer-reviewed references and studies on epididymitis.

The Combined Health Information Database

The Combined Health Information Database summarizes studies across numerous federal agencies. To limit your investigation to research studies and epididymitis, you will need to use the advanced search options. First, go to **http://chid.nih.gov/index.html**. From there, select the "Detailed Search" option (or go directly to that page with the following hyperlink: **http://chid.nih.gov/detail/detail.html**). The trick in extracting studies is found in the drop boxes at the bottom of the search page where "You may refine your search by." Select the dates and language you prefer, and the format option "Journal Article." At the top of the search form, select the number of records you would like to see (we recommend 100) and check the box to display "whole records." We recommend that you type "epididymitis" (or synonyms) into the "For these words:" box. Consider using the option "anywhere in record" to make your search as broad as possible. If you want to limit the search to only a particular field, such as the title of the journal, then select this option in the "Search in these fields" drop box. The following is what you can expect from this type of search:

- **Epididymitis in Children: The Circumcision Factor?**

  Source: Journal of Urology. 160(5): 1842-1844. November 1998.

  Summary: Acute epididymitis in prepubertal male individuals is uncommon, but it represents an important consideration in the differential diagnosis of acute scrotal swelling. This study evaluated the relationship between epididymitis and circumcision status. The authors studied the relationships among the circumcision status of 36 consecutive boys with epididymitis in a review of 128 boys with acute scrotal inflammation (group 1), circumcision status of 43 in whom the diagnosis of epididymitis at discharge had been made elsewhere (group 2), New York State hospital discharge figures for circumcision in newborns (group 3), and the regional prevalence of circumcision in 200 consecutive pediatric emergency department patients at the same institution with nonurological diagnoses (group 4). New York State figures indicate that

70 percent of male newborns are discharged home with a hospital code for circumcision. Similarly, an evaluation of 200 consecutive male patients without urological diagnoses younger than 18 years in the emergency department revealed that 131 (65 percent) were circumcised. Comparatively in groups 1 and 2, only 25 and 26 percent of patients, respectively, were circumcised. The statistical difference in circumcision status among the 4 groups was significant. These data demonstrate with highly statitistical significance that a relationship exists between epididymitis and the presence of a foreskin. The authors found that an intact foreskin is an important etiological factor in boys with epididymitis. 4 tables. 17 references. (AA-M).

- **Testicular Torsion or Acute Epididymitis?: Diagnosis and Treatment**

  Source: Journal of Emergency Nursing. 16(2): 96-98. March-April 1990.

  Summary: This article describes diagnosis of an acute scrotum and two entities that may result in it: testicular torsion and epididymitis. The clinical presentation, diagnosis, and treatment are discussed for each condition. A table provides differentiation data according to age, onset, signs and symptoms, extent of pain, physical examination of genitals, and laboratory examination results. A case example is also presented. It is concluded that differentiation between torsion and epididymitis can be extremely difficult because only 50 percent or less of cases involving testicular torsion exhibit the classically expected findings. The article suggests that a careful history and complete analysis of the physical and laboratory findings are warranted, and when needed, the judicious use of collaborative tests will enable the clinician to make the appropriate diagnosis. 11 references.

- **Diagnosis and Management of Urethritis and Epididymitis**

  Source: Medicine North America. Volume 10: 1158-1167. August 1990.

  Summary: Urethritis is the most common inflammatory disorder of the male urogenital tract. This article discusses the diagnosis and management of urethritis and epididymitis. The authors maintain that a practical and organized approach to acute and persistent or recurrent urethritis is essential to relieve symptoms, avoid complications, and prevent the spread of potentially serious pathogens to others. Specific sections cover definitions, etiology, epidemiology, clinical presentation, examination of the urethra and urethral smear, management of gonococcal urethritis and nongonococcal urethritis, and complications of urethritis, particularly epididymitis. 6 tables. 6 references.

Federally Funded Research on Epididymitis

The U.S. Government supports a variety of research studies relating to epididymitis. These studies are tracked by the Office of Extramural Research at the National Institutes of Health.[2] CRISP (Computerized Retrieval of Information on Scientific Projects) is a searchable database of federally funded biomedical research projects conducted at universities, hospitals, and other institutions.

[2] Healthcare projects are funded by the National Institutes of Health (NIH), Substance Abuse and Mental Health Services (SAMHSA), Health Resources and Services Administration (HRSA), Food and Drug Administration (FDA), Centers for Disease Control and Prevention (CDCP), Agency for Healthcare Research and Quality (AHRQ), and Office of Assistant Secretary of Health (OASH).

Search the CRISP Web site at **http://crisp.cit.nih.gov/crisp/crisp_query.generate_screen**. You will have the option to perform targeted searches by various criteria, including geography, date, and topics related to epididymitis.

For most of the studies, the agencies reporting into CRISP provide summaries or abstracts. As opposed to clinical trial research using patients, many federally funded studies use animals or simulated models to explore epididymitis. The following is typical of the type of information found when searching the CRISP database for epididymitis:

- **Project Title: CELLULAR AND IMMUNOLOGIC RESPONSES TO VASAL OBSTRUCTION**

  Principal Investigator & Institution: Flickinger, Charles J.; University of Virginia Charlottesville Box 400195 Charlottesville, Va 22904

  Timing: Fiscal Year 2002

  Summary: The overall goal of this project is to determine the effects of obstruction of the male reproductive tract on the structure and function of its components, with emphasis on the development of germ cells in the seminiferous tubules, induction of antisperm antibodies, and characterization of dominant post-obstruction sperm autoantigens. The studies are aimed at understanding basic responses to obstruction of the vas deferens, which can result from developmental defects, trauma, and vasectomy. The proposed work builds on observations of increased antibodies to specific sperm autoantigens after prepuberal or adult obstruction of the vas deferens and of testicular alterations following vasectomy. The first aim is to determine whether early reversal of vasal obstruction or later postpubertal repair is more consistent with normal development of the testis and epididymis in a rat model system. The second aim is to determine whether obstruction of the vas deferens results in changes in apoptosis in cells of the seminiferous tubules and the epididymal epithelium. The third aim is to identify, isolate, and clone cDNAs to characterize the dominant sperm autoantigens post-obstruction in the rat. Recently, the first post- obstruction sperm autoantigen in the rat model has been successfully cloned, sequenced and expressed. Plasma cells that are producing antibodies to specific sperm antigens also will be localized by a labeled antigen method. The fourth aim is to determine if immunization with a purified recombinant post- obstruction sperm autoantigen results in reproductive tract alterations such as orchitis and **epididymitis** and to assess how responses to specific autoantigens contribute to post-obstruction chances. The fifth aim is to extend studies of dominant sperm autoaintigens from the rat to humans. The focus will be on species conserved antigens under the principle that conservation of antigens between species reflects conservation of important functions.

  Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

- **Project Title: CLINICAL EPIDEMIOLOGY OF MYCOPLASMA GENITALIUM**

  Principal Investigator & Institution: Totten, Patricia A.; Professor; Medicine; University of Washington Grant & Contract Services Seattle, Wa 98105

  Timing: Fiscal Year 2002; Project Start 01-MAR-2002; Project End 28-FEB-2007

  Summary: Large proportions of the major reproductive tract inflammatory syndromes remain idiopathic, not attributable to the major sexually transmitted pathogens such as Chlamydia trachomatis or Neisseria gonorrhoeae. Where effective STD control programs exist, most urethritis in men and endocervicitis or mucopurulent cervicitis (MPC) in women is no longer attributable to gonococcal or chlamydial infection. This is

equally true for most upper genital tract complications of urethritis (epididymitis) or endocervicitis (endometritis, salpingitis and perinatal and puerperal morbidity). Mycoplasma genitalium, a fastidious bacterium discovered in 1981, now detectable by PCR, has been significantly associated with nongonococcal urethritis (NGU) in men in 11 of 11 studies over the past decade using PCR, including our own recent study which demonstrated M. genitalium in 27 (22%) of 211 men with and 5 (4%) of 117 without NGU (OR 6.5; 95% CI 2.1- 19.9). Recognition of M. genitalium as a pathogen in the male raises the important question of its role as a pathogen in the female, both in nonpregnant and in pregnant women. Since initial submission of this proposal in February 2000, we have completed two retrospective cross- sectional studies involving women. In a random sample of female STD clinic patients, we demonstrated endocervical M. genitalium infection in 24 (13%) of 191 with MPC vs. 27 (6%) of 453 without MPC (OR adjusted for cervical pathogens 3.0; 95% CI 1.6-5.8). This study also detected M. genitalium in 10 (14.3%) of 70 women with history of spontaneous miscarriage at < 20 weeks gestation vs. 41 (7.2%) of 570 without this history (adj OR=2.5; 95% CI 1.1-5.6). A cross-sectional study of 115 Kenyan women with suspected PID demonstrated M. genitalium in endometrial biopsies from 7 (12%) of 58 women with endometritis vs. 0 of 57 without endometritis (p=0.01). In our studies of male urethritis, MPC, and endometritis, associations of M. genitalium with disease were similar to, or stronger than, the associations with chlamydial infection. These data support our proposed studies as the next logical step in clinical epidemiologic studies of this pathogen. Our three specific aims are to (1) define the role of M. genitalium in acute salpingitis in women undergoing laparoscopy in Nairobi Kenya; (2) define the association of M. genitalium with abnormal pregnancy outcomes including preterm delivery of a low birthweight infant, using data and clinical specimens already available from 2500 women prospectively followed to term at University of Washington hospitals (including 625 with gestation <37 weeks); and (3) determine (a) risk factors for M. genitalium infection in a population-based sample of young women participating in Wave 3 of the National Longitudinal Study of Adolescent Health, and in a sample of higher risk women attending the Seattle STD clinic, and (b) concordance of M. genitalium infection in these women and their sex partners. M genitalium may represent an important new pathogen in the female reproductive tract. Studies of its association with salpingitis and pregnancy morbidity are essential. Future studies should also address whether, similar to gonorrhea and chlamydial infection, it facilitates transmission of HIV infection.

Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

- **Project Title: MALE CONTRACEPTIIVES ACTING ON SPERM SURFACE TARGETS**

  Principal Investigator & Institution: Myles, Diana G.; Professor; University of California Davis Sponsored Programs, 118 Everson Hall Davis, Ca 95616

  Timing: Fiscal Year 2002

  Summary: This proposal is focused on developing a new contraceptive method for men. The project begins with our previous finding that immunization of male rodents with sperm surface proteins leads to either of two effects: anti-sperm antibody becomes bound to sperm in the epididymis or sperm are completely eliminated from the epididymis, leading to infertility. In this project we propose to use rodent studies to define the mechanisms of these two phenomena and to develop optimal protocols for obtaining each effect. These immunization protocols will then be tested in monkeys to determine if they affect primate sperm and induce infertility. Simultaneously, a new

approach to male contraception will be tested that is designed to cause the disruption (by immunological or pharmacological means) of cell-cell interactions in the testis, thus blocking sperm development. Our first aim is to systematically optimize immunization conditions in mice by altering four variables: choice of antigen, adjuvant, dose and route of administration. The mice will first be evaluated for antibody bound to epididymal sperm or loss of sperm in the epididymis. The immunized male mice will also be scored for presence of orchitis or **epididymitis** which may be relatively minimal or absent with specific choices among the four variables. The optimal protocol(s) that leads to antibody-bound sperm in the epididymis or ejaculate will be tested for the ability of the sperm to function in vitro fertilization and in vivo fertility of immunized mice. An efficacious protocol will then be tested in male monkeys. The optimal protocol that leads to loss of epididymal sperm in mice will be used to study the mechanism of this loss and tested to determine if epididymal sperm will be eliminated in male monkeys. If contraceptive efficacy is obtained, but inflammation is present, we will test peptide immunogen specifically designed to produce antibodies without an inflammatory response. We will also study early germ cell to identify cell adhesion molecules present outside the blood-testis barrier and therefore subject to inhibition by antibodies or pharmacological agents, that will not have to cross the barrier.

Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

- **Project Title: MOLECULAR GENETIC ANALYSIS OF CHLAMYDIA PATHOGENICITY**

  Principal Investigator & Institution: Maurelli, Anthony T.; Professor; Henry M. Jackson Fdn for the Adv Mil/Med Rockville, Md 20852

  Timing: Fiscal Year 2002; Project Start 01-DEC-1998; Project End 30-NOV-2003

  Summary: (Adapted from the Applicant's Abstract): Bacteria of the genus Chlamydia are significant pathogens of animals and man. The diseases caused by Chlamydia spp. in man include pneumonitis, endocarditis, polyarthritis, blindness, and a wide range of sexually transmitted diseases including cervicitis, salpingitis, pelvic inflammatory disease, and infertility in females; and non-gonococcal urethritis and acute **epididymitis** in males. Despite many years of effort, the Chlamydia remain intractable to genetic analysis due to their obligate intracellular lifestyle and complex developmental cycle. No one has been able to introduce foreign DNA into this organism and achieve stable inheritance of the expression of the foreign genes. Few attempts at isolation of Chlamydia mutants have been reported. Even cloning of Chlamydia genes by complementation has been problematic due to the absence of, or poor expression of cloned Chlamydia genes in Escherichia coli. Our long term goal is to apply the power of genetics to study the pathogenic mechanisms of Chlamydia. The goal of this proposal is to develop genetic tools for the analysis of Chlamydia biology and pathogenesis and to use these tools to address specific problems of Chlamydia pathogenesis. The Specific aims are to: 1) design an efficient, reproducible method for introduction, expression, and stable maintenance of foreign DNA in Chlamydia; 2) design genetic tools for mutagenesis and selection of mutant phenotypes of Chlamydia; 3) clone Chlamydia genes by functional complementation; and, 4) develop a system for gene replacement in Chlamydia. Each of these aims will include development of a genetic tool, demonstration of the tools effectiveness, and application of the tool to a fundamental question of Chlamydia biology. Success in achieving these goals will have a significant impact on Chlamydia research by making new tools for genetic analysis of Chlamydia available. Rapid advances in our understanding of Chlamydia pathogenesis and biology

as well as the ability to construct Chlamydia mutants for vaccine development will be made possible by these new techniques.

Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

- **Project Title: VIRULENCE FACTORS OF CHLAMYDIAE**

  Principal Investigator & Institution: Wyrick, Priscilla B.; Professor; Microbiology; East Tennessee State University Box 70565 Johnson City, Tn 37601

  Timing: Fiscal Year 2002; Project Start 01-APR-1995; Project End 31-MAR-2005

  Summary: Chlamydia trachomatis serovars D-K are the most common cause, in the USA and worldwide, of bacterially-acquired sexually transmitted diseases and their sequelae, including prostatitis, **epididymitis,** pelvic inflammatory disease, ectopic pregnancy and sterility. Chlamydial diseases are insidious and they constitute significant primary, secondary and tertiary health concerns in which women bear a special burden because of their increased risk of adverse reproductive consequences. The goal of this laboratory for 25 years has been to try to understand the basic biology of chlamydial growth in its host epithelial cell in order to understand the infectious process and to permit dissection of the cellular and molecular consequences of persistent infection, since the majority of chlamydial tubal disease appears to result from chronic subclinical, persistent infection. This proposal is a continuation of on-going efforts to understand the crucial attachment/entry steps, the signals in chlamydiae-infected epithelial cells which trigger neutrophil chemotaxis--since a prolonged inflammatory response to persistent chlamydial antigens is believed to be responsible for the damage and sequelae, and hormone modulation of entry and signaling of neutrophils. In Aim 1, the chlamydial envelope-associated hsp70 and its co- chaperonins GrpE and DnaJ will be incorporated into liposomes, along with known and suspected adhesins, to define the role of hsp70 in entry and, in Aim 2, help identify the receptor which functions with newly identified, estrogen-responsive receptor accessory proteins. Also in Aim 2, the swine C. trachomatis S45 isolate- swine genital tissue model of infection will be developed to dissect hormone modulation of entry and neutrophil signaling (Aim 3). In Aim 3, a comparison will be made of chlamydial and chemokine signals triggering neutrophil chemotaxis to polarized HeLa cells normally and persistently infected with non-invasive, asymptomatic serovar E versus invasive, symptomatic serovar L2. Finally, in Aim 4, cryo-electron microscopy and density gradients will be used to show that chlamydial antigen secretion and trafficking can occur via vesicles pinched off from the chlamydial inclusion.

  Website: http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen

E-Journals: PubMed Central[3]

PubMed Central (PMC) is a digital archive of life sciences journal literature developed and managed by the National Center for Biotechnology Information (NCBI) at the U.S. National Library of Medicine (NLM).[4] Access to this growing archive of e-journals is free and

[3] Adapted from the National Library of Medicine: **http://www.pubmedcentral.nih.gov/about/intro.html**.

[4] With PubMed Central, NCBI is taking the lead in preservation and maintenance of open access to electronic literature, just as NLM has done for decades with printed biomedical literature. PubMed Central aims to become a world-class library of the digital age.

unrestricted.[5] To search, go to **http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=Pmc**, and type "epididymitis" (or synonyms) into the search box. This search gives you access to full-text articles. The following is a sample of items found for epididymitis in the PubMed Central database:

- **Bilateral abscessed orchiepididymitis associated with sepsis caused by Veillonella parvula and Clostridium perfringens: case report and review of the literature.** by Arrosagaray PM, Salas C, Morales M, Correas M, Barros JM, Cordon ML.; 1987 Aug; http://www.pubmedcentral.gov/picrender.fcgi?tool=pmcentrez&action=stream&blobtype=pdf&artid=269280
- **Characterization of Brucella ovis lipopolysaccharide and its use for diagnosis of ram epididymitis by enzyme-linked immunosorbent assay.** by Afzal M, Tengerdy RP, Squire PG, Ellis RP.; 1984 Dec; http://www.pubmedcentral.gov/picrender.fcgi?tool=pmcentrez&action=stream&blobtype=pdf&artid=271537
- **Comparative efficacies of ofloxacin, cefotaxime, and doxycycline for treatment of experimental epididymitis due to Escherichia coli in rats.** by Vieler E, Jantos C, Schmidts HL, Weidner W, Schiefer HG.; 1993 Apr; http://www.pubmedcentral.gov/picrender.fcgi?tool=pmcentrez&action=stream&blobtype=pdf&artid=187780
- **Experimental epididymitis due to Chlamydia trachomatis in rats.** by Jantos C, Baumgartner W, Durchfeld B, Schiefer HG.; 1992 Jun; http://www.pubmedcentral.gov/picrender.fcgi?tool=pmcentrez&action=stream&blobtype=pdf&artid=257161
- **Serodiagnosis of ram epididymitis by counterimmunoelectrophoresis, using Brucella ovis surface R antigen.** by Myers DM, Varela-Diaz VM.; 1979 Oct; http://www.pubmedcentral.gov/picrender.fcgi?tool=pmcentrez&action=stream&blobtype=pdf&artid=273195

The National Library of Medicine: PubMed

One of the quickest and most comprehensive ways to find academic studies in both English and other languages is to use PubMed, maintained by the National Library of Medicine.[6] The advantage of PubMed over previously mentioned sources is that it covers a greater number of domestic and foreign references. It is also free to use. If the publisher has a Web site that offers full text of its journals, PubMed will provide links to that site, as well as to sites offering other related data. User registration, a subscription fee, or some other type of fee may be required to access the full text of articles in some journals.

To generate your own bibliography of studies dealing with epididymitis, simply go to the PubMed Web site at **http://www.ncbi.nlm.nih.gov/pubmed**. Type "epididymitis" (or

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[5] The value of PubMed Central, in addition to its role as an archive, lies in the availability of data from diverse sources stored in a common format in a single repository. Many journals already have online publishing operations, and there is a growing tendency to publish material online only, to the exclusion of print.

[6] PubMed was developed by the National Center for Biotechnology Information (NCBI) at the National Library of Medicine (NLM) at the National Institutes of Health (NIH). The PubMed database was developed in conjunction with publishers of biomedical literature as a search tool for accessing literature citations and linking to full-text journal articles at Web sites of participating publishers. Publishers that participate in PubMed supply NLM with their citations electronically prior to or at the time of publication.

synonyms) into the search box, and click "Go." The following is the type of output you can expect from PubMed for epididymitis (hyperlinks lead to article summaries):

- **A case of tuberculous epididymitis associated with Addison's disease.**
  Author(s): Higashihara M, Nagata N, Takeuchi K, Ushio K.
  Source: Endocrinol Jpn. 1984 February; 31(1): 1-5.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=6734524

- **A double-blind, randomized, controlled multicentre study to compare the efficacy of ciprofloxacin with pivampicillin as oral therapy for epididymitis in men over 40 years of age.**
  Author(s): Eickhoff JH, Frimodt-Moller N, Walter S, Frimodt-Moller C.
  Source: Bju International. 1999 November; 84(7): 827-34.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=10532980

- **A false-positive scan for testicular torsion and false-negative scan for epididymitis.**
  Author(s): Rosenson AS, Ali A, Fordham EW, Chaviano A.
  Source: Clinical Nuclear Medicine. 1990 December; 15(12): 863-4. Review.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2276225

- **A prospective study of antisperm antibody development in acute epididymitis.**
  Author(s): Ingerslev HJ, Walter S, Andersen JT, Brandenhoff P, Eldrup J, Geerdsen JP, Scheibel J, Tromholt N, Jensen HM, Hjort T.
  Source: The Journal of Urology. 1986 July; 136(1): 162-4.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=3712605

- **A retrospective review of pediatric patients with epididymitis, testicular torsion, and torsion of testicular appendages.**
  Author(s): Kadish HA, Bolte RG.
  Source: Pediatrics. 1998 July; 102(1 Pt 1): 73-6.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=9651416

- **A statistical study of unilateral prophylactic vasectomy in the prevention of epididymitis: 1029 cases.**
  Author(s): Rinker JR, Hancock CV, Henderson WD.
  Source: The Journal of Urology. 1970 August; 104(2): 303.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=5448908

- **A survey of the prevalence of epididymitis in an industrial setting.**
  Author(s): Walrath J, Fayerweather WE, Spreen KA.
  Source: J Occup Med. 1992 February; 34(2): 170-2.
  http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=1597773

- **Acute epididymitis and Chlamydia trachomatis.**
  Author(s): Nilsson S, Nilsson B, Johannisson G, Lycke E.
  Source: Ann Chir Gynaecol. 1984; 73(1): 42-4.
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CHAPTER 2. NUTRITION AND EPIDIDYMITIS

Overview

In this chapter, we will show you how to find studies dedicated specifically to nutrition and epididymitis.

Finding Nutrition Studies on Epididymitis

The National Institutes of Health's Office of Dietary Supplements (ODS) offers a searchable bibliographic database called the IBIDS (International Bibliographic Information on Dietary Supplements; National Institutes of Health, Building 31, Room 1B29, 31 Center Drive, MSC 2086, Bethesda, Maryland 20892-2086, Tel: 301-435-2920, Fax: 301-480-1845, E-mail: ods@nih.gov). The IBIDS contains over 460,000 scientific citations and summaries about dietary supplements and nutrition as well as references to published international, scientific literature on dietary supplements such as vitamins, minerals, and botanicals.[7] The IBIDS includes references and citations to both human and animal research studies.

As a service of the ODS, access to the IBIDS database is available free of charge at the following Web address: **http://ods.od.nih.gov/databases/ibids.html**. After entering the search area, you have three choices: (1) IBIDS Consumer Database, (2) Full IBIDS Database, or (3) Peer Reviewed Citations Only.

Now that you have selected a database, click on the "Advanced" tab. An advanced search allows you to retrieve up to 100 fully explained references in a comprehensive format. Type "epididymitis" (or synonyms) into the search box, and click "Go." To narrow the search, you can also select the "Title" field.

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[7] Adapted from **http://ods.od.nih.gov**. IBIDS is produced by the Office of Dietary Supplements (ODS) at the National Institutes of Health to assist the public, healthcare providers, educators, and researchers in locating credible, scientific information on dietary supplements. IBIDS was developed and will be maintained through an interagency partnership with the Food and Nutrition Information Center of the National Agricultural Library, U.S. Department of Agriculture.

The following information is typical of that found when using the "Full IBIDS Database" to search for "epididymitis" (or a synonym):

- **Antioxidant treatment with carnitines is effective in infertile patients with prostatovesiculoepididymitis and elevated seminal leukocyte concentrations after treatment with nonsteroidal anti-inflammatory compounds.**
  Author(s): University of Catania, Catania, Italy. acaloger@unict.it
  Source: Vicari, E La Vignera, S Calogero, A E Fertil-Steril. 2002 December; 78(6): 1203-8 0015-0282
- **Effects of treatment with carnitines in infertile patients with prostato-vesiculo-epididymitis.**
  Author(s): Section of Andrology, Endocrinology and Internal Medicine, Department of Biomedical Sciences, University of Catania, Italy. acalogere@unict.it
  Source: Vicari, E Calogero, A E Hum-Reprod. 2001 November; 16(11): 2338-42 0268-1161
- **Protection of rams against epididymitis by a Brucella ovis-vitamin E adjuvant vaccine.**
  Source: Afzal, M. Tengerdy, R.P. Ellis, R.P. Kimberling, C.V. Morris, C.J. Vet-Immunol-Immunopathol. Amsterdam : Elsevier Science Publishers B.V. October 1984. volume 7 (3/4) page 293-304. ill. 0165-2427
- **Serious complications of tuberculous epididymitis.**
  Author(s): Dept of Medicine, Patras University Medical School, University Hospital, Patra, Greece. skout@med.upatras.gr
  Source: Skoutelis, A Marangos, M Petsas, T Chionis, I Barbalias, G Bassaris, H Infection. 2000 May-June; 28(3): 193-5 0300-8126

Federal Resources on Nutrition

In addition to the IBIDS, the United States Department of Health and Human Services (HHS) and the United States Department of Agriculture (USDA) provide many sources of information on general nutrition and health. Recommended resources include:

- healthfinder®, HHS's gateway to health information, including diet and nutrition: **http://www.healthfinder.gov/scripts/SearchContext.asp?topic=238&page=0**
- The United States Department of Agriculture's Web site dedicated to nutrition information: **www.nutrition.gov**
- The Food and Drug Administration's Web site for federal food safety information: **www.foodsafety.gov**
- The National Action Plan on Overweight and Obesity sponsored by the United States Surgeon General: **http://www.surgeongeneral.gov/topics/obesity/**
- The Center for Food Safety and Applied Nutrition has an Internet site sponsored by the Food and Drug Administration and the Department of Health and Human Services: **http://vm.cfsan.fda.gov/**
- Center for Nutrition Policy and Promotion sponsored by the United States Department of Agriculture: **http://www.usda.gov/cnpp/**
- Food and Nutrition Information Center, National Agricultural Library sponsored by the United States Department of Agriculture: **http://www.nal.usda.gov/fnic/**

- Food and Nutrition Service sponsored by the United States Department of Agriculture: **http://www.fns.usda.gov/fns/**

Additional Web Resources

A number of additional Web sites offer encyclopedic information covering food and nutrition. The following is a representative sample:

- AOL: **http://search.aol.com/cat.adp?id=174&layer=&from=subcats**
- Family Village: **http://www.familyvillage.wisc.edu/med_nutrition.html**
- Google: **http://directory.google.com/Top/Health/Nutrition/**
- Healthnotes: **http://www.healthnotes.com/**
- Open Directory Project: **http://dmoz.org/Health/Nutrition/**
- Yahoo.com: **http://dir.yahoo.com/Health/Nutrition/**
- WebMD®Health: **http://my.webmd.com/nutrition**
- WholeHealthMD.com: **http://www.wholehealthmd.com/reflib/0,1529,00.html**

CHAPTER 3. ALTERNATIVE MEDICINE AND EPIDIDYMITIS

Overview

In this chapter, we will begin by introducing you to official information sources on complementary and alternative medicine (CAM) relating to epididymitis. At the conclusion of this chapter, we will provide additional sources.

National Center for Complementary and Alternative Medicine

The National Center for Complementary and Alternative Medicine (NCCAM) of the National Institutes of Health (**http://nccam.nih.gov/**) has created a link to the National Library of Medicine's databases to facilitate research for articles that specifically relate to epididymitis and complementary medicine. To search the database, go to the following Web site: **http://www.nlm.nih.gov/nccam/camonpubmed.html**. Select "CAM on PubMed." Enter "epididymitis" (or synonyms) into the search box. Click "Go." The following references provide information on particular aspects of complementary and alternative medicine that are related to epididymitis:

- **Hatha Yoga therapy management of urologic disorders.**
  Author(s): Ripoll E, Mahowald D.
  Source: World Journal of Urology. 2002 November; 20(5): 306-9. Epub 2002 October 24. Review.
  http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=12522587&dopt=Abstract

- **HIV / STD interactions immunosuppression and future research development.**
  Author(s): Hafez ES, Merino G, Bailon R, Moran C.
  Source: Arch Aids Res. 1992; 6(4): 221-46.
  http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=12286086&dopt=Abstract

- **Protection of rams against epididymitis by a Brucella ovis-vitamin E adjuvant vaccine.**
  Author(s): Afzal M, Tengerdy RP, Ellis RP, Kimberling CV, Morris CJ.

Source: Veterinary Immunology and Immunopathology. 1984 October; 7(3-4): 293-304.
http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=6506451&dopt=Abstract

- **Response of recurrent medulloblastoma to low-dose oral etoposide.**
Author(s): Ashley DM, Meier L, Kerby T, Zalduondo FM, Friedman HS, Gajjar A, Kun L, Duffner PK, Smith S, Longee D.
Source: Journal of Clinical Oncology : Official Journal of the American Society of Clinical Oncology. 1996 June; 14(6): 1922-7.
http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=8656261&dopt=Abstract

- **Serological responses of rams to a Brucella ovis-vitamin E adjuvant vaccine.**
Author(s): Tengerdy RP, Ameghino E, Riemann H.
Source: Vaccine. 1991 April; 9(4): 273-6.
http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=2058270&dopt=Abstract

- **The role of chlamydiae in epididymitis.**
Author(s): Melekos MD, Asbach HW.
Source: International Urology and Nephrology. 1988; 20(3): 293-7.
http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=3136090&dopt=Abstract

Additional Web Resources

A number of additional Web sites offer encyclopedic information covering CAM and related topics. The following is a representative sample:

- Alternative Medicine Foundation, Inc.: **http://www.herbmed.org/**
- AOL: **http://search.aol.com/cat.adp?id=169&layer=&from=subcats**
- Chinese Medicine: **http://www.newcenturynutrition.com/**
- drkoop.com®: **http://www.drkoop.com/InteractiveMedicine/IndexC.html**
- Family Village: **http://www.familyvillage.wisc.edu/med_altn.htm**
- Google: **http://directory.google.com/Top/Health/Alternative/**
- Healthnotes: **http://www.healthnotes.com/**
- MedWebPlus: **http://medwebplus.com/subject/Alternative_and_Complementary_Medicine**
- Open Directory Project: **http://dmoz.org/Health/Alternative/**
- HealthGate: **http://www.tnp.com/**
- WebMD®Health: **http://my.webmd.com/drugs_and_herbs**
- WholeHealthMD.com: **http://www.wholehealthmd.com/reflib/0,1529,00.html**
- Yahoo.com: **http://dir.yahoo.com/Health/Alternative_Medicine/**

The following is a specific Web list relating to epididymitis; please note that any particular subject below may indicate either a therapeutic use, or a contraindication (potential danger), and does not reflect an official recommendation:

- **Herbs and Supplements**

  Saw Palmetto
  Source: The Canadian Internet Directory for Holistic Help, WellNet, Health and Wellness Network; www.wellnet.ca

General References

A good place to find general background information on CAM is the National Library of Medicine. It has prepared within the MEDLINEplus system an information topic page dedicated to complementary and alternative medicine. To access this page, go to the MEDLINEplus site at **http://www.nlm.nih.gov/medlineplus/alternativemedicine.html**. This Web site provides a general overview of various topics and can lead to a number of general sources.

CHAPTER 4. BOOKS ON EPIDIDYMITIS

Overview

This chapter provides bibliographic book references relating to epididymitis. In addition to online booksellers such as **www.amazon.com** and **www.bn.com**, excellent sources for book titles on epididymitis include the Combined Health Information Database and the National Library of Medicine. Your local medical library also may have these titles available for loan.

Chapters on Epididymitis

In order to find chapters that specifically relate to epididymitis, an excellent source of abstracts is the Combined Health Information Database. You will need to limit your search to book chapters and epididymitis using the "Detailed Search" option. Go to the following hyperlink: **http://chid.nih.gov/detail/detail.html**. To find book chapters, use the drop boxes at the bottom of the search page where "You may refine your search by." Select the dates and language you prefer, and the format option "Book Chapter." Type "epididymitis" (or synonyms) into the "For these words:" box. The following is a typical result when searching for book chapters on epididymitis:

- **Intermittent Catheterization**

  Source: in Corcos, J.; Schick, E., eds. Urinary Sphincter. New York, NY: Marcel Dekker, Inc. 2001. p. 475-482.

  Contact: Available from Marcel Dekker, Inc. Cimarron Road, P.O. Box 5005, Monticello, NY 12701. (800) 228-1160 or (845) 796-1919. Fax (845) 796-1772. E-mail: custserv@dekker.com. International E-mail: intlcustserv@dekker.com. Website: www.dekker.com. PRICE: $225.00 plus shipping and handling. ISBN: 0824704770.

  Summary: The introduction of intermittent catheterization as a management option for a multitude of urinary bladder or sphincter dysfunctions has changed the practice of urology over the past 30 years. The technique involves emptying the bladder (or other urine storage reservoir) on a regular basis with a catheter inserted by the patient or caregiver. The catheter is removed when the bladder is empty. When performed at regular intervals, this technique prevents overdistension of the bladder with urine, while allowing the patient to remain free of a chronically indwelling catheter or other

drainage device. This chapter on intermittent catheterization is from a textbook that presents a detailed and systematic account of the current knowledge on the anatomy, physiology, functional relationships, and range of dysfunctions that affect the urinary sphincter. The authors note that clean intermittent catheterization (CIC) is appropriate for children as well as for adults, and is applicable to the management of urine storage dysfunction as well as urine emptying dysfunction. The authors review candidacy for CIC, the evaluation of potential candidates, CIC technique and instruction, followup, and complications, which can include urinary tract infection, renal (kidney) deterioration, urethral trauma, calculi, and **epididymitis** (in males, the infection of the ducts in the testicles). The authors conclude that a properly selected CIC regimen in an appropriate patient should permit continent urine storage with upper urinary tract preservation. The technique is relatively simple to learn and to teach, and with careful followup, complications should be few. 16 references.

- **Spinal Cord Injury and Infertility**

  Source: in Jequier, A.M. Male Infertility: A Guide for the Clinician. Malden, MA: Blackwell Science, Inc. 2000. p. 226-237.

  Contact: Available from Blackwell Science, Inc. 350 Main Street, Commerce Place, Malden, MA 02148. (800) 215-1000 or (617) 388-8250. Fax (617) 388-8270. E-mail: books@blacksci.com. Website: www.blackwell-science.com. PRICE: $186.95. ISBN: 0632051299.

  Summary: There are many problems in spinal cord injury that will affect many systems in the body, but particularly severe is the effect that it has on the urological and reproductive tracts. This chapter on spinal cord injury and infertility is from a textbook on male infertility. Topics include the causation of the disorders in erection and ejaculation in men with spinal cord injury; damage to the autonomic nervous system in the absence of spinal cord injury; lumbar plexus neuropraxia; urological problems in spinal cord injury, including bladder atony, the reflex bladder, detrusor dyssynergia, urinary tract infection, calculi, prostatitis, and **epididymitis;** autonomic hyperreflexia; the management of the sexual dysfunction in men with spinal cord injury; management of ejaculatory failure in men with spinal injury; and assisted conception in the treatment of infertility in men with spinal injury. 1 figure. 18 references.

- **Prostatitis and Lower Urinary Tract Infections in Men**

  Source: in Hanno, P.M.; Malkowicz, S.B.; Wein, A.J. Clinical Manual of Urology. New York, NY: McGraw-Hill, Inc. 2001. p.185-198.

  Contact: Available from McGraw-Hill, Inc. 1221 Avenue of the Americas, New York, NY 10020. (612) 832-7869. Website: www.bookstore.mcgraw-hill.com. PRICE: $54.95;plus shipping and handling. ISBN: 0071362010.

  Summary: This chapter is from a handbook that serves as a basic, portable reference tool for the busy medical student and house officer rotating on the urology service and that enables program directors to use the information presented as a framework on which to present their particular management styles and strategies. In addition, the handbook can serve as a ready reference for the primary care physician, who is often the first person to see the patient with what ultimately proves to be a urologic problem. This chapter considers prostatitis and lower urinary tract infections (UTIs) in men. Topics include the incidence of and risk factors for UTIs in men; pathogenesis; localization of lower UTI (through the use of segmented bacteriologic localization cultures); the signs and symptoms, diagnosis, and treatment of bacterial cystitis; the epidemiology,

classification, and treatment of acute and chronic bacterial prostatitis or chronic pelvic pain syndrome; infection of the seminal vesicles; the etiology, signs and symptoms, laboratory evaluation, differential diagnosis, and treatment of **epididymitis;** and the diagnosis and care of gonococcal and nongonococcal urethritis. The information in the chapter is presented in outline format, for ease of reference, and line drawings illustrate the chapter. The chapter concludes with a list of ten self-assessment questions. 2 figures. 3 tables. 9 references.

- **Men's Health**

  Source: in Hagan, P.T., ed. Mayo Clinic Guide to Self-Care: Answers for Everyday Health Problems. New York, NY: Kensington Publishers. 1999. p. 140-143.

  Contact: Available from Mayo Clinic. 200 First Street, S.W., Rochester, MN 55905. (800) 291-1128 or (507) 284-2511. Fax (507) 284-0161. Website: www.mayo.edu. PRICE: $16.95 plus shipping and handling. ISBN: 0962786578.

  Summary: This chapter on men's health issues is from a family health book published by the Mayo Clinic. The chapter covers testicular pain, including the pain caused by testicular torsion, **epididymitis,** or orchitis; screening for cancer of the testicle; enlarged prostate; screening for prostate cancer; painful urination; erectile dysfunction (impotence); and vasectomy (male birth control). In each section, this consumer oriented reference book explains symptoms, risk factors, diagnostic tests, self care and medical treatment choices, and patient care considerations. 2 figures.

- **Renal and Urologic Disorders**

  Source: in Norris, J., et al., eds. Professional Guide to Diseases. 5th edition. Springhouse, PA: Springhouse Corporation. 1995. p. 747-803.

  Contact: Available from Springhouse Corporation. 1111 Bethlehem Pike, P.O. Box 908, Springhouse, PA 19477-0908. (800) 346-7844 or (215) 646-8700. Fax (215) 646-4508. PRICE: $34.95 (as of 1995). ISBN: 0874347696.

  Summary: This chapter on renal and urologic disorders is from a physician's reference text on almost 600 diseases. The chapter begins with an introduction that briefly summarizes the normal physiology and function of the renal and urologic system. Five sections follow: causes, signs and symptoms, diagnosis, treatment, and special considerations. Specific topics include congenital anomalies, including medullary sponge kidney and polycystic kidney disease; acute renal disorders, including renal failure, pyelonephritis, poststreptococcal glomerulonephritis, acute tubular necrosis, renal infarction, renal calculi, and renal vein thrombosis; chronic renal diseases, including nephrotic syndrome, chronic glomerulonephritis, cystinuria, renovascular hypertension, hydronephrosis, renal tubular acidosis, Fanconi's syndrome, chronic renal failure, and Alport's syndrome; lower urinary tract disorders, including lower urinary tract infection, vesicoureteral reflux, neurogenic bladder, and congenital anomalies; and prostate and epididymis disorders, including prostatitis, **epididymitis,** and benign prostatic hyperplasia. 7 figures. 4 tables. 4 references.

- **Urinary Tract Infection**

  Source: in Blaivas, J.G. Conquering Bladder and Prostate Problems: The Authoritative Guide for Men and Women. New York, NY: Plenum Publishing Corporation. 1998. p. 115-128.

Contact: Available from Kluwer Academic-Plenum Publishing Corporation. 233 Spring Street, New York, NY 10013-1578. (800) 221-9369 or (212) 620-8035. Fax (212) 647-1898. Website: www.plenum.com. PRICE: $26.95. ISBN: 0306458640.

Summary: This chapter on urinary tract infection is from a book for people who have urinary bladder and prostate problems: people who urinate too often, who plan their daily activities around the availability of a bathroom, men with prostate problems, women with incontinence, and people with bladder pain. The book is written in a clear, nontechnical, humorous style that makes the material more accessible to the lay reader. Urinary tract infections (UTIs) are the most common bacterial infections to affect people of all ages. During childbearing years, it is about 50 times more common in women than men, but at the extremes of life (childhood and old age), UTIs affect both sexes equally. In the great majority of people, UTIs are nothing more than a nuisance, and are cured after just a day or two of antibiotics. For other people, though, recurring infections can interfere with their lives and restrict their activities. For these people and for those who develop kidney infections, a full urologic evaluation should be done to identify and treat the underlying causes. Fortunately, for the great majority of people, effective treatment and cures are possible. The chapter describes the symptoms of a UTI, the causes and treatment of cystitis (bladder infection), urethritis and urethral syndrome in women, vaginal infections, urethritis in men, prostatitis and prostatodynia, **epididymitis** (inflammation of the epididymis, the coiled up tube in the testes), and kidney infections.

- **Urology**

Source: in Tierney, L.M.; McPhee, S.J.; Papadakis, M.A., eds. Current Medical Diagnosis and Treatment 1999. 38th ed. Stamford, CT: Appleton and Lange. 1999. p. 894-931.

Contact: Available from McGraw-Hill Companies. 1221 Avenue of the Americas, New York, NY 10020. (800) 352-3566 or (212) 512-4100. Fax (212) 512-4105. Website: www.mcgraw-hill.com. PRICE: $47.50 plus shipping and handling. ISBN: 0838515509.

Summary: This chapter on urology is from a general medical textbook designed as a single source reference for practitioners in both hospital and ambulatory settings. The textbook offers extensive coverage of all primary care topics, including gynecology, obstetrics, dermatology, ophthalmology, otolaryngology, psychiatry, neurology, and urology. The chapter begins with a review of urologic evaluation. The first section covers diagnostic issues: the patient history, including systemic manifestations, pain, hematuria (blood in the urine), irritative voiding symptoms, obstructive voiding symptoms, and incontinence; physical examination; and urinalysis, including collection of specimens, dipstick urinalysis, and microscopic urinalysis. The chapter then addresses the evaluation of hematuria, and discusses genitourinary tract infections, including acute cystitis, acute pyelonephritis, acute bacterial prostatitis, chronic bacterial prostatitis, nonbacterial prostatitis, prostatodynia, and acute **epididymitis.** The reminder of the chapter covers urinary stone disease, urinary incontinence, male erectile dysfunction (impotence) and sexual dysfunction, male infertility, benign prostatic hyperplasia (BPH), malignant genitourinary tract disorders, bladder cancer, cancers of the ureter and renal pelvis, and primary and secondary tumors of the kidney. For each condition, the authors discuss the essentials of diagnosis, general considerations (including etiology), clinical findings, treatment course, and prognosis. Each section offers relevant references, and some sections conclude with a brief list of relevant World Wide Web sites. 1 figure. 13 tables. 49 references.

- **Bacterial Infections of the Genitourinary Tract**

  Source: in Tanagho, E.A. and McAninch, J.W., eds. Smith's General Urology. Fifteenth Edition. Columbus, OH: McGraw-Hill, Inc. 2000. p. 237-264.

  Contact: Available from McGraw-Hill. Medical Publishing. 1221 P.O. Box 182615, Columbus, OH 43272-5046. (800) 262-4729. PRICE: $54.95;plus shipping and handling. ISBN: 0838586074.

  Summary: Urinary tract infections (UTIs) caused by pathogenic bacteria are a significant source of morbidity (illness or disease) and mortality (death) in modern medicine, despite the widespread use of antibiotics. This chapter on bacterial infections of the genitourinary tract is from a textbook that offers a practical and concise guide to the understanding, diagnosis, and treatment of urologic diseases. The authors note that although most cases are susceptible to a variety of antibiotic agents and respond quickly to short term therapy, fulminant infections with resistant organisms are difficult to treat and require a multimodal therapeutic approach. Progress in the management of bacterial UTIs has come about with the development of new antibiotic agents that have excellent activity against the usual uropathogens while simultaneously having fewer adverse effects on the patients. The authors stress that, fortunately, the organisms responsible for UTIs are still quite predictable. They discuss classification of UTIs; pathogenesis of UTIs, including host susceptibility and bacterial virulence; diagnosis; antibiotic agents; antibiotic prophylaxis (preventive therapy) for endourologic procedures; kidney infections, including acute pyelonephritis, emphysematous pyelonephritis, chronic pyelonephritis, renal abscess, perinephric abscess, pyonephrosis and infected hydronephrosis, and xanthogranulomatous pyelonephritis; genitourinary malacoplakia; bladder infections; bacteriuria (bacteria in the urine) in pregnancy; prostatitis; and **epididymitis.** 6 figures. 7 tables. 156 references.

APPENDICES

APPENDIX A. PHYSICIAN RESOURCES

Overview

In this chapter, we focus on databases and Internet-based guidelines and information resources created or written for a professional audience.

NIH Guidelines

Commonly referred to as "clinical" or "professional" guidelines, the National Institutes of Health publish physician guidelines for the most common diseases. Publications are available at the following by relevant Institute[8]:

- Office of the Director (OD); guidelines consolidated across agencies available at **http://www.nih.gov/health/consumer/conkey.htm**
- National Institute of General Medical Sciences (NIGMS); fact sheets available at **http://www.nigms.nih.gov/news/facts/**
- National Library of Medicine (NLM); extensive encyclopedia (A.D.A.M., Inc.) with guidelines: **http://www.nlm.nih.gov/medlineplus/healthtopics.html**
- National Cancer Institute (NCI); guidelines available at **http://www.cancer.gov/cancerinfo/list.aspx?viewid=5f35036e-5497-4d86-8c2c-714a9f7c8d25**
- National Eye Institute (NEI); guidelines available at **http://www.nei.nih.gov/order/index.htm**
- National Heart, Lung, and Blood Institute (NHLBI); guidelines available at **http://www.nhlbi.nih.gov/guidelines/index.htm**
- National Human Genome Research Institute (NHGRI); research available at **http://www.genome.gov/page.cfm?pageID=10000375**
- National Institute on Aging (NIA); guidelines available at **http://www.nia.nih.gov/health/**

[8] These publications are typically written by one or more of the various NIH Institutes.

- National Institute on Alcohol Abuse and Alcoholism (NIAAA); guidelines available at **http://www.niaaa.nih.gov/publications/publications.htm**
- National Institute of Allergy and Infectious Diseases (NIAID); guidelines available at **http://www.niaid.nih.gov/publications/**
- National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS); fact sheets and guidelines available at **http://www.niams.nih.gov/hi/index.htm**
- National Institute of Child Health and Human Development (NICHD); guidelines available at **http://www.nichd.nih.gov/publications/pubskey.cfm**
- National Institute on Deafness and Other Communication Disorders (NIDCD); fact sheets and guidelines at **http://www.nidcd.nih.gov/health/**
- National Institute of Dental and Craniofacial Research (NIDCR); guidelines available at **http://www.nidr.nih.gov/health/**
- National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK); guidelines available at **http://www.niddk.nih.gov/health/health.htm**
- National Institute on Drug Abuse (NIDA); guidelines available at **http://www.nida.nih.gov/DrugAbuse.html**
- National Institute of Environmental Health Sciences (NIEHS); environmental health information available at **http://www.niehs.nih.gov/external/facts.htm**
- National Institute of Mental Health (NIMH); guidelines available at **http://www.nimh.nih.gov/practitioners/index.cfm**
- National Institute of Neurological Disorders and Stroke (NINDS); neurological disorder information pages available at **http://www.ninds.nih.gov/health_and_medical/disorder_index.htm**
- National Institute of Nursing Research (NINR); publications on selected illnesses at **http://www.nih.gov/ninr/news-info/publications.html**
- National Institute of Biomedical Imaging and Bioengineering; general information at **http://grants.nih.gov/grants/becon/becon_info.htm**
- Center for Information Technology (CIT); referrals to other agencies based on keyword searches available at **http://kb.nih.gov/www_query_main.asp**
- National Center for Complementary and Alternative Medicine (NCCAM); health information available at **http://nccam.nih.gov/health/**
- National Center for Research Resources (NCRR); various information directories available at **http://www.ncrr.nih.gov/publications.asp**
- Office of Rare Diseases; various fact sheets available at **http://rarediseases.info.nih.gov/html/resources/rep_pubs.html**
- Centers for Disease Control and Prevention; various fact sheets on infectious diseases available at **http://www.cdc.gov/publications.htm**

NIH Databases

In addition to the various Institutes of Health that publish professional guidelines, the NIH has designed a number of databases for professionals.[9] Physician-oriented resources provide a wide variety of information related to the biomedical and health sciences, both past and present. The format of these resources varies. Searchable databases, bibliographic citations, full-text articles (when available), archival collections, and images are all available. The following are referenced by the National Library of Medicine:[10]

- **Bioethics:** Access to published literature on the ethical, legal, and public policy issues surrounding healthcare and biomedical research. This information is provided in conjunction with the Kennedy Institute of Ethics located at Georgetown University, Washington, D.C.: **http://www.nlm.nih.gov/databases/databases_bioethics.html**
- **HIV/AIDS Resources:** Describes various links and databases dedicated to HIV/AIDS research: **http://www.nlm.nih.gov/pubs/factsheets/aidsinfs.html**
- **NLM Online Exhibitions:** Describes "Exhibitions in the History of Medicine": **http://www.nlm.nih.gov/exhibition/exhibition.html**. Additional resources for historical scholarship in medicine: **http://www.nlm.nih.gov/hmd/hmd.html**
- **Biotechnology Information:** Access to public databases. The National Center for Biotechnology Information conducts research in computational biology, develops software tools for analyzing genome data, and disseminates biomedical information for the better understanding of molecular processes affecting human health and disease: **http://www.ncbi.nlm.nih.gov/**
- **Population Information:** The National Library of Medicine provides access to worldwide coverage of population, family planning, and related health issues, including family planning technology and programs, fertility, and population law and policy: **http://www.nlm.nih.gov/databases/databases_population.html**
- **Cancer Information:** Access to cancer-oriented databases: **http://www.nlm.nih.gov/databases/databases_cancer.html**
- **Profiles in Science:** Offering the archival collections of prominent twentieth-century biomedical scientists to the public through modern digital technology: **http://www.profiles.nlm.nih.gov/**
- **Chemical Information:** Provides links to various chemical databases and references: **http://sis.nlm.nih.gov/Chem/ChemMain.html**
- **Clinical Alerts:** Reports the release of findings from the NIH-funded clinical trials where such release could significantly affect morbidity and mortality: **http://www.nlm.nih.gov/databases/alerts/clinical_alerts.html**
- **Space Life Sciences:** Provides links and information to space-based research (including NASA): **http://www.nlm.nih.gov/databases/databases_space.html**
- **MEDLINE:** Bibliographic database covering the fields of medicine, nursing, dentistry, veterinary medicine, the healthcare system, and the pre-clinical sciences: **http://www.nlm.nih.gov/databases/databases_medline.html**

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[9] Remember, for the general public, the National Library of Medicine recommends the databases referenced in MEDLINE*plus* (**http://medlineplus.gov/** or **http://www.nlm.nih.gov/medlineplus/databases.html**).

[10] See **http://www.nlm.nih.gov/databases/databases.html**.

- **Toxicology and Environmental Health Information (TOXNET):** Databases covering toxicology and environmental health: **http://sis.nlm.nih.gov/Tox/ToxMain.html**
- **Visible Human Interface:** Anatomically detailed, three-dimensional representations of normal male and female human bodies: **http://www.nlm.nih.gov/research/visible/visible_human.html**

The NLM Gateway[11]

The NLM (National Library of Medicine) Gateway is a Web-based system that lets users search simultaneously in multiple retrieval systems at the U.S. National Library of Medicine (NLM). It allows users of NLM services to initiate searches from one Web interface, providing one-stop searching for many of NLM's information resources or databases.[12] To use the NLM Gateway, simply go to the search site at **http://gateway.nlm.nih.gov/gw/Cmd**. Type "epididymitis" (or synonyms) into the search box and click "Search." The results will be presented in a tabular form, indicating the number of references in each database category.

Results Summary

Category	Items Found
Journal Articles	2225
Books / Periodicals / Audio Visual	57
Consumer Health	16
Meeting Abstracts	7
Other Collections	8
Total	2313

HSTAT[13]

HSTAT is a free, Web-based resource that provides access to full-text documents used in healthcare decision-making.[14] These documents include clinical practice guidelines, quick-reference guides for clinicians, consumer health brochures, evidence reports and technology assessments from the Agency for Healthcare Research and Quality (AHRQ), as well as AHRQ's Put Prevention Into Practice.[15] Simply search by "epididymitis" (or synonyms) at the following Web site: **http://text.nlm.nih.gov**.

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[11] Adapted from NLM: **http://gateway.nlm.nih.gov/gw/Cmd?Overview.x**.

[12] The NLM Gateway is currently being developed by the Lister Hill National Center for Biomedical Communications (LHNCBC) at the National Library of Medicine (NLM) of the National Institutes of Health (NIH).

[13] Adapted from HSTAT: **http://www.nlm.nih.gov/pubs/factsheets/hstat.html**.

[14] The HSTAT URL is **http://hstat.nlm.nih.gov/**.

[15] Other important documents in HSTAT include: the National Institutes of Health (NIH) Consensus Conference Reports and Technology Assessment Reports; the HIV/AIDS Treatment Information Service (ATIS) resource documents; the Substance Abuse and Mental Health Services Administration's Center for Substance Abuse Treatment (SAMHSA/CSAT) Treatment Improvement Protocols (TIP) and Center for Substance Abuse Prevention (SAMHSA/CSAP) Prevention Enhancement Protocols System (PEPS); the Public Health Service (PHS) Preventive Services Task Force's *Guide to Clinical Preventive Services*; the independent, nonfederal Task Force on Community Services' *Guide to Community Preventive Services*; and the Health Technology Advisory Committee (HTAC) of the Minnesota Health Care Commission (MHCC) health technology evaluations.

Coffee Break: Tutorials for Biologists[16]

Coffee Break is a general healthcare site that takes a scientific view of the news and covers recent breakthroughs in biology that may one day assist physicians in developing treatments. Here you will find a collection of short reports on recent biological discoveries. Each report incorporates interactive tutorials that demonstrate how bioinformatics tools are used as a part of the research process. Currently, all Coffee Breaks are written by NCBI staff.[17] Each report is about 400 words and is usually based on a discovery reported in one or more articles from recently published, peer-reviewed literature.[18] This site has new articles every few weeks, so it can be considered an online magazine of sorts. It is intended for general background information. You can access the Coffee Break Web site at the following hyperlink: **http://www.ncbi.nlm.nih.gov/Coffeebreak/**.

Other Commercial Databases

In addition to resources maintained by official agencies, other databases exist that are commercial ventures addressing medical professionals. Here are some examples that may interest you:

- **CliniWeb International:** Index and table of contents to selected clinical information on the Internet; see **http://www.ohsu.edu/cliniweb/**.
- **Medical World Search:** Searches full text from thousands of selected medical sites on the Internet; see **http://www.mwsearch.com/**.

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[16] Adapted from **http://www.ncbi.nlm.nih.gov/Coffeebreak/Archive/FAQ.html**.

[17] The figure that accompanies each article is frequently supplied by an expert external to NCBI, in which case the source of the figure is cited. The result is an interactive tutorial that tells a biological story.

[18] After a brief introduction that sets the work described into a broader context, the report focuses on how a molecular understanding can provide explanations of observed biology and lead to therapies for diseases. Each vignette is accompanied by a figure and hypertext links that lead to a series of pages that interactively show how NCBI tools and resources are used in the research process.

APPENDIX B. PATIENT RESOURCES

Overview

Official agencies, as well as federally funded institutions supported by national grants, frequently publish a variety of guidelines written with the patient in mind. These are typically called "Fact Sheets" or "Guidelines." They can take the form of a brochure, information kit, pamphlet, or flyer. Often they are only a few pages in length. Since new guidelines on epididymitis can appear at any moment and be published by a number of sources, the best approach to finding guidelines is to systematically scan the Internet-based services that post them.

Patient Guideline Sources

The remainder of this chapter directs you to sources which either publish or can help you find additional guidelines on topics related to epididymitis. Due to space limitations, these sources are listed in a concise manner. Do not hesitate to consult the following sources by either using the Internet hyperlink provided, or, in cases where the contact information is provided, contacting the publisher or author directly.

The National Institutes of Health

The NIH gateway to patients is located at **http://health.nih.gov/**. From this site, you can search across various sources and institutes, a number of which are summarized below.

Topic Pages: MEDLINEplus

The National Library of Medicine has created a vast and patient-oriented healthcare information portal called MEDLINEplus. Within this Internet-based system are "health topic pages" which list links to available materials relevant to epididymitis. To access this system, log on to **http://www.nlm.nih.gov/medlineplus/healthtopics.html**. From there you can either search using the alphabetical index or browse by broad topic areas. Recently, MEDLINEplus listed the following when searched for "epididymitis":

- Other guides

  Candidiasis
  http://www.nlm.nih.gov/medlineplus/candidiasis.html

  Gonorrhea
  http://www.nlm.nih.gov/medlineplus/gonorrhea.html

  Male Genital Disorders
  http://www.nlm.nih.gov/medlineplus/malegenitaldisorders.html

  Prostate Diseases
  http://www.nlm.nih.gov/medlineplus/prostatediseases.html

  Testicular Cancer
  http://www.nlm.nih.gov/medlineplus/testicularcancer.html

You may also choose to use the search utility provided by MEDLINEplus at the following Web address: **http://www.nlm.nih.gov/medlineplus/**. Simply type a keyword into the search box and click "Search." This utility is similar to the NIH search utility, with the exception that it only includes materials that are linked within the MEDLINEplus system (mostly patient-oriented information). It also has the disadvantage of generating unstructured results. We recommend, therefore, that you use this method only if you have a very targeted search.

The Combined Health Information Database (CHID)

CHID Online is a reference tool that maintains a database directory of thousands of journal articles and patient education guidelines on epididymitis. CHID offers summaries that describe the guidelines available, including contact information and pricing. CHID's general Web site is **http://chid.nih.gov/**. To search this database, go to **http://chid.nih.gov/detail/detail.html**. In particular, you can use the advanced search options to look up pamphlets, reports, brochures, and information kits. The following was recently posted in this archive:

- **Epididymitis and Orchitis: Common Inflammations in the Scrotum**

  Source: San Bruno, CA: StayWell Company. 2001. [2 p.].

  Contact: StayWell Company: Krames Health and Safety Education. 780 Township Line Road, Yardley, PA 19067. (800) 333-3032. Fax (415) 244-4512. E-mail: info@krames.com. Website: www.staywell.com. PRICE: $21.95 per pack of 50; plus shipping and handling. Order number 91866.

  Summary: This brochure familiarizes readers with epididymitis and orchitis. The two testicles are the male sex organs that produce sperm and male hormones; they are located inside the scrotum. Epididymitis is an inflammation of the epididymis, the coiled tube behind each testicle. When the inflammation spreads to a testicle, it is called orchitis. Inflammation is most often caused by bacteria in the urinary tract (a bladder infection) or by bacteria passed between partners during sex. The brochure describes the symptoms of acute and chronic types of inflammation, then reviews the evaluation and treatment. The doctor diagnoses epididymitis through a physical exam and laboratory tests. Treatment includes medication to get rid of the bacteria. Resting, supporting the scrotum, and using ice packs can help relieve the symptoms. For men who are sexually active, any partners need to see a doctor as well. The inflammation will go away with

treatment; however, some men will have an achy feeling in the testicles for several weeks or months as the healing process continues. The brochure is illustrated with full color line drawings. 7 references.

- **Epididymitis: Urethritis (NSU/NGU)**

  Source: Marietta, GA: GU Logic. 1994. 2 p.

  Contact: Available from GU Logic. 2470 Windy Hill Road, Suite 108, Marietta, GA 30067. (800) 451-8107. PRICE: $35 for 50 copies. Order Number: GU70.

  Summary: This patient education brochure describes epididymitis, scrotal pain originating in the epididymis, and urethritis. Topics in the first section include the symptoms and causes of epididymitis; the difference between acute and chronic epididymitis; and treatment options. Topics in the urethritis section include the symptoms, signs, causes, and treatment of non-specific urethritis (NSU). 1 figure.

The National Guideline Clearinghouse™

The National Guideline Clearinghouse™ offers hundreds of evidence-based clinical practice guidelines published in the United States and other countries. You can search this site located at **http://www.guideline.gov/** by using the keyword "epididymitis" (or synonyms). The following was recently posted:

- **Epididymitis. Sexually transmitted diseases treatment guidelines 2002**

  Source: Centers for Disease Control and Prevention - Federal Government Agency [U.S.]; 1993 (revised 2002 May 10); 2 pages

  http://www.guideline.gov/summary/summary.aspx?doc_id=3239&nbr=2465&string=epididymitis

The NIH Search Utility

The NIH search utility allows you to search for documents on over 100 selected Web sites that comprise the NIH-WEB-SPACE. Each of these servers is "crawled" and indexed on an ongoing basis. Your search will produce a list of various documents, all of which will relate in some way to epididymitis. The drawbacks of this approach are that the information is not organized by theme and that the references are often a mix of information for professionals and patients. Nevertheless, a large number of the listed Web sites provide useful background information. We can only recommend this route, therefore, for relatively rare or specific disorders, or when using highly targeted searches. To use the NIH search utility, visit the following Web page: **http://search.nih.gov/index.html**.

NORD (The National Organization of Rare Disorders, Inc.)

NORD provides an invaluable service to the public by publishing short yet comprehensive guidelines on over 1,000 diseases. NORD primarily focuses on rare diseases that might not be covered by the previously listed sources. NORD's Web address is **http://www.rarediseases.org/**. A complete guide on epididymitis can be purchased from NORD for a nominal fee.

Additional Web Sources

A number of Web sites are available to the public that often link to government sites. These can also point you in the direction of essential information. The following is a representative sample:

- AOL: **http://search.aol.com/cat.adp?id=168&layer=&from=subcats**
- Family Village: **http://www.familyvillage.wisc.edu/specific.htm**
- Google: **http://directory.google.com/Top/Health/Conditions_and_Diseases/**
- Med Help International: **http://www.medhelp.org/HealthTopics/A.html**
- Open Directory Project: **http://dmoz.org/Health/Conditions_and_Diseases/**
- Yahoo.com: **http://dir.yahoo.com/Health/Diseases_and_Conditions/**
- WebMD®Health: **http://my.webmd.com/health_topics**

Finding Associations

There are several Internet directories that provide lists of medical associations with information on or resources relating to epididymitis. By consulting all of associations listed in this chapter, you will have nearly exhausted all sources for patient associations concerned with epididymitis.

The National Health Information Center (NHIC)

The National Health Information Center (NHIC) offers a free referral service to help people find organizations that provide information about epididymitis. For more information, see the NHIC's Web site at **http://www.health.gov/NHIC/** or contact an information specialist by calling 1-800-336-4797.

Directory of Health Organizations

The Directory of Health Organizations, provided by the National Library of Medicine Specialized Information Services, is a comprehensive source of information on associations. The Directory of Health Organizations database can be accessed via the Internet at **http://www.sis.nlm.nih.gov/Dir/DirMain.html**. It is composed of two parts: DIRLINE and Health Hotlines.

The DIRLINE database comprises some 10,000 records of organizations, research centers, and government institutes and associations that primarily focus on health and biomedicine. To access DIRLINE directly, go to the following Web site: **http://dirline.nlm.nih.gov/**. Simply type in "epididymitis" (or a synonym), and you will receive information on all relevant organizations listed in the database.

Health Hotlines directs you to toll-free numbers to over 300 organizations. You can access this database directly at **http://www.sis.nlm.nih.gov/hotlines/**. On this page, you are given the option to search by keyword or by browsing the subject list. When you have received

your search results, click on the name of the organization for its description and contact information.

The Combined Health Information Database

Another comprehensive source of information on healthcare associations is the Combined Health Information Database. Using the "Detailed Search" option, you will need to limit your search to "Organizations" and "epididymitis". Type the following hyperlink into your Web browser: **http://chid.nih.gov/detail/detail.html**. To find associations, use the drop boxes at the bottom of the search page where "You may refine your search by." For publication date, select "All Years." Then, select your preferred language and the format option "Organization Resource Sheet." Type "epididymitis" (or synonyms) into the "For these words:" box. You should check back periodically with this database since it is updated every three months.

The National Organization for Rare Disorders, Inc.

The National Organization for Rare Disorders, Inc. has prepared a Web site that provides, at no charge, lists of associations organized by health topic. You can access this database at the following Web site: **http://www.rarediseases.org/search/orgsearch.html**. Type "epididymitis" (or a synonym) into the search box, and click "Submit Query."

APPENDIX C. FINDING MEDICAL LIBRARIES

Overview

In this Appendix, we show you how to quickly find a medical library in your area.

Preparation

Your local public library and medical libraries have interlibrary loan programs with the National Library of Medicine (NLM), one of the largest medical collections in the world. According to the NLM, most of the literature in the general and historical collections of the National Library of Medicine is available on interlibrary loan to any library. If you would like to access NLM medical literature, then visit a library in your area that can request the publications for you.[19]

Finding a Local Medical Library

The quickest method to locate medical libraries is to use the Internet-based directory published by the National Network of Libraries of Medicine (NN/LM). This network includes 4626 members and affiliates that provide many services to librarians, health professionals, and the public. To find a library in your area, simply visit **http://nnlm.gov/members/adv.html** or call 1-800-338-7657.

Medical Libraries in the U.S. and Canada

In addition to the NN/LM, the National Library of Medicine (NLM) lists a number of libraries with reference facilities that are open to the public. The following is the NLM's list and includes hyperlinks to each library's Web site. These Web pages can provide information on hours of operation and other restrictions. The list below is a small sample of

[19] Adapted from the NLM: **http://www.nlm.nih.gov/psd/cas/interlibrary.html**.

libraries recommended by the National Library of Medicine (sorted alphabetically by name of the U.S. state or Canadian province where the library is located)[20]:

- **Alabama:** Health InfoNet of Jefferson County (Jefferson County Library Cooperative, Lister Hill Library of the Health Sciences), **http://www.uab.edu/infonet/**
- **Alabama:** Richard M. Scrushy Library (American Sports Medicine Institute)
- **Arizona:** Samaritan Regional Medical Center: The Learning Center (Samaritan Health System, Phoenix, Arizona), **http://www.samaritan.edu/library/bannerlibs.htm**
- **California:** Kris Kelly Health Information Center (St. Joseph Health System, Humboldt), **http://www.humboldt1.com/~kkhic/index.html**
- **California:** Community Health Library of Los Gatos, **http://www.healthlib.org/orgresources.html**
- **California:** Consumer Health Program and Services (CHIPS) (County of Los Angeles Public Library, Los Angeles County Harbor-UCLA Medical Center Library) - Carson, CA, **http://www.colapublib.org/services/chips.html**
- **California:** Gateway Health Library (Sutter Gould Medical Foundation)
- **California:** Health Library (Stanford University Medical Center), **http://www-med.stanford.edu/healthlibrary/**
- **California:** Patient Education Resource Center - Health Information and Resources (University of California, San Francisco), **http://sfghdean.ucsf.edu/barnett/PERC/default.asp**
- **California:** Redwood Health Library (Petaluma Health Care District), **http://www.phcd.org/rdwdlib.html**
- **California:** Los Gatos PlaneTree Health Library, **http://planetreesanjose.org/**
- **California:** Sutter Resource Library (Sutter Hospitals Foundation, Sacramento), **http://suttermedicalcenter.org/library/**
- **California:** Health Sciences Libraries (University of California, Davis), **http://www.lib.ucdavis.edu/healthsci/**
- **California:** ValleyCare Health Library & Ryan Comer Cancer Resource Center (ValleyCare Health System, Pleasanton), **http://gaelnet.stmarys-ca.edu/other.libs/gbal/east/vchl.html**
- **California:** Washington Community Health Resource Library (Fremont), **http://www.healthlibrary.org/**
- **Colorado:** William V. Gervasini Memorial Library (Exempla Healthcare), **http://www.saintjosephdenver.org/yourhealth/libraries/**
- **Connecticut:** Hartford Hospital Health Science Libraries (Hartford Hospital), **http://www.harthosp.org/library/**
- **Connecticut:** Healthnet: Connecticut Consumer Health Information Center (University of Connecticut Health Center, Lyman Maynard Stowe Library), **http://library.uchc.edu/departm/hnet/**

[20] Abstracted from **http://www.nlm.nih.gov/medlineplus/libraries.html**.

- **Connecticut:** Waterbury Hospital Health Center Library (Waterbury Hospital, Waterbury), **http://www.waterburyhospital.com/library/consumer.shtml**
- **Delaware:** Consumer Health Library (Christiana Care Health System, Eugene du Pont Preventive Medicine & Rehabilitation Institute, Wilmington), **http://www.christianacare.org/health_guide/health_guide_pmri_health_info.cfm**
- **Delaware:** Lewis B. Flinn Library (Delaware Academy of Medicine, Wilmington), **http://www.delamed.org/chls.html**
- **Georgia:** Family Resource Library (Medical College of Georgia, Augusta), **http://cmc.mcg.edu/kids_families/fam_resources/fam_res_lib/frl.htm**
- **Georgia:** Health Resource Center (Medical Center of Central Georgia, Macon), **http://www.mccg.org/hrc/hrchome.asp**
- **Hawaii:** Hawaii Medical Library: Consumer Health Information Service (Hawaii Medical Library, Honolulu), **http://hml.org/CHIS/**
- **Idaho:** DeArmond Consumer Health Library (Kootenai Medical Center, Coeur d'Alene), **http://www.nicon.org/DeArmond/index.htm**
- **Illinois:** Health Learning Center of Northwestern Memorial Hospital (Chicago), **http://www.nmh.org/health_info/hlc.html**
- **Illinois:** Medical Library (OSF Saint Francis Medical Center, Peoria), **http://www.osfsaintfrancis.org/general/library/**
- **Kentucky:** Medical Library - Services for Patients, Families, Students & the Public (Central Baptist Hospital, Lexington), **http://www.centralbap.com/education/community/library.cfm**
- **Kentucky:** University of Kentucky - Health Information Library (Chandler Medical Center, Lexington), **http://www.mc.uky.edu/PatientEd/**
- **Louisiana:** Alton Ochsner Medical Foundation Library (Alton Ochsner Medical Foundation, New Orleans), **http://www.ochsner.org/library/**
- **Louisiana:** Louisiana State University Health Sciences Center Medical Library-Shreveport, **http://lib-sh.lsuhsc.edu/**
- **Maine:** Franklin Memorial Hospital Medical Library (Franklin Memorial Hospital, Farmington), **http://www.fchn.org/fmh/lib.htm**
- **Maine:** Gerrish-True Health Sciences Library (Central Maine Medical Center, Lewiston), **http://www.cmmc.org/library/library.html**
- **Maine:** Hadley Parrot Health Science Library (Eastern Maine Healthcare, Bangor), **http://www.emh.org/hll/hpl/guide.htm**
- **Maine:** Maine Medical Center Library (Maine Medical Center, Portland), **http://www.mmc.org/library/**
- **Maine:** Parkview Hospital (Brunswick), **http://www.parkviewhospital.org/**
- **Maine:** Southern Maine Medical Center Health Sciences Library (Southern Maine Medical Center, Biddeford), **http://www.smmc.org/services/service.php3?choice=10**
- **Maine:** Stephens Memorial Hospital's Health Information Library (Western Maine Health, Norway), **http://www.wmhcc.org/Library/**

- **Manitoba, Canada:** Consumer & Patient Health Information Service (University of Manitoba Libraries), **http://www.umanitoba.ca/libraries/units/health/reference/chis.html**
- **Manitoba, Canada:** J.W. Crane Memorial Library (Deer Lodge Centre, Winnipeg), **http://www.deerlodge.mb.ca/crane_library/about.asp**
- **Maryland:** Health Information Center at the Wheaton Regional Library (Montgomery County, Dept. of Public Libraries, Wheaton Regional Library), **http://www.mont.lib.md.us/healthinfo/hic.asp**
- **Massachusetts:** Baystate Medical Center Library (Baystate Health System), **http://www.baystatehealth.com/1024/**
- **Massachusetts:** Boston University Medical Center Alumni Medical Library (Boston University Medical Center), **http://med-libwww.bu.edu/library/lib.html**
- **Massachusetts:** Lowell General Hospital Health Sciences Library (Lowell General Hospital, Lowell), **http://www.lowellgeneral.org/library/HomePageLinks/WWW.htm**
- **Massachusetts:** Paul E. Woodard Health Sciences Library (New England Baptist Hospital, Boston), **http://www.nebh.org/health_lib.asp**
- **Massachusetts:** St. Luke's Hospital Health Sciences Library (St. Luke's Hospital, Southcoast Health System, New Bedford), **http://www.southcoast.org/library/**
- **Massachusetts:** Treadwell Library Consumer Health Reference Center (Massachusetts General Hospital), **http://www.mgh.harvard.edu/library/chrcindex.html**
- **Massachusetts:** UMass HealthNet (University of Massachusetts Medical School, Worchester), **http://healthnet.umassmed.edu/**
- **Michigan:** Botsford General Hospital Library - Consumer Health (Botsford General Hospital, Library & Internet Services), **http://www.botsfordlibrary.org/consumer.htm**
- **Michigan:** Helen DeRoy Medical Library (Providence Hospital and Medical Centers), **http://www.providence-hospital.org/library/**
- **Michigan:** Marquette General Hospital - Consumer Health Library (Marquette General Hospital, Health Information Center), **http://www.mgh.org/center.html**
- **Michigan:** Patient Education Resouce Center - University of Michigan Cancer Center (University of Michigan Comprehensive Cancer Center, Ann Arbor), **http://www.cancer.med.umich.edu/learn/leares.htm**
- **Michigan:** Sladen Library & Center for Health Information Resources - Consumer Health Information (Detroit), **http://www.henryford.com/body.cfm?id=39330**
- **Montana:** Center for Health Information (St. Patrick Hospital and Health Sciences Center, Missoula)
- **National:** Consumer Health Library Directory (Medical Library Association, Consumer and Patient Health Information Section), **http://caphis.mlanet.org/directory/index.html**
- **National:** National Network of Libraries of Medicine (National Library of Medicine) - provides library services for health professionals in the United States who do not have access to a medical library, **http://nnlm.gov/**
- **National:** NN/LM List of Libraries Serving the Public (National Network of Libraries of Medicine), **http://nnlm.gov/members/**

- **Nevada:** Health Science Library, West Charleston Library (Las Vegas-Clark County Library District, Las Vegas), **http://www.lvccld.org/special_collections/medical/index.htm**
- **New Hampshire:** Dartmouth Biomedical Libraries (Dartmouth College Library, Hanover), **http://www.dartmouth.edu/~biomed/resources.htmld/conshealth.htmld/**
- **New Jersey:** Consumer Health Library (Rahway Hospital, Rahway), **http://www.rahwayhospital.com/library.htm**
- **New Jersey:** Dr. Walter Phillips Health Sciences Library (Englewood Hospital and Medical Center, Englewood), **http://www.englewoodhospital.com/links/index.htm**
- **New Jersey:** Meland Foundation (Englewood Hospital and Medical Center, Englewood), **http://www.geocities.com/ResearchTriangle/9360/**
- **New York:** Choices in Health Information (New York Public Library) - NLM Consumer Pilot Project participant, **http://www.nypl.org/branch/health/links.html**
- **New York:** Health Information Center (Upstate Medical University, State University of New York, Syracuse), **http://www.upstate.edu/library/hic/**
- **New York:** Health Sciences Library (Long Island Jewish Medical Center, New Hyde Park), **http://www.lij.edu/library/library.html**
- **New York:** ViaHealth Medical Library (Rochester General Hospital), **http://www.nyam.org/library/**
- **Ohio:** Consumer Health Library (Akron General Medical Center, Medical & Consumer Health Library), **http://www.akrongeneral.org/hwlibrary.htm**
- **Oklahoma:** The Health Information Center at Saint Francis Hospital (Saint Francis Health System, Tulsa), **http://www.sfh-tulsa.com/services/healthinfo.asp**
- **Oregon:** Planetree Health Resource Center (Mid-Columbia Medical Center, The Dalles), **http://www.mcmc.net/phrc/**
- **Pennsylvania:** Community Health Information Library (Milton S. Hershey Medical Center, Hershey), **http://www.hmc.psu.edu/commhealth/**
- **Pennsylvania:** Community Health Resource Library (Geisinger Medical Center, Danville), **http://www.geisinger.edu/education/commlib.shtml**
- **Pennsylvania:** HealthInfo Library (Moses Taylor Hospital, Scranton), **http://www.mth.org/healthwellness.html**
- **Pennsylvania:** Hopwood Library (University of Pittsburgh, Health Sciences Library System, Pittsburgh), **http://www.hsls.pitt.edu/guides/chi/hopwood/index_html**
- **Pennsylvania:** Koop Community Health Information Center (College of Physicians of Philadelphia), **http://www.collphyphil.org/kooppg1.shtml**
- **Pennsylvania:** Learning Resources Center - Medical Library (Susquehanna Health System, Williamsport), **http://www.shscares.org/services/lrc/index.asp**
- **Pennsylvania:** Medical Library (UPMC Health System, Pittsburgh), **http://www.upmc.edu/passavant/library.htm**
- **Quebec, Canada:** Medical Library (Montreal General Hospital), **http://www.mghlib.mcgill.ca/**

- **South Dakota:** Rapid City Regional Hospital Medical Library (Rapid City Regional Hospital), **http://www.rcrh.org/Services/Library/Default.asp**
- **Texas:** Houston HealthWays (Houston Academy of Medicine-Texas Medical Center Library), **http://hhw.library.tmc.edu/**
- **Washington:** Community Health Library (Kittitas Valley Community Hospital), **http://www.kvch.com/**
- **Washington:** Southwest Washington Medical Center Library (Southwest Washington Medical Center, Vancouver), **http://www.swmedicalcenter.com/body.cfm?id=72**

ONLINE GLOSSARIES

The Internet provides access to a number of free-to-use medical dictionaries. The National Library of Medicine has compiled the following list of online dictionaries:

- ADAM Medical Encyclopedia (A.D.A.M., Inc.), comprehensive medical reference: **http://www.nlm.nih.gov/medlineplus/encyclopedia.html**
- MedicineNet.com Medical Dictionary (MedicineNet, Inc.): **http://www.medterms.com/Script/Main/hp.asp**
- Merriam-Webster Medical Dictionary (Inteli-Health, Inc.): **http://www.intelihealth.com/IH/**
- Multilingual Glossary of Technical and Popular Medical Terms in Eight European Languages (European Commission) - Danish, Dutch, English, French, German, Italian, Portuguese, and Spanish: **http://allserv.rug.ac.be/~rvdstich/eugloss/welcome.html**
- On-line Medical Dictionary (CancerWEB): **http://cancerweb.ncl.ac.uk/omd/**
- Rare Diseases Terms (Office of Rare Diseases): **http://ord.aspensys.com/asp/diseases/diseases.asp**
- Technology Glossary (National Library of Medicine) - Health Care Technology: **http://www.nlm.nih.gov/nichsr/ta101/ta10108.htm**

Beyond these, MEDLINEplus contains a very patient-friendly encyclopedia covering every aspect of medicine (licensed from A.D.A.M., Inc.). The ADAM Medical Encyclopedia can be accessed at **http://www.nlm.nih.gov/medlineplus/encyclopedia.html**. ADAM is also available on commercial Web sites such as drkoop.com (**http://www.drkoop.com/**) and Web MD (**http://my.webmd.com/adam/asset/adam_disease_articles/a_to_z/a**). The NIH suggests the following Web sites in the ADAM Medical Encyclopedia when searching for information on epididymitis:

- **Basic Guidelines for Epididymitis**

  AIDS
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/000594.htm

  Epididymitis
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/001279.htm

  Orchitis
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/001280.htm

  Spermatocele
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/001283.htm

  Testicular torsion
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/000517.htm

  Toxoplasmosis
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/000637.htm

- **Signs & Symptoms for Epididymitis**

  Blood in the semen
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003163.htm

  Chills
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003091.htm

  Dysuria
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003145.htm

  Edema
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003103.htm

  Enlarged lymph nodes
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003097.htm

  Erythema
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003220.htm

  Fever
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003090.htm

  Groin pain
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003111.htm

  Hematuria
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003138.htm

  Pain with intercourse
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003157.htm

  Pain with urination
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003145.htm

  Scrotal swelling
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003161.htm

  Swelling
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003103.htm

  Swelling of the scrotum
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003161.htm

  Swollen testicle
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003161.htm

  Testes enlarged
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003161.htm

  Testicle pain
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003160.htm

- **Diagnostics and Tests for Epididymitis**

  Biopsy
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003416.htm

  Blood chemistry
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003468.htm

  CBC
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003642.htm

  Chest X-ray
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003804.htm

  IVP
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003782.htm

  Sonogram
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003336.htm

  Urinalysis
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003579.htm

  VDRL
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003515.htm

  X-ray
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/003337.htm

- **Surgery and Procedures for Epididymitis**

  Prostatectomy
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/002996.htm

- **Background Topics for Epididymitis**

  Acute
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/002215.htm

  Aggravated by
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/002227.htm

  Chronic
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/002312.htm

  Condoms
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/004001.htm

  Pain medications
  Web site: http://www.nlm.nih.gov/medlineplus/ency/article/002123.htm

Penis
Web site: http://www.nlm.nih.gov/medlineplus/ency/article/002279.htm

Physical examination
Web site: http://www.nlm.nih.gov/medlineplus/ency/article/002274.htm

Safer sexual practices
Web site: http://www.nlm.nih.gov/medlineplus/ency/article/001949.htm

Scrotum
Web site: http://www.nlm.nih.gov/medlineplus/ency/article/002296.htm

Testis
Web site: http://www.nlm.nih.gov/medlineplus/ency/article/002334.htm

Online Dictionary Directories

The following are additional online directories compiled by the National Library of Medicine, including a number of specialized medical dictionaries:

- Medical Dictionaries: Medical & Biological (World Health Organization): **http://www.who.int/hlt/virtuallibrary/English/diction.htm#Medical**
- MEL-Michigan Electronic Library List of Online Health and Medical Dictionaries (Michigan Electronic Library): **http://mel.lib.mi.us/health/health-dictionaries.html**
- Patient Education: Glossaries (DMOZ Open Directory Project): **http://dmoz.org/Health/Education/Patient_Education/Glossaries/**
- Web of Online Dictionaries (Bucknell University): **http://www.yourdictionary.com/diction5.html#medicine**

EPIDIDYMITIS DICTIONARY

The definitions below are derived from official public sources, including the National Institutes of Health [NIH] and the European Union [EU].

Abdominal: Having to do with the abdomen, which is the part of the body between the chest and the hips that contains the pancreas, stomach, intestines, liver, gallbladder, and other organs. [NIH]

Abortion: 1. The premature expulsion from the uterus of the products of conception - of the embryo, or of a nonviable fetus. The four classic symptoms, usually present in each type of abortion, are uterine contractions, uterine haemorrhage, softening and dilatation of the cervix, and presentation or expulsion of all or part of the products of conception. 2. Premature stoppage of a natural or a pathological process. [EU]

Abscess: A localized, circumscribed collection of pus. [NIH]

Acetylcholine: A neurotransmitter. Acetylcholine in vertebrates is the major transmitter at neuromuscular junctions, autonomic ganglia, parasympathetic effector junctions, a subset of sympathetic effector junctions, and at many sites in the central nervous system. It is generally not used as an administered drug because it is broken down very rapidly by cholinesterases, but it is useful in some ophthalmological applications. [NIH]

Acidosis: A pathologic condition resulting from accumulation of acid or depletion of the alkaline reserve (bicarbonate content) in the blood and body tissues, and characterized by an increase in hydrogen ion concentration. [EU]

Acquired Immunodeficiency Syndrome: An acquired defect of cellular immunity associated with infection by the human immunodeficiency virus (HIV), a CD4-positive T-lymphocyte count under 200 cells/microliter or less than 14% of total lymphocytes, and increased susceptibility to opportunistic infections and malignant neoplasms. Clinical manifestations also include emaciation (wasting) and dementia. These elements reflect criteria for AIDS as defined by the CDC in 1993. [NIH]

Acute renal: A condition in which the kidneys suddenly stop working. In most cases, kidneys can recover from almost complete loss of function. [NIH]

Adenosine: A nucleoside that is composed of adenine and d-ribose. Adenosine or adenosine derivatives play many important biological roles in addition to being components of DNA and RNA. Adenosine itself is a neurotransmitter. [NIH]

Adjuvant: A substance which aids another, such as an auxiliary remedy; in immunology, nonspecific stimulator (e.g., BCG vaccine) of the immune response. [EU]

Adverse Effect: An unwanted side effect of treatment. [NIH]

Aetiology: Study of the causes of disease. [EU]

Agenesis: Lack of complete or normal development; congenital absence of an organ or part. [NIH]

Algorithms: A procedure consisting of a sequence of algebraic formulas and/or logical steps to calculate or determine a given task. [NIH]

Alkaline: Having the reactions of an alkali. [EU]

Allylamine: Possesses an unusual and selective cytotoxicity for vascular smooth muscle cells in dogs and rats. Useful for experiments dealing with arterial injury, myocardial fibrosis or cardiac decompensation. [NIH]

Alternative medicine: Practices not generally recognized by the medical community as standard or conventional medical approaches and used instead of standard treatments. Alternative medicine includes the taking of dietary supplements, megadose vitamins, and herbal preparations; the drinking of special teas; and practices such as massage therapy, magnet therapy, spiritual healing, and meditation. [NIH]

Amine: An organic compound containing nitrogen; any member of a group of chemical compounds formed from ammonia by replacement of one or more of the hydrogen atoms by organic (hydrocarbon) radicals. The amines are distinguished as primary, secondary, and tertiary, according to whether one, two, or three hydrogen atoms are replaced. The amines include allylamine, amylamine, ethylamine, methylamine, phenylamine, propylamine, and many other compounds. [EU]

Amino acid: Any organic compound containing an amino (-NH2 and a carboxyl (- COOH) group. The 20 a-amino acids listed in the accompanying table are the amino acids from which proteins are synthesized by formation of peptide bonds during ribosomal translation of messenger RNA; all except glycine, which is not optically active, have the L configuration. Other amino acids occurring in proteins, such as hydroxyproline in collagen, are formed by posttranslational enzymatic modification of amino acids residues in polypeptide chains. There are also several important amino acids, such as the neurotransmitter y-aminobutyric acid, that have no relation to proteins. Abbreviated AA. [EU]

Amino Acid Sequence: The order of amino acids as they occur in a polypeptide chain. This is referred to as the primary structure of proteins. It is of fundamental importance in determining protein conformation. [NIH]

Amiodarone: An antianginal and antiarrhythmic drug. It increases the duration of ventricular and atrial muscle action by inhibiting Na,K-activated myocardial adenosine triphosphatase. There is a resulting decrease in heart rate and in vascular resistance. [NIH]

Ammonia: A colorless alkaline gas. It is formed in the body during decomposition of organic materials during a large number of metabolically important reactions. [NIH]

Ampicillin: Semi-synthetic derivative of penicillin that functions as an orally active broad-spectrum antibiotic. [NIH]

Anaesthesia: Loss of feeling or sensation. Although the term is used for loss of tactile sensibility, or of any of the other senses, it is applied especially to loss of the sensation of pain, as it is induced to permit performance of surgery or other painful procedures. [EU]

Anal: Having to do with the anus, which is the posterior opening of the large bowel. [NIH]

Analog: In chemistry, a substance that is similar, but not identical, to another. [NIH]

Analogous: Resembling or similar in some respects, as in function or appearance, but not in origin or development;. [EU]

Anatomical: Pertaining to anatomy, or to the structure of the organism. [EU]

Anesthesia: A state characterized by loss of feeling or sensation. This depression of nerve function is usually the result of pharmacologic action and is induced to allow performance of surgery or other painful procedures. [NIH]

Aneurysm: A sac formed by the dilatation of the wall of an artery, a vein, or the heart. [NIH]

Annealing: The spontaneous alignment of two single DNA strands to form a double helix. [NIH]

Anode: Electrode held at a positive potential with respect to a cathode. [NIH]

Anomalies: Birth defects; abnormalities. [NIH]

Anorectal: Pertaining to the anus and rectum or to the junction region between the two. [EU]

Antianginal: Counteracting angina or anginal conditions. [EU]

Antiarrhythmic: An agent that prevents or alleviates cardiac arrhythmia. [EU]

Antibacterial: A substance that destroys bacteria or suppresses their growth or reproduction. [EU]

Antibiotic: A drug used to treat infections caused by bacteria and other microorganisms. [NIH]

Antibiotic Prophylaxis: Use of antibiotics before, during, or after a diagnostic, therapeutic, or surgical procedure to prevent infectious complications. [NIH]

Antibodies: Immunoglobulin molecules having a specific amino acid sequence by virtue of which they interact only with the antigen that induced their synthesis in cells of the lymphoid series (especially plasma cells), or with an antigen closely related to it. [NIH]

Antibody: A type of protein made by certain white blood cells in response to a foreign substance (antigen). Each antibody can bind to only a specific antigen. The purpose of this binding is to help destroy the antigen. Antibodies can work in several ways, depending on the nature of the antigen. Some antibodies destroy antigens directly. Others make it easier for white blood cells to destroy the antigen. [NIH]

Antifungal: Destructive to fungi, or suppressing their reproduction or growth; effective against fungal infections. [EU]

Antigen: Any substance which is capable, under appropriate conditions, of inducing a specific immune response and of reacting with the products of that response, that is, with specific antibody or specifically sensitized T-lymphocytes, or both. Antigens may be soluble substances, such as toxins and foreign proteins, or particulate, such as bacteria and tissue cells; however, only the portion of the protein or polysaccharide molecule known as the antigenic determinant (q.v.) combines with antibody or a specific receptor on a lymphocyte. Abbreviated Ag. [EU]

Anti-inflammatory: Having to do with reducing inflammation. [NIH]

Antimicrobial: Killing microorganisms, or suppressing their multiplication or growth. [EU]

Anus: The opening of the rectum to the outside of the body. [NIH]

Apoptosis: One of the two mechanisms by which cell death occurs (the other being the pathological process of necrosis). Apoptosis is the mechanism responsible for the physiological deletion of cells and appears to be intrinsically programmed. It is characterized by distinctive morphologic changes in the nucleus and cytoplasm, chromatin cleavage at regularly spaced sites, and the endonucleolytic cleavage of genomic DNA (DNA fragmentation) at internucleosomal sites. This mode of cell death serves as a balance to mitosis in regulating the size of animal tissues and in mediating pathologic processes associated with tumor growth. [NIH]

Archaea: One of the three domains of life (the others being bacteria and Eucarya), formerly called Archaebacteria under the taxon Bacteria, but now considered separate and distinct. They are characterized by: 1) the presence of characteristic tRNAs and ribosomal RNAs; 2) the absence of peptidoglycan cell walls; 3) the presence of ether-linked lipids built from branched-chain subunits; and 4) their occurrence in unusual habitats. While archaea resemble bacteria in morphology and genomic organization, they resemble eukarya in their method of genomic replication. The domain contains at least three kingdoms: crenarchaeota, euryarchaeota, and korarchaeota. [NIH]

Arginine: An essential amino acid that is physiologically active in the L-form. [NIH]

Arterial: Pertaining to an artery or to the arteries. [EU]

Arteries: The vessels carrying blood away from the heart. [NIH]

Artery: Vessel-carrying blood from the heart to various parts of the body. [NIH]

Aseptic: Free from infection or septic material; sterile. [EU]

Aspirate: Fluid withdrawn from a lump, often a cyst, or a nipple. [NIH]

Aspiration: The act of inhaling. [NIH]

Assay: Determination of the amount of a particular constituent of a mixture, or of the biological or pharmacological potency of a drug. [EU]

Asymptomatic: Having no signs or symptoms of disease. [NIH]

Atony: Lack of normal tone or strength. [EU]

Atrial: Pertaining to an atrium. [EU]

Auditory: Pertaining to the sense of hearing. [EU]

Autoantibodies: Antibodies that react with self-antigens (autoantigens) of the organism that produced them. [NIH]

Autoantigens: Endogenous tissue constituents that have the ability to interact with autoantibodies and cause an immune response. [NIH]

Autodigestion: Autolysis; a condition found in disease of the stomach: the stomach wall is digested by the gastric juice. [NIH]

Autonomic: Self-controlling; functionally independent. [EU]

Autonomic Nervous System: The enteric, parasympathetic, and sympathetic nervous systems taken together. Generally speaking, the autonomic nervous system regulates the internal environment during both peaceful activity and physical or emotional stress. Autonomic activity is controlled and integrated by the central nervous system, especially the hypothalamus and the solitary nucleus, which receive information relayed from visceral afferents; these and related central and sensory structures are sometimes (but not here) considered to be part of the autonomic nervous system itself. [NIH]

Azoospermia: Absence of spermatozoa in the semen, or failure of formation of spermatozoa. [EU]

Bacillus: A genus of Bacillaceae that are spore-forming, rod-shaped cells. Most species are saprophytic soil forms with only a few species being pathogenic. [NIH]

Bacteria: Unicellular prokaryotic microorganisms which generally possess rigid cell walls, multiply by cell division, and exhibit three principal forms: round or coccal, rodlike or bacillary, and spiral or spirochetal. [NIH]

Bacterial Infections: Infections by bacteria, general or unspecified. [NIH]

Bacterium: Microscopic organism which may have a spherical, rod-like, or spiral unicellular or non-cellular body. Bacteria usually reproduce through asexual processes. [NIH]

Bacteriuria: The presence of bacteria in the urine with or without consequent urinary tract infection. Since bacteriuria is a clinical entity, the term does not preclude the use of urine/microbiology for technical discussions on the isolation and segregation of bacteria in the urine. [NIH]

Base: In chemistry, the nonacid part of a salt; a substance that combines with acids to form salts; a substance that dissociates to give hydroxide ions in aqueous solutions; a substance whose molecule or ion can combine with a proton (hydrogen ion); a substance capable of donating a pair of electrons (to an acid) for the formation of a coordinate covalent bond. [EU]

Benign: Not cancerous; does not invade nearby tissue or spread to other parts of the body. [NIH]

Benign prostatic hyperplasia: A benign (noncancerous) condition in which an overgrowth

of prostate tissue pushes against the urethra and the bladder, blocking the flow of urine. Also called benign prostatic hypertrophy or BPH. [NIH]

Bilateral: Affecting both the right and left side of body. [NIH]

Biliary: Having to do with the liver, bile ducts, and/or gallbladder. [NIH]

Biliary Tract: The gallbladder and its ducts. [NIH]

Biotechnology: Body of knowledge related to the use of organisms, cells or cell-derived constituents for the purpose of developing products which are technically, scientifically and clinically useful. Alteration of biologic function at the molecular level (i.e., genetic engineering) is a central focus; laboratory methods used include transfection and cloning technologies, sequence and structure analysis algorithms, computer databases, and gene and protein structure function analysis and prediction. [NIH]

Bladder: The organ that stores urine. [NIH]

Blastocyst: The mammalian embryo in the post-morula stage in which a fluid-filled cavity, enclosed primarily by trophoblast, contains an inner cell mass which becomes the embryonic disc. [NIH]

Blastomycosis: A fungal infection that may appear in two forms: 1) a primary lesion characterized by the formation of a small cutaneous nodule and small nodules along the lymphatics that may heal within several months; and 2) chronic granulomatous lesions characterized by thick crusts, warty growths, and unusual vascularity and infection in the middle or upper lobes of the lung. [NIH]

Blood pressure: The pressure of blood against the walls of a blood vessel or heart chamber. Unless there is reference to another location, such as the pulmonary artery or one of the heart chambers, it refers to the pressure in the systemic arteries, as measured, for example, in the forearm. [NIH]

Blood vessel: A tube in the body through which blood circulates. Blood vessels include a network of arteries, arterioles, capillaries, venules, and veins. [NIH]

Blood-Testis Barrier: Specialized nonfenestrated tightly-joined endothelial cells that form a transport barrier for certain substances between the testis capillaries and seminiferous epithelium. [NIH]

Body Fluids: Liquid components of living organisms. [NIH]

Bone Marrow: The soft tissue filling the cavities of bones. Bone marrow exists in two types, yellow and red. Yellow marrow is found in the large cavities of large bones and consists mostly of fat cells and a few primitive blood cells. Red marrow is a hematopoietic tissue and is the site of production of erythrocytes and granular leukocytes. Bone marrow is made up of a framework of connective tissue containing branching fibers with the frame being filled with marrow cells. [NIH]

Branch: Most commonly used for branches of nerves, but applied also to other structures. [NIH]

Broad-spectrum: Effective against a wide range of microorganisms; said of an antibiotic. [EU]

Calculi: An abnormal concretion occurring mostly in the urinary and biliary tracts, usually composed of mineral salts. Also called stones. [NIH]

Candidiasis: Infection with a fungus of the genus Candida. It is usually a superficial infection of the moist cutaneous areas of the body, and is generally caused by C. albicans; it most commonly involves the skin (dermatocandidiasis), oral mucous membranes (thrush, def. 1), respiratory tract (bronchocandidiasis), and vagina (vaginitis). Rarely there is a systemic infection or endocarditis. Called also moniliasis, candidosis, oidiomycosis, and formerly blastodendriosis. [EU]

Candidosis: An infection caused by an opportunistic yeasts that tends to proliferate and become pathologic when the environment is favorable and the host resistance is weakened. [NIH]

Cardiac: Having to do with the heart. [NIH]

Case report: A detailed report of the diagnosis, treatment, and follow-up of an individual patient. Case reports also contain some demographic information about the patient (for example, age, gender, ethnic origin). [NIH]

Catheter: A flexible tube used to deliver fluids into or withdraw fluids from the body. [NIH]

Catheterization: Use or insertion of a tubular device into a duct, blood vessel, hollow organ, or body cavity for injecting or withdrawing fluids for diagnostic or therapeutic purposes. It differs from intubation in that the tube here is used to restore or maintain patency in obstructions. [NIH]

Cathode: An electrode, usually an incandescent filament of tungsten, which emits electrons in an X-ray tube. [NIH]

Causal: Pertaining to a cause; directed against a cause. [EU]

Cefotaxime: Semisynthetic broad-spectrum cephalosporin. [NIH]

Cell: The individual unit that makes up all of the tissues of the body. All living things are made up of one or more cells. [NIH]

Cell Adhesion: Adherence of cells to surfaces or to other cells. [NIH]

Cell Adhesion Molecules: Surface ligands, usually glycoproteins, that mediate cell-to-cell adhesion. Their functions include the assembly and interconnection of various vertebrate systems, as well as maintenance of tissue integration, wound healing, morphogenic movements, cellular migrations, and metastasis. [NIH]

Cell Death: The termination of the cell's ability to carry out vital functions such as metabolism, growth, reproduction, responsiveness, and adaptability. [NIH]

Cell Division: The fission of a cell. [NIH]

Central Nervous System: The main information-processing organs of the nervous system, consisting of the brain, spinal cord, and meninges. [NIH]

Cervical: Relating to the neck, or to the neck of any organ or structure. Cervical lymph nodes are located in the neck; cervical cancer refers to cancer of the uterine cervix, which is the lower, narrow end (the "neck") of the uterus. [NIH]

Cervix: The lower, narrow end of the uterus that forms a canal between the uterus and vagina. [NIH]

Chaperonin 10: Members of the chaperonin heat-shock protein family. Chaperonin 10 purified from bacteria, plastids, or mitochondria occurs as an oligomer of seven identical subunits arranged in a single ring. [NIH]

Chaperonin 60: Members of the chaperonin heat-shock protein family. Chaperonin 60 purified from bacteria, plastids, or mitochondria is an oligomeric protein with a distinctive structure of fourteen subunits, arranged in two rings of seven subunits each. [NIH]

Chaperonins: A class of sequence-related molecular chaperones found in bacteria, mitochondria, and plastids. Chaperonins are abundant constitutive proteins that increase in amount after stresses such as heat shock, bacterial infection of macrophages, and an increase in the cellular content of unfolded proteins. Bacterial chaperonins are major immunogens in human bacterial infections because of their accumulation during the stress of infection. Two members of this class of chaperones are chaperonin 10 and chaperonin 60. [NIH]

Chemotaxis: The movement of cells or organisms toward or away from a substance in

response to its concentration gradient. [NIH]

Chin: The anatomical frontal portion of the mandible, also known as the mentum, that contains the line of fusion of the two separate halves of the mandible (symphysis menti). This line of fusion divides inferiorly to enclose a triangular area called the mental protuberance. On each side, inferior to the second premolar tooth, is the mental foramen for the passage of blood vessels and a nerve. [NIH]

Choline: A basic constituent of lecithin that is found in many plants and animal organs. It is important as a precursor of acetylcholine, as a methyl donor in various metabolic processes, and in lipid metabolism. [NIH]

Chromatin: The material of chromosomes. It is a complex of DNA, histones, and nonhistone proteins (chromosomal proteins, non-histone) found within the nucleus of a cell. [NIH]

Chronic: A disease or condition that persists or progresses over a long period of time. [NIH]

Chronic Disease: Disease or ailment of long duration. [NIH]

Chronic renal: Slow and progressive loss of kidney function over several years, often resulting in end-stage renal disease. People with end-stage renal disease need dialysis or transplantation to replace the work of the kidneys. [NIH]

Ciprofloxacin: A carboxyfluoroquinoline antimicrobial agent that is effective against a wide range of microorganisms. It has been successfully and safely used in the treatment of resistant respiratory, skin, bone, joint, gastrointestinal, urinary, and genital infections. [NIH]

Circumcision: Excision of the prepuce or part of it. [NIH]

Clinical trial: A research study that tests how well new medical treatments or other interventions work in people. Each study is designed to test new methods of screening, prevention, diagnosis, or treatment of a disease. [NIH]

Clone: The term "clone" has acquired a new meaning. It is applied specifically to the bits of inserted foreign DNA in the hybrid molecules of the population. Each inserted segment originally resided in the DNA of a complex genome amid millions of other DNA segment. [NIH]

Cloning: The production of a number of genetically identical individuals; in genetic engineering, a process for the efficient replication of a great number of identical DNA molecules. [NIH]

Cohort Studies: Studies in which subsets of a defined population are identified. These groups may or may not be exposed to factors hypothesized to influence the probability of the occurrence of a particular disease or other outcome. Cohorts are defined populations which, as a whole, are followed in an attempt to determine distinguishing subgroup characteristics. [NIH]

Complement: A term originally used to refer to the heat-labile factor in serum that causes immune cytolysis, the lysis of antibody-coated cells, and now referring to the entire functionally related system comprising at least 20 distinct serum proteins that is the effector not only of immune cytolysis but also of other biologic functions. Complement activation occurs by two different sequences, the classic and alternative pathways. The proteins of the classic pathway are termed 'components of complement' and are designated by the symbols C1 through C9. C1 is a calcium-dependent complex of three distinct proteins C1q, C1r and C1s. The proteins of the alternative pathway (collectively referred to as the properdin system) and complement regulatory proteins are known by semisystematic or trivial names. Fragments resulting from proteolytic cleavage of complement proteins are designated with lower-case letter suffixes, e.g., C3a. Inactivated fragments may be designated with the suffix 'i', e.g. C3bi. Activated components or complexes with biological activity are designated by a bar over the symbol e.g. C1 or C4b,2a. The classic pathway is activated by the binding of C1

to classic pathway activators, primarily antigen-antibody complexes containing IgM, IgG1, IgG3; C1q binds to a single IgM molecule or two adjacent IgG molecules. The alternative pathway can be activated by IgA immune complexes and also by nonimmunologic materials including bacterial endotoxins, microbial polysaccharides, and cell walls. Activation of the classic pathway triggers an enzymatic cascade involving C1, C4, C2 and C3; activation of the alternative pathway triggers a cascade involving C3 and factors B, D and P. Both result in the cleavage of C5 and the formation of the membrane attack complex. Complement activation also results in the formation of many biologically active complement fragments that act as anaphylatoxins, opsonins, or chemotactic factors. [EU]

Complementary and alternative medicine: CAM. Forms of treatment that are used in addition to (complementary) or instead of (alternative) standard treatments. These practices are not considered standard medical approaches. CAM includes dietary supplements, megadose vitamins, herbal preparations, special teas, massage therapy, magnet therapy, spiritual healing, and meditation. [NIH]

Complementary medicine: Practices not generally recognized by the medical community as standard or conventional medical approaches and used to enhance or complement the standard treatments. Complementary medicine includes the taking of dietary supplements, megadose vitamins, and herbal preparations; the drinking of special teas; and practices such as massage therapy, magnet therapy, spiritual healing, and meditation. [NIH]

Complementation: The production of a wild-type phenotype when two different mutations are combined in a diploid or a heterokaryon and tested in trans-configuration. [NIH]

Computational Biology: A field of biology concerned with the development of techniques for the collection and manipulation of biological data, and the use of such data to make biological discoveries or predictions. This field encompasses all computational methods and theories applicable to molecular biology and areas of computer-based techniques for solving biological problems including manipulation of models and datasets. [NIH]

Conception: The onset of pregnancy, marked by implantation of the blastocyst; the formation of a viable zygote. [EU]

Concretion: Minute, hard, yellow masses found in the palpebral conjunctivae of elderly people or following chronic conjunctivitis, composed of the products of cellular degeneration retained in the depressions and tubular recesses in the conjunctiva. [NIH]

Connective Tissue: Tissue that supports and binds other tissues. It consists of connective tissue cells embedded in a large amount of extracellular matrix. [NIH]

Connective Tissue: Tissue that supports and binds other tissues. It consists of connective tissue cells embedded in a large amount of extracellular matrix. [NIH]

Contraception: Use of agents, devices, methods, or procedures which diminish the likelihood of or prevent conception. [NIH]

Contraindications: Any factor or sign that it is unwise to pursue a certain kind of action or treatment, e. g. giving a general anesthetic to a person with pneumonia. [NIH]

Coronary: Encircling in the manner of a crown; a term applied to vessels; nerves, ligaments, etc. The term usually denotes the arteries that supply the heart muscle and, by extension, a pathologic involvement of them. [EU]

Coronary Thrombosis: Presence of a thrombus in a coronary artery, often causing a myocardial infarction. [NIH]

Corpus: The body of the uterus. [NIH]

Corticosteroids: Hormones that have antitumor activity in lymphomas and lymphoid leukemias; in addition, corticosteroids (steroids) may be used for hormone replacement and

for the management of some of the complications of cancer and its treatment. [NIH]

Counterimmunoelectrophoresis: Immunoelectrophoresis in which immunoprecipitation occurs when antigen at the cathode is caused to migrate in an electric field through a suitable medium of diffusion against a stream of antibody migrating from the anode as a result of endosmotic flow. [NIH]

Cross-Sectional Studies: Studies in which the presence or absence of disease or other health-related variables are determined in each member of the study population or in a representative sample at one particular time. This contrasts with longitudinal studies which are followed over a period of time. [NIH]

Cutaneous: Having to do with the skin. [NIH]

Cyst: A sac or capsule filled with fluid. [NIH]

Cystine: A covalently linked dimeric nonessential amino acid formed by the oxidation of cysteine. Two molecules of cysteine are joined together by a disulfide bridge to form cystine. [NIH]

Cystinuria: An inherited abnormality of renal tubular transport of dibasic amino acids leading to massive urinary excretion of cystine, lysine, arginine, and ornithine. [NIH]

Cystitis: Inflammation of the urinary bladder. [EU]

Cytomegalovirus: A genus of the family Herpesviridae, subfamily Betaherpesvirinae, infecting the salivary glands, liver, spleen, lungs, eyes, and other organs, in which they produce characteristically enlarged cells with intranuclear inclusions. Infection with Cytomegalovirus is also seen as an opportunistic infection in AIDS. [NIH]

Cytoplasm: The protoplasm of a cell exclusive of that of the nucleus; it consists of a continuous aqueous solution (cytosol) and the organelles and inclusions suspended in it (phaneroplasm), and is the site of most of the chemical activities of the cell. [EU]

Deletion: A genetic rearrangement through loss of segments of DNA (chromosomes), bringing sequences, which are normally separated, into close proximity. [NIH]

Dementia: An acquired organic mental disorder with loss of intellectual abilities of sufficient severity to interfere with social or occupational functioning. The dysfunction is multifaceted and involves memory, behavior, personality, judgment, attention, spatial relations, language, abstract thought, and other executive functions. The intellectual decline is usually progressive, and initially spares the level of consciousness. [NIH]

Denaturation: Rupture of the hydrogen bonds by heating a DNA solution and then cooling it rapidly causes the two complementary strands to separate. [NIH]

Density: The logarithm to the base 10 of the opacity of an exposed and processed film. [NIH]

Dermatology: A medical specialty concerned with the skin, its structure, functions, diseases, and treatment. [NIH]

Diagnostic procedure: A method used to identify a disease. [NIH]

Diastolic: Of or pertaining to the diastole. [EU]

Digestive tract: The organs through which food passes when food is eaten. These organs are the mouth, esophagus, stomach, small and large intestines, and rectum. [NIH]

Dilatation: The act of dilating. [NIH]

Diploid: Having two sets of chromosomes. [NIH]

Direct: 1. Straight; in a straight line. 2. Performed immediately and without the intervention of subsidiary means. [EU]

Dissection: Cutting up of an organism for study. [NIH]

Diverticula: Plural form of diverticulum. [NIH]

Diverticulitis: Inflammation of a diverticulum or diverticula. [NIH]

Diverticulum: A pathological condition manifested as a pouch or sac opening from a tubular or sacular organ. [NIH]

Double-blind: Pertaining to a clinical trial or other experiment in which neither the subject nor the person administering treatment knows which treatment any particular subject is receiving. [EU]

Doxycycline: A synthetic tetracycline derivative with a range of antimicrobial activity and mode of action similar to that of tetracycline, but more effective against many species. Animal studies suggest that it may cause less tooth staining than other tetracyclines. [NIH]

Duct: A tube through which body fluids pass. [NIH]

Dura mater: The outermost, toughest, and most fibrous of the three membranes (meninges) covering the brain and spinal cord; called also pachymeninx. [EU]

Ectopic: Pertaining to or characterized by ectopia. [EU]

Ectopic Pregnancy: The pregnancy occurring elsewhere than in the cavity of the uterus. [NIH]

Edema: Excessive amount of watery fluid accumulated in the intercellular spaces, most commonly present in subcutaneous tissue. [NIH]

Efficacy: The extent to which a specific intervention, procedure, regimen, or service produces a beneficial result under ideal conditions. Ideally, the determination of efficacy is based on the results of a randomized control trial. [NIH]

Ejaculation: The release of semen through the penis during orgasm. [NIH]

Emaciation: Clinical manifestation of excessive leanness usually caused by disease or a lack of nutrition. [NIH]

Embolus: Bit of foreign matter which enters the blood stream at one point and is carried until it is lodged or impacted in an artery and obstructs it. It may be a blood clot, an air bubble, fat or other tissue, or clumps of bacteria. [NIH]

Embryo: The prenatal stage of mammalian development characterized by rapid morphological changes and the differentiation of basic structures. [NIH]

Embryo Transfer: Removal of a mammalian embryo from one environment and replacement in the same or a new environment. The embryo is usually in the pre-nidation phase, i.e., a blastocyst. The process includes embryo or blastocyst transplantation or transfer after in vitro fertilization and transfer of the inner cell mass of the blastocyst. It is not used for transfer of differentiated embryonic tissue, e.g., germ layer cells. [NIH]

Endocarditis: Exudative and proliferative inflammatory alterations of the endocardium, characterized by the presence of vegetations on the surface of the endocardium or in the endocardium itself, and most commonly involving a heart valve, but sometimes affecting the inner lining of the cardiac chambers or the endocardium elsewhere. It may occur as a primary disorder or as a complication of or in association with another disease. [EU]

Endocardium: The innermost layer of the heart, comprised of endothelial cells. [NIH]

Endocrine System: The system of glands that release their secretions (hormones) directly into the circulatory system. In addition to the endocrine glands, included are the chromaffin system and the neurosecretory systems. [NIH]

Endocrinology: A subspecialty of internal medicine concerned with the metabolism, physiology, and disorders of the endocrine system. [NIH]

Endometrial: Having to do with the endometrium (the layer of tissue that lines the uterus). [NIH]

Endometrium: The layer of tissue that lines the uterus. [NIH]

Endothelial cell: The main type of cell found in the inside lining of blood vessels, lymph vessels, and the heart. [NIH]

End-stage renal: Total chronic kidney failure. When the kidneys fail, the body retains fluid and harmful wastes build up. A person with ESRD needs treatment to replace the work of the failed kidneys. [NIH]

Enterobius: A genus of intestinal nematode worms which includes the pinworm or threadworm Enterobius vermicularis. [NIH]

Environmental Health: The science of controlling or modifying those conditions, influences, or forces surrounding man which relate to promoting, establishing, and maintaining health. [NIH]

Enzymatic: Phase where enzyme cuts the precursor protein. [NIH]

Enzyme: A protein that speeds up chemical reactions in the body. [NIH]

Enzyme-Linked Immunosorbent Assay: An immunoassay utilizing an antibody labeled with an enzyme marker such as horseradish peroxidase. While either the enzyme or the antibody is bound to an immunosorbent substrate, they both retain their biologic activity; the change in enzyme activity as a result of the enzyme-antibody-antigen reaction is proportional to the concentration of the antigen and can be measured spectrophotometrically or with the naked eye. Many variations of the method have been developed. [NIH]

Epidemiologic Studies: Studies designed to examine associations, commonly, hypothesized causal relations. They are usually concerned with identifying or measuring the effects of risk factors or exposures. The common types of analytic study are case-control studies, cohort studies, and cross-sectional studies. [NIH]

Epidermis: Nonvascular layer of the skin. It is made up, from within outward, of five layers: 1) basal layer (stratum basale epidermidis); 2) spinous layer (stratum spinosum epidermidis); 3) granular layer (stratum granulosum epidermidis); 4) clear layer (stratum lucidum epidermidis); and 5) horny layer (stratum corneum epidermidis). [NIH]

Epithelial: Refers to the cells that line the internal and external surfaces of the body. [NIH]

Epithelial Cells: Cells that line the inner and outer surfaces of the body. [NIH]

Epithelium: One or more layers of epithelial cells, supported by the basal lamina, which covers the inner or outer surfaces of the body. [NIH]

Erectile: The inability to get or maintain an erection for satisfactory sexual intercourse. Also called impotence. [NIH]

Erection: The condition of being made rigid and elevated; as erectile tissue when filled with blood. [EU]

ERV: The expiratory reserve volume is the largest volume of gas that can be expired from the end-expiratory level. [NIH]

Esophagus: The muscular tube through which food passes from the throat to the stomach. [NIH]

Estrogen: One of the two female sex hormones. [NIH]

Etoposide: A semisynthetic derivative of podophyllotoxin that exhibits antitumor activity. Etoposide inhibits DNA synthesis by forming a complex with topoisomerase II and DNA. This complex induces breaks in double stranded DNA and prevents repair by

topoisomerase II binding. Accumulated breaks in DNA prevent entry into the mitotic phase of cell division, and lead to cell death. Etoposide acts primarily in the G2 and S phases of the cell cycle. [NIH]

Excrete: To get rid of waste from the body. [NIH]

Expiratory: The volume of air which leaves the breathing organs in each expiration. [NIH]

Expiratory Reserve Volume: The extra volume of air that can be expired with maximum effort beyond the level reached at the end of a normal, quiet expiration. Common abbreviation is ERV. [NIH]

Family Health: The health status of the family as a unit including the impact of the health of one member of the family on the family as a unit and on individual family members; also, the impact of family organization or disorganization on the health status of its members. [NIH]

Family Planning: Programs or services designed to assist the family in controlling reproduction by either improving or diminishing fertility. [NIH]

Fertilization in Vitro: Fertilization of an egg outside the body when the egg is normally fertilized in the body. [NIH]

Fibrosis: Any pathological condition where fibrous connective tissue invades any organ, usually as a consequence of inflammation or other injury. [NIH]

Fistula: Abnormal communication most commonly seen between two internal organs, or between an internal organ and the surface of the body. [NIH]

Fossa: A cavity, depression, or pit. [NIH]

Fungi: A kingdom of eukaryotic, heterotrophic organisms that live as saprobes or parasites, including mushrooms, yeasts, smuts, molds, etc. They reproduce either sexually or asexually, and have life cycles that range from simple to complex. Filamentous fungi refer to those that grow as multicelluar colonies (mushrooms and molds). [NIH]

Fungus: A general term used to denote a group of eukaryotic protists, including mushrooms, yeasts, rusts, moulds, smuts, etc., which are characterized by the absence of chlorophyll and by the presence of a rigid cell wall composed of chitin, mannans, and sometimes cellulose. They are usually of simple morphological form or show some reversible cellular specialization, such as the formation of pseudoparenchymatous tissue in the fruiting body of a mushroom. The dimorphic fungi grow, according to environmental conditions, as moulds or yeasts. [EU]

Gallbladder: The pear-shaped organ that sits below the liver. Bile is concentrated and stored in the gallbladder. [NIH]

Ganglia: Clusters of multipolar neurons surrounded by a capsule of loosely organized connective tissue located outside the central nervous system. [NIH]

Gas: Air that comes from normal breakdown of food. The gases are passed out of the body through the rectum (flatus) or the mouth (burp). [NIH]

Gastrin: A hormone released after eating. Gastrin causes the stomach to produce more acid. [NIH]

Gastrointestinal: Refers to the stomach and intestines. [NIH]

Gene: The functional and physical unit of heredity passed from parent to offspring. Genes are pieces of DNA, and most genes contain the information for making a specific protein. [NIH]

Genetic Engineering: Directed modification of the gene complement of a living organism by such techniques as altering the DNA, substituting genetic material by means of a virus,

transplanting whole nuclei, transplanting cell hybrids, etc. [NIH]

Genetic testing: Analyzing DNA to look for a genetic alteration that may indicate an increased risk for developing a specific disease or disorder. [NIH]

Genetics: The biological science that deals with the phenomena and mechanisms of heredity. [NIH]

Genital: Pertaining to the genitalia. [EU]

Genitourinary: Pertaining to the genital and urinary organs; urogenital; urinosexual. [EU]

Genotype: The genetic constitution of the individual; the characterization of the genes. [NIH]

Germ Cells: The reproductive cells in multicellular organisms. [NIH]

Gestation: The period of development of the young in viviparous animals, from the time of fertilization of the ovum until birth. [EU]

Giant Cells: Multinucleated masses produced by the fusion of many cells; often associated with viral infections. In AIDS, they are induced when the envelope glycoprotein of the HIV virus binds to the CD4 antigen of uninfected neighboring T4 cells. The resulting syncytium leads to cell death and thus may account for the cytopathic effect of the virus. [NIH]

Gland: An organ that produces and releases one or more substances for use in the body. Some glands produce fluids that affect tissues or organs. Others produce hormones or participate in blood production. [NIH]

Glioma: A cancer of the brain that comes from glial, or supportive, cells. [NIH]

Glomerular: Pertaining to or of the nature of a glomerulus, especially a renal glomerulus. [EU]

Glomeruli: Plural of glomerulus. [NIH]

Glomerulonephritis: Glomerular disease characterized by an inflammatory reaction, with leukocyte infiltration and cellular proliferation of the glomeruli, or that appears to be the result of immune glomerular injury. [NIH]

Glycoproteins: Conjugated protein-carbohydrate compounds including mucins, mucoid, and amyloid glycoproteins. [NIH]

Gonad: A sex organ, such as an ovary or a testicle, which produces the gametes in most multicellular animals. [NIH]

Gonorrhea: Acute infectious disease characterized by primary invasion of the urogenital tract. The etiologic agent, Neisseria gonorrhoeae, was isolated by Neisser in 1879. [NIH]

Gonorrhoea: Infection due to Neisseria gonorrhoeae transmitted sexually in most cases, but also by contact with infected exudates in neonatal children at birth, or by infants in households with infected inhabitants. It is marked in males by urethritis with pain and purulent discharge, but is commonly asymptomatic in females, although it may extend to produce suppurative salpingitis, oophoritis, tubo-ovarian abscess, and peritonitis. Bacteraemia occurs in both sexes, resulting in cutaneous lesions, arthritis, and rarely meningitis or endocarditis. Formerly called blennorrhagia and blennorrhoea. [EU]

Governing Board: The group in which legal authority is vested for the control of health-related institutions and organizations. [NIH]

Graft: Healthy skin, bone, or other tissue taken from one part of the body and used to replace diseased or injured tissue removed from another part of the body. [NIH]

Gram-negative: Losing the stain or decolorized by alcohol in Gram's method of staining, a primary characteristic of bacteria having a cell wall composed of a thin layer of peptidoglycan covered by an outer membrane of lipoprotein and lipopolysaccharide. [EU]

Gram-positive: Retaining the stain or resisting decolorization by alcohol in Gram's method of staining, a primary characteristic of bacteria whose cell wall is composed of a thick layer of peptidologlycan with attached teichoic acids. [EU]

Granulocytes: Leukocytes with abundant granules in the cytoplasm. They are divided into three groups: neutrophils, eosinophils, and basophils. [NIH]

Groin: The external junctural region between the lower part of the abdomen and the thigh. [NIH]

Growth: The progressive development of a living being or part of an organism from its earliest stage to maturity. [NIH]

Gynecology: A medical-surgical specialty concerned with the physiology and disorders primarily of the female genital tract, as well as female endocrinology and reproductive physiology. [NIH]

Health Status: The level of health of the individual, group, or population as subjectively assessed by the individual or by more objective measures. [NIH]

Hematuria: Presence of blood in the urine. [NIH]

Hemorrhage: Bleeding or escape of blood from a vessel. [NIH]

Heredity: 1. The genetic transmission of a particular quality or trait from parent to offspring. 2. The genetic constitution of an individual. [EU]

Hormone: A substance in the body that regulates certain organs. Hormones such as gastrin help in breaking down food. Some hormones come from cells in the stomach and small intestine. [NIH]

Horseradish Peroxidase: An enzyme isolated from horseradish which is able to act as an antigen. It is frequently used as a histochemical tracer for light and electron microscopy. Its antigenicity has permitted its use as a combined antigen and marker in experimental immunology. [NIH]

Host: Any animal that receives a transplanted graft. [NIH]

Hybrid: Cross fertilization between two varieties or, more usually, two species of vines, see also crossing. [NIH]

Hydrogen: The first chemical element in the periodic table. It has the atomic symbol H, atomic number 1, and atomic weight 1. It exists, under normal conditions, as a colorless, odorless, tasteless, diatomic gas. Hydrogen ions are protons. Besides the common H1 isotope, hydrogen exists as the stable isotope deuterium and the unstable, radioactive isotope tritium. [NIH]

Hydronephrosis: Abnormal enlargement of a kidney, which may be caused by blockage of the ureter (such as by a kidney stone) or chronic kidney disease that prevents urine from draining into the bladder. [NIH]

Hyperreflexia: Exaggeration of reflexes. [EU]

Hypertension: Persistently high arterial blood pressure. Currently accepted threshold levels are 140 mm Hg systolic and 90 mm Hg diastolic pressure. [NIH]

Hypertrophy: General increase in bulk of a part or organ, not due to tumor formation, nor to an increase in the number of cells. [NIH]

Hypothalamus: Ventral part of the diencephalon extending from the region of the optic chiasm to the caudal border of the mammillary bodies and forming the inferior and lateral walls of the third ventricle. [NIH]

Id: The part of the personality structure which harbors the unconscious instinctive desires and strivings of the individual. [NIH]

Idiopathic: Describes a disease of unknown cause. [NIH]

Immune response: The activity of the immune system against foreign substances (antigens). [NIH]

Immune Sera: Serum that contains antibodies. It is obtained from an animal that has been immunized either by antigen injection or infection with microorganisms containing the antigen. [NIH]

Immune system: The organs, cells, and molecules responsible for the recognition and disposal of foreign ("non-self") material which enters the body. [NIH]

Immunity: Nonsusceptibility to the invasive or pathogenic effects of foreign microorganisms or to the toxic effect of antigenic substances. [NIH]

Immunization: Deliberate stimulation of the host's immune response. Active immunization involves administration of antigens or immunologic adjuvants. Passive immunization involves administration of immune sera or lymphocytes or their extracts (e.g., transfer factor, immune RNA) or transplantation of immunocompetent cell producing tissue (thymus or bone marrow). [NIH]

Immunoassay: Immunochemical assay or detection of a substance by serologic or immunologic methods. Usually the substance being studied serves as antigen both in antibody production and in measurement of antibody by the test substance. [NIH]

Immunodeficiency: The decreased ability of the body to fight infection and disease. [NIH]

Immunogen: A substance that is capable of causing antibody formation. [NIH]

Immunoglobulin: A protein that acts as an antibody. [NIH]

Immunologic: The ability of the antibody-forming system to recall a previous experience with an antigen and to respond to a second exposure with the prompt production of large amounts of antibody. [NIH]

Immunology: The study of the body's immune system. [NIH]

Implantation: The insertion or grafting into the body of biological, living, inert, or radioactive material. [EU]

Impotence: The inability to perform sexual intercourse. [NIH]

In vitro: In the laboratory (outside the body). The opposite of in vivo (in the body). [NIH]

In vivo: In the body. The opposite of in vitro (outside the body or in the laboratory). [NIH]

Incision: A cut made in the body during surgery. [NIH]

Incontinence: Inability to control the flow of urine from the bladder (urinary incontinence) or the escape of stool from the rectum (fecal incontinence). [NIH]

Induction: The act or process of inducing or causing to occur, especially the production of a specific morphogenetic effect in the developing embryo through the influence of evocators or organizers, or the production of anaesthesia or unconsciousness by use of appropriate agents. [EU]

Infancy: The period of complete dependency prior to the acquisition of competence in walking, talking, and self-feeding. [NIH]

Infarction: A pathological process consisting of a sudden insufficient blood supply to an area, which results in necrosis of that area. It is usually caused by a thrombus, an embolus, or a vascular torsion. [NIH]

Infection: 1. Invasion and multiplication of microorganisms in body tissues, which may be clinically unapparent or result in local cellular injury due to competitive metabolism, toxins, intracellular replication, or antigen-antibody response. The infection may remain localized,

subclinical, and temporary if the body's defensive mechanisms are effective. A local infection may persist and spread by extension to become an acute, subacute, or chronic clinical infection or disease state. A local infection may also become systemic when the microorganisms gain access to the lymphatic or vascular system. 2. An infectious disease. [EU]

Infertility: The diminished or absent ability to conceive or produce an offspring while sterility is the complete inability to conceive or produce an offspring. [NIH]

Infiltration: The diffusion or accumulation in a tissue or cells of substances not normal to it or in amounts of the normal. Also, the material so accumulated. [EU]

Inflammation: A pathological process characterized by injury or destruction of tissues caused by a variety of cytologic and chemical reactions. It is usually manifested by typical signs of pain, heat, redness, swelling, and loss of function. [NIH]

Inguinal: Pertaining to the inguen, or groin. [EU]

Intermittent: Occurring at separated intervals; having periods of cessation of activity. [EU]

Internal Medicine: A medical specialty concerned with the diagnosis and treatment of diseases of the internal organ systems of adults. [NIH]

Interstitial: Pertaining to or situated between parts or in the interspaces of a tissue. [EU]

Intestinal: Having to do with the intestines. [NIH]

Intestines: The section of the alimentary canal from the stomach to the anus. It includes the large intestine and small intestine. [NIH]

Intracellular: Inside a cell. [NIH]

Intravenous: IV. Into a vein. [NIH]

Intravesical: Within the bladder. [NIH]

Intubation: Introduction of a tube into a hollow organ to restore or maintain patency if obstructed. It is differentiated from catheterization in that the insertion of a catheter is usually performed for the introducing or withdrawing of fluids from the body. [NIH]

Invasive: 1. Having the quality of invasiveness. 2. Involving puncture or incision of the skin or insertion of an instrument or foreign material into the body; said of diagnostic techniques. [EU]

Involuntary: Reaction occurring without intention or volition. [NIH]

Joint: The point of contact between elements of an animal skeleton with the parts that surround and support it. [NIH]

Kb: A measure of the length of DNA fragments, 1 Kb = 1000 base pairs. The largest DNA fragments are up to 50 kilobases long. [NIH]

Ketoconazole: Broad spectrum antifungal agent used for long periods at high doses, especially in immunosuppressed patients. [NIH]

Kidney Disease: Any one of several chronic conditions that are caused by damage to the cells of the kidney. People who have had diabetes for a long time may have kidney damage. Also called nephropathy. [NIH]

Kidney Pelvis: The flattened, funnel-shaped expansion connecting the ureter to the kidney calices. [NIH]

Kidney stone: A stone that develops from crystals that form in urine and build up on the inner surfaces of the kidney, in the renal pelvis, or in the ureters. [NIH]

Laparoscopy: Examination, therapy or surgery of the abdomen's interior by means of a laparoscope. [NIH]

Leucocyte: All the white cells of the blood and their precursors (myeloid cell series, lymphoid cell series) but commonly used to indicate granulocytes exclusive of lymphocytes. [NIH]

Leukaemia: An acute or chronic disease of unknown cause in man and other warm-blooded animals that involves the blood-forming organs, is characterized by an abnormal increase in the number of leucocytes in the tissues of the body with or without a corresponding increase of those in the circulating blood, and is classified according of the type leucocyte most prominently involved. [EU]

Library Services: Services offered to the library user. They include reference and circulation. [NIH]

Ligament: A band of fibrous tissue that connects bones or cartilages, serving to support and strengthen joints. [EU]

Ligands: A RNA simulation method developed by the MIT. [NIH]

Ligation: Application of a ligature to tie a vessel or strangulate a part. [NIH]

Lipid: Fat. [NIH]

Lipopolysaccharide: Substance consisting of polysaccaride and lipid. [NIH]

Liposomes: Artificial, single or multilaminar vesicles (made from lecithins or other lipids) that are used for the delivery of a variety of biological molecules or molecular complexes to cells, for example, drug delivery and gene transfer. They are also used to study membranes and membrane proteins. [NIH]

Liver: A large, glandular organ located in the upper abdomen. The liver cleanses the blood and aids in digestion by secreting bile. [NIH]

Localization: The process of determining or marking the location or site of a lesion or disease. May also refer to the process of keeping a lesion or disease in a specific location or site. [NIH]

Localized: Cancer which has not metastasized yet. [NIH]

Lumbar: Pertaining to the loins, the part of the back between the thorax and the pelvis. [EU]

Lymph: The almost colorless fluid that travels through the lymphatic system and carries cells that help fight infection and disease. [NIH]

Lymph node: A rounded mass of lymphatic tissue that is surrounded by a capsule of connective tissue. Also known as a lymph gland. Lymph nodes are spread out along lymphatic vessels and contain many lymphocytes, which filter the lymphatic fluid (lymph). [NIH]

Lymphatic: The tissues and organs, including the bone marrow, spleen, thymus, and lymph nodes, that produce and store cells that fight infection and disease. [NIH]

Lymphatic system: The tissues and organs that produce, store, and carry white blood cells that fight infection and other diseases. This system includes the bone marrow, spleen, thymus, lymph nodes and a network of thin tubes that carry lymph and white blood cells. These tubes branch, like blood vessels, into all the tissues of the body. [NIH]

Lymphoblastic: One of the most aggressive types of non-Hodgkin lymphoma. [NIH]

Lymphocyte: A white blood cell. Lymphocytes have a number of roles in the immune system, including the production of antibodies and other substances that fight infection and diseases. [NIH]

Lymphocyte Count: A count of the number of lymphocytes in the blood. [NIH]

Lymphoid: Referring to lymphocytes, a type of white blood cell. Also refers to tissue in which lymphocytes develop. [NIH]

Lymphoma: A general term for various neoplastic diseases of the lymphoid tissue. [NIH]

Lysine: An essential amino acid. It is often added to animal feed. [NIH]

Lytic: 1. Pertaining to lysis or to a lysin. 2. Producing lysis. [EU]

Malacoplakia: The formation of soft patches on the mucous membrane of a hollow organ, such as the urogenital tract or digestive tract. [NIH]

Malformation: A morphologic defect resulting from an intrinsically abnormal developmental process. [EU]

Malignant: Cancerous; a growth with a tendency to invade and destroy nearby tissue and spread to other parts of the body. [NIH]

Mediate: Indirect; accomplished by the aid of an intervening medium. [EU]

Medical Records: Recording of pertinent information concerning patient's illness or illnesses. [NIH]

MEDLINE: An online database of MEDLARS, the computerized bibliographic Medical Literature Analysis and Retrieval System of the National Library of Medicine. [NIH]

Medullary: Pertaining to the marrow or to any medulla; resembling marrow. [EU]

Medulloblastoma: A malignant brain tumor that begins in the lower part of the brain and can spread to the spine or to other parts of the body. Medulloblastomas are sometimes called primitive neuroectodermal tumors (PNET). [NIH]

Membrane: A very thin layer of tissue that covers a surface. [NIH]

Membrane Proteins: Proteins which are found in membranes including cellular and intracellular membranes. They consist of two types, peripheral and integral proteins. They include most membrane-associated enzymes, antigenic proteins, transport proteins, and drug, hormone, and lectin receptors. [NIH]

Meninges: The three membranes that cover and protect the brain and spinal cord. [NIH]

Meningitis: Inflammation of the meninges. When it affects the dura mater, the disease is termed pachymeningitis; when the arachnoid and pia mater are involved, it is called leptomeningitis, or meningitis proper. [EU]

Mental: Pertaining to the mind; psychic. 2. (L. mentum chin) pertaining to the chin. [EU]

Mental Disorders: Psychiatric illness or diseases manifested by breakdowns in the adaptational process expressed primarily as abnormalities of thought, feeling, and behavior producing either distress or impairment of function. [NIH]

Metastasis: The spread of cancer from one part of the body to another. Tumors formed from cells that have spread are called "secondary tumors" and contain cells that are like those in the original (primary) tumor. The plural is metastases. [NIH]

Metastasize: To spread from one part of the body to another. When cancer cells metastasize and form secondary tumors, the cells in the metastatic tumor are like those in the original (primary) tumor. [NIH]

Metastatic: Having to do with metastasis, which is the spread of cancer from one part of the body to another. [NIH]

MI: Myocardial infarction. Gross necrosis of the myocardium as a result of interruption of the blood supply to the area; it is almost always caused by atherosclerosis of the coronary arteries, upon which coronary thrombosis is usually superimposed. [NIH]

Microbiological: Pertaining to microbiology : the science that deals with microorganisms, including algae, bacteria, fungi, protozoa and viruses. [EU]

Microbiology: The study of microorganisms such as fungi, bacteria, algae, archaea, and

viruses. [NIH]

Microorganism: An organism that can be seen only through a microscope. Microorganisms include bacteria, protozoa, algae, and fungi. Although viruses are not considered living organisms, they are sometimes classified as microorganisms. [NIH]

Micro-organism: An organism which cannot be observed with the naked eye; e. g. unicellular animals, lower algae, lower fungi, bacteria. [NIH]

Microscopy: The application of microscope magnification to the study of materials that cannot be properly seen by the unaided eye. [NIH]

Micturition: The passage of urine; urination. [EU]

Miscarriage: Spontaneous expulsion of the products of pregnancy before the middle of the second trimester. [NIH]

Mitochondria: Parts of a cell where aerobic production (also known as cell respiration) takes place. [NIH]

Mitosis: A method of indirect cell division by means of which the two daughter nuclei normally receive identical complements of the number of chromosomes of the somatic cells of the species. [NIH]

Mitotic: Cell resulting from mitosis. [NIH]

Molecular: Of, pertaining to, or composed of molecules : a very small mass of matter. [EU]

Molecular Chaperones: A family of cellular proteins that mediate the correct assembly or disassembly of other polypeptides, and in some cases their assembly into oligomeric structures, but which are not components of those final structures. It is believed that chaperone proteins assist polypeptides to self-assemble by inhibiting alternative assembly pathways that produce nonfunctional structures. Some classes of molecular chaperones are the nucleoplasmins, the chaperonins, the heat-shock proteins 70, and the heat-shock proteins 90. [NIH]

Molecule: A chemical made up of two or more atoms. The atoms in a molecule can be the same (an oxygen molecule has two oxygen atoms) or different (a water molecule has two hydrogen atoms and one oxygen atom). Biological molecules, such as proteins and DNA, can be made up of many thousands of atoms. [NIH]

Monoclonal: An antibody produced by culturing a single type of cell. It therefore consists of a single species of immunoglobulin molecules. [NIH]

Mucopurulent: Containing both mucus and pus. [EU]

Mucus: The viscous secretion of mucous membranes. It contains mucin, white blood cells, water, inorganic salts, and exfoliated cells. [NIH]

Myocarditis: Inflammation of the myocardium; inflammation of the muscular walls of the heart. [EU]

Myocardium: The muscle tissue of the heart composed of striated, involuntary muscle known as cardiac muscle. [NIH]

Need: A state of tension or dissatisfaction felt by an individual that impels him to action toward a goal he believes will satisfy the impulse. [NIH]

Neoplasms: New abnormal growth of tissue. Malignant neoplasms show a greater degree of anaplasia and have the properties of invasion and metastasis, compared to benign neoplasms. [NIH]

Nephropathy: Disease of the kidneys. [EU]

Nephrosis: Descriptive histopathologic term for renal disease without an inflammatory

component. [NIH]

Nephrotic: Pertaining to, resembling, or caused by nephrosis. [EU]

Nephrotic Syndrome: Clinical association of heavy proteinuria, hypoalbuminemia, and generalized edema. [NIH]

Nerve: A cordlike structure of nervous tissue that connects parts of the nervous system with other tissues of the body and conveys nervous impulses to, or away from, these tissues. [NIH]

Nervous System: The entire nerve apparatus composed of the brain, spinal cord, nerves and ganglia. [NIH]

Neurogenic: Loss of bladder control caused by damage to the nerves controlling the bladder. [NIH]

Neurology: A medical specialty concerned with the study of the structures, functions, and diseases of the nervous system. [NIH]

Neutrophil: A type of white blood cell. [NIH]

Nitrogen: An element with the atomic symbol N, atomic number 7, and atomic weight 14. Nitrogen exists as a diatomic gas and makes up about 78% of the earth's atmosphere by volume. It is a constituent of proteins and nucleic acids and found in all living cells. [NIH]

Nucleus: A body of specialized protoplasm found in nearly all cells and containing the chromosomes. [NIH]

Obstetrics: A medical-surgical specialty concerned with management and care of women during pregnancy, parturition, and the puerperium. [NIH]

Ofloxacin: An orally administered broad-spectrum quinolone antibacterial drug active against most gram-negative and gram-positive bacteria. [NIH]

Opacity: Degree of density (area most dense taken for reading). [NIH]

Ophthalmology: A surgical specialty concerned with the structure and function of the eye and the medical and surgical treatment of its defects and diseases. [NIH]

Opportunistic Infections: An infection caused by an organism which becomes pathogenic under certain conditions, e.g., during immunosuppression. [NIH]

Orchiectomy: The surgical removal of one or both testicles. [NIH]

Orchitis: Inflammation of a testis. The disease is marked by pain, swelling, and a feeling of weight. It may occur idiopathically, or it may be associated with conditions such as mumps, gonorrhoea, filarial disease, syphilis, or tuberculosis. [EU]

Orgasm: The crisis of sexual excitement in either humans or animals. [NIH]

Ornithine: An amino acid produced in the urea cycle by the splitting off of urea from arginine. [NIH]

Otolaryngology: A surgical specialty concerned with the study and treatment of disorders of the ear, nose, and throat. [NIH]

Ovum: A female germ cell extruded from the ovary at ovulation. [NIH]

Pachymeningitis: Inflammation of the dura mater of the brain, the spinal cord or the optic nerve. [NIH]

Pancreas: A mixed exocrine and endocrine gland situated transversely across the posterior abdominal wall in the epigastric and hypochondriac regions. The endocrine portion is comprised of the Islets of Langerhans, while the exocrine portion is a compound acinar gland that secretes digestive enzymes. [NIH]

Pancreatic: Having to do with the pancreas. [NIH]

Pancreatitis: Acute or chronic inflammation of the pancreas, which may be asymptomatic or symptomatic, and which is due to autodigestion of a pancreatic tissue by its own enzymes. It is caused most often by alcoholism or biliary tract disease; less commonly it may be associated with hyperlipaemia, hyperparathyroidism, abdominal trauma (accidental or operative injury), vasculitis, or uraemia. [EU]

Parotid: The space that contains the parotid gland, the facial nerve, the external carotid artery, and the retromandibular vein. [NIH]

Parotitis: Inflammation of the parotid gland. [NIH]

Parturition: The act or process of given birth to a child. [EU]

Pathogen: Any disease-producing microorganism. [EU]

Pathogenesis: The cellular events and reactions that occur in the development of disease. [NIH]

Pathologic: 1. Indicative of or caused by a morbid condition. 2. Pertaining to pathology (= branch of medicine that treats the essential nature of the disease, especially the structural and functional changes in tissues and organs of the body caused by the disease). [EU]

Pathologic Processes: The abnormal mechanisms and forms involved in the dysfunctions of tissues and organs. [NIH]

Patient Education: The teaching or training of patients concerning their own health needs. [NIH]

Pelvic: Pertaining to the pelvis. [EU]

Pelvic inflammatory disease: A bacteriological disease sometimes associated with intrauterine device (IUD) usage. [NIH]

Pelvis: The lower part of the abdomen, located between the hip bones. [NIH]

Penis: The external reproductive organ of males. It is composed of a mass of erectile tissue enclosed in three cylindrical fibrous compartments. Two of the three compartments, the corpus cavernosa, are placed side-by-side along the upper part of the organ. The third compartment below, the corpus spongiosum, houses the urethra. [NIH]

Peptide: Any compound consisting of two or more amino acids, the building blocks of proteins. Peptides are combined to make proteins. [NIH]

Perinatal: Pertaining to or occurring in the period shortly before and after birth; variously defined as beginning with completion of the twentieth to twenty-eighth week of gestation and ending 7 to 28 days after birth. [EU]

Pharmacologic: Pertaining to pharmacology or to the properties and reactions of drugs. [EU]

Phenotype: The outward appearance of the individual. It is the product of interactions between genes and between the genotype and the environment. This includes the killer phenotype, characteristic of yeasts. [NIH]

Physical Examination: Systematic and thorough inspection of the patient for physical signs of disease or abnormality. [NIH]

Physiologic: Having to do with the functions of the body. When used in the phrase "physiologic age," it refers to an age assigned by general health, as opposed to calendar age. [NIH]

Physiology: The science that deals with the life processes and functions of organismus, their cells, tissues, and organs. [NIH]

Pivampicillin: Pivalate ester analog of ampicillin. [NIH]

Plants: Multicellular, eukaryotic life forms of the kingdom Plantae. They are characterized

by a mainly photosynthetic mode of nutrition; essentially unlimited growth at localized regions of cell divisions (meristems); cellulose within cells providing rigidity; the absence of organs of locomotion; absense of nervous and sensory systems; and an alteration of haploid and diploid generations. [NIH]

Plasma: The clear, yellowish, fluid part of the blood that carries the blood cells. The proteins that form blood clots are in plasma. [NIH]

Plasma cells: A type of white blood cell that produces antibodies. [NIH]

Plastids: Self-replicating cytoplasmic organelles of plant and algal cells that contain pigments and may synthesize and accumulate various substances. Plastids are used in phylogenetic studies. [NIH]

Plexus: A network or tangle; a general term for a network of lymphatic vessels, nerves, or veins. [EU]

Pneumonia: Inflammation of the lungs. [NIH]

Pneumonitis: A disease caused by inhaling a wide variety of substances such as dusts and molds. Also called "farmer's disease". [NIH]

Podophyllotoxin: The main active constituent of the resin from the roots of may apple or mandrake (Podophyllum peltatum and P. emodi). It is a potent spindle poison, toxic if taken internally, and has been used as a cathartic. It is very irritating to skin and mucous membranes, has keratolytic actions, has been used to treat warts and keratoses, and may have antineoplastic properties, as do some of its congeners and derivatives. [NIH]

Poisoning: A condition or physical state produced by the ingestion, injection or inhalation of, or exposure to a deleterious agent. [NIH]

Polyarthritis: An inflammation of several joints together. [EU]

Polycystic: An inherited disorder characterized by many grape-like clusters of fluid-filled cysts that make both kidneys larger over time. These cysts take over and destroy working kidney tissue. PKD may cause chronic renal failure and end-stage renal disease. [NIH]

Polymerase: An enzyme which catalyses the synthesis of DNA using a single DNA strand as a template. The polymerase copies the template in the 5'-3'direction provided that sufficient quantities of free nucleotides, dATP and dTTP are present. [NIH]

Polymerase Chain Reaction: In vitro method for producing large amounts of specific DNA or RNA fragments of defined length and sequence from small amounts of short oligonucleotide flanking sequences (primers). The essential steps include thermal denaturation of the double-stranded target molecules, annealing of the primers to their complementary sequences, and extension of the annealed primers by enzymatic synthesis with DNA polymerase. The reaction is efficient, specific, and extremely sensitive. Uses for the reaction include disease diagnosis, detection of difficult-to-isolate pathogens, mutation analysis, genetic testing, DNA sequencing, and analyzing evolutionary relationships. [NIH]

Polysaccharide: A type of carbohydrate. It contains sugar molecules that are linked together chemically. [NIH]

Postoperative: After surgery. [NIH]

Practice Guidelines: Directions or principles presenting current or future rules of policy for the health care practitioner to assist him in patient care decisions regarding diagnosis, therapy, or related clinical circumstances. The guidelines may be developed by government agencies at any level, institutions, professional societies, governing boards, or by the convening of expert panels. The guidelines form a basis for the evaluation of all aspects of health care and delivery. [NIH]

Precursor: Something that precedes. In biological processes, a substance from which another, usually more active or mature substance is formed. In clinical medicine, a sign or symptom that heralds another. [EU]

Pregnancy Outcome: Results of conception and ensuing pregnancy, including live birth, stillbirth, spontaneous abortion, induced abortion. The outcome may follow natural or artificial insemination or any of the various reproduction techniques, such as embryo transfer or fertilization in vitro. [NIH]

Prepuce: A covering fold of skin; often used alone to designate the preputium penis. [EU]

Prevalence: The total number of cases of a given disease in a specified population at a designated time. It is differentiated from incidence, which refers to the number of new cases in the population at a given time. [NIH]

Primitive neuroectodermal tumors: PNET. A type of bone cancer that forms in the middle (shaft) of large bones. Also called Ewing's sarcoma/primitive neuroectodermal tumor. [NIH]

Progressive: Advancing; going forward; going from bad to worse; increasing in scope or severity. [EU]

Prophylaxis: An attempt to prevent disease. [NIH]

Proportional: Being in proportion : corresponding in size, degree, or intensity, having the same or a constant ratio; of, relating to, or used in determining proportions. [EU]

Prospective study: An epidemiologic study in which a group of individuals (a cohort), all free of a particular disease and varying in their exposure to a possible risk factor, is followed over a specific amount of time to determine the incidence rates of the disease in the exposed and unexposed groups. [NIH]

Prostate: A gland in males that surrounds the neck of the bladder and the urethra. It secretes a substance that liquifies coagulated semen. It is situated in the pelvic cavity behind the lower part of the pubic symphysis, above the deep layer of the triangular ligament, and rests upon the rectum. [NIH]

Prostate gland: A gland in the male reproductive system just below the bladder. It surrounds part of the urethra, the canal that empties the bladder, and produces a fluid that forms part of semen. [NIH]

Prostatectomy: Complete or partial surgical removal of the prostate. Three primary approaches are commonly employed: suprapubic - removal through an incision above the pubis and through the urinary bladder; retropubic - as for suprapubic but without entering the urinary bladder; and transurethral (transurethral resection of prostate). [NIH]

Prostatic Hyperplasia: Enlargement or overgrowth of the prostate gland as a result of an increase in the number of its constituent cells. [NIH]

Prostatitis: Inflammation of the prostate. [EU]

Protein S: The vitamin K-dependent cofactor of activated protein C. Together with protein C, it inhibits the action of factors VIIIa and Va. A deficiency in protein S can lead to recurrent venous and arterial thrombosis. [NIH]

Proteins: Polymers of amino acids linked by peptide bonds. The specific sequence of amino acids determines the shape and function of the protein. [NIH]

Proteinuria: The presence of protein in the urine, indicating that the kidneys are not working properly. [NIH]

Protocol: The detailed plan for a clinical trial that states the trial's rationale, purpose, drug or vaccine dosages, length of study, routes of administration, who may participate, and other aspects of trial design. [NIH]

Protozoa: A subkingdom consisting of unicellular organisms that are the simplest in the animal kingdom. Most are free living. They range in size from submicroscopic to macroscopic. Protozoa are divided into seven phyla: Sarcomastigophora, Labyrinthomorpha, Apicomplexa, Microspora, Ascetospora, Myxozoa, and Ciliophora. [NIH]

Psychiatry: The medical science that deals with the origin, diagnosis, prevention, and treatment of mental disorders. [NIH]

Psychic: Pertaining to the psyche or to the mind; mental. [EU]

Public Policy: A course or method of action selected, usually by a government, from among alternatives to guide and determine present and future decisions. [NIH]

Puerperium: Period from delivery of the placenta until return of the reproductive organs to their normal nonpregnant morphologic state. In humans, the puerperium generally lasts for six to eight weeks. [NIH]

Purpura: Purplish or brownish red discoloration, easily visible through the epidermis, caused by hemorrhage into the tissues. [NIH]

Pyelonephritis: Inflammation of the kidney and its pelvis, beginning in the interstitium and rapidly extending to involve the tubules, glomeruli, and blood vessels; due to bacterial infection. [EU]

Pyogenic: Producing pus; pyopoietic (= liquid inflammation product made up of cells and a thin fluid called liquor puris). [EU]

Randomized: Describes an experiment or clinical trial in which animal or human subjects are assigned by chance to separate groups that compare different treatments. [NIH]

Receptor: A molecule inside or on the surface of a cell that binds to a specific substance and causes a specific physiologic effect in the cell. [NIH]

Recombinant: A cell or an individual with a new combination of genes not found together in either parent; usually applied to linked genes. [EU]

Rectum: The last 8 to 10 inches of the large intestine. [NIH]

Refer: To send or direct for treatment, aid, information, de decision. [NIH]

Reflex: An involuntary movement or exercise of function in a part, excited in response to a stimulus applied to the periphery and transmitted to the brain or spinal cord. [NIH]

Reflux: The term used when liquid backs up into the esophagus from the stomach. [NIH]

Regimen: A treatment plan that specifies the dosage, the schedule, and the duration of treatment. [NIH]

Renal agenesis: The absence or severe malformation of one or both kidneys. [NIH]

Renal failure: Progressive renal insufficiency and uremia, due to irreversible and progressive renal glomerular tubular or interstitial disease. [NIH]

Renal pelvis: The area at the center of the kidney. Urine collects here and is funneled into the ureter, the tube that connects the kidney to the bladder. [NIH]

Renal tubular: A defect in the kidneys that hinders their normal excretion of acids. Failure to excrete acids can lead to weak bones, kidney stones, and poor growth in children. [NIH]

Renal tubular acidosis: A rare disorder in which structures in the kidney that filter the blood are impaired, producing using that is more acid than normal. [NIH]

Renal vein thrombosis: Blood clots in the vessel that carries blood away from the kidney. This can occur in people with the nephrotic syndrome. [NIH]

Renovascular: Of or pertaining to the blood vessels of the kidneys. [EU]

Reproduction Techniques: Methods pertaining to the generation of new individuals. [NIH]

Reproductive cells: Egg and sperm cells. Each mature reproductive cell carries a single set of 23 chromosomes. [NIH]

Retropubic: A potential space between the urinary bladder and the symphisis and body of the pubis. [NIH]

Retrospective: Looking back at events that have already taken place. [NIH]

Retrospective study: A study that looks backward in time, usually using medical records and interviews with patients who already have or had a disease. [NIH]

Risk factor: A habit, trait, condition, or genetic alteration that increases a person's chance of developing a disease. [NIH]

Rod: A reception for vision, located in the retina. [NIH]

Salivary: The duct that convey saliva to the mouth. [NIH]

Salivary glands: Glands in the mouth that produce saliva. [NIH]

Salpingitis: 1. Inflammation of the uterine tube. 2. Inflammation of the auditory tube. [EU]

Sarcoidosis: An idiopathic systemic inflammatory granulomatous disorder comprised of epithelioid and multinucleated giant cells with little necrosis. It usually invades the lungs with fibrosis and may also involve lymph nodes, skin, liver, spleen, eyes, phalangeal bones, and parotid glands. [NIH]

Screening: Checking for disease when there are no symptoms. [NIH]

Scrotum: In males, the external sac that contains the testicles. [NIH]

Secondary tumor: Cancer that has spread from the organ in which it first appeared to another organ. For example, breast cancer cells may spread (metastasize) to the lungs and cause the growth of a new tumor. When this happens, the disease is called metastatic breast cancer, and the tumor in the lungs is called a secondary tumor. Also called secondary cancer. [NIH]

Secretion: 1. The process of elaborating a specific product as a result of the activity of a gland; this activity may range from separating a specific substance of the blood to the elaboration of a new chemical substance. 2. Any substance produced by secretion. [EU]

Sediment: A precipitate, especially one that is formed spontaneously. [EU]

Segregation: The separation in meiotic cell division of homologous chromosome pairs and their contained allelomorphic gene pairs. [NIH]

Self Care: Performance of activities or tasks traditionally performed by professional health care providers. The concept includes care of oneself or one's family and friends. [NIH]

Semen: The thick, yellowish-white, viscid fluid secretion of male reproductive organs discharged upon ejaculation. In addition to reproductive organ secretions, it contains spermatozoa and their nutrient plasma. [NIH]

Seminal vesicles: Glands that help produce semen. [NIH]

Seminiferous Epithelium: Specialized epithelium lining the seminiferous tubules containing developing and mature spermatozoa and Sertoli cells. [NIH]

Seminiferous tubule: Tube used to transport sperm made in the testes. [NIH]

Semisynthetic: Produced by chemical manipulation of naturally occurring substances. [EU]

Sepsis: The presence of bacteria in the bloodstream. [NIH]

Septicaemia: A term originally used to denote a putrefactive process in the body, but now usually referring to infection with pyogenic micro-organisms; a genus of Diptera; the severe

type of infection in which the blood stream is invaded by large numbers of the causal. [NIH]

Septicemia: Systemic disease associated with the presence and persistence of pathogenic microorganisms or their toxins in the blood. Called also blood poisoning. [EU]

Sequencing: The determination of the order of nucleotides in a DNA or RNA chain. [NIH]

Serologic: Analysis of a person's serum, especially specific immune or lytic serums. [NIH]

Serum: The clear liquid part of the blood that remains after blood cells and clotting proteins have been removed. [NIH]

Sexually Transmitted Diseases: Diseases due to or propagated by sexual contact. [NIH]

Shock: The general bodily disturbance following a severe injury; an emotional or moral upset occasioned by some disturbing or unexpected experience; disruption of the circulation, which can upset all body functions: sometimes referred to as circulatory shock. [NIH]

Side effect: A consequence other than the one(s) for which an agent or measure is used, as the adverse effects produced by a drug, especially on a tissue or organ system other than the one sought to be benefited by its administration. [EU]

Signs and Symptoms: Clinical manifestations that can be either objective when observed by a physician, or subjective when perceived by the patient. [NIH]

Small intestine: The part of the digestive tract that is located between the stomach and the large intestine. [NIH]

Solitary Nucleus: Gray matter located in the dorsomedial part of the medulla oblongata associated with the solitary tract. The solitary nucleus receives inputs from most organ systems including the terminations of the facial, glossopharyngeal, and vagus nerves. It is a major coordinator of autonomic nervous system regulation of cardiovascular, respiratory, gustatory, gastrointestinal, and chemoreceptive aspects of homeostasis. The solitary nucleus is also notable for the large number of neurotransmitters which are found therein. [NIH]

Specialist: In medicine, one who concentrates on 1 special branch of medical science. [NIH]

Species: A taxonomic category subordinate to a genus (or subgenus) and superior to a subspecies or variety, composed of individuals possessing common characters distinguishing them from other categories of individuals of the same taxonomic level. In taxonomic nomenclature, species are designated by the genus name followed by a Latin or Latinized adjective or noun. [EU]

Spectrum: A charted band of wavelengths of electromagnetic vibrations obtained by refraction and diffraction. By extension, a measurable range of activity, such as the range of bacteria affected by an antibiotic (antibacterial s.) or the complete range of manifestations of a disease. [EU]

Sperm: The fecundating fluid of the male. [NIH]

Sperm retrieval: The doctor removes sperm from a man's reproductive tract (testis or epididymis) using a fine needle or another instrument. [NIH]

Sphincter: A ringlike band of muscle fibres that constricts a passage or closes a natural orifice; called also musculus sphincter. [EU]

Spinal cord: The main trunk or bundle of nerves running down the spine through holes in the spinal bone (the vertebrae) from the brain to the level of the lower back. [NIH]

Spleen: An organ that is part of the lymphatic system. The spleen produces lymphocytes, filters the blood, stores blood cells, and destroys old blood cells. It is located on the left side of the abdomen near the stomach. [NIH]

Spontaneous Abortion: The non-induced birth of an embryo or of fetus prior to the stage of

viability at about 20 weeks of gestation. [NIH]

Sterile: Unable to produce children. [NIH]

Sterility: 1. The inability to produce offspring, i.e., the inability to conceive (female s.) or to induce conception (male s.). 2. The state of being aseptic, or free from microorganisms. [EU]

Steroids: Drugs used to relieve swelling and inflammation. [NIH]

Stillbirth: The birth of a dead fetus or baby. [NIH]

Stimulus: That which can elicit or evoke action (response) in a muscle, nerve, gland or other excitable issue, or cause an augmenting action upon any function or metabolic process. [NIH]

Stomach: An organ of digestion situated in the left upper quadrant of the abdomen between the termination of the esophagus and the beginning of the duodenum. [NIH]

Stool: The waste matter discharged in a bowel movement; feces. [NIH]

Strand: DNA normally exists in the bacterial nucleus in a helix, in which two strands are coiled together. [NIH]

Stress: Forcibly exerted influence; pressure. Any condition or situation that causes strain or tension. Stress may be either physical or psychologic, or both. [NIH]

Subacute: Somewhat acute; between acute and chronic. [EU]

Subclinical: Without clinical manifestations; said of the early stage(s) of an infection or other disease or abnormality before symptoms and signs become apparent or detectable by clinical examination or laboratory tests, or of a very mild form of an infection or other disease or abnormality. [EU]

Subcutaneous: Beneath the skin. [NIH]

Subspecies: A category intermediate in rank between species and variety, based on a smaller number of correlated characters than are used to differentiate species and generally conditioned by geographical and/or ecological occurrence. [NIH]

Substance P: An eleven-amino acid neurotransmitter that appears in both the central and peripheral nervous systems. It is involved in transmission of pain, causes rapid contractions of the gastrointestinal smooth muscle, and modulates inflammatory and immune responses. [NIH]

Substrate: A substance upon which an enzyme acts. [EU]

Sympathetic Nervous System: The thoracolumbar division of the autonomic nervous system. Sympathetic preganglionic fibers originate in neurons of the intermediolateral column of the spinal cord and project to the paravertebral and prevertebral ganglia, which in turn project to target organs. The sympathetic nervous system mediates the body's response to stressful situations, i.e., the fight or flight reactions. It often acts reciprocally to the parasympathetic system. [NIH]

Symphysis: A secondary cartilaginous joint. [NIH]

Symptomatic: Having to do with symptoms, which are signs of a condition or disease. [NIH]

Syphilis: A contagious venereal disease caused by the spirochete Treponema pallidum. [NIH]

Systemic: Affecting the entire body. [NIH]

Systolic: Indicating the maximum arterial pressure during contraction of the left ventricle of the heart. [EU]

Testicle: The male gonad where, in adult life, spermatozoa develop; the testis. [NIH]

Testicular: Pertaining to a testis. [EU]

Testis: Either of the paired male reproductive glands that produce the male germ cells and the male hormones. [NIH]

Tetracycline: An antibiotic originally produced by Streptomyces viridifaciens, but used mostly in synthetic form. It is an inhibitor of aminoacyl-tRNA binding during protein synthesis. [NIH]

Thermal: Pertaining to or characterized by heat. [EU]

Thigh: A leg; in anatomy, any elongated process or part of a structure more or less comparable to a leg. [NIH]

Thorax: A part of the trunk between the neck and the abdomen; the chest. [NIH]

Threshold: For a specified sensory modality (e. g. light, sound, vibration), the lowest level (absolute threshold) or smallest difference (difference threshold, difference limen) or intensity of the stimulus discernible in prescribed conditions of stimulation. [NIH]

Thrombosis: The formation or presence of a blood clot inside a blood vessel. [NIH]

Thrombus: An aggregation of blood factors, primarily platelets and fibrin with entrapment of cellular elements, frequently causing vascular obstruction at the point of its formation. Some authorities thus differentiate thrombus formation from simple coagulation or clot formation. [EU]

Thrush: A disease due to infection with species of fungi of the genus Candida. [NIH]

Thymus: An organ that is part of the lymphatic system, in which T lymphocytes grow and multiply. The thymus is in the chest behind the breastbone. [NIH]

Tissue: A group or layer of cells that are alike in type and work together to perform a specific function. [NIH]

Tone: 1. The normal degree of vigour and tension; in muscle, the resistance to passive elongation or stretch; tonus. 2. A particular quality of sound or of voice. 3. To make permanent, or to change, the colour of silver stain by chemical treatment, usually with a heavy metal. [EU]

Tonus: A state of slight tension usually present in muscles even when they are not undergoing active contraction. [NIH]

Torsion: A twisting or rotation of a bodily part or member on its axis. [NIH]

Toxic: Having to do with poison or something harmful to the body. Toxic substances usually cause unwanted side effects. [NIH]

Toxicology: The science concerned with the detection, chemical composition, and pharmacologic action of toxic substances or poisons and the treatment and prevention of toxic manifestations. [NIH]

Toxins: Specific, characterizable, poisonous chemicals, often proteins, with specific biological properties, including immunogenicity, produced by microbes, higher plants, or animals. [NIH]

Transfection: The uptake of naked or purified DNA into cells, usually eukaryotic. It is analogous to bacterial transformation. [NIH]

Transfer Factor: Factor derived from leukocyte lysates of immune donors which can transfer both local and systemic cellular immunity to nonimmune recipients. [NIH]

Transplantation: Transference of a tissue or organ, alive or dead, within an individual, between individuals of the same species, or between individuals of different species. [NIH]

Transurethral: Performed through the urethra. [EU]

Transurethral resection: Surgery performed with a special instrument inserted through the

urethra. Also called TUR. [NIH]

Transurethral Resection of Prostate: Resection of the prostate using a cystoscope passed through the urethra. [NIH]

Trauma: Any injury, wound, or shock, must frequently physical or structural shock, producing a disturbance. [NIH]

Ultrasonography: The visualization of deep structures of the body by recording the reflections of echoes of pulses of ultrasonic waves directed into the tissues. Use of ultrasound for imaging or diagnostic purposes employs frequencies ranging from 1.6 to 10 megahertz. [NIH]

Unconscious: Experience which was once conscious, but was subsequently rejected, as the "personal unconscious". [NIH]

Uraemia: 1. An excess in the blood of urea, creatinine, and other nitrogenous end products of protein and amino acids metabolism; more correctly referred to as azotemia. 2. In current usage the entire constellation of signs and symptoms of chronic renal failure, including nausea, vomiting anorexia, a metallic taste in the mouth, a uraemic odour of the breath, pruritus, uraemic frost on the skin, neuromuscular disorders, pain and twitching in the muscles, hypertension, edema, mental confusion, and acid-base and electrolyte imbalances. [EU]

Uremia: The illness associated with the buildup of urea in the blood because the kidneys are not working effectively. Symptoms include nausea, vomiting, loss of appetite, weakness, and mental confusion. [NIH]

Ureter: One of a pair of thick-walled tubes that transports urine from the kidney pelvis to the bladder. [NIH]

Urethra: The tube through which urine leaves the body. It empties urine from the bladder. [NIH]

Urethritis: Inflammation of the urethra. [EU]

Urinalysis: Examination of urine by chemical, physical, or microscopic means. Routine urinalysis usually includes performing chemical screening tests, determining specific gravity, observing any unusual color or odor, screening for bacteriuria, and examining the sediment microscopically. [NIH]

Urinary: Having to do with urine or the organs of the body that produce and get rid of urine. [NIH]

Urinary tract: The organs of the body that produce and discharge urine. These include the kidneys, ureters, bladder, and urethra. [NIH]

Urinary tract infection: An illness caused by harmful bacteria growing in the urinary tract. [NIH]

Urinate: To release urine from the bladder to the outside. [NIH]

Urine: Fluid containing water and waste products. Urine is made by the kidneys, stored in the bladder, and leaves the body through the urethra. [NIH]

Urogenital: Pertaining to the urinary and genital apparatus; genitourinary. [EU]

Urogenital Diseases: Diseases of the urogenital tract. [NIH]

Urography: Radiography of any part of the urinary tract. [NIH]

Urologic Diseases: Diseases of the urinary tract in both male and female. It does not include the male genitalia for which urogenital diseases is used for general discussions of diseases of both the urinary tract and the genitalia. [NIH]

Urology: A surgical specialty concerned with the study, diagnosis, and treatment of diseases

of the urinary tract in both sexes and the genital tract in the male. It includes the specialty of andrology which addresses both male genital diseases and male infertility. [NIH]

Uterus: The small, hollow, pear-shaped organ in a woman's pelvis. This is the organ in which a fetus develops. Also called the womb. [NIH]

Vaccine: A substance or group of substances meant to cause the immune system to respond to a tumor or to microorganisms, such as bacteria or viruses. [NIH]

Vagina: The muscular canal extending from the uterus to the exterior of the body. Also called the birth canal. [NIH]

Vaginal: Of or having to do with the vagina, the birth canal. [NIH]

Vaginitis: Inflammation of the vagina characterized by pain and a purulent discharge. [NIH]

Vas Deferens: The excretory duct of the testes that carries spermatozoa. It rises from the scrotum and joins the seminal vesicles to form the ejaculatory duct. [NIH]

Vascular: Pertaining to blood vessels or indicative of a copious blood supply. [EU]

Vascular Resistance: An expression of the resistance offered by the systemic arterioles, and to a lesser extent by the capillaries, to the flow of blood. [NIH]

Vasculitis: Inflammation of a blood vessel. [NIH]

Vasectomy: An operation to cut or tie off the two tubes that carry sperm out of the testicles. [NIH]

Vein: Vessel-carrying blood from various parts of the body to the heart. [NIH]

Venereal: Pertaining or related to or transmitted by sexual contact. [EU]

Ventricular: Pertaining to a ventricle. [EU]

Vertebrae: A bony unit of the segmented spinal column. [NIH]

Vesicoureteral: An abnormal condition in which urine backs up into the ureters, and occasionally into the kidneys, raising the risk of infection. [NIH]

Veterinary Medicine: The medical science concerned with the prevention, diagnosis, and treatment of diseases in animals. [NIH]

Virulence: The degree of pathogenicity within a group or species of microorganisms or viruses as indicated by case fatality rates and/or the ability of the organism to invade the tissues of the host. [NIH]

Virus: Submicroscopic organism that causes infectious disease. In cancer therapy, some viruses may be made into vaccines that help the body build an immune response to, and kill, tumor cells. [NIH]

Visceral: , from viscus a viscus) pertaining to a viscus. [EU]

Visceral Afferents: The sensory fibers innervating the viscera. [NIH]

Visual pathway glioma: A rare, slow-growing tumor of the eye. [NIH]

Vitro: Descriptive of an event or enzyme reaction under experimental investigation occurring outside a living organism. Parts of an organism or microorganism are used together with artificial substrates and/or conditions. [NIH]

Vivo: Outside of or removed from the body of a living organism. [NIH]

White blood cell: A type of cell in the immune system that helps the body fight infection and disease. White blood cells include lymphocytes, granulocytes, macrophages, and others. [NIH]

Wound Healing: Restoration of integrity to traumatized tissue. [NIH]

Zygote: The fertilized ovum. [NIH]

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