

# DYSURIA

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



**JAMES N. PARKER, M.D.**  
**AND PHILIP M. PARKER, PH.D., EDITORS**

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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."<sup>1</sup> 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 dysuria 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 dysuria, 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 dysuria, 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 dysuria. 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 dysuria, 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 dysuria.

*The Editors*

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



## CHAPTER 1. STUDIES ON DYSURIA

### Overview

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

### The Combined Health Information Database

The Combined Health Information Database summarizes studies across numerous federal agencies. To limit your investigation to research studies and dysuria, 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 "dysuria" (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:

- **Evaluation of Dysuria in Men**

Source: American Family Physician. 60(3): 865-872. September 1, 1999.

Contact: Available from American Academy of Family Physicians. 11400 Tomahawk Creek Parkway, Leawood, KS 66211-2672. (800) 274-2237. Website: [www.aafp.org](http://www.aafp.org).

Summary: Men with pain or a burning sensation on urination (**dysuria**) should be evaluated with a thorough history, a focused physical examination, and urinalysis (both urine dipstick and microscopic examination of the urine specimen). This article reviews the evaluation of **dysuria** in man. The authors note that although **dysuria** may be caused by anything that leads to inflammation of the urethral mucosa, it is most often the result of urinary tract infection (UTI). In younger patients, the infectious agent is usually a sexually transmitted organism such as *Chlamydia trachomatis*. In patients over 35 years

of age, coliform bacteria predominate. Infection in older men most often occurs as a result of urinary stasis secondary to benign prostatic hyperplasia. Other conditions that may cause **dysuria** include renal calculus, genitourinary malignancy, spondyloarthropathy, and medications. The authors conclude that successful treatment of **dysuria** depends on correct identification of its cause. 1 figure. 2 tables. 35 references.

- **Dysuria, Urgency, and Incontinence in Elderly Women with Bladder Diverticulum**

Source: *Geriatric Medicine Today*. 9(5): 61-62, 65. May 1990.

Summary: This article reports on a study in which the association of bladder diverticulum in women is associated with **dysuria**, urgency, incontinence, and urinary tract infection. The authors investigated eleven elderly women with bladder diverticula to learn about its possible cause and the relationship of the cause of this condition to its management. The authors focus on the role of urodynamic evaluation for diagnosis and treatment decisions. They conclude that combined treatment with anticholinergic agents to reduce the bladder contractions and maintenance antimicrobial therapy because of the constantly low urinary residual volume is most appropriate for this population. 2 tables. 4 references.

- **Woman with Dysuria**

Source: *American Family Physician*. 57(9): 2155-2164. May 1, 1998.

Contact: Available from American Academy of Family Physicians. 11400 Tomahawk Creek Parkway, Leawood, KS 66211-2672. (800) 274-2237. Website: [www.aafp.org](http://www.aafp.org).

Summary: This article reviews the diagnosis and patient care management of the woman who presents with **dysuria** (painful urination). The author discusses disorders associated with symptoms of **dysuria** and their characteristic laboratory and physical findings. Bacterial cystitis is the most common bacterial infection occurring in women. Thirty percent of women will experience at least one episode of cystitis during their lifetime. About one third of patients presenting with symptoms of cystitis have upper urinary tract infections (UTIs). A careful history to identify risk factors for subclinical pyelonephritis is important. Symptoms of chronic cystitis accompanied by sterile urine without pyuria (the presence of white blood cells in the urine) may represent interstitial cystitis (IC). **Dysuria** may also be the principal complaint of women with vaginitis (infectious, atrophic, or chemical) or urethritis. A stepwise diagnostic approach, accompanied by inexpensive office laboratory testing, is usually sufficient to determine the cause of **dysuria**. The author reviews the treatment options for each of the causes of **dysuria**. 8 tables. 30 references. (AA-M).

## Federally Funded Research on Dysuria

The U.S. Government supports a variety of research studies relating to dysuria. These studies are tracked by the Office of Extramural Research at the National Institutes of Health.<sup>2</sup> 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.

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<sup>2</sup> 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](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 dysuria.

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 dysuria. The following is typical of the type of information found when searching the CRISP database for dysuria:

- **Project Title: EFFECT OF CRANBERRY CONSTITUENTS ON UTI PATHOGENESIS**

Principal Investigator & Institution: Hultgren, Scott J.; Professor; Molecular Microbiology; Washington University Lindell and Skinker Blvd St. Louis, Mo 63130

Timing: Fiscal Year 2004; Project Start 01-JAN-2004; Project End 30-NOV-2007

Summary: (provided by applicant): Urinary tract infections (UTIs) are among the most common bacterial infections, with symptoms that can include **dysuria**, urgency and frequency of urination, flank pain and fever. Clinical diagnosis is based on symptoms and the laboratory finding of bacteriuria. Women of all ages are especially susceptible to acute and recurrent infections. Because of the rise in antibiotic-resistant bacteria and the deleterious effects of long-term antibiotic prophylaxis, alternative therapies for UTIs are needed. Alternative therapies proposed for treatment of acute and recurrent UTIs have included the ingestion of cranberries or cranberry juice. The actions ascribed to cranberries include acidification of the urine, inhibition of kinases, and anti-inflammatory, anti-adhesive and anti-oxidant effects. The Vorsa laboratory has fractionated cranberry fruit into the major flavonoid classes of proanthocyanidins, flavonols and anthocyanins. Through bioassay directed fractionation, the cranberry proanthocyanidin fraction was shown to contain compounds that can inhibit the aggregation of human erythrocytes by bacteria expressing PapG, the bacterial adhesin associated with pyelonephritis. In addition, the flavonol extract exhibited high anti-inflammatory activity in a TPA-induced mouse ear edema model. The Hultgren laboratory has utilized a mouse model of cystitis to elucidate the structure, function and mechanism of action of bacterial and host factors involved in the establishment and persistence of UTIs. The steps of the pathogenic cascade that occurs upon introduction of uropathogenic E. coli (UPEC) into the urinary tract has been delineated. This cascade includes bacterial binding and invasion into bladder epithelial cells, intracellular growth, fluxing, reservoir formation and reemergence leading to recurrence. The host responds by mounting an immune response that includes the release of cytokines and infiltration of PMNs. In collaboration, the Vorsa and Hultgren laboratories will investigate the bioavailability of specific cranberry constituents and their effects on each of the steps of UPEC pathogenesis and the host response. We will utilize compound and protein HPLC and FPLC purification, affinity chromatography, mouse models, extensive in vitro and tissue culture models, high resolution EM, DNA microarrays, mass spectroscopy, X-ray crystallography and videomicroscopy. This work will lead to a molecular understanding of the bioactivities of defined cranberry constituents on UPEC pathogenesis and may lead to better treatments for UTIs.

Website: [http://crisp.cit.nih.gov/crisp/Crisp\\_Query.Generate\\_Screen](http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen)

- **Project Title: RISK FACTORS FOR ENDOMETRIOSIS**

Principal Investigator & Institution: Hunter, David J.; Director; Epidemiology; Harvard University (Sch of Public Hlth) Public Health Campus Boston, Ma 02115

Timing: Fiscal Year 2002; Project Start 03-AUG-2001; Project End 31-JUL-2003

Summary: (provided by applicant): Endometriosis, the third leading cause of gynecologic hospitalization in the United States, remains one of the most enigmatic gynecologic pathologies. Endometriosis is defined as the presence of endometrial tissue outside of the uterine cavity. These implants respond to the hormonal cues of the menstrual cycle and "bleed" as they would in the uterus. The consequence is the development of adhesions, scarring, and painful inflammation. Signs and symptoms include dysmenorrhea, dyspareunia, infertility, **dysuria**, and irritable bowel syndrome. The effects of the disease can be physically and mentally debilitating with frequent misdiagnoses and poor treatment options. Its prevalence among U.S. women has been estimated to be approximately 10%, [the] time from onset of symptoms to laparoscopically confirmed diagnosis is estimated to average between 6 and 11 years. To date, the etiology of endometriosis remains unknown and few epidemiologic studies exist. Using data on 2,690 laparoscopically confirmed incident cases of endometriosis collected from the Nurses' Health Study II, an ongoing, prospective cohort study that began in 1989, the applicant proposes a study to assess the following hypotheses: a) Women with menstrual characteristics of younger age at menarche, longer time to menstrual regularity, or shorter menstrual cycle length are at higher risk of endometriosis. b) Women with a low waist-to-hip ratio are a higher risk of endometriosis. c) Women with a higher body mass index at age 18 are at lower risk of endometriosis. d) Women who were born with a greater birthweight are at higher risk of endometriosis. All analyses will control for other known and suggested risk factors for endometriosis such as oral contraceptive use and cigarette smoking. The applicant will have more than 90% power to evaluate the above hypotheses. These analyses will be the first prospective data with adequate power to evaluate this important and understudied cause of morbidity among premenopausal women.

Website: [http://crisp.cit.nih.gov/crisp/Crisp\\_Query.Generate\\_Screen](http://crisp.cit.nih.gov/crisp/Crisp_Query.Generate_Screen)

## 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.<sup>3</sup> 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 dysuria, simply go to the PubMed Web site at <http://www.ncbi.nlm.nih.gov/pubmed>. Type "dysuria" (or synonyms) into the search box, and click "Go." The following is the type of output you can expect from PubMed for dysuria (hyperlinks lead to article summaries):

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<sup>3</sup> 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.

- **A 23-year-old white single insulin-dependent diabetic woman admitted as a gynaecological emergency with a 3-day history of painful vulval swelling and dysuria.**  
 Author(s): Singh G, Wijesurendra CS, Sparks RA, Johansen KA.  
 Source: International Journal of Std & Aids. 1992 July-August; 3(4): 297.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=1489403](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=1489403)
- **A 24-month-old infant with painful urination.**  
 Author(s): Kowalczyk LS.  
 Source: Journal of Emergency Nursing: Jen : Official Publication of the Emergency Department Nurses Association. 1990 March-April; 16(2): 124-5.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=2181187](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2181187)
- **A case of cicatricial pemphigoid producing severe dysuria due to labial adhesion.**  
 Author(s): Ikegaya H, Kato A, Matsushima H, Takai K, Hosaka Y, Kitamura T.  
 Source: Bju International. 1999 April; 83(6): 735-6.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=10233597](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=10233597)
- **A middle-aged man with dysuria and weight loss.**  
 Author(s): Katske F, Barbaric Z.  
 Source: Urology. 1991 February; 37(2): 126-8.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=1992580](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=1992580)
- **A multicenter, double-blind, placebo-controlled trial of the efficacy of prazosin in the treatment of dysuria associated with benign prostatic hypertrophy.**  
 Author(s): Le Duc A, Cariou G, Baron C, Cukier J, Quentel P, Faure G, Rambeaud JJ, Navratil H, Costa P, Richaud JJ, et al.  
 Source: Urologia Internationalis. 1990; 45 Suppl 1: 56-62.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=1690483](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=1690483)
- **A strategy for efficient diagnosis and treatment of dysuria in women in the military setting.**  
 Author(s): Bohan JS.  
 Source: Military Medicine. 1983 March; 148(3): 245-7.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=6408506](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=6408506)
- **A urological study on preventative and therapeutic measures for dysuria following radical operation of cervical cancer.**  
 Author(s): Kume T.  
 Source: J Jpn Obstet Gynecol Soc. 1967 July; 14(3): 146-56. No Abstract Available.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=6056021](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=6056021)

- **Acute dysuria in women.**  
Author(s): Komaroff AL.  
Source: The New England Journal of Medicine. 1984 February 9; 310(6): 368-75. Review.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=6361571](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=6361571)
- **Appendicitis presenting with dysuria in a 2-year-old: ultrasound-aided diagnosis--a case report.**  
Author(s): Okoji GO, Cameron BH.  
Source: Annals of Tropical Paediatrics. 1991; 11(4): 389-90.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=1721800](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=1721800)
- **Approach to the frequency and dysuria syndrome.**  
Author(s): Cattell WR, Brooks HL, McSherry MA, Northeast A, O'Grady F.  
Source: Kidney International. Supplement. 1975 August; 4: S138-43.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=1059811](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=1059811)
- **Bladder diverticula in elderly females with urgency, dysuria and incontinence.**  
Author(s): Gillon G, Nissenkorn I, Servadio C.  
Source: European Urology. 1988; 14(1): 34-6.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=3125054](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=3125054)
- **Case report: persistent dysuria and a suprapubic mass in a 3-year-old boy.**  
Author(s): Walsh SA, Weiss RM.  
Source: Current Opinion in Pediatrics. 2002 October; 14(5): 647-8.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=12352261](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=12352261)
- **Causes of frequency and dysuria in women.**  
Author(s): Wathne B, Hovelius B, Mardh PA.  
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## CHAPTER 2. NUTRITION AND DYSURIA

### Overview

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

### Finding Nutrition Studies on Dysuria

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](mailto: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.<sup>4</sup> 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 "dysuria" (or synonyms) into the search box, and click "Go." To narrow the search, you can also select the "Title" field.

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<sup>4</sup> 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 “dysuria” (or a synonym):

- **30 cases of postpartum dysuria treated with acupuncture.**  
Source: Hou, X J J-Tradit-Chin-Med. 1989 September; 9(3): 186 0254-6272
- **Irritability and dysuria in infants with idiopathic hypercalciuria.**  
Author(s): Department of Pediatrics, Johns Hopkins Hospital, Baltimore, MD 21205.  
Source: Fivush, B Pediatr-Nephrol. 1990 May; 4(3): 262-3 0931-041X
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## 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](http://www.nutrition.gov)
- The Food and Drug Administration’s Web site for federal food safety information: [www.foodsafety.gov](http://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](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 DYSURIA

### Overview

In this chapter, we will begin by introducing you to official information sources on complementary and alternative medicine (CAM) relating to dysuria. 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 dysuria 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 "dysuria" (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 dysuria:

- **30 cases of postpartum dysuria treated with acupuncture.**  
 Author(s): Hou XJ.  
 Source: J Tradit Chin Med. 1989 September; 9(3): 186. No Abstract Available.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=2615453](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2615453)
- **A phase I study with MAG-camptothecin intravenously administered weekly for 3 weeks in a 4-week cycle in adult patients with solid tumours.**  
 Author(s): Wachters FM, Groen HJ, Maring JG, Gietema JA, Porro M, Dumez H, de Vries EG, van Oosterom AT.  
 Source: British Journal of Cancer. 2004 June 14; 90(12): 2261-7.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=15150611](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15150611)
- **A study of prostane in the treatment of benign prostatic hyperplasia.**  
 Author(s): Upadhyay L, Tripathi K, Kulkarni KS.

Source: *Phytotherapy Research* : Ptr. 2001 August; 15(5): 411-5.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstr&list\\_uids=11507733](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstr&list_uids=11507733)

- **Controlled double-blind trial of flavoxate in painful conditions of the lower urinary tract.**  
 Author(s): Baert L.  
 Source: *Current Medical Research and Opinion*. 1974-75; 2(10): 631-5.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstr&list\\_uids=4616803](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstr&list_uids=4616803)
  
- **Diuretic effects of selected Thai indigenous medicinal plants in rats.**  
 Author(s): Sripanidkulchai B, Wongpanich V, Laupattarakasem P, Suwansaksri J, Jirakulsomchok D.  
 Source: *Journal of Ethnopharmacology*. 2001 May; 75(2-3): 185-90.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstr&list\\_uids=11297849](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstr&list_uids=11297849)
  
- **Effects of choreito consumption on urine variables of healthy cats fed a magnesium-supplemented commercial diet.**  
 Author(s): Buffington CA, Blaisdell JL, Kawase K, Komatsu Y.  
 Source: *Am J Vet Res*. 1997 February; 58(2): 146-9.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstr&list\\_uids=9028478](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstr&list_uids=9028478)
  
- **Elemental mercury vapour toxicity, treatment, and prognosis after acute, intensive exposure in chloralkali plant workers. Part II: Hyperchloraemia and genitourinary symptoms.**  
 Author(s): Bluhm RE, Breyer JA, Bobbitt RG, Welch LW, Wood AJ, Branch RA.  
 Source: *Human & Experimental Toxicology*. 1992 May; 11(3): 211-5.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstr&list\\_uids=1352116](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstr&list_uids=1352116)
  
- **Enhancement of radiation-induced downstaging of rectal cancer by fluorouracil and high-dose leucovorin chemotherapy.**  
 Author(s): Minsky BD, Cohen AM, Kemeny N, Enker WE, Kelsen DP, Reichman B, Saltz L, Sigurdson ER, Frankel J.  
 Source: *Journal of Clinical Oncology* : Official Journal of the American Society of Clinical Oncology. 1992 January; 10(1): 79-84.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstr&list\\_uids=1727928](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstr&list_uids=1727928)
  
- **Epidemiological determinants of vesicovaginal fistulas.**  
 Author(s): Tahzib F.  
 Source: *British Journal of Obstetrics and Gynaecology*. 1983 May; 90(5): 387-91.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstr&list\\_uids=6849845](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstr&list_uids=6849845)
  
- **Home remedy for dysuria.**  
 Author(s): Peltz S, Hashmi S.

Source: The British Journal of General Practice : the Journal of the Royal College of General Practitioners. 1991 February; 41(343): 82.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=2031746](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2031746)

- **Hyperuricosuria due to high-dose pancreatic extract therapy in cystic fibrosis.**  
 Author(s): Stapleton FB, Kennedy J, Nousia-Arvanitakis S, Linshaw MA.  
 Source: The New England Journal of Medicine. 1976 July 29; 295(5): 246-8.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=934188](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=934188)
- **Invasive bladder carcinoma: preliminary report of selective bladder conservation by transurethral surgery, upfront MCV (methotrexate, cisplatin, and vinblastine) chemotherapy and pelvic irradiation plus cisplatin.**  
 Author(s): Marks LB, Kaufman SD, Prout GR Jr, Heney NM, Griffin PP, Shipley WU.  
 Source: International Journal of Radiation Oncology, Biology, Physics. 1988 October; 15(4): 877-83.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=3182328](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=3182328)
- **Long-term outcome of acupuncture in women with frequency, urgency and dysuria.**  
 Author(s): Chang PL, Wu CJ, Huang MH.  
 Source: The American Journal of Chinese Medicine. 1993; 21(3-4): 231-6.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=8135166](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=8135166)
- **Phase I trial of postoperative 5-FU, radiation therapy, and high dose leucovorin for resectable rectal cancer.**  
 Author(s): Minsky BD, Cohen AM, Enker WE, Kelsen DP, Kemeny N, Riechman B, Saltz L, Sigurdson ER, Frankel J.  
 Source: International Journal of Radiation Oncology, Biology, Physics. 1992; 22(1): 139-45.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=1727111](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=1727111)
- **Phase I trial of weekly docetaxel with concurrent three-dimensional conformal radiation therapy in the treatment of unfavorable localized adenocarcinoma of the prostate.**  
 Author(s): Kumar P, Perrotti M, Weiss R, Todd M, Goodin S, Cummings K, DiPaola RS.  
 Source: Journal of Clinical Oncology : Official Journal of the American Society of Clinical Oncology. 2004 May 15; 22(10): 1909-15.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=15143084](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15143084)
- **Preoperative high-dose leucovorin/5-fluorouracil and radiation therapy for unresectable rectal cancer.**  
 Author(s): Minsky BD, Kemeny N, Cohen AM, Enker WE, Kelsen DP, Reichman B, Saltz L, Sigurdson ER, Frankel J.

Source: Cancer. 1991 June 1; 67(11): 2859-66.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=2025851](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2025851)

- **Risky behaviour in Jamaican adolescent patients attending a sexually transmitted disease clinic.**  
Author(s): Smikle MF, Dowe G, Hylton-Kong T, Williams E, Baum M.  
Source: The West Indian Medical Journal. 2000 December; 49(4): 327-30.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=11211544](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=11211544)
- **Serenoa repens (Permixon). A review of its pharmacology and therapeutic efficacy in benign prostatic hyperplasia.**  
Author(s): Plosker GL, Brogden RN.  
Source: Drugs & Aging. 1996 November; 9(5): 379-95. Review.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=8922564](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=8922564)
- **Traditional medicine poisoning in Zimbabwe: clinical presentation and management in adults.**  
Author(s): Tagwireyi D, Ball DE, Nhachi CF.  
Source: Human & Experimental Toxicology. 2002 November; 21(11): 579-86. Review.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=12507252](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=12507252)
- **Treatment of urgency and urge incontinence with flavoxate in the People's Republic of China.**  
Author(s): Gu FL, Reng ZY, Shang GZ, Shao HX, Wang B, Cheng ZD, Jiang Y, Zhao WP, Zheng JF, Qu CT, et al.  
Source: J Int Med Res. 1987 September-October; 15(5): 312-8.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=3315777](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=3315777)
- **Urinary tract infections in the aged: improvement with thymostimulin.**  
Author(s): Casale G, Zurita IE, Colombo M, de Nicola P.  
Source: Arzneimittel-Forschung. 1983; 33(6): 889-90.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=6684446](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=6684446)
- **Urodynamic studies in acupuncture for women with frequency, urgency and dysuria.**  
Author(s): Chang PL.  
Source: The Journal of Urology. 1988 September; 140(3): 563-6.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=3411675](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=3411675)
- **Using flavoxate as primary medication for patients suffering from urge symptomatology.**  
Author(s): Fehrmann-Zumpe P, Karbe K, Blessman G.

Source: International Urogynecology Journal and Pelvic Floor Dysfunction. 1999; 10(2): 91-5.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=10384969](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=10384969)

## 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<sup>®</sup>: <http://www.drkoop.com/InteractiveMedicine/IndexC.html>
- Family Village: [http://www.familyvillage.wisc.edu/med\\_altn.htm](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](http://medwebplus.com/subject/Alternative_and_Complementary_Medicine)
- Open Directory Project: <http://dmoz.org/Health/Alternative/>
- HealthGate: <http://www.tnp.com/>
- WebMD<sup>®</sup>Health: [http://my.webmd.com/drugs\\_and\\_herbs](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/](http://dir.yahoo.com/Health/Alternative_Medicine/)

The following is a specific Web list relating to dysuria; 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:

- **General Overview**

- **Appendicitis**

- Source: Integrative Medicine Communications; [www.drkoop.com](http://www.drkoop.com)

- **Genital Herpes**

- Source: Healthnotes, Inc.; [www.healthnotes.com](http://www.healthnotes.com)

- **Prostate Cancer**

- Source: Integrative Medicine Communications; [www.drkoop.com](http://www.drkoop.com)

- **Prostate Infection**

- Source: Integrative Medicine Communications; [www.drkoop.com](http://www.drkoop.com)

**Prostatitis**

Source: Integrative Medicine Communications; [www.drkoop.com](http://www.drkoop.com)

**Sexually Transmitted Diseases**

Source: Integrative Medicine Communications; [www.drkoop.com](http://www.drkoop.com)

**STDs**

Source: Integrative Medicine Communications; [www.drkoop.com](http://www.drkoop.com)

**Urethral Inflammation**

Source: Integrative Medicine Communications; [www.drkoop.com](http://www.drkoop.com)

**Urethritis**

Source: Integrative Medicine Communications; [www.drkoop.com](http://www.drkoop.com)

- **Chinese Medicine**

**Baimaogen**

Alternative names: Lalang Grass Rhizome; Rhizoma Imperatae

Source: Chinese Materia Medica

**Baiwei**

Alternative names: Blackend Swallowwort Root; Radix Cynanchi Atrati

Source: Chinese Materia Medica

**Bianxu**

Alternative names: Common Knotgrass Herb; Herba Polygoni Avicularis

Source: Chinese Materia Medica

**Cheqiancao**

Alternative names: Plantain Herb; Herba Plantaginis

Source: Chinese Materia Medica

**Cheqianzi**

Alternative names: Plantain Seed; Semen Plantaginis

Source: Chinese Materia Medica

**Danzhuye**

Alternative names: Lophatherum Herb; Herba Lophatheri

Source: Chinese Materia Medica

**Daochi Wan**

Alternative names: Daochi Pills

Source: Pharmacopoeia Commission of the Ministry of Health, People's Republic of China

**Fenqing Wulin Wan**

Alternative names: Fenqing Wulin Pills

Source: Pharmacopoeia Commission of the Ministry of Health, People's Republic of China



**Fuling**

Alternative names: Indian Bread; Poria  
Source: Chinese Materia Medica

**Guangjinqiancao**

Alternative names: Snowbellleaf Tickclover Herb; Herba Desmodii Styracifolii  
Source: Chinese Materia Medica

**Guanmutong**

Alternative names: Manchurian Dutchmanspipe Stem; Caulis Aristolochiae  
Manshuriensis  
Source: Chinese Materia Medica

**Huashi**

Alternative names: Talc; Talcum  
Source: Chinese Materia Medica

**Jiebai Wan**

Alternative names: Jiebai Pills  
Source: Pharmacopoeia Commission of the Ministry of Health, People's Republic of  
China

**Jindengiong**

Alternative names: Franchet Groundcherry Fruit; Calyx seu Fructus Physalis  
Source: Chinese Materia Medica

**Jinqiancao**

Alternative names: Christina Loosestrife; Herba Lysimachiae  
Source: Chinese Materia Medica

**Lianqiancao**

Alternative names: Longtube Ground Ivy Herb; Herba Glechomae  
Source: Chinese Materia Medica

**Lugen**

Alternative names: Reed Rhizome; Rhizoma Phragmitis  
Source: Chinese Materia Medica

**Pugongying**

Alternative names: Dandelion; Herba Taraxaci  
Source: Chinese Materia Medica

**Pu Huang**

Alternative names: Cattail Pollen; Pollen Typhae  
Source: Chinese Materia Medica

**Qiancao**

Alternative names: Longtube Ground Ivy Herb; Lianqiancao; Herba Glechomae  
Source: Chinese Materia Medica

**Qingyedan**

Alternative names: Mile Swertia Herb; Herba Swertiae Mileensis  
Source: Chinese Materia Medica

**Qumai**

Alternative names: Lilac Pink Herb; Herba Dianthi  
Source: Chinese Materia Medica

**Sanbaicao**

Alternative names: Chinese Lizardtail Rhizome or Herb; Rhizoma seu Herba Saururi  
Source: Chinese Materia Medica

**Shiwei**

Alternative names: Shearer's Pyrrosia Leaf; Folium Pyrrosiae  
Source: Chinese Materia Medica

**Tongcao**

Alternative names: Stachyurus or Japanese Helwingia Pith; Xiaotongcao; Medulla Stachyuri  
Source: Chinese Materia Medica

**Tufuling**

Alternative names: Glabrous Greenbrier Rhizome; Rhizoma Smilacis Glabrae  
Source: Chinese Materia Medica

**Yuxingcao**

Alternative names: Heartleaf Houttuynia Herb; Herba Houttuyniae  
Source: Chinese Materia Medica

**Zexie**

Alternative names: Oriental Waterplantain Rhizome; Rhizoma Alismatis  
Source: Chinese Materia Medica

**Zhizi**

Alternative names: Cape Jasmine Fruit; Fructus Gardeniae  
Source: Chinese Materia Medica

**Zhuling**

Alternative names: Chuling; Polyporus  
Source: Chinese Materia Medica

- **Herbs and Supplements**

**Beta-Sitosterol**

Source: WholeHealthMD.com, LLC.; [www.wholehealthmd.com](http://www.wholehealthmd.com)  
Hyperlink:  
[http://www.wholehealthmd.com/refshelf/substances\\_view/0,1525,972,00.html](http://www.wholehealthmd.com/refshelf/substances_view/0,1525,972,00.html)

**Echinacea**

Source: Alternative Medicine Foundation, Inc.; [www.amfoundation.org](http://www.amfoundation.org)

**Ephedra (Ma huang)**

Source: WholeHealthMD.com, LLC.; [www.wholehealthmd.com](http://www.wholehealthmd.com)

Hyperlink:

[http://www.wholehealthmd.com/refshelf/substances\\_view/0,1525,777,00.html](http://www.wholehealthmd.com/refshelf/substances_view/0,1525,777,00.html)

**Gravel Root**

Source: The Canadian Internet Directory for Holistic Help, WellNet, Health and Wellness Network; [www.wellnet.ca](http://www.wellnet.ca)

**Saw Palmetto**

Source: WholeHealthMD.com, LLC.; [www.wholehealthmd.com](http://www.wholehealthmd.com)

Hyperlink:

[http://www.wholehealthmd.com/refshelf/substances\\_view/0,1525,819,00.html](http://www.wholehealthmd.com/refshelf/substances_view/0,1525,819,00.html)

## **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. PATENTS ON DYSURIA

### Overview

Patents can be physical innovations (e.g. chemicals, pharmaceuticals, medical equipment) or processes (e.g. treatments or diagnostic procedures). The United States Patent and Trademark Office defines a patent as a grant of a property right to the inventor, issued by the Patent and Trademark Office.<sup>5</sup> Patents, therefore, are intellectual property. For the United States, the term of a new patent is 20 years from the date when the patent application was filed. If the inventor wishes to receive economic benefits, it is likely that the invention will become commercially available within 20 years of the initial filing. It is important to understand, therefore, that an inventor's patent does not indicate that a product or service is or will be commercially available. The patent implies only that the inventor has "the right to exclude others from making, using, offering for sale, or selling" the invention in the United States. While this relates to U.S. patents, similar rules govern foreign patents.

In this chapter, we show you how to locate information on patents and their inventors. If you find a patent that is particularly interesting to you, contact the inventor or the assignee for further information. **IMPORTANT NOTE:** When following the search strategy described below, you may discover non-medical patents that use the generic term "dysuria" (or a synonym) in their titles. To accurately reflect the results that you might find while conducting research on dysuria, we have not necessarily excluded non-medical patents in this bibliography.

### Patents on Dysuria

By performing a patent search focusing on dysuria, you can obtain information such as the title of the invention, the names of the inventor(s), the assignee(s) or the company that owns or controls the patent, a short abstract that summarizes the patent, and a few excerpts from the description of the patent. The abstract of a patent tends to be more technical in nature, while the description is often written for the public. Full patent descriptions contain much more information than is presented here (e.g. claims, references, figures, diagrams, etc.). We

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<sup>5</sup>Adapted from the United States Patent and Trademark Office:  
<http://www.uspto.gov/web/offices/pac/doc/general/whatis.htm>.

will tell you how to obtain this information later in the chapter. The following is an example of the type of information that you can expect to obtain from a patent search on dysuria:

- **3-substituted methyl-2,3-dihydroimidazo[1,2-C] quinazoline derivatives, the preparation and use thereof**

Inventor(s): Chern; Ji-Wang (Taipei, TW), Lai; Yue-Jun (Taipei, TW), Lu; Guan-Yu (Taipei, TW), Tao; Pao-Luh (Taipei, TW), Yen; Mao-Hsiung (Taipei, TW)

Assignee(s): National Science Council (Taipei, TW)

Patent Number: 5,340,814

Date filed: October 14, 1992

Abstract: The present invention provides a novel series of 3-substituted methyl-2,3-dihydroimidazo[1,2-c]quinazoline compounds. These compounds are found useful as an active ingredient for the treatment of hypertension and **dysuria**.

Excerpt(s): The present invention relates to new 3-substituted methyl-2,3-dihydroimidazo[1,2-c]quinazoline derivatives I-IV and their pharmaceutically acceptable salts, the preparation thereof by methods per se and the use of the new compounds in therapy, particularly for the treatment or prevention of high blood pressure and **dysuria**. A class of antihypertensive agents such as prazosin, disclosed in U.S. Pat. No. 3,511,836, which is a 2-substituted quinazoline derivative containing a quinazoline ring system, has been proven effective in the clinic acting as a.alpha.sub.1 -adrenoceptor antagonist. While 3-substituted quinazolinones such as ketanserin, thioketanserin disclosed in U.S. Pat. No. 4,335,127, and SGB-1534 disclosed in Japan J. Pharmacol. 1987, 44, 35 have been found to have antihypertensive activities by a serotonin-5.sub.2 and.alpha.sub.1 -adrenoceptor antagonist, respectively. During the course of our synthetic studies on the fused quinazoline ring system, we have synthesized the angularly tricyclic condensed quinazoline derivatives such as 2-substituted methyl-2,3-dihydroimidazo[1,2-c]quinazoline derivatives which would possess a rigid structural feature necessary to elicit the biological activities of both ketanserin and SGB-1534 and have been shown potent lowering blood pressure acting as a.alpha.sub.1 -adrenoceptor antagonist (U.S. patent application Ser. No. 07/744,534, filed by Ji-Wang Chern, et al. and is now U.S. Pat. No. 5,158,953. Recently, it was reported in Drug of the Future, 1989, 14, 400 and Brit. J. Pharmacol. 1988, 93, 702-14 that.alpha.sub.1 -adrenoceptor antagonists can be used for the treatment of **dysuria** which is due to the prostatauxe. Nevertheless, more potent and clinically effective antihypertensive agents are still needed.

Web site: [http://www.delphion.com/details?pn=US05340814\\_\\_](http://www.delphion.com/details?pn=US05340814__)

- **Alfuzosin hydrochloride dihydrate**

Inventor(s): Borrega; Regis (Le Plessis Robinson, FR), Kitamura; Satoshi (Osaka, JP)

Assignee(s): Synthelabo (Le Plessis-Robinson, FR)

Patent Number: 5,545,738

Date filed: December 27, 1994

Abstract: Alfuzosin hydrochloride is stabilized as alfuzosin hydrochloride dihydrate, which is useful for the production of antihypertensive agents or **dysuria** curing agents.

Excerpt(s): The present invention belongs to the field of synthetic medicinal chemistry, and it relates to the stabilization of the publicly known compound, alfuzosin hydrochloride. Particularly, the present invention relates to a hydrate of alfuzosin hydrochloride. Generally, it is known that active components or excipients undergo crystal transition due to moisture absorption, which results in their volumetric change, leading to a change in hardness or cracking of the tablets. To establish appropriate bioavailability, such changes are extremely troublesome phenomena, particularly in the case of sustained release preparations. When anhydrous alfuzosin hydrochloride is preserved under conditions with the relative humidity exceeding 75%, the crystal structure of the anhydrous form changes, thereby providing a trihydrate, which is accompanied by a change in volume. No reports have been made concerning the change in the preparation properties of tablets comprising crystals of anhydrous alfuzosin which are observed in long period stability tests, etc. To avoid the realization of the above-mentioned anxiety, however, it is useful to have an alfuzosin compound in a crystal state which does not suffer from the change in the crystal form under influence of humidity and temperature during the preparation process and storage of the preparations. After repeated zealous investigations, we the present inventors have found that alfuzosin hydrochloride can take forms of mono-, di-, tri- and tetrahydrate, with confirmation that the dihydrate is the stablest of them during the usual preparation process and under usual preservation conditions, thus the present invention has been completed. Alfuzosin hydrochloride dihydrate is produced by recrystallization of anhydrous alfuzosin hydrochloride from an 80:20 mixture solution of acetone and water at 6.degree. C.

Web site: [http://www.delphion.com/details?pn=US05545738\\_\\_](http://www.delphion.com/details?pn=US05545738__)

- **Alfuzosine compositions and use**

Inventor(s): Regnier; Francois (Nancy, FR)

Assignee(s): Synthelabo (Paris, FR)

Patent Number: 4,661,491

Date filed: May 27, 1986

Abstract: A method for treating humans or non-human animals for **dysuria** comprising administering an effective non-toxic amount of alfuzosine or a pharmaceutically acceptable salt thereof to a human or non-human animal suffering **dysuria**.

Excerpt(s): The present invention relates to pharmaceutical compositions containing alfuzosine and the use of alfuzosine in the treatment of **dysuria**. In many patients manifesting **dysuria**, an exceptionally high cervico-urethral pressure is observed, which is related to a relative hyperactivity of the.alpha.-adrenergic receptors. It has now been found that alfuzosine has activity in altering the phenylephrine-induced contractions on preparations of smooth muscle originating from the base of the bladder (trigone muscle) and the urethra of rabbits and that alfuzosine can be used for the treatment of conditions of the lower urinary apparatus, in which hyperactivity of the alpha-adrenergic receptors of the vesicosphincter system disturbs the continence/micturition cycle.

Web site: [http://www.delphion.com/details?pn=US04661491\\_\\_](http://www.delphion.com/details?pn=US04661491__)

- **Method for treating dysuria using naftopidil**

Inventor(s): Nelboeck-Hochstetter; Michael (Tutzing, DE), Reicke; Ulrich (Hirschberg-Leutershusen, DE), Sponer; Gisbert (Laudenbach, DE)

Assignee(s): Boehringer Mannheim GmbH (Mannheim, DE)

Patent Number: 5,026,706

Date filed: May 30, 1990

Abstract: Naftopidil, 1-(2-methoxyphenyl)-4-[3-(naphth-1-yloxy)-2-hydroxypropyl]-piperazine, or of a salt thereof, is effective in the treatment of **dysuria**, particularly in causes of prostatic hypertrophy.

Excerpt(s): The present invention is concerned with the use of naftopidil for the therapy of **dysuria**, particularly in cases of benign prostatic hypertrophy. Naftopidil, the chemical name of which is 1-(2-methoxyphenyl)-4-[3-(naphth-1-yloxy)-2-hydroxypropyl]-piperazine, is described in U.S. Pat. No. 3,997,666 as being a compound with outstanding blood pressure lowering and thus antihypertensive properties. Furthermore, it is said to inhibit the anaphylactoid reactions in rats induced by dextran. In the case of clinical investigations with naftopidil, we have now found that the compound alleviates complaints of **dysuria**, particularly in cases of prostatic hypertrophy. The complaints are characterized by a disturbance in micturition, especially the urge to micturate during the night. As a rule, this affects men over 60 years. Hitherto, a specific therapy has not been established. By way of experiment, use has been made of active materials based on plant extracts or on beta-sitosterol.

Web site: [http://www.delphion.com/details?pn=US05026706\\_\\_](http://www.delphion.com/details?pn=US05026706__)

- **Therapeutic agent for dysuria comprising alpha-phenyl-alpha-pyridylalkanoic acid derivatives**

Inventor(s): Tomoi; Masaaki (Osaka, JP)

Assignee(s): Fujisawa Pharmaceutical Co., Ltd. (Osaka, JP)

Patent Number: 5,202,331

Date filed: April 1, 1991

Abstract: A method for the therapeutic treatment of **dysuria** with alpha-phenyl-alpha-pyridylalkanoic acid derivatives is disclosed.

Excerpt(s): This invention relates to a therapeutic agent for **dysuria** comprising alpha-phenyl-alpha-pyridylalkanoic acid derivatives or their salts, wherein R<sup>sup.1</sup>, R<sup>sup.2</sup> and R<sup>sup.3</sup> are each lower alkyl. It is known as described in European Patent Application publication No. 105458 that the compound [I] of this invention has antiulcer activity and antispasmodic activity. Therefore, the compound is expected to be useful for the management of spasm, pain and/or hyperanesthesia in gastric ulcer, duodenal ulcer, hyperacidity, esophagospasm, gastritis, enteritis, irritable bowel syndrome, intestinal colic, cholecystitis, cholangitis, pylorospasm, pancreatitis, biliary dyskinesia, sequelae of cholecystectomy, urolithiasis, dysmenorrhea, hyperhidrosis, urinary tract spasm or the like.

Web site: [http://www.delphion.com/details?pn=US05202331\\_\\_](http://www.delphion.com/details?pn=US05202331__)



## Patent Applications on Dysuria

As of December 2000, U.S. patent applications are open to public viewing.<sup>6</sup> Applications are patent requests which have yet to be granted. (The process to achieve a patent can take several years.) The following patent applications have been filed since December 2000 relating to dysuria:

- **Novel remedies with the use of beta 3 agonist**

Inventor(s): Ogawa, Kohei; (Shizuoka, JP), Umeno, Hiroshi; (Shizuoka, JP)

Correspondence: Young & Thompson; 745 South 23rd Street 2nd Floor; Arlington; VA; 22202

Patent Application Number: 20030018061

Date filed: July 29, 2002

Abstract: Provided is a therapeutic agent comprising at least one member selected from the group consisting of an anticholinergic agent, a monoamine reuptake inhibitor, a lipase inhibitor, a selective serotonin reuptake inhibitor, insulin, an insulin secretagogue, biguanide, an.alpha.-glucosidase inhibitor, an insulin resistance improving agent, a HMG-CoA reductase inhibitor, an anion exchange resin, a clofibrate type drug and a nicotinic acid type drug, and a compound having a.beta.3 agonist activity. The.beta.3-agonist has an activity of inhibiting **dysuria**. Further, when used together with a remedy for **dysuria** such as propiverine, oxybutynin hydrochloride or tolterodine, it exerts an enhanced anti-dysuria effect. When used together with an antiobestic agent such as sibutramine or orlistat, it exerts an enhanced antiobestic effect. When used together with an antidiabetic agent such as insulin, glibenclamide, acarbose or rosiglitazone, it exerts an enhanced antidiabetic effect. When used together with an antilipemic agent such as bezafibrate or pravastatin, it exerts an enhanced antilipemic effect.

Excerpt(s): The present invention relates to novel therapeutic agents that use a.beta.3 agonist.beta. adrenaline receptors are classified into.beta.1,.beta.2, and.beta.3. It is considered that.beta.1 stimulation increases the pulse rate,.beta.2 stimulation induces relaxation of smooth muscle tissue and reduces the blood pressure, and.beta.3 promotes lipolysis of adipose cells and increases thermogenesis. Accordingly, it is shown that a.beta.3 agonist is useful as a therapeutic agent for diabetes, obesity and prevention of hyperlipidemia (Nature 309, p163-165 (1984); Int. J. Obes. Relat. Metab. Disord. 20, p191-199 (1996); Drug Development Research 32, p69-76 (1994); J. Clin. Invest. 101, p2387-2393 (1998)). Recently, it has been shown that.beta. adrenaline receptors are expressed in the detrusor muscle, and that the detrusor muscle relaxes with a.beta.3-agonist (J. Urol. 161, p680-685 (1999); J. Pharmacol. Exp. Ther. 288, p1367-1373 (1999)). On the other hand, while flavoxate hydrochloride, oxybutynin hydrochloride, propiverine hydrochloride and tolterodine have been used in treatment of patients affected by pollakiuria or incontinence of urine up to now (Folia Pharmacologica Japonica, Vol. 113, p157-166 (1999); Eur. J. Pharmacol. 349, p285-292 (1998)), their side effects include mouth dryness, difficulty in urinating, and constipation (RINSHOU HINYOUKIKI, Vol. 52, p277-285 (1998)), and the situation can not be considered satisfactory.

Web site: <http://appft1.uspto.gov/netahtml/PTO/search-bool.html>

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<sup>6</sup> This has been a common practice outside the United States prior to December 2000.

- **Novel use of arylethanesulfonamide derivative**

Inventor(s): Fujimori, Akira; (Ibaraki, JP), Koakutsu, Akiko; (Ibaraki, JP), Sanagi, Masanao; (Ibaraki, JP), Yamamoto, Nobuyuki; (Tokyo, JP), Yuyama, Hironori; (Ibaraki, JP)

Correspondence: Finnegan, Henderson, Farabow, Garrett & Dunner; Llp; 1300 I Street, NW; Washington; DC; 20005; US

Patent Application Number: 20040138241

Date filed: October 10, 2003

Abstract: Novel use of N-[6-methoxy-5-(2-methoxyphenoxy)-2-(pyrimidin-2-yl)-pyrimidin-4-yl]-2-phenylethanesulfonamide or a pharmaceutically acceptable salt thereof That is, a pharmaceutical composition for remedy of **dysuria** containing N-[6-methoxy-5-(2-methoxyphenoxy)-2-(pyrimidin-2-yl)-pyrimidin-4-yl]-2-phenylethanesulfonamide or a pharmaceutically acceptable salt thereof as an active ingredient.

Excerpt(s): The present invention relates to a novel utility of N-[6-methoxy-5-(2-methoxyphenoxy)-2-(pyrimidin-2-yl)-pyrimidin-4-yl]-2-phenylethanesulfonamide or a salt thereof. Specifically, the invention relates to a pharmaceutical composition for remedy of **dysuria** comprising N-[6-methoxy-5-(2-methoxyphenoxy)-2-(pyrimidin-2-yl)-pyrimidin-4-yl]-2-phenylethanesulfonamide or a salt thereof as an active ingredient. Urinary dysfunction is classified into (1) **dysuria** referring to a symptom of hard excretion of urine in which an increase of difficulty of urination or residual urine is caused, ultimately leading to urinary retention and (2) urine storage disorder referring to a symptom mainly composed of symptoms such as pollakiuria and urinary incontinence, in which urine cannot be sufficiently stored in a bladder. The **dysuria** that is one of urinary dysfunction is classified into one due to bladder function and one accompanying obstruction of a lower urinary tract depending on its cause; and the **dysuria** due to obstruction of a lower urinary tract is classified into one attributing to urethra and one attributing to prostate in adult males. As a representative example of the **dysuria** attributing to prostate, **dysuria** due to benign prostatic hypertrophy is enumerated. The **dysuria** due to benign prostatic hypertrophy is a disease causing urinary dysfunction due to compression by prostate of prostatic urethra accompanying hypertrophy of prostate (mechanical obstruction) or excessive contraction of prostatic smooth muscle (functional obstruction) due to an increase of  $\alpha_1$  receptors, etc.

Web site: <http://appft1.uspto.gov/netathtml/PTO/search-bool.html>

- **Use of cyclohexenone derivatives for the manufacture of a medicament in the treatment of dysuria**

Inventor(s): Luu, Bang; (Strasbourg, FR), Miyagawa, Masao; (Tottori, JP), Saito, Motoaki; (Tottori, JP), Suzuki, Hiroto; (Tokyo, JP), Watanabe, Takeshi; (Tottori, JP), Yamada, Masashi; (Tokyo, JP)

Correspondence: Oblon, Spivak, McClelland, Maier & Neustadt, P.C.; 1940 Duke Street; Alexandria; VA; 22314; US

Patent Application Number: 20040132829

Date filed: February 2, 2004

Abstract: A preventive and/or therapeutic agent for **dysuria**, which comprises as an effective ingredient a cyclohexenone long-chain alcoholic derivative represented by the following formula (1):[wherein, R.sup.1, R.sup.2 and R.sup.3 each independently represents a hydrogen atom or a methyl group and X represents a linear or branched C.sub.10-28 alkylene or alkenylene group]. This compound alleviates **dysuria** due to hypofunction of the urinary bladder so that they are useful as a preventive and/or therapeutic agent for **dysuria**. 1

Excerpt(s): The present invention relates to a preventive and/or therapeutic agent for **dysuria**. Dysuria includes pollakiuria, frequency of micturition, polyuria, urodynia, difficulty in urination, sense of residual urine, residual urine and urinary-incontinence. It develops when the function of urinary system is damaged by aging, trauma or disease. For treatment of it, various receptor antagonists have been used. Each of such remedies however is not almighty and must be used properly according to the symptom of **dysuria**. For patients having a main complaint in pollakiuria, an anticholinergic drug is administered, while for those mainly suffering from difficulty in urination, a parasympathomimetic drug is administered. There is accordingly a demand for the development of a medicament capable of improving the urinary function more easily and conveniently. An object of the present invention is therefore to provide a novel remedy for **dysuria**.

Web site: <http://appft1.uspto.gov/netahtml/PTO/search-bool.html>

## Keeping Current

In order to stay informed about patents and patent applications dealing with dysuria, you can access the U.S. Patent Office archive via the Internet at the following Web address: <http://www.uspto.gov/patft/index.html>. You will see two broad options: (1) Issued Patent, and (2) Published Applications. To see a list of issued patents, perform the following steps: Under "Issued Patents," click "Quick Search." Then, type "dysuria" (or synonyms) into the "Term 1" box. After clicking on the search button, scroll down to see the various patents which have been granted to date on dysuria.

You can also use this procedure to view pending patent applications concerning dysuria. Simply go back to <http://www.uspto.gov/patft/index.html>. Select "Quick Search" under "Published Applications." Then proceed with the steps listed above.



## CHAPTER 5. BOOKS ON DYSURIA

### Overview

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

### Book Summaries: Federal Agencies

The Combined Health Information Database collects various book abstracts from a variety of healthcare institutions and federal agencies. To access these summaries, go directly to the following hyperlink: <http://chid.nih.gov/detail/detail.html>. You will need to use the "Detailed Search" option. To find book summaries, 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. For the format option, select "Monograph/Book." Now type "dysuria" (or synonyms) into the "For these words:" box. You should check back periodically with this database which is updated every three months. The following is a typical result when searching for books on dysuria:

- **Urinary Tract Infections: Detection, Prevention and Management. 5th ed**

Source: Baltimore, MD: Williams and Wilkins. 1997. 419 p.

Contact: Available from Williams and Wilkins. 351 West Camden Street, Baltimore, MD 21201. (800) 638-0672. Fax (800) 447-8438. E-mail: [custserv@wwilkins.com](mailto:custserv@wwilkins.com). PRICE: \$30.00 (paperback). ISBN: 0683181025.

Summary: The fifth edition of this book provides health care professionals with a comprehensive reference guide to the prevention, diagnosis, and treatment of urinary tract infections (UTI). The current edition has been entirely rewritten and includes summary tables of important concepts. Each chapter is designed to stand alone if desired, and includes its own set of references. Topics include an overview of UTIs; bacteriuria, pyuria, proteinuria, hematuria, and pneumaturia; diagnostic methods; UTIs in children and adults; vesicoureteral reflux and reflux nephropathy; **dysuria** syndromes (infections of the urethra, vagina, bladder, and prostate); pyelonephritis and

other kidney infections; caring for urinary catheters; pathogenesis of infection; and UTI management. The section on UTIs in adults discusses pregnancy, diabetes, the elderly, renal transplantation, hypertension, and other risk factors. Tables, guidelines, and illustrations are presented throughout the text. A subject index concludes the book.

- **General Practitioner's Guide to Genitourinary Medicine and Sexual Health**

Source: Cambridge, England: Cambridge University Press. 1996. 107 p.

Contact: Available from Cambridge University Press. 40 West 20th Street, New York, NY 10011-4211. (800) 872-7423. Fax (212) 691-3239. PRICE: \$29.95. ISBN: 0521556562.

Summary: This illustrated text provides general practitioners with guidelines for diagnosing and managing the many common genitourinary and sexual health problems seen in general practice. The author provides a symptom-oriented approach. Early chapters provide advice on how to take a patient's sexual history and on indications for referral. Seventeen topical chapters cover bacterial vaginosis; candidiasis; other causes of vaginal discharge; a general approach to the management of vaginal discharge; vulval problems; frequency **dysuria** syndrome; pelvic pain; cytology and colposcopy; contraception and genital tract infection; **dysuria** in young men; prostatitis, prostatodynia, and hematospermia; scrotal pain; penile rashes; genital ulceration; genital 'lumps'; genital irritation; human immunodeficiency virus (HIV) infection; and genital problems in children. The text is illustrated throughout with black and white photographs; in addition, a section of full-color plates is included. A subject index concludes the volume. 9 references. (AA-M).

## The National Library of Medicine Book Index

The National Library of Medicine at the National Institutes of Health has a massive database of books published on healthcare and biomedicine. Go to the following Internet site, <http://locatorplus.gov/>, and then select "Search LOCATORplus." Once you are in the search area, simply type "dysuria" (or synonyms) into the search box, and select "books only." From there, results can be sorted by publication date, author, or relevance. The following was recently catalogued by the National Library of Medicine:<sup>7</sup>

- **Disputatio inauguralis medica, exhibens aegrum dysuria cum tenesmo laborantem.** Author: Valentini, Michael Bernhard, 1657-1729; Year: 1724
- **Disputatio medica inauguralis qua casum, dysuria ad stranguriam vergente laborantis, resolutum. exhibet Joh. Wilhelmus Christiani.** Author: Franck von Franckenau, Georg, 1643-1704; Year: 1686
- **Dissertatio inauguralis medica de dysuria.** Author: Wegelin, Adrian, 1756-1815; Year: 1779

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<sup>7</sup> In addition to LOCATORplus, in collaboration with authors and publishers, the National Center for Biotechnology Information (NCBI) is currently adapting biomedical books for the Web. The books may be accessed in two ways: (1) by searching directly using any search term or phrase (in the same way as the bibliographic database PubMed), or (2) by following the links to PubMed abstracts. Each PubMed abstract has a "Books" button that displays a facsimile of the abstract in which some phrases are hypertext links. These phrases are also found in the books available at NCBI. Click on hyperlinked results in the list of books in which the phrase is found. Currently, the majority of the links are between the books and PubMed. In the future, more links will be created between the books and other types of information, such as gene and protein sequences and macromolecular structures. See <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=Books>.

- **Dissertatio inauguralis medica de ischuria et dysuria.** Author: Cartheuser, Johann Friedrich, 1704-1777; Year: 1750
- **Dissertatio inauguralis medica, de dysuria senili.** Author: Alberti, Michael, 1682-1757; Year: 1728
- **Dissertatio medica inauguralis de dysuria.** Author: Wedel, Georg Wolfgang, 1645-1721; Year: 1704

## Chapters on Dysuria

In order to find chapters that specifically relate to dysuria, an excellent source of abstracts is the Combined Health Information Database. You will need to limit your search to book chapters and dysuria 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 "dysuria" (or synonyms) into the "For these words:" box. The following is a typical result when searching for book chapters on dysuria:

- **Dysuria in Women**

Source: in Reisman, A.B.; Setevens, D.L., eds. Telephone Medicine: A Guide for the Practicing Physician. Philadelphia, PA: American College of Physicians. 2002. p. 163-174.

Contact: Available from American College of Physicians (ACP). 190 N. Independence Mall West, Philadelphia, PA 19106-1572. (800) 523-1546 or (215) 351-2600. Website: [www.acponline.org](http://www.acponline.org). PRICE: \$40.00 plus shipping and handling. ISBN: 0943126878.

Summary: This chapter on **dysuria (painful urination)** in women is from a reference book for practicing physicians who are providing information for their patients over the telephone. Though most cases of **dysuria** are caused by uncomplicated cystitis, **dysuria** may also be one of the presenting signs in more serious infection, including pyelonephritis and pelvic inflammatory disease (PID). The chapter summarizes key points, then outlines an approach to the patient who calls with **dysuria**. The author addresses how the physician on the telephone can separate women with cystitis or vaginitis from those at risk of serious infection, and under what circumstances antibiotics should be initiated without an office visit. Topics include epidemiology, utility of early diagnosis, the general approach to the telephone evaluation, determining whether the patient requires emergency evaluation, determining whether the patient require nonemergency evaluation (an office visit), the indications for urinalysis and urine culture, empiric treatment for patients who are not pregnant, managing women with recurrent infections, what to tell the patient, and what to document. A patient care diagnostic algorithm is provided. 1 figure. 25 references.

- **Acute Dysuria and Urinary Tract Infections**

Source: in Carlson, K.J. et al. Primary Care of Women. St. Louis, MO: Mosby-Year Book, Inc. 1995. p. 126-132.

Contact: Available from Mosby-Year Book, Inc. 11830 Westline Industrial Drive, St. Louis, MO 63146. (800) 325-4177 or (314) 872-8370. Fax (314) 432-1380. PRICE: \$69.95 (as of 1995). ISBN: 0801676770.

Summary: This chapter, from a medical reference for clinicians engaged in the primary care of women, discusses acute **dysuria** and urinary tract infections (UTIs). Topics include epidemiology; the causes of acute cystitis; the evaluation of acute **dysuria**, including history and physical examination, and diagnostic tests; management, including choice of therapy; and recurrent UTIs, including diagnostic tests and management options. The author dispels many myths traditionally taught about women with **dysuria** and proposes a scheme for categorizing the condition of women with acute **dysuria**. The author also presents dosage information for treating specific types of UTIs. 5 tables. 20 references.



## CHAPTER 6. MULTIMEDIA ON DYSURIA

### Overview

In this chapter, we show you how to keep current on multimedia sources of information on dysuria. We start with sources that have been summarized by federal agencies, and then show you how to find bibliographic information catalogued by the National Library of Medicine.

### Video Recordings

An excellent source of multimedia information on dysuria is the Combined Health Information Database. You will need to limit your search to "Videorecording" and "dysuria" using the "Detailed Search" option. Go directly to the following hyperlink: <http://chid.nih.gov/detail/detail.html>. To find video productions, 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 "Videorecording (videotape, videocassette, etc.)." Type "dysuria" (or synonyms) into the "For these words:" box. The following is a typical result when searching for video recordings on dysuria:

- **Cystitis: Don't Ignore Painful Urination**

Source: Madison, WI: University of Wisconsin Hospitals and Clinics, Department of Outreach Education. 2000. (videocassette).

Contact: Available from University of Wisconsin Hospital and Clinics. Picture of Health, 702 North Blackhawk Avenue, Suite 215, Madison, WI 53705-3357. (800) 757-4354 or (608) 263-6510. Fax (608) 262-7172. PRICE: \$19.95 plus shipping and handling; bulk copies available. Order number 032700R.

Summary: Cystitis, or bladder infection or inflammation, is a common problem, characterized by frequency of urination, urgency to urinate, and burning upon urination. This videotape program, moderated by Carol Koby, discusses bacterial cystitis (bladder infection) and the more chronic interstitial cystitis (IC, an inflammation of the lining of the bladder). The program features nurse practitioners Sue Marten and Stacy Cesario, who identify symptoms, describe the different types of cystitis, and review medical and self care treatment options. The nurse practitioners first review the

anatomy of the female urogenital tract and the types of symptoms that may be experienced. Although both types of cystitis are characterized by **dysuria (painful urination)** and urinary frequency and urgency, IC also tends to include intense abdominal pain, painful intercourse, and lack of response to antibiotic therapy. Other topics covered include the symptoms of an infection that has spread to the kidneys, risk factors for certain populations (pregnant women or women with diabetes), the causes of bacterial infections, diagnostic considerations, self help and prevention strategies, disorders associated with IC, the etiology of IC (which is largely unknown, but seems to require a previous inflammatory process), and treatment options for IC (bladder distention, chlorpactin, bladder instillation of DMSO, oral medications, and TENS, electrical stimulation). The program features interviews with some patients, who describe the difficulties of obtaining an accurate diagnosis of IC and their success with self care, diet therapy, bladder retraining, and stress reduction. The program concludes by referring viewers to the Interstitial Cystitis Association (ICA 301-610-5300).

## CHAPTER 7. PERIODICALS AND NEWS ON DYSURIA

### Overview

In this chapter, we suggest a number of news sources and present various periodicals that cover dysuria.

### News Services and Press Releases

One of the simplest ways of tracking press releases on dysuria is to search the news wires. In the following sample of sources, we will briefly describe how to access each service. These services only post recent news intended for public viewing.

#### PR Newswire

To access the PR Newswire archive, simply go to <http://www.prnewswire.com/>. Select your country. Type “dysuria” (or synonyms) into the search box. You will automatically receive information on relevant news releases posted within the last 30 days. The search results are shown by order of relevance.

#### Reuters Health

The Reuters’ Medical News and Health eLine databases can be very useful in exploring news archives relating to dysuria. While some of the listed articles are free to view, others are available for purchase for a nominal fee. To access this archive, go to <http://www.reutershealth.com/en/index.html> and search by “dysuria” (or synonyms).

#### The NIH

Within MEDLINEplus, the NIH has made an agreement with the New York Times Syndicate, the AP News Service, and Reuters to deliver news that can be browsed by the public. Search news releases at [http://www.nlm.nih.gov/medlineplus/alphaneews\\_a.html](http://www.nlm.nih.gov/medlineplus/alphaneews_a.html). MEDLINEplus allows you to browse across an alphabetical index. Or you can search by date

at the following Web page: <http://www.nlm.nih.gov/medlineplus/newsbydate.html>. Often, news items are indexed by MEDLINEplus within its search engine.

### **Business Wire**

Business Wire is similar to PR Newswire. To access this archive, simply go to <http://www.businesswire.com/>. You can scan the news by industry category or company name.

### **Market Wire**

Market Wire is more focused on technology than the other wires. To browse the latest press releases by topic, such as alternative medicine, biotechnology, fitness, healthcare, legal, nutrition, and pharmaceuticals, access Market Wire's Medical/Health channel at [http://www.marketwire.com/mw/release\\_index?channel=MedicalHealth](http://www.marketwire.com/mw/release_index?channel=MedicalHealth). Or simply go to Market Wire's home page at <http://www.marketwire.com/mw/home>, type "dysuria" (or synonyms) into the search box, and click on "Search News." As this service is technology oriented, you may wish to use it when searching for press releases covering diagnostic procedures or tests.

### **Search Engines**

Medical news is also available in the news sections of commercial Internet search engines. See the health news page at Yahoo ([http://dir.yahoo.com/Health/News\\_and\\_Media/](http://dir.yahoo.com/Health/News_and_Media/)), or you can use this Web site's general news search page at <http://news.yahoo.com/>. Type in "dysuria" (or synonyms). If you know the name of a company that is relevant to dysuria, you can go to any stock trading Web site (such as <http://www.etrade.com/>) and search for the company name there. News items across various news sources are reported on indicated hyperlinks. Google offers a similar service at <http://news.google.com/>.

### **BBC**

Covering news from a more European perspective, the British Broadcasting Corporation (BBC) allows the public free access to their news archive located at <http://www.bbc.co.uk/>. Search by "dysuria" (or synonyms).

### **Newsletter Articles**

Use the Combined Health Information Database, and limit your search criteria to "newsletter articles." Again, you will need to use the "Detailed Search" option. Go directly to the following hyperlink: <http://chid.nih.gov/detail/detail.html>. Go to the bottom of the search page where "You may refine your search by." Select the dates and language that you prefer. For the format option, select "Newsletter Article." Type "dysuria" (or synonyms) into the "For these words:" box. You should check back periodically with this database as it is updated every three months. The following is a typical result when searching for newsletter articles on dysuria:

- **Fibro and Interstitial Cystitis**

Source: Fibromyalgia Wellness Letter. 2(2): 3. April 1999.

Contact: Available from Fibromyalgia Wellness Letter. P.O. Box 921907, Norcross, GA 30010-1907. (877) 775-0343.

Summary: This brief article, from a newsletter for people with fibromyalgia, reviews the condition of interstitial cystitis (IC). IC is a chronic inflammatory condition affecting the bladder wall; about 10 percent of people with fibromyalgia also have IC. The symptoms of IC can include pain in the bladder and pelvic region, often accompanied by urinary urgency and frequency. People with IC may also experience nocturia (urinating at night), **dysuria** (painful urination), and dyspareunia (painful sexual intercourse). There is no definitive test to diagnose IC, so physicians must rule out other conditions, such as urinary tract infections. Cystoscopy (visualization of the bladder with a cystoscope) may be used to confirm the diagnosis. The article briefly discusses treatment options, which include bladder distension, oral medications (including pentosan polysulfate sodium, brand name Elmiron), bladder instillation with DMSO, experimental medications (still under study), transcutaneous electrical nerve stimulation (TENS), diet modification, and surgery. The article concludes with the contact information of the Interstitial Cystitis Association (ICA, 800-HELP-ICA or [www.ichelp.org](http://www.ichelp.org)).

### **Academic Periodicals covering Dysuria**

Numerous periodicals are currently indexed within the National Library of Medicine's PubMed database that are known to publish articles relating to dysuria. In addition to these sources, you can search for articles covering dysuria that have been published by any of the periodicals listed in previous chapters. To find the latest studies published, go to <http://www.ncbi.nlm.nih.gov/pubmed>, type the name of the periodical into the search box, and click "Go."

If you want complete details about the historical contents of a journal, you can also visit the following Web site: <http://www.ncbi.nlm.nih.gov/entrez/jrbrowser.cgi>. Here, type in the name of the journal or its abbreviation, and you will receive an index of published articles. At <http://locatorplus.gov/>, you can retrieve more indexing information on medical periodicals (e.g. the name of the publisher). Select the button "Search LOCATORplus." Then type in the name of the journal and select the advanced search option "Journal Title Search."



## CHAPTER 8. RESEARCHING MEDICATIONS

### Overview

While a number of hard copy or CD-ROM resources are available for researching medications, a more flexible method is to use Internet-based databases. Broadly speaking, there are two sources of information on approved medications: public sources and private sources. We will emphasize free-to-use public sources.

### U.S. Pharmacopeia

Because of historical investments by various organizations and the emergence of the Internet, it has become rather simple to learn about the medications recommended for dysuria. One such source is the United States Pharmacopeia. In 1820, eleven physicians met in Washington, D.C. to establish the first compendium of standard drugs for the United States. They called this compendium the U.S. Pharmacopeia (USP). Today, the USP is a non-profit organization consisting of 800 volunteer scientists, eleven elected officials, and 400 representatives of state associations and colleges of medicine and pharmacy. The USP is located in Rockville, Maryland, and its home page is located at <http://www.usp.org/>. The USP currently provides standards for over 3,700 medications. The resulting USP DI<sup>®</sup> Advice for the Patient<sup>®</sup> can be accessed through the National Library of Medicine of the National Institutes of Health. The database is partially derived from lists of federally approved medications in the Food and Drug Administration's (FDA) Drug Approvals database, located at <http://www.fda.gov/cder/da/da.htm>.

While the FDA database is rather large and difficult to navigate, the Pharmacopeia is both user-friendly and free to use. It covers more than 9,000 prescription and over-the-counter medications. To access this database, simply type the following hyperlink into your Web browser: <http://www.nlm.nih.gov/medlineplus/druginformation.html>. To view examples of a given medication (brand names, category, description, preparation, proper use, precautions, side effects, etc.), simply follow the hyperlinks indicated within the United States Pharmacopeia (USP).

Below, we have compiled a list of medications associated with dysuria. If you would like more information on a particular medication, the provided hyperlinks will direct you to ample documentation (e.g. typical dosage, side effects, drug-interaction risks, etc.). The

following drugs have been mentioned in the Pharmacopeia and other sources as being potentially applicable to dysuria:

#### **Antiandrogens, Nonsteroidal**

- **Systemic - U.S. Brands:** Casodex; Eulexin; Nilandron  
<http://www.nlm.nih.gov/medlineplus/druginfo/uspdi/203418.html>

### **Commercial Databases**

In addition to the medications listed in the USP above, a number of commercial sites are available by subscription to physicians and their institutions. Or, you may be able to access these sources from your local medical library.

#### **Mosby's Drug Consult™**

Mosby's Drug Consult™ database (also available on CD-ROM and book format) covers 45,000 drug products including generics and international brands. It provides prescribing information, drug interactions, and patient information. Subscription information is available at the following hyperlink: <http://www.mosbysdrugconsult.com/>.

#### ***PDRhealth***

The *PDRhealth* database is a free-to-use, drug information search engine that has been written for the public in layman's terms. It contains FDA-approved drug information adapted from the Physicians' Desk Reference (PDR) database. *PDRhealth* can be searched by brand name, generic name, or indication. It features multiple drug interactions reports. Search *PDRhealth* at [http://www.pdrhealth.com/drug\\_info/index.html](http://www.pdrhealth.com/drug_info/index.html).

#### **Other Web Sites**

Drugs.com ([www.drugs.com](http://www.drugs.com)) reproduces the information in the Pharmacopeia as well as commercial information. You may also want to consider the Web site of the Medical Letter, Inc. (<http://www.medletter.com/>) which allows users to download articles on various drugs and therapeutics for a nominal fee.

If you have any questions about a medical treatment, the FDA may have an office near you. Look for their number in the blue pages of the phone book. You can also contact the FDA through its toll-free number, 1-888-INFO-FDA (1-888-463-6332), or on the World Wide Web at [www.fda.gov](http://www.fda.gov).



# 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<sup>8</sup>:

- 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/>

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<sup>8</sup> 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](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](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](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](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.<sup>9</sup> 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:<sup>10</sup>

- **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](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](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](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](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](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](http://www.nlm.nih.gov/databases/databases_medline.html)

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<sup>9</sup> Remember, for the general public, the National Library of Medicine recommends the databases referenced in MEDLINEplus (<http://medlineplus.gov/> or <http://www.nlm.nih.gov/medlineplus/databases.html>).

<sup>10</sup> 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](http://www.nlm.nih.gov/research/visible/visible_human.html)

### The NLM Gateway<sup>11</sup>

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.<sup>12</sup> To use the NLM Gateway, simply go to the search site at <http://gateway.nlm.nih.gov/gw/Cmd>. Type "dysuria" (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	1827
Books / Periodicals / Audio Visual	30
Consumer Health	951
Meeting Abstracts	33
Other Collections	85
Total	2926

### HSTAT<sup>13</sup>

HSTAT is a free, Web-based resource that provides access to full-text documents used in healthcare decision-making.<sup>14</sup> 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.<sup>15</sup> Simply search by "dysuria" (or synonyms) at the following Web site: <http://text.nlm.nih.gov>.

<sup>11</sup> Adapted from NLM: <http://gateway.nlm.nih.gov/gw/Cmd?Overview.x>.

<sup>12</sup> 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).

<sup>13</sup> Adapted from HSTAT: <http://www.nlm.nih.gov/pubs/factsheets/hstat.html>.

<sup>14</sup> The HSTAT URL is <http://hstat.nlm.nih.gov/>.

<sup>15</sup> 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<sup>16</sup>

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.<sup>17</sup> 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.<sup>18</sup> 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/clinweb/>.
- **Medical World Search:** Searches full text from thousands of selected medical sites on the Internet; see <http://www.mwsearch.com/>.

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<sup>16</sup> Adapted from <http://www.ncbi.nlm.nih.gov/Coffeebreak/Archive/FAQ.html>.

<sup>17</sup> 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.

<sup>18</sup> 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 dysuria 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 dysuria. 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 dysuria. 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 “dysuria”:

**Bladder Diseases**

<http://www.nlm.nih.gov/medlineplus/bladderdiseases.html>

**Home Care Services**

<http://www.nlm.nih.gov/medlineplus/homecareservices.html>

**Infant and Toddler Health**

<http://www.nlm.nih.gov/medlineplus/infantandtoddlerhealth.html>

**Interstitial Cystitis**

<http://www.nlm.nih.gov/medlineplus/interstitialcystitis.html>

**Prostate Diseases**

<http://www.nlm.nih.gov/medlineplus/prostatediseases.html>

**Urinary Tract Infections**

<http://www.nlm.nih.gov/medlineplus/urinarytractinfections.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 dysuria. 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:

- **Urinary Tract Infection**

Source: McGaw Park, IL: Baxter Healthcare Corporation. 1990. 8 p.

Contact: Available from Healthcare Communications. Baxter Healthcare Corporation. 1500 Waukegan Road, McGaw Park, IL 60085. ATTN: Customer Service. (800) 766-3646. PRICE: \$0.35 each. Order number HIP210-020.

Summary: This brochure describes the symptoms of and treatment for urinary tract infections in women. A simple chart depicts the urinary system and one section discusses the role and function of the urinary system. Symptoms of urinary tract infection can include burning or discomfort upon urination (dysuria); feeling the need to urinate more frequently than usual; lower back or abdominal soreness; and cloudy or discolored urine. Urinalysis, analyzing a urine sample for bacteria, white blood cells, and other substances, is commonly used to pinpoint a diagnosis of either bladder or urinary tract infection. Various antibiotic treatments are available depending upon the individual condition. Only with a more serious infection, often involving the kidneys, is longer therapy, intravenous antibiotics and possible hospitalization usually necessary. The brochure emphasizes the importance of recognizing symptoms and seeking prompt and thorough medical attention.

### 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 dysuria. 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>.

### 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/](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/](http://dmoz.org/Health/Conditions_and_Diseases/)
- Yahoo.com: [http://dir.yahoo.com/Health/Diseases\\_and\\_Conditions/](http://dir.yahoo.com/Health/Diseases_and_Conditions/)
- WebMD®Health: [http://my.webmd.com/health\\_topics](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 dysuria. By consulting all of associations listed in this chapter, you will have nearly exhausted all sources for patient associations concerned with dysuria.

### 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 dysuria. 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 "dysuria" (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 "dysuria". 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 "dysuria" (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 "dysuria" (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.<sup>19</sup>

### 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

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<sup>19</sup> 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)<sup>20</sup>:

- **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://sfguide.ucsf.edu/barnett/PERC/default.asp>
- **California:** Redwood Health Library (Petaluma Health Care District), <http://www.phcd.org/rdwlib.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/>

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<sup>20</sup> 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](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](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](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.lsuhscc.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](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](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, Worcester), <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 Resource 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.lvcld.org/special\\_collections/medical/index.htm](http://www.lvcld.org/special_collections/medical/index.htm)
- **New Hampshire:** Dartmouth Biomedical Libraries (Dartmouth College Library, Hanover), <http://www.dartmouth.edu/~biomed/resources.html#conshealth.html#d/>
- **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](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](http://my.webmd.com/adam/asset/adam_disease_articles/a_to_z/a)).

### 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/](http://dmoz.org/Health/Education/Patient_Education/Glossaries/)
- Web of Online Dictionaries (Bucknell University):  
<http://www.yourdictionary.com/diction5.html#medicine>



## DYSURIA 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]

**Abdominal Pain:** Sensation of discomfort, distress, or agony in the abdominal region. [NIH]

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

**Acetone:** A colorless liquid used as a solvent and an antiseptic. It is one of the ketone bodies produced during ketoacidosis. [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]

**Adenocarcinoma:** A malignant epithelial tumor with a glandular organization. [NIH]

**Adhesions:** Pathological processes consisting of the union of the opposing surfaces of a wound. [NIH]

**Adipose Tissue:** Connective tissue composed of fat cells lodged in the meshes of areolar tissue. [NIH]

**Adrenaline:** A hormone. Also called epinephrine. [NIH]

**Adrenergic:** Activated by, characteristic of, or secreting epinephrine or substances with similar activity; the term is applied to those nerve fibres that liberate norepinephrine at a synapse when a nerve impulse passes, i.e., the sympathetic fibres. [EU]

**Adrenergic beta-Antagonists:** Drugs that bind to but do not activate beta-adrenergic receptors thereby blocking the actions of beta-adrenergic agonists. Adrenergic beta-antagonists are used for treatment of hypertension, cardiac arrhythmias, angina pectoris, glaucoma, migraine headaches, and anxiety. [NIH]

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

**Affinity:** 1. Inherent likeness or relationship. 2. A special attraction for a specific element, organ, or structure. 3. Chemical affinity; the force that binds atoms in molecules; the tendency of substances to combine by chemical reaction. 4. The strength of noncovalent chemical binding between two substances as measured by the dissociation constant of the complex. 5. In immunology, a thermodynamic expression of the strength of interaction between a single antigen-binding site and a single antigenic determinant (and thus of the stereochemical compatibility between them), most accurately applied to interactions among simple, uniform antigenic determinants such as haptens. Expressed as the association constant ( $K$  litres mole<sup>-1</sup>), which, owing to the heterogeneity of affinities in a population of antibody molecules of a given specificity, actually represents an average value (mean intrinsic association constant). 6. The reciprocal of the dissociation constant. [EU]

**Affinity Chromatography:** In affinity chromatography, a ligand attached to a column binds specifically to the molecule to be purified. [NIH]

**Agonist:** In anatomy, a prime mover. In pharmacology, a drug that has affinity for and stimulates physiologic activity at cell receptors normally stimulated by naturally occurring substances. [EU]

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

**Alkaloid:** A member of a large group of chemicals that are made by plants and have nitrogen in them. Some alkaloids have been shown to work against cancer. [NIH]

**Alkalosis:** A pathological condition that removes acid or adds base to the body fluids. [NIH]

**Alpha Particles:** Positively charged particles composed of two protons and two neutrons, i.e., helium nuclei, emitted during disintegration of very heavy isotopes; a beam of alpha particles or an alpha ray has very strong ionizing power, but weak penetrability. [NIH]

**Alpha-1:** A protein with the property of inactivating proteolytic enzymes such as leucocyte collagenase and elastase. [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]

**Ambulatory Care:** Health care services provided to patients on an ambulatory basis, rather than by admission to a hospital or other health care facility. The services may be a part of a hospital, augmenting its inpatient services, or may be provided at a free-standing facility. [NIH]

**Amputation:** Surgery to remove part or all of a limb or appendage. [NIH]

**Anaerobic:** 1. Lacking molecular oxygen. 2. Growing, living, or occurring in the absence of molecular oxygen; pertaining to an anaerobe. [EU]

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

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

**Angiotensin-Converting Enzyme Inhibitors:** A class of drugs whose main indications are the treatment of hypertension and heart failure. They exert their hemodynamic effect mainly by inhibiting the renin-angiotensin system. They also modulate sympathetic nervous system activity and increase prostaglandin synthesis. They cause mainly vasodilation and mild natriuresis without affecting heart rate and contractility. [NIH]

**Anhydrous:** Deprived or destitute of water. [EU]

**Antagonism:** Interference with, or inhibition of, the growth of a living organism by another living organism, due either to creation of unfavorable conditions (e. g. exhaustion of food supplies) or to production of a specific antibiotic substance (e. g. penicillin). [NIH]

**Anthocyanins:** Glycosidic pigments in blue, red, and purple flowers and also found as metabolic byproducts in blood and urine. [NIH]

**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]

**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]

**Anticholinergic:** An agent that blocks the parasympathetic nerves. Called also parasympatholytic. [EU]

**Antidepressant:** A drug used to treat depression. [NIH]

**Antidiabetic:** An agent that prevents or alleviates diabetes. [EU]

**Antidiabetic Agent:** A substance that helps a person with diabetes control the level of glucose (sugar) in the blood so that the body works as it should. [NIH]

**Antidote:** A remedy for counteracting a poison. [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]

**Antihypertensive:** An agent that reduces high blood pressure. [EU]

**Antihypertensive Agents:** Drugs used in the treatment of acute or chronic hypertension regardless of pharmacological mechanism. Among the antihypertensive agents are diuretics (especially diuretics, thiazide), adrenergic beta-antagonists, adrenergic alpha-antagonists, angiotensin-converting enzyme inhibitors, calcium channel blockers, ganglionic blockers, and vasodilator agents. [NIH]

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

**Antimetabolite:** A chemical that is very similar to one required in a normal biochemical reaction in cells. Antimetabolites can stop or slow down the reaction. [NIH]

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

**Antineoplastic:** Inhibiting or preventing the development of neoplasms, checking the maturation and proliferation of malignant cells. [EU]

**Antiseptic:** A substance that inhibits the growth and development of microorganisms without necessarily killing them. [EU]

**Antispasmodic:** An agent that relieves spasm. [EU]

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

**Anxiety:** Persistent feeling of dread, apprehension, and impending disaster. [NIH]

**Aqueous:** Having to do with water. [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]

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

**Astringents:** Agents, usually topical, that cause the contraction of tissues for the control of bleeding or secretions. [NIH]

**Astrocytes:** The largest and most numerous neuroglial cells in the brain and spinal cord. Astrocytes (from "star" cells) are irregularly shaped with many long processes, including those with "end feet" which form the glial (limiting) membrane and directly and indirectly contribute to the blood brain barrier. They regulate the extracellular ionic and chemical

environment, and "reactive astrocytes" (along with microglia) respond to injury. Astrocytes have high-affinity transmitter uptake systems, voltage-dependent and transmitter-gated ion channels, and can release transmitter, but their role in signaling (as in many other functions) is not well understood. [NIH]

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

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

**Back Pain:** Acute or chronic pain located in the posterior regions of the trunk, including the thoracic, lumbar, sacral, or adjacent regions. [NIH]

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

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

**Bezafibrate:** Antilipemic agent that lowers cholesterol and triglycerides. It decreases low density lipoproteins and increases high density lipoproteins. [NIH]

**Bile:** An emulsifying agent produced in the liver and secreted into the duodenum. Its composition includes bile acids and salts, cholesterol, and electrolytes. It aids digestion of fats in the duodenum. [NIH]

**Bile duct:** A tube through which bile passes in and out of the liver. [NIH]

**Bile Pigments:** Pigments that give a characteristic color to bile including: bilirubin, biliverdine, and bilicyanin. [NIH]

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

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

**Bioassay:** Determination of the relative effective strength of a substance (as a vitamin, hormone, or drug) by comparing its effect on a test organism with that of a standard preparation. [NIH]

**Bioavailability:** The degree to which a drug or other substance becomes available to the target tissue after administration. [EU]

**Biochemical:** Relating to biochemistry; characterized by, produced by, or involving chemical reactions in living organisms. [EU]

**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]

**Bloating:** Fullness or swelling in the abdomen that often occurs after meals. [NIH]

**Blood Platelets:** Non-nucleated disk-shaped cells formed in the megakaryocyte and found in the blood of all mammals. They are mainly involved in blood coagulation. [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]

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

**Body Mass Index:** One of the anthropometric measures of body mass; it has the highest correlation with skinfold thickness or body density. [NIH]

**Body Regions:** Anatomical areas of the body. [NIH]

**Bowel:** The long tube-shaped organ in the abdomen that completes the process of digestion. There is both a small and a large bowel. Also called the intestine. [NIH]

**Bowel Movement:** Body wastes passed through the rectum and anus. [NIH]

**Brachytherapy:** A collective term for interstitial, intracavity, and surface radiotherapy. It uses small sealed or partly-sealed sources that may be placed on or near the body surface or within a natural body cavity or implanted directly into the tissues. [NIH]

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

**Calcium:** A basic element found in nearly all organized tissues. It is a member of the alkaline earth family of metals with the atomic symbol Ca, atomic number 20, and atomic weight 40. Calcium is the most abundant mineral in the body and combines with phosphorus to form calcium phosphate in the bones and teeth. It is essential for the normal functioning of nerves and muscles and plays a role in blood coagulation (as factor IV) and in many enzymatic processes. [NIH]

**Calcium Channel Blockers:** A class of drugs that act by selective inhibition of calcium influx through cell membranes or on the release and binding of calcium in intracellular pools. Since they are inducers of vascular and other smooth muscle relaxation, they are used in the drug therapy of hypertension and cerebrovascular spasms, as myocardial protective agents, and in the relaxation of uterine spasms. [NIH]

**Camptothecin:** An alkaloid isolated from the stem wood of the Chinese tree, *Camptotheca acuminata*. This compound selectively inhibits the nuclear enzyme DNA topoisomerase. Several semisynthetic analogs of camptothecin have demonstrated antitumor activity. [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]

**Carbon Dioxide:** A colorless, odorless gas that can be formed by the body and is necessary for the respiration cycle of plants and animals. [NIH]

**Carcinoma:** Cancer that begins in the skin or in tissues that line or cover internal organs. [NIH]

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

**Cardiomyopathy:** A general diagnostic term designating primary myocardial disease, often of obscure or unknown etiology. [EU]

**Cardiotonic:** 1. Having a tonic effect on the heart. 2. An agent that has a tonic effect on the heart. [EU]

**Cardiovascular:** Having to do with the heart and blood vessels. [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]

**Catecholamine:** A group of chemical substances manufactured by the adrenal medulla and secreted during physiological stress. [NIH]

**Catheters:** A small, flexible tube that may be inserted into various parts of the body to inject or remove liquids. [NIH]

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

**Cefuroxime:** Broad-spectrum cephalosporin antibiotic resistant to beta-lactamase. It has been proposed for infections with gram-negative and gram-positive organisms, gonorrhea, and haemophilus. [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 Cycle:** The complex series of phenomena, occurring between the end of one cell division and the end of the next, by which cellular material is divided between daughter cells. [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]

**Cephradine:** A semi-synthetic cephalosporin antibiotic. [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]

**Cesarean Section:** Extraction of the fetus by means of abdominal hysterotomy. [NIH]

**Chemotherapy:** Treatment with anticancer drugs. [NIH]

**Cholangitis:** Inflammation of a bile duct. [NIH]

**Cholecystectomy:** Surgical removal of the gallbladder. [NIH]

**Cholecystitis:** Inflammation of the gallbladder. [NIH]

**Cholesterol:** The principal sterol of all higher animals, distributed in body tissues, especially the brain and spinal cord, and in animal fats and oils. [NIH]

**Cholinergic:** Resembling acetylcholine in pharmacological action; stimulated by or releasing

acetylcholine or a related compound. [EU]

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

**Cicatricial:** Ectropion due to scar tissue on the margins or the surrounding surfaces of the eyelids. [NIH]

**Cisplatin:** An inorganic and water-soluble platinum complex. After undergoing hydrolysis, it reacts with DNA to produce both intra and interstrand crosslinks. These crosslinks appear to impair replication and transcription of DNA. The cytotoxicity of cisplatin correlates with cellular arrest in the G2 phase of the cell cycle. [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]

**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]

**Cofactor:** A substance, microorganism or environmental factor that activates or enhances the action of another entity such as a disease-causing agent. [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]

**Colic:** Paroxysms of pain. This condition usually occurs in the abdominal region but may occur in other body regions as well. [NIH]

**Colitis:** Inflammation of the colon. [NIH]

**Colon:** The long, coiled, tubelike organ that removes water from digested food. The remaining material, solid waste called stool, moves through the colon to the rectum and leaves the body through the anus. [NIH]

**Colposcopy:** The examination, therapy or surgery of the cervix and vagina by means of a specially designed endoscope introduced vaginally. [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]

**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]

**Congestion:** Excessive or abnormal accumulation of blood in a part. [EU]

**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]

**Constipation:** Infrequent or difficult evacuation of feces. [NIH]

**Continence:** The ability to hold in a bowel movement or urine. [NIH]

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

**Contraceptive:** An agent that diminishes the likelihood of or prevents conception. [EU]

**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]

**Controlled study:** An experiment or clinical trial that includes a comparison (control) group. [NIH]

**Conventional treatment:** A currently accepted and widely used treatment for a certain type of disease, based on the results of past research. Also called conventional therapy. [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]

**Cues:** Signals for an action; that specific portion of a perceptual field or pattern of stimuli to which a subject has learned to respond. [NIH]

**Curative:** Tending to overcome disease and promote recovery. [EU]

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

**Cystitis:** Inflammation of the urinary bladder. [EU]

**Cystoscope:** A thin, lighted instrument used to look inside the bladder and remove tissue samples or small tumors. [NIH]

**Cystoscopy:** Endoscopic examination, therapy or surgery of the urinary bladder. [NIH]

**Cytokines:** Non-antibody proteins secreted by inflammatory leukocytes and some non-leukocytic cells, that act as intercellular mediators. They differ from classical hormones in that they are produced by a number of tissue or cell types rather than by specialized glands. They generally act locally in a paracrine or autocrine rather than endocrine manner. [NIH]

**Cytotoxicity:** Quality of being capable of producing a specific toxic action upon cells of special organs. [NIH]

**Decongestant:** An agent that reduces congestion or swelling. [EU]

**Deuterium:** Deuterium. The stable isotope of hydrogen. It has one neutron and one proton in the nucleus. [NIH]

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

**Diarrhea:** Passage of excessively liquid or excessively frequent stools. [NIH]

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

**Dietary Fats:** Fats present in food, especially in animal products such as meat, meat products, butter, ghee. They are present in lower amounts in nuts, seeds, and avocados. [NIH]

**Diffusion:** The tendency of a gas or solute to pass from a point of higher pressure or concentration to a point of lower pressure or concentration and to distribute itself throughout the available space; a major mechanism of biological transport. [NIH]

**Digestion:** The process of breakdown of food for metabolism and use by the body. [NIH]

**Dihydrotestosterone:** Anabolic agent. [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]

**Dissociation:** 1. The act of separating or state of being separated. 2. The separation of a molecule into two or more fragments (atoms, molecules, ions, or free radicals) produced by the absorption of light or thermal energy or by solvation. 3. In psychology, a defense mechanism in which a group of mental processes are segregated from the rest of a person's mental activity in order to avoid emotional distress, as in the dissociative disorders (q.v.), or in which an idea or object is segregated from its emotional significance; in the first sense it is roughly equivalent to splitting, in the second, to isolation. 4. A defect of mental integration in which one or more groups of mental processes become separated off from normal consciousness and, thus separated, function as a unitary whole. [EU]

**Distention:** The state of being distended or enlarged; the act of distending. [EU]

**Diuretics, Thiazide:** Diuretics characterized as analogs of 1,2,4-benzothiadiazine-1,1-dioxide. All have a common mechanism of action and differ primarily in the dose required to produce a given effect. They act directly on the kidney to increase the excretion of sodium chloride and water and also increase excretion of potassium ions. [NIH]

**Diverticula:** Plural form of diverticulum. [NIH]

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

**Docetaxel:** An anticancer drug that belongs to the family of drugs called mitotic inhibitors. [NIH]

**Dopamine:** An endogenous catecholamine and prominent neurotransmitter in several systems of the brain. In the synthesis of catecholamines from tyrosine, it is the immediate precursor to norepinephrine and epinephrine. Dopamine is a major transmitter in the extrapyramidal system of the brain, and important in regulating movement. A family of dopaminergic receptor subtypes mediate its action. Dopamine is used pharmacologically for its direct (beta adrenergic agonist) and indirect (adrenergic releasing) sympathomimetic effects including its actions as an inotropic agent and as a renal vasodilator. [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]

**Doxepin:** A dibenzoxepin tricyclic compound. It displays a range of pharmacological actions including maintaining adrenergic innervation. Its mechanism of action is not fully understood, but it appears to block reuptake of monoaminergic neurotransmitters into presynaptic terminals. It also possesses anticholinergic activity and modulates antagonism of histamine H(1)- and H(2)-receptors. [NIH]

**Drive:** A state of internal activity of an organism that is a necessary condition before a given stimulus will elicit a class of responses; e.g., a certain level of hunger (drive) must be present before food will elicit an eating response. [NIH]

**Drug Interactions:** The action of a drug that may affect the activity, metabolism, or toxicity of another drug. [NIH]

**Duodenal Ulcer:** An ulcer in the lining of the first part of the small intestine (duodenum). [NIH]

**Duodenum:** The first part of the small intestine. [NIH]

**Dyskinesia:** Impairment of the power of voluntary movement, resulting in fragmentary or incomplete movements. [EU]

**Dysmenorrhea:** Painful menstruation. [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]

**Electrolyte:** A substance that dissociates into ions when fused or in solution, and thus becomes capable of conducting electricity; an ionic solute. [EU]

**Electrons:** Stable elementary particles having the smallest known negative charge, present in all elements; also called negatrons. Positively charged electrons are called positrons. The numbers, energies and arrangement of electrons around atomic nuclei determine the chemical identities of elements. Beams of electrons are called cathode rays or beta rays, the latter being a high-energy biproduct of nuclear decay. [NIH]

**Empiric:** Empirical; depending upon experience or observation alone, without using scientific method or theory. [EU]

**Emulsion:** A preparation of one liquid distributed in small globules throughout the body of a second liquid. The dispersed liquid is the discontinuous phase, and the dispersion medium is the continuous phase. When oil is the dispersed liquid and an aqueous solution is the continuous phase, it is known as an oil-in-water emulsion, whereas when water or aqueous solution is the dispersed phase and oil or oleaginous substance is the continuous phase, it is known as a water-in-oil emulsion. Pharmaceutical emulsions for which official standards have been promulgated include cod liver oil emulsion, cod liver oil emulsion with

malt, liquid petrolatum emulsion, and phenolphthalein in liquid petrolatum emulsion. [EU]

**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]

**Endogenous:** Produced inside an organism or cell. The opposite is external (exogenous) production. [NIH]

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

**Endometriosis:** A condition in which tissue more or less perfectly resembling the uterine mucous membrane (the endometrium) and containing typical endometrial granular and stromal elements occurs aberrantly in various locations in the pelvic cavity. [NIH]

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

**Endoscope:** A thin, lighted tube used to look at tissues inside the body. [NIH]

**Enteritis:** Inflammation of the intestine, applied chiefly to inflammation of the small intestine; see also enterocolitis. [EU]

**Enterocolitis:** Inflammation of the intestinal mucosa of the small and large bowel. [NIH]

**Enuresis:** Involuntary discharge of urine after the age at which urinary control should have been achieved; often used alone with specific reference to involuntary discharge of urine occurring during sleep at night (bed-wetting, nocturnal enuresis). [EU]

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

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

**Epigastric:** Having to do with the upper middle area of the abdomen. [NIH]

**Epinephrine:** The active sympathomimetic hormone from the adrenal medulla in most species. It stimulates both the alpha- and beta- adrenergic systems, causes systemic vasoconstriction and gastrointestinal relaxation, stimulates the heart, and dilates bronchi and cerebral vessels. It is used in asthma and cardiac failure and to delay absorption of local anesthetics. [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]

**Erythrocytes:** Red blood cells. Mature erythrocytes are non-nucleated, biconcave disks containing hemoglobin whose function is to transport oxygen. [NIH]

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

**Evacuation:** An emptying, as of the bowels. [EU]

**Excipients:** Usually inert substances added to a prescription in order to provide suitable consistency to the dosage form; a binder, matrix, base or diluent in pills, tablets, creams, salves, etc. [NIH]

**Exocrine:** Secreting outwardly, via a duct. [EU]

**Expiration:** The act of breathing out, or expelling air from the lungs. [EU]

**External-beam radiation:** Radiation therapy that uses a machine to aim high-energy rays at the cancer. Also called external radiation. [NIH]

**Extracellular:** Outside a cell or cells. [EU]

**Extrapyramidal:** Outside of the pyramidal tracts. [EU]

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

**Fat:** Total lipids including phospholipids. [NIH]

**Fatty acids:** A major component of fats that are used by the body for energy and tissue development. [NIH]

**Feces:** The excrement discharged from the intestines, consisting of bacteria, cells exfoliated from the intestines, secretions, chiefly of the liver, and a small amount of food residue. [EU]

**Fetus:** The developing offspring from 7 to 8 weeks after conception until birth. [NIH]

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

**Fixation:** 1. The act or operation of holding, suturing, or fastening in a fixed position. 2. The condition of being held in a fixed position. 3. In psychiatry, a term with two related but distinct meanings : (1) arrest of development at a particular stage, which like regression (return to an earlier stage), if temporary is a normal reaction to setbacks and difficulties but if protracted or frequent is a cause of developmental failures and emotional problems, and (2) a close and suffocating attachment to another person, especially a childhood figure, such as one's mother or father. Both meanings are derived from psychoanalytic theory and refer to 'fixation' of libidinal energy either in a specific erogenous zone, hence fixation at the oral, anal, or phallic stage, or in a specific object, hence mother or father fixation. 4. The use of a fixative (q.v.) to preserve histological or cytological specimens. 5. In chemistry, the process whereby a substance is removed from the gaseous or solution phase and localized, as in carbon dioxide fixation or nitrogen fixation. 6. In ophthalmology, direction of the gaze so that the visual image of the object falls on the fovea centralis. 7. In film processing, the chemical removal of all undeveloped salts of the film emulsion, leaving only the developed silver to form a permanent image. [EU]

**Flank Pain:** Pain emanating from below the ribs and above the ilium. [NIH]

**Flavoxate:** A drug that has been used in various urinary syndromes and as an antispasmodic. Its therapeutic usefulness and its mechanism of action are not clear. It may have local anesthetic activity and direct relaxing effects on smooth muscle as well as some activity as a muscarinic antagonist. [NIH]

**Fluorouracil:** A pyrimidine analog that acts as an antineoplastic antimetabolite and also has immunosuppressant. It interferes with DNA synthesis by blocking the thymidylate synthetase conversion of deoxyuridylic acid to thymidylic acid. [NIH]

**Folic Acid:** N-(4-(((2-Amino-1,4-dihydro-4-oxo-6-pteridiny)l)methyl)amino)benzoyl)-L-glutamic acid. A member of the vitamin B family that stimulates the hematopoietic system. It is present in the liver and kidney and is found in mushrooms, spinach, yeast, green leaves, and grasses. Folic acid is used in the treatment and prevention of folate deficiencies and megaloblastic anemia. [NIH]

**Forearm:** The part between the elbow and the wrist. [NIH]

**Fovea:** The central part of the macula that provides the sharpest vision. [NIH]



**Fractionation:** Dividing the total dose of radiation therapy into several smaller, equal doses delivered over a period of several days. [NIH]

**Frameshift:** A type of mutation which causes out-of-phase transcription of the base sequence; such mutations arise from the addition or deletion of nucleotide(s) in numbers other than 3 or multiples of 3. [NIH]

**Frameshift Mutation:** A type of mutation in which a number of nucleotides not divisible by three is deleted from or inserted into a coding sequence, thereby causing an alteration in the reading frame of the entire sequence downstream of the mutation. These mutations may be induced by certain types of mutagens or may occur spontaneously. [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]

**Gamma Rays:** Very powerful and penetrating, high-energy electromagnetic radiation of shorter wavelength than that of x-rays. They are emitted by a decaying nucleus, usually between 0.01 and 10 MeV. They are also called nuclear x-rays. [NIH]

**Ganglionic Blockers:** Agents having as their major action the interruption of neural transmission at nicotinic receptors on postganglionic autonomic neurons. Because their actions are so broad, including blocking of sympathetic and parasympathetic systems, their therapeutic use has been largely supplanted by more specific drugs. They may still be used in the control of blood pressure in patients with acute dissecting aortic aneurysm and for the induction of hypotension in surgery. [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]

**Gastric:** Having to do with the stomach. [NIH]

**Gastritis:** Inflammation of the stomach. [EU]

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

**Gastrointestinal tract:** 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]

**General practitioner:** A medical practitioner who does not specialize in a particular branch of medicine or limit his practice to a specific class of diseases. [NIH]

**Generator:** Any system incorporating a fixed parent radionuclide from which is produced a daughter radionuclide which is to be removed by elution or by any other method and used in a radiopharmaceutical. [NIH]

**Genital:** Pertaining to the genitalia. [EU]

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

**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]

**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]

**Glucose:** D-Glucose. A primary source of energy for living organisms. It is naturally occurring and is found in fruits and other parts of plants in its free state. It is used therapeutically in fluid and nutrient replacement. [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]

**Governing Board:** The group in which legal authority is vested for the control of health-related institutions and organizations. [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 peptidoglycan with attached teichoic acids. [EU]

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

**Gynaecological:** Pertaining to gynaecology. [EU]

**Haploid:** An organism with one basic chromosome set, symbolized by  $n$ ; the normal condition of gametes in diploids. [NIH]

**Haptens:** Small antigenic determinants capable of eliciting an immune response only when coupled to a carrier. Haptens bind to antibodies but by themselves cannot elicit an antibody response. [NIH]

**Headache:** Pain in the cranial region that may occur as an isolated and benign symptom or as a manifestation of a wide variety of conditions including subarachnoid hemorrhage; craniocerebral trauma; central nervous system infections; intracranial hypertension; and other disorders. In general, recurrent headaches that are not associated with a primary disease process are referred to as headache disorders (e.g., migraine). [NIH]

**Heart failure:** Loss of pumping ability by the heart, often accompanied by fatigue, breathlessness, and excess fluid accumulation in body tissues. [NIH]

**Helminths:** Commonly known as parasitic worms, this group includes the acanthocephala, nematoda, and platyhelminths. Some authors consider certain species of leeches that can become temporarily parasitic as helminths. [NIH]

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

**Hemoglobin:** One of the fractions of glycosylated hemoglobin A1c. Glycosylated hemoglobin is formed when linkages of glucose and related monosaccharides bind to hemoglobin A and its concentration represents the average blood glucose level over the previous several weeks. HbA1c levels are used as a measure of long-term control of plasma glucose (normal, 4 to 6 percent). In controlled diabetes mellitus, the concentration of glycosylated hemoglobin A is within the normal range, but in uncontrolled cases the level may be 3 to 4 times the normal concentration. Generally, complications are substantially lower among patients with Hb levels of 7 percent or less than in patients with HbA1c levels of 9 percent or more. [NIH]

**Hemostasis:** The process which spontaneously arrests the flow of blood from vessels carrying blood under pressure. It is accomplished by contraction of the vessels, adhesion and aggregation of formed blood elements, and the process of blood or plasma coagulation. [NIH]

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

**Heterogeneity:** The property of one or more samples or populations which implies that they are not identical in respect of some or all of their parameters, e. g. heterogeneity of variance. [NIH]

**Histamine:** 1H-Imidazole-4-ethanamine. A depressor amine derived by enzymatic decarboxylation of histidine. It is a powerful stimulant of gastric secretion, a constrictor of bronchial smooth muscle, a vasodilator, and also a centrally acting neurotransmitter. [NIH]

**Hormonal:** Pertaining to or of the nature of a hormone. [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]

**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]

**Hydrolysis:** The process of cleaving a chemical compound by the addition of a molecule of water. [NIH]

**Hyperbilirubinemia:** Pathologic process consisting of an abnormal increase in the amount of bilirubin in the circulating blood, which may result in jaundice. [NIH]

**Hypercalciuria:** Abnormally large amounts of calcium in the urine. [NIH]

**Hyperhidrosis:** Excessive sweating. In the localized type, the most frequent sites are the palms, soles, axillae, inguinal folds, and the perineal area. Its chief cause is thought to be emotional. Generalized hyperhidrosis may be induced by a hot, humid environment, by fever, or by vigorous exercise. [NIH]

**Hyperlipidemia:** An excess of lipids in the blood. [NIH]

**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]

**Hysterectomy:** Excision of the uterus. [NIH]

**Hysterotomy:** An incision in the uterus, performed through either the abdomen or the vagina. [NIH]

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

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

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

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

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

**Immunosuppressant:** An agent capable of suppressing immune responses. [EU]

**Implant radiation:** A procedure in which radioactive material sealed in needles, seeds, wires, or catheters is placed directly into or near the tumor. Also called [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]

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

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

**Infestation:** Parasitic attack or subsistence on the skin and/or its appendages, as by insects, mites, or ticks; sometimes used to denote parasitic invasion of the organs and tissues, as by helminths. [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]

**Ingestion:** Taking into the body by mouth [NIH]

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

**Inhalation:** The drawing of air or other substances into the lungs. [EU]

**Innervation:** 1. The distribution or supply of nerves to a part. 2. The supply of nervous energy or of nerve stimulus sent to a part. [EU]

**Inorganic:** Pertaining to substances not of organic origin. [EU]

**Inotropic:** Affecting the force or energy of muscular contractions. [EU]

**Insomnia:** Difficulty in going to sleep or getting enough sleep. [NIH]

**Instillation:** . [EU]

**Insulin:** A protein hormone secreted by beta cells of the pancreas. Insulin plays a major role in the regulation of glucose metabolism, generally promoting the cellular utilization of glucose. It is also an important regulator of protein and lipid metabolism. Insulin is used as a drug to control insulin-dependent diabetes mellitus. [NIH]

**Insulin-dependent diabetes mellitus:** A disease characterized by high levels of blood glucose resulting from defects in insulin secretion, insulin action, or both. Autoimmune, genetic, and environmental factors are involved in the development of type I diabetes. [NIH]

**Internal radiation:** A procedure in which radioactive material sealed in needles, seeds, wires, or catheters is placed directly into or near the tumor. Also called brachytherapy,

implant radiation, or interstitial radiation therapy. [NIH]

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

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

**Intestine:** A long, tube-shaped organ in the abdomen that completes the process of digestion. There is both a large intestine and a small intestine. Also called the bowel. [NIH]

**Intracellular:** Inside a cell. [NIH]

**Intravenous:** IV. Into a vein. [NIH]

**Intrinsic:** Situated entirely within or pertaining exclusively to a part. [EU]

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

**Ions:** An atom or group of atoms that have a positive or negative electric charge due to a gain (negative charge) or loss (positive charge) of one or more electrons. Atoms with a positive charge are known as cations; those with a negative charge are anions. [NIH]

**Irradiation:** The use of high-energy radiation from x-rays, neutrons, and other sources to kill cancer cells and shrink tumors. Radiation may come from a machine outside the body (external-beam radiation therapy) or from materials called radioisotopes. Radioisotopes produce radiation and can be placed in or near the tumor or in the area near cancer cells. This type of radiation treatment is called internal radiation therapy, implant radiation, interstitial radiation, or brachytherapy. Systemic radiation therapy uses a radioactive substance, such as a radiolabeled monoclonal antibody, that circulates throughout the body. Irradiation is also called radiation therapy, radiotherapy, and x-ray therapy. [NIH]

**Irritable Bowel Syndrome:** A disorder that comes and goes. Nerves that control the muscles in the GI tract are too active. The GI tract becomes sensitive to food, stool, gas, and stress. Causes abdominal pain, bloating, and constipation or diarrhea. Also called spastic colon or mucous colitis. [NIH]

**Jaundice:** A clinical manifestation of hyperbilirubinemia, consisting of deposition of bile pigments in the skin, resulting in a yellowish staining of the skin and mucous membranes. [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]

**Ketanserin:** A selective serotonin receptor antagonist with weak adrenergic receptor blocking properties. The drug is effective in lowering blood pressure in essential hypertension. It also inhibits platelet aggregation. It is well tolerated and is particularly effective in older patients. [NIH]

**Ketoacidosis:** Acidosis accompanied by the accumulation of ketone bodies (ketosis) in the body tissues and fluids, as in diabetic acidosis. [EU]

**Ketone Bodies:** Chemicals that the body makes when there is not enough insulin in the blood and it must break down fat for its energy. Ketone bodies can poison and even kill body cells. When the body does not have the help of insulin, the ketones build up in the blood and then "spill" over into the urine so that the body can get rid of them. The body can also rid itself of one type of ketone, called acetone, through the lungs. This gives the breath a fruity odor. Ketones that build up in the body for a long time lead to serious illness and coma. [NIH]

**Kidney Transplantation:** The transference of a kidney from one human or animal to another. [NIH]

**Large Intestine:** The part of the intestine that goes from the cecum to the rectum. The large intestine absorbs water from stool and changes it from a liquid to a solid form. The large

intestine is 5 feet long and includes the appendix, cecum, colon, and rectum. Also called colon. [NIH]

**Lesion:** An area of abnormal tissue change. [NIH]

**Leucovorin:** The active metabolite of folic acid. Leucovorin is used principally as its calcium salt as an antidote to folic acid antagonists which block the conversion of folic acid to folinic acid. [NIH]

**Libido:** The psychic drive or energy associated with sexual instinct in the broad sense (pleasure and love-object seeking). It may also connote the psychic energy associated with instincts in general that motivate behavior. [NIH]

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

**Lipase:** An enzyme of the hydrolase class that catalyzes the reaction of triacylglycerol and water to yield diacylglycerol and a fatty acid anion. It is produced by glands on the tongue and by the pancreas and initiates the digestion of dietary fats. (From Dorland, 27th ed) EC 3.1.1.3. [NIH]

**Lipid:** Fat. [NIH]

**Lipid A:** Lipid A is the biologically active component of lipopolysaccharides. It shows strong endotoxic activity and exhibits immunogenic properties. [NIH]

**Lipolysis:** The hydrolysis of lipids. [NIH]

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

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

**Locomotion:** Movement or the ability to move from one place or another. It can refer to humans, vertebrate or invertebrate animals, and microorganisms. [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]

**Lymphocytes:** White blood cells formed in the body's lymphoid tissue. The nucleus is round or ovoid with coarse, irregularly clumped chromatin while the cytoplasm is typically pale blue with azurophilic (if any) granules. Most lymphocytes can be classified as either T or B (with subpopulations of each); those with characteristics of neither major class are called null cells. [NIH]

**Malignancy:** A cancerous tumor that can invade and destroy nearby tissue and spread to other parts of the body. [NIH]

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

**Malignant tumor:** A tumor capable of metastasizing. [NIH]

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

**Mediator:** An object or substance by which something is mediated, such as (1) a structure of

the nervous system that transmits impulses eliciting a specific response; (2) a chemical substance (transmitter substance) that induces activity in an excitable tissue, such as nerve or muscle; or (3) a substance released from cells as the result of the interaction of antigen with antibody or by the action of antigen with a sensitized lymphocyte. [EU]

**Medicament:** A medicinal substance or agent. [EU]

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

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

**Menarche:** The establishment or beginning of the menstrual function. [EU]

**Menopause:** Permanent cessation of menstruation. [NIH]

**Menstrual Cycle:** The period of the regularly recurring physiologic changes in the endometrium occurring during the reproductive period in human females and some primates and culminating in partial sloughing of the endometrium (menstruation). [NIH]

**Menstruation:** The normal physiologic discharge through the vagina of blood and mucosal tissues from the nonpregnant uterus. [NIH]

**Mercury:** A silver metallic element that exists as a liquid at room temperature. It has the atomic symbol Hg (from hydrargyrum, liquid silver), atomic number 80, and atomic weight 200.59. Mercury is used in many industrial applications and its salts have been employed therapeutically as purgatives, antisyphilitics, disinfectants, and astringents. It can be absorbed through the skin and mucous membranes which leads to mercury poisoning. Because of its toxicity, the clinical use of mercury and mercurials is diminishing. [NIH]

**Metabolic acidosis:** (met-ah-BOL-ik as-id-O-sis): A condition in which the blood is too acidic. It may be caused by severe illness or sepsis (bacteria in the bloodstream). [NIH]

**Metabolite:** Any substance produced by metabolism or by a metabolic process. [EU]

**Methotrexate:** An antineoplastic antimetabolite with immunosuppressant properties. It is an inhibitor of dihydrofolate reductase and prevents the formation of tetrahydrofolate, necessary for synthesis of thymidylate, an essential component of DNA. [NIH]

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

**Microglia:** The third type of glial cell, along with astrocytes and oligodendrocytes (which together form the macroglia). Microglia vary in appearance depending on developmental stage, functional state, and anatomical location; subtype terms include ramified, perivascular, ameboid, resting, and activated. Microglia clearly are capable of phagocytosis and play an important role in a wide spectrum of neuropathologies. They have also been suggested to act in several other roles including in secretion (e.g., of cytokines and neural growth factors), in immunological processing (e.g., antigen presentation), and in central nervous system development and remodeling. [NIH]

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

**Migration:** The systematic movement of genes between populations of the same species, geographic race, or variety. [NIH]

**Mitotic:** Cell resulting from mitosis. [NIH]

**Mitotic inhibitors:** Drugs that kill cancer cells by interfering with cell division (mitostis).

[NIH]

**Modification:** A change in an organism, or in a process in an organism, that is acquired from its own activity or environment. [NIH]

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

**Molecular Structure:** The location of the atoms, groups or ions relative to one another in a molecule, as well as the number, type and location of covalent bonds. [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]

**Monoamine:** Enzyme that breaks down dopamine in the astrocytes and microglia. [NIH]

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

**Motility:** The ability to move spontaneously. [EU]

**Mucosa:** A mucous membrane, or tunica mucosa. [EU]

**Mydriatic:** 1. Dilating the pupil. 2. Any drug that dilates the pupil. [EU]

**Nalidixic Acid:** Synthetic antimicrobial agent used in urinary tract infections. It is active against gram-negative bacteria but has little activity against gram-positive organisms or *Pseudomonas*. [NIH]

**Nephropathy:** Disease of the kidneys. [EU]

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

**Neurotransmitter:** Any of a group of substances that are released on excitation from the axon terminal of a presynaptic neuron of the central or peripheral nervous system and travel across the synaptic cleft to either excite or inhibit the target cell. Among the many substances that have the properties of a neurotransmitter are acetylcholine, norepinephrine, epinephrine, dopamine, glycine,  $\gamma$ -aminobutyrate, glutamic acid, substance P, enkephalins, endorphins, and serotonin. [EU]

**Neutrons:** Electrically neutral elementary particles found in all atomic nuclei except light hydrogen; the mass is equal to that of the proton and electron combined and they are unstable when isolated from the nucleus, undergoing beta decay. Slow, thermal, epithermal, and fast neutrons refer to the energy levels with which the neutrons are ejected from heavier nuclei during their decay. [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]

**Norepinephrine:** Precursor of epinephrine that is secreted by the adrenal medulla and is a widespread central and autonomic neurotransmitter. Norepinephrine is the principal transmitter of most postganglionic sympathetic fibers and of the diffuse projection system in the brain arising from the locus ceruleus. It is also found in plants and is used pharmacologically as a sympathomimetic. [NIH]

**Nuclear:** A test of the structure, blood flow, and function of the kidneys. The doctor injects a mildly radioactive solution into an arm vein and uses x-rays to monitor its progress through the kidneys. [NIH]

**Nurse Practitioners:** Nurses who are specially trained to assume an expanded role in providing medical care under the supervision of a physician. [NIH]



**Nursing Care:** Care given to patients by nursing service personnel. [NIH]

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

**Organ Culture:** The growth in aseptic culture of plant organs such as roots or shoots, beginning with organ primordia or segments and maintaining the characteristics of the organ. [NIH]

**Orlistat:** A lipase inhibitor used for weight loss. Lipase is an enzyme found in the bowel that assists in lipid absorption by the body. Orlistat blocks this enzyme, reducing the amount of fat the body absorbs by about 30 percent. It is known colloquially as a "fat blocker." Because more oily fat is left in the bowel to be excreted, Orlistat can cause an oily anal leakage and fecal incontinence. Orlistat may not be suitable for people with bowel conditions such as irritable bowel syndrome or Crohn's disease. [NIH]

**Outpatient:** A patient who is not an inmate of a hospital but receives diagnosis or treatment in a clinic or dispensary connected with the hospital. [NIH]

**Oxidation:** The act of oxidizing or state of being oxidized. Chemically it consists in the increase of positive charges on an atom or the loss of negative charges. Most biological oxidations are accomplished by the removal of a pair of hydrogen atoms (dehydrogenation) from a molecule. Such oxidations must be accompanied by reduction of an acceptor molecule. Univalent o. indicates loss of one electron; divalent o., the loss of two electrons. [EU]

**Pacemaker:** An object or substance that influences the rate at which a certain phenomenon occurs; often used alone to indicate the natural cardiac pacemaker or an artificial cardiac pacemaker. In biochemistry, a substance whose rate of reaction sets the pace for a series of interrelated reactions. [EU]

**Palliative:** 1. Affording relief, but not cure. 2. An alleviating medicine. [EU]

**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]

**Parasite:** An animal or a plant that lives on or in an organism of another species and gets at least some of its nutrition from that other organism. [NIH]

**Parasitic:** Having to do with or being a parasite. A parasite is an animal or a plant that lives on or in an organism of another species and gets at least some of its nutrients from it. [NIH]

**Parasympathomimetic:** 1. Producing effects resembling those of stimulation of the parasympathetic nerve supply to a part. 2. An agent that produces effects similar to those produced by stimulation of the parasympathetic nerves. Called also cholinergic. [EU]

**Pathologies:** The study of abnormality, especially the study of diseases. [NIH]

**Patient Care Management:** Generating, planning, organizing, and administering medical and nursing care and services for patients. [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]

**Pentosan polysulfate:** A drug used to relieve pain or discomfort associated with chronic inflammation of the bladder. It is also being evaluated for its protective effects on the gastrointestinal tract in people undergoing radiation therapy. [NIH]

**Perineal:** Pertaining to the perineum. [EU]

**pH:** The symbol relating the hydrogen ion (H<sup>+</sup>) concentration or activity of a solution to that of a given standard solution. Numerically the pH is approximately equal to the negative logarithm of H<sup>+</sup> concentration expressed in molarity. pH 7 is neutral; above it alkalinity increases and below it acidity increases. [EU]

**Phallic:** Pertaining to the phallus, or penis. [EU]

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

**Phenyl:** Ingredient used in cold and flu remedies. [NIH]

**Phenylephrine:** An alpha-adrenergic agonist used as a mydriatic, nasal decongestant, and cardiostimulant agent. [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]

**Pigments:** Any normal or abnormal coloring matter in plants, animals, or micro-organisms. [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; absence of nervous and sensory systems; and an alteration of haploid and diploid generations. [NIH]

**Platelet Aggregation:** The attachment of platelets to one another. This clumping together can be induced by a number of agents (e.g., thrombin, collagen) and is part of the mechanism leading to the formation of a thrombus. [NIH]

**Pneumonia:** Inflammation of the lungs. [NIH]

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

**Polyuria:** Urination of a large volume of urine with an increase in urinary frequency, commonly seen in diabetes. [NIH]

**Posterior:** Situated in back of, or in the back part of, or affecting the back or dorsal surface of the body. In lower animals, it refers to the caudal end of the body. [EU]

**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]

**Pravastatin:** An antilipemic fungal metabolite isolated from cultures of *Nocardia autotrophica*. It acts as a competitive inhibitor of HMG CoA reductase (hydroxymethylglutaryl CoA reductases). [NIH]

**Prazosin:** A selective adrenergic alpha-1 antagonist used in the treatment of heart failure, hypertension, pheochromocytoma, Raynaud's syndrome, prostatic hypertrophy, and urinary retention. [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]

**Premenopausal:** Refers to the time before menopause. Menopause is the time of life when a women's menstrual periods stop permanently; also called "change of life." [NIH]

**Presynaptic:** Situated proximal to a synapse, or occurring before the synapse is crossed. [EU]

**Presynaptic Terminals:** The distal terminations of axons which are specialized for the release of neurotransmitters. Also included are varicosities along the course of axons which have similar specializations and also release transmitters. Presynaptic terminals in both the central and peripheral nervous systems are included. [NIH]

**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]

**Prophylaxis:** An attempt to prevent disease. [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]

**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]

**Protons:** Stable elementary particles having the smallest known positive charge, found in the nuclei of all elements. The proton mass is less than that of a neutron. A proton is the nucleus of the light hydrogen atom, i.e., the hydrogen ion. [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]

**Protozoan:** 1. Any individual of the protozoa; protozoon. 2. Of or pertaining to the protozoa; protozoal. [EU]

**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]

**Psychogenic:** Produced or caused by psychic or mental factors rather than organic factors. [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]

**Pulmonary:** Relating to the lungs. [NIH]

**Pulmonary Artery:** The short wide vessel arising from the conus arteriosus of the right ventricle and conveying unaerated blood to the lungs. [NIH]

**Pulse:** The rhythmical expansion and contraction of an artery produced by waves of pressure caused by the ejection of blood from the left ventricle of the heart as it contracts. [NIH]

**Purulent:** Consisting of or containing pus; associated with the formation of or caused by pus. [EU]

**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]

**Race:** A population within a species which exhibits general similarities within itself, but is both discontinuous and distinct from other populations of that species, though not sufficiently so as to achieve the status of a taxon. [NIH]

**Radiation:** Emission or propagation of electromagnetic energy (waves/rays), or the waves/rays themselves; a stream of electromagnetic particles (electrons, neutrons, protons, alpha particles) or a mixture of these. The most common source is the sun. [NIH]

**Radiation therapy:** The use of high-energy radiation from x-rays, gamma rays, neutrons, and other sources to kill cancer cells and shrink tumors. Radiation may come from a machine outside the body (external-beam radiation therapy), or it may come from radioactive material placed in the body in the area near cancer cells (internal radiation therapy, implant radiation, or brachytherapy). Systemic radiation therapy uses a radioactive substance, such as a radiolabeled monoclonal antibody, that circulates throughout the body. Also called radiotherapy. [NIH]

**Radioactive:** Giving off radiation. [NIH]

**Radiolabeled:** Any compound that has been joined with a radioactive substance. [NIH]

**Radiopharmaceutical:** Any medicinal product which, when ready for use, contains one or more radionuclides (radioactive isotopes) included for a medicinal purpose. [NIH]

**Radiotherapy:** The use of ionizing radiation to treat malignant neoplasms and other benign conditions. The most common forms of ionizing radiation used as therapy are x-rays, gamma rays, and electrons. A special form of radiotherapy, targeted radiotherapy, links a cytotoxic radionuclide to a molecule that targets the tumor. When this molecule is an antibody or other immunologic molecule, the technique is called radioimmunotherapy. [NIH]

**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]

**Receptors, Serotonin:** Cell-surface proteins that bind serotonin and trigger intracellular changes which influence the behavior of cells. Several types of serotonin receptors have been recognized which differ in their pharmacology, molecular biology, and mode of action. [NIH]

**Rectal:** By or having to do with the rectum. The rectum is the last 8 to 10 inches of the large intestine and ends at the anus. [NIH]

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

**Recurrence:** The return of a sign, symptom, or disease after a remission. [NIH]

**Reductase:** Enzyme converting testosterone to dihydrotestosterone. [NIH]

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

**Remission:** A decrease in or disappearance of signs and symptoms of cancer. In partial remission, some, but not all, signs and symptoms of cancer have disappeared. In complete remission, all signs and symptoms of cancer have disappeared, although there still may be cancer in the body. [NIH]

**Residual Volume:** The volume of air remaining in the lungs at the end of a maximal expiration. Common abbreviation is RV. [NIH]

**Reversion:** A return to the original condition, e. g. the reappearance of the normal or wild type in previously mutated cells, tissues, or organisms. [NIH]

**Rhabdomyosarcoma:** A malignant tumor of muscle tissue. [NIH]

**Rigidity:** Stiffness or inflexibility, chiefly that which is abnormal or morbid; rigor. [EU]

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

**Rosiglitazone:** A drug taken to help reduce the amount of sugar in the blood. Rosiglitazone helps make insulin more effective and improves regulation of blood sugar. It belongs to the family of drugs called thiazolidinediones. [NIH]

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

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

**Segregation:** The separation in meiotic cell division of homologous chromosome pairs and their contained allelomorphous 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]

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

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

**Septic:** Produced by or due to decomposition by microorganisms; putrefactive. [EU]

**Serotonin:** A biochemical messenger and regulator, synthesized from the essential amino acid L-tryptophan. In humans it is found primarily in the central nervous system, gastrointestinal tract, and blood platelets. Serotonin mediates several important physiological functions including neurotransmission, gastrointestinal motility, hemostasis,

and cardiovascular integrity. Multiple receptor families (receptors, serotonin) explain the broad physiological actions and distribution of this biochemical mediator. [NIH]

**Shivering:** Involuntary contraction or twitching of the muscles. It is a physiologic method of heat production in man and other mammals. [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]

**Sibutramine:** A drug used for the management of obesity that helps reduce food intake and is indicated for weight loss and maintenance of weight loss when used in conjunction with a reduced-calorie diet. It works to suppress the appetite primarily by inhibiting the reuptake of the neurotransmitters norepinephrine and serotonin. Side effects include dry mouth, headache, constipation, insomnia, and a slight increase in average blood pressure. In some patients it causes a higher blood pressure increase. [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]

**Skeletal:** Having to do with the skeleton (boney part of the body). [NIH]

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

**Smooth muscle:** Muscle that performs automatic tasks, such as constricting blood vessels. [NIH]

**Sodium:** An element that is a member of the alkali group of metals. It has the atomic symbol Na, atomic number 11, and atomic weight 23. With a valence of 1, it has a strong affinity for oxygen and other nonmetallic elements. Sodium provides the chief cation of the extracellular body fluids. Its salts are the most widely used in medicine. (From Dorland, 27th ed) Physiologically the sodium ion plays a major role in blood pressure regulation, maintenance of fluid volume, and electrolyte balance. [NIH]

**Solvent:** 1. Dissolving; effecting a solution. 2. A liquid that dissolves or that is capable of dissolving; the component of a solution that is present in greater amount. [EU]

**Spasm:** An involuntary contraction of a muscle or group of muscles. Spasms may involve skeletal muscle or smooth muscle. [NIH]

**Spastic:** 1. Of the nature of or characterized by spasms. 2. Hypertonic, so that the muscles are stiff and the movements awkward. 3. A person exhibiting spasticity, such as occurs in spastic paralysis or in cerebral palsy. [EU]

**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]

**Specificity:** Degree of selectivity shown by an antibody with respect to the number and types of antigens with which the antibody combines, as well as with respect to the rates and the extents of these reactions. [NIH]

**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]

**Spotting:** A slight discharge of blood via the vagina, especially as a side-effect of oral contraceptives. [EU]

**Stabilization:** The creation of a stable state. [EU]

**Stasis:** A word termination indicating the maintenance of (or maintaining) a constant level; preventing increase or multiplication. [EU]

**Stenosis:** Narrowing or stricture of a duct or canal. [EU]

**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]

**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]

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

**Stricture:** The abnormal narrowing of a body opening. Also called stenosis. [NIH]

**Stromal:** Large, veil-like cell in the bone marrow. [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]

**Sympathomimetic:** 1. Mimicking the effects of impulses conveyed by adrenergic postganglionic fibres of the sympathetic nervous system. 2. An agent that produces effects similar to those of impulses conveyed by adrenergic postganglionic fibres of the sympathetic nervous system. Called also adrenergic. [EU]

**Symphysis:** A secondary cartilaginous joint. [NIH]

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

**Symptomatology:** 1. That branch of medicine which treats of symptoms; the systematic discussion of symptoms. 2. The combined symptoms of a disease. [EU]

**Synapse:** The region where the processes of two neurons come into close contiguity, and the nervous impulse passes from one to the other; the fibers of the two are intermeshed, but, according to the general view, there is no direct contiguity. [NIH]

**Systemic:** Affecting the entire body. [NIH]

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

**Testosterone:** A hormone that promotes the development and maintenance of male sex characteristics. [NIH]

**Therapeutics:** The branch of medicine which is concerned with the treatment of diseases, palliative or curative. [NIH]

**Thermogenesis:** The generation of heat in order to maintain body temperature. The uncoupled oxidation of fatty acids contained within brown adipose tissue and shivering are examples of thermogenesis in mammals. [NIH]

**Thoracic:** Having to do with 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]

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

**Ticks:** Blood-sucking arachnids of the order Acarina. [NIH]

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

**Tissue Culture:** Maintaining or growing of tissue, organ primordia, or the whole or part of an organ in vitro so as to preserve its architecture and/or function (Dorland, 28th ed). Tissue culture includes both organ culture and cell culture. [NIH]

**Topical:** On the surface of the body. [NIH]

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

**Toxicity:** The quality of being poisonous, especially the degree of virulence of a toxic microbe or of a poison. [EU]

**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]

**Transcutaneous:** Transdermal. [EU]

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

**Transmitter:** A chemical substance which effects the passage of nerve impulses from one cell to the other at the synapse. [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]

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

**Trichomoniasis:** An infection with the protozoan parasite *Trichomonas vaginalis*. [NIH]

**Tricyclic:** Containing three fused rings or closed chains in the molecular structure. [EU]

**Tryptophan:** An essential amino acid that is necessary for normal growth in infants and for nitrogen balance in adults. It is a precursor serotonin and niacin. [NIH]

**Tunica:** A rather vague term to denote the lining coat of hollow organs, tubes, or cavities. [NIH]

**Typhimurium:** Microbial assay which measures his-his<sup>+</sup> reversion by chemicals which cause base substitutions or frameshift mutations in the genome of this organism. [NIH]

**Tyrosine:** A non-essential amino acid. In animals it is synthesized from phenylalanine. It is also the precursor of epinephrine, thyroid hormones, and melanin. [NIH]

**Ulcer:** A localized necrotic lesion of the skin or a mucous surface. [NIH]



**Ulceration:** 1. The formation or development of an ulcer. 2. An ulcer. [EU]

**Unresectable:** Unable to be surgically removed. [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]

**Ureters:** Tubes that carry urine from the kidneys 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 Retention:** Inability to urinate. The etiology of this disorder includes obstructive, neurogenic, pharmacologic, and psychogenic causes. [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]

**Urinary urgency:** Inability to delay urination. [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]

**Urodynamic:** Measures of the bladder's ability to hold and release urine. [NIH]

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

**Urolithiasis:** Stones in the urinary system. [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]

**Vaginal Discharge:** A common gynecologic disorder characterized by an abnormal, nonbloody discharge from the genital tract. [NIH]

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

**Vaginosis:** A condition caused by the overgrowth of anaerobic bacteria (e. g., *Gardnerella vaginalis*), resulting in vaginal irritation and discharge. [NIH]

**Valves:** Flap-like structures that control the direction of blood flow through the heart. [NIH]

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

**Vasculitis:** Inflammation of a blood vessel. [NIH]

**Vasodilator:** An agent that widens blood vessels. [NIH]

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

**Venous:** Of or pertaining to the veins. [EU]

**Ventricle:** One of the two pumping chambers of the heart. The right ventricle receives oxygen-poor blood from the right atrium and pumps it to the lungs through the pulmonary artery. The left ventricle receives oxygen-rich blood from the left atrium and pumps it to the body through the aorta. [NIH]

**Vesicoureteral:** An abnormal condition in which urine backs up into the ureters, and occasionally into the kidneys, raising the risk of infection. [NIH]

**Vesicovaginal Fistula:** An abnormal communication between the bladder and the vagina. [NIH]

**Veterinary Medicine:** The medical science concerned with the prevention, diagnosis, and treatment of diseases in animals. [NIH]

**Vinblastine:** An anticancer drug that belongs to the family of plant drugs called vinca alkaloids. It is a mitotic inhibitor. [NIH]

**Vinca Alkaloids:** A class of alkaloids from the genus of apocyanaceous woody herbs including periwinkles. They are some of the most useful antineoplastic agents. [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]

**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]

**Void:** To urinate, empty the bladder. [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]

**Womb:** A hollow, thick-walled, muscular organ in which the impregnated ovum is developed into a child. [NIH]

**X-ray:** High-energy radiation used in low doses to diagnose diseases and in high doses to treat cancer. [NIH]

**X-ray therapy:** The use of high-energy radiation from x-rays to kill cancer cells and shrink tumors. Radiation may come from a machine outside the body (external-beam radiation therapy) or from materials called radioisotopes. Radioisotopes produce radiation and can be placed in or near the tumor or in the area near cancer cells. This type of radiation treatment is called internal radiation therapy, implant radiation, interstitial radiation, or brachytherapy. Systemic radiation therapy uses a radioactive substance, such as a radiolabeled monoclonal antibody, that circulates throughout the body. X-ray therapy is also called radiation therapy, radiotherapy, and irradiation. [NIH]

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