

# ANAL FISTULA

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



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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 anal fistula 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 anal fistula, 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 anal fistula, 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 anal fistula. 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 anal fistula, 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 anal fistula.

*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 ANAL FISTULA

### Overview

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

### The Combined Health Information Database

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

- **Office Management of Common Anorectal Problems**

Source: Postgraduate Medicine. 92(2): 141-146, 149-150, 153-154. August 1992.

Summary: Anorectal disorders can often be treated in the physician's office with relatively simple medical therapy or procedures. Diagnosis is usually easy, but patient discomfort is one of the greatest obstacles to management. In this article, the author discusses in-office treatment of hemorrhoids, perirectal and perianal abscesses, and **anal fistulas**, fissures, and warts. The article also addresses the need for surgical referral. A final section covers anorectal disease in HIV-positive patients. 9 figures. 3 tables. 7 references. (AA-M).

- **Anatomic Plane of Separation Between External Anal Sphincter and Puborectalis Muscle: Clinical Implications**

Source: Diseases of the Colon and Rectum. 42(3): 374-379. March 1999.

Contact: Available from Williams and Wilkins. 352 West Camden Street, Baltimore, MD 21201-2436.

Summary: The possible existence of an anatomic and functional separation between the external sphincter and the puborectalis muscle has been reported in the medical literature. In this article, the authors confirm, by means of anatomic and clinical observations, the presence of such a separation and focus on its importance in understanding the pathway of diffusion for some suppurative anal lesions and in planning advanced procedures to spare the sphincter. Twenty adult anatomic specimens of the anal region (from 12 women, and 8 men) were cut in the sagittal, coronal, and paracoronal planes, stained with hematoxylin and eosin, and examined. The pelvic floor musculature was examined in 3 patients undergoing postanal repair operations. Primary posterior and posterolateral **anal fistulas** in 11 women and 19 men were carefully traced during and after staged fistulotomy. An attempted was made peranally to separate the external sphincter from the puborectalis muscle to spare the sphincter in 4 patients (3 women) aged 56 to 65 years with rectal cancers 4 to 5 cm from the anal verge. The results of these investigations showed a connective plane of separation between the puborectalis muscle and the external sphincter. An anatomicofunctional separation between the puborectalis muscle and the external sphincter was easily demonstrated during anal repair operations. The authors conclude that the presence of this plane is important to help understand the diffusion of some suppurative anal lesions and to plan advanced procedures to spare the sphincter. 9 figures. 26 references. (AA-M).

- **Anorectal Disease**

Source: Current Opinion in Gastroenterology. 7(1): 66-71. February 1991.

Summary: This review article summarizes new developments in anorectal disease. Topics include anal fistulae in Crohn's disease; ileal pouch vaginal fistulae, anorectal physiology, hemorrhoids, anal sphincter reconstruction, and AIDS and sexually transmitted anorectal disease. The author focuses on surgical therapies, noting that, in addition to success with more aggressive approaches to anal Crohn's disease and to sphincter injuries, surgeons are more frequently operating on AIDS patients with anorectal disease. 1 table. 28 annotated references. (AA-M).

## **Federally Funded Research on Anal Fistula**

The U.S. Government supports a variety of research studies relating to anal fistula. 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 anal fistula.

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 anal fistula.

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

- **A calculus within an anal fistula tract in a diabetic patient.**  
 Author(s): Ahmed ME, Shumo AI.  
 Source: Saudi Med J. 2001 February; 22(2): 170-1.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=11299415](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=11299415)
  
- **A manometric study of anorectal function after surgery for anal fistula, with special reference to incontinence.**  
 Author(s): Sainio P.  
 Source: Acta Chir Scand. 1985; 151(8): 695-700.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=4096174](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=4096174)
  
- **A new concept of the anatomy of the anal sphincter mechanism and the physiology of defecation. VII. Anal fistula: a simplified classification.**  
 Author(s): Shafik A.  
 Source: Diseases of the Colon and Rectum. 1979 September; 22(6): 408-14.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=498899](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=498899)

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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 prospective manometric study of the effect of anal fistula surgery on anorectal function.**  
Author(s): Sainio P, Husa A.  
Source: Acta Chir Scand. 1985; 151(3): 279-88.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=4013605](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=4013605)
- **A randomized, controlled trial of fibrin glue vs. conventional treatment for anal fistula.**  
Author(s): Lindsey I, Smilgin-Humphreys MM, Cunningham C, Mortensen NJ, George BD.  
Source: Diseases of the Colon and Rectum. 2002 December; 45(12): 1608-15.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=12473883](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=12473883)
- **A stone within an anal fistula tract.**  
Author(s): Navarra G, Ascanelli S, Turini A, Carcoforo P, Pozza E.  
Source: International Journal of Colorectal Disease. 1999 November; 14(4-5): 263.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=10647638](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=10647638)
- **A tuberculous anal fistula.**  
Author(s): Adhami S, Duthie G, Greenstone M.  
Source: Journal of the Royal Society of Medicine. 1999 September; 92(9): 467-8.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=10645298](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=10645298)
- **Accuracy of hydrogen peroxide enhanced endoanal ultrasonography in assessment of the internal opening of an anal fistula complex.**  
Author(s): Moscovitz I, Baig MK, Nogueras JJ, Ovalioglu E, Weiss EG, Singh JJ, Wexner SD.  
Source: Techniques in Coloproctology. 2003 October; 7(3): 133-7.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=14628155](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=14628155)
- **Adenocarcinoma associated with chronic anal fistula.**  
Author(s): Tan YS, Nambiar R, Sim CS.  
Source: Ann Acad Med Singapore. 1989 November; 18(6): 717-20. Review.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=2696420](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2696420)
- **Adenocarcinoma of the sigmoid colon seeding a chronic anal fistula: report of a case.**  
Author(s): Hyman N, Kida M.  
Source: Diseases of the Colon and Rectum. 2003 June; 46(6): 835-6.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=12794588](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=12794588)

- **Adjustable seton in the management of complex anal fistula.**  
 Author(s): Thompson JE Jr, Bennion RS, Hilliard G.  
 Source: Surg Gynecol Obstet. 1989 December; 169(6): 551-2. No Abstract Available.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=2683156](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=2683156)
- **All's Well That Ends Well: Shakespeare's treatment of anal fistula.**  
 Author(s): Cosman BC.  
 Source: Diseases of the Colon and Rectum. 1998 July; 41(7): 914-24.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=9678380](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=9678380)
- **An etiology of anal fistula in infants.**  
 Author(s): Takatsuki S.  
 Source: The Keio Journal of Medicine. 1976 January; 25(1): 1-4.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=950735](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=950735)
- **An interesting case of cancer of the sigmoid with concomitant cancer in an anal fistula.**  
 Author(s): Parnes IH.  
 Source: The Mount Sinai Journal of Medicine, New York. 1976 July-August; 43(4): 476-9.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=1085913](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=1085913)
- **Anal endosonography for recurrent anal fistulas: image enhancement with hydrogen peroxide.**  
 Author(s): Cheong DM, Nogueras JJ, Wexner SD, Jagelman DG.  
 Source: Diseases of the Colon and Rectum. 1993 December; 36(12): 1158-60.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=8253014](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=8253014)
- **Anal fistula in India.**  
 Author(s): Raghavaiah NV.  
 Source: Int Surg. 1976 April; 61(4): 243-5. No Abstract Available.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=1270231](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=1270231)
- **Anal fistula in infants: etiology, features, management.**  
 Author(s): Poenaru D, Yazbeck S.  
 Source: Journal of Pediatric Surgery. 1993 September; 28(9): 1194-5.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=8308691](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=8308691)
- **Anal fistula surgery. Factors associated with recurrence and incontinence.**  
 Author(s): Garcia-Aguilar J, Belmonte C, Wong WD, Goldberg SM, Madoff RD.  
 Source: Diseases of the Colon and Rectum. 1996 July; 39(7): 723-9.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=8674361](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=8674361)

- **Anal fistula.**  
Author(s): Glen DL.  
Source: The British Journal of Surgery. 1993 December; 80(12): 1626-7.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=8298948](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=8298948)
- **Anal fistula.**  
Author(s): Seow-Choen F, Nicholls RJ.  
Source: The British Journal of Surgery. 1992 March; 79(3): 197-205. Review.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=1555083](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=1555083)
- **Anal fistula: a review of 82 cases.**  
Author(s): Ani AN, Solanke TF.  
Source: Diseases of the Colon and Rectum. 1976 January-February; 19(1): 51-5.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=1248349](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=1248349)
- **Anal fistula: Levovist-enhanced endoanal ultrasound: a pilot study.**  
Author(s): Chew SS, Yang JL, Newstead GL, Douglas PR.  
Source: Diseases of the Colon and Rectum. 2003 March; 46(3): 377-84.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=12626915](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=12626915)
- **Anal fistulas at St Mark's Hospital.**  
Author(s): Marks CG, Ritchie JK.  
Source: The British Journal of Surgery. 1977 February; 64(2): 84-91.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=890252](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=890252)
- **Anal fistulas in Crohn's disease.**  
Author(s): Marks CG, Ritchie JK, Lockhart-Mummery HE.  
Source: The British Journal of Surgery. 1981 August; 68(8): 525-7.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=7272665](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=7272665)
- **Anal fistulas in Crohn's disease: incidence and outcome of surgical treatment.**  
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Source: Bratisl Lek Listy. 2003; 104(4-5): 165-6.  
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## CHAPTER 2. ALTERNATIVE MEDICINE AND ANAL FISTULA

### Overview

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

- **Analgesic effect of laser irradiation following surgical operation of the anus.**  
Author(s): Xi Z, Pei X, Gao X, Niu X.  
Source: J Tradit Chin Med. 1992 September; 12(3): 182. No Abstract Available.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=1453755](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=1453755)
- **Ayurvedic treatment for fistula-in-ano. An example of cheap and simple technology for developing countries.**  
Author(s): Wolffers I.  
Source: Trop Doct. 1986 January; 16(1): 44. No Abstract Available.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=3765069](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=3765069)
- **Closure of refractory perineal Crohn's lesion. Integration of hyperbaric oxygen into case management.**  
Author(s): Nelson EW Jr, Bright DE, Villar LF.

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- **Endosonographic evidence of persistence of Crohn's disease-associated fistulas after infliximab treatment, irrespective of clinical response.**  
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 Source: European Journal of Pediatric Surgery : Official Journal of Austrian Association of Pediatric Surgery. [et Al] = Zeitschrift Fur Kinderchirurgie. 1994 June; 4(3): 184-5.  
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- **Hyperbaric oxygen: a new alternative in the treatment of perianal Crohn's disease.**  
 Author(s): Sipahi AM, Damiao AO, de Sousa MM, Barbutti RC, Trivellato S, Esteves C, D'Agostino M, Laudanna AA.  
 Source: Revista Do Hospital Das Clinicas. 1996 September-October; 51(5): 189-91.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=9216097](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=9216097)
- **Hyperbaric oxygenation for rectovaginal fistula: a report of two cases.**  
 Author(s): Dohgomori H, Arikawa K, Nobori M, Tonari M.  
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- **Injured external anal sphincter in erectile dysfunction.**  
 Author(s): Shafik A.  
 Source: Andrologia. 2001 January; 33(1): 35-41.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=11167517](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=11167517)
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 Author(s): Ren CP.  
 Source: Chinese Medical Journal. 1978 March; 4(2): 158-9.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=95934](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=95934)

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 Author(s): Ohya T, Usui Y, Okamoto K, Inoue Y, Arii S, Iwai T.  
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 Source: International Journal of Colorectal Disease. 1991 May; 6(2): 100-2.  
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- **The use of relaxation techniques in the perioperative management of proctological patients: preliminary results.**  
 Author(s): Renzi C, Peticca L, Pescatori M.  
 Source: International Journal of Colorectal Disease. 2000 November; 15(5-6): 313-6.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=11151436](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=11151436)
  
- **Trans-sphincteric exposure of the rectum.**  
 Author(s): Mason AY.  
 Source: Annals of the Royal College of Surgeons of England. 1972 November; 51(5): 320-31.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=4567019](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=4567019)
  
- **Vesicovaginal fistulae.**  
 Author(s): Kelly J.  
 Source: British Journal of Urology. 1979 June; 51(3): 208-10.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=465988](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=465988)

## 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®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 anal fistula; 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**

- **Anal Fistulae**

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

- **Chinese Medicine**

- **Mubiezi**

- Alternative names: Cochinchina Momordica Seed; Semen Momordicae

- Source: Chinese Materia Medica

## 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 3. PATENTS ON ANAL FISTULA

### 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>4</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 "anal fistula" (or a synonym) in their titles. To accurately reflect the results that you might find while conducting research on anal fistula, we have not necessarily excluded non-medical patents in this bibliography.

### Patent Applications on Anal Fistula

As of December 2000, U.S. patent applications are open to public viewing.<sup>5</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 anal fistula:

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<sup>4</sup>Adapted from the United States Patent and Trademark Office:  
<http://www.uspto.gov/web/offices/pac/doc/general/whatis.htm>.

<sup>5</sup> This has been a common practice outside the United States prior to December 2000.

- **Method of operating for anal fistula**

Inventor(s): Ohmi, Yoshihiro; (Ibaraki, JP)

Correspondence: Westerman, Hattori, Daniels & Adrian, Llp; 1250 Connecticut Avenue, NW; Suite 700; Washington; DC; 20036; US

Patent Application Number: 20040069312

Date filed: October 10, 2002

Abstract: The present invention comprises a constitution of a method of operating for an **anal fistula** wherein said **anal fistula** vanishes away by closing a primary opening of the purulent **anal fistula** developed round an anus, a constitution of a method of operating or an **anal fistula** wherein a primary opening is closed and the lower portion of the **anal fistula** is also cut away at the same time when secondary openings are developed at two portions of the **anal fistula** developed round an anus, a constitution of a method of operating for an **anal fistula** wherein a primary opening of the purulent **anal fistula** developed round an anus is closed and a part of a periproctal abscess is also incised at he same time, a constitution of a method of operating for an **anal fistula** wherein an internal hemorrhoid and an external hemorrhoid are ligated and cut away and a primary opening of the **anal fistula** developed in the anus portion is also closed at the same time when the **anal fistula** having the primary opening and a secondary opening in the anus portion and the internal hemorrhoid and the external hemorrhoid are developed, and a constitution of a method of operating for an **anal fistula** wherein a primary opening of one **anal fistula** is closed to be removed and a primary opening of the other **anal fistula** is also closed to be removed at the same time when the **anal fistulas** are developed at two portions round an anus.

Excerpt(s): The present invention relates to a method of operating for an **anal fistula** developed at an anus portion. Heretofore, it has been considered that resection or release of a primary opening through which bacteria invade, an inflamed anal gland between internal and external sphincters, and surrounding tissue is necessary in a radical operation for an **anal fistula**, and therefore the operation has been performed employing incisional surgery such as resection, release. However, there has been a problem that fecal incontinence, soiling, etc. May occur as a secondary disease even by means of the incisional surgery, which is a conventional method of operation for **anal fistulas**.

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 anal fistula, 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 "anal fistula" (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 anal fistula.

You can also use this procedure to view pending patent applications concerning anal fistula. 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 4. BOOKS ON ANAL FISTULA

### Overview

This chapter provides bibliographic book references relating to anal fistula. 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 anal fistula 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 "anal fistula" (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 anal fistula:

- **Handbook of Colon and Rectal Surgery**

Source: Philadelphia, PA: Lippincott Williams and Wilkins. 2002. 931 p.

Contact: Available from Lippincott Williams and Wilkins. P.O. Box 1600, Hagerstown, MD 21741. (800) 638-3030 or (301) 223-2300. Fax (301) 223-2365. PRICE: \$79.00 plus shipping and handling. ISBN: 0781725860.

Summary: This handbook provides a more portable version of the larger textbook with the same title: Colon and Rectal Surgery, 4th Edition. The coverage addresses the entire range of diseases affecting the colon, rectum, and anus. A stepwise approach to treatment guides physicians from evaluation to follow up with incisive coverage of symptoms, testing and diagnosis, preparation, medical and surgical management, and postoperative care. Thirty-three chapters cover anatomy and embryology of the anus, rectum, and colon; physiology of the colon; diet and drugs in colorectal surgery; evaluation and diagnostic techniques; flexible sigmoidoscopy and colonoscopy; setting

up a colorectal physiology laboratory; analgesia (pain killing) in colon and rectal surgery; hemorrhoids; anal fissure; anorectal abscess; **anal fistula**; rectovaginal and rectourethral fistulas; anal incontinence; colorectal trauma; management of foreign bodies; disorders of defecation; rectal prolapse, solitary rectal ulcer, syndrome of the descending perineum, and rectocele; pediatric surgical problems; cutaneous conditions; colorectal manifestations of acquired immunodeficiency syndrome (HIV); polypoid diseases; carcinoma (cancer) of the colon; carcinoma of the rectum; malignant tumors of the anal canal; less common tumors and tumorlike lesions of the colon, rectum, and anus; diverticular disease; laparoscopic-assisted colon and rectal surgery; vascular diseases; ulcerative colitis; Crohn's disease and indeterminate colitis; intestinal stomas; enterostomal therapy; and miscellaneous colitides. The handbook includes the same illustrations as the larger text. A subject index concludes the volume.

## Chapters on Anal Fistula

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

- **Anal Fistula**

Source: in Corman, M.L.; Allison, S.I.; Kuehne, J.P. Handbook of Colon and Rectal Surgery. Philadelphia, PA: Lippincott Williams and Wilkins. 2002. p.161-183.

Contact: Available from Lippincott Williams and Wilkins. P.O. Box 1600, Hagerstown, MD 21741. (800) 638-3030 or (301) 223-2300. Fax (301) 223-2365. PRICE: \$79.00 plus shipping and handling. ISBN: 0781725860.

Summary: This chapter on **anal fistula** (abnormal passage) is from a handbook that addresses the entire range of diseases affecting the colon, rectum, and anus. The authors discuss symptoms, classification, practice parameters for treatment, identification of the fistula tract, principles of surgical treatment, surgical approaches, results of surgery for **anal fistula**, dual **anal fistulas**, **anal fistula** and Crohn's disease (a type of inflammatory bowel disease), **anal fistula** and carcinoma (cancer), and **anal fistula** in infants and children. The authors comment that the surgeon who has the opportunity to treat the patient initially is the one most likely to effect a cure, limit morbidity, and minimize disability. 12 figures.

# 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>6</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>6</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>7</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>8</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>7</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>8</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>9</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>10</sup> To use the NLM Gateway, simply go to the search site at <http://gateway.nlm.nih.gov/gw/Cmd>. Type "anal fistula" (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	2869
Books / Periodicals / Audio Visual	48
Consumer Health	933
Meeting Abstracts	2
Other Collections	23
Total	3875

### HSTAT<sup>11</sup>

HSTAT is a free, Web-based resource that provides access to full-text documents used in healthcare decision-making.<sup>12</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>13</sup> Simply search by "anal fistula" (or synonyms) at the following Web site: <http://text.nlm.nih.gov>.

<sup>9</sup> Adapted from NLM: <http://gateway.nlm.nih.gov/gw/Cmd?Overview.x>.

<sup>10</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>11</sup> Adapted from HSTAT: <http://www.nlm.nih.gov/pubs/factsheets/hstat.html>.

<sup>12</sup> The HSTAT URL is <http://hstat.nlm.nih.gov/>.

<sup>13</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>14</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>15</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>16</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/Coffeekbreak/>.

### 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>14</sup> Adapted from <http://www.ncbi.nlm.nih.gov/Coffeekbreak/Archive/FAQ.html>.

<sup>15</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>16</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 anal fistula 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 anal fistula. 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 anal fistula. 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 “anal fistula”:

**Abscesses**

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

**Anal and Rectal Diseases**

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

**Anal Cancer**

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

**Crohn's Disease**

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

**Fistulas**

<http://www.nlm.nih.gov/medlineplus/fistulas.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 anal fistula. 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:

- **Anal Fistulas: Symptoms and Treatment**

Source: Milwaukee, WI: International Foundation for Functional Gastrointestinal Disorders (IFFGD). 1998. 2 p.

Contact: Available from International Foundation for Functional Gastrointestinal Disorders (IFFGD). P.O. Box 170864, Milwaukee, WI 53217. (888) 964-2001 or (414) 964-1799. Fax (414) 964-7176. E-mail: [iffgd@iffgd.org](mailto:iffgd@iffgd.org). Website: [www.iffgd.org](http://www.iffgd.org). PRICE: \$0.50 plus shipping and handling; bulk copies available. Order number: 138.

Summary: This fact sheet for patients and their families outlines the symptoms of and treatment for **anal fistulas**. An **anal fistula** is an abnormal connection between the anal canal and the skin. The fact sheet first reviews the anatomy of the anal canal, focusing on the sphincter muscles. The fact sheet then reviews the cause and symptoms of anal fistulae, noting that nearly all anal fistulae are a result of an anorectal abscess. The primary symptom of an **anal fistula** is persistent drainage because of chronic, low grade sepsis (infection) after treatment of the acute abscess. Diagnosis of an **anal fistula** rests on identifying the external opening on the perianal skin and the internal opening in the anal canal (this often requires examination under anesthesia in the operating room). The goals of treatment are the elimination of sepsis and of the fistula tract, the prevention of recurrence, and the preservation of continence. Treatment requires surgery in an

operating room under general or regional anesthesia. The fact sheet briefly reviews the types of surgical techniques utilized to treat anal fistulae. 1 figure.

### **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 anal fistula. 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 anal fistula. By consulting all of associations listed in this chapter, you will have nearly exhausted all sources for patient associations concerned with anal fistula.

### **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 anal fistula. 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 "anal fistula" (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 "anal fistula". 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 "anal fistula" (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 "anal fistula" (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>17</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://nmlm.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>17</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>18</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://sfghdean.ucsf.edu/barnett/PERC/default.asp>
- **California:** Redwood Health Library (Petaluma Health Care District), <http://www.phcd.org/rdwdlib.html>
- **California:** Los Gatos PlaneTree Health Library, <http://planetreesanjose.org/>
- **California:** Sutter Resource Library (Sutter Hospitals Foundation, Sacramento), <http://suttermedicalcenter.org/library/>
- **California:** Health Sciences Libraries (University of California, Davis), <http://www.lib.ucdavis.edu/healthsci/>
- **California:** ValleyCare Health Library & Ryan Comer Cancer Resource Center (ValleyCare Health System, Pleasanton), <http://gaelnet.stmarys-ca.edu/other.libs/gbal/east/vchl.html>
- **California:** Washington Community Health Resource Library (Fremont), <http://www.healthlibrary.org/>
- **Colorado:** William V. Gervasini Memorial Library (Exempla Healthcare), <http://www.saintjosephdenver.org/yourhealth/libraries/>
- **Connecticut:** Hartford Hospital Health Science Libraries (Hartford Hospital), <http://www.harthosp.org/library/>
- **Connecticut:** Healthnet: Connecticut Consumer Health Information Center (University of Connecticut Health Center, Lyman Maynard Stowe Library), <http://library.uchc.edu/departm/hnet/>

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<sup>18</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>



# ANAL FISTULA 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]

**Acoustic:** Having to do with sound or hearing. [NIH]

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

**Acrylonitrile:** A highly poisonous compound used widely in the manufacture of plastics, adhesives and synthetic rubber. [NIH]

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

**Adenoma:** A benign epithelial tumor with a glandular organization. [NIH]

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

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

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

**Anal Fissure:** A small tear in the anus that may cause itching, pain, or bleeding. [NIH]

**Analgesic:** An agent that alleviates pain without causing loss of consciousness. [EU]

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

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

**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]

**Antigen:** Any substance which is capable, under appropriate conditions, of inducing a specific immune response and of reacting with the products of that response, that is, with

specific antibody or specifically sensitized T-lymphocytes, or both. Antigens may be soluble substances, such as toxins and foreign proteins, or particulate, such as bacteria and tissue cells; however, only the portion of the protein or polysaccharide molecule known as the antigenic determinant (q.v.) combines with antibody or a specific receptor on a lymphocyte. Abbreviated Ag. [EU]

**Anti-infective:** An agent that so acts. [EU]

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

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

**Atmospheric Pressure:** The pressure at any point in an atmosphere due solely to the weight of the atmospheric gases above the point concerned. [NIH]

**Autosuggestion:** Suggestion coming from the subject himself. [NIH]

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

**Biological Transport:** The movement of materials (including biochemical substances and drugs) across cell membranes and epithelial layers, usually by passive diffusion. [NIH]

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

**Bladder:** The organ that stores urine. [NIH]

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

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

**Caudal:** Denoting a position more toward the cauda, or tail, than some specified point of reference; same as inferior, in human anatomy. [EU]

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

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

**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]

**Colonoscopy:** Endoscopic examination, therapy or surgery of the luminal surface of the colon. [NIH]

**Colorectal:** Having to do with the colon or the rectum. [NIH]

**Colorectal Surgery:** A surgical specialty concerned with the diagnosis and treatment of disorders and abnormalities of the colon, rectum, and anal canal. [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]

**Concomitant:** Accompanying; accessory; joined with another. [EU]

**Consciousness:** Sense of awareness of self and of the environment. [NIH]

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

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

**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]

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

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

**Defecation:** The normal process of elimination of fecal material from the rectum. [NIH]

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

**Descending Colon:** The part of the colon where stool is stored. Located on the left side of the abdomen. [NIH]

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

**Developing Countries:** Countries in the process of change directed toward economic growth, that is, an increase in production, per capita consumption, and income. The process of economic growth involves better utilization of natural and human resources, which results in a change in the social, political, and economic structures. [NIH]

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

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

**Dorsal:** 1. Pertaining to the back or to any dorsum. 2. Denoting a position more toward the back surface than some other object of reference; same as posterior in human anatomy; superior in the anatomy of quadrupeds. [EU]

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

**Embolicism:** Blocking of a blood vessel by a blood clot or foreign matter that has been transported from a distant site by the blood stream. [NIH]

**Embryology:** The study of the development of an organism during the embryonic and fetal stages of life. [NIH]

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

**Endoscopy:** Endoscopic examination, therapy or surgery performed on interior parts of the body. [NIH]

**Endosonography:** Ultrasonography of internal organs using an ultrasound transducer sometimes mounted on a fiberoptic endoscope. In endosonography the transducer converts electronic signals into acoustic pulses or continuous waves and acts also as a receiver to detect reflected pulses from within the organ. An audiovisual-electronic interface converts the detected or processed echo signals, which pass through the electronics of the instrument, into a form that the technologist can evaluate. The procedure should not be confused with endoscopy which employs a special instrument called an endoscope. The "endo-" of endosonography refers to the examination of tissue within hollow organs, with reference to the usual ultrasonography procedure which is performed externally or transcutaneously. [NIH]

**Enterostomal Therapy:** A nurse who cares for patients with an ostomy. [NIH]

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

**Epidermal:** Pertaining to or resembling epidermis. Called also epidermic or epidermoid. [EU]

**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]

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

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

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

**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]

**Fecal Incontinence:** Failure of voluntary control of the anal sphincters, with involuntary passage of feces and flatus. [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]

**Fibrin:** A protein derived from fibrinogen in the presence of thrombin, which forms part of the blood clot. [NIH]

**Fibrinogen:** Plasma glycoprotein clotted by thrombin, composed of a dimer of three non-identical pairs of polypeptide chains (alpha, beta, gamma) held together by disulfide bonds. Fibrinogen clotting is a sol-gel change involving complex molecular arrangements: whereas fibrinogen is cleaved by thrombin to form polypeptides A and B, the proteolytic action of other enzymes yields different fibrinogen degradation products. [NIH]

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

**Flatus:** Gas passed through the rectum. [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]

**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]

**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]

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

**Grade:** The grade of a tumor depends on how abnormal the cancer cells look under a microscope and how quickly the tumor is likely to grow and spread. Grading systems are different for each type of cancer. [NIH]

**Grafting:** The operation of transfer of tissue from one site to another. [NIH]

**Hematoxylin:** A dye obtained from the heartwood of logwood (*Haematoxylon campechianum* Linn., Leguminosae) used as a stain in microscopy and in the manufacture of ink. [NIH]

**Hemorrhoid:** An enlarged or swollen blood vessel, usually located near the anus or the rectum. [NIH]

**Hormones:** Chemical substances having a specific regulatory effect on the activity of a certain organ or organs. The term was originally applied to substances secreted by various endocrine glands and transported in the bloodstream to the target organs. It is sometimes extended to include those substances that are not produced by the endocrine glands but that have similar effects. [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]

**Hydrogen Peroxide:** A strong oxidizing agent used in aqueous solution as a ripening agent, bleach, and topical anti-infective. It is relatively unstable and solutions deteriorate over time unless stabilized by the addition of acetanilide or similar organic materials. [NIH]

**Hyperbaric:** Characterized by greater than normal pressure or weight; applied to gases under greater than atmospheric pressure, as hyperbaric oxygen, or to a solution of greater specific gravity than another taken as a standard of reference. [EU]

**Hyperbaric oxygen:** Oxygen that is at an atmospheric pressure higher than the pressure at sea level. Breathing hyperbaric oxygen to enhance the effectiveness of radiation therapy is being studied. [NIH]

**Iatrogenic:** Resulting from the activity of physicians. Originally applied to disorders induced in the patient by autosuggestion based on the physician's examination, manner, or discussion, the term is now applied to any adverse condition in a patient occurring as the result of treatment by a physician or surgeon, especially to infections acquired by the patient during the course of treatment. [EU]

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

**Ileal:** Related to the ileum, the lowest end of the small intestine. [NIH]

**Ileum:** The lower end of the small intestine. [NIH]

**Image Enhancement:** Improvement of the quality of a picture by various techniques, including computer processing, digital filtering, echocardiographic techniques, light and ultrastructural microscopy, fluorescence spectrometry and microscopy, scintigraphy, and in vitro image processing at the molecular level. [NIH]

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

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

**Imperforate Anus:** A birth defect in which the anal canal fails to develop. The condition is treated with an operation. [NIH]

**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]

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

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

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

**Incisional:** The removal of a sample of tissue for examination under a microscope. [NIH]

**Incisive:** 1. Having the power or quality of cutting. 2. Pertaining to the incisor teeth. [EU]

**Incisor:** Anything adapted for cutting; any one of the four front teeth in each jaw. [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]

**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]

**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]

**Inflammatory bowel disease:** A general term that refers to the inflammation of the colon and rectum. Inflammatory bowel disease includes ulcerative colitis and Crohn's disease. [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]

**Intussusception:** A rare disorder. A part of the intestines folds into another part of the intestines, causing blockage. Most common in infants. Can be treated with an operation. [NIH]

**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]

**Irrigation:** The washing of a body cavity or surface by flowing solution which is inserted and then removed. Any drug in the irrigation solution may be absorbed. [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]

**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]

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

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

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

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

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

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

**Medial:** Lying near the midsagittal plane of the body; opposed to lateral. [NIH]

**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]

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

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

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

**Microscopy, Fluorescence:** Microscopy of specimens stained with fluorescent dye (usually fluorescein isothiocyanate) or of naturally fluorescent materials, which emit light when exposed to ultraviolet or blue light. Immunofluorescence microscopy utilizes antibodies that are labeled with fluorescent dye. [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]

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

**Mucinous:** Containing or resembling mucin, the main compound in mucus. [NIH]

**Mucinous Adenocarcinoma:** A malignant tumor of the epithelial cells of a gland which typically metastasizes by way of the lymphatics. [NIH]

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

**Musculature:** The muscular apparatus of the body, or of any part of it. [EU]

**Neoplasm:** A new growth of benign or malignant tissue. [NIH]

**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]

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

**Ostomy:** Surgical construction of an artificial opening (stoma) for external fistulization of a duct or vessel by insertion of a tube with or without a supportive stent. [NIH]

**Oxygenation:** The process of supplying, treating, or mixing with oxygen. No:1245 - oxygenation the process of supplying, treating, or mixing with oxygen. [EU]

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

**Pelvic:** Pertaining to the pelvis. [EU]

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

**Perianal:** Located around the anus. [EU]

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

**Perineum:** The area between the anus and the sex organs. [NIH]

**Perioperative:** Around the time of surgery; usually lasts from the time of going into the hospital or doctor's office for surgery until the time the patient goes home. [NIH]

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

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

**Pilot study:** The initial study examining a new method or treatment. [NIH]

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

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

**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]

**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]

**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, Asctospora, Myxozoa, and Ciliophora. [NIH]

**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]

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

**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]

**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]

**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]

**Rectal Prolapse:** Protrusion of the rectal mucous membrane through the anus. There are various degrees: incomplete with no displacement of the anal sphincter muscle; complete with displacement of the anal sphincter muscle; complete with no displacement of the anal sphincter muscle but with herniation of the bowel; and internal complete with rectosigmoid or upper rectum intussusception into the lower rectum. [NIH]

**Rectovaginal Fistula:** Abnormal communication between the rectum and the vagina. [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]

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

**Refractory:** Not readily yielding to treatment. [EU]

**Relaxation Techniques:** The use of muscular relaxation techniques in 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]

**Resection:** Removal of tissue or part or all of an organ by surgery. [NIH]

**Rubber:** A high-molecular-weight polymeric elastomer derived from the milk juice (latex) of *Hevea brasiliensis* and other trees. It is a substance that can be stretched at room temperature to at least twice its original length and after releasing the stress, retract rapidly, and recover its original dimensions fully. Synthetic rubber is made from many different chemicals, including styrene, acrylonitrile, ethylene, propylene, and isoprene. [NIH]

**Sagittal:** The line of direction passing through the body from back to front, or any vertical plane parallel to the medial plane of the body and inclusive of that plane; often restricted to the medial plane, the plane of the sagittal suture. [NIH]

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

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

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

**Seton:** A thin strand of linen or silk drawn through a cutaneous wound in order to lay down the foundations of a drain. [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]

**Sigmoid:** 1. Shaped like the letter S or the letter C. 2. The sigmoid colon. [EU]

**Sigmoid Colon:** The lower part of the colon that empties into the rectum. [NIH]

**Sigmoidoscopy:** Endoscopic examination, therapy or surgery of the sigmoid flexure. [NIH]

**Small intestine:** The part of the digestive tract that is located between the stomach and the

large intestine. [NIH]

**Solitary Rectal Ulcer:** A rare type of ulcer in the rectum. May develop because of straining to have a bowel movement. [NIH]

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

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

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

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

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

**Styrene:** A colorless, toxic liquid with a strong aromatic odor. It is used to make rubbers, polymers and copolymers, and polystyrene plastics. [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]

**Supplementation:** Adding nutrients to the diet. [NIH]

**Suppurative:** Consisting of, containing, associated with, or identified by the formation of pus. [NIH]

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

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

**Thrombin:** An enzyme formed from prothrombin that converts fibrinogen to fibrin. (Dorland, 27th ed) EC 3.4.21.5. [NIH]

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

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

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

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

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

**Trees:** Woody, usually tall, perennial higher plants (Angiosperms, Gymnosperms, and some Pterophyta) having usually a main stem and numerous branches. [NIH]

**Tumour:** 1. Swelling, one of the cardinal signs of inflammations; morbid enlargement. 2. A new growth of tissue in which the multiplication of cells is uncontrolled and progressive;

called also neoplasm. [EU]

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

**Ulcerative colitis:** Chronic inflammation of the colon that produces ulcers in its lining. This condition is marked by abdominal pain, cramps, and loose discharges of pus, blood, and mucus from the bowel. [NIH]

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

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

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

**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 Fistula:** An abnormal passage communicating with the vagina. [NIH]

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

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

**Villi:** The tiny, fingerlike projections on the surface of the small intestine. Villi help absorb nutrients. [NIH]

**Villous:** Of a surface, covered with villi. [NIH]

**Viral:** Pertaining to, caused by, or of the nature of virus. [EU]

**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]

**Warts:** Benign epidermal proliferations or tumors; some are viral in origin. [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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