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1997 ELHILL Enhancements

MEDLINE and MEDLINE Backfile Configuration—1997

The work of Year-End Processing includes incorporating the annual changes to Medical Subject Headings (MeSH) into MEDLINE, MEDLINE Backfiles, and the other MEDLARS databases for the 1997 system which will be available online on December 16, 1996. Year-End Processing also includes placing citations into the correct chronological file. (At the time of indexing, all citations from journals indexed for MEDLINE are placed into the current MEDLINE file no matter what year the journal issue was published.) During the 1996 Year-End Processing, all 1993 year of publication citations and pre-1993 references indexed during 1996 will be pulled from MEDLINE and placed in the newly configured Backfiles. MEDLINE will retain citations to articles published in 1994 forward. The dates of coverage for MEDLINE and its Backfiles will be as follows:

FILE	ALIASES	COVERAGE
MEDLINE	MED	1994-97
MED90	M90, BACK90, B90	1990-93
MED85	M85, BACK85, B85	1985-89
MED80	M80, BACK80, B80	1980-84
MED75	M75, BACK75, B75	1975-79
MED66	M66, BACK66, B66	1966-74

Discontinuation of Gene Symbol (GS) Indexing

NLM ceased entering Gene Symbol (GS) data in MEDLINE, AIDSLINE, CANCERLIT, HISTLINE, HealthSTAR and SPACELINE with the 9601 Entry Month (EM). During 1996, Gene Symbol data entered from 1990-1995 was retained in these databases and remained directly searchable when qualified by (GS).

Effective with the 1997 system on December 16, 1996, Gene Symbol data will no longer be directly searchable in these databases. Searchers who wish to limit retrieval to Gene Symbol data present in citations entered from 1990-1995 may use CONTAINS within a retrieval set, for example:

*ONCOGENES CONTAINS H-RAS (GS)

Expanded Identification Number (ID) Field in MEDLINE Backfiles

The Identification Number (ID) field contains research grant numbers or contract numbers (or both) that designate financial support by any agency of the United States Public Health Service which includes any institute of the National Institutes of Health (NIH). A grant or contract number is entered in the ID field exactly as it appears in the journal article. For MEDLINE citations published in 1990 forward, the ID field was expanded to include a second subelement, containing the 2-letter grant acronym, and a third subelement, containing the Institute acronym. All subelements are directly searchable using the (ID) qualifier.

Beginning in 1997, ID values will also be expanded in all MEDLINE Backfiles to enable direct searching by grant and institute acronyms. Expanded IDs are already present in CANCERLIT, AIDSLINE, and HealthSTAR. ID data is not expanded in HISTLINE, SPACELINE, HSRPROJ, or POPLINE.

ID expansion and searching by ID was discussed in greater detail in the November-December 1993 *Technical Bulletin*, p. 14-19.

Clinical Trials Publication Types (PT)

During Year-End Processing for the 1997 MEDLARS system, Publication Type values of RANDOMIZED CONTROLLED TRIAL and CONTROLLED CLINICAL TRIAL will be added, as appropriate, to citations in MEDLINE and MEDLINE Backfiles identified in a collaboration between the Cochrane Center in Baltimore, MD and the National Library of Medicine. This is the third year of an ongoing effort that has resulted in improved access to clinical trials data in thousands of MEDLARS citations.

--prepared by Jan Willis
MEDLARS Managment Section

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PDQ Passwords To Be Discontinued

The changeover from PDQ passwords to MEDLARS passwords, in order to ftp the results of Auto SDI searches, or to issue the $DSPRINT command from the MEDLARS server, will take place during the day on Wednesday, November 27. Users who ftp the results of Auto SDI searches or issue the $DSPRINT command from the MEDLARS server should begin using their MEDLARS password on Wednesday, November 27. If the MEDLARS password is rejected, then try the old PDQ password. This transition is expected to be completed by the end of the day, and then only the MEDLARS password will be accepted.

To access the PDQ database, searchers may use their MEDLARS User ID codes and passwords **now**. PDQ passwords will become obsolete after Monday, December 16. Searchers should change all existing scripts containing the PDQ password before then. Searchers who try to use their PDQ passwords after midnight, Monday December 16 will **not** be able to connect to the PDQ database.

More Databases Available Via Internet Grateful Med

On Monday, September 9, 1996, three additional databases, AIDSLINE, HealthSTAR, and PREMEDLINE joined MEDLINE and the Backfiles on Internet Grateful Med. To access these three databases from the initial search screen, click on Search other files, click on the Button to the left of the database name and then click on Change Files. There is no charge for searching AIDSLINE; HealthSTAR and PREMEDLINE are billed at the same rate as MEDLINE. For more information on the new PREMEDLINE file, see the article on page 1 of the July-August 1996 *Technical Bulletin*.

Something Old—Something New

In the fall of 1996, a new database, OLDMEDLINE, will join the family of MEDLINE databases. OLDMEDLINE, or OLDMED, will initially contain over 307,000 citations originally printed in the 1964 and 1965 *Index Medicus*. This is the first addition to what NLM hopes will be a growing database of earlier *Index Medicus* citations.

These citations contain the original printed records from *Index Medicus* and for the most part reflect the MeSH vocabulary and data format in use in 1964-65. At this time, NLM has no plans to update older MeSH Headings in OLDMED with the current vocabulary. Some other data in OLDMED, such as Entry Month (EM), may not comply with current MEDLINE format, and is not being corrected.

Because of some significant differences between this database and MEDLINE Backfiles, and to avoid confusion for experienced MEDLINE searchers, it was decided to name this new file OLDMEDLINE, rather than, for example, MED64, or BACK64.

Perhaps the most significant search difference between MEDLINE and OLDMEDLINE will be the way you perform a subject search. Because the MeSH Headings in OLDMED have not been updated in over 30 years, there will be no MeSH Heading (MH) field in this file. Instead, MeSH Heading data will be carried in the Keywords (KW) field, and searched qualified by (KW), e.g.,

HEART (KW)

Further details about OLDMEDLINE and how to search it will be available when the file is made available later this fall. Please watch the ELHILL online NEWS for this announcement.

Change in Timeout Policy

A timeout is the amount of time you may remain on the system (i.e., connected to the ELHILL computer) without any online interaction before you are disconnected. Timeouts for command language searchers were increased on August 30, 1996 from 5 to 7.5 minutes on an experimental basis through December 1996. This change is being made in direct response to searcher requests for more time to stay connected to the system. NLM will be evaluating the effect of this change on the overall performance of the system. The timeout period for Grateful Med searchers remains at five minutes.

RISKLINE

A new subfile, RISKLINE, was added to TOXLINE with the August update. RISKLINE, created by the National Chemicals Inspectorate (KEMI) in Sweden, is a bibliographic file covering toxicology and ecotoxicology. Most references contain abstracts, index terms, and CAS Registry Numbers. KEMI is the subfile acronym and appears in the SI (Secondary Source ID) field. There were 5,612 records included in the initial loading of this file. This information appeared as an online news note on August 12, 1996. An upcoming NLM *Technical Bulletin* article will take a closer look at the structure, content, and searching of this subfile.

Database Update Schedules and Database Update Frequency Chart for 1997

The NLM database update schedules and update frequency chart for 1997 are published as Appendixes A, B,C, D, and E. You may wish to photocopy these pages and post them near your computer for future reference during the 1997 year.

Pre-explosion Tables for 1997

A complete list of the 1997 MeSH Heading Pre-explosions and their Tree numbers are in Appendix F. The families of 1997 Subheading Pre-explosions and their short forms are in Appendix G. The Place of Publication Pre-explosions listing the countries that would be retrieved are shown in Appendix H.

Suggestions Are Requested for 1998 MeSH Headings

The National Library of Medicine's MeSH Section considers suggestions for Medical Subject Heading (MeSH) additions and changes annually. Users are encouraged to send suggestions and comments to the NLM MeSH Heading Suggestion e-mail address: **meshsugg@nlm.nih.gov** or they may use the form *Medical Subject Heading*

Suggestion in Appendix I of this issue. Persons sending their suggestions via e-mail should include the same information that is requested in the printed form.

Suggestions for new or changed MeSH headings or Pre-explosions are welcome at any time. However, it is unlikely that suggestions received after January 31, 1997 can be processed in time for inclusion in the 1998 MeSH. Indexing with the new vocabulary starts in the fall of each year and first appears online in December in citations with the January Entry Month (i.e., 9801 (EM) citations will contain the 1998 MeSH vocabulary terms and will be available online in December 1997).

Revised NLM Pricing Information

The 1997 NLM Online Pricing Algorithm for Domestic Users is included as Appendix J of this issue.

Effective January 1, 1997, the pricing structures of the CHEMLINE, TOXLIT, and TOXLIT65 files will be modified in response to changes in the 1997 royalty rates charged by CAS® (Chemical Abstracts Service). CAS is the supplier of proprietary data for these files. Please see Table I on the reverse side of Appendix J for the new NLM rates for the five components of the online algorithm for CHEMLINE, TOXLIT and TOXLIT 65.

An updated Pricing Schedule for Domestic & Non-U.S. Charges is included as Appendix K of this issue of the *Technical Bulletin*.

Cancer Rates and Risks, 1996

The 4th edition of *Cancer Rates and Risks* is available from the Cancer Information Service of the National Cancer Institute (NCI). Based on the best data available from U.S. and international sources, it includes information about cancer incidence, survival and mortality rates, and changing patterns of occurrence. There is no charge for individual copies of this publication. A nominal fee to cover postage and handling costs is assessed for an order of more than 20 items. You may request this and other publications about cancer prevention, early detection, diagnosis, and treatment in the following ways:

Phone: 800-4-CANCER (800-422-6237)
Fax: 301-330-7968
Mail: National Cancer Institute
Bldg. 31, Room 10A16
Bethesda, MD 20892

Coming Attractions in MeSH

I. New Subject Headings

Three hundred fifty (350) new headings have been added to MeSH for the 1997 indexing and searching year. The following subject areas deserve particular mention:

Viruses

The greatest MeSH change for 1997 was in the field of virology. As a result of an analysis of *Virus Taxonomy: Classification and Nomenclature of Viruses, Sixth Report of the International Committee on Taxonomy of Viruses, 1995*, many new plant, insect, and bacterial viruses were added or modified. There were 34 new viruses headings added, 5 new viral disease headings added, and 24 name changes. Many attendant tree changes were required.

Dentistry

For the first time since 1965, when hundreds of dental terms were added to MeSH, the dental headings have been comprehensively analyzed, revised and amplified: 34 new terms were added, 9 were updated in form or name, and 14 new see references were added. The American Dental Association review of the additions and changes is greatly appreciated.

History of Medicine

Fourteen headings of special interest to historians were added. Although of particular interest for historical materials, they are available for use in standard indexing and cataloging.

National Aeronautics and Space Administration

Continuing our cooperation with NASA, we added 11 new terms and corresponding see references, among them COSMIC DUST; EVOLUTION, CHEMICAL; and EVOLUTION, PLANETARY.

Alternative Medicine

MIND-BODY RELATION (META-PHYSICS), not to be confused with MIND-BODY RELATIONS (PHYSIOLOGY) see PSYCHOPHYSIOLOGY, was added to assist in indexing and cataloging this field. AROMATHERAPY also was added.

Category D: Chemicals and Drugs

As is usual each year, many entries in the *Supplementary Chemical Records* were elevated to MeSH status. In addition 18 enzyme names were changed to conform to the official recommendations of the International Union of Biochemistry.

Bioethics

The 1996 edition of the *Bioethics Thesaurus*, published by the Kennedy Institute of Ethics, was reviewed for possible additions to MeSH. Three new terms were added: HEALTH CARE; PHYSICIAN-NURSE RELATIONS; and TERMINALLY ILL. Several cross-references were also added.

II. New Pre-explosions

Two new headings, METALS, HEAVY and METALS, LIGHT have been added to the MeSH vocabulary. In addition to being new, these two headings may also be pre-exploded. They have been added to the Pre-explosions list in Appendix F.

III. Annotations

In the past, annotations in MeSH included directional statements such as see above or see below. That is, an annotation frequently referred to a MeSH heading above or below the one being examined. This practice worked well when all users were examining a printed page of the *Annotated MeSH* and above and below were both visible and obvious. However, these references are inconvenient for anyone viewing a MeSH record on a computer screen, where typically only one record at a time is displayed.

So, for 1997 every annotation containing the words “see term below” or “see term above” or comparable readings was

changed to include the referrent itself. Thus:

ANTINEOPLASTIC AGENTS
.... for combined anticancer agents see term below

now reads

ANTINEOPLASTIC AGENTS
.... for combined anticancer agents, ANTINEOPLASTIC AGENTS, COMBINED is available

IV. Short Form of Descriptors

MeSH has always supplied short forms of some descriptors - main headings and cross-references - for ease of typing by indexers, catalogers, and searchers. For 1997 only one new short form was supplied:

ACCESS

for every occurrence of the words ACCESS and ACCESSIBILITY. The list of short forms is found in the front of the *Annotated MeSH*.

V. Allowable Qualifiers

The subheading (qualifier) /blood has been added to the RECEPTORS LIST of Allowable Qualifiers (see Topical Subheadings by Allowable Category in the front of the *Annotated MeSH*) to permit specificity for circulating levels of various receptors in the blood. To verify whether a particular subheading is allowed in combination with a MeSH heading, you may check the AQ (Allowable Qualifier) field in the online MeSH file as shown in Figure 1.

However, the presence of a subheading in the AQ field of a MeSH record means only that an indexer is allowed to use it with the MeSH heading; it doesn't tell you whether the MeSH heading/subheading combination has actually ever been used. To check whether any articles have been indexed with a MeSH heading/subheading combination, use the NBRDET (NEIGHBOR DETAILED) command with the MeSH heading you wish to investigate and you will see a display of all the heading/subheading combinations that currently exist in the file you are searching. See Figure 1. Note that there are no entries for RECEPTORS, STEROID/BL in the current MEDLINE file, because it will not come into use as an allowable combination until 9701 (EM) data enters the file in December. And even then, it will not appear until an article on this particular subject is indexed.

```
SS 1 /C?
USER:
file new                    • FILE NEW takes you to the 1997 MeSH until Dec. 16. After that
                              date, FILE MESH will take you to the 1997 MeSH.
PROG:
YOU ARE NOW CONNECTED TO THE NEW MESH VOCABULARY (1997) FILE.

SS 1 /C?
USER:
receptors, steroid (mh)

PROG:
SS (1) PSTG (1)

SS 2 /C?
USER:
prt include aq

PROG:

1
MH - Receptors, Steroid
DE  - RECEPT STEROID
RN  - 0
DC  - 1
MN - D12.776.826.750
MN - D12.776.930.682
AQ - AG AI AN BI BL CH CL DE DF GE HI IM IP ME PH RE UL   • BL is an allowable
                                                            subheading in the 1997
                                                            MeSH.
SS 2 /C?
USER:
file med

PROG:
YOU ARE NOW CONNECTED TO THE MEDLINE (1993 - 96) FILE.

SS 1 /C?
USER:
nbrdet receptors, steroid

PROG:

SELECT #  POSTINGS  TERM
  1       97        *RECEPTORS, SOMATOTROPIN/ME (MH)
  2       28        RECEPTORS, SOMATOTROPIN/PH (MH)
  3      477        RECEPTORS, STEROID (MH)
  4      477        RECEPTORS, STEROID (NM)
  5        3        RECEPTORS, STEROID/AG (MH)
UP N OR DOWN N OR ENTER A SELECT COMMAND.

USER:
down 10

PROG:

SELECT #  POSTINGS  TERM
  6       10        RECEPTORS, STEROID/AI (MH)
  7       54        RECEPTORS, STEROID/AN (MH)
  8       37        RECEPTORS, STEROID/BI (MH)      • There is no BL (BLOOD)
  9       40        RECEPTORS, STEROID/CH (MH)        subheading present. It is not
 10        8        RECEPTORS, STEROID/CL (MH)        permitted until 1997.
 11       64        RECEPTORS, STEROID/DE (MH)
 12        2        RECEPTORS, STEROID/DF (MH)
 13      126        RECEPTORS, STEROID/GE (MH)      • There is no HI (HISTORY)
 14        5        RECEPTORS, STEROID/IM (MH)        subheading present even
 15        9        RECEPTORS, STEROID/IP (MH)        though it is an allowable
UP N OR DOWN N OR ENTER A SELECT COMMAND.             combination, because there
                                                      were no citations on this subject.
```

Figure 1 - Examining the Allowable Qualifier Field in MeSH and MEDLINE

VI. Genre Terms

In 1991 a new field was made available for searching: PUBLICATION TYPE (the mnemonic is PT). MEDLINE searchers are accustomed to seeing the PT field used to indicate a review article, clinical trial, etc. In the area of bibliographic control, genre terms have been developed to more precisely characterize the format of presentation of materials or media. Genre terms are used to describe materials based on their intellectual or literary form such as addresses or sermons or their physical form such as animation or academic dissertations. NLM has greatly increased the number of Publication Types to include genre terms. For 1997, the list of Publication Types in MeSH has been expanded with the addition of 35 such terms. The list of Publication Types starts on page I-16 in the 1997 *Annotated MeSH*.

It is anticipated that the heaviest use of these genre terms will be in cataloging and in indexing historical materials, and that most will not be seen in indexing the current journal literature. Only the three terms in bold type in the table of genre terms will appear in MEDLINE.

Genre Terms Added to Publication Type

Academic Dissertations
Account Books
Addresses
Advertisements
Almanacs
Animation
Annual Reports
Architectural Drawings
Biography
Book Illustrations
Bookplates
Broadsides
Caricatures
Cartoons
Catalogs
Diaries
Documentaries and Factual Films
Encyclopedias
Ephemera
Eulogies
Funeral Sermons
Guidebooks
Herbals
Instruction
Lecture Notes
Lectures
Maps
Pharmacopoeias
Portraits
Posters
Price Lists
Programs
Prospectuses
Sermons
Unedited Footage

Observers will note an inconsistency of form between the original Publication Types and the newly added PTs or genre terms. The 1991 Publication Types were made singular in order to differentiate between a PT and a corresponding main heading concept, e.g., CLINICAL TRIAL (PT) and CLINICAL TRIALS (MH). The new genre additions use the plural form to agree with the current practice of the libraries already using these terms.

An additional new Publication Type, Biography, replaces two earlier Publication Types, Current Biog-Obit and Historical Biography. Searching on BIOGRAPHY (PT) in MEDLINE Backfiles will find all of the occurrences of the two earlier Publication Types.

Figure 2 displays a record from the MeSH file for the new Publication Type, Biography. Note that although genre displays in the MeSH Heading (MH) field with [Publication Type] after the term, to retrieve the record you must search it as BIOGRAPHY (PT). The Online Note (OL) field is helpful for information on the correct way to search.

```
SS 1 /C?
USER:
file new

PROG:
YOU ARE NOW CONNECTED TO THE NEW MESH VOCABULARY (1997) FILE.

SS 1 /C?
USER:
biography (pt)

PROG:
SS (1) PSTG (1)

SS 2 /C?
USER:
prt include an, ol

PROG:

1
MH  -  Biography [Publication Type]
DC  -  2
AN  -  publication type only; for living or dead biographees, now combining former
       citation & publication types HISTORICAL BIOGRAPHY & CURRENT BIOG-OBIT
       (Manual 17.13+, 32.16+, 32.17+); do not confuse with catalogers' form subhead
       /biography; obituaries go here; for biog as a subject, index under main
       heading BIOGRAPHY; check appropriate hist tags; add also HISTORICAL
       ARTICLE [PUBLICATION TYPE]; Manual 17.13+
OL  -  search policy: Online Manual; use: name of biographee AND BIOGRAPHY (PT);
       use BIOGRAPHY (PT) to search CURRENT BIOG-OBIT (PT) 1966-96 & HISTORICAL
       BIOGRAPHY (PT) 1966-96
```

Figure 2 - Biography (PT) in the MeSH File

VI. RODS AND CONES (MH) Deleted

Terms are often deleted from MeSH based on lack of usage in the current literature. This deletion is an exception to that practice. This change is necessitated by the recognition that invertebrate light perception is not mediated by rods and cones. The heading RODS AND CONES has been replaced by PHOTORECEPTORS, a general term for sensory receptors for light irrespective of the organism. (RODS AND CONES becomes a see reference to PHOTORECEPTORS.) The new treeing under PHOTORECEPTORS is:

PHOTORECEPTORS
  CONES (RETINA)
  PHOTORECEPTORS, INVERTEBRATE
  RODS (RETINA)
  ROD OUTER SEGMENTS

--prepared by Thelma Charen
Dr. Stuart Nelson
MeSH Section

Year-End Processing of STORESEARCHes, Automatic SDIs and Saved Searches

Introduction

Each year during the late summer and the fall, changes are made to records in MEDLINE, MEDLINE Backfiles, and in other MEDLARS databases. This work, called "Year-End Processing," includes annual changes to Medical Subject Headings (MeSH). While the work goes largely unnoticed as it proceeds, there are some important dates for searchers associated with the Year-End Processing.

All stored searches, including Automatic SDI stored searches and saved searches for the ELHILL databases, should be reviewed by searchers for the impact of any changed and new 1997 MeSH headings (MH). A Year-End Processing schedule which includes projected dates for processing Automatic SDIs is found in Appendix L of this issue.

1997 MeSH

The 1997 MEDLINE and SDILINE files will be available online with 1997 MeSH and updated with 9701 Entry Month (EM) data on Monday, December 16, 1996. The CANCERLIT 9612 (EM) update and the updated CATLINE and AVLINE files will also be available on December 16, 1996 with 1997 MeSH. AIDSLINE and HealthSTAR are expected to be updated with 1997 MeSH in January 1997. Other files using the MeSH vocabulary, including HISTLINE, SPACELINE, HSRPROJ, BIOETHICS, POPLINE, TOXLINE, DENTALPROJ, and AIDSTRIALS, will be maintained with 1997 MeSH at later dates. Watch the MEDLARS online NEWS and future issues of the *Technical Bulletin* for announcements.

Changes to the MeSH vocabulary for 1997 may be found in the introduction to the *Medical Subject Headings—Annotated Alphabetic List, 1997* and online in FILE NEW. The *Medical Subject Headings—Annotated Alphabetic List* is available from the National Technical Information Service (NTIS); ordering information was provided on page 3 of the July-August *Technical Bulletin* and can also be displayed online using the $INFO MESHTOOLS command.

Special Dates for SDILINE Automatic SDI Searches

SDILINE Automatic SDI stored searches requiring revision must be deleted and restored by Thursday, December 5, 1996, in order to receive correct retrieval against 1997 monthly updates. The January 9701 (EM) SDILINE Automatic SDIs will be processed beginning on or about December 7, 1996. Searchers should execute their STORESEARCHes online to examine retrieval between November 18 and December 5, 1996. During this brief time, citations in the December 1996 SDILINE file will contain 1997 MeSH terms. It is during this period of time that searchers can run their STORESEARCHes against the revised SDILINE to check correct operation of stored strategies against the new vocabulary. Only SDILINE will have 1997 vocabulary terms on citations during this time period; MEDLINE and other databases will not.

To check correct operation of stored searches during this designated period, searchers should:

1. Between October 24 - November 15, 1996, record the number of citations retrieved for each SDILINE stored search as processed by NLM for the December 1996 SDILINE (i.e., 9612 (EM), which is scheduled to be run on October 26) with the 1996 vocabulary. The number of citations retrieved is listed on the front of each SDI search printout. The name of the stored search is the title of the printout.

2. Beginning November 18, 1996, searchers should go online and run each SDILINE stored search online against the SDILINE file. Stored searches may be executed online by connecting to SDILINE and typing the stored search name qualified by (SN). The December SDILINE will contain the same citations, and the 1997 MeSH vocabulary. However, the citations are not reindexed with the new 1997 MeSH terms; only MeSH heading changes will appear in this file; new MeSH headings will not retrieve any citations in December SDILINE.

3. Compare the postings retrieved with the records found earlier. If the number of postings (i.e., records) retrieved is not equal to the number received in the December 1996 SDILINE (9612 (EM)) printouts that used 1996 vocabulary, searchers may assume the stored search has been affected by a 1997 MeSH vocabulary change.

4. If the search has been affected by a 1997 MeSH vocabulary change, searchers should display the strategy by using the command DISPLAY followed by the stored search name. Do not use the (SN) qualifier. For example: display s601 heart disease.

5. Check the terms in the strategy against the list of new and replaced MeSH headings. On the list titled "Replaced Medical Subject Headings", terms designated as P (Print Entry Term) or N (Non-Print Entry Term) may still be used as search terms and remain in any stored or saved search. Terms designated as C (Supplementary Chemical Term) may remain but must be qualified with (NM). Terms designated as T (Publication Type) may remain but must be qualified with (PT). Terms with no status indicator may not be used as search terms, and must be deleted from all stored and/or saved searches for accurate results.

If a search contains MeSH Tree numbers, the numbers should be checked in the *Medical Subject Headings--Tree Structures, 1997*. CAS Registry Numbers and Names of Substances (NM) should be checked in the online NEW MESH database (type FILE NEW). If the strategies are not too long, searchers may want to enter them online line-by-line and evaluate any No Postings messages to isolate any problem areas. Remember that only one month's data is being searched, so some stored searches may not retrieve any citations. Also, brand new 1997 MeSH headings—those for new concepts—will retrieve no postings because the records were indexed using 1996 MeSH. (Changed headings and entry terms may retrieve postings, however, because they are mapped to previous indexing).

6. Purge searches requiring changes using the ELHILL PURGESEARCH command. (For example, PURGESEARCH S601 heart disease). Then store the revised strategy (STORESEARCH) the following day. Type EXPLAIN STORESEARCH for detailed instructions for storing a search. It is possible to purge and store a search on the same day if the name of the new search is different. Varying the name by one character from the old name is sufficient to make the new name unique.

7. All revised SDILINE search strategies for 9701 (EM) Automatic SDILINE processing should be stored by December 5, 1996.

Other Databases with SDI Service

Other files which have Automatic SDI service are HealthSTAR, BIOETHICSLINE, CANCERLIT, CATLINE, AVLINE, AIDSLINE, POPLINE, and TOXLINE. These files do not have an equivalent of SDILINE; therefore it is not possible to follow the exact procedures described above for the SDILINE database. Searchers should carefully review any strategies that have been stored for execution by NLM against these databases for possible vocabulary revisions and restore by the dates listed.

CANCERLIT SDIs

CANCERLIT is expected to be available with 1997 MeSH and the 9612 (EM) update on December 16, 1996. Review and restore any affected searches by December 13, 1996. NLM plans to run CANCERLIT Automatic SDIs during the week of December 16.

AIDSLINE SDIs

AIDSLINE is expected to be available with 1997 MeSH and the 9701 (EM) update on or after January 4, 1997. Changes for 9701 (EM) Automatic SDIs run against AIDSLINE should be made no later than that date.

HealthSTAR SDIs

HealthSTAR is expected to be available with 1997 MeSH and the 9701 (EM) update on or after January 11, 1997. Changes for 9701 (EM) Automatic SDIs run against HealthSTAR should be made by that date.

CATLINE and AVLINE AUTOMATIC SDIs

The CATLINE and AVLINE databases are expected to be updated with 1997 vocabulary on December 16, 1996. Automatic SDIs will be run against these databases on or after January 3, 1997. Changes for Automatic SDIs should be made by that date.

POPLINE SDIs

POPLINE SDIs should not be changed yet. Please see future issues of the *Technical Bulletin* and the online NEWS for announcements about POPLINE and the 1997 vocabulary.

TOXLINE SDIs

TOXLINE contains MeSH vocabulary on the TOXBIB and BIOSIS subfiles. Stored search strategies for TOXLINE that contain MeSH headings should also be reviewed for 1997 MeSH vocabulary changes. Any changes to these strategies should be reviewed and restored by December 12, 1996. Beginning with the 9612 (EM) TOXLINE update in December, records added to both the TOXBIB and the BIOSIS subfiles will contain 1997 MeSH. 1996 MeSH terms will remain on TOXBIB and BIOSIS records from earlier entry months until the entire TOXLINE file is regenerated sometime in February or March 1997. Watch the online ELHILL news and the *Technical Bulletin* for the date of the regeneration.

--prepared by Marcia Zorn
MEDLARS Management Section

Search Hint: Management Case Studies

This article describes an effective strategy for searching the HealthSTAR database for citations to articles on a topic for which a corresponding MeSH heading has not yet been established. This Search Hint focuses attention on a methodology used in the published literature, "management case studies", and describes how to find bibliographic citations to health care delivery topics that are presented as case studies. The HealthSTAR (Health Services Technology, Administration, and Research) database, produced cooperatively by the National Library of Medicine and the American Hospital Association, and the *Hospital and Health Administration Index*, published by the American Hospital Association, are appropriate sources for locating citations on this subject.

Management Case Studies as Research Method

Currently in the United States, health care providers are striving to increase efficiency, control costs, improve quality and accessibility of care, and meet the challenges posed by the growth of managed care. In particular, hospitals are restructuring, and hospitals and physicians are forming affiliations with each other and with other providers and health plans. Restructuring includes such internal activities as downsizing, outsourcing, and implementation of patient-centered care. Affiliation includes the formation of joint ventures, shared services, mergers, multi-facility systems, and vertically integrated systems. Various types of studies describe the formation of restructured or affiliated organizations and evaluate the success of the resulting organizational entities. The management case study is one such research method. It provides models of specific, named health care organizations, describing and evaluating them in much the same way that clinical case reports provide accounts of diagnostic and therapeutic processes and their outcome in the treatment of specific diseases in individual patients.

Strategy for Finding Management Case Studies

Management case studies provide a fertile field for executive leaders and other administrators who are looking for models upon which to base restructuring or integrating their facilities or practices. However, there is no term in MeSH for this particular research methodology. The most efficient approach to searching HealthSTAR for management case studies on any health care delivery topic is to: (1) start by searching using Text Words, (2) exclude CASE REPORTS (which are always clinical), (3) limit by broad organizational topics, (4) limit by year for current retrieval, and (5) use the proximity ADJACENCY operator to find "case study" or "case studies" in titles and abstracts. The entire retrieval, using this strategy, will be relevant. Figure 1 illustrates this search strategy. Postings for this and other examples were retrieved after the October 1996 (9610) HealthSTAR update.

```
SS 1 /C?
USER:
file healthstar

PROG:
YOU ARE NOW CONNECTED TO THE HSTAR (HEALTHSTAR-HEALTH
+ HSTAR, 1990- )FILE.

SS 1 /C?
USER:
(tw) case and study or case and studies

PROG:
SS (1) PSTG (51542)

SS 2 /C?
USER:
1 and not case report

PROG:
SS (2) PSTG (32962)
```

```
SS 3 /C?
USER:
2 and og& (px) or 2 and organization a#d administration (px)

PROG:
SS (3) PSTG (5515)

SS 4 /C?
USER:
3 and 95 (yr) or 3 and 96 (yr)

PROG:
SS (4) PSTG (1593)

SS 5 /C?
USER:
4 contains case adj stud:

PROG:
SS (5) PSTG (346)
```

Figure 1 - Searching for "Management Case Studies"

A sample of the retrieval includes the following citations, selected because they indicate in the title that they are case studies, listing source identifier, title, publication type, and source fields. HealthSTAR contains citations from several sources in a variety of formats, including journal articles, monographs, technical reports, meeting abstracts and papers, book chapters, government documents, and newspaper articles. Figure 2 shows several of these formats:

SI - HTX/96648652
TI - Administrative data for case-mix adjusting outcome measures in long-term care: pressure ulcer development as a case study [abstract]
PT - ABSTRACT
SO - AHSR FHSR Annu Meet Abstr Book. 1995;12:129.

SI - AHA/96228020
TI - Involuntary health plan switching: case study of a corporate health benefits program.
PT - JOURNAL ARTICLE
SO - Med Care Res Rev. 1996 Jun;53(2):225-39.

SI - CAT/9605197
TI - Financing health services through user fees and insurance : case studies from Sub-Saharan Africa.
PT - MONOGRAPH
SO - Washington, D.C. : World Bank, c1995 (1996 printing) xi, 239 p. : ill (World Bank discussion papers. Africa Technical Department series, ISSN 0259-210X ; 294)

Figure 2 - Sample formats retrieved from strategy in Figure 1

Management Case Studies on a Particular Topic

However, rather than case study methodology per se, searchers are usually interested in case studies on a particular topic. To illustrate this aspect of the search, MeSH headings for the topic "integrated delivery systems" are added to subsequent search illustrations, as shown in Figures 3 and 5. Because DELIVERY OF HEALTH CARE, INTEGRATED was not added to MeSH until 1996, other MeSH headings are also selected to cover the 1995 retrieval. The 1996 MeSH heading COMMUNITY NETWORKS may also be considered related to integrated delivery systems.

SS 6 /C?
USER:
*integrated delivery systems or *continuity of patient care/og or

PROG:
CNT 6

USER:
*community networks or *joint ventures

PROG:
SS (6) PSTG (1630)

SS 7 /C?
USER:
5 and 6 • Search statement 5 is the final retrieval in Figure 1.

PROG:
SS (7) PSTG (20)

Figure 3 - Searching for case studies on "integrated delivery systems"

The search shown in Figure 3 produces 20 relevant citations in which integrated delivery systems are the main focus of the publication and are presented as case studies. Figure 4 shows sample citations from this search.

SI - HTX/96648457
TI - The impact of governmental policy on community health partnerships and community care networks: an analysis of three cases [abstract]
SO - AHSR FHSR Annu Meet Abstr Book. 1995;12:41-2.

SI - CAT/9606309
TI - Making integrated health care work : case studies.
SO - Englewood, Colo. : Center for Research in Ambulatory Health Care Administration, c1996 viii, 236 p

SI - MED/96173988
TI - Improving the cost, quality, and access to healthcare in community hospitals through the use of reorganized integrated delivery systems and implementation of sophisticated clinical information systems: an organizational experience.
SO - Medinfo. 1995;8 Pt 2:1558-61.

SI - AHA/96176122
TI - Forming a coronary services network on the basis of quality of care.
SO - Qual Manag Health Care. 1996 Winter;4(2):14-23.

SI - AHA/96106826
TI - Case study. Medalia HealthCare, a primary-care network, is innovative and quality-oriented joint venture.
SO - Strateg Healthc Excell. 1995 Dec;8(12):1-8.

SI - AHA/95299895
TI - Regionalization: Canadian-style integrated networks. A case study.
SO - J Healthc Resour Manag. 1995 Jan;13(1):14-20.

Figure 4 - Sample retrieved from strategy in Figure 3

Alternative "Evaluative" Terms for Locating Relevant Citations

If the searcher wants to expand the search, the MeSH headings in search statement 6 could be searched without asterisks, indicating they are substantially mentioned, but not the main focus of the publication. Alternatively, an analysis of MeSH headings assigned to the 346 citations retrieved in Figure 1 indicates several "evaluative" MeSH headings that may designate case study methodology. These MeSH headings could be ORed together and combined with the topic in addition to searching on the Text Words "case study" combined with the topic. These "evaluative" MeSH headings are given, using MeSH short forms, in Search Statement 8 of Figure 5, listed in order of descending frequency of occurrence in the 346 citations.

An analysis of the 270 citations retrieved in Search Statement 10 shows a high degree of relevance. Search Statement 11 compares the 20 citations retrieved in search statement 7 with the 270 citations retrieved in Search Statement 10. There is almost no overlap, indicating a wealth of literature on evaluation of integrated delivery systems that does not contain the Text Word sequence "case study" in the title or abstract. In other words, a substantial amount of relevant literature would be missed if the searcher used Text Word searching as the sole basis of the search strategy.

```
SS 8 /C?
USER:
health services research or models, organizational or organizational innovation or
CNT 8

USER:
program evaluation or decision making, organizational or
CNT 8

USER:
program development or outcome assessment (health care) or
CNT 8

USER:
outcome a#d process assessment (health care) or evaluation studies

PROG:
SS (8) PSTG (48374)

SS 9 /C?
USER:
6 and 8                    • Search statement 6 is from Figure 3.

PROG:
SS (9) PSTG (471)

SS 10 /C?
USER:
9 and 95 (yr) or 9 and 96 (yr)

PROG:
SS (10) PSTG (270)

SS 11 /C?
USER:
7 or 10                    • Search statement 7 is the final retrieval from Figure 3.

PROG:
SS (11) PSTG (276)
```

Figure 5 - Searching "Evaluative" MeSH Headings and "Integrated Delivery System" MeSH Headings

Searching *Hospital and Health Administration Index*

In searching for information on management case studies in *Hospital and Health Administration Index*, the most productive strategy is to scan the topic, still using "integrated delivery systems" as an example, for indications that the citation is a case study, an organizational model, or a study of a single system, facility, or service. Searchers should be aware that the *Index* cites only journal literature. For example, a search of *Hospital and Health Administration Index*, volume 52, number 1, 1996, under DELIVERY OF HEALTH CARE, INTEGRATED, lists:

'Model' rural IDS suffers $49M legal hit in battle with Blues. Greene JL, et al. Healthc Syst Strategy Rep 1995 Jan 20;12(2):1-2, 5

Achieving cultural congruence in integrated health systems: lessons from two corporate change initiatives. Nathanson P. Health Syst Lead 1995 Oct;2(8):19-25

TeamWorks: a model for continuous quality improvement in the health care industry. Hunter DL, et al. Am J Med Qual 1995 Winter;10(4):199-205

An alternative method is to search the two most productive "evaluative" subject headings, HEALTH SERVICES RESEARCH and MODELS, ORGANIZATIONAL, for indications that articles are case studies. This is a more problematic approach, because citations must have been indexed with these MeSH headings with asterisks, indicating that the subject heading is a main focus of the articles, in order for them to appear under these subject headings in the *Index*. Ordinarily, "method" terms are indexed without asterisks, since they are usually not a main focus of the article. In addition, these citations may be on any health care topic. A search of MODELS, ORGANIZATIONAL in the same volume of the *Index* yields:

New models for emergency and ambulatory care at academic health centers--Part I: New York City. Ling LJ, et al. Acad Emerg Med 1995 Sep;2(9):836-43

Tackling evaluation: applying a programme logic model to community rehabilitation for adults with brain injury. Letts L, et al. Can J Occup Ther 1995 Dec;62(5):268-77

Case study: telemedicine trial and applications development. Miles SM. Healthc Inf Manage 1995 Summer;9(3):41-7

The whole hospital model. Bristol Hospital's patient focused care redesign. Kennedy TD 3rd, et al. PFCA Rev 1995 Summer;7-13

Individual communities, hospitals, and physicians have assumed leadership roles in fostering new models and relationships, and require supporting, documented studies from the published literature describing viable research models, case studies, and demonstrations of restructuring, collaboration, and cooperation. The search strategies illustrated here will provide searchers with a reasonable approach to finding these studies in the published literature. In order to facilitate such searching, the American Hospital Association has recommended that MANAGEMENT CASE STUDIES be established as a MeSH heading.

--prepared by Anne Carbery Fox
AHA Resource Center, American Hospital Association

Health Sciences Serials to Cease Publication

Due to increased online access and a decreased subscription base, NLM will no longer produce the microfiche publication *Health Sciences Serials* after the October 1996 issue. Bibliographic information for serial titles in *Health Sciences Serials* can be obtained free of charge by accessing Locator, a client-server interface that allows menu-driven Internet access to CATLINE (cataloged records of monographs and serials), AVLINE (audiovisuals), SERLINE (serials owned by NLM and other libraries), and DIRLINE (directory of health-related information resources). To access Locator, use VT100 emulation and telnet to locator.nlm.nih.gov. Figure 1 displays a sample serials record from Locator.

--prepared by Esther Baldinger
Technical Services Division

TITLE	CANCER
TITLE ABBREVIATION	Cancer
PUBLISHER	WILEY. NEW YORK NY, UNITED STATES
FIRST/LAST ISSUES	1,MAY,1948- - OPEN
FREQUENCY	Semi-monthly
CALL NUMBER	W1 CA671K
FILM NUMBER	S04408
ACCESS	Last 10 years in Reading Room Circulation Desk
SUBJECTS	NEOPLASMS
NOTES	INTERDISCIPLINARY INTERNATIONAL JOURNAL OF THE AMERICAN CANCER SOCIETY. JOURNAL OF THE AMERICAN CANCER SOCIETY AND OFFICIAL JOURNAL OF THE JAMES EWING SOCIETY; ALSO, 1970- OF THE AMERICAN SOCIETY OF CLINICAL ONCOLOGY, AND JULY 1972- OF THE AMERICAN SOCIETY OF THERAPEUTIC RADIOLOGISTS. SUPPLEMENTS ACCOMPANY SOME NUMBERS. 2 SUPPLEMENTS PER YEAR. FREQUENCY VARIES. IMPRINT VARIES. INDEXING FOR ONLINE FILES BEGAN WITH 18N10,OCT 1965.
LANGUAGE	English
INDEXED IN	Abridged Index Medicus Biological Abstracts Cancerlit Chemical Abstracts Excerpta Medica Index Medicus Medline, currently indexed
NLM UI	C04980000
ISSN	0008-543X
MICROFILM INFO	CIRCULATING COPIES Year Volume 1948-1980 1-46
MISSING ISSUES	Year Volume Issue 1984 53 10 MAY 15TH SUPPL

Figure 1 - Sample Locator Record for a Journal Title

Gold Standard Search

Thank you to everyone who mailed in search strategies in response to the "Gold Standard Search" article in the May-June 1996 issue of the *Technical Bulletin*. This feature offers searchers a chance to match wits with NLM staff on a search strategy formulation. The Gold Standard search strategies are developed here at NLM. The search request published in the May-June 1996 issue was:

Your client wants information on the cost of making health care accessible to rural America.

The Winner

There was no winner for this search. However, honorable mentions go to Sally Kilby at the California Hospital Medical Center Library in Los Angeles, CA and Katherine Alexander at the Northwest Medical Center in Springdale, AR. Some of the pitfalls that were embedded in this particular search topic will be discussed in the following paragraphs.

Choosing a File

The first step in this Gold Standard Search was to choose the correct file. For this search, it was necessary to select HealthSTAR. No other ELHILL file covers this subject area so completely. If you first ran your strategy in MEDLINE, you would still need to search HealthSTAR. This means running your strategy twice and incurring the extra step of eliminating the MEDLINE overlap. The submitted strategies that were run in MEDLINE were checked against the HealthSTAR file and no additional citations were retrieved in MEDLINE that were not available with that strategy in HealthSTAR. Selecting MEDLINE and therefore not searching as efficiently as possible was the most common mistake in the submitted searches.

Grateful Med searchers should note that if you select either the HEALTH or the HSTAR database from the Other Databases screen your search will be performed in the new HealthSTAR file. Internet Grateful Med searchers can click on Search Other Files and from the next screen they may select HealthSTAR.

Analysis of the Search Strategies

The selection of the appropriate MeSH headings was important. The difficult part of this search was limiting it to a manageable number of citations and choosing a rational basis for narrowing of the retrieval. Two of the ways in which retrieval can be narrowed are:

1. Place an asterisk in front of the MeSH heading to ensure it is a main point in the article.
2. Attach a subheading to a MeSH heading to restrict your search to only that aspect of the subject (e.g., HOSPITALS, RURAL/ec will limit your search to the economic aspects of rural hospitals).

The decision on how to narrow your search will determine the relevancy and comprehensiveness of your retrieval. The Gold Standard search combines *HEALTH SERVICES ACCESSIBILITY with the free floating subheading /economics because it was found that directly attaching the subheading (e.g. *HEALTH SERVICES ACCESSIBILITY/ec) eliminated too many relevant articles. However, eliminating the subheading altogether or removing the asterisk added too many peripheral articles to the retrieval.

Deciding on the optimal balance between relevance and the amount of retrieval (precision vs. recall) is dependent on your understanding of what the user really needs to know. It is a subjective decision and there is no right answer. The use of subheadings and the starring of MeSH headings were made in this case by comparing the retrieval obtained with and without them and then selecting the combination that seemed to produce the most relevant citations. Retrieval from the submitted strategies ranged from 26 to 82 citations. The Gold Standard Search retrieved 65 citations. There was so much information available on this subject that relevance rather than comprehensiveness was a primary consideration for this Gold Standard Search.

Search Strategy Suggestions

The following MeSH headings were used in some combination by most entrants: RURAL HEALTH; RURAL POPULATION; HOSPITALS, RURAL; RURAL HEALTH SERVICES; HEALTH SERVICES ACCESSIBILITY; and HEALTH RESOURCES. Some searchers used HEALTH SERVICES NEEDS AND DEMAND; but, the articles retrieved with this heading were not as specific to the subject. HEALTH CARE RATIONING and the financial MeSH headings were largely overlooked but are are also useful in searching this subject.

All searchers limited their retrieval to the United States. However, many of the searchers did not use the pre-explosion capability and searched EXP UNITED STATES instead of UNITED STATES (PX). It's cheaper and faster to use the Pre-Explosion. It is also more efficient to combine search statements and then limit your retrieval to the United States at the end, rather than combining individual MeSH headings with a term that should be applied to the overall search retrieval.

The HealthSTAR front file covers materials from 1990 to the present. In order to restrict your search to the most current citations, it is necessary to decide which years you want to include and then restrict your search to those years. The Gold Standard Search limits the years to 1993 through the current year (the same years as the MEDLINE file) to facilitate the comparison between the retrieval from MEDLINE and HealthSTAR. More than half the citations retrieved are available only in HealthSTAR.

The Next Gold Standard Search

The search request is:

The client is a layperson who wants information on alternative treatments for breast cancer.

Results will be published in the January-February 1997 *Technical Bulletin*. Entries must be received by December 15, 1996 to be considered.

Mail us a copy of your search strategy and include a printout of citations and abstracts. If your strategy is selected for publication you could win either a copy of the Grateful Med software or one hour of free search time. In cases of multiple submissions of identical winning strategies, the prize winner will be either the person who is a first time winner or the first winning strategy received.

Search Hints

Select your database carefully. Limit your retrieval to English-language citations.

Reminder

There are no exact answers or absolutely correct strategies, only best approximations, just like real life. Good luck!

Please send a copy of your search strategy with the retrieval, including printed abstracts, which database was searched and whether you searched directly or used Grateful Med to:

Gold Standard Search
MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894

SS 1 /C?
USER:
file healthstar

PROG:
YOU ARE NOW CONNECTED TO THE HSTAR (HEALTHSTAR- HEALTH + HSTAR, 1990-) FILE.

SS 1 /C?
USER:
rural health services/ec or hospitals, rural/ec

PROG:
SS (1) PSTG (262)

SS 2 /C?
USER:
exp health care costs or exp costs a#d cost analysis

PROG:
SS (2) PSTG (27966)

SS 3 /C?
USER:
1 and 2

PROG:
SS (3) PSTG (57)

SS 4 /C?
USER:
*rural health services or *hospitals, rural or *rural health

PROG:
SS (4) PSTG (2599)

SS 5 /C?
USER:
*financial management or *financing, government or *financing, organized or

PROG:
CNT 5

USER:
*primary health care/ec or *community health services/ec or health care rationing

PROG:
SS (5) PSTG (4584)

SS 6 /C?
USER:
4 and 5

PROG:
SS (6) PSTG (52)

SS 7 /C?
USER:
rural health or rural population

PROG:
SS (7) PSTG (6730)

SS 8 /C?
USER:
7 and exp *health services accessibility and ec (sh)

PROG:
SS (8) PSTG (54)

SS 9 /C?
USER:
3 or 6 or 8

PROG:
SS (9) PSTG (151)

SS 10 /C?
USER:
9 and united states (px)

PROG:
SS (10) PSTG (109)

SS 11 /C?
USER:
10 and 96 (yr) or 10 and 95 (yr)

PROG:
SS (11) PSTG (23)

SS 12 /C?
USER:
10 and 94 (yr) or 10 and 93 (yr)

PROG:
SS (12) PSTG (42)

SS 13 /C?
USER:
11 or 12

PROG:
SS (13) PSTG (65)

SS 14 /C?
USER:
13 and not med (si)

PROG:
SS (14) PSTG (38)

- This last step is to illustrate the number of unique, non-MEDLINE, citations available only in HealthSTAR.

Figure 1 - Gold Standard Search

1997 Weekly Update Schedule for MEDLINE

Entry Month	Updated MEDLINE Available	Date of Entry (DA) Ranges
9701 (EM)	Dec 16	961025-961127*
9702 (EM)	Dec 28	961128-961226
9703 (EM)		
Part 1	Jan 4	961227-970102
Part 2	Jan 11	970103-970109
Part 3	Jan 18	970110-970116
Part 4	Jan 25	970117-970123
9704 (EM)		
Part 1	Feb 1	970124-970130
Part 2	Feb 8	970131-970206
Part 3	Feb 15	970207-970213
Part 4	Feb 22	970214-970220
9705 (EM)		
Part 1	Mar 1	970221-970227
Part 2	Mar 8	970228-970306
Part 3	Mar 15	970307-970313
Part 4	Mar 22	970314-970320
Part 5	Mar 29	970321-970327
9706 (EM)		
Part 1	Apr 5	970328-970403
Part 2	Apr 12	970404-970410
Part 3	Apr 19	970411-970417
Part 4	Apr 26	970418-970424
9707 (EM)		
Part 1	May 3	970425-970501
Part 2	May 10	970502-970508
Part 3	May 17	970509-970515
Part 4	May 24	970516-970522
Part 5	May 31	970523-970529
9708 (EM)		
Part 1	Jun 7	970530-970605
Part 2	Jun 14	970606-970612
Part 3	Jun 21	970613-970619
Part 4	Jun 28	970620-970626

Entry Month	Updated MEDLINE Available	Date of Entry (DA) Ranges
9709 (EM)		
Part 1	Jul 5	970627-970702*
Part 2	Jul 12	970703-970710*
Part 3	Jul 19	970711-970717
Part 4	Jul 26	970718-970724
9710 (EM)		
Part 1	Aug 2	970725-970731
Part 2	Aug 9	970801-970807
Part 3	Aug 16	970808-970814
Part 4	Aug 23	970815-970821
Part 5	Aug 30	970822-970828
9711 (EM)		
Part 1	Sep 6	970829-970904
Part 2	Sep 13	970905-970911
Part 3	Sep 20	970912-970918
Part 4	Sep 27	970919-970925
9712 (EM)		
Part 1	Oct 4	970926-971002
Part 2	Oct 11	971003-971009
Part 3	Oct 18	971010-971016
Part 4	Oct 25	971017-971023
9801 (EM)	Dec 15	971024-971126*

*Modified because of holiday

Search hint: To run weekly updates to a search, use the pattern shown below, where SS 1: represents your completed search strategy.

On August 2 - SS 1: AND 9710 (EM)
On August 9 - SS 1: AND 9710 (EM) AND FROM 970801 TO 970807 (DA)
On August 16 - SS 1: AND 9710 (EM) AND FROM 970808 TO 970814 (DA)
On August 23 - SS 1: AND 9710 (EM) AND FROM 970815 TO 970821 (DA)
On August 30 - SS 1: AND 9710 (EM) AND FROM 970822 TO 970828 (DA)

1997 Update Schedule for AIDSLINE

Entry Month	Updated AIDSLINE Available
9701 (EM)	Jan 4**
9702 (EM)	Jan 4**
9703 (EM)	
Part 1	Jan 4
Part 2	Jan 11
Part 3	Jan 18
Part 4	Jan 25
Part 5	Feb 4*
9704 (EM)	
Part 1	Feb 1
Part 2	Feb 8
Part 3	Feb 15
Part 4	Feb 22
Part 5	Mar 4*
9705 (EM)	
Part 1	Mar 1
Part 2	Mar 8
Part 3	Mar 15
Part 4	Mar 22
Part 5	Mar 29
Part 6	Apr 8*
9706 (EM)	
Part 1	Apr 5
Part 2	Apr 12
Part 3	Apr 19
Part 4	Apr 26
Part 5	May 6*
9707 (EM)	
Part 1	May 3
Part 2	May 10
Part 3	May 17
Part 4	May 24
Part 5	May 31
Part 6	Jun 10*

Entry Month	Updated AIDSLINE Available
9708 (EM)	
Part 1	Jun 7
Part 2	Jun 14
Part 3	Jun 21
Part 4	Jun 28
Part 5	Jul 8*
9709 (EM)	
Part 1	Jul 5
Part 2	Jul 12
Part 3	Jul 19
Part 4	Jul 26
Part 5	Aug 5*
9710 (EM)	
Part 1	Aug 2
Part 2	Aug 9
Part 3	Aug 16
Part 4	Aug 23
Part 5	Aug 30
Part 6	Sep 9*
9711 (EM)	
Part 1	Sep 6
Part 2	Sep 13
Part 3	Sep 20
Part 4	Sep 27
Part 5	Oct 7*
9712 (EM)	
Part 1	Oct 4
Part 2	Oct 11
Part 3	Oct 18
Part 4	Oct 25
Part 5	Nov 4*

*The last update portion of AIDSLINE includes data derived from CANCERLIT, BIOETHICSLINE (bimonthly), CATLINE, AVLINE, and HealthSTAR. The other update portions are the MEDLINE-derived data. Other materials such as newsletters, meeting abstracts and special journal citations are added throughout the cycle. Please note that the last update portion to complete the Entry Month routinely occurs about 3 days after Part 1 of the next Entry Month is added, e.g., Part 5 of 9709 (EM) is added August 5 after Part 1 of 9710 (EM) which is added on August 2.

**Subject to change.

1997 Weekly Update Schedule for HealthSTAR

Entry Month	Updated HealthSTAR Available
9701 (EM)	Jan 11**
9702 (EM)	Jan 11**
9703 (EM)	
Part 1	Jan 11**
Part 2	Jan 11
Part 3	Jan 18
Part 4	Jan 25
Part 5	Feb 1*
9704 (EM)	
Part 1	Feb 1
Part 2	Feb 8
Part 3	Feb 15
Part 4	Feb 22
Part 5	Mar 1*
9705 (EM)	
Part 1	Mar 1
Part 2	Mar 8
Part 3	Mar 15
Part 4	Mar 22
Part 5	Mar 29
Part 6	Apr 5*
9706 (EM)	
Part 1	Apr 5
Part 2	Apr 12
Part 3	Apr 19
Part 4	Apr 26
Part 5	May 3*
9707 (EM)	
Part 1	May 3
Part 2	May 10
Part 3	May 17
Part 4	May 24
Part 5	May 31
Part 6	Jun 7*

Entry Month	Updated HealthSTAR Available
9708 (EM)	
9Part 1	Jun 7
Part 2	Jun 14
Part 3	Jun 21
Part 4	Jun 28
Part 5	Jul 5*
9709 (EM)	
Part 1	Jul 5
Part 2	Jul 12
Part 3	Jul 19
Part 4	Jul 26
Part 5	Aug 2*
9710 (EM)	
Part 1	Aug 2
Part 2	Aug 9
Part 3	Aug 16
Part 4	Aug 23
Part 5	Aug 30
Part 6	Sep 6*
9711 (EM)	
Part 1	Sep 6
Part 2	Sep 13
Part 3	Sep 20
Part 4	Sep 27
Part 5	Oct 4*
9712 (EM)	
Part 1	Oct 4
Part 2	Oct 11
Part 3	Oct 18
Part 4	Oct 25
Part 5	Nov 4*

* The last update portion of HealthSTAR includes data derived from CATLINE and specially indexed non-journal materials. All other update portions include MEDLINE-derived data, special list (H) journals indexed by the American Hospital Association (AHA), and special list journals (T) selected for indexing by NLM's National Information Center on Health Services Research and Health Care Technology (NICHSR).

** Subject to change.

1997 Monthly Update Schedule for NLM Databases

Entry Month	SDILINE Available	BIOETH-ICSLINE Available	CANCERLIT Available	POPLINE Available	TOXLINE /TOXLIT Available
9701	Dec 16	*	Jan 4	Jan 11	Jan 11
9702	Dec 28	Jan 18	Feb 1	Feb 8	Feb 8
9703	Jan 25	*	Mar 1	Mar 8	Mar 8
9704	Feb 22	Mar 15	Apr 5	Apr 5	Apr 12
9705	Mar 29	*	May 3	May 3	May 10
9706	Apr 26	May 17	Jun 7	Jun 7	Jun 14
9707	May 31	*	Jul 5	Jul 5	Jul 12
9708	Jun 28	Jul 19	Aug 2	Aug 2	Aug 9
9709	Jul 26	*	Sep 6	Sep 6	Sep 13
9710	Aug 30	Sep 20	Oct 4	Oct 4	Oct 11
9711	Sep 27	*	Nov 1	Nov 8	Nov 8
9712	Oct 25	Nov 15	Dec 15	Dec 6	Dec 15

For MEDLINE updates, see the "1997 Weekly Update Schedule for MEDLINE."

For AIDSLINE updates, see the "1997 Update Schedule for AIDSLINE."

* BIOETHICSLINE is updated every two months.

See ELHILL and TOXNET Online News for confirmation of these updates and for updates to files not listed here.

Use $INFO UPDATES to retrieve a list of MEDLARS databases showing the date of last update and total number of records for each.

MEDLARS ELHILL Database Update Frequency

	Daily	Weekly	Bi-weekly	Monthly	Bi-monthly	Quarterly
AIDSDRUGS				X		
AIDSLINE		X				
AIDSTRIALS			X			
AVLINE		X				
BIOETHICSLINE					X	
CANCERLIT				X [1]		
CATLINE		X				
ChemID						X
CHEMLINE					X	
DIRLINE						X
DOCUSER				X		
HealthSTAR		X				
HISTLINE		X				
HSRPROJ						X
MEDLINE		X				
PDQ				X [1]		
POPLINE				X [1]		
PREMEDLINE	X					
SDILINE				X [1]		
SERLINE				X [2]		
SPACELINE		X				
TOXLINE				X [2]		
TOXLIT				X [2]		

MEDLARS TOXNET Database Update Frequency

	Continuously	Monthly	Quarterly	Annually	As Needed
CCRIS		X			
DART		X			
ETICBACK					X
EMIC		X			
EMICBACK					X
GENE-TOX					X
HSDB	X				
IRIS		X			
RTECS			X		
TRI				X	
TRIFACTS					X

[1] Generally updated 1st week of month; SDILINE - after the last Friday of the month.
[2] Generally updated 2nd week of month

1997 MeSH Heading Pre-explosions

Pre-exploded MeSH Heading	Tree Number(s)
Abnormalities	C16.131
Adult	M1.471.116
Aged	M1.471.116.100
Amino Acids	D12.125
Anesthesia	E3.155
Antibodies	D24.611.125
Bacteria	B3
Bacterial Infections	C1.252
Behavior	F1.145
Behavior a#d Behavior Mechanisms	F1
Behavioral a#d Mental Disorders	F3
Biochem Phenom Metab	G6
Blood Proteins	D12.776.124
Brain	A8.186.211
Carbohydrates	D9.203
Cardiovascular Diseases	C14
Cardiovascular System	A7
Cells	A11
Central Nervous System	A8.186
Central Nervous System Diseases	C10.228
Chemistry, Analytical	E5.196; H1.181.278
Child	M1.471.392
Circulatory, Respiratory Physiology	G9
Dentistry	E6; G2.163
Diagnosis	E1
Diagnosis, Laboratory	E1.223
Digestive System Diseases	C6
Enzymes	D8.586
Epidemiologic Methods	E5.318; G3.850.520
Equipment a#d Supplies	E7
Gastrointestinal Diseases	C6.405
Genetics	G1.273.343; G5
Health Facilities	N2.278
Health Personnel	M1.526.485; N2.360
Health Services	N2.421
Heart Diseases	C14.280
Hormones	D6.472
Immune System	A15.382
Immunity	G4.610
Immunologic Factors	D24.611
Infant	M1.471.392.520
Invertebrates	B1
Lipids	D10.516

Pre-exploded MeSH Heading	Tree Number(s)
Mammals	B2.649
Mental Disorders	F3.709
Metabolic Diseases	C18.452
Metals	D1.552; J1.637.517
Metals, Heavy	D1.268.556; D1.552.544
Meatals, Light	D1.268.557; D1.552.547
Miscellaneous Techniques	E5
Musculoskeletal Diseases	C5
Musculoskeletal System	A2
Neoplasms	C4
Nervous System	A8
Nervous System Diseases	C10
Neurologic Manifestations	C10.597; C23.888.592
Organization a#d Administration	N4.452
Physiology, General	G7
Proteins	D12.776
Psychologic Processes Principles	F2
Public Health	G2.403.790.548.560; G3.850; N1.407.540.740
Quality of Health Care	N4.761; N5.715
Reproduction, Urogenital Physiology	G8
Respiratory Tract Diseases	C8
Rodentia	B2.649.865
Signs a#d Symptoms	C23.888
Skin Diseases	C17.800
Steroids	D4.808
Stomatognathic Diseases	C7
Surgery, Operative	E4
United States *	Z1.107.567.875
Vascular Diseases	C14.907
Vertebrate Viruses	B4.909
Vertebrates	B2
Virus Diseases	C2
Viruses	B4
Wounds a#d Injuries	C21.866

* When United States is the subject of an article.
To retrieve articles published in the United States, at any USER: prompt, enter United States (CY).

MeSH Heading Pre-explosions are searchable only by the Pre-explosion Name (PX) or *Pre-explosion Name (PX) and not by the tree number(s). See also Subheading Pre-explosions and Place of Publication Pre-explosions in Appendixes G and H respectively.

Families of 1997 Subheading Pre-explosions

adverse effects
- poisoning
- toxicity

analysis
- blood
- cerebrospinal fluid
- isolation & purification
- urine

anatomy & histology
- blood supply
- cytology
  - pathology
  - ultrastructure
- embryology
  - abnormalities
- innervation

chemistry
- agonists
- analogs & derivatives
- antagonists & inhibitors
- chemical synthesis

complications
- secondary

cytology
- pathology
- ultrastructure

diagnosis
- pathology
- radiography
- radionuclide imaging
- ultrasonography

embryology
- abnormalities

epidemiology
- ethnology
- mortality

etiology
- chemically induced
- complications
  - secondary
- congenital
- embryology
- genetics
- immunology
- microbiology
  - virology
- parasitology
- transmission

metabolism
- biosynthesis
- blood
- cerebrospinal fluid
- deficiency
- enzymology
- pharmacokenetics
- urine

microbiology
- virology

organization & admin
- economics
- legislation & jurisprudence
- manpower
- standards
- supply & distribution
- trends
- utilization

pharmacology
- adminstration & dosage
- adverse effects
  - poisoning
  - toxicity
- agonists
- antagonists & inhibitors
- contraindications
- diagnostic use
- pharmacokinetics

physiology
- genetics
- growth & development
- immunology
- metabolism
  - biosynthesis
  - blood
  - cerebrospinal fluid
  - deficiency
  - enzymology
  - pharmacokinetics
  - urine
- physiopathology
- secretion

statistics & numer data
- epidemiology
  - ethnology
  - mortality

surgery
- transplantation

therapeutic use
- administration & dosage
- adverse effects
- contraindications
- poisoning

therapy
- diet therapy
- drug therapy
- nursing
- prevention & control
- radiotherapy
- rehabilitation
- surgery
  - transplantation

Note: See the reverse side of this appendix for the short forms of the subheading pre-explosions used in searching.

Alphabetic List of
1997 Subheading Pre-explosions

FULL NAME	SHORT FORM	FULL NAME	SHORT FORM
adverse effects&	AE&	metabolism&	ME&
analysis&	AN&	microbiology&	MI&
anatomy & histology&	AH&	organization & admin&	OG&
chemistry&	CH&	pharmacology&	PD&
complications&	CO&	physiology&	PH&
cytology&	CY&	statistics & numer data&	SN&
diagnosis&	DI&	surgery&	SU&
embryology&	EM&	therapeutic use&	TU&
epidemiology&	EP&	therapy&	TH&
etiology&	ET&		

Final ampersand (&) and the qualifier (PX) are needed to search; either the full name or short form may be used.

The asterisk (*) may not be used in front of a subheading pre-explosion.

Place of Publication Pre-explosions

- Africa
  - Africa, Northern
    - Algeria
    - Egypt
    - Libya
    - Morocco
    - Tunisia
  - Africa, South of the Sahara
    - Africa, Central
      - Cameroon
      - Central African Republic
      - Chad
      - Congo
      - Equatorial Guinea
      - Gabon
      - Zaire
    - Africa, Eastern
      - Burundi
      - Djibouti
      - Eritrea
      - Ethiopia
      - Kenya
      - Rwanda
      - Somalia
      - Sudan
      - Tanzania
      - Uganda
    - Africa, Southern
      - Angola
      - Botswana
      - Lesotho
      - Malawi
      - Mozambique
      - Namibia
      - South Africa
      - Swaziland
      - Zambia
      - Zimbabwe
    - Africa, Western
      - Benin
      - Burkina Faso
      - Cote d'Ivoire
      - Gambia
      - Ghana
      - Guinea
      - Guinea-Bissau
      - Liberia
      - Mali
      - Mauritania
      - Niger
      - Nigeria
      - Senegal
      - Sierra Leone
      - Togo
- Central America
  - Belize
  - Costa Rica
  - El Salvador
  - Guatemala
  - Honduras
  - Nicaragua
  - Panama
- North America
  - Canada
  - Greenland
  - Mexico
  - United States
- South America
  - Argentina
  - Bolivia
  - Brazil
  - Chile
  - Colombia
  - Ecuador
  - French Guiana
  - Guyana
  - Paraguay
  - Peru
  - Suriname
  - Uruguay
  - Venezuela
- West Indies
  - Antigua
  - Bahamas
  - Barbados
  - Cuba
  - Dominica
  - Dominican Republic
  - Haiti
  - Jamaica
  - Martinique
  - Netherlands Antilles
  - Puerto Rico
  - Saint Kitts and Nevis
  - Saint Lucia
  - Saint Vincent and the Grenadines
  - Trinidad and Tobago
  - Virgin Islands of the United States
- Asia
  - Asia, Central
    - Kazakhstan
    - Kyrgyzstan
    - Tajikistan
    - Turkmenistan
    - Uzbekistan
  - Asia, Southeastern
    - Borneo
    - Brunei
- Asia, (cont'd)
  - Asia, Southeastern (cont'd)
    - Cambodia
    - Indonesia
    - Laos
    - Malaysia
    - Mekong Valley
    - Myanmar
    - Philippines
    - Singapore
    - Thailand
    - Timor
    - Vietnam
  - Asia, Western
    - Bangladesh
    - Bhutan
    - India
    - Middle East
      - Afghanistan
      - Bahrain
      - Iran
      - Iraq
      - Israel
      - Jordan
      - Kuwait
      - Lebanon
      - Oman
      - Qatar
      - Saudi Arabia
      - Syria
      - Turkey
      - United Arab Emirates
      - Yemen
    - Nepal
    - Pakistan
    - Sri Lanka
  - Far East
    - China
      - Tibet
    - Hong Kong
    - Japan
    - Korea
    - Macao
    - Mongolia
    - Taiwan
- Europe
  - Andorra
  - Austria
  - Belgium
  - Europe, Eastern
    - Albania
    - Baltic States
      - Estonia
      - Latvia
      - Lithuania

Place of Publication Pre-explosions, cont.

- Europe (cont'd)
  - Europe, Eastern (cont'd)
    - Bosnia-Herzegovina
    - Bulgaria
    - Byelarus
    - Croatia
    - Czech Republic
    - Hungary
    - Macedonia (Republic)
    - Moldova
    - Poland
    - Romania
    - Russia
    - Slovakia
    - Slovenia
    - Ukraine
    - Yugoslavia
  - Finland
  - France
  - Germany
  - Gibraltar
  - Great Britain
    - England
    - Northern Ireland
    - Scotland
    - Wales
  - Greece
  - Iceland
  - Ireland
  - Italy
  - Liechtenstein
  - Luxembourg
  - Monaco
  - Netherlands
  - Portugal
  - San Marino
  - Scandinavia
    - Denmark
    - Norway
    - Sweden
  - Spain
  - Switzerland
  - Transcaucasia
    - Armenia
    - Azerbaijan
    - Georgia (Republic)
- Indian Ocean Islands
  - Comoros
  - Madagascar
  - Mauritius
  - Reunion
  - Seychelles
- Pacific Islands
  - Melanesia
    - Fiji
    - New Caledonia
    - Papua New Guinea
    - Vanuatu
  - Micronesia
    - Guam
    - Palau
  - Polynesia
    - Pitcairn Island
    - Samoa
      - American Samoa
      - Western Samoa
    - Tonga

Alphabetic List of Place of Publication Pre-explosions

Africa&
Africa, Central&
Africa, Eastern&
Africa, Northern&
Africa South of the Sahara&
Africa, Southern&
Africa, Western&
Asia&
Asia, Central&
Asia, Southeastern&
Asia, Western&
Baltic States&
Central America&
China&
Europe&
Europe, Eastern&
Far East&
Great Britain&
Indian Ocean Islands&
Melanesia&
Micronesia&
Middle East&
North America&
Pacific Islands&
Polynesia&
Samoa&
Scandinavia&
South America&
Transcaucasia&
West Indies&

Ending ampersand (&) and the qualifier (PX) are needed to search. The asterisk (*) may <u>not</u> be used in front of a place of publication pre-explosion.

SUGGESTION FOR MEDICAL SUBJECT HEADINGS CHANGE

Suggested Change:
(One- or two-sentence statement of what you feel is needed.)

How often have you encountered this concept?

Reason for suggesting change:
(If suggesting a new term, please mention the sense or context in which the term occurs if you cannot define it.)

Citations:
(One or more authoritative citations, either from MEDLINE or other sources, are requested, particularly if the concept or term is quite new or rarely written about.)

Name: _____ Date: _____

Address: _____

Telephone: _____

E-mail: _____

Please return to:

MeSH Section
National Library of Medicine
8600 Rockville Pike
Bethesda, Maryland 20894
Phone: (301) 496-1495
Fax: (301)-402-2002
E-mail: meshsugg@lhc.nlm.nih.gov

10/96

Effective January 1, 1997 Prices apply 24 hours per day.

NLM *ONLINE* PRICING ALGORITHM CHARGES TO DOMESTIC USERS

File	Connect Charge (Per Hour)	Search Statement Charge	Online Citation Charge	Interaction Charge (Carriage Returns)	Computer Resources Disk Accesses (Per 100)	Online Character Charge (Per 1,000)
			ELHILL COMPUTER			
MEDLINE® & Backfiles	$2.40	$.06	$.01	—	$.04	$.05
AIDSLINE®, AIDSTRIALS, AIDSDRUGS & DIRLINE®	FREE	FREE	FREE	—	FREE	FREE
TOXLIT® & TOXLIT65	2.40	1.88*	1.15*	—	.04	.05
TOXLINE® & TOXLINE65	2.40	.06	.01	—	.04	.05
CHEMLINE®	2.40	1.13**	.69**	—	.04	.05
ALERT & LOAN STATUS	2.40	.06	—	—	.04	—
All Others	2.40	.06	.01	—	.04	.05
PDQ®	18.00	—	—	—	—	—
DOCUSER®	FREE	FREE	FREE	—	FREE	FREE
			TOXNET COMPUTER			
All Files	3.80	.08	—	.02	—	.08

- Depending largely upon the amount of information viewed/printed/downloaded, a MEDLINE search generally ranges from $1.25 - $5.00.
- The charge to ftp online search results via the Internet follows this algorithm. There are no additional charges.
- NLM has a Student Code Program for domestic users. Student codes are charged at online rates that are approximately 50% of the regular, domestic online rates.

* Includes royalties of $1.82 per Search Statement, $1.14 per Online Citation Charge.
** Includes royalties of $1.07 per Search Statement, $0.68 per Online Citation Charge.

NLM *OFFLINE* CHARGES TO DOMESTIC USERS

Pages	**Per Page for PRT OFFLINE, OFFSEARCH, or Automatic SDIs**	**Per 2,000 Characters Transmitted via ftp*** for Automatic SDIs only**
MEDLINE & Other Databases	$0.30	$0.10
AIDSLINE, AIDSTRIALS, AIDSDRUGS, DIRLINE & DOCUSER	FREE	FREE
TOXLIT & TOXLIT65	$2.98 (includes $2.68 royalty charge per page)	$2.78 (includes $2.68 royalty)
CHEMLINE	$1.83 (includes $1.53 royalty charge per page)	Not applicable
TOXNET Files	$0.30	Not applicable
Offsearches	**Per File**	
MEDLINE & Other Databases	$1.00 (plus page charges)	
AIDSLINE, AIDSTRIALS, AIDSDRUGS, DIRLINE & DOCUSER	FREE	
Automatic SDI Searches	**Per Search**	
SDILINE®, AVLINE®, BIOETHICSLINE®, CANCERLIT®, CATLINE®, HealthSTAR, POPLINE®, TOXLINE	$1.50 (plus page charges or ftp character charges)	
AIDSLINE	FREE	
TOXLIT	$7.77 (plus page charges or ftp character charges; includes $6.27 royalty charge)	

***The Internet ftp data charge is applied per unit of 2,000 characters transmitted (a low estimate of how many characters fit on a page of NLM's offline print paper) using the rate of $0.05/1,000 characters from the online pricing algorithm.

NOTES: Non-U.S. online users incur charges under the NLM online pricing algorithm and are charged $ .75 extra on the connect charge (per hour) portion and $0.02/1,000 characters transmitted extra (the equivalent of $3.75/hour). There is a $0.10/page surcharge for offline print pages and a surcharge of $0.10/2,000 characters transmitted via ftp for Automatic SDI Searches. The foreign surcharge does not apply for the following databases: AIDSDRUGS, AIDSLINE, AIDSTRIALS, AVLINE, CATLINE, DIRLINE, DOCUSER, MeSH VOCABULARY FILE®, and SERLINE®.

NLM 1/97 Rev.

TABLE I

New NLM Rates for CHEMLINE, TOXLIT, TOXLIT65

Effective January 1, 1997

NLM ONLINE PRICING ALGORITHM CHARGES TO DOMESTIC USERS

Prices apply 24 hours per day

Files	Connect Charge (Per Hour)	Search Statement Charge	Online Citation Charge	Interaction Charge (Carriage Returns)	Computer Resources (Disk Accesses) (Per 100)	Online Character Charge (Per 1,000)
CHEMLINE	$2.40	$1.13*	$0.69*	——	$0.04	$0.05
TOXLIT & TOXLIT65	$2.40	$1.88**	$1.15**	——	$0.04	$0.05

* Includes royalties of $1.07 per Search Statement, $0.68 per Online Citation Charge.
** Includes royalties of $1.82 per Search Statement, $1.14 per Online Citation Charge.

OFFLINE CHARGES TO DOMESTIC USERS

Pages	Per Page for PRT OFFLINE, OFFSEARCH, or Automatic SDIs	Per 2,000 Characters Transmitted via ftp*** for Automatic SDIs only
CHEMLINE	$1.83 (includes $1.53 royalty charge)	Not applicable
TOXLIT & TOXLIT65	$2.98 (includes $2.68 royalty charge)	$2.78 (includes $2.68 royalty)

Offsearches	Per File
All Databases	$1.00 (plus page charges)

Automatic SDI Searches	Per Search
TOXLIT	$7.77 (plus page charges or ftp character charges; includes $6.27 royalty charge)

***The Internet ftp data charge is applied per unit of 2,000 characters transmitted (a low estimate of how many characters fit on a page of NLM's offline print paper) using the rate of $0.05/1,000 characters from the online pricing algorithm.

NOTES: Non-U.S. online users incur charges under the NLM online pricing algorithm and are charged $0.75 extra on the connect charge (per hour) portion and $0.02/1,000 characters transmitted extra (the equivalent of $3.75/hour). There is a $0.10/page surcharge for offline print pages and a surcharge of $0.10/2,000 characters transmitted via ftp for Automatic SDI Searches. The foreign surcharge does not apply for the following databases: AIDSDRUGS, AIDSLINE, AIDSTRIALS, AVLINE, CATLINE, DIRLINE, DOCUSER, MeSH VOCABULARY FILE®, and SERLINE®.

MEDLARS® PRICING SCHEDULE-DOMESTIC & NON-U.S.CHARGES

Effective October 1, 1996

Part 1: Leasing Tape Copies of NLM Databases

The following is a listing of annual license fees for databases available from NLM.

There are no use charges; however, unless otherwise noted, in addition to the annual license fee, licensees in foreign countries, licensees whose databases run on computers outside the U.S., or domestic licensees who provide data outside the U.S. are subject to a surcharge. See page 38K, Additional Fees, for details.

Database		Annual License Fee and Notes
AIDSDRUGS	-	No annual license fee or foreign surcharge. AIDSDRUGS and AIDSTRIALS are leased together.
AIDSLINE®	-	No annual license fee or foreign surcharge.
AIDSTRIALS	-	No annual license fee or foreign surcharge. AIDSDRUGS and AIDSTRIALS are leased together.
AVLINE®	-	$1,000 current year: updated monthly. $1,000 one time fee for base file (up to current year). Foreign surcharge does not apply. Available in MARC-compatible format only.
BIOETHICSLINE®	-	$1,000
CANCERLIT®	-	$3,000; however, NLM licenses CANCERLIT only to official International MEDLARS Centers. All other prospective licensees of CANCERLIT should contact NCI (National Cancer Institute): R.A. Bloch International Cancer Information Center 9030 Old Georgetown Road Bethesda, MD 20852 (301) 496-7406
CATLINE®	-	$6,000 current year: updated weekly via ftp only. -or- $4,000 current year: updated monthly on tape only. $3,000 one-time fee for base file (1965 up to the current year) on tape only. $3,000 one time fee for retrospective file (pre-1965) on tape only. Foreign surcharge does not apply. Available in MARC-compatible format only.
CHEMICAL CARCINOGENESIS RESEARCH INFORMATION SYSTEM (CCRIS)	-	$1,000
ChemID	-	$1,000 Licensees must make separate arrangements with two data suppliers in advance: U.S. Pharmacopeial Convention, Inc., and Cosmetic Toiletries and Fragrance Association.
CHEMLINE®	-	$1,000 plus royalties. CHEMLINE tape royalties are not paid to NLM but are negotiated with and paid directly to the file content provider, Chemical Abstracts Service (CAS). Licensees must make separate arrangements with CAS in advance.

Rev. October 1996

DEVELOPMENTAL AND REPRODUCTIVE TOXICOLOGY (DART™) - $1,000

DIRLINE - No annual license fee or foreign surcharge.

ENVIRONMENTAL TERATOLOGY INFORMATION CENTER BACKFILE (ETICBACK) - $1,000

GENE-TOX - $1,000

HAZARDOUS SUBSTANCES DATA BANK (HSDB®) - $2,500

The Emergency Medical Treatment (EMT) field in HSDB is not distributed in the leased database.

HealthSTAR - $3,000

HISTLINE® - $1,000

MEDLINE® - Current Year (1997) data:
$9,000 weekly updates -OR-
$5,000 monthly updates

Older data: licensees requesting older data must select one of the 6 groupings of years as shown below.

Fees	Years of Publication
$1,750.00	1994 - 1996
$1,750.00	1990 - 1996
$3,500.00	1985 - 1996
$5,250.00	1980 - 1996
$5,250.00	1975 - 1996
$7,000.00	1966 - 1996

MeSH VOCABULARY FILE® - $1,000 on tape (no charge with MEDLINE).
Foreign surcharge does not apply. No fee applies if the data are used for translation purposes only.

Available in ELHILL Unit Record Format (EURF) or MARC-compatible format. EURF is updated either monthly (to receive newly added supplementary chemical records) or annually; MARC format is updated annually and does not contain the supplementary chemical records.

The National Library of Medicine also makes certain MeSH data available at no charge on the Internet. See page 39K for additional information.

PDQ® - Available from NCI.

All prospective domestic and non-U.S. licensees of PDQ should contact NCI (National Cancer Institute):

R.A. Bloch International Cancer Information Center
9030 Old Georgetown Road
Bethesda, MD 20852
(301) 496-7406

POPLINE® - $2,000

REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS®)	-	Available from NTIS. Prospective domestic and non-U.S. licensees of RTECS should contact NTIS (National Technical Information Service): NTIS 5285 Port Royal Road Springfield, VA 22161 (703) 487-4650
SDILINE®	-	$5,000 updated monthly (if leased separately from MEDLINE).
SERLINE®	-	$1,000. Foreign surcharge does not apply. Certain SERLINE data elements related to holdings information are not distributed in the leased database. Certain SERLINE data are also available at no charge on the Internet. See page 39K for additional information.
SPACELINE	-	$1,000
TOXIC CHEMICAL RELEASE INVENTORY (TRI87, TRI88, TRI89, TRI90, TRI91, TRI92, TRI93, and TRI94)	-	Available from NTIS. Prospective domestic and non-U.S. licensees of TRI should contact NTIS (National Technical Information Service): NTIS 5285 Port Royal Road Springfield, VA 22161 (703) 487-4650
TOXLINE® & TOXLINE65	-	$2,500 plus royalties for the current file (1981 through the current year). $2,500 plus royalties for the backfile (1965-80). The NIOSHTIC subfile produced by the National Institute for Occupational Safety and Health (NIOSH) is not distributed in the leased databases. There are tape royalties for TOXLINE and TOXLINE65 which must be negotiated with and paid directly to two of the file content (BIOSIS) and the American Society of Hospital Pharmacists (ASHP). Licensees must make separate arrangements with those data suppliers in advance. There are two leasing options available for TOXLINE and TOXLINE65: 1. all subfiles except NIOSHTIC; 2. all subfiles except NIOSHTIC, BIOSIS, and IPA. The charges are the same because the same number of update tapes are sent. Please specify which TOXLINE version is to be licensed.
TOXLIT® & TOXLIT65	-	$2,500 plus royalties for the current file (1981 through the current year). $2,500 plus royalties for the backfile (1965-80) There are tape royalties for TOXLIT and TOXLIT65 which are not paid to NLM but are negotiated with and paid directly to the file content provider, Chemical Abstracts Service (CAS). Licensees must make separate arrangements with CAS in advance.
TOXNET® Databases & Databanks	-	See individual database names: CCRIS, DART, ETICBACK, GENE-TOX, HSDB, RTECS, TRI.

Additional Fees:

1. **Surcharge** - Foreign users, as non-U.S. taxpayers, pay a surcharge that represents their proportional share of the costs of creating the National Library of Medicine databases. Foreign users include licensees in foreign countries, licensees whose databases run on computers outside the U.S., or domestic licensees who provide data outside the U.S. The surcharge is as follows:

   a. Online systems (including the Internet) and networked CD-ROMs or other storage media that may serve 26 or more concurrent users: The algorithm for calculating the surcharge, based on the number of connect hours, online characters transmitted, and citations printed offline remains at $2.50/connect hour, $0.02/1,000 characters transmitted, and $0.02/citation printed offline. Licensees will report the sum of this algorithm, but will pay only 75% of these charges.

      Licensees may propose an alternative to the NLM algorithm for calculating the foreign surcharge. An alternative that NLM finds acceptable is to divide the total number of characters transmitted by the licensee to foreign users by the average number of characters transmitted per hour to arrive at the equivalent number of connect hours. Then multiply by $3.75 to arrive at the foreign surcharge. NLM has determined that $3.75 per hour is the proportional share of the cost of providing access to foreign users.

   b. Single user, non-networked CD-ROMs - $50.00 per subscription.

   c. Online systems or networked CD-ROMs or other storage media that may serve 25 or fewer concurrent users: Licensees may choose either the algorithm or approved alternative listed above in Item 1.a. OR $200.00 per concurrent user based on the maximum number of concurrent users that the system can support.

   NOTES:

   For portions of a MEDLARS file used in a licensee's system/product:
   MEDLINE: if a licensee's system/product contains fewer than 12,000 citations from each corresponding year of MEDLINE, then no surcharge is due.
   For MEDLARS files other than MEDLINE: if fewer than 25% of the records in the leased file is used each year in a licensee's system product, then no surcharge is due.

   For full databases other than MEDLINE:
   When provided along side a MEDLINE product available through a customer's local area network, no surcharge is due. The surcharge for MEDLINE does apply. When provided as separate products not on a local area network, the surcharge listed above applies. When provided with no MEDLINE product, the surcharge listed above applies.

   While NLM imposes this fee scheduled upon its licensees, NLM does not regulate the rates that licensees charge to their customers for their publicly available versions of our database. Licensees charging a flat rate are always at risk that the actual usage to which the foreign surcharge applies may be greater than what their fees are based upon.

2. **Non-recurring "personal use" subsets.**

   One-time retrieval from the current year and/or older data; limited to 150,000 citations; no updates; data must be leased directly from NLM; applicable for domestic licensees only. Cost is $500.00.

3. **Sample data**

   A sample tape is available upon written request for a fee of $50.00 for domestic and $62.50 for non-U.S. requests. (There is no fee for AIDSDRUGS/AIDSTRIALS, AIDSLINE, or DIRLINE sample tapes.) MeSH data in MARC-compatible format is available electronically at no charge (see page 39K).

4. **GENER format**

   If Current Year MEDLINE (SDILINE) data are supplied in GENER format, there is an extra, annual flat-rate fee of $1,000.00 for domestic licensees and $1,250.00 for non-U.S. licensees.

5. **Replacement tapes**

   Replacement tapes cost $75.00/tape for domestic licensees and $93.75/tape for non-U.S. licensees.

MEDLARS Data on the Internet

1. MeSH Trees File:

   The National Library of Medicine makes its annual Medical Subject Headings (MeSH) with their associated hierarchical tree numbers (referred to as the "Trees file") available from the NLM World Wide Web site (http://www.nlm.nih.gov). Click on General Information, then Organizational Structure, then Medical Subject Headings Section. For those without Web access, the Trees file is available on a 3.5" diskette. There is no charge or license required for either version. Completion of a memorandum of understanding is required. For those without Web access, requests for the diskette should be sent to: Ms. Jane Rosov, MEDLARS Management Section, National Library of Medicine, Bethesda, MD 20894 (fax: 301-496-0822; e-mail janer@nlm.nih.gov).

2. MeSH in MARC-Compatible Format:

   MeSH in MARC-compatible format is available from the NLM World Wide Web site (see Web site address above) at no cost. A signed license agreement is no longer required to obtain the full MARC file; however, completion of a memorandum of understanding is required. Sample MeSH MARC data may be obtained from the NLM World Wide Web site.

3. SERLINE Data:

   Certain SERLINE data are available via ftp at no cost. Tagged information, sorted alphabetically by the title of the journal, may be obtained by anonymous ftp from the host nlmpubs.nlm.nih.gov in the directory /online/journals. There are six files, each beginning with the name "List of Serials Indexed - Tagged Data:". A license agreement is not required to ftp these data.

Please direct any leasing questions to:

Mr. Sheldon Kotzin
Chief, Bibliographic Services Division
National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894
Telephone: 301-496-6217
FAX: 301-496-0822
INTERNET: kotzin@nlm.nih.gov

A National Library of Medicine data leasing information packet is available from the address listed above and also may be obtained from the NLM World Wide Web site (http://www.nlm.nih.gov - click on Databases) or by anonymous ftp from the host nlmpubs.nlm.nih.gov in the directory/online/agreements/leased/license.

Part 2: Online Access to the NLM Databases

Online charges are calculated by using an algorithm which includes connect hour charges and charges for search statements, citations, computer resources (i.e., disk accesses), and characters transmitted to the user's terminal. The charges remain the same regardless of time of day. Reduced charges approximating 50% of regular online rates are available under the NLM Student Code Program.

Non-U.S. Users: In addition to the algorithm a foreign surcharge applies for online access to NLM by users outside the U.S. The surcharge is $0.75/connect hour and $0.02/1,000 characters transmitted (the equivalent of $3.75/hour for users transmitting 125,000 characters/hour) which represents a 25% reduction from the surcharge rate prior to Oct. 1, 1994. There is a $0.10/page surcharge for offline print pages (or a $0.10/2,000 characters surcharge for automatic SDIs disseminated via ftp).

The following is a listing of the NLM ELHILL databases that are available online at NLM and charged according to the algorithm that is presented in detail at the end of Part 2. The foreign surcharge does not apply for AIDSDRUGS, AIDSLINE, AIDSTRIALS, AVLINE, CATLINE, DIRLINE, DOCUSER®, MeSH, and SERLINE.

NLM ELHILL Databases*

AVLINE®	MEDLINE® and BACKFILES
BIOETHICSLINE®	MeSH VOCABULARY FILE®
CANCERLIT®	POPLINE®
CATLINE®	PREMEDLINE
ChemID®	SDILINE®
DENTALPROJ™	SERLINE®
HealthSTAR	SPACELINE
HISTLINE®	TOXLINE® & TOXLINE65

*Additional ELHILL databases charged at differing rates, as well as PDQ and the TOXNET databases and databanks, are listed below.

The following databases are exceptions to the pricing algorithm:

AIDSDRUGS, AIDSLINE AIDSTRIALS, DIRLINE, DOCUSER® - No charges.

ALERT & LOAN STATUS - The charges for citations and characters do not apply.

CHEMLINE® - Effective January 1, 1997:
For domestic users, CHEMLINE royalty charges of $0.69 per online citation and $1.13 per search statement are added to the algorithm. Offline page charges of $1.83 per page include $1.53 per page royalty. Royalty charges are subject to change without advance notice.

For non-U.S. users, effective January 1988, NLM negotiates with and collects royalties for the Chemical Abstracts Service for CHEMLINE from the non-U.S. Online Center.

PDQ® - A flat-rate of $18.00/hour is charged.

TOXLIT® & TOXLIT65 - Effective January 1, 1997:
For domestic users, TOXLIT royalty charges of $1.15 per online citation and $1.88 per search statement are added to the basic online algorithm. Offline page charges of $2.98 per page include $2.68 per page royalty. Royalty charges are subject to change without advance notice.

TOXNET® Databases & Databanks - These files include CCRIS, DART, EMIC, EMICBACK, ETICBACK, GENE-TOX, HSDB, IRIS, RTECS, TRI and TRIFACTS. The algorithm used to price online searching on these files approximates the ELHILL algorithm.

NLM *ONLINE* PRICING ALGORITHM CHARGES TO DOMESTIC USERS

File	Connect Charge (Per Hour)	Search Statement Charge	Online Citation Charge	Interaction Charge (Carriage Returns)	Computer Resources Disk Accesses (Per 100)	Online Character Charge (Per 1,000)
			ELHILL COMPUTER			
MEDLINE® & Backfiles	$2.40	$.06	$.01	—	$.04	$.05
AIDSLINE®, AIDSTRIALS, AIDSDRUGS & DIRLINE®	FREE	FREE	FREE	—	FREE	FREE
TOXLIT® & TOXLIT65	2.40	1.88*	1.15*	—	.04	.05
TOXLINE® & TOXLINE65	2.40	.06	.01	—	.04	.05
CHEMLINE®	2.40	1.13**	.69**	—	.04	.05
ALERT & LOAN STATUS	2.40	.06	—	—	.04	—
All Others	2.40	.06	.01	—	.04	.05
PDQ®	18.00	—	—	—	—	—
DOCUSER®	FREE	FREE	FREE	—	FREE	FREE
			TOXNET COMPUTER			
All Files	3.80	.08	—	.02	—	.08

- Depending largely upon the amount of information viewed/printed/downloaded, a MEDLINE search generally ranges from $1.25 - $5.00.
- The charge to ftp online search results via the Internet follows this algorithm. There are no additional charges.
- NLM has a Student Code Program for domestic users. Student codes are charged at online rates that are approximately 50% of the regular, domestic online rates.

* Includes royalties of $1.82 per Search Statement, $1.14 per Online Citation Charge.
** Includes royalties of $1.07 per Search Statement, $0.68 per Online Citation Charge.

NLM *OFFLINE* CHARGES TO DOMESTIC USERS

Pages	**Per Page for PRT OFFLINE, OFFSEARCH, or Automatic SDIs**	**Per 2,000 Characters Transmitted via ftp*** for Automatic SDIs only**
MEDLINE & Other Databases	$0.30	$0.10
AIDSLINE, AIDSTRIALS, AIDSDRUGS, DIRLINE & DOCUSER	FREE	FREE
TOXLIT & TOXLIT65	$2.98 (includes $2.68 royalty charge per page)	$2.78 (includes $2.68 royalty)
CHEMLINE	$1.83 (includes $1.53 royalty charge per page)	Not applicable
TOXNET Files	$0.30	Not applicable
Offsearches	**Per File**	
MEDLINE & Other Databases	$1.00 (plus page charges)	
AIDSLINE, AIDSTRIALS, AIDSDRUGS, DIRLINE & DOCUSER	FREE	
Automatic SDI Searches	**Per Search**	
SDILINE®, AVLINE®, BIOETHICSLINE®, CANCERLIT®, CATLINE®, HealthSTAR, POPLINE®, TOXLINE	$1.50 (plus page charges or ftp character charges)	
AIDSLINE	FREE	
TOXLIT	$7.77 (plus page charges or ftp character charges; includes $6.27 royalty charge)	

***The Internet ftp data charge is applied per unit of 2,000 characters transmitted (a low estimate of how many characters fit on a page of NLM's offline print paper) using the rate of $0.05/1,000 characters from the online pricing algorithm.

NOTES: Non-U.S. online users incur charges under the NLM online pricing algorithm and are charged $ .75 extra on the connect charge (per hour) portion and $0.02/1,000 characters transmitted extra (the equivalent of $3.75/hour). There is a $0.10/page surcharge for offline print pages and a surcharge of $0.10/2,000 characters transmitted via ftp for Automatic SDI Searches. The foreign surcharge does not apply for the following databases: AIDSDRUGS, AIDSLINE, AIDSTRIALS, AVLINE, CATLINE, DIRLINE, DOCUSER, MeSH VOCABULARY FILE®, and SERLINE®.

NLM 1/97 Rev.

SDI FORM 3 PAGES

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Online Services Reference Manual -- Updated Chapters

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manuals

gopher:
WordPerfect, PostScript
gopher.nlm.nih.gov in the directory
Online Services/MEDLARS
Information/Online Services
Reference Manuals

NLM Serials Publications: LSIOU, LJI, and updates for indexed titles

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gopher:
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gopher.nlm.nih.gov in the directory
Online Services/Journal Title Lists

Questions?

ftp: ftpadmin@nlm.nih.gov
gopher: admin@gopher.nlm.nih.gov
e-mail: admin@mailserv.nlm.nih.gov

To retrieve a list of MEDLARS databases online, their file counts and update information, type:
FILE ALERT at a USER: prompt, then type $info updates
To retrieve the Serials updates online, type:
FILE ALERT at a USER: prompt, then type $info seryymm, e.g. $info ser9603

NLM Internet Directory

The following Internet addresses may be used for specific questions and comments to NLM:

AIDS Information Services	aids@aids.nlm.nih.gov
Anonymous ftp Service Assistance	ftpadmin@nlm.nih.gov
Fixed-Fee and Flat-Rate Special Agreements	ginter@nlm.nih.gov
GenBank Molecular Sequence Database Information	info@ncbi.nlm.nih.gov
Gopher and e-mail File Server Assistance	admin@gopher.nlm.nih.gov
Grateful Med	gmhelp@nlm.nih.gov
History of Medicine Division	hmdref@nlm.nih.gov
Images from the History of Medicine	hmdref@nlm.nih.gov
Interlibrary Loan (ILL)/DOCLINE Assistance	ill@nlm.nih.gov
International Programs Office	ip@nlm.nih.gov
Internet Grateful Med Help	access@nlm.nih.gov
MEDLARS Management Section	mms@nlm.nih.gov
MeSH Heading Suggestions	meshsugg@lhc.nlm.nih.gov
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National Information Center on Health Services Research and Health Care Technology (HealthSTAR/HSTAT):	nichsr@nlm.nih.gov
Office of Public Information	publicinfo@nlm.nih.gov
Planning and Evaluation Office	siegel@nlm.nih.gov
Preservation Information	pres@nlm.nih.gov
Reference Assistance	ref@nlm.nih.gov
Technical Services Division	tsd@nlm.nih.gov
Toxicology Information Program	toxmail@tox.nlm.nih.gov

NLM Internet Access

TELNET

MEDLARS, PDQ & TOXNET	medlars.nlm.nih.gov
Locator	locator.nlm.nih.gov
HSTAT	text.nlm.nih.gov

FTP

MEDLARS Server	medlars.nlm.nih.gov
NLM Anonymous Server	nlmpubs.nlm.nih.gov

TOOLS

Internet Grateful Med	http://igm.nlm.nih.gov
NLM Home Page (HyperDoc)	http://www.nlm.nih.gov
NLM AIDS Home Page	http://sis.nlm.nih.gov/aidswww.htm
NLM Gopher	gopher.nlm.nih.gov
e-mail Based File Server	files@mailserv.nlm.nih.gov

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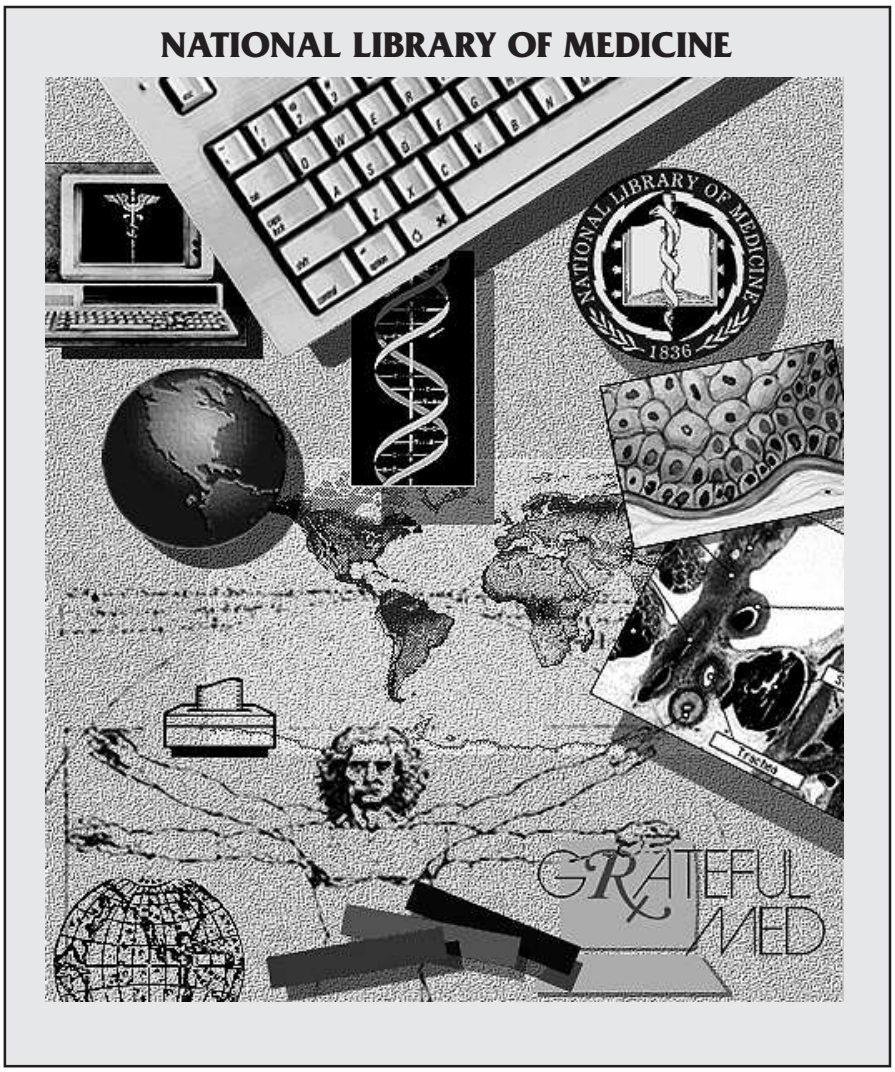

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