NLM Technical Bulletin

PREMEDLINE for Early Data Delivery

In order to speed the flow of new information to NLM database searchers, NLM announces the arrival of a new database, PREMEDLINE, on August 13, 1996. This database provides basic citation information and abstracts before they are indexed and put into MEDLINE, and will be updated daily. NLM database searchers will have the opportunity to view citations while they are separately undergoing the process of being indexed for MEDLINE. Citations will remain in PREMEDLINE only until they have had MeSH terms, Publication Types, GenBank accession numbers, and other indexing data added. Once the indexing is finished, the complete records will be added to the weekly MEDLINE update, and the PREMEDLINE record will be deleted from the database.

The PREMEDLINE Unit Record is displayed in Figure 1 on page 4. The unit record can be retrieved online by entering $INFO PREMEDL at any USER: prompt. Initially, PREMEDLINE will be available only to command language searchers. It will eventually be added to the databases accessible through Internet Grateful Med and Grateful Med for Windows as their development schedules permit. PREMEDLINE searches will be billed at the same rate as searches in the MEDLINE database.

[In Process Citation]
Sample searches from the PREMEDLINE database follow in Figures 2 and 3 (pages 5-6). The rubric [In Process Citation] has been added to the end of every Title (TI)

field to identify the status of the citation. Because the file does not include MeSH headings, all subject searching is performed as text word matches against words in the title and abstract (if present). If you do not qualify your search term, the search default is to Text Word (TW) searching. Therefore, all multi-word phrases must be entered as single words ANDed together.

Searching non-English Language Citations
Some citations to foreign language journals will have only the rubric phrase [In Process Citation] in the TI field because the English-language title is created and added to the Title field during the indexing process. The lack of a title in the TI field means that if the article does not also have an English-language abstract then the citation cannot be retrieved with a Text Word search. Therefore, be aware that Text Word searching in this database may result in some non-English language citations not being retrieved.

PREMEDLINE and MEDLINE
The citations in PREMEDLINE are given permanent Unique Identifiers (UI) that carry over into MEDLINE. The DA (Date of Entry) field, however, is specific to each file. That is, it will not be the same in the two files, reflecting the different dates the record was entered into each database. Also, be aware that these citations have not gone through NLM's quality control process. Citations may include extraneous, erroneous or

missing characters in any field. Errors present in the record will be corrected during the indexing process and the corrected citation will appear in MEDLINE. No errata, commentary, retractions, or corrections will be added to PREMEDLINE.

--prepared by Iris Renner
MEDLARS Management Section

Technical Notes

PDQ Passwords Are Being Discontinued

PDQ passwords will become obsolete later this year, and access to all MEDLARS databases and features will be permitted only with a MEDLARS (ELHILL) User ID and Password. PDQ searchers may begin using their MEDLARS passwords to access the database now. Grateful Med (GM) users and command language searchers should change the password in their GM PDQ setup or communications software automatic logon script to their MEDLARS password. However, users who ftp results of Auto SDI searches, or issue the $DSPRINT command from the MEDLARS server must continue using the PDQ password until further notice. Command language searchers are also reminded that they can access PDQ from any USER: prompt in the MEDLARS system by typing the command, FILE PDQ.

HISTLINE Update

When the new MeSH-based HISTLINE was created in 1994 (see pages 1, 9-14 of the July-August 1994 *Technical Bulletin*), approximately 30,000 of the old HISTLINE records could not be transferred because they lacked MeSH headings. A three phase project to add MeSH headings to these citations and transfer these records into the current HISTLINE has been under way.

The first phase of this retrospective conversion has been to isolate citations from journals in the NLM collection that were not covered in any other NLM database, and to convert them into the current HISTLINE format. This phase has now been completed and 14,975 of the old records were added to the current HISTLINE on June 21, 1996.

The second and third phases of the conversion project, now in progress, entail the identification and conversion of journal articles from non-NLM sources, and analytics which include book chapters and papers from conferences and meetings.

The value of "HMDOLD" in the Secondary Source (SI) field identifies records that have been converted from the old HISTLINE and can be searched as follows:

> USER:
> (SI) HMDOLD

For subject searching of these older records, MeSH headings and Keywords may both be used. There are no abstracts available for any of these citations.

FEDRIP Subfile Unavailable in TOXLINE

The FEDRIP (Federal Research in Progress) subfile was removed from TOXLINE when the database was regenerated in May 1996. It is expected that FEDRIP will be put back into TOXLINE in the August update of the file. Watch the online NEWS for further notice.

TRI94 Available on TOXNET

On June 26, 1996, TRI94 joined TRI87-93 to become the eighth file in the EPA's Toxic Chemical Release Inventory (TRI) series, available on TOXNET. TRI data is collected by EPA from facilities around the country and includes estimated releases of certain chemicals to the environment (air, water, land, underground injection) as well as source reduction and recycling activities. The data available on TOXNET are the same as the public data release documents.

Thirty new chemicals are reportable for the first time in TRI94 and several chemicals have been removed from the list of chemicals reported. The 1994 reporting year was the first year of mandatory federal facility reporting to TRI. A new data element with the mnemonic, FEDA (Federal Agency), has been added which allows searching for Federal Government agencies by acronym, full name, or individual word in the name.

New Journal Titles Selected for Indexing

Due to the current backlog created by the data entry dispute, some journals selected for addition to *Index Medicus* (and MEDLINE) in 1996 will begin indexing with the 1997 issues unless the publisher can provide the citation and abstract electronically in SGML Tagged format. Usually, new titles begin indexing during the year in which they are selected and they appear in the Titles Selected for Indexing section of the Serials Update information. (The Serials Update is available online with the $INFO command and via anonymous ftp; see page 14 of the May-June 1996 *Technical Bulletin* for details.)

Appendix A contains a list of the journal titles that have been selected following the February and June 1996 meetings of the Literature Selection Technical Review Committee (LSTRC); titles with an asterisk (*) before their names will be indexed beginning with 1997 issues. Titles without an * will be indexed beginning with the 1996 issues later this year.

Medical Subject Headings, Annotated Alphabetic List, 1996 Errata

In the 1996 *Medical Subject Headings, Annotated Alphabetic List* certain tree numbers appear with a plus sign but in fact have no descriptors indented under the tree number. For example, in the entry for 'Anabolic Steroids' the tree number is displayed as 'D6.597.100.194+' but there are no narrower terms for the descriptor at this tree number.

This problem occurred because the NLM publications program that generates the plus sign used the MeSH Trees data from the 1995 MeSH rather than from the 1996 MeSH. Consequently, a tree location having indentations in the 1995 MeSH appears with a plus in the 1996 *Annotated Alphabetic List*, whether or not there are indentations for the tree number in 1996 MeSH.

The problem is most visible in descriptors that became Pharmacologic Action (PA) terms in 1996 MeSH. Many of these 314 PA terms no longer have narrower terms treed under them; instead, those once narrower terms now contain the PA term in the new PA data element in the online MeSH Vocabulary File. (Two lists of PA terms are displayed in the 1996 *MeSH Tree Structures*, beginning on p. I-154.)

The reverse discrepancy was also produced. If a tree number had no indentations in 1995 MeSH but had narrower terms added in 1996, there is no plus sign displayed in the *Annotated Alphabetic List*. See, for example, 'Alkylating Agents'.

The problem was fixed by the time the *Alphabetic List for Index Medicus MeSH* (*Black & White MeSH*) was produced so this version can be used to check the *Annotated Alphabetic List*. The MeSH *Tree Structures* publication may also be used to check the actual terms listed under a heading showing

the plus sign, because it is unaffected by the problem. Or you can use the ELHILL TREE command online to display the hierarchical listing for any term e.g., TREE ALKYLATING AGENTS.

MeSH Tools 1997 - Ordering and Pricing Information

The ordering and pricing information for four 1997 MeSH Tools and the *List of Serials Indexed for Online Users (LSIOU)* is available. These publications may now be ordered from NTIS. Questions concerning orders may be directed to NTIS at 800-423-9255. Callers from outside the U.S. or Canada may reach NTIS at 703-487-4650. Questions about standing orders should be directed to the NTIS Subscription Section at 703-487-4630.

Medical Subject Headings—Annotated Alphabetic List, 1997
   Single Demand Order Number
      PB97-964801
   NTIS Standing Order Number
      PB97-964800
      $47.50 (U.S./Canada/Mexico)
      $95.00 (other countries)

Medical Subject Headings—Tree Structures, 1997
   Single Demand Order Number
      PB97-964901
   NTIS Standing Order Number
      PB97-964900
      $43.00 (U.S./Canada/Mexico)
      $86.00 (other countries)

Permuted Medical Subject Headings, 1997
   Single Demand Order Number
      PB97-965101
   NTIS Standing Order Number
      PB97-965100
      $38.75 (U.S./Canada/Mexico)
      $77.50 (other countries)

Revised *TOXNET Reference Guide* Available

Single copies of the revised *TOXNET Reference Guide*, dated June 1996, are available at no charge by sending a self-addressed mailing label to:

   ATTN: TOXNET Reference Guide
   Toxicology and Environmental Health
      Information Program
   National Library of Medicine
   8600 Rockville Pike
   Bethesda, MD 20894

New *Bibliography of Bioethics* Available

Volume 22, 1996 of the annual *Bibliography of Bioethics* is now available for purchase. The *Bibliography* corresponds to the BIOETHICSLINE database and is a comprehensive source of access to English-language literature on ethical, legal, and public aspects of health care and biomedical research. The price of this latest volume is $60.00 (U.S., Canada, and Mexico; $70.00 elsewhere). The order form included in Appendix B also has pricing information for earlier volumes in the series.

FTS2000 Reminder

If you have not already done so, please enter the new FTS2000 number, 1-800-525-0216, into your telecommunications software or into Grateful Med. CompuServe access ceased on August 1 and TYMNET access will be discontinued on September 1. Sprint/Telenet access will be discontinued at a later date, so that Canadian and Australian users, currently using this network can transition to other methods.

For more information or access procedures, refer to the article on pages 6-7 of the November-December 1995 *Technical Bulletin*. If you need assistance in making this change or experience difficulty in using the new number, contact the MEDLARS Management Section at mms@nlm.nih.gov or gmhelp@nlm.nih.gov or call the MEDLARS Service Desk at 800-638-8480. ▣

Editing and Data Entry Contract Dispute Update

NLM made the following online announcement on August 27, 1996:

The National Library of Medicine has recently signed an editing and data entry contract for MEDLINE citations and abstracts. The Library will shortly be able to keep up with current receipts of journals and is hopeful that the existing backlog will be reduced by the end of the calendar year. Thank you for your patience and support during this very difficult time.

AIDS Meeting Abstracts Available on the Web

The abstracts from the XI International Conference on AIDS, held in Vancouver, British Columbia, July 7-13, were made available on July 8 from the NLM Web site, HyperDOC. This was the first year in which the abstracts were obtained prior to the meeting and made available to the conferees for searching during the meeting.

In order to access the web site from HyperDOC (http://www.nlm.nih.gov), link on:

• NLM Services
• Special NLM Information Sources on Health-Related Subjects
• HIV/AIDS Resources
• Search Abstracts of the XI International Conference on AIDS.

The abstracts are searchable by author name, title words, and keywords. A keyword search looks for the word or words in the Title, Abstract, or Address field.

NLM hopes to have the abstracts from this conference indexed and available in AIDSLINE in the fall of this year. Watch the online NEWS for an announcement of this update.   ▣
--prepared by Anne White-Olson
MEDLARS Management Section

CATEGORY QUALIFIER	ELEMENT NAME	SEARCH STATUS	PRINT	PRINT FULL	PRINT DETAILED
AA	ABSTRACT AUTHOR	*	N	N	Y
AB	ABSTRACT	TW	N	N	Y
AD	ADDRESS	AD	N	N	Y
AU	AUTHOR	*	Y	Y	Y
CY	COUNTRY OF PUBLICATION	*	N	N	Y
DA	DATE OF ENTRY	*,R	N	N	Y
DP	DATE OF PUBLICATION	*	N	N	Y
EA	ENGLISH ABSTRACT INDICATOR		N	N	Y
ID	ID NUMBER	*	N	N	Y
IP	ISSUE/ PART SUPPLEMENT		N	N	Y
IS	ISSN	*	N	N	Y
JC	JOURNAL TITLE CODE	*	N	N	Y
LA	LANGUAGE	*	N	Y	Y
LI	SPECIAL LIST INDICATOR	*	N	N	Y
NI	NO-AUTHOR INDICATOR		N	N	Y
PG	PAGINATION		N	N	Y
RO	RECORD ORIGINATOR		N	N	Y
SB	JOURNAL SUBSET	*	N	N	Y
SI	SECONDARY SOURCE ID	*	Y	Y	Y
SO	SOURCE		Y	Y	Y
TA	TITLE ABBREVIATION	*	N	N	Y
TI	TITLE	TF,TW	Y	Y	Y
TT	TRANSLIT/VERNAC TITLE		Y	Y	Y
UI	UNIQUE IDENTIFIER	*,R	N	N	Y
VI	VOLUME ISSUE		N	N	Y
YR	YEAR	*	N	N	N

KEY

*	=	DIRECTLY SEARCHABLE
TW	=	TEXT WORD SEARCHABLE
TF	=	TITLE FIELD TEXT WORDS
AD	=	ADDRESS FRAGMENT SEARCHABLE
N	=	NO
Y	=	YES
R	=	RANGEABLE

NOTES:

YR IS A TWO-DIGIT NUMBER IN THE FORMAT YY.
PRINT AR IS ALSO AVAILABLE. IT PRINTS UI,AU,TI,TT,AB,SO.

Figure 1 - PREMEDLINE Unit Record

```
SS 1 /C?
USER:
file premedl              • Note the truncated name will retrieve the file.


PROG:
YOU ARE NOW CONNECTED TO THE PREMEDLINE (IN-PROCESS CITATIONS FOR MEDLINE) FILE.


SS 1 /C?
USER:
beta and carotene


PROG:
SS (1) PSTG (22)        • Note that you get the same results with or without the (TW) qualifier, because TW is the default.


SS 2 /C?
USER:
(tw) beta and carotene


PROG:
SS (2) PSTG (22)


SS 3 /C?
USER:
prt 1 dl


PROG:


1
UI   -   96292466
AU   -   Hebuterne X
AU   -   Wang XD
AU   -   Smith DE
AU   -   Tang G
AU   -   Russell RM
TI   -   In vivo biosynthesis of retinoic acid from beta-carotene involves and excentric cleavage pathway in ferret intestine [In Process Citation]
LA   -   Eng
ID   -   RO1-CA-49195-01/CA/NCI
DA   -   960730
DP   -   1996 Mar
CY   -   UNITED STATES
IS   -   0022-2275
TA   -   J Lipid Res
RO   -   O:099
PG   -   482-92
SB   -   M
IP   -   3
VI   -   37
JC   -   IX3
AA   -   AUTHOR
AB   -   This study was done to determine whether retinoic acid can be produced by excentric cleavage of beta-carotene in vivo. By using an inhibitor
         of retinaldehyde oxidation, citral, either retinaldehyde or beta-carotene was incorporated in a micellar solution and perfused through the
         upper portion of small intestine of ferrets. After 2 h perfusion of 1 microM retinaldehyde, retinoic acid rose in portal blood (+ 3.5 +/- 1.3 nmol/
         L) and was detected in the intestinal mucosa (30 +/- 2 pmol/g). When citral was added at 2 mM along with retinaldehyde, retinoic acid
         decreased in the portal blood and retinoic acid was not detected in the intestinal mucosa. With or without the presence of citral (2 mM), the
         perfusion of beta-carotene (10 microM) during 2 h caused a significant rise of retinoic acid in portal blood (+ 2.6 +/- 0.6 nmol/L and + 4.1
         +/- 0.6 nmol/L, respectively) and in liver; moreover, significant amounts of retinoic acid were detected in the intestinal mucosa (19 +/-3 pmol/
         g and 36 +/- pmol/g, respectively). This study demonstrates that after intestinal perfusion of beta-carotene in the ferret in vivo, a substantial
         amount of retinoic acid is formed via an excentric cleavage pathway.
AD   -   United States Department of Agriculture, Human Nutrition Research Center on Aging at Tufts University, Boston, MA 02111, USA.
SO   -   J Lipid Res 1996 Mar;37(3):482-92
```

Figure 2 - Searching the PREMEDLINE Database by Text Word (Subject)

```
SS 1 /C?
USER:
file premedl              • The full name or the abbreviated name will work here.

SS 1 /C?
USER:
jama (ta)                 • Searching on the Title Abbreviation (TA) field  will retrieve the citations from the issue(s)
                            currently in process.  The most recent issue of a title may not display first.
SS (1) PSTG (73)

SS 2 /C?
USER:
prt ti, so

PROG:

1
TI   -    Adverse effects of anabolic steroids [In Process Citation]
SO   -    JAMA 1996 Jul 17;276(3):257

2
TI   -    An Olympic medical legacy [editorial] [In Process Citation]
SO   -    JAMA 1996 Jul 17;276(3):248-9

3
TI   -    Aspirations and ideals in the Olympic games [editorial] [In Process Citation]
SO   -    JAMA  1996 Jul 17;276(3):247

4
TI   -    Physical activity and cardiovascular health. NIH Consensus Development Panel on Physical Activity and Cardiovascular Health [In Process Citation]
SO   -    JAMA  1996 Jul 17;276(3):241-6
          •
          .
          .
26
TI   -    Olympic athletes face heat, other health hurdles [news] [In Process Citation]
SO   -    JAMA  1996 Jul 17;276(3):178-80

27
TI   -     Female Olympians' sex tests outmoded [news] [In Process Citation]
SO   -    JAMA  1996 Jul 17;276(3):177-8

28
TI   -    A piece of my mind. Racing [In Process Citation]
SO   -    JAMA  1996 Jul 17;276(3):176
```

Figure 3 - Using PREMEDLINE to View a Journal's "Table of Contents"

Online Registration is Now Available via Netscape 2.0 (or Higher)

Online registration became available on the Internet Grateful Med World-Wide Web site (http://igm.nlm.nih.gov) in June 1996. The current online registration system works only with Netscape 2.0 or higher; the earlier versions of Netscape do not have the encryption necessary to safeguard the transmission of credit card numbers. The Library is currently developing a comprehensive online registration system that will allow non-Netscape users access and will also have many additional features available.

The current system allows users with Netscape to register online and immediately receive a User ID code and password. All persons using the online registration system must supply their credit card number as part of the application process. Billing to a credit card is the only option; if you wish to choose direct payment or bill to a Deposit Account, then you cannot use the online registration system and must apply with a paper application form. International users do not have the option of applying with a paper application form; they must use the online registration process and bill to a credit card. The new online registration is open to individuals and students from within the United States and also from outside the United States. Codes issued to persons within the United States may be used with a modem connection or with an Internet connection and they may be used with any version of Grateful Med or without a Grateful Med interface. Regular codes (that is, non-student codes) issued within the United States receive a $20.00 search credit. Codes issued to persons outside the United States will require the use of Internet for access and will contain a surcharge on the basic billing rate. Students, both domestic and international, receive a discounted search rate for two years; however, a surcharge will apply to the international student rate.

International Access

Prospective international users are urged to consider contacting an International MEDLARS Center for assistance in establishing an account to search the NLM databases. Grateful Med training and user support services may also be obtained from the International Centers. (NLM regrets that it cannot provide international users such support directly.) The full list of International MEDLARS Centers addresses is shown in Appendix C of this issue. It is also available from NLM's anonymous ftp server (nlmpubs.nlm.nih.gov) or on the NLM Home Page (http://www.nlm.nih.gov). The list may also be obtained by written request from:

Fact Sheets
Office of Public Information
National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894
E-mail: publicinfo@nlm.nih.gov

--prepared by Toby Port
MEDLARS Management Section

Proximity Searching in TOXNET

More than 10 years have elapsed since TOXNET's SAME command spearheaded NLM's efforts at implementing proximity searching. Over the years this command has proven its value in allowing for more precise searching and minimizing false drops. Nonetheless, it was recognized from the start that the SAME command would need to be improved before TOXNET could be said to offer full proximity searching capabilities. This improvement arrived recently in the form of two new operators, ADJ and NEAR, which now complement SAME. This article will review all three operators in the general context of proximity searching and show how they can result in more effective search strategies.

The "AND" Boolean Operator

In terms of online searching, proximity refers to the degree of spatial closeness between two or more search terms. Proximity searching involves techniques for specifying exactly how closely these terms should be spaced. It implies an AND Boolean operator and places a greater restriction upon it.

One could argue that the most elemental form of proximity operator is the AND command together with a specific data element. Thus, the HSDB search strategy - (HTOX) HEART AND ATTACK - in itself indicates that the words "heart" and "attack" should both appear in an HTOX field. There is proximity here in the sense that the system does not look for the words anywhere in the record, but specifically in the HTOX field. Among the many problems with not going beyond this approach is that a file, such as HSDB in particular, may contain many occurrences of a given field. Thus, although this approach will certainly retrieve chemical records where "heart attack" is listed, and in the context you want, there may be other instances where the retrieved records are actually false drops. False drops occur when you successfully retrieve what your search specifies, but the data are not really what you want. Thus, staying with the example, a record may be retrieved which speaks of "heart chambers" in one HTOX occurrence and "attack of white cells" in another. This probably has no bearing on heart attacks, but fulfills your search conditions.

The SAME Command

The SAME command takes proximity searching one step further by requiring TOXNET to look for terms ANDed together in the same data occurrence. Thus, entering SAME (HTOX) HEART AND ATTACK, would ensure that the words "heart" and "attack" both appear in the same HTOX data occurrence(s) of the retrieved records. This, of course, still does not guarantee that the phrase "heart attack" itself appeared, but it does increase the likelihood of it, relative to the aforementioned search without the SAME command.

ADJ and NEAR

The ADJ and NEAR operators go beyond the SAME command in allowing users to much more finely tune the nature and degree of closeness between search terms.

ADJ instructs TOXNET to search for terms right next to, or close to, one another, in the order specified. Thus, (HTOX) PULMONARY ADJ EMBOLISM looks for the exact phrase "pulmonary embolism" in HTOX field occurrences. A search such as (HTOX) VISUAL ADJ5 DISTURBANCES, on the other hand, would look for the the words "visual" and "disturbances", in that order, separated by fewer than 5 words, in HTOX field occurrences. This could include "visual disturbances", of course, but it also could include "visual and mental disturbances." The @ symbol can be used instead of ADJ with or without a space on either side of the @.

NEAR operates in a fashion very similar to ADJ, the difference being that the order of the terms does not matter. Thus, (HTOX) EXPIRATORY NEAR PEAK looks for either "expiratory peak" or "peak expiratory" in occurrences of fields within the HTOX category. The search (HTOX) WEIGHT NEAR2 LOSS would look for the words "weight" and "loss", separated from each other, in any order, by fewer than 2 words, in occurrences of fields within the HTOX category. This could include phrases such as "weight loss" or "loss of weight."

More on Proximity Operators

Nesting parentheses, truncation, and the ALL command cannot be used with the ADJ and NEAR operators, but can be used with the SAME operator. The table below shows correct and incorrect proximity designations.

RIGHT:	(htox) liver near5 heart or kidney near5 heart
RIGHT:	same (htox) (liver or kidney) and heart
WRONG:	(htox) (liver or kidney) near5 heart
RIGHT:	(enex) aquatic adj organism or aquatic adj organisms
RIGHT:	same (enex) aquatic and all organism:
WRONG:	(enex) aquatic adj organism:
WRONG:	(enex) aquatic adj all organism:

The SAME command generally gives a quicker response than a PROXIMITY operator and is less expensive to use.

Note in Figure 1 (below and on the next page) that the ADJ and NEAR operators may take a few minutes to give a response to your request.

```
[HSDB] SS 1 /cf?
USER:
same (enex) aquatic and all organism:

    Search in progress

1929 OCCURRENCES IN 960 RECORDS
SS (1) PSTG (960)

[HSDB] SS 2 /cf?
USER:
show cost

THE ESTIMATED TOTAL ONLINE COST FOR THIS 1 MINUTE 29 SECOND
HSDB SESSION IS $0.29
```

Figure 1 - Comparison of Cost of SAME and ADJ in HSDB

```
[HSDB] SS 1 /cf?          • Disconnected and logged in again to reset time/cost data.
USER:
(enex) aquatic adj organism or aquatic adj organisms

    Search in progress

SS (1) PSTG (943)

[HSDB] SS 2 /cf?
USER:
show cost

THE ESTIMATED TOTAL ONLINE COST FOR THIS 2 MINUTE 21 SECOND
HSDB SESSION IS $0.51
```

Figure 1 - Comparison of Cost of SAME and ADJ in HSDB cont.

ADJ and NEAR can be combined and used more than once in an individual search statement, and also be used within a SAME. Examples:

   (htox) nervous adj system near5 central same (firp) fire near control and foam

Proximity searching in ELHILL defaults to the Title and Abstract fields and post-qualification must be used if qualification is required. However, if you wish to qualify your TOXNET proximity search, you must use prequalification, e.g., (HTOX) skin adj contact.

More Proximity Examples Available Online

More examples of the use of these proximity operators may be found with the use of the EXPLAIN command. While online, simply enter EXPLAIN PROXIMITY for a general overview, or EXPLAIN SAME, EXPLAIN ADJ, or EXPLAIN NEAR, for more specific descriptions. Also, the *TOXNET Reference Guide*, recently revised and dated June 1996 (see Technical Note on page 3 of this issue for order information), contains a full description of TOXNET's proximity search operators.

Choosing Between SAME and a Proximity Operator

With the advent of ADJ and NEAR, more thought needs to be given to when to use these operators versus when to use SAME. You should lean towards using SAME when there is no particular functional relationship between the terms, such as when you are looking for effects of a chemical being studied on both cats and on dogs (e.g., SAME (NTOX) CATS AND DOGS). These are cases where you are looking for studies discussing several concepts, but where there is not necessarily a relationship between these concepts. On the other hand, where you are searching for a concept clearly represented by a phrase, such as "renal hypertension," you should try one of the more specific proximity operators (e.g., (HTOX) RENAL ADJ HYPERTENSION). Indeed, the earlier example of "heart attack," would better be searched not with the "same" command, but as (HTOX) HEART ADJ ATTACK.

Figure 2 illustrates the differences in the retrieval obtained using ADJ, NEAR and SAME commands in the HTOX field of the HSDB database. The ADJ command retrieves only citations with the exact phrase "atrial arrhythmias" in the HTOX field. ADJ is the most specific command and retrieves the smallest citation set. The NEAR command retrieves all citations with atrial and arrhythmia within 10 words of each other in the same sentence in the HTOX field. The SAME command retrieves citations where "atrial" and "arrhythmia" both occur in the same HTOX data occurrence, although not necessarily in the same sentence.

--prepared by Philip Wexler
Specialized Information Services Division

```
[HSDB] SS 1 /cf?
USER:
(htox) atrial adj arrhythmias          • Phrase "atrial arrhythmias" must appear in citation.

    Search in progress

SS (1) PSTG (33)

[HSDB] SS 2 /cf?
USER:
prt hits

1        -  HSDB
NAME     -   PARATHION
RN       -  56-38-2
HTOX     -  SYMPTOMATOLOGY: 1. Nausea is often the first symptom, followed by vomiting, abdominal cramps, diarrhea, and
            excessive salivation (sialorrhea). Hypothermia has been reported in animals and at least once in man as an early sign. 2.
            Headache, giddiness, vertigo, and weakness. 3. Rhinorrhea and a sensation of tightness in the chest are common in inhalation
            exposures.  4. Blurring or dimness of vision, miosis (with fixed pinpoint pupils), tearing, ciliary muscle spasm, loss of
            accommodation, and ocular pain. None of these eye effects are diagnostically dependable except in primary ocular exposures.
            Indeed, mydriasis is sometimes seen, probably due to sympatho adrenal discharge. 5. Bradycardia or tachycardia. Varying
            degrees of AV  heart block are described, as well as atrial arrhythmias. 6. Loss of  muscle coordination, slurring of  speech,
            fasciculations and twitching of muscles (particularly of the tongue and eyelids), and generalized profound weakness.
CONTINUE PRINTING? (YES/NO/CONT)
n
```

Figure 2 - Proximity Operators in TOXNET

[HSDB] SS 2 /cf?
USER:
(htox) atrial near10 arrhythmias   • **Atrial must be in same sentence within 10 words of**
                                            arrhythmia.

    Search in progress

SS (2) PSTG (38)

[HSDB] SS 3 /cf?
USER:
2 and not 1   • **Eliminating the overlap with SS 1.**

    Search in progress

SS (3) PSTG (5)

[HSDB] SS 4 /cf?
USER:
prt hits

1   - HSDB
NAME   - ETHANOL
RN   - 64-17-5
HTOX   - Alcohol in modest doses has the potential of producing **atrial** or ventricular **arrhythmias**. Although many of the pt
            have underlying heart disease, there are reports of pt with no evident heart disease where acute alcohol ingestion has caused
            arrhythmias. This sequence of events, (ie, cause and effect), has been referred to as the holiday heart syndrome. [NissenMB,
            Lemberg L; Heart, Lung 13 (1): 89-92 (1984)] **PEER REVIEWED**

        •
        •
        •

CONTINUE PRINTING? (YES/NO/CONT)
n

[HSDB] SS 4 /cf?
USER:
same (htox) atrial and arrhythmias   • **Atrial and arrhythmias must both be in the same**
                                            HTOX field.

    Search in progress

40 OCCURRENCES IN 40 RECORDS
SS (4) PSTG (40)

[HSDB] SS 5 /cf?
USER:
4 and not 2   • **Eliminating overlap with previous search statements.**

    Search in progress

SS (5) PSTG (2)

[HSDB] SS 6 /cf?
USER:
prt hits

1   - HSDB
NAME   - CYCLOPROPANE
RN   - 75-19-4
HTOX   - A VARIETY OF **ARRHYTHMIAS** MAY OCCUR DURING THE ADMINISTRATION OF CYCLOPROPANE, INCLUDING SINUS
            BRADYCARDIA, ATRIAL EXTRASYSTOLES, **ATRIAL** FIBRILLATION, A-V NODAL RHYTHMS, VENTRICULAR EXTRASYSTOLES,
            AND BIGEMINAL RHYTHM. [GOODMAN. PHARM BASIS THERAP 5TH ED 1975 , p. 86] **PEER REVIEWED**

        •
        •
        •

Figure 2 - Proximity Operators in TOXNET cont.

NLM Online Training Program: 1997 Schedule

The 1997 schedule of NLM Online Services Training classes has been finalized and can be found at the end of this article on page 12.

Classes Offered

- The *Fundamentals of MEDLARS Searching* is designed for new searchers, focusing on ELHILL commands, MEDLINE, and the MeSH vocabulary. *Fundamentals* concentrates on NLM's command language searching and is not recommended for Grateful Med searchers or searchers using other MEDLINE vendors. There is no charge for this class. **All students must hold an active MEDLARS User ID code.**

- The *Chemical/Toxicology/TOXNET Specialized Module* covers the ChemID, CHEMLINE, TOXLINE, TOXLIT, and various TOXNET databases and assumes knowledge of the ELHILL command language. There is no charge for this class. **All students must hold an active MEDLARS User ID code.**

- The *MEDLARS Refresher & Review (MEDLARS R & R)*, a four-hour workshop, will continue being offered by the National Online Training Center. The workshop includes a brief review of NLM system capabilities, a section covering recent enhancements to the system such as proximity searching, Pharmacologic Action Pre-explosions, key MeSH vocabulary enhancements, and demonstrations of commands and techniques, such as SPRINT, online sorting features and Multi-File Searching (MFS).

The workshop is intended for the experienced ELHILL command language searcher who would like a system refresher or update on MEDLARS. Computer hands-on sessions are not included.

The *MEDLARS R&R* classes are offered on a cost recovery basis; the fee is $45.00 and 4.0 MLA Continuing Education credit hours are awarded for completion of this class.

Unlike previous years when the *MEDLARS Refresher & Review* was conducted by the three Regional Online Training Centers, this workshop will be offered by the National Online Training Center and conducted by one of the Center's trainers. The National Online Training Center will try to accommodate requests from Library consortia, groups and MLA chapters, but due to the extensive *Fundamentals of MEDLARS Searching* class schedule there is the possibility that some requests will not be met.

This schedule is subject to change and additional workshops may be added; call the National Online Training Center to verify the current schedule or to schedule an *R&R* in your area. The number is 1-800-338-7657 and press "2" at the prompt.

How to Apply

To register for classes, use the Request for NLM Online Training form found in Appendix B. Registration for all classes should be sent to the National Online Training Center located in New York, NY at the New York Academy of Medicine. The address and fax number are provided on the registration form. You may also view the schedule and register online at http://www.nnlm.nih.gov/mar/online.

Every attempt will be made to place training applicants in the class requested. If a class is filled, the applicants will be registered for their second choice, and also automatically placed on a waiting list for their first choice. Approximately one month prior to the class, registrants will receive a packet with information on hotels, local site arrangements and the class agenda. **All classes are considered "tentative" pending sufficient enrollment one month before the class.**

Questions/More Information

If you have questions or need additional information, please contact the National Online Training Center or the MEDLARS Service Desk as shown in the table below. 🖻

--prepared by Janet Zipser
MEDLARS Management Section
and Maureen Czujak
National Online Training Center

Contact Points for Training Information

E-mail:	notc@nyam.org	
	mms@nlm.nih.gov	
Phone:	National Online Training Center:	800-338-7657 (press #2) or 212-876-8763
	MEDLARS Service Desk:	800-638-8480
URL:	http://www.nnlm.nlm.nih.gov/mar/online	

NLM Online Services Training Schedule
1997

Fundamentals of MEDLARS Searching

Dates	Location	Dates	Location
Jan 6-7	Baltimore, MD	Jul 14-15	Gainesville, FL
Jan 13-14	Seattle, WA	Jul 21-22	Bethesda, MD
Jan 27-28	Bethesda, MD	Jul 30-31	Chicago, IL
Jan 30-31	Tucson, AZ		
Feb 6-7	New York, NY	Aug 4-5	Portland, OR
Feb 20-21	Houston, TX	Aug 14-15	New York, NY
Feb 24-25	Bethesda, MD	Aug 25-26	Farmington, CT
Feb 24-25	Chicago, IL		
Mar 10-11	Charleston, SC	Sep 9-10	Omaha, NE
Mar 13-14	Omaha, NE	Sep 15-16	Bethesda, MD
Mar 17-18	Bethesda, MD	Sep 25-26	Baltimore, MD
Mar 24-25	Los Angeles, CA	Sep 29-30	Minneapolis, MN
Apr 7-8	Boston, MA	Oct 20-21	Bethesda, MD
Apr 10-11	Baltimore, MD	Oct 30-31	Los Angeles, CA
Apr 14-15	Bethesda, MD		
Apr 28-29	Farmington, CT		
May 5-6	Atlanta, GA	Nov 6-7	New York, NY
May 20-21	Seattle, WA	Nov 13-14	Houston, TX
		Nov 18-19	Chicago, IL
Jun 9-10	New York, NY	Dec 4-5	Farmington, CT
Jun 18-19	Houston, TX	Dec 11-12	ChapelHill, NC
Jun 23-24	Bethesda, MD	Dec 16-17	Seattle, WA

Chem/Tox/TOXNET Specialized Module

Dates	Location	Dates	Location
Jan 29-30	Bethesda, MD	Jul 23-24	Bethesda, MD
Mar 19-20	Bethesda, MD	Oct 22-23	Bethesda, MD

MEDLARS R&R (Refresher & Review) Workshop

Dates	Location	Dates	Location
Jan 8	Baltimore, MD	Feb 14	Bethesda, MD
Jan 10	New York, NY	Feb 26	Chicago, IL
Jan 15	Seattle, WA	Mar 26	Los Angeles, CA
Jan 24	New York, NY	Mar 7	Charleston, SC
Feb 3	Farmington, CT		

Search Hint: Searching ELHILL Files for Words Containing Diacritical Marks

Introduction

Searchers need to be aware that the presence of diacritical marks can result in incomplete retrieval with proximity search operators in ELHILL files (e.g., MEDLINE, CATLINE, etc.). A diacritical mark is a symbol added to a character to distinguish it from another of similar form, or to give it a particular pronunciation, e.g., the accent grave in French, the German umlaut, the Spanish cedilla. The diacritical marks themselves, although they are coded into ELHILL, have never been displayed online because of the character limitations on most keyboards; until 1994 they were all represented online by a single symbol, a colon, appearing before the letter the diacritical mark modified. Only the printed *Index Medicus* shows the correct, graphical display of all the diacritics.

As of January 1994, the colons representing diacritical marks ceased being displayed online in ELHILL (see pages 12-13 of the November-December 1993 *Technical Bulletin* for more details). Therefore, cafe´-au-lait displays online now as cafe-au-lait, not as caf:e-au-lait. There is no colon shown to represent the accent grave over the e in cafe. However, behind the scenes, the accent is still there in ELHILL, only the online display of the colon to represent it has been disabled. The translation to the appropriate diacritical mark still occurs during the process of creating *Index Medicus*.

To display the colons that represent diacritical marks during an online search session, give the command **$SET TRANS NONE**. (Depending on your software and hardware, diacritical marks may display as other characters including degree marks, boxes, etc.) Note the difference in the title display after this command is given. See Figure 1.

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

SS 1 /C?
USER:
(tf) cafe and lait

PROG:
SS (1) PSTG (12)

USER:
prt 4  ti              • Default print format shown below does NOT display colons for  diacritical marks.
PROG:

1
TI   -    Treatment of cafe au lait macules with lasers. A clinicopathologic correlation.

2
TI   -    Cafe-au-lait macule in type V skin: successful treatment with a 510 nm pulsed dye laser.

3
TI   -    Complete elimination of large cafe-au-lait birthmarks by the 510-nm pulsed dye laser.

4
TI   -    Noonan syndrome with cafe-au-lait spots and multiple lentigines syndrome are not linked to the  neurofibromatosis type 1 locus.


SS 4 /C?
USER:
$set trans none         • Command that requests ELHILL to display colons in place of diacritical marks.
USER:
prt 4  ti

PROG:

1
TI   -    Treatment of cafe au lait macules with lasers. A clinicopathologic correlation.          • There is no colon because in this
                                                                                                      article cafe does not have  a diacritic.
2
TI   -    Caf:e-au-lait macule in type V skin: successful treatment with a 510 nm pulsed dye laser.

3
TI   -    Complete elimination of large caf:e-au-lait birthmarks by the 510-nm pulsed dye laser.

4
TI   -    Noonan syndrome with caf:e-au-lait spots and multiple lentigines syndrome are not linked to the neurofibromatosis type 1 locus.
```

Figure 1 - Title Displays With and Without $SET TRANS NONE

The Problem

These "invisible" colons can result in incomplete retrieval for the unwary searcher using proximity operators. For example, notice the difference in retrieval from the two search statements below. The user wants to retrieve all articles containing the phrase cafe-au-lait; the MeSH heading CAFE-AU-LAIT SPOTS was introduced in 1996, so earlier citations will need to be retrieved in another way.

```
SS 1 /C?
USER:
(tw) cafe and lait

PROG:
SS (1) PSTG (94)

SS 2 /C?
USER:
cafe near lait

PROG:
SS (2) PSTG (20)
```

The reason for this difference is Text Word (TW) and Title Field Text Word (TF) searching ignore the colon in the word cafe but the proximity operator (NEAR) does not. Proximity operators (NEAR, ADJ, CONTAINS) see the underlying diacritic represented by the colon and so all citations that are caf:e-au-lait are not retrieved, because caf:e does not match the stated request for cafe.

The Solution

If you suspect that the word you are searching for may contain a diacritical mark and you want to use a proximity command, then the simplest thing to do is to truncate the word before the letter that has the diacritical mark as shown below.

```
USER:
caf: near lait

PROG:
SS (1) PSTG (91)
```

The Text Word search retrieves 94 citations and the proximity search with the truncated term retrieves 91. This is because Text Word searching also searches the MeSH Heading Fragments (MHF) field for the individual words in a MeSH heading. So, the Text Word search retrieves three citations that are indexed with CAFE-AU-LAIT SPOTS, but do not have these words (with or without diacritical marks) in the Title or Abstract fields.

If truncation is not possible, because it is the first letter of the word that has the diacritical mark or because the truncated form of the word creates a retrieval too large for proximity searching, then it would be better to use Text Word searching instead. ◫

--prepared by Toby Port
MEDLARS Management Section

New Journal Titles for *Index Medicus*/MEDLINE

(Chosen by the Literature Selection Technical Review Committee (LSTRC) as of July 1996.)

KEY * = Indexing begins in 1996.
If not asterisked (*) then
indexing begins in 1997.

* Academic Radiology
  Administration and Policy in Mental Health
  Alcohol Health and Research World
* Alternative Therapies in Health and Medicine
  American Journal on Addictions
* American Journal of Contact Dermatitis
  American Journal of Geriatric Psychiatry
  American Journal of Primatology
* Anales Espanoles de Pediatria
  Annals of Behavioral Medicine
  Anxiety
* Artificial Life
  Behavioral and Brain Sciences
  Behavioral Pharmacology
  Behavioral Sciences and the Law
  Bulletin of Hunan Medical University
  Chemistry and Biology
  Chinese Journal of Applied Physiology
  Chinese Journal of Chromatography
  Chinese Journal of Experimental and Clinical Virology
  Chinese Journal of Hematology
  Chinese Journal of Medical Instrumentation
  Chinese Journal of Reparative and Reconstructive
      Surgery
  Clinical and Diagnostic Virology
  Clinical Hemorheology
  Clinical Molecular Pathology
  Clinical Psychology Review
* Contributions to Epidemiology and Biostatistics
  Current Opinion in Hematology
  Current Opinion in Pulmonary Medicine
  Cytokines and Molecular Therapy
  Depression
  Development and Psychopathology
  Developmental Psychology
  Early Pregnancy: Biology and Medicine
  Emerging Infectious Diseases
  Endothelium
  Epidemiologia e Psichiatria Sociale
* European Journal of Emergency Medicine
  European Journal of Medical Research
* European Radiology
  Harvard Review of Psychiatry
  IEEE Transactions on Medical Imaging
* IEEE Transactions on Rehabilitation Engineering
  International Journal of Geriatric Psychiatry
* International Urogynecology Journal and Pelvic Floor
      Dysfunction
  Journal of Adolescence
  Journal of Anxiety Disorders

  Journal of Biomedical Engineering
  Journal of Capillary Electrophoresis
* Journal of Cardiac Failure
  Journal of Child and Adolescent
      Psychopharmacology
  Journal of Chinese Medicinal Materials
  Journal of Clinical Child Psychology
  Journal of Clinical Otorhinolaryngology
* Journal of Endovascular Surgery
* Journal of Epidemiology
  Journal of Forensic Medicine
* Journal of Glaucoma
  Journal of Hygiene Research
  Journal of the International Neuropsychological
      Society
  Journal of Marital and Family Therapy
* Journal of Mass Spectrometry
* Journal of Maternal-Fetal Medicine
  Journal of Mental Health Administration
* Journal of Neurovirology
* Journal of Nuclear Cardiology
* Journal of Pediatric and Adolescent Gynecology
  Journal of Personality Disorders
  Journal of Psychopharmacology (Oxford)
  Journal of Psychotherapy Practice and Research
* Journal of Sleep Research
* Journal of the Society for Gynecologic Investigation
  Journal of Telemedicine and Telecare
  Journal of Women's Health
  Law and Human Behavior
  Medical Care Research and Review
  Mental and Physical Disability Law Reporter
  Methods, A Companion to Methods in Enzymology
* Molecular Medicine Today
  Neuroimage
  Neuropsychiatry, Neuropsychology, and Behavioral
      Neurology
  Neuropsychology
* Pathology
  Psycho-Oncology
  Radiation Oncology Investigations
* Seminars in Pediatric Neurology
* Seminars in Reproductive Endocrinology
  Spectroscopy and Spectral Analysis
  Systematic Biology
* Tobacco Control
  Ultrasonics Sonochemistry
  Vital and Health Statistics. Series 20: Data from the
      National Vital Statistics System
  West China Journal of Stomatology

REQUEST FOR NLM ONLINE TRAINING

> Online training classes concentrate on ELHILL command language searching and thus
> are not recommended for *Grateful Med* searchers or searchers using other MEDLINE vendors.

TRAINEE NAME: ———————————————— PHONE: (———) ————————— x ———————————

ORGANIZATION: ———

ADDRESS: ———

CITY, STATE, ZIP: ———————————————————————————————————————

E-mail address: ——

User ID code: ☐ ☐ ☐ ☐ ☐   *OR*   I am also applying for a User ID code ☐
                                        (Please include application forms for a code.)

FUNDAMENTALS OF MEDLARS SEARCHING

DATES ∕ SITES REQUESTED: ———————————————— ————————————————
                         1st Choice   2nd Choice

CHEM/TOX/TOXNET Specialized Module: (Requires familiarity with MEDLARS.)

DATES ∕ SITES REQUESTED: ———————————————— ————————————————
                         1st Choice   2nd Choice

MEDLARS R&R Workshop: (Requires familiarity with MEDLARS.)

DATES ∕ SITES REQUESTED: ———————————————— ————————————————
                         1st Choice   2nd Choice

MAILING/FAXING INSTRUCTIONS :

Mail ∕ FAX form to:

National Online Training Center
The New York Academy of Medicine
1216 Fifth Ave.
New York, NY 10029-5293

FAX: 212 ∕ 534-7042
Questions?   Call 1-800-338-7657 (press #2) *OR*
                212 ∕ 876-8763

8 ∕ 96   MMS

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Retrieving NLM Publications in Electronic Format

Issues of the *NLM Technical Bulletin* may be retrieved electronically via Internet: ftp, gopher or e-mail. New issues are added as they go to print; look for new issues on the server during the last week of February, April, June, August, October and December. Also available electronically are updated chapters of the *Online Services Reference Manual* (OSRM) and the serials publications: *List of Serials Indexed for Online Users* (LSIOU) and *List of Journals Indexed in Index Medicus* (LJI). Monthly update information for indexed titles, formerly found at the back of each *Technical Bulletin* issue is available electronically. Instructions for retrieving any of these publications are included below.

If you prefer to get your copy of the *Technical Bulletin* routinely electronically, please notify MMS so that we do not continue to mail you a *Technical Bulletin*. Our e-mail address is: mms@nlm.nih.gov. Please include your User ID code.

Technical Bulletin

ftp:
PostScript and Acrobat files
anonymous ftp to nlmpubs.nlm.nih.gov
in the directory nlminfo/newsletters/
techbull

gopher:
PostScript and Acrobat files
gopher.nlm.nih.gov in the directory
Online Services/MEDLARS
Information/NLM Technical Bulletin

e-mail:
Send an e-mail message to: files@mailserv.nlm.nih.gov. In the body of the message, enter the commands:

    SEND /nlminfo/newsletters/techbull/mmmmmm9y.ps or mmmmmm9y.pdf
    END

Note: mmmmmm9y.ps or pdf should be substituted with the proper months and year of the Technical Bulletin to be e-mailed, e.g., novdec95.ps or pdf.
Note: Commands must be sent in the body of the e-mail message; anything in the subject line is ignored.

After receiving the message, the e-mail file server will mail the ps (PostScript) or pdf (portable document format) file mmmmmm9y.ps or mmmmmm9y.pdf back to you.

Online Services Reference Manual -- Updated Chapters

ftp:
WordPerfect, PostScript
anonymous ftp to nlmpubs.nlm.nih.gov
in the directory online/medlars/
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

ftp:
WordPerfect, PostScript and Text files
anonymous ftp to nlmpubs.nlm.nih.gov
in the directory online/journals

gopher:
WordPerfect and Text files
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
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
Interlibrary Loan (ILL)/DOCLINE Assistance .... ill@nlm.nih.gov
International Programs Office .... siegel@nlm.nih.gov
Internet Grateful Med Help .... access@nlm.nih.gov
MEDLARS Management Section .... mms@nlm.nih.gov
MeSH Heading Suggestions .... meshsugg@nlm.nih.gov
National Center for Biotechnology Information (NCBI) .... info@ncbi.nlm.nih.gov
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
Online Images from the History of Medicine .... oli@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
e-mail Based File Server .... files@mailserv.nlm.nih.gov

NLM Internet Access

TELNET

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

FTP

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

World Wide Web Sites

Internet Grateful Med .... http://igm.nlm.nih.gov
NLM Home Page (HyperDoc) .... http://www.nlm.nih.gov
National Network of Libraries of Medicine (NN/LM) ..... http://www.nnlm.nlm.nih.gov
National Online Training Information .... http://www.nnlm.nlm.nih.gov/mar/online
NLM AIDS Home Page .... http://sis.nlm.nih.gov/aidswww.htm

NATIONAL LIBRARY OF MEDICINE

GRATEFUL MED

NLM Phone Numbers: Public Information 800-272-4787   MEDLARS Service Desk 800-638-8480
Internet E-Mail Addresses: publicinfo@nlm.nih.gov   mms@nlm.nih.gov