Using Subheadings

MeSH Subheadings are used with MeSH terms to help describe more completely a particular aspect of a subject. In the MeSH database, subheadings logically paired with the main heading are presented. Check the box of specific interest and then send to **Search Box with AND** to build a search.

Subheadings:

☐ analysis ☐ blood ☐ blood supply
☐ diagnosis ☐ diet therapy ☐ drug therapy

For example, if both analysis and diagnosis were selected from the above example and sent to the **Search Box with OR**, the search would include:
("Neoplasms/analysis"[MeSH] OR "Neoplasms/diagnosis"[MeSH])

Subheadings always follow headings, e.g. the drug therapy of asthma will be displayed as: *asthma/drug therapy*.

Major Topic Headings

Subject analysts examine each journal article and assign the most specific MeSH terms applicable - typically ten to twelve per citation. In PubMed, the major topic is represented by an asterisk. Use the **Restrict to Major Topic headings** check box to limit a search to citations where the heading (and/or subheading) is the major focus of the article, then **Send To Search Box with AND**, **OR** or **NOT**. The term will be followed by [MAJR] (e.g. "Neoplasms"[MAJR])

Note: To view MeSH terms for a selected article in PubMed, select **Citation** from the Display drop-down menu.

MeSH Terms:

- ♦ Adenocarcinoma/drug therapy*
- ♦ Adult
- ♦ Chemotherapy, Adjuvant
- ♦ Esophageal Neoplasms/surgery*

Advanced Searching in PubMed

Knowing MeSH headings, subheadings and other qualifiers, one may search **PubMed** directly by using their specific codes:

- ▪ MeSH Heading: **[mh]** or **[MeSH]** may be added to a term to restrict a search to only MeSH terms (e.g. knee [mh]). [MeSH] is not needed when using subheadings.
- ▪ Subheadings: Each subheading has a two letter abbreviation. Therapy is **th**; so cancer/therapy and cancer/th are equivalent searches. Only one subheading per term is allowed; combine additional subheadings by using OR (neoplasms/th OR neoplasms/an). A search may also "free float" headings [mh] and subheadings **[sh]** (e.g., hypertension [mh] AND toxicity [sh]). The complete list of subheading abbreviations is available in the online PubMed Help manual
- ▪ Do Not Explode: use **[mh:noexp]** to restrict a search to articles focusing on the broadest MeSH term
- ▪ Major Topics: use **[majr]** to restrict a search to citations where the term is the major topic or focus of the article. This can be used in combination with the above Do Not Explode: **[majr:noexp]**
- ▪ Other codes: additional codes and tags are available to limit searches. Visit **PubMed Help** for **Search Field Descriptions and Tags**

Assistance and Training

The left sidebar in both MeSH and PubMed links to Tutorials, FAQ and to the PubMed Help manual which includes information on MeSH. Additional information is also available in the **MeSH Browser** at: **http://www.nlm.nih.gov/mesh/**

Searching PubMed® with MeSH®

PubMed MeSH (**MEdical Subject Headings**) is the National Library of Medicine's (NLM) controlled vocabulary used for indexing articles for the MEDLINE® subset of PubMed. MeSH terminology provides a consistent way to retrieve information where several different terms may be used for the same concept.

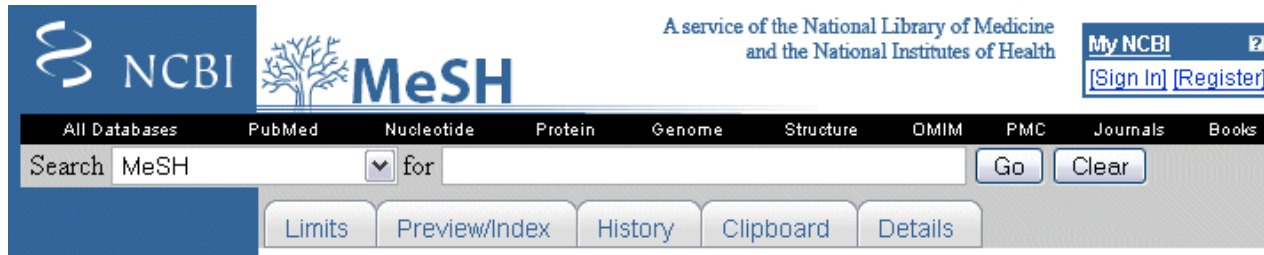Available in Browser and Database formats: http://www.nlm.nih.gov/mesh/

MeSH Features

MeSH containing nearly 25,000 descriptors is updated weekly and reviewed annually.

- Search **Indexed for MEDLINE** citations (over 92% of the PubMed database) with MeSH terms
- Limit searches to citations where the MeSH term is the major focus of the article
- Broaden/Narrow searches with a MeSH tree
- Combine MeSH terms using the MeSH Database Search Box
- Use subheading check boxes to build complex search strategies
- Focus searches using other types of MeSH terms including publication types [pt], substance names [nm] or registry numbers [rn] and pharmacological actions [pa]

NOTE: MeSH terms apply only to **Indexed for MEDLINE** citations. Other types of citations (e.g. **as supplied by publisher**) cannot be searched using MeSH terms.

NCBI MeSH

A service of the National Library of Medicine and the National Institutes of Health

My NCBI [?]
[Sign In] [Register]

All Databases   PubMed   Nucleotide   Protein   Genome   Structure   OMIM   PMC   Journals   Books

Search MeSH ▾ for [   ] Go   Clear

Limits   Preview/Index   History   Clipboard   Details

Searching with the MeSH Database

To access MeSH from PubMed, click on **MeSH Database** in the blue navigation bar. Enter the topic of interest into the Search bar and click the **Go** button.

PubMed Services
Journals Database
MeSH Database

Possible results include: a fully displayed term (e.g. prognosis), several terms (e.g. measles) or a related term (e.g. cancer).
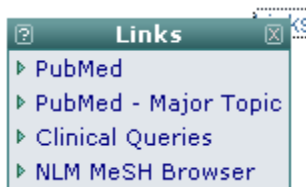
☑ 1: Neoplasms   Links
    New abnormal growth...

Note: verify that the definition of the term matches the expected definition.

Using Links

In the results list, click **Links** adjacent to the MeSH term desired. The drop-down menu offers several options:

▪ PubMed: search PubMed with the term
▪ PubMed – Major Topic: search PubMed
  with the MeSH term, retrieving only citations where the term is a major focus

Links
▸ PubMed
▸ PubMed - Major Topic
▸ Clinical Queries
▸ NLM MeSH Browser

▪ Clinical Queries:
  put the MeSH term into the Clinical Queries search box where the search may be further refined
▪ NLM MeSH Browser: show the MeSH browser Descriptor Data for this term including Scope Note, Allowable Qualifiers and the MeSH Tree
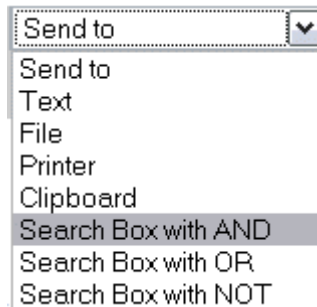
Refining a Search

The MeSH Database offers several methods to clarify and focus searches. From the results list, click the desired MeSH term to fully display the term. Additional information may include the definition or scope note, the year the term was added to the MeSH Database, **Previous Indexing** terms and years, **Entry Terms** (similar terms used by an author), **Registry Number** of substance names, and:
• MeSH tree(s) including this term
• **Do Not Explode this term** check box
• **Subheadings** check boxes and
• **Restrict Search to Major Topic headings only** check box
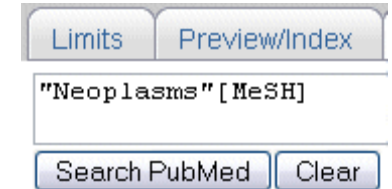
Combining MeSH Terms

Two ways to combine MeSH terms are:
• Search the MeSH Database for each term individually, send each to PubMed using the **PubMed** option in **Links**, then combine these searches in PubMed using the **History** tab
• Use the **Send To** menu in the **MeSH Database**

Send to ▾
Send to
Text
File
Printer
Clipboard
Search Box with AND
Search Box with OR
Search Box with NOT

To combine terms in the MeSH Database, first search and select a term by using the check box, either from results page or the full display page. Next, from the **Send To** drop

down menu, select **Search Box with AND**. A new box will appear near the top of the page containing the selected term labeled [MeSH].

To add additional terms, first **Clear** the Search bar at the top of

Limits   Preview/Index
"Neoplasms"[MeSH]
Search PubMed   Clear

the page and search for the next term. Add it to the search box by using **Send To Search Box with AND, with OR** or **with NOT.**

When all desired terms have been added to the Search Box, click **Search PubMed**.

MeSH Tree and Explosion

MeSH terms are arranged hierarchically by subject categories, with more specific (narrower) terms arranged beneath broader terms. PubMed automatically explodes searches to include *all* narrower terms. Thus, a search for neoplasms will include all articles which focus not only on the main term, neoplasms, but also focus only on narrower terms, cysts, hamartoma, etc.

All MeSH Categories
  Diseases Category
    Neoplasms
      Cysts
        Arachnoid Cysts
        ···
        Urachal Cyst
      Hamartoma
        Hamartoma Syndrome, Multiple
        Proteus Syndrome
        ···

Check **Do Not Explode this term** for articles focusing only on the main term rather than solely on narrower terms.

NOTE: The MeSH tree may also be used to identify related broader or narrower terms to help focus a search or find additional search terms. Click on those terms to access them.