

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(es) 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 AND, the search would include:

("Neoplasms/analysis"[MeSH] OR
"Neoplasms/diagnosis"[MeSH])

A subheading always follows the heading. Again, 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 subheading) is the major focus of the article and 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. [mh] 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 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. See Appendices in PubMed Help

Assistance and Training

The left sidebar in both MeSH and PubMed links to PubMed's Help manual which includes information on MeSH, to tutorials and to FAQs. Additional information is available in the MeSH Browser at <http://www.nlm.nih.gov/mesh/>.

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Searching PubMed® with MeSH®

MeSH – Medical Subject Headings – is the National Library of Medicine's controlled vocabulary used for indexing articles for MEDLINE®/PubMed. MeSH terminology provides a consistent way to retrieve information that may use several different terms for the same concept.

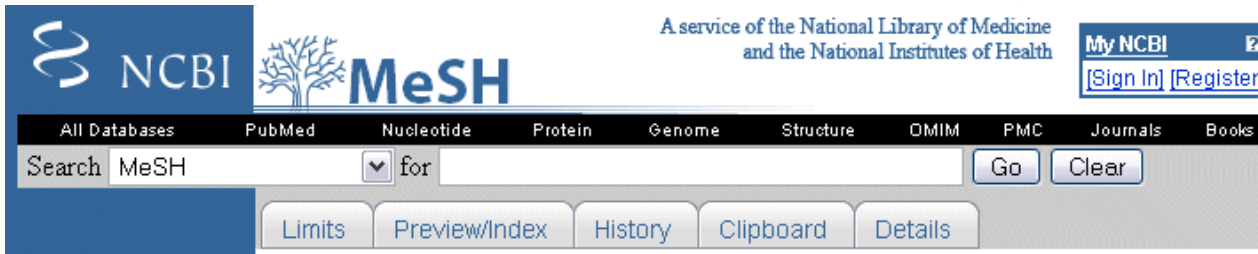
Available free through PubMed and at: <http://www.nlm.nih.gov/mesh/>

MeSH Features

- MeSH contains more than 23,000 terms and is updated weekly and reviewed annually.
- Search "Indexed for MEDLINE" citations (nearly 85% 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 pharmaceutical actions [pa]

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

The National Network of Libraries of Medicine (NN/LM), an outreach program of NLM, provides assistance and training nationwide. To find a local library, please call 800-338-7657 or go to <http://nmlm.gov/members/>



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
- 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

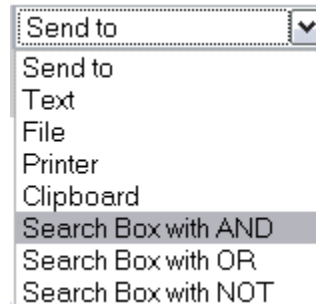
The MeSH Database offers several methods to clarify and focus searches. From the results list, click the desired MeSH term to fully display the term. Additional information may include the definition or scope note, the year the term was added to the MeSH Database, “Previous Indexing” terms and years, “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:

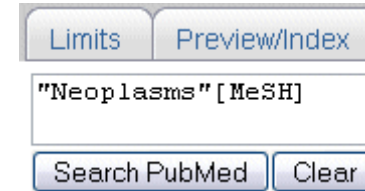
- Search the MeSH Database for each term individually, send each term PubMed using the *PubMed* option in Links, then **combine the searches in PubMed** using the *History* tab
- Use the *Send To* menu in the **MeSH Database**



To combine terms in the MeSH Database, first search and select a term by using the check box. This can be done from results page or from 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 the page and search for the next term. Add it to the search box by using *Send To Search Box with AND, OR or 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 neoplasms, but also on 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 on narrower terms (e.g. Proteus Syndrome).

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.