

Using Subheadings

Subheadings are used 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 appropriate subheading box(es), then use **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 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.

MeSH Terms:

Arthroplasty, Replacement, Knee/methods*
Female

Use **Restrict to Major Topic headings** to limit a search to citations where the heading 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, click on the **MeSH Terms**, etc. plus button below the citation in the abstract format.



Publication Types, MeSH Terms, Grant Support

Advanced Searching in PubMed

Search **PubMed** directly by using specific MeSH headings, subheadings and other qualifier 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:** Two letters may be used for subheadings. Therapy is **th**; so cancer/therapy and cancer/th are equivalent searches. Use only one subheading per term; 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 searches 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 may be used with 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

Help and **Tutorials** links are in PubMed and the MeSH database. Find additional information in the **MeSH Browser** at: www.nlm.nih.gov/mesh/.

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Searching PubMed® with MeSH®

The National Library of Medicine's (NLM) **Medical Subject Headings (MeSH)** is the 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.

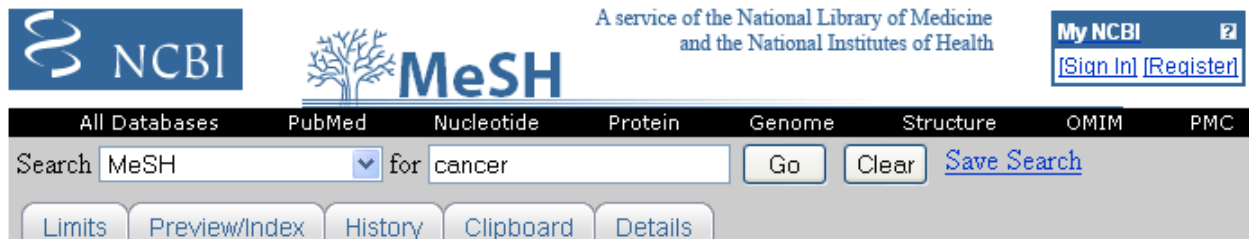
MeSH Features

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

- Search **Indexed for MEDLINE** citations (92% of the PubMed database) using MeSH terms
- Limit searches to citations where the MeSH term is the major focus of the article
- Broaden/Narrow searches with a MeSH tree
- Use subheadings to build complex search strategies
- Focus searches using other types of MeSH terms including publication types [pt], pharmaceutical actions [pa], or substance names [nm]
- Access the MeSH Browser for annotations: <http://www.nlm.nih.gov/mesh/>

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.

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://nnlm.gov/members/>



Searching with the MeSH Database

To access MeSH from PubMed, click on **MeSH Database** on the PubMed homepage or under “More Resources” in Advanced Search. Alternatively, use **Resources** on the top blue bar, then **Literature**, then **MeSH**.

Enter a topic into the Search bar and click the **Go** button. Possible results include: a fully displayed term (e.g. prognosis), several terms (e.g. measles) or a related term (e.g. cancer).

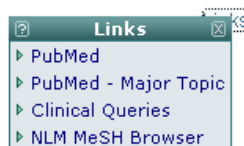
✓ 1: [Neoplasms](#) [Links](#)
New abnormal growth...

Note: Always 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 selected term
- **PubMed – Major Topic:** search PubMed with the MeSH term, retrieving citations where the term is a major focus of the article
- **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. Click the selected MeSH title to fully display the term including:

- Definition or scope note
- **Subheadings** check boxes
- **Restrict Search to Major Topic headings only** check box
- **Do Not Explode this term** check box
- **Entry Terms** (similar terms used by an author)
- MeSH tree(s) including this term

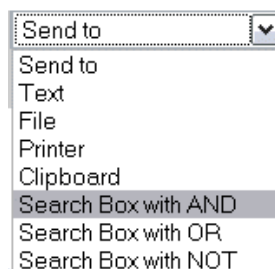
Additional information may include the year the term was added to the MeSH Database, **Previous Indexing** terms and years, and **Registry Number** of substance names.

Combining MeSH Terms

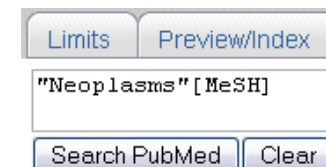
Two ways to combine MeSH terms are:

1. 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.
2. Use the Send To menu in the MeSH Database

To combine terms using the **Send To** box, 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 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 on narrower terms such as **urachal cyst**.

[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 focusing on related narrower terms.

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