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.

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


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.

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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
2. 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

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.

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.

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 tofind additional search terms. Click on terms to access and use them in a search.