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/

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Revised: August 2008
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.

Possible results include: a fully displayed term (e.g. prognosis), several terms (e.g. measles) or a related term (e.g. cancer).

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 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

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 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.

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.