Searching PubMed® with MeSH®

The National Library of Medicine’s (NLM) Medical Subject Headings (MeSH) is the controlled vocabulary used for indexing PubMed (PubMed.gov) citations.

MeSH provides a consistent way to retrieve information where different terms are used by authors for the same concept.

MeSH Features

MeSH contains nearly 27,000 descriptors. It is updated weekly and reviewed annually.

- Search Indexed for MEDLINE citations (90% of the PubMed database) using MeSH terms
- Limit searches to citations where the MeSH term is the major focus of the article
- Broaden/Narrow a search using the MeSH hierarchy tree
- Use subheadings to build complex and focused search strategies
- Focus searches using other types of MeSH terms including publication types [pt], pharmaceutical actions [pa], or substance names [nm]

NOTE: MeSH terms apply only to Indexed for MEDLINE citations.

Advanced Searches with Field Tags

Search PubMed directly by using specific MeSH headings, subheadings and other qualifier codes; case does not matter. For the complete list, visit PubMed Help and the Search Field Descriptions and Tags link.

- **MeSH Heading**: [mh] or [MeSH] may be added to a term to restrict a search to only MeSH terms (e.g. knee [mh])
- **Subheadings**: Two letters may be used for subheadings. Therapy is th; so cancer/therapy and cancer/th are equivalent searches
  A search may also "free float" headings [mh] and subheadings [sh] (e.g., hypertension [mh] AND toxicity [sh])
- **Do not include MeSH terms** found below this term in the MeSH hierarchy: use [mh:noexp], [majr:noexp] or [sh:noexp] to restrict searches to articles focusing on the broadest MeSH term


Major Topic Headings

Subject analysts examine each article and assign the most specific MeSH terms applicable, with a related subheading: typically ten to twelve headings per citation. In PubMed, the major topic is represented by an asterisk.

**MeSH Terms**

Fentanyl
Neoplasms/therapy*

To view MeSH terms for a selected article in PubMed, click on the link to **MeSH Terms** below the citation in the abstract format.

Publication Types, MeSH Terms, Substances

In the MeSH Database, use **Restrict to MeSH** **Major Topic** to limit a search to citations where that term is the major focus of the article. The term is added to the search builder will be followed by [MAJR] (e.g. "Neoplasms"[Majr])

Subheadings

Subheadings help describe more completely a particular aspect of a topic. In the MeSH database, subheadings logically paired with the main heading are presented. Check the appropriate box(es), then use the **Add to search builder** button with **OR** to build a search.

In this example, the search would include: ("Neoplasms/analysis"[Mesh] OR "Neoplasms/epidemiology"[Mesh])

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Start in the MeSH Database

Access MeSH in PubMed from the drop-down menu OR click on MeSH Database from the PubMed homepage.

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

Refine a Search

The MeSH Database offers options to clarify and focus searches. Click the selected MeSH term (neoplasms) to view:
- Definition, often with the year introduced
- Check boxes including:
  - Subheadings
  - Restrict Search to MeSH Major Topic
  - Do not include MeSH terms found below this term in the MeSH hierarchy
- Entry Terms (similar terms used by authors)
- See Also related and linked terms
- MeSH hierarchy of linked terms

Combine MeSH Terms, Search PubMed

Use the PubMed Search Builder to combine multiple MeSH terms and subheadings.

1. Check the boxes of the desired MeSH terms, subheadings and/or restrictions
2. Select either AND, OR or NOT from the drop-down menu, then click the Add to search builder button
3. Continue to search for and add terms
4. NOTE: Make any necessary changes to the parentheses and terms in the search box to clarify the search
5. When finished, click Search PubMed

An unrestricted search for neoplasms will include articles which focus on the main term (neoplasms), but also focus only on a narrower terms (e.g. urachal cyst).

Check Do not include MeSH terms found below this term in the MeSH hierarchy for articles focusing only on the main term and eliminating those focusing on narrower terms.

NOTE: Focus a search by using the MeSH hierarchy to identify appropriate broader or narrower terms or to find additional search terms. Click on terms to access them.

Use Related Information

Search MeSH and select one specific term. Use Related information to search with the term.
- PubMed: Search PubMed with the term
- PubMed – Major Topic: Search PubMed, retrieving citations where the selected 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 and Allowable Qualifiers (subheadings)