Intended Users:	Healthcare Students	Healthcare Providers	Information Professionals	Researchers

Medical Subject Headings (MeSH)

Description: MeSH is a controlled, hierarchically organized vocabulary that permits searching at various levels of detail, from the most general terms to narrower, more precise terms. It consists of over 30,000 main headings and more are added with each yearly update. Articles in PubMed all have MeSH terms and keywords that describe their contents. MeSH are used to index and organize information in MEDLINE/PubMed, the NLM Catalog, and other biomedical databases from NLM and other organizations.

Popular uses of this product:

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• View the definition, scope, and relationships of MeSH terms. • Build effective search strategies for complex medical research questions. • Explore the MeSH trees to find narrower or broader search terms.	• Build effective search strategies for complex medical research questions. • View MeSH terms on a PubMed article to find other relevant literature or build more effective search strings.	• Instruct patrons on how to use MeSH terms with advanced searches on PubMed. • Instruct patrons on using controlled vocabularies and hierarchical structures when searching. • Build complex systematic searches using a combination of MeSH terms and keywords.	• Build effective search strategies for complex medical research questions. • View MeSH terms on a PubMed article to find other relevant literature or build more effective search strings. • Use “MeSH on Demand” to identify key terms to use as subject tags.

Key Points:

1. MeSH is a controlled vocabulary that is used to index and organize articles in PubMed and other biomedical databases.
2. A MeSH search retrieves subjects, not words. When people search only in a MeSH field of a database, they restrict the search to MEDLINE citations indexed with that subject heading or any narrower subject headings that fall under the original term’s hierarchy.

Potential Predicaments:

1. Articles that are MEDLINE records are automatically indexed with MeSH terms. However, not all content on PubMed is from MEDLINE, so not all articles have MeSH terms. People should use a variety of search strategies with MeSH and non-MeSH terms to retrieve recently published articles.
2. In PubMed and most NLM databases, when people search for a broader MeSH term, all narrower subject headings are automatically included in the search. For example, searching “Lung Disease” retrieves articles indexed with that descriptor and also citations indexed with any narrower terms such as “lung injury” or “pneumonia.” This is known as automatic explosion. If a PubMed searcher wants to search using only the broader term, limit the search with the tag "[mh:noexp]."

Teaching Examples:

1. In the MeSH database, search “pancreatic cancer.” MeSH returns the result “pancreatic neoplasms” because neoplasm is the preferred term within the controlled vocabulary. Have participants build a search using a broader term “digestive system neoplasms,” and then have them build a search with narrower terms such as “adenoma” or “pancreatic intraductal neoplasm.” Compare the number of results with the broader and narrower MeSH terms.

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2. On PubMed have participants search “type 2 diabetes” and note how many results are returned. Then have participants search using the MeSH heading "Diabetes Mellitus, Type 2"[Mesh]. Consider the difference in the number of results and how more effective search strings can be built.

Real Life Examples:

1. A researcher wants to find MeSH terms or potential keywords for their article. They enter their text into the MeSH on Demand tool. The medical text indexer will suggest possible MeSH subject headings that could be related to the text content.
2. A student needs to find a few more articles for their research assignment. They find a relevant article on PubMed and scroll down to find “MeSH terms” listed below the References. The student uses some of those terms in their next search to find other related articles.

More Information:

About MeSH Learn about MeSH