

MeSH Database

Articles are indexed using a powerful vocabulary, called Medical Subject Headings (MeSH). The MeSH Database provides the option of identifying appropriate MeSH terms for searches.

The **MeSH Database** is available from the drop-down search menu and from the PubMed homepage or Advanced search page under “More Resources”. Use the MeSH database to search for a particular term or concept. If multiple items are retrieved, click on the desired term to view and select subheadings and other options. Then click on the **Add to Search Builder** button on the right side of the screen. When finished adding terms, click **Search PubMed** to complete the search.

Clinical Queries

PubMed Clinical Queries makes it easier to find articles that report applied clinical research and is accessed from the PubMed homepage or the Advanced Search “More Resources” tab. Enter a search term and click the **Search** button.

PubMed Clinical Queries

Results of searches on this page are limited to specific clinical research areas.

[Clinical Study Categories](#) [Systematic Reviews](#) [Medical Genetics](#)

Clinical Study Categories displays results by clinical study category (etiology, diagnosis, therapy, prognosis and guidelines) and scope (narrow or broad). The categories of the results may be changed by using the drop-down menus.

Systematic Reviews displays systematic reviews, meta-analyses, reviews of clinical trials, evidence-based medicine, consensus development conferences, and guidelines.

Medical Genetics displays citations related to various topics in medical genetics. After entering search terms, choose one of the topics available or select “All.”

Printing, E-mailing, Downloading Results

After selecting your citations (i.e. from checked boxes or Clipboard), select a format from **Display Settings** and print directly from the browser.

Alternatively, select from the **Send To** menu. **File** offers format and sort options before saving the downloadable file. **E-mail** offers several options and asks for an email address. **Citation Manager** provides a file in the MEDLINE format for download to citation management software.

My NCBI

PubMed’s **My NCBI** feature stores both citations and search strategies and provides automatic e-mail updates of stored searches. Register for My NCBI by creating a User Name and Password. Click **Manage Filters** to select or create up to fifteen pre-formatted search filters.

Accessing Full-Text

Many PubMed citations have links to the full-text of articles through **PubMed Central** (a free digital archive of life sciences journal literature), through library electronic and print holdings, and/or through the publisher (the latter may require a subscription or may make an article available by pay-per-view). **Loansome Doc** allows registered users to order copies of articles from a medical library. Contact your librarian for details about full text links or call your Regional Medical Library at **800-338-7657**.

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>

Funded under contract awarded by the DHHS, NIH, National Library of Medicine, and developed and updated by the NN/LM staff. This resource is freely available at:

<http://nmlm.gov/training/resources/pmtri.pdf> .

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PubMed BASICS

PubMed® is the U.S. National Library of Medicine’s (NLM) premiere search system for health information. It is available *free* on the Internet at <http://pubmed.gov>.

PubMed Content

- MEDLINE®: NLM’s database of over 19 million citations of articles published in biomedical and related journals which have been fully indexed
- In-process citations that have not yet been analyzed and indexed for MEDLINE
- Publisher supplied citations that will be analyzed to receive full indexing for MEDLINE if they are biomedical in nature

PubMed Features

- Sophisticated search capabilities, including spell checker, advanced search builder, and special tools for searching clinical topics
- Assistance in finding search terms using the MeSH (Medical Subject Heading Database), a guide to MEDLINE’s controlled vocabulary
- Ability to store citation collections and to receive email updates for saved searches using PubMed’s My NCBI
- Links to full-text articles, to information about library holdings, and to other NLM databases
- Links to other NLM search systems, such as ClinicalTrials.gov®, MedlinePlus®, NIH Clinical Alerts and Advisories, and PubMed Central

Assistance and Training

Click on **Help** above the search box or on **PubMed Tutorials** under Using PubMed on the homepage.

[Choose additional filters](#)Display Settings: Summary, 20 per page, Sorted by Recently AddedSend to: Filters: [Manage Filters](#)


PubMed Searching

To search PubMed, type a word or phrase into the query box, including subject, author and/or journal. Then click on the **Search** button or press the Enter key. Combine search terms with connector words: “AND”, “OR” or “NOT” using upper case letters.

PubMed offers alternative searching options; for example, the auto suggest drop down menu appears when entering words and often a **Titles with your search terms** box is available after a search.

Search details, located in the right hand column, provides information on how PubMed ran a search. PubMed looks first for the word or phrase as a MeSH term, then for journal titles, then authors. PubMed also searches “All Fields” for the word(s). **Search details** shows how PubMed maps terms to MeSH headings. Changes to the search may be made in the details box; click Search to run the updated search strategy.

Limit searches by using the **Filters** list in the left navigation bar. Click on a term to activate or deactivate the filter. Use **Choose additional filters** for the full list of filters including: Text availability, Publication dates, Species (Humans or Animals), Article types, Languages, Subjects, Ages, Sex, and Journal categories. Multiple choices may be made within sections. Make selections then click the **Search** button.

 **Filters activated:** published in the last 5 years [Clear all](#)

The **Filters activated** message appears above the search results list and limits remain in effect until removed or cleared.

Advanced

The Advanced search link provides two options to refine and focus a search: a search Builder and History. The Advanced search box always defaults to Clear and does not retain previously run searches.

PubMed Advanced Search Builder offers creation of a search using Boolean operators. Using the All Fields selection will run search terms through the Automatic Term Mapping process. A specific field may be selected from the drop-down menu to apply to the term. **Show index list** is available to display the search field index and the number of citations for each term in the search field. The Index display allows selection of multiple terms to “OR” together.

History tracks search statements and numbers them as links. Clicking on the numbered link provides a menu which offers the option of combining search statements into a new search with the AND, OR or NOT connectors. The search may also be run, deleted, examined in Details, or saved in My NCBI.

More Resources is a tab at the top of the page that offers additional searching quick links to the **MeSH** and **Journals in NCBI** databases, the **Single Citation Matcher**, and links to the pre-constructed searches of **Clinical** and **Topic-Specific Queries**.

PubMed Search Results

After clicking on the **Search** button, PubMed displays a list of results in Summary format. To retrieve more information about the citations, use the **Display Settings** menu to change the view to the **Abstract** or **MEDLINE** formats.

Clipboard

The **Clipboard** feature stores selected citations from one or more searches for eight hours. Click the check box next to citations to select them; from the **Send To** pull-down menu select Clipboard, and click the **Add to Clipboard** button. Click on the **Clipboard** link to view citations. Permanently store citations in PubMed My NCBI Collections accessed from the Send to menu.

Display Settings: Summary, Sorted by Recently Added [Send to:](#)

Results: 2

- [The keratocyte: corneal stromal cell with variable repair phenotypes.](#)
1. West-Mays JA, Dwivedi DJ. Int J Biochem Cell Biol. 2006;38(10):1625-31. Epub 2006 Apr 3. Review. PMID: 16675284 [PubMed - indexed for MEDLINE] [Free PMC Article](#) [Related citations](#)

Related Citations

A helpful PubMed feature is the ability to find citations that are similar to those of interest. To retrieve Related Articles, click on the **Related Citations** link under the PMID of each citation in Summary format or select citations from the boxed list in the Abstract format.

Sensors

PubMed examines search terms for certain elements and provides a shaded area above the search results with links to one or more citations or databases.

- **Citation Sensor:** matches search terms with citation elements (e.g. blood choi 2009)
- **Gene Sensor:** checks for the symbol of a gene found in the Entrez Gene database (e.g. CFTR)
- **Sequence Sensor:** detects accession numbers of nucleotides or proteins (e.g. X62176)
- **Structure Sensor:** detects items (proteins, etc.) in the Structure database (e.g. 1R10)