PubMed

Take a Class

The Galter Library teaches a related class called PubMed. See our Classes schedule for the next available offering. If this class is not on our upcoming schedule, it is still available to you or your group by request.

Getting Started

PubMed, a service of the National Library of Medicine, includes over 24 million citations to biomedical journal articles dating back to the 1940s. The article citations are from MEDLINE and additional life science journals. This guide describes some of the basic concepts of searching PubMed such as:

- Subject Searching
- History
- Details
- Limits
- Clipboard
- MeSH Database
- Clinical Queries
- Finding Journals
- Single Citation Matcher
- My NCBI

Choose PubMed from the Popular Links menu on the Galter Library website to access PubMed. Accessing PubMed from the Galter Library website ensures that you will be using the Northwestern version of PubMed and will see links to full-text journal subscriptions through Galter. The initial URL should look like this: http://www.ncbi.nlm.nih.gov/pubmed?holding=norwelib&otool=norwelib.com (the norwelib suffix will disappear once you start searching, but you should still be in the Northwestern version of PubMed as long as it appeared initially).

Subject Searching

Formulating a Subject Search

State your information need in the form of a question or a statement:

Example: Your 71 year old female patient recently had hip replacement surgery and has an increased risk for pulmonary
embolism. You would like to compare the efficacy of coumadin and heparin to treat patients with an increased risk for recurrent pulmonary embolism.

Possible question: Is the anticoagulant coumadin more effective than heparin for treating patients with an increased risk of pulmonary embolism?

1. Break your question into individual, potential search terms: e.g. coumadin, heparin, pulmonary embolism.
2. Enter your search terms in the search box. If all your search terms must be present in your results, use "AND" e.g. pulmonary embolism AND coumadin AND heparin. If any of your terms must be present, use "OR". However, use of the "AND" connector between search terms is optional. If you don't enter any connector the default is "AND".
3. Click Search.
4. After your search, use the left menu options to click and apply limits or filters to your results if desired, e.g. date range or English.
5. Evaluate the results to see if they answer your original question and refine the search if necessary. Hint: Look at the Details box to the right of your search results to see how PubMed interpreted your search statement. Click See More to edit this search statement.

The following related videos are available on the PubMed website:

- Simple Subject Search (1 min.)
- Searching PubMed by Author and Subject (1 min.)

Details

Use Details to:

- See exactly how PubMed searched the terms that you typed or selected
- Determine which MeSH terms can be used to describe your topic

To access Details, look for the Search Details box on the right-hand side of any results page. Then click the See More link.
Details will show how the search terms you entered were translated into MeSH terms and keywords. In the example below, note that "coumadin" was translated to the MeSH term "warfarin". The concept "pulmonary embolism" was searched as a MeSH term, and as a phrase within all fields of the database but the individual terms "pulmonary" and "embolism" were also split and searched in all database fields.

Query Translation:

```
("pulmonary embolism"[MeSH Terms] OR ("pulmonary"[All Fields] AND "embolism"[All Fields]) OR "pulmonary embolism"[All Fields]) AND ("warfarin"[MeSH Terms] OR "warfarin"[All Fields] OR "coumadin"[All Fields]) AND ("heparin"[MeSH Terms] OR "heparin"[All Fields])
```

To make your search more precise, you can edit the terms in the Query Translation box. Removing terms with the [All Fields] tag can reduce the number of search results considerably.

---

**Author Searching**

To search for an author in PubMed, enter the last name and first initial in the search box with no punctuation, e.g. miller j

Handy tip: use the square bracketed [AU] field tag to confine an author search to the author field in PubMed records, e.g. miller j[au]

PubMed truncates the search to include varying middle initials and designations such as Jr. If you know the middle initial, add it to refine your search. You can search for more than one author at a time.

For citations from 2002 on, you can also use the entire first name of the author. If an author's first name might also be a last name, use a comma after the last name, e.g. ryan, james searches for James Ryan rather than Ryan James.

You can also use the Search Builder on the Advanced Search page or Single Citation Matcher to search for authors.

The following related videos are available on the PubMed website:
What is MeSH?

MeSH stands for Medical Subject Headings and is the language of MEDLINE. MeSH allows users to group all terms that mean the same thing under one official subject heading, so saving the searcher time. For example, if you want to do a search on "lung cancer", how do you know what terminology the author used to describe it? It could be lung cancer, lung neoplasms, cancer of the lung, pulmonary cancer, etc. MeSH allows you to enter one term and find all the articles that use that term and its synonyms.

MeSH Database

Use the MeSH Database to:

- Search for potential subject headings to help find the best term to use for a search.
- Select subheadings to refine your search further.
- Choose to restrict your search to Major Topic headings only.
- Build a PubMed search using the appropriate MeSH terms for your topic.

To build a search using the MeSH Database:

2. Enter your first search concept.
3. Click Search.
4. A list of possible MeSH terms will appear or, if your search concept matches a MeSH term exactly, the detailed record for that MeSH term will display.
5. Click on the blue link for your preferred MeSH term to view the detailed record (if in a list of terms).
6. Select appropriate subheadings if desired.
7. Restrict retrieval to Major Topic headings if desired.
8. Below the PubMed search builder box on the right, choose Add to search builder with AND or OR.
9. Your search term(s) will appear in the PubMed search builder box.
10. Repeat steps 2-8 to add more search terms and build your search.
11. When all of your search concepts are added, click the Search PubMed button below the PubMed search builder.
The following related videos are available on the PubMed website:

- **Searching with the MeSH Database** (3 min.)
- **Combining MeSH Terms Using the MeSH Database** (4 min.)
- **Applying Subheadings and Other Features of the MeSH Database** (5 min.)

**Filters (formerly Limits)**

PubMed has replaced the Limits page with a results filter sidebar. The filter sidebar options work the same way as the limit selections; that is, once a filter is selected, it will be activated for subsequent searches until the selection is cleared.
Click a filter to narrow your search results, e.g., you may filter your search results for cystic fibrosis to Clinical Trial and articles published in the last 10 years. A "Filters activated" message will display on the result page.
Only valid filter options for a result set will display on the sidebar, e.g., Meta-Analysis was removed from the filter list in the search above because none of the result citations were tagged with that article type.

To turn off filters, click either the "Clear all" link to remove all the filters, the "clear" link next to a filter category to clear the selections within that category, or the individual filter.

To add additional filter categories to the sidebar, click the “Choose additional filters” link at the top of the filters sidebar.

---

### Advanced Search

Use the advanced search to access your search history and create a search using the Search Builder, a way to to construct a search one concept at a time. To access the advanced search click on the Advanced link under the main search window.
You can combine result sets using the search history numbers or access the results of previous searches by clicking on the number of results. More resources such as the MeSH Database and Single Citation Matcher are also available from the drop down menu at the top of this page.

Finding Journals

There are several ways to find journals in PubMed:

- Enter the title of a journal, the ISSN (International Standard Serial Number), or the MEDLINE abbreviation into the main PubMed search box
- If you are searching for a journal title that is also a subject name, e.g. cell, add the tag [ta] after the journal name in the search box
- You can also use Single Citation Matcher, available from the PubMed home page or the Advanced Search page
- Another option is the Journals Database, available from the top drop-down menu, the PubMed home page, or the Advanced Search page. You can search the Journals Database by title, abbreviation, ISSN, or subject.

The following related videos are available on the PubMed website:

- Search for a Journal (3 min.)
- Retrieving Citations from a Journal Issue (1 min.)
My NCBI allows you to:

- Save searches
- Set up e-mail alerts for new content
- Choose filters that group search results
- Create collections of saved references
- Set PubMed preferences

The following related videos are available on the PubMed website:

- Saving Searches (4 min.)
- Changing Saved Searches (2 min.)
- Collections (3 min.)
- Editing Collections (3 min.)
- Sharing Collections (2 min.)
- Creating Your NCBI Bibliography (4 min.)
- Filters (3 min.)
- Links to Full Text from Your Library (3 min.)
- Custom Filters (2 min.)
- E-mail Alerts for Articles from Your Favorite Journals (4 min.)

Clipboard

The Clipboard feature enables you to:

- Temporarily save a list of article citations you select from various searches
- Sort the saved citations by Journal, Author or Publication Date
Print, save, or e-mail the citation list

To save references to the Clipboard:

- Place a check in the box prior to the reference(s) you want to save
- Click “Send To” and choose Clipboard

Single Citation Matcher

Single Citation Matcher is the easiest way to find an article for which you know all or part of the citation. A few key bits of information are often enough (e.g. author, journal, year) to find article citations. Access Single Citation Matcher under PubMed Tools on the PubMed home page or under the More Resources menu tab on the Advanced Search page.
History

Your search history is available using the Advanced Search. The search history feature displays a numbered list of all searches performed allowing you to:

- View and access results from previous search sets
- Combine searches using set numbers (Remember, the connectors AND and OR must be capitalized when combining search phrases)
Saving Searches

To save a search, you must first sign into your My NCBI account.

After you perform your search, click the Create Alert link under the main search box at the top of the page.

This will open the Saved Searches page in My NCBI. You will see:

- The detailed search you performed
- Any limits or filters that were applied
- An option to re-name your search (the default name is the full search strategy you used--you might want to create a shorter name for the search)
- An option to send email alerts (this is the default)
  - If you want to receive email alerts, you can choose the frequency, day of delivery, number, and format of the results
  - If you do not want to receive email alerts, simply click the "No, thanks." option

Clinical Queries

The Clinical Queries section of PubMed (available under "PubMed Tools" on the PubMed home page) allows you to apply quick filters or "hedges" to your searches. Search filters are available in several categories including therapy, diagnosis, etiology and prognosis. There is a broad filter and a specific filter for each category.

Clinical Queries:

- May be used with searches on therapy, diagnosis, etiology, or prognosis
- Uses filters based on the principles of evidence-based medicine to find articles most likely to be based on studies with sound methodologies
Related Videos and Tutorials

The following related videos are available on the PubMed website (turn up your speaker volume):

**Searching**
- [Simple Subject Search](#) (1 min.)
- [Searching PubMed by Author and Subject](#) (1 min.)
- [Search PubMed for an Author](#) (3 min.)
- [Searching PubMed by Author and Subject](#) (1 min.)
- [Search for a Journal](#) (3 min.)
- [Retrieving Citations from a Journal Issue](#) (1 min.)

**Using MeSH**
- [Searching with the MeSH Database](#) (3 min.)
- [Combining MeSH Terms Using the MeSH Database](#) (4 min.)
- [Applying Subheadings and Other Features of the MeSH Database](#) (5 min.)

**My NCBI**
- [Saving Searches](#) (4 min.)
  - [Changing Saved Searches](#) (2 min.)
- [Collections](#) (3 min.)
  - [Editing Collections](#) (3 min.)
  - [Sharing Collections](#) (2 min.)
- [Creating Your NCBI Bibliography](#) (4 min.)
- [Filters](#) (3 min.)
  - [Links to Full Text from Your Library](#) (3 min.)
  - [Custom Filters](#) (2 min.)
- [E-mail Alerts for Articles from Your Favorite Journals](#) (4 min.)

Printed: Wednesday, May 3, 2017 4:52 AM
Source: [https://galter.northwestern.edu/guides-and-tutorials/pubmed-basics.pdf](https://galter.northwestern.edu/guides-and-tutorials/pubmed-basics.pdf)