

How to Search in Pub Med : A Brief Tutorial

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Introduction

Literature search is essential for the ophthalmologists to develop skills in tracking down the best available current literature. It has become an indispensable part of clinical practice, in order to practice Current Ophthalmology based on Evidence-Based Medicine. PubMed is by far, the most popular and useful computerized database for the medical fraternity.

PubMed is the bibliographic on-line computerized database of the National Library of Medicine (NLM), which is the primary source in the US for information from biomedical literature. It is a free Online Database and provides access to over nine million medical journal reports dating back to the 1950's. The coverage is worldwide, but most records are from English-language sources or have English

abstracts. It includes links to many sites providing full text articles and other related resources.

The Following paragraphs explain the basic steps to obtain the maximum benefit from PubMed.

Users

PubMed is intended primarily for Physicians, Nurses, veterinarians, Dentists, researchers, practitioners, educators, administrators and students.

I. How to search in PubMed

1. Open your Internet browser.
2. Go to the PubMed website:
<http://www.ncbi.nlm.nih.gov/PubMed/>, which is the address for the National Library of Medicine. Then Press enter Key. The main window will appear. (Figure 1)

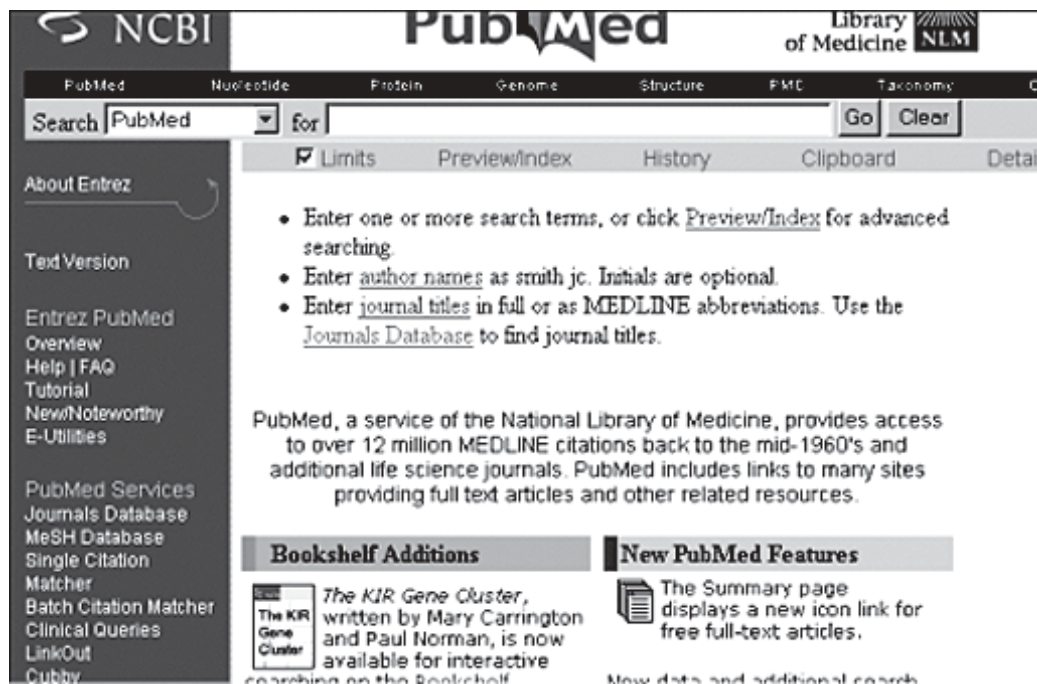


Figure1: Main Window

3. To perform a search, type a keyword or phrase related to your topic into the search window.
 4. Multiple keywords will automatically be combined with AND. You may also search using the Boolean operators OR or NOT.
 5. Press the enter key or click on the **Go** button to begin and view your results.
 6. PubMed will automatically display, in summary format, up to the first 20 retrieved records.
 7. If you want to download or save the result click on the button "Send to". Your results will be sent or saved in a text format.
6. You may search phrases by enclosing a phrase in quotations. Eg. "Eye trauma" as phrase search. (Enclosed with "to ensure words are next to each other)
 7. To search for words that could have various endings place an asterisk at the end of the root word. E.g. Refract* gives Refraction, Refractive, Refractory etc. Truncation symbol is * in this database.

II. Searchable Fields

The important use of limits in the clinical setting is that it helps to know more about a journal topic. You can use the abbreviations in the following fields. i.e. Abstracts (ab), Author (au), Registry number (rn), country of Publication (cp), Entry month (en), exploded Sub-heading (xs), floating sub-heading (fs), Grant Number (no), Institution (in), ISSN (is), Issue/Part (ip), Journal Code (jc), Journal Name (jn), Journal Sub set (sb), Journal Word (jw), Language (lg), MESH Subject Heading (sh), Page (pg), Publication Type (pt), Title (ti), Volume (vo), Year of Publication (yr).

III. Keyword searching

1. Type in one word or a combination of words in the keyword box (Search Box), then click on GO
2. You may choose a connector word AND, OR, NOT.
3. If you type AND the subject is narrowed, to retrieve all of the terms e.g. Retinitis Pigmentosa AND Children (anywhere in article description)
4. If you type OR it will widen your choice, to retrieve any of the terms e.g. Retinitis OR Uveitis OR Cataract.
5. If you type NOT it will remove articles with unwanted keywords, to eliminate terms e.g. Children OR Infants.
(Please note that Boolean operators AND, OR, NOT must be in upper case, or they will be ignored).

IV. Author Searching

1. The format for author searching is last name plus initials. Do not use any punctuation. eg. Robin A
2. PubMed will automatically truncate the author's name to account for varying initials. Sometimes an author will be listed using only his first initial and last name, and other times he may use his first and middle initials and last name.
3. To turn off automatic truncation of an author's name, surround the name with double quotes and use the [au] tag.
4. If you are searching with last name only, use the [au] tag.

V. Journal Searching

1. To search for journals by journal title, abbreviation, or ISSN (International Standard Serial Number), click "Journal Browser" under "PubMed Services" on the sidebar.
2. Enter your search in the search box, and click "Go."
3. PubMed will retrieve exact and close matches for journals indexed in Medline.

VI. Subject Searching

MeSH (Medical Subject Headings) is the controlled vocabulary used for indexing PubMed. To search using these subject headings, Click on MeSH Browser on the left sidebar.

VII. History – (Figure 2)

You can also combine separate searches. After performing your searches, click the button "**History**" below the search box. To combine searches, use # before the set number (search number), and then

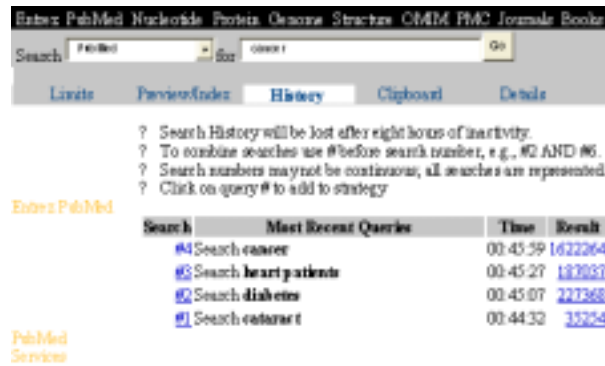


Figure 2: History Window

one of the connector words AND, OR, NOT. (e.g. #1 AND #2). Type #1 AND #4 in the Search window if you want to combine Cataract with Cancer.

VIII. Working with Search Results

Search Results screen and the various Action Bar selections allow to manipulate search results. The Following can be performed

1. Understand the layout of the search results screen.
2. Change the display format of the retrieved citations.
3. Adjust the number of citations displayed on a page.
4. Move between pages of results.
5. Sort your results.
6. Save and view selected citations.
7. Print citations.
8. Save your search strategy.

IX. Limiting a Search (Figure 3)

After performing the search, you can limit your search results by Clicking on the button “Limits” below your search box. You can limit your search by fields, publication type, age groups, publication date, language, human or animal etc.

1. Select the types of limits you want by using the pull down menus.
2. Click on “Go” or press “Enter” to search
3. A check mark will appear in the box next to the word “Limits” to indicate that this feature is in use.



Figure 3: Limits Window

4. The limits in effect will be displayed in a yellow bar across the top of the search set.
5. If you wish to see abstracts for only selected records, use the check boxes beside the records to select the ones you wish to view.

X. Viewing or displaying records

1. In PubMed, by default, your results will be displayed in summary format, up to the first 20 retrieved records (author, title, and journal information). To view an individual record’s abstract, click on the author’s name(s).
2. In order to view more than one record at a time click the “Display” button and choose another format from the pull down menu of options (e.g. abstract, brief, citation, Link Out, MEDLINE, etc.)
3. Reclick Display to redisplay the records in the new format.

XI. Sorting results

Use Sort to change the order. You can sort citations by author, journal, or publication. Select a sort field from the Sort pull-down menu and click Display. Publication Date sorts the most recent citations first and the secondary sort in journal. Author and journal sorts according to A to Z; the secondary sort is publication date.

XII. Saving or downloading results

1. Results may be saved to a disk or hard drive.
2. Once search results have been displayed in the desired format (Summary, Brief, Abstract, Citation, or MEDLINE), click on the pull-down menu next to Send To.
3. Select “File” and click on Send To.

4. A Save as Dialog Box will appear.
5. Title the name of your search in the File Name Box.
6. Click Save.
7. These files can be opened in Word, WordPerfect, or Notepad.
8. Your results will be saved in a text format.

XIII. Printing & Emailing

1. Select your citations and then select the display format.
2. Go to the Send to button
3. Select Text or E-mail from the pull-down menu
4. Click on Send To.
5. This will create a plain text version of your results.
6. Then print the results using your Web browser's Print feature.
7. E-mail ask you to select additional options and enter an email will ask you to select additional options and enter an email

Journal:

Date:

Volume: Issue: First page:

Author's last name and initials (e.g., Smith BJ)

Title words:

Figure 4: Single Citation Window

XIV. Single Citation Matcher – (Figure 4)

To search for a specific article or journal issue, click on Single Citation Matcher on the blue sidebar. A form screen will appear. Enter information about the article you wish to find.

- You may omit any item if you wish
- Journal titles may be entered in full or as valid MEDLINE abbreviations
- For Date, you may enter yyyy, yyyy/mm, or yyyy/

mm/dd. For example, 1998, 1998/03, or 1998/03/06

- Author names are automatically truncated to account for varying initials, e.g., smith j will also match on smith ja, smith jb, smith jc jr, etc. Enclose author names in double quotes to retrieve that exact match, e.g., “smith j”

Advanced Features

Links

PubMed provides some links to full text articles from participating publishers. As of September 1997, PubMed provided direct links to approximately 95 full-text journals from websites of participating publishers with more than half of these journals from Academic Press. New journals are added regularly. However, in order to view full-text in most journals, users are required to register, subscribe, or pay a fee.

Related PubMed articles Link

Each Article have related articles link. These links occur on the right side of the citation and clicking this will retrieve closely related articles.

Link out

Link Out allows Publishers and other resources to display links to their sites on items from the enterz databases. These links can help to retrieve full text of articles or related resources.

Conclusion

PubMed is an important and interesting current awareness tool. It is easy to use and combines specific journal titles with a subject limited to the most recent records. Professional searchers should also find it useful for verifying citations and performing high precision searches. PubMed offers a much more powerful, flexible, and somewhat easier to use interface system which does not limit the skilled user who may wish to perform complex searches.