Top 10 Tips for Searching PubMed

Tip #1: Access PubMed via the Dalhousie Library Website

You can access PubMed by searching the databases tab on the library homepage.

Search Library Resources

Or through the Pharmacy subject guide at: http://dal.ca.libguides.com/pharmacy

Entering PubMed via the Dal Library page will ensure that you see the button, which links full-text of articles via Dalhousie’s ejournal collection.

(If full-text is not available, the button facilitates ordering the article via Document Delivery service.)

Tip #2: Keyword searching

Just typing your keywords in the search bar and clicking search can be quick and easy!

Or... it can be frustrating by returning results that have nothing to do with your topic.

Solution: check out the Search Details box to see how PubMed actually searched your keywords.

Advanced users may wish to add in more specific tags in the search box. For example:

- Keyword[tiab] = search for a word or phrase in the title and/or abstract of articles.
- Keyword [tw] = search for a word or phrase in the title, abstract, and/or author assigned keywords.

Tip #3: MeSH searching: The National Library of Medicine’s Medical Subject Headings.

MeSH headings are a consistent way to retrieve information when several different terms might be used for the same concept.
Activate the MeSH database in one of several ways:

The dropdown menu will always be accessible from anywhere on PubMed.

From the PubMed Homepage, MeSH can be accessed directly under the “More Resources” heading.

Important Note: In MeSH search for **ONE TERM** at a time. Like looking up something in the dictionary.

Searching your term in MeSH will take you to a MeSH Entry Page. This page contains a lot of great information.

Let’s break that page down:

- A definition of the term searched, as well as the year the term was given a MeSH heading.
A list of subheadings: these are ways to narrow and focus your search. Select as many or as few as you are interested in. But be cautious, this has the potential to eliminate some relevant articles, in addition to focusing your search results.

Once you have selected (or chosen not to select any) subheadings you can click on Add to Search Builder. Once the term has added itself to the search box you click on “Search PubMed” which takes you out of the MeSH database, and back into PubMed to see article results.

Additional Points of Interest on this page:

- The Restrict to MeSH Major Topic button is used to restrict your search to results where the articles have had this term designated as its major topic or focus.
- Entry Terms: The list of different terms that, if they appear in an article, qualify the article to be classified under this MeSH heading. Basically: a list of terms that if they appear in an article, will appear in your search results for this MeSH search.
- Related information: note the easy access point to Clinical Queries.
- MeSH automatically does an explosion search... searching for any terms classed below it in the MeSH trees (see image to left).
  If you do NOT want these subterms included in your search, you must tick the box by the purple arrow above.
- The MeSH trees (pictured right) is a good way to see broader or narrower terms for your topic. You find these by scrolling down the MeSH entry page.

Tip #4: Avoid fighting with Search Details: Using Advanced Search

Don’t try to search everything all at once, right from the get-go. PubMed gets confused, you get confused, and everybody loses. Search your terms individually and then construct them using the advanced search option!

Once you are in the advanced search you can see your full search history:
Use these queries and the Builder (above the history) to start constructing your search – a piece at a time!

**Step 1:** click ADD next to the terms you want to combine.

**Step 2:** change your operator to reflect what you want (see the Boolean review below)

**Step 3:** search

**Step 4:** repeat steps 1-3 as necessary to combine as desired.

(Extra Tip: don’t try to combine OR and AND searches. Do all your OR searching first. Then combine all the individual OR searches with an AND)

Remember your Boolean Rules when you are constructing your search!

**A Boolean Key:**

<table>
<thead>
<tr>
<th>Term</th>
<th>Uses</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>OR – at least one of the items linked with OR is in the result</td>
<td>Connect your synonyms into one big search pool**</td>
<td>Pink OR Purple Whooping Cough OR Pertussis</td>
</tr>
<tr>
<td>AND – all of the items linked with AND are in the result</td>
<td>Connect your different concepts together**</td>
<td>Coffee AND Sugar Diabetes AND Exercise</td>
</tr>
<tr>
<td>NOT – the term following NOT will not appear in any of your results</td>
<td>Keep a simple concept or term out of results</td>
<td>Squash NOT Sport Migraine NOT Aura</td>
</tr>
</tbody>
</table>

**Use OR to combine searches relating to each concept first, then use AND to combine strings of terms for each concept that are ORed together.

Terms ORed together to cover one concept

Multiple concepts ANDed together

Final results of search
Tip #5: Pharmacological Action - Substances known to have a particular pharmacologic action

Pharmacological Action terms are added to new or existing substances if the following three criteria are met:

- There are more than 20 citations in PubMed discussing the Pharmacological Action being exhibited by that drug;
- There is substantial evidence that the Pharmacological Action is in effect in humans (i.e., the drug is used clinically); and
- A reasonable proportion of the literature (greater than or equal to 10%) on than drug accounts for those effects.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>allM isothiocyanate (Supplementary Concept)</td>
<td>Substances capable of inhibiting, retarding or arresting the process of fermentation, acidification or other deterioration of foods.</td>
<td>Substances which are of little or no nutritive value, but are used in the processing or storage of foods or animal feed, especially in the developed countries; includes ANTIOXIDANTS; FOOD PRESERVATIVES; FOOD COLORING AGENTS; FLAVORING AGENTS; ANTI-INFECTIVE AGENTS (both plain and LOCAL); VEHICLES; EXCIPIENTS and other similarly used substances. Many of the same substances are PHARMACEUTIC AIDS when added to pharmaceuticals rather than to foods.</td>
</tr>
<tr>
<td>Benzoic Acid (MeSH Term)</td>
<td>Year introduced: 1975</td>
<td>Subheadings: (Usual list)</td>
</tr>
<tr>
<td>juglone (Supplementary Concept)</td>
<td>Restrict to MeSH Major Topic.</td>
<td></td>
</tr>
<tr>
<td>Nin (MeSH Term)</td>
<td>Entry Terms: Preservatives, Food</td>
<td>See Also: Pharmaceutic Aids</td>
</tr>
<tr>
<td>octyl gallate (Supplementary Concept)</td>
<td>Previous Indexing: Food Additives (1966-1974)</td>
<td></td>
</tr>
<tr>
<td>Parabens (MeSH Term)</td>
<td></td>
<td></td>
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<tr>
<td>purpuragallin (Supplementary Concept)</td>
<td></td>
<td></td>
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<tr>
<td>Sodium Benzoate (MeSH Term)</td>
<td></td>
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<tr>
<td>Sodium Nitrite (MeSH Term)</td>
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<tr>
<td>Sorbic Acid (MeSH Term)</td>
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</tbody>
</table>

Sample Search

"Food Preservatives" [Pharmacological Action] AND "Beverages"[Mesh]

Sample Search

"Food Preservatives"[Mesh] AND "Beverages"[Mesh]

Sample Search

"Food Additives"[Mesh] AND "Beverages"[Mesh]

Tip #6: Substance Name, Substances, & Supplementary Concept records

A form of controlled vocabulary like MeSH which are used to describe chemical and substance names such as: Tonicaine or Chromium sulfate.

A drug name typed into the search box in PubMed may automatically map to the appropriate descriptor or Substance Name, but this may not happen with very new drug or substance names.

Remember to check the Details box (tip #2) to see how a given term maps.

To search specifically for a chemical or substance Supplementary Concept search for the name in the MeSH database. (See tip #3 for information on how.)
Tip #7: Clinical Queries

Clinical Queries can be accessed from various points in PubMed, including from the home page (pictured right), and via MeSH entry pages.

Clinical Queries limit your search to specific clinical research areas, as well as by scope.

A search in Clinical Queries will not automatically map to MeSH like a regular PubMed keyword search, so it is recommended that you copy the MeSH terms you want to use over to your Clinical Queries search.

Tip #8: Tutorials and Help

You are not alone! Options for help include:

- Stop by the reference hours at the CHEB or Chapter House for help with any or all of the tools above
- Make an appointment with Melissa (until December) or Lucy for a database refresher, or assistance in assembling a search strategy
- PubMed has an extensive tutorials and help section for questions arising at midnight study sessions

Tip #9: NCBI Account

Create a free account, and it stays with you for life! (Even beyond your time at Dal!)

When you are logged in to your NCBI account, you are able to save searches forever. Do this by selecting “create alert” at the top of the results page of the search you wish to save.

This allows you to re-run complex searches at the click of a button, whenever you want.
Tip #10: Exporting Citations to RefWorks
Don’t have a RefWorks account? – go here to get one started: http://libraries.dal.ca/research/refworks.html

Getting your citations out of PubMed and in to RefWorks has two stages:

Stage 1:
1. Save the desired citations into the Clipboard (click on the “Send to” button at the top right of every page to do this.)
2. Once you have saved all desired articles in your Clipboard, open it up by selecting it at the right of your screen
3. From the Clipboard open up the “Send to” menu again and select “Citation Manager”
4. This record will be saved to your computer downloads folder as a file called citations.nbib

Stage 2:
5. Log in to Refworks.
6. Under References select Import.
7. From the dropdown item “Import Filter/Data Source” select: NLM PubMed
8. Select the file you want to import
9. Select what folder you want your sources to go into
10. Click Import!

And that’s the end of our Top 10 tips! Thanks for joining us today!

Contact information:

Melissa Helwig: melissa.helwig@dal.ca
Lucy Kiester: lucy.kiester@dal.ca

Catch us in person at the CHEB (second floor) or Chapter House (until November). Ask at the circulation desk for directions!