PubMed searching

Date created: March 2019
Duration: 7:03

This video will cover various ways to search PubMed. PubMed includes article citations from over 5,000 biomedical journals published across the world. Dalhousie users should use the Dal Libraries' customized version of PubMed, accessible through the library homepage. Only through this version will you find Dal links for the full text articles.

There are three common ways to search PubMed: using words or phrases in the search box on the PubMed main page (known as keyword searching– like the type of search you would do on Google), using the medical subject headings or MeSH Terms, which are index terms or tags that tell you what the article is about, or using a combination of both. Note that there are additional tutorials on searching and other functions in PubMed linked from the homepage.

First we'll do a keyword search, entering our search terms Teenagers AND Acne AND Accutane. Note that the Boolean operators such as AND and OR should be capitalized to ensure that PubMed interprets your search correctly. AND means both concepts must be present in citations retrieved, which narrows your search. OR means only one concept needs to be present for a citation to be retrieved, which broadens your search. Now we'll click the search button to run our search.

The results screen indicates that we've retrieved over 700 results. When doing keyword searches it's always a good idea to check the Search Details box on the right side of the screen to see how PubMed has interpreted the search.

Here we can see that PubMed's automatic mapping has correctly identified the appropriate medical subject headings, or MeSH terms – in this case, Adolescent, Acne Vulgaris, and Isotretinoin, which is the generic name for Accutane. This mapping to PubMed's controlled vocabulary enhances your search and makes it less likely that you will have missed relevant articles. PubMed has also searched for keywords in all fields of the citations, including title, abstract, journal source and so on. The articles retrieved may or may not be about Teenagers, Acne, or Accutane, as the authors may have used these words in the title or abstract in some other context. Keyword searches are useful for broadening your search, and to search for citations that may not have been indexed yet with medical subject headings. It might also be several months before citations are indexed with MeSH headings, and not all citations in PubMed end up indexed. Using keywords will capture these recent citations regardless, and keyword searches often result in higher retrieval but more irrelevant citations.

Let's try the same search using the MeSH database. MeSH offers ways to control the number of citations retrieved and increases relevancy. MeSH terms are the agreed upon terms indexers use to describe what each article is about, so you don't have to brainstorm every possible synonym for a word. You can find the MeSH database from the PubMed main page, in the drop down menu at the top of the screen.

When you use MeSH, each concept must be entered separately into the search box. We'll enter our first term, "Teenager" into the search box, select "MeSH" from the drop down menu, and click "Search". We are presented with one option, which is Adolescent. On this screen we are given a scope note that defines how the term is being used, possible sub headings to narrow the focus of our search, and a hierarchy which shows our term in relation to broader or narrower concepts. If there are narrower concepts under the term we've selected these will automatically be included in our search unless we click the box that says "Do not include MeSH terms found below this term in the MeSH hierarchy". In this case, there are no narrower terms below Adolescent. Now, click "Add to search builder", and leave the term for a moment while we continue our search. Let's now search for our next term in the MeSH search box, "Acne". Here our results include Acne Vulgaris, so click that to look at the scope note, subheadings, and more. Now, click "Add to Search Builder". Finally, let's repeat this process for Accutane by searching for it in the MeSH search box. Click the first result, "Isotretinoin", then "Add to Search Builder". You are now ready to run a MeSH search for your terms, so double check that your Boolean operators are set to AND, then click "Search PubMed".

We have now retrieved almost 600 results that are highly relevant to our topic, but remember: Not all citations in PubMed have MeSH terms assigned to them, so let's try our search one more time, using a combination of keywords and MeSH headings. This method ensures that your search is broad enough to find articles indexed with MeSH terms, along with those that are newer uploads to PubMed, have alternate synonyms for your search terms, and more. Start by repeating the process of looking your terms up in the MeSH database. Once you have found your term, click "Add to Search Builder". Then, you can manually enter your keywords using OR. In this case, we are looking up "Teenager" in MeSH, viewing the MeSH page for "Adolescent", then clicking "Add to search Builder". Then type "OR Teen" in the Search Builder box. Then click "Search PubMed". You can continue this process for the other two terms, Acne and Accutane.

Once you have searched all of your terms using this method, click "Advanced" to go to your search history. Here you can combine these last three search strings so you end up with results that include keywords and MeSH terms related to your topic. Click "Add" beside the last three searches so they show up in the search boxes above. Then, select "AND" as your Boolean operator in the small drop down menu. Now click "Search".

Here we have retrieved about 700 results, and you can use filters to customize your results further. You'll find these on the left side of your screen. Note that by default, only some of the filters are showing, and by clicking "Show additional filters" you can choose to display others such as "Language" by checking the box beside it then clicking "Show". To be even more precise, you can also add keywords to your search. In this case, we might be interested in

reading case reports on this topic, so we can add “AND Case Report” in our search box at the top of the screen.

At this point, you may want to start looking at your search results a little more closely, so you will want to change the display. Click on the drop down menu beside Format to see the viewing options. By clicking “Abstract” you can read the article’s abstract, have a look at the MeSH headings that were used in indexing this paper, and click the Get it @ Dal button to find options for full text access. If you’re unfamiliar with the Get it @ Dal button, check out our tutorial in the description below.

If you want to save articles, click the checkbox to the left of the title. Then, scroll to the top and click “Send to”, then click the button beside Clipboard, then “Add to clipboard”. You can then save this clipboard to your personal MyNCBI collections, or export them to a citation manager. Just remember not to leave results on the clipboard for too long, because PubMed won’t automatically save them for you longer than 8 hours.

Thanks for watching. For subject guides, Live Help, other online tutorials, and contact information for the five Dalhousie Libraries, check out the links in the description below.