Exercise #1: Keyword/Boolean Searching and Filters

1. Open a browser and go to the Finding Articles and More tab of the Library Guide for today’s session: guides.lib.berkeley.edu/publichealth/B2B/articles

2. Click the PubMed link

3. Type: nanoparticles AND drug delivery AND (tumor OR cancer) into the search box and click Search (or hit Enter). How many citations did you retrieve? (Should be almost 15,000!)

4. At the bottom of the left side menu, click the Show additional filters link.
   ➢ Using filters is a good way to focus your results and get fewer articles.

5. In the box that appears, select (check) Languages and Search fields. Click Show.

6. Select the following filters - one at a time - by clicking the links on the left side. (NOTE: You will need to wait a few seconds for the screen to refresh after each selection):
   ➢ Under Publication dates choose 5 years (remember to wait for the screen to refresh...)
   ➢ Under Species choose Humans
   ➢ Under Languages select English
   ➢ Under Search Fields click Choose... then, select Title (near the bottom of the drop-down list that appears). Click Apply.

Most scientific article databases have filters or limits (publication date, search field, language, etc.) that you can use to focus your search.

7. How many items did you retrieve? (Should be about 147).

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Exercise #2: Using Medical Subject Headings (MeSH) Terms

1. Click the Advanced link, below the Search box

2. Scroll down a bit to History, where you will see searches you have done today.

3. Re-run the last search you did – the one with about 147 results – by clicking on the number under the Items found column (NOT the # number under the Search column).

4. From the search results, check the box to the left of any three citations.

5. Scroll back up to the top and click Format: Summary drop-down menu (under the search box), and select Abstract.

6. Scroll down and expand the MeSH Terms link by clicking on the plus symbol \[+\] to the far right of where it says MeSH Terms…

7. Look at the MeSH terms for one of the articles. Note that some MeSH terms have a slash (/) and a word after the slash (e.g. Nanoparticles/chemistry); more about this in Ex. 3.

8. Look for a Mesh major term (MeSH Term with * after it), and click on the term

9. A little box will open: click Search in PubMed. This runs a new PubMed search for only this term as a major MeSH term. (Notice the “tag” [MAJR] after the term in the PubMed search box).

10. Use your browser's Back button to return to your 3 citations.

11. If there’s anything in the Search box at the top, click the \[\times\] (far right) to clear it.

12. Again, click the MeSH Terms … link for one of these citations.

13. Click a MeSH term and after the little box opens, click Add to Search: this adds the selected term to the Search box.

14. Scroll down and click on another MeSH term. Again click Add to Search in the little box.

15. Go back up to the search box: You should see the two MeSH terms in the search box separated by AND. Click Search to run the search.

- Search results will vary, depending on the terms in the search box. If you got zero results, repeat steps 12-15.
- If you notice the Filters activated: link near the top, click Clear all.
- Keep this search results page on your screen for Exercise 3

~~~~~~~~~~~~ End of Exercise 2 ~~~~~~~~~~
Exercise #3: Using Medical Subject Headings: (MeSH) Subheadings

1. On your search results screen, **click the title of an article**.
   - Clicking the title changes the display of a single citation to **Abstract display**.

2. Click the **MeSH Terms** link.

3. Click on one of the **Mesh Terms**.

4. After the little box opens, click **Search in MeSH**. This runs a search in the **MeSH Database**, which is a database of terms (not articles).
   - **Note:** If your MeSH Database search finds more than one MeSH term, you will see a list of terms with their definitions.
   - **If more than one term appears here,** click on a single **MeSH term**.

5. **Scroll down** to see the **definition, year introduced** (usually), **subheadings**, other options, and the **MeSH "tree(s)"** (hierarchy/ies) where this term is found. Your term will have broader terms and **may** have narrower terms.
   - **Note:** Any word in the definition in UPPER CASE is itself another MeSH term.

6. Click the **Subheadings:** link. You will see definitions for **all** the Subheadings (Subheadings are also called “Qualifiers”).
   - Using subheadings/qualifiers will result in a **more focused search** of your MeSH term.

7. Use your browser's **Back button** to return to the **MeSH record**.

8. **Click in the box to the left of one of the subheadings** to start building your search.

9. Scroll down a bit and **check** the box next to **Restrict to MeSH Major Topic**.

10. Scroll up and click the **Add to search builder** button (near the top right). Your MeSH term and subheading will appear in the box.

11. Click the **Search PubMed** button below this box to run a search using your MeSH term. **Make sure you have cleared any filters activated on the search results screen.**

    “Extra Credit:” Use your browser’s **Back** button to return to the MeSH database. Enter another term in the **Search box. Select** this MeSH term, then **Add to search builder**, and search PubMed. Once back in PubMed, click on **Advanced** under the search box to get to your search history. Combine the two MeSH terms by clicking **Add** to the left of the two MeSH term searches, and run that search.

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Exercise #4: Working With Your Search Results

1. In PubMed, click on the Advanced link. Under Search History, you will see the searches you have done today. Re-run any of the searches by clicking on the number under the Result column (NOT the # number under the Search column).

2. Click in the box to the left of any 3 citations.

3. Use the Send to drop down menu link, just under the Search box, select Clipboard, then click the Add 3 items button that appears.

4. Note the Clipboard: 3 items link near the top right of the PubMed window. Also, a note appears above the search results confirming how many items were sent to the Clipboard.

   - Note: The Clipboard icon and the [number] items link are only visible on a search results page. However, a clipboard link also appears under Search History in Advanced Search, as well as at the bottom of the PubMed Home Page.

   - At the bottom of each citation you sent to Clipboard appears the text (in orange), “Item in clipboard” to help you keep track of citations you already sent to clipboard.

5. Click the Clipboard: 3 items link.

6. Click on an article title. To the right of the abstract is the Similar Citations in PubMed box.

   - PubMed generally displays 3 similar citations plus 2 similar review articles in this box. Mouse over the citations in this box to see a more complete citation.

7. Click the See all… link at the bottom right of the Similar Citations box. PubMed will now display citations similar to your article in relevance order, starting with your original citation.

8. Click in the left box of two new citations.

9. Use the Send to menu link to select E-mail.

10. In the Format menu, choose Abstract (or Abstract (text) if you want a plain text e-mail).

11. Enter your e-mail address in the appropriate box, complete the anti-spam text, then click the E-mail button.

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