BIOL 4208 - Literature Review – Searching for Articles

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Starting your Search

Begin by thinking of some keywords related to your topic. Think of the major concepts in your research question and some terms that can be used to describe those concepts. Use your keywords to search library databases for relevant articles. As you search and read a few article you will find more keywords to add to your list.

Example

**Topic:** What effect does high altitude have on sleep?
**Keywords:**

<table>
<thead>
<tr>
<th>Concept # 1</th>
<th>Concept # 2</th>
<th>Concept #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>high altitude</td>
<td>sleep</td>
<td>physiology</td>
</tr>
<tr>
<td>high elevation</td>
<td>sleep quality</td>
<td>breathing</td>
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<td></td>
<td>disturbed sleep</td>
<td>hypoxia</td>
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<td></td>
<td>sleep apnea</td>
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<tr>
<td></td>
<td>sleep fragmentation</td>
<td></td>
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<tr>
<td></td>
<td>insomnia</td>
<td></td>
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</tbody>
</table>

Use Boolean operators to combine your keywords into different searches in a library database. (Hint: use AND to combine words in rows, and OR to combine words in columns). Quotation marks “” keep words together in the order you have typed them, and the asterisk * at the end of a word looks for multiple endings. Good databases to do your search in are PubMed, Google Scholar, Scopus and Web of Science. Try more than one database as you may get different results.

E.g.
In-Depth Searching

When conducting a search, you will often find a small number of articles that focus very clearly on your topic. You can use these articles to help you find additional related research. There are a number of ways that you can do this:

1. Author and journal search

Most researchers focus on only a few specific areas of research. If you find a particularly relevant article, see if the author(s) has published other papers on the same topic. Search for the name of the author(s) in a relevant database. Similarly, many journals are dedicated to very specific topics. If you find a journal that focuses on your area of research, combine the title of the journal with your keywords to narrow your search.

2. Subject search

Library databases use subject headings to describe articles in the database. Subject headings are similar to keywords, but are chosen from a very specific list. The purpose of subject headings is to ensure that the terminology used to describe articles is consistent.

If you find a relevant article in a library database, look at the subject headings used to describe the article. If the subject headings in the database are different from the keywords that you are using, you can incorporate them into your search. This will help you ‘speak the same language’ as the database.
3. References
Just like you’ll be referencing articles that you use in your literature review, the articles themselves will have reference lists of other related research. When you are reading the articles, look for references to other research that might be relevant. Use the reference list to locate the article.

4. Cited reference searching
Just as the articles that you have found have cited previous research, they may also have been referenced by other researchers since they were published. Since researchers usually reference articles that are about similar topics, these newer articles might be relevant to your research.

Let’s say, for example, that you find an article published in 2010 that has 25 references. All 25 references must have been published before 2010. It’s possible, though, that your article has been cited by other researchers 2, 3, or even 10 times since 2010. All together, these articles form a citation chain of related research – sort of like a family tree.

Look for a ‘Times Cited’ or similar link in the database you are searching and click on it to view citing articles. The databases Web of Science, Scopus, and Google Scholar are particularly useful but PubMed only gives a partial list so this is not the best database to use for this purpose. The numbers that each database gives you will vary somewhat.

Example #1. Scopus
Example # 2. Cited reference searching in Web of Science.

Example # 3. Cited reference searching in Google Scholar

Need help?
You are welcome to contact Francine with questions or to make individual appointments. She can be reached by email at fmay@mtroyal.ca or by phone at 403-440-6128 from Monday to Friday. You can also visit the library information desk or use our online chat service for assistance.