Why plan your search?

The enormous amount of published research in the health & medical sciences can feel overwhelming, so before you start typing keywords into a database, plan your search strategy first. This guide will take you through the basic steps of planning and running a search. For more in depth help with specific databases, see the database-specific guides on the Searching health databases page.

Planning steps

- Identify the key concepts of your topic
- Work out alternative terminology for these concepts (synonyms)
- Record this terminology in a logic grid
- Adapt your basic logic grid so that it will work according to the specific rules of your chosen databases

Step 1: Identify key concepts

Don't be tempted to type whole sentences into a database. Your search will be much more effective if you focus in on specific concepts.

1. Examine your research topic and pick out the major concepts. For example:

   Topic: **Do dietary factors play a role in the onset of migraine in adolescence?**

   Major concepts: **Do dietary factors play a role in the onset of migraine in adolescence?**

2. These concepts will now form the basis of your search strategy. Most databases will ignore common words such as do, role, the, onset etc, so there is no point in including them.

Step 2: Think of alternative terminology (synonyms)

Researchers use many different words to express the same idea, so which words should you use?

Eg: a researcher may use the word adolescence, or they may instead use adolescent, or teenage, or teen

- Think of as many alternative words/phrases as you can for each concept.
- You do not need to know every possible word or phrase when you begin, however the more you search, the more synonyms you will notice.
- Make a list of these words as you think of them.
- Even better, put them into a logic grid...
Step 3: Create a logic grid

A logic grid is simply a table, created in a Word document to plan and record your search strategy.

1. Open a Word document and create a table. It should have two rows, and a column for each concept.
2. Type a concept into the top row of each column
3. Begin making a list of synonyms for each concept:

<table>
<thead>
<tr>
<th>Dietary factors</th>
<th>Migraine</th>
<th>Adolescence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diet</td>
<td>Migraine</td>
<td>Adolescence</td>
</tr>
<tr>
<td>Nutrition</td>
<td>Vascular headache</td>
<td>Adolescent</td>
</tr>
<tr>
<td>Food intake</td>
<td></td>
<td>Teenagers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teens</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Young adults</td>
</tr>
</tbody>
</table>

Topic: Do dietary factors play a role in the onset of migraine in adolescence?

Search tips: truncation, phrases, AND, OR

Now that you have a basic logic grid, apply some additional search tips and techniques.

1. **Truncation**
   Broaden your search to include various word endings by applying a truncation symbol to the root of a word. The asterisk (*) is most common, but truncation symbols do vary from database to database.

   Example: genetic* = generic, genetics, genetically

2. **Phrase searching**
   Using quotation marks around 2 or more words is a common way to ensure that search results will contain those exact words in that exact order.

   - Example: pain management will find results which contain the word pain and the word management, however they may not be together.
   - “pain management” will ensure that only results which contain the words pain management side by side will be returned.

3. **AND searching**
   Find search results which contain all of your search terms. Use the AND search between your concepts to make sure your results mention all of your concepts in the same article.

   - Example: diet AND migraine AND teenagers

4. **OR searching**
   Find search results which contain any of your search terms. Use the OR search between each of your synonyms. In this example, you don't mind if the article uses the word teenagers, or the word adolescents, just as long as it uses at least one of them.

   - Example: teenagers OR adolescents
Step 4: Apply these search tips to your logic grid

Now that you have a basic logic grid, apply some additional search tips and techniques:

<table>
<thead>
<tr>
<th>Dietary factors</th>
<th>Migraine</th>
<th>Adolescence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diet OR “Dietary factors&quot; OR Nutrition OR “Food intake”</td>
<td>Migraine OR “Vascular headache”</td>
<td>Adolescen* OR Teen* OR “Young adults”</td>
</tr>
</tbody>
</table>

Step 5: Run this search in Library Search

Now that you have a basic logic grid, apply some additional search tips and techniques:

1. Go to Library Search, select Advanced Search
2. Copy and paste each of your logic grid columns into a separate line
3. Notice that the AND is automatically included between each of your search strings.
4. The result of this search will include at least one of the words from the first line and at least one of the words from the second line, plus at least one of the words from the third line.

Now adapt your logic grid to work with other databases

Most health and medical sciences databases are more complex than Library Search, and have very powerful search engines. They include features such as subject headings and field codes to make your search focussed and precise.

The good news is that once you have constructed a basic logic grid, it becomes your ‘master’ grid which you can then translate for use in any of the major databases. See the links below for database-specific help, including ‘translating’ your logic grids.
See also: <insert links>
Which databases should I use?
Database searching videos
PubMed
Embase
CINAHL
PsycINFO
Dentistry & Oral Sciences Source

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