OVID Medline

Advanced Searching

A workbook prepared by the Ulster University Library Life & Health Sciences Subject Team on searching in the Medline database.

Life & Health Sciences Library Team
ULSTER UNIVERSITY LIBRARY
Introduction

The aim of this workbook is to show you how to carry out an advanced search using Medline.

What is Medline?
Medline (1948 – present) is produced by the U.S. National Library of Medicine (NLM) and is the main biomedical and clinical medicine database, holding 23 million individual references from solely peer reviewed journals. Content coverage includes; medicine, allied health, biology, dentistry, healthcare, nursing, pharmaceutical sciences and veterinary medicine. Medline is supplied to the Ulster University through the OVID platform.

Learning Outcomes:
- Accessing Medline from the Ulster Portal.
- The Advanced Search screen and Medical Subject Headings (MeSH).
- Keyword searching.
- Advanced searching techniques; truncation and wildcards.
- Advanced searching techniques; proximity searching.
- Combining terms.
- Planning a search.
- Carrying out a search in Medline.
- Applying Limits.
- Viewing results and finding full text.
- Creating a personal account to save searches and articles.
- Exporting article citations to Refworks.

ACCESS

- Log on to the Portal at [http://portal.ulster.ac.uk](http://portal.ulster.ac.uk)
- Select the Library & ICT tab.
- Select the Databases link, displayed under Key Services, on the right hand side of the screen. The A-Z listing of Library Databases is displayed on the screen.
- Click on M and scroll down to select Medline (Ovid).
- On the next screen click on Proceed to open the database.
If you see this screen, enter Ulster and click on the Ulster University link:

**AUTHENTICATION**
You will need to identify yourself as an Ulster University user to gain access to the database. On the screen showing an artist’s impression of the new Belfast campus, enter your **student email address** and **Ulster Network password**. This will authenticate you for the current browsing session.

**The Advanced Search screen and Medical Subject Headings (MeSH)**
Medline opens up in the Advanced Search screen with the Map Term to Subject Heading function automatically selected.

**What are Subject Headings?**
Databases such as Medline use a thesaurus of standardised indexing terms to describe the content of each article; these terms are known as Subject Headings or
MeSH (medical subject headings). Medline will try and match or 'map' your topic to the closest matching Subject Heading in their thesaurus.

Checking your term against the Subject Headings will:

- Direct you to the preferred subject term that the database considers to be a best match for your term e.g. for high blood pressure Medline will recommend the heading; hypertension

- Find all articles indexed under one umbrella subject heading regardless of the terminology used by the article authors e.g. the heading pressure ulcer also covers the terms; bed sores, pressure sores and decubitus ulcers.

Keyword search

Not every term has a Subject Heading so you may need to carry out a keyword search. Medline will always give you the option of searching by keyword at the
bottom of the list of suggested subject headings. When you use this function you will be searching within the article title and abstract.

You will also need to use a keyword search in conjunction with a subject heading search if you want to make sure that all articles containing your terms, regardless of context, are retrieved. This stage is necessary if carrying out a systematic review or higher level of research (e.g. final year dissertation, Masters or PhD) and you will need to use your own judgement and knowledge to decide how deeply you need to search a topic.

**Truncation and Wildcards**

When searching by keyword, databases will usually only find the exact term you enter and not any plurals or variations. In order to make sure that all variants of a term are found a number of advanced search symbols can be used.

- * is the truncation symbol, use to find all the various different endings of a term
  - e.g. herb* will find herb, herbs, herbal, herbalist, herbalism
- # is the wildcard symbol that will replace 1 character within a word
  - e.g. organi#ation will find organisation and organization
- ? is the wildcard symbol that will replace 1 or 0 characters within a word
  - e.g. behavio?r will find behaviour and behavior

Wildcards can be useful for finding both British and American word variations.

It is not always necessary to use advanced searching techniques, only use when they make sense for the context of the question.
Proximity Searching

Proximity searching enables you to search for two or more terms within a set number of words. It is a useful technique to use when you want to find terms that are near to each other. The proximity operator in Medline is ADJ followed by the number of words:

- chronic ADJ pain will find the two terms next to each other in the order entered.
- chronic ADJ1 pain will find the two terms next to each other in any order.
- chronic ADJ2 pain will find the terms within 1 words of each other in any order.
- chronic ADJ3 pain will find the terms within 2 words of each other in any order e.g. articles about chronic neck pain and pain relating to chronic illness will both be found.

Combining Terms

You will need to combine terms using OR, AND in order to retrieve the most relevant results.

Use OR to combine terms which are similar, this will widen a search and increase the number of articles retrieved.
Use **AND** to combine terms which are different, this will narrow and reduced the number of articles retrieved.

Databases collections can be huge (e.g. Medline holds over 23 million individual journal citations) and you need to be well prepared and specific about what information you want to find. Plan your search before you start; what information do you want to find out?

In this section we will use Medline to search for articles to answer a specific question. Look at the question below and ask, what are the key topics or concepts and how else may they be described?

**What is the evidence to support the use of wheelchairs with very young children diagnosed with cerebral palsy?**

It is a good idea to write down the key topics and then list any variations or alternative terms that could also be used to describe them.

**Remember**

- Not all topics will have many or any variations or alternative terms.
• Use your own professional knowledge and judgement to decide how deep you want to go into the search process.

• When thinking of terms, keep in mind that most databases are produced in America and use American terminology e.g. physical therapy modalities rather than physiotherapy.

• You can't just type the question into the search box as this is an unsystematic method of searching and would return too few relevant results.

• It can be very useful to look at the Library book stock before searching the databases, a good up to date text book on your chosen subject area can help familiarise you with the subject and with the terminology used by academic publications.

<table>
<thead>
<tr>
<th>Topic 1</th>
<th>Topic 2</th>
<th>Topic 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheelchairs</td>
<td>Cerebral Palsy</td>
<td>Young children</td>
</tr>
<tr>
<td>Powered wheelchairs</td>
<td></td>
<td>Child</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Preschool</td>
</tr>
</tbody>
</table>

**Carrying out a search in Ovid Medline**

In the Advanced Search type in the first set of search terms beginning with wheelchairs, as illustrated below.

Make sure that the Map Term to Subject Heading checkbox is ticked. Click on Search

Medline displays a list of terms, Subject Headings, which it considers to best match your search terms. Each heading is displayed in blue.
Click on Scope displayed to the right of the Heading to view further information, including how the database defines the term. You will need to do this for every Subject Heading to check that you have chosen the correct heading.

Click on Previous Page to return to the list of Subject Headings.

The Subject Heading is highlighted, click on it to open up the subject heading thesaurus tree.
This is a list of all the Subject Headings available and is ranked by hierarchical relationship rather than alphabetically.

Subject headings are assigned at a topic’s most specific level and can have broader and/or narrower subject headings within the tree.

In this example Wheelchairs is a narrower heading within the broader subject Self-Help Devices, which in turn is itself a narrower heading within the overall subject of Equipment and Supplies.

**Explode and Focus**

The two boxes to the right of the number of articles found are the Explode and Focus options. They also appear on the previous screen as shown below.

If you select **Explode** it will include all the narrower subject headings (if available) for your term. In our example Wheelchairs has no narrower headings so cannot be exploded. Self-Help Devices does have narrower headings, so if explode is selected you will search for this main heading and the 2 narrower headings indented underneath.
Any topic with showing the plus sign in the Subject Heading thesaurus tree can be exploded e.g. 

You will need to repeat this process for all Subject Headings you use. If you don't check the thesaurus tree you may be missing vital additional terms.

Selecting the Focus box will only return articles in which your chosen Subject Heading is the main subject within the article. This is a limiter and should be used with caution at advanced searching level.

Subheadings
Once a Subject Heading has been selected scroll to the top of the screen and click on the Continue button, on the next screen a list of subheadings will appear. You can now limit your search to a particular aspect of you topic e.g. the adverse effects of wheelchairs. This is not recommended as you may miss articles due to indexing inconsistencies e.g. many articles aren’t assigned subheadings.

It is better practice to select all subheadings, by clicking on Continue all subheadings will be automatically selected.
The details of the search and the number of articles found will be recorded in the **Search History** part of the screen, to open the panel click on Search History.

As you progress each search will be recorded in the Search History panel.

Repeat the process with the next term powered wheelchairs, use truncation to find all the word variations e.g. power* wheelchair*

This time none of the Subject Headings seem appropriate so we will need to use the search as Keyword option at the bottom of the Subject Heading suggestions. Select and then click on Continue.
The search history panel will now show 2 searches

![Image of search history panel]

You now need to combine these searches to create one set of results containing all the records together.

In the **Search History** panel of the screen tick the checkboxes beside each search set and click on Combine Selections with **OR**

![Image of search history panel with combined selections]

This will create a third search set

| 3 | 1 or 2 | 4037 |

You are now ready to search for the next topic in your question, cerebral palsy. Type the terms into the Search box and click on Search. The Subject Heading cerebral palsy is suggested at the top of the list. Select and click on Continue to create a fourth search.
You need to find articles which discuss the use of wheelchairs in relation to cerebral palsy. To do this you must combine search 3 (the wheelchairs or powered wheelchairs search) with search 4 (the cerebral palsy search).

Tick the checkboxes beside search 3 and search 4 and this time Combine Selection with **AND**.

A fifth set of results, search 5 is created.

**5**  
3 and 4  
145  
Advanced

Medline’s default is to show 5 searches onscreen. Click on Expand to show all searches.
Repeat the process with the next term young children. Use the search as Keyword option at the bottom of the Subject Heading suggestions. Select and then click on Continue.

Repeat with the next term child. In this example child has a more specific heading and can be exploded to include Child, Preschool.

Combine these terms to create a third set, search 8.

You need to find articles which discuss the use of wheelchairs with very young children diagnosed with cerebral palsy. To do this you must combine search 5 (the wheelchair, powered wheelchair search and cerebral palsy search) with search 8 (the children search).

Tick the checkboxes beside search 5 and search 8 and this time Combine Selection with **AND**.
A new set of results, search 9 is created.

Next we need to limit these results to articles published from 2010 onwards and in the English Language only.

**Applying Limits**

Find the Limits link underneath the main search box, click to open.

You will see a list of most commonly used limiters but we need to use the Additional Limits, click on this to open.

On the next screen select the limits you want to apply.
The final set of results, search 10 is displayed and the completed search will look like this:

Click on Display or scroll down the page to see the articles found.

**Viewing Results and finding Full Text**

Each record is displayed like so; title of the article, authors, journal title and publication details - volume, part number, page numbers and date.
Click on the blue article title to view more information.

This fuller record lists the Subject Headings (major concepts are denoted with the prefix *) assigned to the article and an abstract. The abstract will provide you with a summary of the original article and should help you decide if the journal article is going to be relevant (not every record will include an abstract).

Medline, like most academic databases, provides bibliographic details only and you will usually have to link out to another supplier to find the full text of an article.

Click on the button to check the Library's Electronic Journals Catalogue, to see if we subscribe to the journal the article appears in.
On the next screen select a supplier by opening one of the hyperlinks, in this example Taylor and Francis.

You will then be linked to the article where you can read online or download and save/print the pdf.

If the U Find It cannot link you to full text, the following message will be displayed:
You can check the Library Catalogue and/or Google Scholar for full text. You will need to copy and paste the title of the journal/article into each respective resource. If no full text is available can use the Library Document Delivery Service, for more information so to [http://library.ulster.ac.uk/documentdelivery/](http://library.ulster.ac.uk/documentdelivery/)

### Creating a Personal Account and Saving Searches

When you have finished your session and closed down Medline your search history and any results found will be deleted. Next time you open up the database you will have to repeat the search from the beginning. If you want to save a search to re-run or use at a later date you can create a Personal Account within OVID that will save your search permanently.

Click on Save Search History; find it at the bottom of the Search History.

Click on Create a new Personal Account and complete the onscreen form.

Give the search a name, include the database you searched and click on Save to finish.
You now have your own personal account.

Not every article in your results list will be relevant. You can save those that are by checking the tick box displayed on each record and clicking on Add to My Projects. You will then be prompted to create a project folder to place the articles in and if you have a personal account these will also be saved permanently.

To retrieve a search go to My Account and login, click on the My Workspace tab and then on My Searches and Alert. Select the search you want to re-run by ticking the checkbox and then clicking on run.

**RefWorks**

To email citation records to RefWorks from Medline use the tick boxes beside each result to select, then click on Export at the top of the results screen.
This opens the Export Citation List box, select Export to RefWorks and click on Export Citation(s). Your RefWorks account will open on the screen and the references will move over to your Last Imported Folder.

Close the Refworks screen and return to Medline.

You should now be able to carry out and save an Advanced Search in Ovid.

Help

Ovid SP has an excellent Help section: find it at the top of the search screen.
Don’t worry if you are having difficulties using the database; just contact a member of the Life and Health Sciences subject team who will be happy to help.

For further information please contact your Subject Librarian

July 2017