Searching healthcare databases using Ovid / Training Guide

Overview

This detailed guide will help you plan and carry out a topic search across databases such as Medline and Embase using a specialist search tool called Ovid. It contains advice on planning your search, step-by-step instructions for using the tool and provides further hints and tips on using the Advanced Search features.
Using Online Databases

Why use a database?
Finding individual journal articles by searching through journals with relevant-sounding titles can be very time-consuming and inefficient.

Search tools such as Hunter allow you to do a quick search for articles on your topic but lack the features to refine your search so that you retrieve the most relevant and up to date articles.

Databases provide a quick answer to these problems. Searching across different journal titles using a database is far faster and more efficient than hand searching individual journal titles. Databases also provide many features that you can utilise to refine your search to ensure that it is both thorough and relevant.

What do databases contain?
Databases provide article references for the medical and health care journal literature. You will find a range of journal articles describing everything from systematic reviews to case reports. Most records contain abstracts, or short summaries of the article. From these records you can select the references that are most relevant to your topic, and find the full text (the whole article) to read.

What is Ovid?
Ovid is the specialist search tool that allows you to search databases such as Medline. St George’s Library pays a subscription to Ovid to be able to use this service and it is only available to St George’s, University of London staff and students. Ovid will also provide direct links to the full text (the whole article) if available electronically.

Which databases are available in Ovid?
Medline – From US National Library of Medicine. Covers clinical medicine, including the allied health fields. Includes biological and physical sciences and humanities where they relate to health care.
Embase – Produced by Elsevier. Covers biomedicine and pharmacology; particularly strong in the areas of drugs, toxicology and psychiatry. Includes US and European journals.
Maternity and Infant Care – From the Midwives Information and Resource Service. For maternity health professionals with an overview of key midwifery and medical research to inform their practice.
PsycINFO – Compiled by the American Psychological Association. Contains relevant material from medicine, psychiatry, social work, law, criminology, social science and organisational behaviour.

Are there any other databases available?
AMED – Allied Health and Complementary Medicine, CINAHL Plus – Cumulative Index to Nursing and & Allied Health, and Medline are available on the EBSCOhost platform.

A Library helpsheet is available for searching using the EBSCOhost platform – copies are available in the Library, or can be downloaded from the Library website > Help > SGUL electronic journals, books & databases.

How do I access databases and do I need a password?
Databases are available from any PC with an internet connection. The best way to access the healthcare databases is to use the links from the Databases pages on the Library website. If you are off-site you will need your University username and password. If you have a query regarding these details please ask at the Student Centre or Library Helpdesk.
Planning a Search in Medline

Consider your topic and appropriate search terms

Before starting your search you need to think of what search terms to use. Break down your topic into individual concepts. For example, a search for articles on the effect of postnatal depression on the family has two concepts - postnatal depression and family. Listing any alternative words for these terms is also potentially useful, for example postpartum depression or puerperal depression.

Writing a search plan

1. Write down your research topic in one sentence. It helps to think about:
   a) what kinds of patients you are interested in, for example: ethnicity, age, gender and disease or condition
   b) what intervention or treatment are you concerned with, for example: diagnostic test, drug therapy or surgical procedure.
   c) where is the intervention happening, for example: outpatients clinic, A&E, or home
   d) what outcomes are you looking for, for example fewer episodes, less mortality or improvement in function

   Try and keep it as simple as possible.

2. List the major concepts for your topic, for example:

   | postnatal depression | family |

3. Are there any alternative words (synonyms, broader or narrower terms) you might use for any of these concepts? For example:

   | postpartum depression | puerperal depression | family relations |

Subject Headings and Keywords

The most efficient way of searching is to use the subject headings that are allocated to each article to describe its content to find articles about your subject. In Medline these terms are known as MeSH headings (Medical Subject Headings).

As you will see further on in this guide there are ways of discovering the subject headings used by Medline.

Sometimes you will not find any relevant subject heading for your term. This can happen if you are searching using a proper noun such as NHS. In this instance, you can perform this search as a text word search where the database looks for your terms in the abstract and title.
Search Operators - AND / OR

The best way to search is to search for each term separately and then combine them together at the end with search connectors.

Search operators let you combine your search terms in different ways:

- **AND** will find documents where both terms appear, for example, *stress AND anxiety* will find documents that discuss both. This will narrow your search and give you fewer results.
- **OR** will find documents where either term appear, for example, *stress OR anxiety*. This will broaden your search and give you more results.

Following the principle of searching each item separately, your search could then look like this:

1. Postnatal depression
2. Postpartum depression
3. 1 OR 2
4. Family
5. Family relations
6. 4 OR 5
7. 3 AND 6

**Limits**

It’s useful to think in advance how you may want to limit your search such as age group, English language, date range. These limits will be added at the end of your search.

**The 10 Step Search Process**

Once you have planned your search you are now ready to carry out your search. Use this 10-step process to guide you.

1. Carry out a subject heading search for each term in your first concept
2. If you don’t find a relevant subject heading carry out text word searches looking for your terms in the title or abstract.
3. Use OR to combine all your subject headings or text words together for your first concept
4. Repeat steps 1-3 for the remaining terms related to your second or third concept etc.
5. Use **AND** to combine your ORed searches together
6. Review some of the retrieved results to assess their relevance
7. If necessary, revise your search strategy and repeat your searches
8. Limit your results, if necessary
9. Select or mark the most relevant records from the search
10. Print, save or email your results
Searching - using Ovid

Access to the databases
This example uses the Medline database – to access Ovid and open the Medline database:

- Go to the Library home page [www.library.sgul.ac.uk](http://www.library.sgul.ac.uk) > Databases > A–Z list
- Scroll down or select M to locate the Medline database in this list
- Links are available for onsite or offsite access – click the appropriate Ovid link. (Note that there is also the option to search Medline via EBSCO – this is a different interface and not covered in this guide).
- For offsite access you will need to log in using your University username & password

Deciding on your search terms
This instruction sheet will take you through a search for articles about the use of physiotherapy for low back pain. In this example we can identify fairly quickly the two important terms – **low back pain** and **physiotherapy**.

Modes of searching
Ovid provides two modes of searching – **Basic Search** and **Advanced Ovid Search**.

Basic Search allows free text searching so you can enter a search either as a simple query OR key terms. Advanced Ovid Search provides additional features to allow more control over how Ovid searches. In general, it is recommended that you use **Advanced Ovid Search**. In the next sections, examples are given for searching using both modes.
Performing the search using Advanced Search

Creating a search for your first search term

Make sure the **Advanced Search** tab is selected

In the search box, type in your first search term: *low back pain*. Make sure that ‘Map term to Subject Heading’ is ticked (it is the default).

- **Click Search button**

The system will compare (or ‘map’) your search term to a standard set of subject headings that have been used to index the journal articles in Medline to try and find a match. The next screen is displayed. As you can see, *low back pain* matches a subject heading, and is automatically selected.

- **Click Continue button**

Using a standard subject heading will mean your search is more efficient and effective in finding relevant articles.

- **Click Continue button**

The following screen is displayed, giving you a choice of different **subheadings**.

As a general rule, especially at the beginning of performing a search, you should include all subheadings to maximise the number of articles you retrieve. You can always narrow your search later. Click the **Include all subheadings** to select it.

- **Click Continue button**
You are returned to the Search page, with the search results listed.

Creating searches for your other search terms
You are now ready to repeat the process we have just been through for any other search terms you have identified. In our example, the second search term is physiotherapy.

In the search box, type in the search term: physiotherapy. Again, make sure that ‘Map term to Subject Heading’ is ticked.

- Click Search button

This following screen is displayed:

Notice that this time the search term physiotherapy is not listed as a subject heading. This is because it does not match exactly any of the standard subject headings. The system has displayed those subject headings which most closely match the search term.

You now need to select the most appropriate subject heading or headings.

Select Physical Therapy Modalities
Note that there is a check box Include all subheadings at this stage too. Click the check box to select this option.

Note: Use the Scope notes for a fuller explanation of the subject heading. It can help you to decide whether you should include a subject heading.

- Click Continue button

On the Search page, under Search History, you will see a screen similar to the one below:
Combining the search terms

You now have two sets of search results, for **low back pain** and **physical therapy modalities**

To find articles which deal with both subjects (low back pain AND physical therapy modalities), you now need to **combine** these two sets of results:

Click in the check boxes next to the two Search results for the two terms:

- Click **And** button to Combine selections

You will see a screen similar to the one below:

<table>
<thead>
<tr>
<th>#</th>
<th>Searches</th>
<th>Results</th>
<th>Search Type</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low Back Pain/</td>
<td>8994</td>
<td>Advanced</td>
<td>Display</td>
</tr>
<tr>
<td></td>
<td>Physical Therapy Modalities/</td>
<td>9226</td>
<td>Advanced</td>
<td>Display</td>
</tr>
</tbody>
</table>

There are 540 articles here which deal with **low back pain** and **physical therapy**.

**Applying Limits**

With some searches you may find a manageable number of articles to review. However, as is the case here, some searches may have several hundred results. In this situation you can use the **Limits** function to narrow your search further and remove articles which are not relevant, such as those in a foreign language, or not available in full-text.

Click the check boxes for **Full Text**, **English Language** and click **Search** button.

<table>
<thead>
<tr>
<th>#</th>
<th>Searches</th>
<th>Results</th>
<th>Search Type</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low Back Pain/</td>
<td>8994</td>
<td>Advanced</td>
<td>Display</td>
</tr>
<tr>
<td></td>
<td>Physical Therapy Modalities/</td>
<td>9226</td>
<td>Advanced</td>
<td>Display</td>
</tr>
<tr>
<td></td>
<td>1 and 2</td>
<td>540</td>
<td>Advanced</td>
<td>Display</td>
</tr>
<tr>
<td></td>
<td>Match 3 to (english language and full text)</td>
<td>342</td>
<td>Advanced</td>
<td>Display</td>
</tr>
</tbody>
</table>

Note your **Limits** are applied to your most recent search, i.e. #3, to give results #4. 342 results is still a lot, but you will often only be interested in the most recent. To view and apply further limits, for example, by age group, publication type, click **Additional Limits** button.
Viewing your search results

To view your search results either click Display or scroll down the page.

The graphic below illustrates a typical listing for a reference in your results with an explanation below of the various items shown:

   Calvo-Munoz I, Gomez-Conesa A, Sanchez-Meca J.
   BMC Musculoskeletal Disorders, 14:55, 2013.
   [Journal Article, Meta-Analysis, Review]
   UI: 23374375

Authors Full Name
Calvo-Munoz, Inmaculada, Gomez-Conesa, Antonia, Sanchez-Meca, Julio.

View Abstract

At the top of the display are options to manage your results such as printing (see page 12). The display defaults to Citation view, but this can be changed to a simple Title view, or Abstract view.

Links on right of the screen:

Abstract Reference - link to the article summary information.
Complete reference – link to the complete bibliographic information for the article
Find Similar (articles) and Find Citing Articles searches Journals@Ovid only
Full text – link to the publisher’s website for the full text of the article

To navigate back to the results list or Search History from the full bibliographic information click on Search Results in the top left of the screen or Search in the top right.

To sort the results, use the Sort by drop down list under Results Tools on the right-hand side.
Printing, emailing and exporting your references

Just above the results list there are options to manage your search results:

![Options to manage search results](image)

First you must select all the references you require – you can select individually, by clicking the check box against each article reference, or use **Select All** check box. Then select one of the options.

### Print

- Select fields to display. The default is **Citation (Title, Author, Source)**.
- Select the **Citation Style** – this will format the references.
- To include a record of your **Search History** (i.e. search steps), click the **Search History** check box.
- Then click on **Print Preview** and print from your browser.

### Email

Emailing results is similar process, but you will need to enter an email address. You also have the option to include a **Link to external resolver**, which will include a link to St George’s Library catalogue to check if we hold the article (recommended). You can also tick Include URL, which will include the direct link to the article though.

### Export

The Export option allows you to create documents (such as Microsoft Word, PDF or text files) or export citations directly to reference management software (such as RefWorks, Reference Manager, or EndNote).
Further tips for searching using Advanced Ovid Search

These tips will help you refine your searches when carrying out a search.

Explode and Focus

Explode

After typing your subject term, the system maps it to the MeSH subject headings from which you must choose the most appropriate. The next decision you must make is whether to **explode** the term or not.

The subject headings are organised in a tree structure. Each heading is linked to others which are either broader terms (higher up the tree) or narrower (lower down the tree). To view the structure, click on the Subject Heading.

<table>
<thead>
<tr>
<th></th>
<th>Asthma, Aspirin-Induced</th>
<th>Asthma, Exercise-Induced</th>
<th>Status Astmaticus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8</td>
<td>699</td>
<td>454</td>
</tr>
</tbody>
</table>

When articles are indexed they are given the most specific term possible, but in instances where a paper deals in more general terms with a topic it will be given a broader subject heading. If you wish to retrieve very specific information you may wish to concentrate on a single subject heading, but if your interest is more general you may wish to include all the subject headings linked to your area of interest. You do this by clicking in the small box in the **Explode** column. Read the **Scope Note** to check the meaning of a subject heading and how it is used.

Focus

Having decided whether or not to explode you must then decide whether to select all documents with the subject heading you have chosen or to select only those which focus on the topic.

Subheadings

Subheadings are the more specific terms associated with subject headings. As a default all subheadings are included. Use them in combination with a subject heading to further describe the search term you want and narrow your results.

For example, when you combine the subject heading **nutrition disorders** with its subheading diet therapy (dh), Ovid retrieves records that are not about nutrition disorders in general, but about the effects that diet therapy can have on nutrition disorders specifically.

Select the check boxes of subheadings that you want to associate with your subject heading. You can also specify whether you want only articles which relate to all your selected subheadings (select AND) or any of them (select OR).

If you do select any subheadings this may exclude a lot of relevant material covering different aspects of the same subject. Sometimes it may be preferable to select a specific subheading, for example treatment, diagnosis etc. if you are overwhelmed with references. However, usually, it is better to select **Include All Subheadings** and reduce the number of references by combining the subject with another topic or use some of the **Limit** options available.
Search by Author / Journal / Title / Textword

You can also search by author, journal title, article title or textword (a free text search) using Advanced Search.

Author
On the Search page, in Advanced Search, click Author option. Enter the Author's last name, a space, and first initial if known: click Search. An alphabetical list of authors is displayed, including initials from which you may select any number of authors. To find articles for authors selected, click Search for selected terms button.

(Article) Title
Click on the Title option. Enter a word or phrase to be searched in the title. Click Search button.

Journal (Title)
You may search for a specific journal title in a similar way as searching for an author. Click on the Journal option. Type in the Journal title you require. An alphabetical list of journal titles is displayed, from which you may select any number of titles.

Textword or Keyword
If your search involves a new concept or topic, or a proper noun it may not have an appropriate subject heading. In this case you may need to search by “textword”. You do this by clicking in the box marked Map Term to Subject Heading to de-select this option.

When you carry out a “textword” search Ovid looks through the titles and abstracts of the documents and matches your search letter by letter. This means you will retrieve every document in which your word (s) is mentioned. Consequently you will retrieve a lot of irrelevant material, but if there is little material available it is a good way of beginning a search. Once you have retrieved some relevant documents it is advisable to have a close look at the subject headings used to describe those documents by viewing the complete reference and to carry out a new search using relevant terms. When doing a textword search spelling is critical (do not forget that this is an American database so American spellings should also be used).

Pitfalls of textword searching - make sure you cater for:
- English/American spelling: behaviour/behavior
- Word order: evening primrose oil/oil of evening primrose
- Synonyms: house/home/residence
- Words with several meanings: lead, pine, mint
- Word endings: measure/measures/measurement

Truncation
This can be useful if you are doing a textword search. By using the “$” or “*” symbol at the end of a stem, Ovid will look for words beginning with that stem. This is very useful for including plurals in the search. For example, mentor$ will find articles containing the words mentor, mentors, mentorship etc.
## Shortcuts for Ovid searching

### Text word searching

<table>
<thead>
<tr>
<th>Feature</th>
<th>Example</th>
<th>To find articles containing …</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ truncation</td>
<td>diseas$</td>
<td>disease, diseases, diseased</td>
</tr>
<tr>
<td>$n truncation</td>
<td>discipline$1</td>
<td>discipline, disciplines, disciplined</td>
</tr>
<tr>
<td>measur$4</td>
<td></td>
<td>measure, measures, measured, measuring but not measurement</td>
</tr>
</tbody>
</table>

Note: For truncation an * can be used instead of $

<table>
<thead>
<tr>
<th># wild card</th>
<th>wom#n</th>
<th>women or woman would find dogs but not dog</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>dog#</td>
<td>Note that the character must be present</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>? wild card</th>
<th>behavio?r</th>
<th>behaviour, behavior would find dog, dogs but not dogma</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>dog?</td>
<td>Note that the presence of the character is optional</td>
</tr>
</tbody>
</table>

| adjn adjacency | cancer adj3 colon | where cancer & colon are within 3 words of each other |

### Searching fields

<table>
<thead>
<tr>
<th>Field</th>
<th>Example</th>
<th>To find articles …</th>
</tr>
</thead>
<tbody>
<tr>
<td>title</td>
<td>.ti</td>
<td>water birth.ti</td>
</tr>
<tr>
<td></td>
<td></td>
<td>with water birth in the article title</td>
</tr>
<tr>
<td></td>
<td>.ti</td>
<td>nurs$.ti</td>
</tr>
<tr>
<td></td>
<td></td>
<td>with nurse, nurses, nursing, nursed in the title</td>
</tr>
<tr>
<td>infection adj4 control$.ti</td>
<td></td>
<td>where infection &amp; control$ are within 4 words of each other in the title</td>
</tr>
<tr>
<td>abstract</td>
<td>.ab</td>
<td>diabetes.ab</td>
</tr>
<tr>
<td></td>
<td></td>
<td>with diabetes in the abstract</td>
</tr>
<tr>
<td>journal</td>
<td>.jn</td>
<td>nursing standard.jn</td>
</tr>
<tr>
<td></td>
<td></td>
<td>in Nursing Standard</td>
</tr>
<tr>
<td>author</td>
<td>.au</td>
<td>collington v.au</td>
</tr>
<tr>
<td></td>
<td></td>
<td>by V Collington</td>
</tr>
<tr>
<td>publication year</td>
<td>.yr</td>
<td>2006.yr</td>
</tr>
<tr>
<td></td>
<td></td>
<td>published in 2006</td>
</tr>
</tbody>
</table>

### Search History results terminology

exp = Explode ; * = Focus ; Wound Healing/ and Honey/ = subject headings;
eae = subheading adverse effects(for Honey subject heading)
Saving your Search History & AutoAlerts

Once you have created a search, you may want to save it so that you can re-use it in the future, or make changes to it.

You can save your search by using the **Save All** option.

- Click on **Save All**
- You will then be prompted to log into your Personal Account (which only exists within Ovid). If you do not already have a Personal Account, select **Create Personal Account**
- Once you are logged in, you are prompted to Save your current Search

You must enter a Search Name; Comment is optional
- Type can be Permanent, Temporary (deleted after 24 hours), AutoAlert or MyProjects.
- AutoAlert will run a search at regular intervals automatically and Ovid will email to you the details of any new articles that match your search history
- Click **Save**

You can run, edit or delete your searches and alerts, by going to the **My Workspace** page and clicking on **My Searches & Alerts**.
Performing the search using Basic Search

Using the physiotherapy for low back pain example we used when looking at the Advanced Search, we are going to use the Basic Search to find articles on this topic.

Make sure Basic Search is selected.

Enter a search either as a simple query OR key terms, for example:

Physiotherapy for low back pain

OR

Physiotherapy low back pain

Note:

- If using key terms, use nouns rather than verbs, adverbs or adjectives
- Terms are ‘ANDed’ together i.e. will search for articles containing all terms
- To ‘OR’ terms together, eg HIV or AIDS, search separately and combine using OR button
- Check ‘Include Related Terms’ – will search for synonyms, plurals as well

Click Search button. The search results are displayed:

Results are ranked, with the most relevant at the top, i.e. with highest star Relevance. Relevancy is calculated using various criteria including if all terms are found and how often the terms are found in the article. Use Sort By to change sort sequence.

Search Information shows the search terms used; click ▶ to expand and show synonyms used. Always check the terms & synonyms that Basic Search has used to make sure it has interpreted your search correctly. If not, you may need to adjust your query or key terms.

Exact matched terms are highlighted in yellow. Alternative terms are highlighted in pink.

Filter by – identifies most frequently occurring Subjects (as in Subject headings), Authors and Journals. Click on ▶ to view them, and then click on an item to narrow your results.

Only the first 500 results are displayed i.e. those the systems calculates as most relevant.

In handling your Search results, you can use these following features in the same way as described for Advanced Ovid Search:

- Apply Limits such by full text, publication year; see page 9
- View search results; see page 10
- Print, save or email your results; see page 11
Searching a different database

To carry out a thorough literature search you will usually need to search more than one database. You can switch to another database that is available on Ovid from the search screen itself.

Just above the search box it will display which database you are currently searching, in this case Medline, and give you the option to change databases by clicking the Change link, which will give you this pop-up box:

Select the most relevant database for your search using the check boxes on the left, in this case we have selected Embase, then click OK. The Resource selected will now display the name of the database you have switched to. Carry out your search strategy in the same way as before.

Note: there are options which allow you to select more than one database at a time, and/or to run your existing search history on the database you are switching to. However, because the subject headings are different in each database this is not a precise way to search and you may miss useful articles. It is always best to search one database at a time and to re-enter your search yourself, going through the process of mapping to the subject headings each time so that you can ensure you are selecting the subject heading that most accurately describes your search term.
Locating the journals you need

You should find that in Ovid, in your listing of references (i.e. your search results) links are provided where the full text is available electronically through St George’s Library.

Finding Journals

- From the Library homepage [www.library.sgul.ac.uk](http://www.library.sgul.ac.uk), select **Search Hunter**
- From the drop down list, select Journal Titles
- Type the **title of the journal** in the search box, and click **Search**


You can look up a journal title using Search25 [http://www.search25.ac.uk/](http://www.search25.ac.uk/) to see whether any other institution within the M25 holds the journal (select Union List of Serials to search). If so, you should be able to go to the institution to copy the article. It is advisable to contact them to check before you go.

Interlibrary Loans

Please note that the Library does not hold every journal. For articles not available through the Library, our Interlibrary Loans department can obtain it for you. Inter-loan requests cost £6.00, payable in cash or with an account code. If you have any questions, please contact our Interlibrary Loans department on 020 8725 5441 or at interloan@sgul.ac.uk, or visit our web pages [http://library.sgul.ac.uk](http://library.sgul.ac.uk) > Resources > Interlibrary Loans.