Searching the Evidence using OvidSP

(Particularly useful for University of Cambridge access to Embase)

August 2016
Supporting Literature Searching

Searching the Evidence using OvidSP

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To help you use this guide,

indicates a step in the process of searching and retrieving articles.
indicates a tip, or an extra piece of information.

August 2016
• Introduction

This guide is designed to give you a brief overview of how to search any database via the OVID interface. Depending on the ATHENS/RAVEN password you are using, the range of databases will vary: for example University of Cambridge subscribe to a different set of databases via OVID compared with Anglia Ruskin University.

Access to Embase via OVID for University of Cambridge users is achieved using a RAVEN username and password. Again, each institution has a different password, and you may be eligible for more than one: for example if you are studying part time at University of Cambridge, but also working part time at Addenbrooke’s, you would be eligible for a University RAVEN password and an NHS ATHENS password.

As a brief overview, this guide will help you learn the principles of how to search any database via OVID, regardless of which password you use to access it.

While this guide will demonstrate a search in EMBASE, the OVID search interface will look and work the same regardless of the database you use.

• How to access the OVID databases

You can access the OVID databases via 2 main routes:

Route 1: Go to http://library.medschl.cam.ac.uk/ and click “Research Support” and “Databases for literature searching” – scroll down to click Embase “available using RAVEN”. Click Embase, and login with RAVEN if you are ‘off campus’. Click the “continue” button at the top of the page. Alternatively, go to http://tinyurl.com/embase and click “Embase” and login with RAVEN if you are off campus).

Or

Route 2: Go to http://www.athensams.net/myathens - enter your ATHENS username and password. Select OVID online from the list. Click the “continue” button to reach the selection of databases available to you using your particular ATHENS registration.
• Planning your Search

To demonstrate how to search in the OVID databases, we are going to search for articles in the EMBASE database to answer the following question:

_Have there been any review articles published between 2010 and 2016 that discuss eating disorders in adolescent females which may lead to osteoporosis or bone development problems?_

Before starting your search you should ask questions of yourself such as:

- What are the keywords?
- Are there any other ways to spell the keywords?
- Are there any other words which mean the same thing (synonyms)?
- Are there any related keywords I want to include?
- What limits do I want to apply – date, language, age group, publication type?

In this search there are 2 sets of keywords:

**Eating disorders**

We combine these in one search line using the Boolean operator **OR**

**Osteoporosis OR bone development problems**

We will then combine these 2 search sets with the Boolean operator **AND.** We will then apply limits of age group (adolescents) and publication type (review articles) and year of publication (2010 – 2016).

**Boolean Logic**

**OR** will search for articles containing any of the terms we choose.

Use **OR** to combine synonyms, alternative spellings or related items

**AND** will search for articles which contain all of the terms we have chosen.
• Search for the first of the first set of keywords

Access OvidSP, perhaps using one of the 2 routes described on page 2

"Choose a database"

To read more information about the coverage of any particular database, click on the “i” button to the right of any of the databases.

Tick the box of the database you want, and click the “OK” button - in this case Embase 1996 – 2016 Week 31 (or whichever is the most appropriate range of years to suit your topic.)

The search page appears:
There are 5 tabs:

Basic search: a natural language search. Enter your search terms in plain English and click the Search button.

Find citation: lets you submit fielded data to retrieve specific journal article citations. More details of this in Appendix B: Find Citation
Search Fields: You can apply fields to a search statement and restrict OvidSP’s search to only the text of the fields indicated.

Advanced OVID Search: which is the search this guide will concentrate on -

Multi-field Search: enables you to search using multiple search terms: more complex search than Basic, but not as complex as Advanced.

Select the Advanced Search tab, and type:

eating disorders

Into the box labelled “Enter Keyword or phrase”

Note that the box labelled “map term to subject heading” is checked.

Click on the Search” button

Why can’t we enter the whole question at once?
It is tempting to put the whole search into the search box in one go.
Don’t!!
- It is better to search in stages, searching only for related terms.
  Searching in stages, is better because: some databases will treat a string of words as one phrase, so you may find nothing or very little
- searching in stages allows you to build up a much more complex and specific search
- searching in stages makes it easier to correct mistakes.
• Mapping to a Medical Subject Heading (MeSH)

TIP: WHAT IS MeSH?
MeSH is a list of words and phrases that are used to index references in bibliographic databases, such as Embase, Medline, British Nursing Index etc.

Databases in OVID will try to match the term you entered with terms from the list of Medical Subject Headings (MeSH).
If it cannot find an exact match, you will see a list of suggested terms. If there is a match, there will be only one term. After any MeSH terms you will always have the choice of selecting the free text term, that is, exactly what you typed.

A more detailed explanation of MeSH is available in Appendix A.

The term eating disorders is automatically mapped to the Medical Subject Heading: “eating disorders”. Note that the subject heading is already selected.

The free text term eating disorders also appears as a selectable item: “eating disorders.mp (search as keyword)”

Select the free text term as well by checking the box on the left.

Note that the two terms will automatically be OR’d together as OR is displaying in the “combine selections with” box above the subject headings.

TIP: WHY SEARCH AS KEYWORD AND MeSH?
It is advisable to select the keyword(s) that you have entered even if they are the same as the subject heading. This will find records where the keyword(s) appear in the title or abstract but not as a subject heading: i.e.
free text terms.

- **Select**  
  - **Subject Heading**  
    - eating disorder  
    - eating disorders.mp. search as Keyword

---

**TIP: EXPLODE and FOCUS?**

Explode and Focus are ways of broadening and narrowing your search - go to Appendix A for more details.

- **Expand**
- **Focus**

---

**TIP: SCOPE?**

Scope notes provide additional information about indexed terms of a database. The information provided can include when the term was first indexed, how the term is applied in the database, used-for terms and see-terms, and other information relevant to your search.

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Having selected both the MeSH and the free text terms, and clicked continue, you are now back at the Main Search Screen, with a view of the results in the Search History box (you may have to click on “search history” to view this).
Searching for the second and third of the first set of keywords.

Now type **Anorexia** into the search box and click “search”

This maps you to the MeSH terms “Anorexia” and “anorexia nervosa”. Select both MeSH terms by checking the select boxes.

Select anorexia.mp as a free text term by checking the select box

Now click “continue”

Now type **Bulimia** into the search box and click “search”

This maps you to the MeSH terms “bulimia”. Select the MeSH term and also the free text term by checking the select boxes.

Now click “continue”

Your search history display should look like:
• Combining Search Terms

The next step is to combine these terms together.

Select sets 1, 2 and 3 by checking the select boxes

Combine selections with OR (these keywords are all synonyms)

**TIP: WHY ARE WE USING “OR”?

You use “OR” to combine search terms that are synonyms, acronyms, alternative spellings or alternative terms. This is because you want the database to find ANY of these terms**
• Searching for second set of keywords

You are now back at the main search page, and should start to search for the next set of keywords.

Type: Osteoporosis into the search box and click “search”

Select the MeSH term and the keyword term. Click Continue.

TIP: WHY AREN’T WE USING THE OTHER MeSH TERMS, SUCH AS POSTMENOPAUSE OSTEOPOOROSIS?

Remember that we are looking for articles that discuss eating disorders in adolescent females which may lead to osteoporosis or bone development problems. Therefore, we don’t use the MeSH term Postmenopause Osteoporosis, as that would refer to older women not to adolescents.

Repeat this process for the keyword: Bone development
• Combining Search Terms

Now combine the sets you have created for osteoporosis and bone development together.

- Select sets 5 and 6 by checking the select boxes
- Combine selections with OR (these keywords are all synonyms)

Your search screen should look like this:

![Search History Table]

TIP: WHY ARE WE USING “OR”?

You use “OR” to combine search terms that are synonyms, acronyms, alternative spellings or alternative terms. This is because you want the database to find ANY of these terms.
• Combining concepts

The next stage is to combine the 2 concepts together, i.e. any of the eating disorders with osteoporosis or bone development.

Select sets 4 and 7 by checking the select boxes

Combine selections with AND
**TIP: WHY ARE WE USING “AND”?

You use 'AND' to combine search terms where you want all the words to appear in the articles that are found.

• Limiting the search

The final stage of your search is to apply limits.

Click to expand the Limits option which is beneath the search box.

While there are a few quick limits that we can apply at this level, there are "additional limits".

Click to view these.
Ensure that search 8 is selected (i.e. the search that combines your 2 concepts) and scroll down the screen and select the following limits:

- English language
- Female
- In publication year: from 2010-current
- Age Group: scroll down the list to select Adolescent
- Clinical Queries – select “Reviews (maximizes sensitivity)"

Click “Limit a search”
TIP: WHY ARE WE USING THESE LIMITS?
Remember the original question we are searching for:
Have there been any review articles published between 2010 and 2016 that discuss eating disorders in adolescent females which may lead to osteoporosis or bone development problems?

Therefore:
• We are limiting by year as we are interested only in articles published between 2010 and 2016
• We are limiting by English language because we are only likely to be able to locate English language articles;
• We are limiting by gender and age group because we are interested in adolescent females;
• We are limiting by publication type because we are interested in review articles.

Obviously when you are searching on your own topic, you would vary these limits according to your own needs.
Remember: the more limits you apply, the fewer articles you will retrieve. Think carefully about whether you really need to use a particular limit.

• Displaying your results
To view the results of your search click “Display Results” at the right of set 9

<table>
<thead>
<tr>
<th>#</th>
<th>Searches</th>
<th>Results</th>
<th>Type</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>eating disorders.mp. or exp eating disorder/</td>
<td>33394</td>
<td>Advanced</td>
<td>Display Results</td>
</tr>
<tr>
<td>2</td>
<td>exp anorexia nervosa/ or exp anorexia/ or anorexia.mp.</td>
<td>58952</td>
<td>Advanced</td>
<td>Display Results</td>
</tr>
<tr>
<td>3</td>
<td>bulimia.mp. or exp bulimia/</td>
<td>9830</td>
<td>Advanced</td>
<td>Display Results</td>
</tr>
<tr>
<td>4</td>
<td>1 or 2 or 3</td>
<td>78910</td>
<td>Advanced</td>
<td>Display Results</td>
</tr>
<tr>
<td>5</td>
<td>exp osteoporosis/ or osteoporosis.mp.</td>
<td>105215</td>
<td>Advanced</td>
<td>Display Results</td>
</tr>
<tr>
<td>6</td>
<td>bone development.mp. or exp bone development/</td>
<td>64032</td>
<td>Advanced</td>
<td>Display Results</td>
</tr>
<tr>
<td>7</td>
<td>5 or 6</td>
<td>159023</td>
<td>Advanced</td>
<td>Display Results</td>
</tr>
<tr>
<td>8</td>
<td>4 and 7</td>
<td>1644</td>
<td>Advanced</td>
<td>Display Results</td>
</tr>
<tr>
<td>9</td>
<td>limit 8 to (‘reviews (maximizes sensitivity)’ and english and yr=2010-Current’ and adolescent &lt;13 to 17 years)</td>
<td>41</td>
<td>Advanced</td>
<td>Display Results</td>
</tr>
</tbody>
</table>
You will view a page that looks like:

The results are displayed as journal citations: Article Author(s), Article Title, Journal (or source) with year, volume, part and page numbers.

By clicking on “View Abstract” or “Abstract reference” – you will see a summary of the paper. Note: that there is not always an abstract available.

By clicking on “Complete Reference” – you will see the full database record (Note: this does not mean the full text of the article)

There may also be “Full Text” – this will allow you to see the whole article, if the journal is available online through OVID.

TIP: PUBLICATION TYPES
Note that the publication type appears in square brackets after the reference.
Abstract View

1. Increased cognitive restraint in amenorrheic adolescent and young adults athletes is associated with higher cortisol secretion and trunk fat and lower bone density.

Mitra M., De Lourdes Eguiguren M., Singhal V., Ackerman K.E., Clarke H., Slattery M., Eddy K.T.


Publisher
Endocrine Society

Abstract
AB Background: Cognitive eating restraint (CER) is conscious restriction of eating to control weight, while drive for thinness (DT) is an excessive concern or preoccupation with dieting, weight, and fat phobia. Higher CER and DT scores have been associated with low energy states, higher cortisol, and lower bone mineral density (BMD). However, associations with bone microarchitecture parameters have not been assessed in adolescent and young adult female athletes and non-athletes. Objectives: To compare CER and DT scores in amenorrheic athletes (AA), eumenorrheic athletes (EA) and nonathletes (NA), and determine associations with cortisol levels, BMD and bone microarchitecture parameters. Methods: We enrolled 139 subjects (74 AA, 35 EA and 30 NA) 14-25 y in this cross-sectional study. Participants completed the Three Factor Eating Questionnaire and the Eating Disorders Inventory-2 for assessment of CER and DT respectively, and were grouped into “low” or “high” CER and DT groups based on median scores. We used DXA to assess body composition and BMD at the spine and hip, and high-resolution peripheral quantitative CT to assess distal radius microarchitecture. We measured integrated cortisol levels overnight (first sample at 20-11 PM to 8 AM) and bone formation (P1NP) and resorption (CTX) markers in a subset. Results: AA had the highest CER (14.2±4.2 vs. 12.4±3.7 in EA and 12.7±4.3 in NA, p=0.04) and DT scores (3.7±5.3 vs. 1.45±2.4 in EA and 2.0±3.9 in NA, p=0.03). Higher CER and DT scores were associated with higher total (n=0.35, p=0.008; n=0.49, p=0.001) and pulsatile (n=0.38, p=0.004; n=0.50, p=0.001) cortisol secretion. CER score was also associated with age (n=0.24, p=0.003) and amenorrhea duration (n=0.25, p=0.004). CER and DT scores were not associated with BMI. Subjects from the high CER group were older and had lower lumbar BMD T-scores (p=0.05), cortical perimeter (p=0.02), trabecular area (p=0.02), and greater atrophy score (p=0.007) but fewer cortical cracks (p=0.007), cortical holes (p=0.007) and microcracks.

Complete Reference View:

Accession Number: 72339444

Author: Mitra M., De Lourdes Eguiguren M., Singhal V., Ackerman K.E., Clarke H., Slattery M., Eddy K.T.

Institution: (Mitra, De Lourdes Eguiguren, Singhal, Ackerman, Clarke, Slattery) Massachusetts General Hospital, Harvard Medical School, Boston, MA, United States

(Eddy) Massachusetts General Hospital, Boston, MA, United States

Correspondence Address: M. Mitra, Massachusetts General Hospital, Harvard Medical School, Boston, MA, United States

Title: Increased cognitive restraint in amenorrheic adolescent and young adults athletes is associated with higher cortisol secretion and trunk fat and lower bone density.


Publisher: Endocrine Society

URL: http://press.endocrine.org/doi/a...
The abstract for the article is further down the screen. As well as the abstract you can view the “Subject Headings”, “Correspondence Address”, and many other fields of information about the article.

**Full text view:**

There may be an obvious PDF link to some articles:

You can just click on this link to get straight to the full-text of this article.

To check whether the remaining articles are available either try clicking on the link, or else check against Discover holdings (www.idiscover.cam.ac.uk)

- E-mailing or printing your results

Select the journal articles you want by clicking the box to the left of the article. Then click “Keep Selected”

Your selected results will be safe in the Search History:

If you select articles from more than one search it may be necessary to amalgamate all the “kept” articles into one set:
Click to display all the articles you’ve selected.

Towards the top of the list of articles, you’ll see the following options.

Tick the “all” button to do something with all the articles you’ve selected.

Then decide whether you wish to print, email or export these articles.

You get different options depending on what you’ve chosen to do. Simply make the choice that suits you best.
The Export option lets you download your article citations as a word document, or as a file that is compatible with a reference management tool.

**TIP: Why include the Search History?**
It is useful to include the search history so that you know what terms you used in the search, especially if you are likely to repeat the search, or justify your literature search results.

You can now return to the “Main Search Page” and continue searching, changing the key words you use to refine and improve your search.

**TIP: Refining your search**
The first set of results you get will rarely be the best, and will probably not be your last – it’s always worth trying different words, or different combinations or words.

- **Keeping up to date**

Once you have a search strategy that is successful, you may want to be kept informed of new articles on the same topic. You can do this via RSS, or creating an email alert. For either of these options you must create a personal account in OVID.

You can see the option to create a Personal account in the top-right hand corner of the main search page.
In the main search page, in the search history box, there is an RSS option.

Once you have logged into your personal account, click the RSS button...  

As you can see you can...

- Change the name of your alert to make it meaningful
- Chose the frequency of update
- Chose the amount of information about each article
- Change from an RSS feed to an email alert

It is always possible to delete these alerts at a later date.
Appendix A: MeSH in more detail – explode, focus & subheadings

** This appendix uses the Embase MeSH structure **

<table>
<thead>
<tr>
<th>TIP: What is MeSH?</th>
</tr>
</thead>
<tbody>
<tr>
<td>MeSH is a list of words and phrases that are used to index references in Embase.</td>
</tr>
</tbody>
</table>

• Explode

First, we will look at exploding MeSH terms. We will use a non-medical example.

<table>
<thead>
<tr>
<th>From the Main Search Page, make sure that the &quot;Map term to subject heading&quot; box is ticked. Into the search box, type western europe</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Click on &quot;Search &quot;.</th>
</tr>
</thead>
</table>

Embase will try to match the term you entered with terms from the list of Medical Subject Headings (MeSH). If it cannot find an exact match, you will see a list of suggested terms. If there is a match, there will only be one term. After any MeSH terms you will always have the choice of selecting the free text term, that is, exactly what you typed.

<table>
<thead>
<tr>
<th>Select Subject Heading</th>
<th>Explode</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Europe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>western europe.mp, search as Keyword</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Click on the MeSH term &quot;Western Europe &quot;. The MeSH term is in blue and is a hyperlink.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Scroll down until you find the term &quot;Western Europe&quot;. It is highlighted in blue. You will see that the list of MeSH terms is arranged hierarchically. Underneath Western Europe are several terms which are indented. These terms include &quot;Germany&quot;, &quot;Scandinavia&quot; and &quot;Associated terms&quot;. These are all narrower terms, more specific.</th>
</tr>
</thead>
</table>
The subject terms are arranged alphabetically, but if you look at the detail of the term Western Europe, you can see that broader terms are suggested, and also narrower terms using explode you can include narrower terms in your search.

Click the "Previous page" button at the top right of the screen to go back to the list of mapped MeSH terms. To the right of the term "Western Europe" are two boxes. The first of those boxes is labelled "explode ".

Tick this box. Click on "Continue" (at the top of the screen).

Your search will give results for all of the terms under the MeSH term Western Europe, and all of the narrower terms indented under it.

TIP: How do I get back to the main search page
You will now be at the main search page. But if in the future you are not, look for a "Main Search Page" button and click on it.
**TIP: What if there are no MeSH terms?**
If there are no MeSH terms, then probably the Map term to subject heading box may not have been ticked. Go to the main search page and tick it, and try again.

We would recommend selecting the free text term (the words you actually typed in the search box) as well as the MeSH term. But try this little exercise:

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>At the main search screen, enter <strong>eating disorders</strong>. Click on &quot;Search&quot;.</td>
</tr>
<tr>
<td>2</td>
<td>Click on &quot;Continue&quot;.</td>
</tr>
<tr>
<td>3</td>
<td>Click on &quot;Continue&quot; on the next screen as well (we deal with subheadings shortly!). You have searched for the MeSH term <strong>Eating Disorders without exploding it</strong> – how many hits did you get?</td>
</tr>
<tr>
<td>4</td>
<td>At the main search screen, enter <strong>eating disorders</strong>. Click on &quot;Search&quot;.</td>
</tr>
<tr>
<td>5</td>
<td>Tick the &quot;Explode&quot; box and click on &quot;Continue &quot;. Click on &quot;Continue&quot; on the next screen. How many hits did you get this time? More or less?</td>
</tr>
</tbody>
</table>

**Does explode find more results, or fewer?**

**TIP: Why the difference?**
Exploding finds more. This is because you have searched for more MeSH terms by including the narrower terms.
• Focus

At the main search screen, enter

\textit{eating disorders}

Click on "Search".

This time tick the "Focus" box.

This is the right hand of those two small boxes. Again, the label is at the top of the column.

Click on "Continue".

Click on "Continue" again. Compare the results with the “unexploded” (Eating Disorder/) and the “exploded” (exp Eating Disorder/) terms with the “focused” (*Eating Disorder/) term

You have found fewer results than before. This is because you have restricted the search to papers where "eating disorders" are a main theme.

Every reference in any database can be indexed with up to 20 or 30 MeSH terms. If a paper just touches upon eating disorders, it will be indexed under the appropriate MeSH term.

Using “focus” will find the papers where your term is a major theme.

• Subheadings

Subheadings have been displayed in the previous steps of this tutorial. We have ignored them. In this step we will look at subheadings.

At the main search screen, enter

\textit{eating disorders}

Click on "Search".

Tick the MeSH term "Eating Disorders ". Click on "Continue ".

A list of subheadings will appear:
Subheadings allow you to restrict your search to a particular aspect.

Tick the box for the “Therapy” subheading, and click on "Continue ". Have a look at the results.

Choosing subheadings may reduce the number of results considerably. Note that if you select MeSH headings and free text (as we recommend!), you will not be shown subheadings.
Appendix B: Find Citation

The “Find Citation” tab lets you submit fielded data to retrieve specific journal article citations.

To search, follow these steps.

1. Select the Find Citation tab.
2. Fill in as many fields in the form as you can.
3. Click the Search button, and then browse the results.
4. Email, or print as per previous instructions

Further Help


At Addenbrooke’s and University of Cambridge contact:

Isla Kuhn, Veronica Phillips, Eleanor Barker
Cambridge University Medical Library

Email: librarytraining@medschl.cam.ac.uk
Phone: (01223) 336750
Web: http://library.medschl.cam.ac.uk