Searching the Cochrane Library
Learning objectives

At the end of this session you should be able to:

- Identify when to use Cochrane
- Log on to the Cochrane Library databases from home and work
- Formulate a search string, using basic Boolean logic
- Search using Keywords and MeSH terms
- Use the search history function to combine search results
- Refine search criteria by author or title
- View records from each database and navigate through a review
- Print records from each database
- View graphs and tables from a review

What is the Cochrane Library?

The Cochrane Library is a database of reliable evidence on the effectiveness of healthcare interventions. It is regarded as the best resource available of this type. The Cochrane Library is put together by the Cochrane Collaboration, the NHS Centre for Reviews and Dissemination and other related organisations and is updated quarterly.

When should you use the Cochrane Library?

The Cochrane Library should be used when looking for the best evidence on the effectiveness of treatment and health promotion interventions. The best type of evidence comes from systematic reviews and randomised controlled trials (RCTs). It is also a source of information on the methodology of systematic reviews.

It should be used when looking for information on the effectiveness of an intervention, for example:

- What is the effectiveness of treatment y?
- What is the effectiveness of treatment x in condition z?
- Is treatment y better than treatment x?
- Are there any systematic reviews of stroke rehabilitation effectiveness?

The Cochrane Library should not be used for the following:

- General healthcare information
- Guidelines for clinical practice or audit procedures
- Primary research (other than systematic reviews and randomised controlled trials)
- Questions relating to the cause, prognosis, epidemiology or risk factors for an illness or disease¹
Overview of the Cochrane Library databases

The Cochrane Library consists of several different databases:

The main databases
- **Cochrane Database of Systematic Reviews (Cochrane Reviews)**
  Database of completed, full text systematic reviews carried out by the Cochrane Collaboration, plus ‘protocols’ (reviews currently in progress)
- **Database of Abstracts of Reviews of Effectiveness (Other Reviews)**
  Database of structured abstracts of other systematic reviews from alternative sources of literature
- **Cochrane Central Register of Controlled Trials (Clinical Trials)**
  Detailed references to randomised controlled trials identified through searching databases such Medline and Embase, as well as hand searching journals

Other databases
- **Cochrane Database of Methodology Reviews (Methods Reviews)**
  Contains full text, ongoing and completed reviews of methodological studies
- **Cochrane Methodology Register (Methods Studies)**
  Bibliography of publications on how to conduct reviews and trials
- **Health Technology Assessment Database (Technology Assessments)**
  Database of information on healthcare technology assessments
- **NHS Economic Evaluation Database (Economic Evaluations)**
  Database contains structured abstracts of articles describing economic evaluations of healthcare interventions
- **About the Cochrane Collaboration (Cochrane Groups)**
  Contains information about the work of the Collaboration and lists the Cochrane Review Groups with their contact details.

When you search the Cochrane Library, you will search all the databases at once. You are able to decide which database you want to view the results in.

Accessing the Cochrane Library


Access is available to everyone (*ip addresses*), without requiring a username and password. It is possible to create an account if you wish to save your searches.
Planning your search

Before starting any search you should first decide exactly what you want to search for and from what perspective. A useful method of doing this uses the acronym PICO:

<table>
<thead>
<tr>
<th>Patient, problem or population</th>
<th>Age, sex, race, condition or disease, care setting, etc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>Type of intervention e.g. test, therapy or clinical procedure</td>
</tr>
<tr>
<td>Comparison</td>
<td>Alternative interventions, if applicable</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Measurement, result, effect</td>
</tr>
</tbody>
</table>

This will allow you to form your search strategy and give you keywords.

For example, if you are looking to find out whether antibiotics are effective in the management of severe asthma, the keywords you would need to search for are *antibiotics* and *asthma*.

Conducting a keyword search

A keyword search will search for a particular word or phrase anywhere in the text of documents in all the databases. When keyword searching it is necessary to consider as many alternative terms and synonyms as you can for your topic (e.g. Heart attack, Myocardial infarction, MI etc.)

Quick Search

You can **Search** for:
- Single words, i.e. *Lithium*
- Phrases using the quotation marks i.e. "cri du chat".
- Different words with same root using the wildcard (*) i.e. *cardio* will search for cardiograph, cardiology, etc.

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2 PICO can be a helpful tool, but should not dictate your search.
Advanced Search

To keyword search, select **Advanced Search**

Enter the term(s) in the search box.

To search for reviews or trials with your search terms anywhere in the text select **Search All Text** from the drop down menu

Click on **Go** to carry out the search
You may find a lot of ‘false hits’ (documents which contain your search terms in the text but these terms are not the main focus of the review). To search for reviews or trials which have your search term in the title, abstract or as ‘keywords’ select Title, Abstract, Keywords from the drop down menu. Each database will then indicate the number of references found.

Search Tips

- To search for a phrase you must enter it in quotes e.g. “smoking cessation”
- Truncation can make keyword searching more effective and comprehensive. Use the * symbol at the end of a word to search for different endings e.g. depress*. (Will search depression, depressed etc.)
- Internal truncation may also be used to search for different spellings e.g. p*diatric. (Will search paediatric and pediatric)

MeSH (Medical Subject Headings) Searching

MeSH is a controlled thesaurus. It is used to index articles on the same subject in the same way. When you search using the database’s thesaurus you will only retrieve records that are about that subject, not those which merely mention the word. This means that you will retrieve more relevant results. In order to conduct a comprehensive search it is best to search using both keywords and MeSH.

To search using MeSH click on Medical Terms (MeSH) tab from the Cochrane Advanced Search page.

Enter your term in the search box, and click on Lookup. This brings up a list of terms, select the most appropriate one.
**Search term or explode**

**Single MeSH term (unexploded)** will select the main heading (in this case Asthma). **Explode all trees** will broaden your search to include any narrower terms (in this case Asthma, Exercise-Induced and Status Asthmaticus).

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**Tree Number 2**

Respiratory Tract Diseases [+15]

Lung Diseases [+29]

- Lung Diseases, Obstructive [+3]
  - Asthma
  - Bronchiitis [+2]
  - Pulmonary Disease, Chronic Obstructive [+2]

**Tree Number 3**

Respiratory Tract Diseases [+15]

Respiratory Hypersensitivity [+4]

- Alveolitis, Extrinsic Allergic [+3]
- Aspergillosis, Allergic Bronchopulmonary

Asthma [+4]

- Asthma, Exercise-Induced
- Status Asthmaticus
- Asthma, Aspirin-Induced
- Asthma, Occupational

- Rhinitis, Allergic [+2]
Click on the **Add to Search Manager** link to be taken to your search history so far.

Your search history will appear displaying a list of the searches done so far. To view the results click on the link.

**Combining results**

The Cochrane Library gives three options to connect your search results together:

- **AND** will combine all terms
- **OR** will combine similar terms into one big group
- **NOT** will exclude term from the search

**Key:**  
A = Aids  
B = HIV

To combine, enter # (line number) and # (line number) in the search box  
e.g. **#1 AND #2**. Then click on **Go**

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3 Image from [http://www.library.uiuc.edu/gex/images/Boolean.jpg](http://www.library.uiuc.edu/gex/images/Boolean.jpg) [cited 2008 June 13]
Search For:

The combined results will appear in the Search Manager. To view the results of your combined results click on the link

Current Search History

Displaying Results

To view results from a particular database, click on the title of that database. Click on Record to open the review you want and the review will be displayed in full on screen.
Printing

Cochrane Systematic reviews can be opened as a PDF document and then printed.

NOTE: some systematic reviews are very long! You may only wish to print selected pages.
More Cochrane Resources

- **Cochrane Podcasts**
  Cochrane podcasts are a simple, quick and easy way to keep up with the latest Cochrane evidence.

- **Cochrane Journal Club**
  A Cochrane Journal Club covers a single review of special interest, usually selected from the latest and most updated reviews published in the Cochrane Library.
Cochrane Learning
Cochrane Learning is a health professional development resource built upon the independent, high-quality evidence found in the Cochrane Library. All activities have been designed to meet the accreditation standards of the ACCME (Accreditation Council for Continuing Medical Education). Activities from Dr Cochrane are now available from www.cochranelearning.com

Cochrane Clinical Answers
Cochrane Clinical Answers (CCAs) contain clinical questions, short answers, and a chance to dissect the evidence from relevant Cochrane reviews.