

Searching CENTRAL

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1. Introduction

CENTRAL is available on *The Cochrane Library* and is searched using the interface provided with the *Library*, which is accessed on CD-ROM, over the Internet, or using server-based local systems. Training materials on how to search *The Cochrane Library* have been prepared by the UK National Health Service Centre for Reviews and Dissemination (CRD) in York and are available from their website (www.york.ac.uk/inst/crd/cochlib.htm). These training materials are highly recommended and are generally updated quarterly with each issue of *The Cochrane Library*. This section of the CENTRAL Management Plan has drawn on material from the Self-training Guide for *The Cochrane Library* 2000 Issue 1, produced by Ruth Frankish at the CRD.

Information provided in this section is specific to the needs of Cochrane Review Groups for developing and maintaining their Specialized Registers, as well as other interested parties. The advice in this section is correct at the time of the release of the CENTRAL Management Plan. However, because it is dependent on *The Cochrane Library*'s search interface (which is subject to revision), you should contact the US Cochrane Center (USCC) if you are concerned that it might be out-of-date.

Typically, searchers of CENTRAL either search for specific text words or for "keywords" assigned by the database from which the record originated. Text word searches check each record's title and abstract, if it is available, for words or root words ("truncations") supplied by the searcher. Keyword searches use Medical Subject Headings (MeSH) for searching MEDLINE, Emtree terms for searching EMBASE, and so forth.

In the Issue 1, 2000 edition of *The Cochrane Library*, there were approximately 270,000 CENTRAL records. Of these, 160,000 (59%) were MEDLINE records that contained MeSH terms as well as abstracts, when an abstract was part of the original MEDLINE record, and 30,000 (11%) were EMBASE records that did not have an equivalent MEDLINE record in CENTRAL. EMBASE records contained the Emtree thesaurus terms, as well as abstracts, when an abstract was part of the original EMBASE record. The remaining 70,000 (27%) records in CENTRAL were indexed neither in MEDLINE nor EMBASE. Many of these were from articles published in journals not indexed in these databases, or from the "grey literature" such as conference proceedings. Thus, most of these records have no thesaurus terms ("keywords") and no abstracts, so searching must rely solely on words appearing in the title.

The search interface in *The Cochrane Library* allows a variety of types of search to be performed; any search can be saved and run again in the future. The three types of search are Simple, Advanced, and MeSH.

2. Simple search

In *The Cochrane Library*, the user cannot choose which database to search; searches are run against all databases (including CENTRAL) at once and the user is presented with a list of results against each database. The default search option in *The Cochrane Library* is a simple search whereby all text (e.g., titles, abstracts, authors' names, sources, keywords) is searched for search terms entered into the search box and records in CENTRAL are selected only if *all* search terms are found in the record (i.e., search terms are automatically combined with 'AND' where no operator is included in the search). Word order and case are ignored and the individual search terms are matched anywhere in a CENTRAL record (not just when they are adjacent). If the user wishes to identify phrases, the search terms should be placed inside double quotes or the operator 'NEXT' should be entered between them. (For example, "MYOCARDIAL INFARCTION" or MYOCARDIAL NEXT INFARCTION.) Punctuation and numbers other than years are ignored. Search terms must be three characters or longer and some words (known as 'stopwords') will not be found – these words are listed in the Help file for *The Cochrane Library*. Words can be truncated by ending them with an '*' (i.e., ARTER* will retrieve ARTERIAL, ATERIES, etc). Words of 16 characters or more will automatically be truncated.

The 'NOT' operator can be used to exclude records containing specified words from a search (for example MYOCARDIAL NOT INFARCTION). NOT must, however, be used with caution to avoid unintentionally removing potentially relevant records. The 'OR' operator can be used to find records containing one or more of your search terms (for example, MYOCARDIAL OR INFARCTION). The 'NEAR' operator can also be used. This acts like 'AND' with the added condition that the terms must appear within six words of one another.

3. Advanced search

This option allows you to build complex queries step-by-step (line by line), store the results of each search in a set, and then combine the sets. The sets are numbered and can be combined using 'AND' or 'OR'. Combine sets by highlighting the lines to be combined and selecting the operator (e.g., and, or) you wish to apply. The Advanced Search screen also allows access to additional features. These include the ability to restrict searches to certain fields (title, author, abstract, keyword, source), to search records relating to articles published between specified years, and to search only those records that have been added since the last release of *The Cochrane Library*. When searching for specific authors, use the surname only, as surname-initial searching is not supported in *The Cochrane Library*.

4. Searching CENTRAL to develop and maintain Cochrane Specialized Registers

To use CENTRAL effectively as a source of records for a Specialized Register, search strategies including MeSH terms, Emtree terms, and free-text terms need to be combined using the Advanced and MeSH search options. The full functionality of MeSH searching, including 'explosions' (i.e., the ability to search a range of narrower terms under a single broad heading), is available in *The Cochrane Library*. The UK National Health Service Self-training Guide for *The Cochrane Library* mentioned in the first paragraph contains detailed information on MeSH searching, specific to CENTRAL. Information about MeSH searching in PubMed is available on the PubMed website in the document called "Introduction to Web-based Searching: Using PubMed, NLM Gateway, and ClinicalTrials.gov"

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(http://www.nlm.nih.gov/pubs/web_based.html). The entire MeSH thesaurus is also available to download from the NLM website.

The EMBASE EMTREE thesaurus is not included in *The Cochrane Library* searching interface, so the full functionality of EMTREE searching (including 'explosions') is not available. Instead, each EMTREE term must be entered individually in the Advanced Search option and then combined using 'OR'. Text word terms should also be used to identify records in an Advanced Search, whether or not they have MeSH or other keyword terms. All text word and keyword terms for a given concept (i.e., myocardial infarction) should be combined using the 'OR' operator. Detailed information on searching EMBASE can be found on the website <http://www.elsevier.nl/homepage/sah/spd/embase/menu.htm>. This site provides EMBASE user guides for the various online hosts. The EMTREE thesaurus is not available free of charge and is only available as part of a subscription to the product or as a printed manual.

Cochrane Review Group Specialized Registers typically contain mainly quasi-randomized and randomized controlled trials (per the Cochrane definitions) but may also contain reports of studies where it is unclear whether randomization was used, and studies using other types of designs. Thus, CENTRAL, which includes these Specialized Registers, may also contain reports of studies that are not controlled trials. In addition, CENTRAL contains some records from MEDLINE that relate to studies using historical controls that are indexed by MEDLINE Publication Type CONTROLLED-CLINICAL-TRIAL. 'Benefit of the doubt' is exercised in deciding whether to include records in CENTRAL so that records that are possibly relevant will be included. Some records may not appear to be reports of trials or other relevant studies from the record available in CENTRAL; however, caution is urged here, as evidence may exist somewhere in the record.

To allow verification or need for a modification, CENTRAL search strategies can be saved for future use using the 'Save and Load' option on the Cochrane Library. A saved search can be re-used on a subsequent version of CENTRAL using the 'Load and Run' option. Currently, search strategies for CENTRAL cannot be corrected or edited within *The Cochrane Library* itself. They can be exported as a text file using the 'Save and Load – Export' option, edited in a word processor and re-imported using the 'Save and Load – Import' option. Searches (or saved search strategies being re-run) can be limited to records added since the last release of CENTRAL using the 'Restrict date range to: – New this issue' option on the Advanced Search screen. If the search strategy has been changed since the last release of CENTRAL, it should not be limited in this way when it is re-run. Instead, records already included in a Review Group's Specialized Register that have been submitted and incorporated into CENTRAL, can be excluded by adding 'NOT SR-XXXXX' to the search (where XXXXX is the code for the Review Group). This will ensure that records that have already been assessed and included in the Specialized Register will be excluded from the results of the new search.

After searching CENTRAL, Cochrane Review Groups will need to remove irrelevant records from the search results before incorporating the remainder of the retrieved records in their Specialized Registers. In addition to reports of non-trials from Specialized Registers, and those using historical controls that are indexed CCT (PT), there will be other ineligible records in CENTRAL due to human error. If you find records in CENTRAL that, on the basis of the full article, do not meet the Cochrane eligibility criteria, and are incorrectly

indexed as CCT or RCT, you should send details to the US Cochrane Center, as described in the CCTR Coding and Error Removal chapter of the CENTRAL Management Plan.

5. Transferring CENTRAL records to ProCite

Records can be downloaded from CENTRAL and transferred to bibliographic software such as ProCite, Reference Manager, and EndNote or to Specialized Register software such as MeerKat. A configuration file to facilitate the transfer of CENTRAL records from *The Cochrane Library* into ProCite has been developed and maintained by the UK Cochrane Centre and is made available on *The Cochrane Library* (in the DOCS subfolder on CD2). Molly Harris of the San Antonio Cochrane Center has prepared the following instructions for this process:

1. Perform your search on *The Cochrane Library*.
2. Select *The Cochrane Controlled Trials Register (CENTRAL/CCTR)*. Mark the individual records you select by checking/ticking the box beside each record. Alternatively, check/tick the top line entitled 'References' to select all the records identified by your search.
3. Save the records by clicking on the 'Print + Save' button on the left tool bar, then click on 'Save' and fill in the following selections:
 - a) File name: your file name title.txt (this must have the 'text' file extension).
 - b) Save file as type: select Text files [*.TXT] (ProCite requires ASCII text files).
 - c) Drives: select the drive where ProCite is located on your computer.
 - d) Folders: select/double click on ProCite.
 - e) Select/click the subfolder to which you wish to download.
 - f) Check your selections, then click on 'OK'.
4. To obtain the Cochrane Configuration File (in the DOCS subfolder on CD2):
 - a) In Windows Explorer, go to your Cochrane Library program folder.
 - b) Select/double click on the DOCS subfolder.
 - c) Select Clib.cfg (identified by the red 'Biblio-Links' symbol). Select and click on copy from the 'EDIT' option on the tool bar at the top of the screen to copy the file.
 - d) Select/double click on the ProCite program folder. Select and double click on the config subfolder. Select and click on 'Paste' from the 'EDIT' option on the tool bar at the top of the screen.
 - e) Click on the Clib.cfg file. Click on 'Properties' from the 'FILE' option on the tool bar at the top of the screen. Make sure the box 'read only' is NOT checked/ticked. If it is checked/ticked, click on the box to remove it.
 - f) Select/double click the Clib.cfg file that will open the Cochrane Library configuration file within ProCite's Biblio-Links.
5. To load the records into ProCite, open ProCite and the database that will receive the records. Then,
 - a) Select the Tools button at the top of the screen. Select Import text file from the pull down menu.
 - b) The Open import file screen will open. At the Look in prompt, select/double click the folder to which you downloaded your CENTRAL records. (You may have to use the 'up next level' button to find it).

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- c) Select your text file. Click 'Open'. The first record(s) of your file will be displayed on the Import screen. Select the following items:
 - File type: Tagged
 - File format: Clib (you may need to click on the box labeled with '...' to locate it)
 - Target database: The ProCite database that will receive the records.
 - d) Click on the transfer button. The screen showing the records being imported will appear. When the importing process is completed, the number of records successfully imported will appear in a box in the middle of the screen.
 - e) Close this screen to return to your ProCite database.
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