



Cochrane Anaesthesia & Cochrane Emergency and Critical Care

**Editorial Process: Developing
Search Strategies for
Systematic Reviews**

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This document outlines the general steps of the editorial process as they pertain to the conduct of the search. The development of the search strategy should be a collaboration between a medical librarian/information specialist (IS) and the authors.

The authors should seek assistance from a local IS. This individual may be added to the author team if they fulfil [authorship requirements](#). In exceptional circumstances, if authors are unable to secure local assistance, the Cochrane Information Specialist (**CIS**) will help develop the strategy and run the searches.

Please note that this guidance is to be applied to intervention reviews. Other types of reviews (e.g., diagnostic test accuracy reviews) may involve other considerations. If your review is not an intervention review, please contact the Managing Editor and Cochrane Information Specialist for further guidance.

1 The Protocol

- Once the review title is registered, the author team will be introduced to the **CIS** to ensure modes of information exchange are established from the outset of review production.
- The authors and the local IS will develop a draft search in Medline based on the PICO.
- Please run a search for systematic reviews on the same or similar topics and check the search strategies and included studies.
- Please also run quick searches for eligible studies and use the terms from these studies and from relevant systematic reviews to develop the search strategy.
- The draft search strategy and a set of core references relevant for the review are sent to the Review Group **CIS** (Janne Vendt), who will peer review the strategy.
- The author team is required to make relevant revisions to the search strategy. Once all feedback is addressed, the search strategy is published in the protocol alongside the relevant search methods.

The search strategy should be based on the concepts: population, intervention and study design. Cochrane reviews do not typically restrict the search based on outcomes. If higher precision is required, it may be necessary to add additional concepts, but this should be decided in consultation with the **CIS**. The search terms should be a combination of database-specific subject headings and free text terms.

Search strategies for Cochrane reviews aim for high sensitivity, which may sacrifice precision. That is, in order to identify the highest number of relevant search results, you may have to screen a larger number of irrelevant studies. This increases the chance of not missing relevant studies.

Please see Handbook [Chapter 4: Searching for and selecting studies](#) for further guidance.

2 The Review

- The search strategy in the protocol is only a *draft* and it may be necessary to adjust it during the search process.
- The author's local IS will adapt the Medline strategy to the rest of the databases.
- As a minimum, the following databases should be searched:
 - Medline
 - EMBASE
 - CENTRAL
 - Web of Science or Scopus.
 - WHO Global Index Medicus

- Google Scholar (Check the first 100-200 references of a simple keyword search)
- It may be relevant to add other databases; such as:
 - CINAHL
 - PsycInfo
 - Biosis
- If relevant, please use the RCT-filters listed in the Handbook: [Technical Supplement to Chapter 4](#).
- After adapting the search strategy to rest of the databases — but before running and screening the searches — the **CIS** must check the searches again.
- Once the search strategies have been checked and any issues have been resolved, the local IS (or the **CIS**, if required) will run the searches.
- The search strategy for all the databases should be reported in the appendix, including search strategies for trial registers.
- The interface/platform for the specific databases should be listed as well.

As with the protocol, in exceptional circumstances, if the authors do not have access to a local IS, the **CIS** can be consulted to help with adapting the strategy to required databases, running the searches, compiling search results, and importing search results into Covidence or other systematic review software.

As part of the search process, the authors must conduct supplemental searching in other resources. This includes:

- Checking *all* references and citations of included studies and relevant systematic reviews. The database used for citation searching should be reported.
 - Searching trial registers for ongoing and unpublished trials in — as a minimum:
 - ClinicalTrials.gov
 - [World Health Organization International Clinical Trials Registry Platform](#)
 - Other trial registries could be:
 - [EU clinical trial register](#)
 - [The ISRCTN registry](#)
 - Local trial registries from specific countries or regions.
- Please use several simple searches when searching trial registers and list the terms used in the appendix.
- If you wish to go the extra mile and conduct additional grey literature searching, here are some suggested resources where you may find relevant studies to inform the background or discussion of the review, or to include:
 - [TRIP Database](#)
 - HTA Websites (individual organizations can be found via [INAHTA](#))
 - [ECRI Guideline Clearinghouse](#)
 - [Google](#)
 - Regulatory Agencies
 - Clinical study reports
 - Government Ministry Websites
 - Subject-specific Professional Associations or Societies, such as [European Society of Anaesthesiology](#), [Canadian Critical Care Society](#), etc.

- The authors will screen the references and complete the PRISMA flowchart and [relevant sections of the review reporting](#) on the search methods and conduct.
- Literature searching is an iterative process and the best final search strategies are developed by analyzing the results on an ongoing basis. During the internal review process, the **CIS** will evaluate the execution of your search. If several relevant studies are identified through methods other than the core search strategy, it may be necessary to run a top-up search with extra search terms. If new concepts or search terms appear during the screening, please contact the **CIS** as soon as possible.
- As per Cochrane mandatory MECIR standards (see [Handbook Chapter 4.4.10 Timing of searches](#)), the search date cannot be older than 12 months and preferably not older than 6 months (from the date of publication). It is recommended to update the searches regularly to keep the review as current as possible.
 - One method of ensuring that the search is up to date and that the evidence is as current as possible is setting up *Search Alerts* (see [Handbook Chapter 4.4.9 Alerts](#)). We strongly recommend that some method of ensuring that the search is current is implemented in case of delays during review production.
- The authors must check the included studies for retractions via PubMed, the publisher's website and [the Retraction Watch Database](#). It is also necessary to check for post publication amendments such as errata or comments.
- Before the publication of the review, the **CIS** will review the final search strategy, the reporting in the search methods and results section, and the PRISMA flow chart for accuracy and consistency.
- CRS - Specialized Register: The **CIS** maintains a specialized register containing all studies that are included in the reviews published by the group. The content of the register can be searched via CENTRAL. When a review is published, the **CIS** will add all included studies to the specialized register.

Please see Handbook [Chapter 4: Searching for and selecting studies](#) for further guidance.

3 Review Updates

- Once the scope and eligibility criteria for the update have been determined, the **CIS** must review and — in some cases — revise the original search strategy before the searches for an update are run.
- Any studies identified as ongoing or awaiting classification at the time of the previous version of the review should be revisited.
- The search should be run, at minimum, from the date of the last search, and from database inception if any critical changes to the search strategy have been made or if any new databases or sources are added.
- The authors will screen the new references and conduct supplemental searching in other resources as listed above.
- The PRISMA flow diagram and reporting of the search strategy as well as the search results should clearly distinguish what was done for the original or last update of the review, and what was done for the present update. For instance, the study flow for the original search should be reported separately from the study flow for the updated search.

There is guidance available in the Handbook (see [Handbook Chapter IV: Updating a review](#))