



# HOW TO MAKE

a search strategy for a

# Systematic Review

## WHAT IS A SEARCH STRATEGY?

A structured approach to finding relevant literature for systematic reviews.

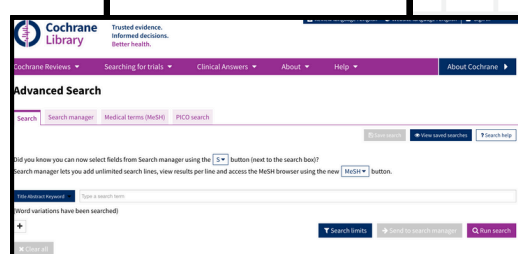
## STEPS

### STEP 1: DEFINE YOUR RESEARCH QUESTION

- Use the PICO (Population, Intervention, Comparison, and Outcome) framework to clarify your question

### STEP 2: CHOOSE YOUR DATABASES

- Use multiple databases to ensure comprehensive coverage.
- Databases are accessible via your institution's library website.



### STEP 3: DEVELOP SEARCH TERMS AND KEYWORDS

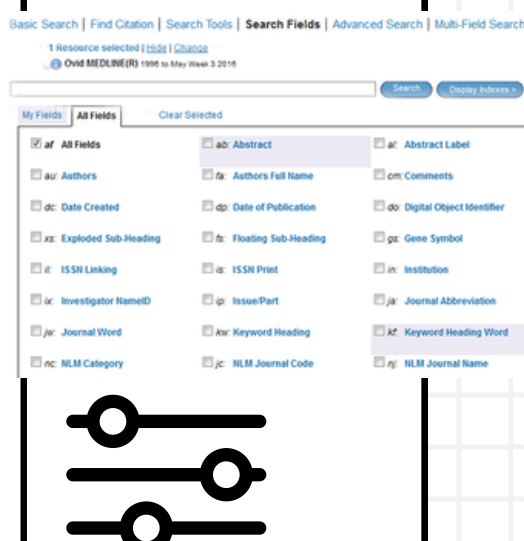
- Make a table with each main concept (PICO element) you want to search and brainstorm relevant keywords
  - Consider synonyms, abbreviations, acronyms, alternative spellings (i.e., British vs American English), plurals
  - If your term is registered as a Medical Subject Headings (MeSH), this should be included in your search, along with selected keywords

Concept/Keyword	Alternative words or synonyms for each concept	Truncation/Wildcard use
Hypertension	"hypertensive" OR "HTN" OR "blood pressure" OR "BP"	Hypertension[MeSH] hypertens*
AND		
Exercise	"exercising" OR "workout" OR "sport" OR "physical activity" OR "training"	Exercise[MeSH] OR "exercis*" OR "sport*" OR "physical activit*" OR "work* out"
AND		
Adults	"aging adults" OR "older adults" OR "senior adult" OR "elderly"	Adult[MeSH]

- Boolean Operators: Use AND (to combine concepts), OR (to include synonyms), and NOT (to exclude irrelevant terms).
  - Example: For a study on hypertension and lifestyle changes: ("Hypertension" OR "High blood pressure") AND "Exercise" AND "Adults"
- Use truncation and wildcards as appropriate:
  - Asterisk wildcard (\*) - Is used at the end of a word or between words where variations may be possible.
    - i.e., "Hyperten\*" can return "Hypertension" or "Hypertensive", etc.
  - Question mark wildcard (?) - Is used to replace a single unknown character.
    - i.e., wom?n will return results for women or woman

### STEP 4: APPLY FILTERS AND LIMITS

- Choose a **search-field descriptor** for keywords:
  - Will vary depending on the data base
  - On Ovid databases (i.e. Embase, MEDLINE):
    - Hyperten\*.ti,ab. limits the search to the title and abstract fields
    - Hyperten\*.kw. (in Embase) limits the search to keywords (or .kf. in MEDLINE)
  - You can stack these search fields by adding them after a comma or add multiple keywords:
    - i.e., Hyperten\*.ti,ab,kw.
    - i.e., (aging adults OR older adults OR senior adult OR elderly).ti,ab,kw.



- **Add searching limits:** The last step, use filters sparingly to avoid missing important studies.
  - Language
  - Limit to Humans
  - Publication Date
  - Study Type

### STEP 5: RUN YOUR SEARCH AND REFINE

- Assess initial results. Are they relevant?
  - **Key tip:** Take a key article and check that the search has found this article. If not, adjust your search.
- Refine: Adjust your keywords, Boolean operators, or filters if the search is too broad or narrow.
- Repeat: Run the search in other databases.
  - Look for database-specific syntax that will allow you to adapt each line of your search

### STEP 6: DOCUMENT YOUR SEARCH STRATEGY

- Keep records of your search strategies: used while you are adapting the search but also during publication.
- What to document:
  - Database used
  - Date of search
  - Full search terms/queries and the number of articles retrieved for that line
  - Any filters or limits applied
- This ensures transparency and reproducibility of the systematic review.

## Ready to Start Your Systematic Review?

For more detail, refer to these resources, which were consulted in creating this infographic:

- [Deakin University Systematic and systematic-like review toolkit](#)
- [University of Tasmania Systematic Reviews for Health: Building Search Strategies](#)

