Effectiveness and Efficiency in Exhaustive Searches

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# Examining the research question

A good answerable research question should be clear and focused.   
Not too vague, too specific or too broad

Determine elements

Related concepts can often be grouped together as one element. Anything where you can put an OR in between is an element.

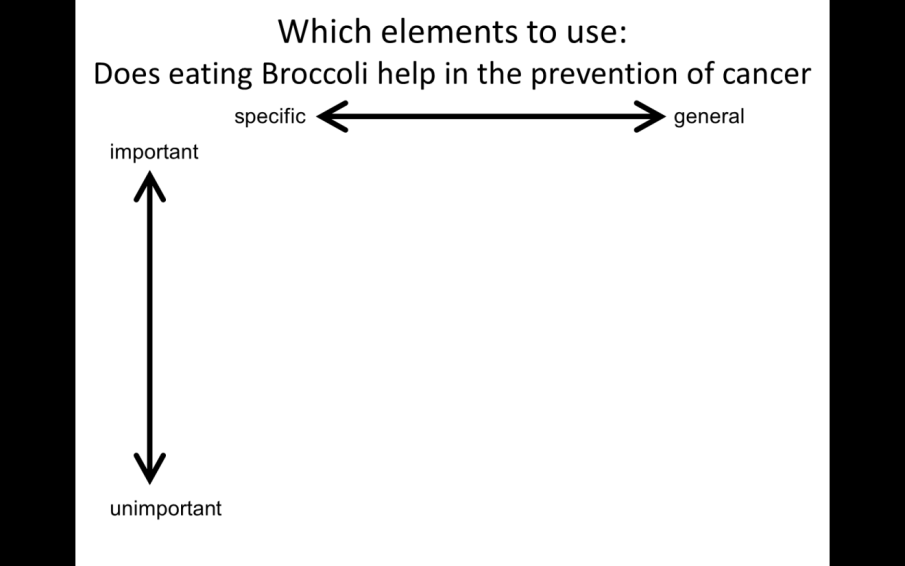
Watch out for bias

Including very specific characteristics or judgements can bring bias into your search strategy because these might not be mentioned in the title / abstract / thesaurus terms. Only those articles that find what you expect might mention this

Watch out for duplicates

Elements often overlap. An intervention can be only used for a certain disease, or a disease can be present only in a certain population.

PICO(S) / SPIDER or any other acronym is not necessary for a good search strategy

Determine which elements are the best to use:

An element is specific if not many hits are observed or expected. An element is general if many hits are retrieved. This is independent of the research question.

Depending on the research question an element can be important or unimportant. An element is unimportant if you can find an article that can answer your research question that does not have that element in title / abstract or thesaurus terms. This is always dependent of the research question.

# Identifying search terms for each element

There are two major thesauri: MeSH for Medline and Emtree for Embase

Emtree has almost three times as much terms as MeSH, and often finds much more specific terms. Although sometimes Emtree provides only a very general alternative for a specific MeSH term.

Emtree is somewhat less consistent than MeSH as indexers for embase can add candidate terms to the list ad hoc.

There are three interfaces to view thesauri, each has their own downside:

PubMed (MeSH)

The clearest interface for thesaurus terms. All entry terms (synonyms) and narrower terms in one screen. But be aware that MeSH terms might not be found if the search words are not truncate (compare temperature change to temperature\* change\*)

Ovid (MeSH and Emtree)

The Ovid interface is more difficult to overview, the tree structure will be shown in full, though only part of it is needed and entry terms are only visible after a click. Also terms will be missed (such as subheadings)

Embase.com (Emtree)

Truncation is impossible, but automatically terms are suggested.

Conclusion: even when you are searching Medline in Ovid, it is better to search MeSH terms in PubMed, and use truncation when doing so. For Emtree the interface of the thesaurus is determined by the interface for the Embase database itself.

## Thesaurus terms

Important!

* Always copy the exact thesaurus terms, including commas
* There might be more terms relevant for your element
* Especially in Emtree often one thesaurus term combined two elements  
  in that case: add such a term under all elements for which it is relevant (when not already found by explosion)
* Sometimes an element can only (or also) be translated by a combination of two separate thesaurus terms. You need to work with parentheses to combine this properly
* In MeSH you can find additional terms: previous indexing, see also, which Emtree lacks
* Consider searching for an unexploded term higher up in the tree. Articles indexed with the term osteoarthritis probably include hip osteoarthritis, and articles with just transplantation will include kidney transplantation. If this results in too many hits this broader term can be search as major term only.

## Free text terms

Optimal sensitivity can only be reached by adding for each element in the search strategy words in title and or abstract. Words can be found in the thesauri:

* Words or phrases from the entry terms (MeSH) or synonyms (Emtree)
  + Don't use the inversions that are overrepresented in MeSH (anything with a comma in it)
  + Often only one or a combination of two words is enough to capture many entry terms
  + Often one term will be enough to capture entry terms or synonyms of more thesaurus terms
* Words or phrases from narrower terms  
  Although articles that have been indexed with a certain narrower term will be retrieved when searching for the broader thesaurus term, extra relevant articles can be found by searching the narrower terms in title and or abstract
* Also search for the thesaurus term itself in title abstract

Add for yourself: abbreviations, and spelling differences between USA and UK spelling

## What to do if there is no good thesaurus term available?

Split one element into two elements and search seperately. Maybe there is not good term avialable for the combined term, but it is indexed with a combination of two or more terms.

If you use the interface of pubmed, missed MeSH terms can be caused by a bug in the PubMed MeSH interface. The solution: truncate the search terms with \* when searching in MeSH database

If you want to find a MeSH term for a very broad topic, but are unable to find a good overall term, first try to find (several) specific MeSH terms. Maybe there is a broader thesaurus terms that encompasses them all, if not, just use a combination of specific terms.

When no thesaurus terms are found bit.ly/pubreminer can be used on a simple PubMed search to see the most frequently used MeSH terms

The field [tt] can be used in PubMed to find articles in your native language and check the translation

Google / Wikipedia (for translation) can find additional terms, even when a good thesaurus term can be found

Only if all this fails you should start with your own terms in title and abstract, and maybe add thesaurus terms later in the process.

# Database / interface choice

## Which database to start in?

It is wise to always use a certain database as your start database, for ease of workflow. An ideal starting database should contain a large set of articles on many different topics and has a good thesaurus. That leaves only two choices: Medline or embase

The embase thesaurus is more complex, therefore it is easier to translate Emtree to MeSH than vice versa.

Recommendation: If you have embase, start in embase, otherwise start in Medline

**Interface choice**

Ideally an interface allows for proximity search and can search multiple fields simultaneously for multiple synonyms.

PubMed does not allow proximity, and [tiab] has to be repeated after each synonym. Not ideal!

EBSCO cannot search multiple fields simultaneously but search TI(…) OR AB(…). Not ideal!

Preference order:

1. Embase.com
2. Embase Ovid
3. Medline Ovid
4. Medline via EBSCO / ProQuest
5. PubMed

## Which databases to use?

In order of importance (most unique relevant references retrieved): Embase, Medline, Web of Science, Google Scholar. Specific databases such as CINAHL (for nursing) and PsycINFO (for psychiatry and behavior) are only necessary if the topic searched is related to the content of the databases. Cochrane library does not add relevant references that were not retrieved from the other databases, even when limiting to RCTs only.

Source: Bramer WM, Rethlefsen ML, Kleijnen J, Franco OH. Optimal database combinations for literature searches in systematic reviews: a prospective exploratory study. Syst Rev. 2017 Dec 6;6(1):245.

# General rules for creating a basic search strategy

1. Work in a word document, not the interface

The word document is your search history, can be used as supplementary material to the ultimately published article, and is a good way to save many mediated searches (folders: customer > research question > date)

1. Create single line search strategies

Multi line search strategies are harder to optimize, since extra words appear at the end of the strategy, thus needing a full restructuring. They are hard to repeat, as every line has to be entered in that specific order, without errors. And they are hard to translate between databases, since the number of thesaurus terms can differ.

Single line search strategies can be more difficult to create, and to read but easy to optimize (just add an extra word at the right place) easy to repeat (one copy and paste) and easy to translate (see further)

Downside of the single line search strategy is the number of parentheses needed (but the solution given is to type parentheses before adding the words) and the fact that it is harder to identify typing errors (to find those easily in multiline searches one would have to use one line per term, which is hardly the practice, but with the single line searches' optimization spelling errors will be found quickly).

1. Type code before adding the words
2. After opening parentheses, immediately close them
3. Never remove parentheses, only add
4. Prepare proximity statement for reuse
5. Copy terms from thesaurus instead of typing them
6. Use arrow keys and Ctrl- shortcuts

See supplement 3 for frequently used short cuts.

1. Use ab,ti to create the strategy, final syntax can be broad

For optimization ab,ti is needed. After optimization extra fields can be added.

# Combining long lists of terms into search strategies

Thesaurusses contain long lists of synonyms, in MeSH called entry terms. Most of these terms (without those containing commas) should be used in a search strategy. Using Ctrl-H (Find and replace) in Word these lists can be edited easily.

Take for instance this part of the synonyms for acetylsalicylic acid from emtree:

contrheuma; contrheuma retard; darosal; depot aspirin; dispirin; dolean; durlaza; dusil; easprin; ecasil; ecosprin; ecotrin; ecotrin 650; egalgic; emocin; empirin; encaprin; encine em; endosprin; entaprin; entericin; enteroprin; enterosarine;

Press Ctrl-H and replace '; ' with '^p'. ^p in Find and replace stands for a line break. The results are shown here over multiple columns to save space. Next, replace space with a hyphen to account for phrases (the hyphen works in every major database).

contrheuma

~~contrheuma retard~~

darosal

~~depot aspirin~~

dispirin

dolean

durlaza

dusil

easprin

ecasil

ecosprin

ecotrin

~~ecotrin 650~~

egalgic

emocin

empirin

encaprin

encine ~~em~~

endosprin

entaprin

entericin

enteroprin

enterosarine

The list can be edited, duplicates can be removed (shown as strike through)

Then replace ^p with '\* OR ' to truncate each term and to create a combination search strategy with ORs in between. Replace e\*, s\* and y\* with \* to account for the most common variations.

contrheuma\* OR darosal\* OR dispirin\* OR dolean\* OR durlaza\* OR dusil\* OR easprin\* OR ecasil\* OR ecosprin\* OR ecotrin\* OR egalgic\* OR emocin\* OR empirin\* OR encaprin\* OR endosprin\* OR entaprin\* OR entericin\* OR enteroprin\* OR enterosarin\* OR

This can be copied and pasted in you search strategy

# Finding errors

The most common mistakes will result in the appearance of extra ANDs in the search strategies as interpreted by the databases. Search within the page (Ctrl-F) showing the full search strategy for ' AND '. Any extra AND might be caused by an error.

Other frequently occuring errors are extra parentheses. This will lead to error messages in most interfaces. Every element should contain as many opening as closing parentheses. When in doubt where the error occurs, paste one element at a time into the database and see if the error message still occurs. Next, paste only the thesaurus term section, or the title abstract section of that element, until the location of the error is clear.

Prevent errors from happening. Whenever an opening parenthesis is typed, immediately type the corresponding closing parenthesis, and then place the cursus in between to enter the search terms. When adding a search term, carefully place the cursor. In what element is the term to be added? Thesaurus terms go with the other thesaurus terms, single word synonyms or phrases directly in the title abstract parentheses, and proximity statements either combined with an existing proximity or as a new proxmity syntax.

# Optimizing the basic search strategy

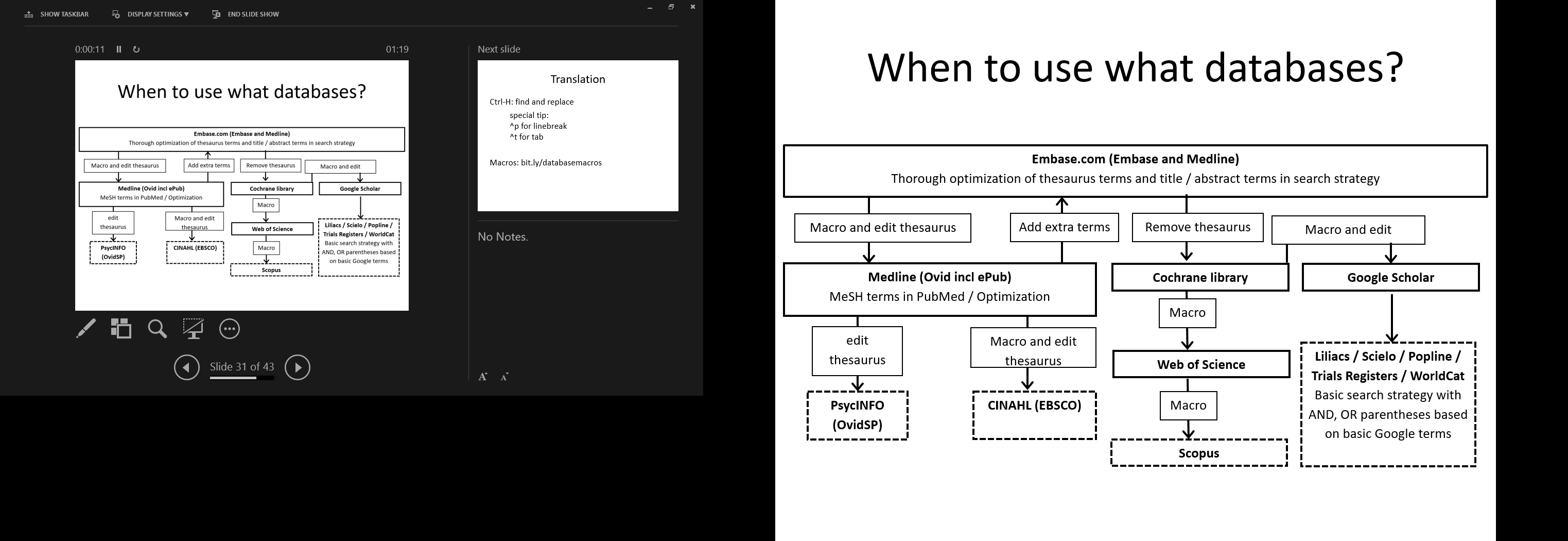
To find all possibly relevant references the search should contain all possibly relevant search terms. The basic search strategy was designed to find the most relevant references, optimization will find additional relevant terms and therefore other potentially relevant references.

Important abstract to scan are the references that have been given a certain thesaurus term (preferably as major term) where the title and abstract do not contain one of the terms already in the search. An indexer has read the article and concluded that it was on topic, but they were triggered by other words, which words are that? Can we use those word in our search? Also articles that have the free text terms in our search in their title that are not indexed with the thesaurus terms in our search might be indexed with other relevant thesaurus terms. Scan keyword lists for those references for relevant thesaurus terms to add to the search strategy.

This optimization is done per element at a time, and repeated several times but always within the full search strategy.

# Translating the strategy between databases

At Erasmus MC we use the following schedule to translate between databases



The ease and success of automatic translation between databases depends on the order in which the databases and interfaces are searched.

Searching Embase before Medline eases the translation of thesaurus terms, as there are more Emtree terms than MeSH terms. If all Emtree terms are found is easier to find all corresponding MeSH terms.

Translation from embase.com to Medline in Ovid is easier than the other way around. Embase.com syntax is somewhat more limiting (no phrase truncation, limited options for nested proximity and no truncation for 0 or 1 character). Work-arounds for embase.com (respectively: using proximity, separating the nested proximity from unnested, and writing out all variants) do work just as well in the Ovid interface.

Starting in PubMed means that automatic translation is almost impossible. Because PubMed does not allow proximity all phrases must be written out or you must use () AND (), and PubMed requires each word or phrase searched in title abstract to end with [tiab].

Also starting in the EBSCO interface makes automatic translation very hard, because there is no single field code for title or abstract all words need to be repeated, and the fact that field codes are placed before the terms, unlike any other major interface.

## Semi-automatic translation using Crtl-H

In Erasmus MC we used translation tables to translate syntax between databases. By closely comparing the syntax differences between interfaces we were able to create tables for most translations. Use the function Find and Replace (Ctrl-H) in word to replace one syntax with the other

You can use CTrl-H for other purposes too. Using ^p in one of the fields, can replace a line break with something else (for instance put an OR between terms that were on separate lines), or insert a line break into a list (such as instead of a ; between synonyms in Emtree it can put all terms on a new line, for ease of reviewing the terms).

For example the translation table between embase.com and Medline Ovid is:

|  |  |
| --- | --- |
| ' | [nothing] |
| NEXT/1 | ADJ |
| NEXT/ | ADJ |
| NEAR/ | ADJ |
| :ab,ti | .ab,ti. |
| /exp | / |
| /de | / |
| :lnk | .xs. |
| /dm\_ | [nothing] |
| /dd\_ | [nothing] |

Using the tables in supplement 1, you can see the corresponding syntaxes of the major databases and interfaces and create your own translation.

Not for every translation find and replace is necessary: The syntax for the Cochrane Library is equal to that of embase.com. Only for thesaurus terms it is completely different. But since Cochrane does not add thesaurus terms themselves, searching Cochrane with thesaurus terms will not retrieve extra articles compared to searching Medline in Ovid.

Therefore at Erasmus MC to create a Cochrane search strategy we remove the Emtree terms from the embase.com query.

## Full-automatic translation using Macros

For Erasmus MC, both the information specialists and participants in the in house workshops use custom designed macros to translate between databases. These macros were designed by recording several steps in the Ctrl-H functions.

The Erasmus MC macros and a description how to work with them can be found at bit.ly/databasemacros

To install the macros

* In word go to View > Macros > View macros
* Click on Create
* If you don't have other macros that you want to keep Press Ctrl-A, otherwise be careful not to delete other macros
* Paste the contents of the webpage and save and close.

To use the macros

* Copy the source search strategy (for instance embase.com) into a new Word document (Ctrl-N)
* Put the cursus at the home position of the document (Ctrl-HOME)
* Go to View > Macros > View macros and run the desired macro (for instance changeEmbase2Medline)

To alter the macros for your own database preference

Copy one of the macros below the complete list and alter the name. Now edit the find and replace characters that you see in the macro. Remove any excess find and replace statements. (This might require some trial and error).

# Increase specificity or sensitivity

Always start with a sensitive search. Your most important goal is to find all relevant articles. The most important question from the researcher is: did we miss relevant articles. This is also the hardest question. The only answer is: no matter how well we searched, we will always miss articles that can answer our research question.

Start searching sensitively and while doing so save retrieved relevant articles on the clipboard or other facilities in the interface.

When after optimizing sensitivity, the number of hits is too high for the researchers to scan on title abstract (remember, depending on the topic this might take much less time than sometimes is thought)

When the number is indeed reduced compare the results that were added to the clipboard with the results of the final search strategy. (In PubMed easy by comparing #0, which by default contains the contents of the clipboard, to the final query). Is everything that was found to be relevant still in the search results.

For optimization a set with at least 100 references is needed, otherwise the set contains too little articles to find words in. If one element is reducing the number of hits too much, you can temporarily remove that element to optimize the others, and then later reintroduce that element.

Only if you can afford to miss relevant references you can as a last resort use the major thesaurus terms and words in title. Do this only for one of your elements, and for the most important one. If you do it, do it for the whole element, all thesaurus and free text words.

|  |  |
| --- | --- |
| **Increase Sensitivity (always)** | **Increase Specificity (if necessary)** |
| Add extra synonyms or thesaurus terms  Extra words can be found in the already retrieved articles as described in the articles body | Delete irrelevant synonyms or thesaurus terms  When in doubt whether a synonym adds value, look at the extra retrieved articles. Do they seem relevant? |
| Generalize specific elements  Potential relevant articles might have used a more broader thesaurus term, because they give an overview of related topics | Specify more general elements  Maybe narrower terms from the thesaurus cause noise. See if using a no explode function solves this problem |
| Drop unimportant elements  Check for each element what happens if it is deleted from the search strategy. If the number of hits does not increase to above what can be handled it is unnecessary and can be deleted. If the number is too high scan the extra articles for potentially relevant words. | Add an extra element  Extra elements will reduce the number of hits, but will increase the chance of missed relevant articles. Always check the articles that are missed by this element for extra relevant terms. This might be very time consuming. |
| Use floating subheadings  Searching with a combination of thesaurus terms and subheading (such as "neoplasms/prevention and control"[mh]) is more specific than searching with subheadings as a separate element ("neoplasms[mh] AND "prevention and control"[sh]). The latter will also retrieve articles where the subheading is used with other thesaurus terms. | Combine a floating subheading with thesaurus  Floating subheadings can retrieve irrelevant results. This can be reduced by combining thesaurus terms with subheadings. When this method is used, it is wise to also use the next method, combining the free text words of these elements to phrases or proximity instead of AND. |
| Broaden proximity (or replace with AND)  It can be determined with great precision whether to use 3, 4 or 5 words in proximity. Changes are often minimal. At Erasmus MC we start with 3, and then broaden to 6, then to 9 etc. and check the extra retrieved articles. AND instead of proximity often retrieves much noise, but can sometimes identify relevant articles. | Narrower proximity or phrases (instead of AND)  A combination of two or more free text words with AND is very sensitive. This can be reduced by combining words of two elements into exact phrases or proximity searches. |
| Add (phrase) truncation or shorten word stems  Truncation will hardly retrieve irrelevant articles. Always add truncation and use as short stems as possible to start with | Remove truncation or lengthen word stems  Sometimes truncated words or phrases result in noise. In that case lengthen the word stem or do not truncate. |
| Remove filters  Filters should only be applied in the end of the search strategy, if the number of hits retrieved is too high. No filter is 100% safe, the most optimal method is often to categorize the retrieved articles by hand. | Add filters  Filters on Language should be applied with caution. Best results are found using any language. Never restrict to languages spoken by the team member, but only to English.  Limit on date is only systematically for two reasons: 1) a thorough systematic reviews has been carried out at some point in history that needs to be updated; 2) one of the elements in the research question did not exist before a certain date (maybe execute a broader search before that date to find relevant older articles) |

# Filters

Elements that can become filters in your schedule can be found in the top right corner: general important elements.

Where can you find filters:

Sensitive Clinical Queries in PubMed (don't use the interface, use the filter information)

Topic Specific Queries (subsets) in PubMed but watch closely whether they are sensitive enough (see for instance population health)

Find articles describing filter development by searching filter[ti] AND your topic

Use systematic reviews that have one element in common with your research question.

Don't use filters in the interface, not sensitive enough. All filters on the left side of PubMed are either dangerous or useless.

Advise: never trust filters blindly, even when they are validated. They can always be improved (see the Cochrane HSSS which does not contain randomization)

# Final remarks / evaluation

Whether your search is successful depends on many factors

* Coverage of accessible databases
* Features of search engine of used interfaces
* Quality of indexing
* Presence and quality of abstract

And only one of the factors is:

* Quality of search and experience of searcher

What are Success factors and Time savers in our method:

* Optimization techniques
* Macros for syntax translation
* Direct feedback by researcher
* Database order and interface choice
* Single-line search strategies
* Create query in Word and paste in database
* Experience (be pro-active)
* Having two screens on your computer
* Computer literacy

At Erasmus MC the researcher sits next to the information specialist through almost the complete search process, reviewing relevancy of proposed words and thesaurus terms, and of the retrieved articles.

Quality is the norm not speed

The method is not a blue print for speed is this differs with experience, but it gives beginners a step-by-step approach on how to start an extensive search, and allows more experienced searchers to gain speed by focusing on the contents and results of the search strategy instead of the process.

If you gain speed more customers can be helped with a good thorough systematic search. If you don't help them, they will still publish their review, but then do the search themselves, which costs them much extra time, and will result in missing relevant hits.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Fields | PubMed | Embase.com | OvidSP Medline/PsycInfo | Cochrane |
| Title/ abstract | [tiab] | ():ab,ti | ().ab,ti. | ():ab,ti |
| Meaningful text | [tw] | ():de,ab,ti | ().mp. (.tw,kf,ot.) | ():ab,ti,kw |
| Including subheadings | " | ():de,lnk,ab,ti | " | " |
| Keyword | "Mesh term"[mesh] | 'emtree term'/exp | exp *term*/ | [mh "mesh term"][[1]](#footnote-1) |
| No explode | "Mesh term"[mesh:noexp] | 'Emtree term'/de | term/ | [mh ^"mesh term"] |
| with subheading | "Mesh term"/sh[mesh] | 'emtree term'/exp/dm\_sh | exp term/sh | [mh "mesh term"/SH,SH] |
| just subheading | [sh] | :lnk | .xs. (exp) of .fs. (noexp) | [mh /SH] |
| synonyms | - | 'emtree term'/syn | - | - |
| Proximity (n terms) | - | NEAR/n - NEXT/n | ADJn | NEAR/n - NEXT/n |
| Phrases | MeSH with "double quotes", free text without quotes | 'single quotes' | No quotes needed | "double quotes" |
| Phrase truncation | No quote\* | (use NEXT/1 proximit\*) | No quote\* | "use quote\*" |
| Truncation | End | End/ mid | End/ mid | End/ mid |
| endless | \* | \* | \* | \* |
| 0 or 1 character |  |  | ? |  |
| 1 character |  | ? | # | ? |
| Filters |  |  |  |  |
| Limit humans | NOT (animals[mesh] NOT humans[mesh]) | NOT ([animals]/lim NOT [humans]/lim) | NOT (animals NOT humans).sh. | (Not necessary) |
| Added since | yyyy/mm/dd:3000 [mhda] | [dd-mm-yyyy]/sd | limit 1 to rd=yyyymmdd-yyyymmdd | AND ("yyyy, Issue m" OR "yyyy Issue m+1" etc…)[[2]](#footnote-2) |
| Publication date |  | [yyyy-yyyy]/py | limit 1 to yr=yyyy-yyyy |  |
| Recordset-numbers | #1 | #1 | 1[[3]](#footnote-3) | #1 |
| Geographical data**[[4]](#footnote-4)** | [all fields] | :ca,ta,cy,ad | .jn,cp,in |  |

# Supplements

## Supplement 1 – syntax comparison between major interfaces

|  |  |  |  |
| --- | --- | --- | --- |
| Fields | EBSCO | Web of Science | Scopus |
| Title/ abstract | TI () OR AB () |  | TITLE-ABS() |
| Meaningful text | TX () | TS=() | TITLE-ABS-KEY() |
| Including subheadings |  |  |  |
| Keyword | MH thesaurus term | [[5]](#footnote-5) | 6 |
| explode | MH thesaurus term+ |  |  |
| with subheading |  |  |  |
| just subheading | MW |  |  |
| synonyms |  |  |  |
| Proximity | Nn - Wn[[6]](#footnote-6) | NEAR/n6 | W/n - PRE/n6 |
| Phrases | No quotes needed | "double quotes" | "double quotes" |
| Phrase truncation | No quote\* | "use quote\*" | "use quote\*" |
| Truncation | End/ mid[[7]](#footnote-7) | End/ mid/ start | End/ mid/ start |
| endless | \* | \* | \* |
| 0 or 1 character | # | $ |  |
| 1 character | ? | ? | ? |
| Filters |  |  |  |
| Limit humans | NOT (MH animals+ NOT MH humans) | NOT (animal\* NOT human\*)[[8]](#footnote-8) | AND NOT (animal\* AND NOT human\*)[[9]](#footnote-9) |
| Added since | EM yyyy(mm)(dd)- | (advanced search > processing date) | AND RECENT(number of days since last search) |
| Recordsets | S1 | #1 | #1 |

## Supplement 2 – Google Scholar tips

Google scholar: scholar.google.com can find extra relevant articles that were not found in other databases, often because the desired search terms were not present in title and or abstract but only in full text. However the search options in google scholar are somewhat limited. At Erasmus MC we use it almost for every systematic review. Here are some tips on how to use it efficiently and as systematically as possible.

Limitations of the search engine:

* No truncation
* Number of characters in search limited to 256
* No proximity
* Only 1000 references visible

To reduce the number of characters, replace every ' OR ' including the spaces with |.

Don't use AND, as that is the default Boolean operator.

Don't use parentheses as they will be ignored.

Google can place word variants or synonyms in quoted phrases.

"myocardial|heart attack|infarct"

will find myocardial attack, myocardial infarct, heart attack and heart infarct.

You can add the proximity operator AROUND(N) between the terms in a phrase within quotes

"serious|severe AROUND(3) infection|infections"

will retrieve serious bacterial infection, severe viral infections and any other variation thinkable.

A systematic search strategy in google scholar for the example topic might look like:

Coxarthrosis|"arthritis|Osteoarthritis AROUND(3) hip|hips|cox" "Exercise therapy|treatment"|"therapeutic exercise"

Downloading references in to reference manager

With the standard settings only one citations at a time can be downloaded.

Using Harzing's Publish or Perish ([www.harzing.com/pop.htm](http://www.harzing.com/pop.htm)) a search strategy can be sent to google scholar and all 1000 references will be downloaded. From PoP the desired references can be exported to other reference software.

## Supplement 3 – Useful Keyboard Short cuts

|  |  |
| --- | --- |
| Shortcuts used in MS Word | |
| Ctrl-N | Create a new blank document |
| Ctrl-C | Copy the selected text to the clipboard |
| Ctrl-V | Paste the contents of the clipboard |
| Ctrl-X | Cut the selected text |
| Ctrl-A | Select all |
| Ctrl-H | Find and Replace  Use ^p and ^t to replace or introduce a line break or tab |
| Ctrl-Z | Undo last action |
| Ctrl-Y | Redo last undone action |
| Home | To start of the line |
| Ctrl-Home | To start of the document |
| End | To end of the line |
| Ctrl-End | To end the document (Ctrl) |
| Ctrl-Left or Ctrl-Right | To beginning of this or the next word |
| Ctrl-Up or Ctrl-Down | To beginning of this or the next paragraph |
| *The above keys can be combined with Shift to select everything between the current cursor position and the new position* | |
| Shift-Ctrl-Left | Select one complete word to the left |
| Shift-Ctrl-Home | Select all tekst from the start of the document to the cursor position |
| Double Click in text | Select a word |
| Double Click in margin | Select a paragraph |
| Triple Click in text | Select a paragraph |
| Triple Click in margin | Select whole document |
| *General Windows shortcuts* | |
| Alt-Tab | Switch between programs (hold Alt pressed and click Tab to scroll between programs) |
| Windows – Arrow key | Move the open window to left (left arrow) right (right arrow) maximize (up arrow), minimize (down arrow) |

1. Cochrane doesn't add MeSH terms to records but instead only uses those that have been added by Medline. Searching for MeSH terms will not retrieve extra hits compared to the Medline search. [↑](#footnote-ref-1)
2. There is no update date searchable. Cochrane library has issue numbers that can be found using free text search. Search for all issues for each month since your last search. [↑](#footnote-ref-2)
3. Every number is treated as a recordset: if you want to search for a number in the text: use quotes "1". You can also search on ranges: OR/1-10 [↑](#footnote-ref-3)
4. Geographical data may be present in the journal title, institution of the author or the country of the journal, and thus can lead to relevant extra hits. [↑](#footnote-ref-4)
5. Web-of-Science and Scopus don't use a controlled vocabulary, only author keywords. They can only be search as free text. [↑](#footnote-ref-5)
6. Contrary to other databases n is the maximum number of words between the searched words, so one less than in embase and OvidSP for the same phrases. [↑](#footnote-ref-6)
7. But you cannot truncate multiple times within on term. [↑](#footnote-ref-7)
8. Because of WoS en Scopus lack of a thesaurus this filter does not suffice. To be exhaustive one needs to add the most frequent free text words.   
   *NOT ((animal\* OR plant\* OR rats OR mice OR pigs) NOT (human\* OR patient\*))* (and maybe add some extra that you come across. Tip: search in embase for AND ([animals]/lim NOT [humans]/lim) and see what animals are mentioned in the thesaurus terms. Those that you find you add to the filter for web-of-science, and subtract them from the test query in embase: (your search query) AND ([animals]/lim NOT [humans]/lim) NOT (mouse OR rat OR dog OR rabbit) [↑](#footnote-ref-8)
9. Pay attention that Scopus doesn't use the operator NOT, but requires AND NOT. [↑](#footnote-ref-9)