

TIPS FOR EFFECTIVE MEDLINE SEARCHING

- Unless you are seeking random inspiration, take some time to construct a strategy to answer your question. Some thought about exactly what you need and how it will appear in the literature will save time and produce more useful results. Choose an interface appropriate to your needs. Break the question into concepts and use Boolean logic (AND, OR, NOT) to include synonyms and build your search strategy.

- Boolean logic:

AND – to find the intersection of two sets – everything about topic 1 AND topic 2.

OR – to find the union of two sets – everything about topic 1 OR topic 2, as synonyms perhaps.

NOT – to exclude one set from another – everything about topic 1 NOT topic 2, about 1 topic as long it is not also about the second topic

In OVID, build a separate set for each concept, then use AND (e.g., type “3 and 4”) or OR or NOT, or the COMBINE button.

In PubMed, click on “History” to see set numbers. Put # in front of the set number and, as in many Internet search engines, you must use upper case for AND and OR (e.g. (#3 AND #4) OR #5).

- **In PubMed, use the “MeSH Browser” on the left menu column to select the standard indexing term.** “Kidney diseases” pulls together what authors may call “Renal diseases” or “Kidney disorders” or “Renal syndromes”.
- **Explode** - Use the hierarchical tree structure of MeSH to retrieve the general term and all more specific terms. For example, to retrieve all articles dealing with headaches, explode HEADACHE for articles indexed under the general term together with those under specific types of headaches, such as CLUSTER HEADACHE, MIGRAINE, and TENSION HEADACHE. **In PubMed, headings are automatically exploded.**
- **Focus** - Use the few terms indexers have used to identify the principal topics of each article to reduce retrieval to highly relevant items. Sometimes an * (asterisk) is used to indicate the MeSH terms which are the chief focus of an article. Such terms are called “Major” in some interfaces.

NOTE: Explode and focus are not opposites except in the sense that exploding increases the number of citations retrieved while focusing decreases this number.

- **Limit** - Limit functions allow limits to:
 - > English language
 - > Age group
 - > Sex
 - > Human (eliminating animal studies)
 - > Specific time periods.
 - > Review articles and other publication types: Use “Review”, “Meta-analysis” and “Randomized controlled trial” to find these types of publications BUT use the subset / clinical query stored search to find “Systematic Reviews”
- Prefer a subheading linked to a term. For example, use LYME DISEASE with subheading DIAGNOSIS, not LYME DISEASE and the general MeSH term, DIAGNOSIS (which is used for articles generally about how to diagnose). **In OVID, available subheadings are offered. In PubMed, subheadings are offered in the “Detailed” display in the MeSH browser. Choose subheadings only if you want to do a specific search.**

Subheadings can be searched attached to any term as “floating subheadings”:

- In Ovid: ed.fs. to pull all citations indexed with a MeSH term including the subheading “education”
 - In PubMed, education [subheading] or ed [sh]
- Use the topic as specifically as you require. Indexers apply the most specific topic, for example, MIGRAINE DISORDERS if the article is substantially on that topic, HEADACHE DISORDERS if it covers several types of headaches including migraine.
 - If a MeSH term is not available, for example, for a very specific or new topic, consider doing a title word search, perhaps checking the indexing terms used for relevant citations you find. **NOTE: The default in OVID is to map. You will want to turn mapping off to search a new or very specific topic for which not MeSH term exists.**
 - **Truncate** - In OVID, use a “?”; in PubMed, use an “*”. To include singulars, plurals, and variations together, e.g. ULTRASONOGRAPH* in PubMed or ULTRASONOGRAPH? in OVID to retrieve ULTRASONOGRAPH and ULTRASONOGRAPHY (but not ULTRASOUND).

You can search title terms directly as follows to pull highly relevant articles:

- In Ovid: portfolio\$.ti.
- In PubMed: portfolio*[ti]

- **Useful Headings** - Some headings capture concepts not easily pinned down. Consider: “Time factors”, “Age factors” and “Sex factors”.

The Discipline vs. the Work of the Discipline - Articles about the organization or management of a discipline are indexed under the name of the discipline, but the work of the discipline is indexed under a disease term. For example, an article on training for dermatologists is indexed under “Dermatology / Education”. Articles on treating dermatologic problems are indexed under terms from the “Skin diseases” tree.

The Bug vs. the Disease Caused by the Bug – Articles about the microbiology of a virus or bacterium are indexed under the name of the bug, e.g., “Streptococcus”, while articles about what the bug causes go under the disease, e.g. “Streptococcal infections”.