A Jumpstarter on How to Search PubMed and PubMed Central (PMC) for Research on Alzheimer's Disease

What is PubMed?

PubMed

- One among numerous databases of peer-reviewed, evidence-based research and expert opinion
- Maintained by the National Library of Medicine
- Located at http://www.ncbi.nlm.nih.gov/pubmed
- Free
- Contains over 63,000 indexed citations on Alzheimer's disease
- Most with abstracts

What is PubMed Central (PMC)?

PubMed Central (PMC)

- Maintained by the National Library of Medicine (NLM)
- Full-text articles and research that must meet scientific and technical standards
- Free
- Sub-set of PubMed (11,500 major articles on Alzheimer's with fulltext)
- Final versions of NIH-funded articles as mandated by legislation
- Final versions of articles from publishers available through open access
- Provides <u>Journals</u> in 3 categories
 - 1. <u>complete</u> contents of selected titles and issues
 - 2. <u>back issues</u> (prior to the late 1990s)
 - 3. complete issues and volumes for <u>recent issues</u> but not for early years

Why search PubMed or PMC for Alzheimer's research?

To find:

- background on topics, terms, and concepts
- standards of care, interventions, and programs
- guidelines and practice recommendations
- evidence-based research for presentations, article writing, grant work, college & university course work
- statistical data
- experts in a field
- bibliographies/reading lists
- verification of citations
- and for keeping up-to-date on current research

What is MeSH and why is it useful?

MeSH

- Medical Subject Headings is an online database used by the National Library of Medicine to assign search words and terms to scientific papers
- helps identify research studies faster
- contains major terms called "headings" and narrower terms called "subheadings" to better define your search
- can do even more for you!

- MeSH provides "scope notes" (definitions) for hard-tounderstand medical and scientific terms, like "epidemiology" or "meta-analysis"
- MeSh maps to related term(s) automatically to help you run a better search.

e.g.

- "treatment" is mapped to "therapy" and "therapeutics"
- "dementia" is mapped to "alzheimer disease"
- "training" is mapped to "education"

Search these bold-faced terms for Alzheimer's disease

- alzheimer disease [mh] (as a MeSH heading)
- alzheimer disease [majr] (for major studies)
- Carrillo MC [au] (to search by author)

If using [mh] sends back too few results, try searching without it.

Example:

alzheimer disease [mh] AND caregivers [mh] alzheimer disease [mh] AND caregivers

Use these terms when they fit your topic

MeSH contains these terms that can be useful for finding Alzheimer's research

- alzheimer disease
- intervention studies
- standards of care
- quality of life
- practice guidelines
- randomized controlled trial
- clinical trials, phase III
- longitudinal studies
- review
- statistics
- caregivers
- ...and terms related to LTC

MeSH does not contain the terms below - so enclose them in parentheses, quotation marks, or in combination with OR

- cognitive decline
- care
- outcomes
- (staffing OR personnel)
- (intervention OR strateg* OR "best practice")
- (program OR demonstration)
- (benefit OR efficacy OR effectiveness)
- (support OR outreach)

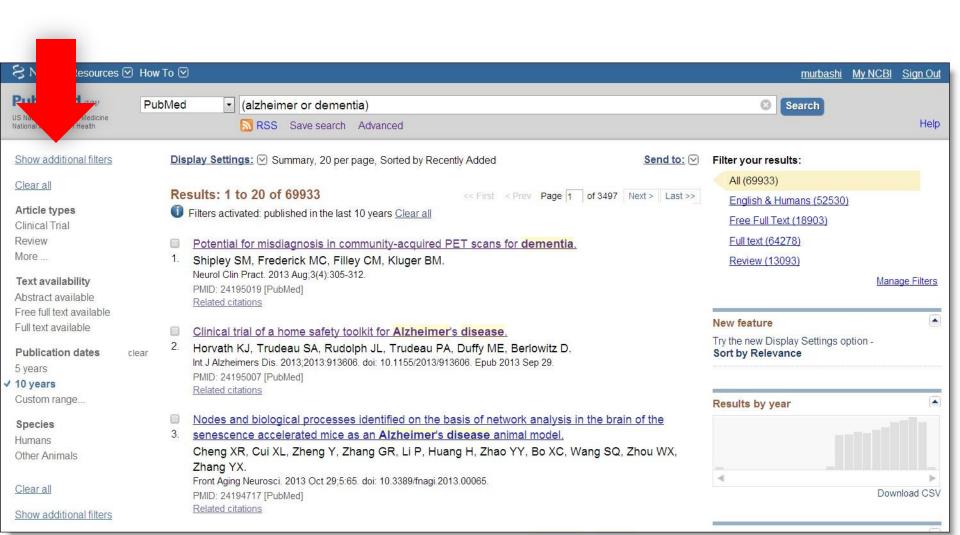
Use these terms to find "best practices"

- standards
- guidelines
- protocols
- "standards of care"
- "consensus statement"
- "gold standard"
- "process improvement"
- Benchmarking [mh]

Development of a Best Practices Search Filter in PubMed. IN: Manitoba Libraries, 1.1, pg. 24.

http://www.mla.mb.ca/content/manitoba-libraries-11

Use filters like "article types" and "publication dates" to limit your search for even better results



Find systematic reviews in **Clinical Queries**

- Clinical Queries is another service that incorporates:
 - abstracts and full-texts
 - retrieves systematic reviews, meta-analyses, reviews of clinical trials, evidence-based medicine, consensus development conferences, and guidelines.
- Type the subject search term/s and click Search.
 - (alzheimer or dementia) comorbidity
- Click See all.

Try the Yale MeSH Analyzer

- a web-based tool to refine the results of searches*
- each PubMed entry has a PMID (PubMed Identifier) / ID number
- example: PMID: 26398086
- the analyzer can compare PMIDs side-by-side, displaying, among other things, the publication dates and the MeSH headings across all the PMIDs (therefore the citations) being analyzed
- it is most helpful for comprehensive database searches and systematic reviews

*developed by Yale librarians, Lei Wang and Holly Grossetta Nardini

Try MeSH on Demand

Use MeSH on Demand to find MeSH headings (terms) related to your topic.

- open MeSh on Demand.
- paste some text into the tool, such as an abstract or a paragraph that has words or terms you may want to search.
- click the "Find MeSh Terms" button.
- the NLM Medical Text Indexer (MTI) will return a list of MeSH Terms relevant to your text.
- continue your search using the Terms from the list or link to the Related Citations by their PMIDs.

Search Workbench

Search Workbench allows you to examine, edit and visualize your PubMed searches from a single interface

- each search you enter is displayed as a Venn diagram and a line graph.
- shows how your results change over time.
- compare completed searches to one another.
- facilitate the process of fine-tuning a search strategy.

There are dozens of ways to run a search. Here are a few. Practice these and discover your own.

Search using MeSH headings - [mh]

alzheimer disease [mh] AND nursing homes [mh]

Search with or without operators (AND, OR, NOT)

"nursing homes staffing" can also be used for "nursing homes AND staffing"

Search free text by inserting quotation marks

("nursing homes" OR "long term care" OR "skilled nursing facilities" OR "residential care facilities")

Use subheadings found in MeSH

cholinesterase inhibitors/adverse effects alzheimer disease/etiology

Search here and find out more

- PubMed
- PMC
- MeSH
- PubMed Help
- Bookmark these tools for easy access through the Virtual Library under <u>Search Databases</u>