Literature Searching in PubMed:

Advanced Course

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University Medical Library
AS 2024

Course attendance certificate for medical students

- **You should have or still will receive infos from us**
- **Now in Zoom:**
    - Logged in as guest? Please log in again with your (stud.)unibas.ch account and correct full name
    - Potential checks/control based on this list of participants

Overview

I **Short repetition of *"Basics in Literature searching"***

II **PubMed Live *(various slides on theory)***

- What do I find where?

- Understanding free-text searching

- Search for fixed word sequences (*phrasing*)

- Search in specific fields only (*search fields with […]*)

- Root term search (*truncation*)

- Using MeSH database (*Exercise 1*)

- Reduce / expand hits (*precision vs. sensitivity*)

- Exercise 2

- Take home messages

Aims: Where do you want to go?
What will you learn today?

I

	Daily hospital routine	Literature search, master thesis	Systematic Review
Require ments	Fast, find specific answers	extensive, well built/solid background research	Reproducible, systematic and sensitive search
Ex. **sources**	– UpToDate – PubMed Clinical Queries	– Google Scholar – PubMed/Embase – Web of Science/Scopus	– PubMed/Embase/Cochrane Library – Web of Science/Scopus – Grey Literature – Complementary search methods
Ex. **search input** PubMed	Heart failure Spironolactone Mortality	Heart failure AND Spironolactone AND (Mortality OR Death) **vs** (Heart failure OR Cardiac Failure OR Heart Decompensation OR "Heart Failure"[Mesh]) AND (Spironolactone OR Aldactone OR "Spironolactone"[Mesh]) AND (mortality OR death OR died OR "Mortality"[Mesh])	(Heart failure[tiab] OR Cardiac Failure[tiab] OR Myocardial Failure[tiab] OR Heart Decompensation[tiab] OR "Heart Failure"[Mesh]) AND (Spironolactone[tiab] OR Aldactone[tiab] OR "Spironolactone"[Mesh]) AND (death[tiab] OR died[tiab] OR die[tiab] OR dies[tiab] OR dying[tiab] OR fatality[tiab] OR fatal*[tiab] OR surviv*[tiab]) AND (... [tiab] OR (randomized controlled trial[pt] OR controlled clinical trial[pt] OR randomized[tiab] OR placebo[tiab] OR "clinical trials as topic"[MeSH Terms:noexp] OR randomly[tiab] OR trial[ti] ... "Animals"[MeSH Terms] NOT "humans"[MeSH Terms])))

Basic course topic

Today's topic

Let information specialists advise you! Use our free support service
(https://ub.unibas.ch/de/ub-medizin/support-literaturrecherche/)

Formulating the question precisely with PICO(S)

Do not unconditionally follow these frameworks, but use your own experience and brain!

Population: Adults with meniscus tear

Intervention: physiotherapy

Control: Arthroscopic partial meniscus resection

Outcome: Pain ↓, QoL ↑

TobiasSchumann
https://de.wikipedia.org/wiki/Datei:Who_is_it.png#metadata

PICO question: In adult patients with a meniscus tear, is physiotherapy or arthroscopic partial meniscus resection better to reduce pain and increase quality of life?

➤ In addition to PICO there are other systems depending on the context/setting, e.g. PECO, SPIDER, SPICE, CLIP, ECLIPSE, etc.
  → http://dx.doi.org/10.1136/bmjgh-2018-001107

Example PICO(S) as basis for a search

I

Comparison of the effects of treating depression with St. John's wort or serotonin reuptake inhibitors on symptom severity – Search for RCTs

Search concept	Possible search terms (English)
1) **P**opulation	
2) **I**ntervention	
3) **C**ontrol	
4) **O**utcome	
5) **S**tudy Design	

Example PICO(S) as basis for a search

Comparison of the effects of treating depression with St. John's wort or serotonin reuptake inhibitors on symptom severity – Search for RCTs

Search concept	Possible search terms (English)		
1) **P**opulation	depression	depressive disorder	melancholia
2) **I**ntervention	hypericum	St. John's wort	…
3) **C**ontrol	serotonin uptake inhibitors	selective serotonin re-uptake inhibitors	SSRIs
4) **O**utcome	(Intentionally left out for now in the search - reporting bias in abstracts!)		
5) **S**tudy Design	RCTs		

Boolean operators

Connecting two terms with …

AND = both search terms occur

OR = at least one of the two search terms occurs

NOT = second term must not be present
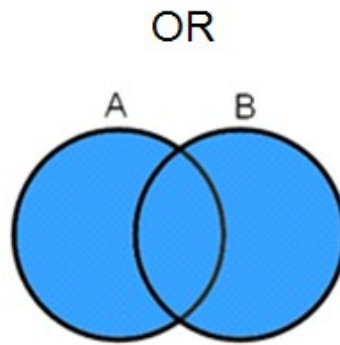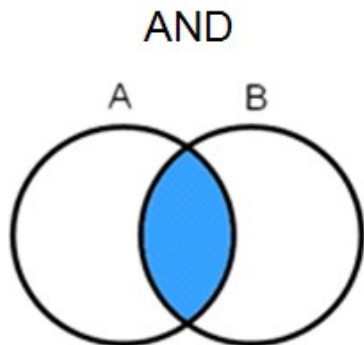
Attention: 'NOT' usually leads to unwanted exclusions. Best to contact an information specialist

Boolean operators and brackets: Combining the PICO aspects

P AND **I** AND **C** AND **O**

or with synonyms:

(**Population 1** OR **Population 2** OR **…**) AND

(**Intervention 1** OR **Intervention 2** OR **…**) AND

(**Control 1** OR **Control 2** OR **…**) AND

(**Outcome 1** OR **Outcome 2** OR **…**)
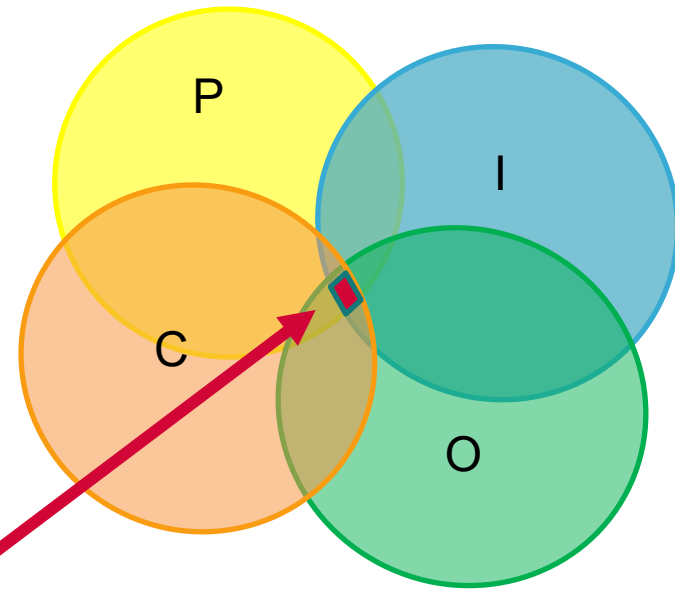
Intersection = final search results

 Note: Not all aspects of the PICO question need to be included in a search.
 → initially only search for a few and clearly describable aspects (e.g. drugs)
 → outcomes often not mentioned in the abstract - therefore omit them if possible

Resources: electronic databases

	Clinical medicine	Biomedicine	Biology	Pharmacy Pharma cology	Psychology Psychiatry	Health Sciences	Nursing, all health professions
PubMed	✖	✖					
Embase							
Biosis Previews							
Cochrane Library							
CINAHL							
PsycINFO							
Scopus							
Web of Science							

Adapted, table by Martina Gosteli

PubMed
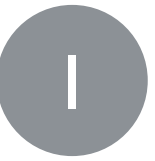
- **Pub**lic access to **Med**line database

- Comprehensive medical search interface

- Fundamental redesign in 2020 (New PubMed)

- Publisher: US National Library of Medicine (NLM)

- Daily updates

- Annually ~1 Mio new citations

- Search in full text or direct access of full text not possible (abstracts freely accessible)

PubMed: Useful Links
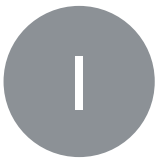
PubMed access via Uni Basel

https://pubmed.ncbi.nlm.nih.gov/?otool=unibaslib

PubMed® Online Training:

https://learn.nlm.nih.gov/rest/training-packets/T0042010P.html

PubMed User Guide

https://pubmed.ncbi.nlm.nih.gov/help/

Training courses at the University Medical Library

https://ub.unibas.ch/en/university-medical-library/#c10080

PubMed Live! What do I find where?

ll

> ## Live demonstration in the course
> Documented by screenshots in the handout (appendix, slides 37-51)
>
> Depression / Hypericum / Serotonin uptake inhibitors
>
> https://pubmed.ncbi.nlm.nih.gov/?otool=unibaslib

3 things that turn off automatic term mapping (ATM):

1. Phrasing

2. Search in specific fields only (field search)

3. Root term search (truncation)

Disadvantage if ATM is switched off:

➢ **MeSH terms are no longer searched for automatically!**

MeSH Terms
(Medical Subject Headings)
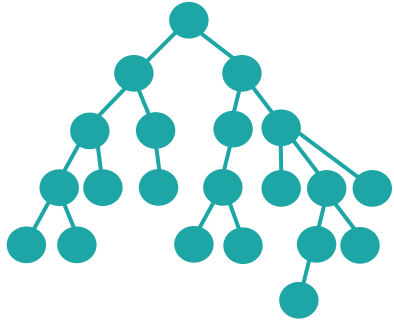
MeSH Terms (thesaurus = synonym dictionary)
= Controlled vocabulary of biomedical terms → gives uniformity and consistency to the indexing
= Collection of hierarchically organized, standardized biomedical terms that describe the subject content of articles

– In Medline database, new articles are manually indexed with MeSH terms by experts

– With MeSH Terms you can find matching ("specific") articles, no matter which terms are used by the authors of the articles in title and abstract

– Example:
"Depression" [Mesh] may also find articles in which the abstract only says "melancholia ".

MeSH Search:
Possibilities to narrow the scope

- **Major Topic**

- **Subheadings**

- **Not «explode»**

Thesaurus «Tree»

MeSH Search:
Possibilities to narrow the scope

II
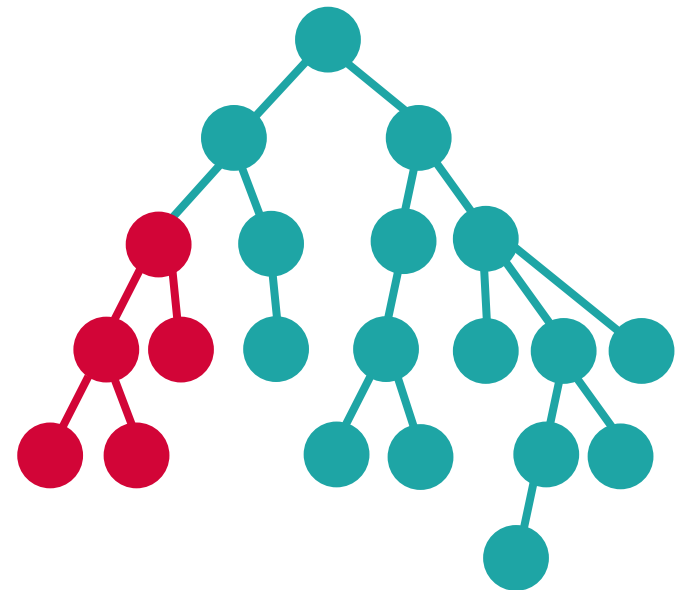
Major Topic

- Limitation to articles in which the MeSH term was indexed as the major topic.

In PubMed:

☑ Restrict to MeSH Major Topic.

Thesaurus «Tree»
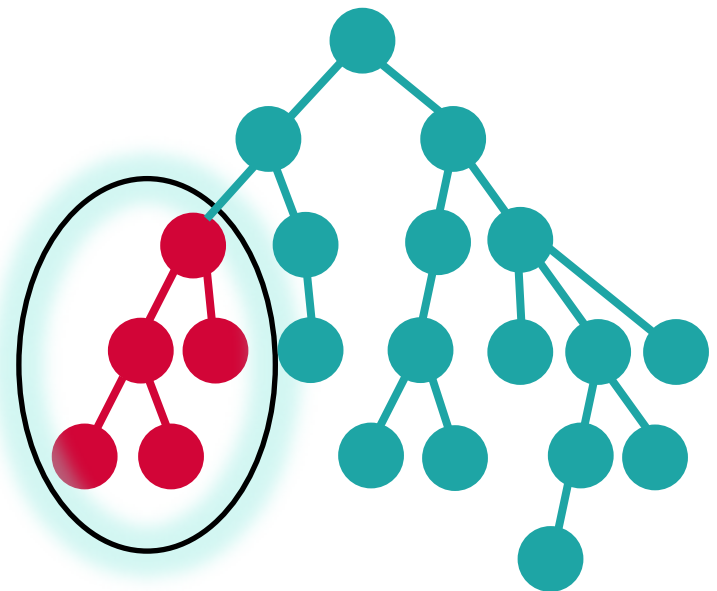
MeSH Search:
Possibilities to narrow the scope

Subheadings

- Limitation to articles for which the subject heading has been further restricted thematically.

In PubMed:

☐ diagnostic imaging

☐ diet therapy

☑ drug therapy

☐ economics

☑ education

https://www.nlm.nih.gov/mesh/qualifiers_scopenotes.html

Thesaurus «Tree»
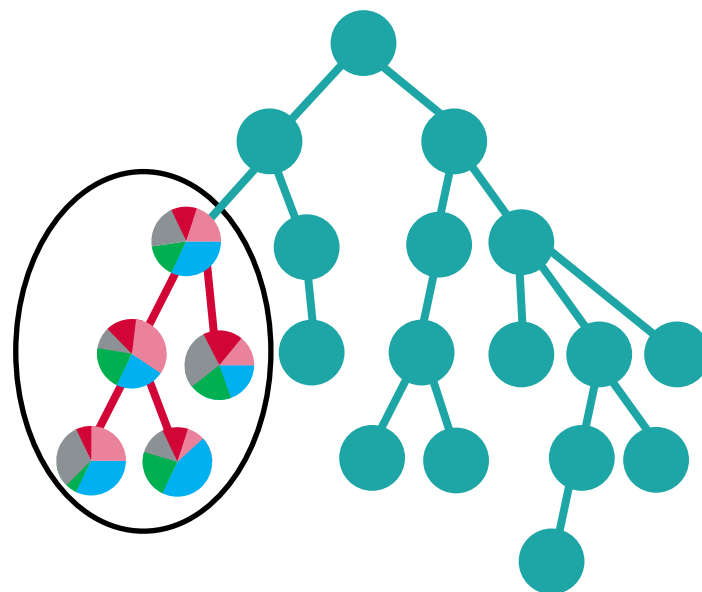
Heading/Subheading1
Heading/Subheading2
Heading/Subheading3
Heading/Subheading4
Heading/Subheading5

MeSH Search:
Possibilities to narrow the scope

Not «explode»

- Limitation to articles indexed with exactly this subject heading (=MeSH-Term).

Thesaurus «Tree»

Infections

    Vector Borne Diseases

        Malaria

           Malaria, Avian

           Malaria, Cerebral

           Malaria, Falciparum

                Blackwater Fever

           Malaria, Vivax
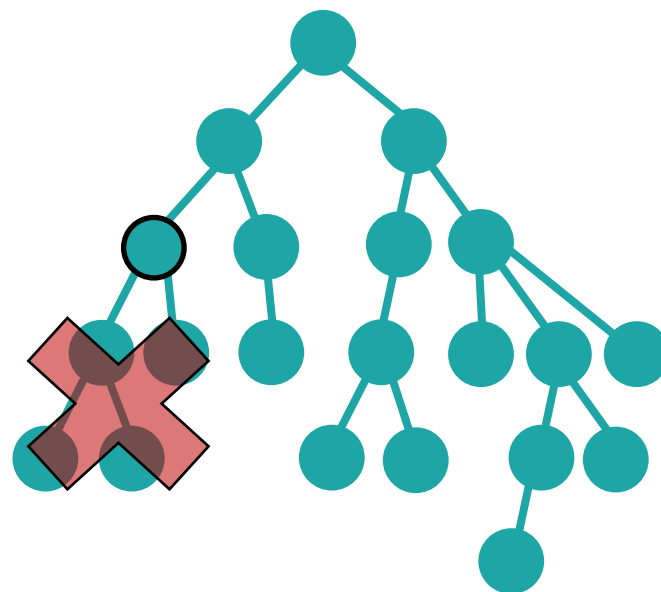
☑ Do not include MeSH terms found below this term in the MeSH hierarchy.

PubMed Live! What do I find where?

II

Live demonstration in the course
Documented by screenshots in the handout (appendix, slides 52-64)

Depression / Hypericum / Serotonin uptake inhibitors

https://pubmed.ncbi.nlm.nih.gov/?otool=unibaslib

Exercise 1

> Open PubMed
> https://pubmed.ncbi.nlm.nih.gov/?otool=unibaslib

> Go to the MeSH Database (link on the lower right).

Explore
MeSH Database

Perform the following searches in the PubMed Search Builder and note the correct number of hits

1. *hypericum[mesh]*

2. Same search as 1st, but limit to articles where this MeSH term describes the *major topic* *hypericum[majr]*

3. Same search as 1st, but now limit with the subheading *adverse effects* *hypericum/adverse effects[mesh]*

4. Same search as 2nd, but limited by the subheading *adverse effects* *hypericum/adverse effects[majr]*

Bonus task:

Link the 1st MeSH search with at least two text words of your choice

MeSH Search:
Advantages and disadvantages

☺ **Advantages**

- **Thematically matching articles** are found**, regardless** of which **terms or spellings** the author of the article used

- Indexing by qualified personnel

- Useful tricks to narrow the scope

  ➔ **Major Topic**

  ➔ **Subheadings**

  ➔ **«do not explode»**

- Due to the hierarchical structure, **broader and narrower terms** are easy to find

☹ **Disadvantages**

- Completely new articles have no subject headings yet, sometimes **not until after 3-6 months**

- **New** substances or **new** medical terms have not yet been indexed

- Non-indexed articles

- Although professionals have indexed: MeSH term allocation not always uniform

MeSH Search:
Advantages and disadvantages

☺ **Advantages**

☹ **Disadvantages**

- **Thematically matching articles** are found, **regardless** of which **terms or s**...

- I...

- U...

- Due to the hierarchical structure, **broader and narrower terms** are easy to find

- Completely new articles have no subject headings yet, sometimes ...cal ...ked

☞ For a sensitive search combine MeSH search with text word search!

Precision vs. sensitivity

Precision: specific, narrow; few hits (only a few of the relevant hits found but little noise)

Search

Pubmed

Medical literature
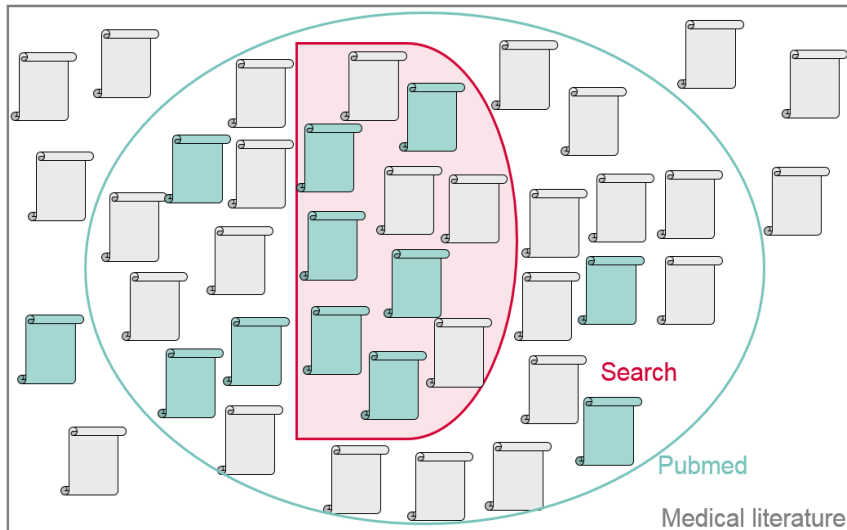
e.g. for daily hospital routine, master thesis?

Sensitivity: complete, broad; many hits (almost all of the relevant hits found but among lots of noise)

Search

Pubmed

Medical literature
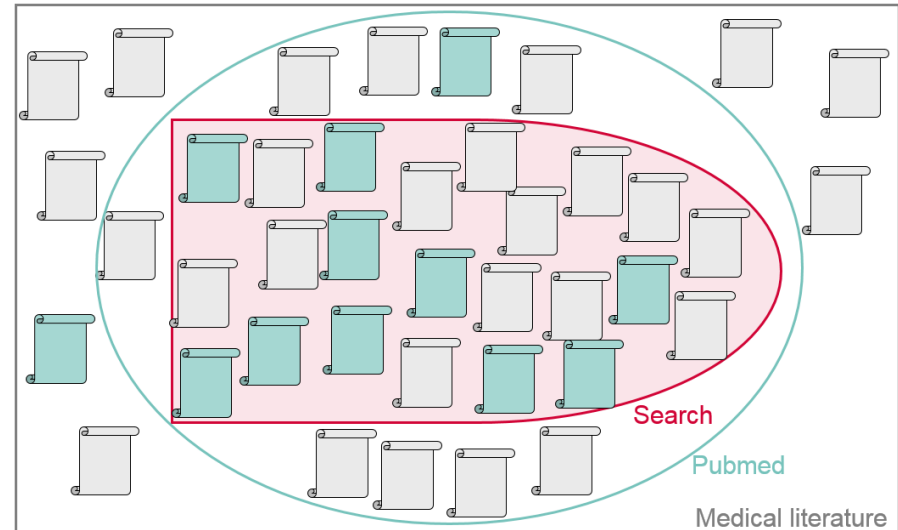
e.g. for Systematic Reviews, Health Technology Assessments

→ Try different strategies and observe how this changes the results

Precision vs. sensitivity

Precision ⬆ (fewer results) vs. **Sensitivity** ⬆ (more results)

Precision	Sensitivity
Precise terms (e.g. diabetes mellitus type 2)	General terms (e.g. Diabetes)
Targeted, no (or few) synonyms and word variations per search block	More synonyms and word variations per search block
Set filters (e.g. publication type, year)	Do not set filters (e.g. publication type, year)
Combine more PECO aspects with AND, e.g. P AND I AND C AND O	Combine fewer PECO aspects with AND, e.g. P AND I P AND I AND C I AND C

27

Precision vs. sensitivity

Precision
(fewer results)
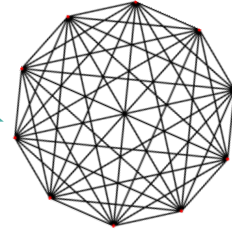
vs. **Sensitivity**
(more results)

More restrictive field search, e.g. textwords only in "Title/Abstract"	Less restrictive field search, e.g. completely free textword search (allowing also for ATM) or textwords in "All fields"
Restrict MeSH by using - MeSH Subheadings - MeSH Major Topic - MeSH No explode	Do not restrict MeSH

Filter results: integrated PubMed filters

Mostly MeSH-based
→ finds only indexed articles
→ using these built-in filters can lead to **unwanted exclusions of relevant articles**!
→ not suited for systematic review searches

Filter results: Professional search filters

- Professional search filter for RCTs (with text words and MeSH terms): *Lefebvre et al.,* ***Cochrane Handbook for Systematic Reviews of Interventions.*** *Version 6 (updated 2019):* https://work.cochrane.org/pubmed

- Similar professional search filters (e.g. for "Systematic Reviews"): https://sites.google.com/a/york.ac.uk/issg-search-filters-resource/home

Find more synonyms and word variations and further articles: Example

Combined MeSH and text word search (59 hits, 20 with RCT filter*; 18. Oct. 2024):

(depression[mesh] OR depression[tiab])

AND (hypericum[mesh] OR hypericum[tiab] OR st johns wort[tiab])

AND (selective serotonin reuptake inhibitors[mesh] OR serotonin uptake inhibitors[tiab])

New search with more hits (114 hits, 45 with RCT filter*; 18. Oct. 2024):

(depression[mesh] OR depress*[tiab] OR melanchol*[tiab])

AND (hypericum[mesh] OR hypericum*[tiab] OR st johns wort[tiab] OR st. john's Wort[tiab] OR st. Johns Wort[tiab] OR st. Johnswort[tiab] OR st john wort[tiab] OR saint johns wort[tiab])

AND (selective serotonin reuptake inhibitors[mesh] OR serotonin uptake inhibitor*[tiab] OR serotonin reuptake inhibitor*[tiab] OR 5-hydroxytryptamine uptake inhibitor*[tiab] OR 5-hydroxytryptamine reuptake inhibitor*[tiab] OR 5-HT uptake inhibitor*[tiab] OR 5-HT reuptake inhibitor*[tiab])

*RCT Filter:

AND (randomized controlled trial[pt] OR controlled clinical trial[pt] OR randomized[tiab] OR placebo[tiab] OR clinical trials as topic[mesh:noexp] OR randomly[tiab] OR trial[ti] NOT (animals[mesh] NOT humans[mesh]))

How to find more synonyms and word variations and further articles
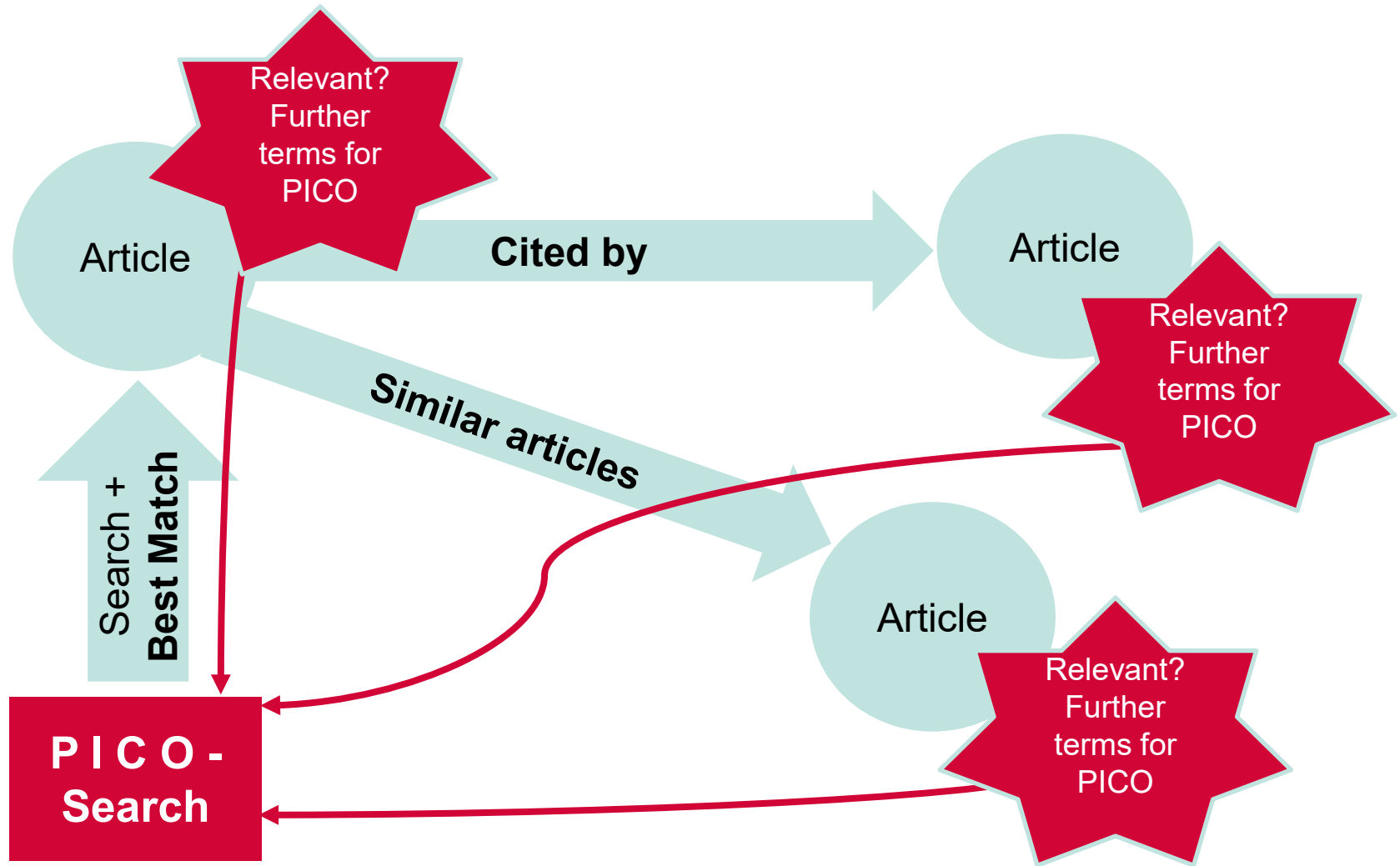
Exercise 2

Question:

Does the additional intake of spironolactone reduce mortality in patients with heart failure?

Task: Create a suitable search.

a) Identify the PICO aspects of the question and consider what you are looking for
b) Find suitable MeSH terms in the MeSH database
c) Find suitable text words (note synonyms and word variants)
d) Combine the MeSH terms and text words with OR and then the partial searches of the different PICO aspects with AND

e) *Bonus task: Filter your results from d) with the RCT filter from Cochrane (https://work.cochrane.org/pubmed)*

Take Home Messages

- Free-text searching is completely sufficient for simple search queries

- For more complex searches, a combination of MeSH terms and text words is recommended

- There are many ways to reach your goal:
  Test different search strategies and check which one makes the most sense for your topic and situation
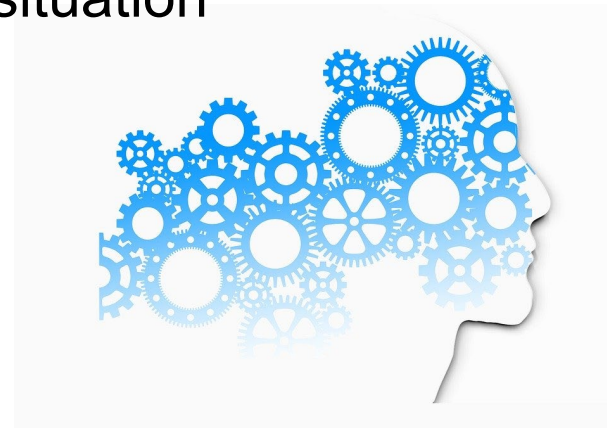
Universität Basel

Universitätsbibliothek

Thank you
for your attention

Further information:

https://ub.unibas.ch/en/locations/university-medical-library/support-for-literature-searching/

Kontakt:

✉ thomas.fuerst@unibas.ch

Course Evaluation/Feedback:

oder
https://evasys.unibas.ch/evasys/online.php?p=H5JCU

For additional courses see https://ub.unibas.ch/en/locations/university-medical-library/

Upcoming courses

08 NOV 2023 16:00 - 18:00 / SCHULUNG, ONLINE

Literature Searching with PubMed - Advanced

This course builds on the course "Basics in Literature Search with PubMed and Other Resources". It will deepen and complement your knowledge on the important search functions needed for a specific and comprehensive medical literature...

09 NOV 2023 14:00 - 16:00 / SCHULUNG, MEDIZIN

Grundlagen Literaturrecherche: PubMed & andere Quellen
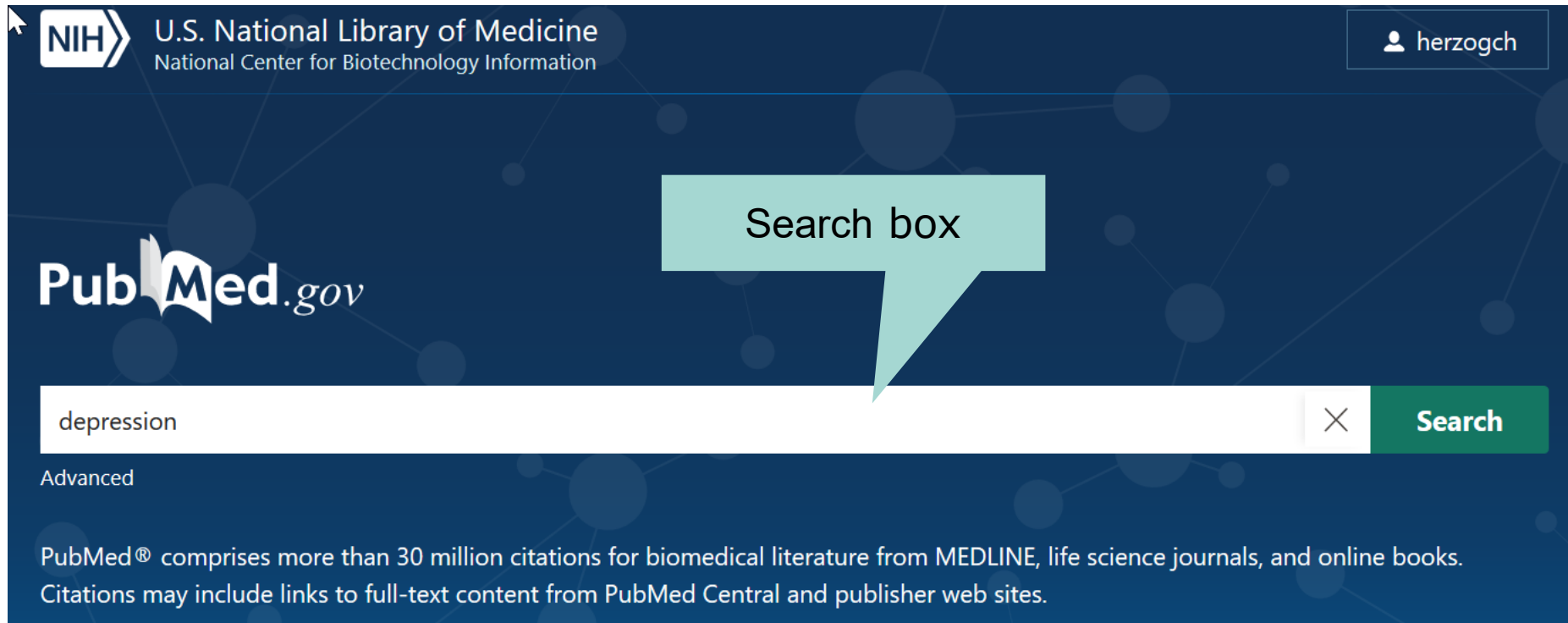
Vermittlung von Grundlagenkenntnissen für die Literatursuche in medizinischen Datenbanken mit dem Fokus auf PubMed.

16 NOV 2023 16:00 - 17:30 / SCHULUNG, FORSCHUNG & LEHRE, ONLINE

Wie nutze ich Turnitin für die Plagiatserkennung?

ALL COURSES UBM

PubMed: What do I find where?

Presentation of the results

Filters to filter the retrieved hits (e.g. by year of publication, article type, study population characteristics, language…)

Default sorting by "best match" (can easily be changed)

Links to abstract view

Abstract view

Review > J Clin Neurosci. 2018 Jan;47:1-5. doi: 10.1016/j.jocn.2017.09.022. Epub 2017 Oct 21.

Depression and cardiovascular disease in elderly: Current understanding

Yaxin Zhang [1], Yujing Chen [2], Lina Ma [3]

Affiliations + expand
PMID: 29066229   DOI: 10.1016/j.jocn.2017.09.022

Abstract

Geriatric depression is a major public health problem and has an especially large effect on health when comorbid with a chronic medical condition. Hypertension, coronary heart disease, and diabetes are accompanied by a high incidence of depression and can affect the treatment and ... ssion is a highly prevalent risk factor for incident of and is associated with ... rtality of cardiovascular disease. In addition to the proactive and effective ... diseases, efforts should also be made to improve patients' psychological and ... rrent evidence on antidepressive therapy in patients with coronary diseases is ... nderstanding of pathophysiological mechanisms underpinning depression and ... ease as well as the complex biological crosstalk of cardiovascular disease ... depression is particularly important for future therapeutic strategies. The following review is on current understanding of geriatric depression and cardiovascular disease.

Keywords: Cardiovascular disease; Depression; Elderly.

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PubMed Disclaimer

Similar articles

[Cardiovascular disorders and depression: a review of epi... data].
Péter L, Döme P, Rihmer Z, Kovács G, Faludi G.
Neuropsychopharmacol Hung. 2008 May;10(2):81-90.
PMID: 18959139   Review.   Hungarian.

PREV RESULT
2 of 626,630

Direct link to the previous (or next) abstract

FULL TEXT LINKS
ELSEVIER FULL-TEXT ARTICLE
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Cite
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Share options

SHARE

PAGE NAVIGATION
< Title & authors
Abstract
Similar articles
Cited by
Publication types
MeSH terms
Related information
LinkOut - more resources

Links to all fields in the view (alternative to simply scrolling down)

Presentation of the results

PubMed®

depression | ✕ | **Search**

Advanced   Create alert   Create RSS

Save | Email | Send to   Sort by: Best match ⇕   Display options ⚙

MY NCBI FILTERS ⬈

626,630 ~sults   ≪ ‹ Page 1 of 31,332 › ≫

RESULTS BY YEAR

1788 — 2024

TEXT AVAILABILITY

☐ Abstract
☐ Free full text
☐ Full text

ARTICLE ATTRIBUTE

☐ Associated data

ARTICLE TYPE

☐ Books and Documents

☐ ...jor **Depression** and Its Recu... ...ife Cou...
...roe SM, Harkness KL.
...May 9;18:329-357...

...**ression's** tremendous burden...
...on these two distinctive life c...
distinction for research on the origins and lifetime course...

☐ Editorial: A Systematic Review of **Depression**.
2 Cui R.
Cite   Curr Neuropharmacol. 2015;13(4):480. doi: 10.2174/15701...
       PMID: 26412067   Free PMC article.   Review.   No ...
Share
       ⬚ Item in Clipboard

☐ **Depression** and cardiovascular disease in elderly: Current understanding.
3 Zhang Y, Chen Y, Ma L.
Cite   J Clin Neurosci. 2018 Jan;47:1-5. doi: 10.1016/j.jocn.2017.09.022. Epub 2017 Oct 21.
       PMID: 29066229   Review.
Share

Options to save or email some or all results

Options to send some or all results to temporary "Clipboard", "My Bibliography" or "Collections" (in My NCBI account) or to a citation management software.

Access to the advanced interface

PubMed advanced interface

Search details on PubMed advanced

History and Search Details   ↓ Download   🗑 Delete

Search	Actions	Details	Query	Results	Time
#1	•••	⌄	Search: **depression**	626,630	13:45:10

"depressed"[All Fields] OR "depression"[MeSH Terms] OR "depression"[All Fields] OR "depressions"[All Fields] OR "depressions"[All Fields] OR "depressive disorder"[MeSH Terms] OR ("depressive"[All Fields] AND "disorder"[All Fields]) OR "depressive disorder"[All Fields] OR "depressivity"[All Fields] OR "depressive"[All Fields] OR "depressively"[All Fields] OR "depressiveness"[All Fields] OR "depressives"[All Fields]

Translations

depression: "depressed"[All Fields] OR "depression"[MeSH Terms] OR "depression"[All Fields] OR "depressions"[All Fields] OR "depression's"[All Fields] OR "depressive disorder"[MeSH Terms] OR ("depressive"[All Fields] AND "disorder"[All Fields]) OR "depressive disorder"[All Fields] OR "depressivity"[All Fields] OR "depressive"[All Fields] OR "depressively"[All Fields] OR "depressiveness"[All Fields] OR "depressives"[All Fields]

Showing 1 to 1 of 1 entries

Understanding free textword searching

In a free textword search, PubMed performs an **automatic term mapping (ATM)**, i.e. a «translation»:

Suitable MeSH terms and word variants (plural forms, compound words, verb forms, adjectives, ...) are combined with the OR operator to form a search string.

Turning off automatic term mapping (ATM)

Phrasing switches off ATM and as a logical consequence less hits

History and Search Details   ↓ Download   🗑 Delete

Search	Actions	Details	Query	Results	Time
#2	•••	⌄	Search: **"depression"** "depression"[All Fields]	504,710	14:13:05
#1	•••	⌄	Search: **depression** "depressed"[All Fields] OR "depression"[MeSH Terms] OR "depression"[All Fields] OR "depressions"[All Fields] OR "depressions"[All Fields] OR "depressive disorder"[MeSH Terms] OR ("depressive"[All Fields] AND "disorder"[All Fields]) OR "depressive disorder"[All Fields] OR "depressivity"[All Fields] OR "depressive"[All Fields] OR "depressively"[All Fields] OR "depressiveness"[All Fields] OR "depressives"[All Fields] **Translations** **depression:** "depressed"[All Fields] OR "depression"[MeSH Terms] OR "depression"[All Fields] OR "depressions"[All Fields] OR "depression's"[All Fields] OR "depressive disorder"[MeSH Terms] OR ("depressive"[All Fields] AND "disorder"[All Fields]) OR "depressive disorder"[All Fields] OR "depressivity"[All Fields] OR "depressive"[All Fields] OR "depressively"[All Fields] OR "depressiveness"[All Fields] OR "depressives"[All Fields]	626,630	13:45:10

Showing 1 to 2 of 2 entries

Turning off automatic term mapping (ATM)

Truncation switches off ATM and as a logical consequence less hits. Of note, in PubMed, the asterisk (*) can only be set at the end of a word.

History and Search Details

⬇ Download   🗑 Delete

Search	Actions	Details	Query	Results	Time
#2	•••	⌄	Search: **depression*** "depression*"[All Fields]	509,468	14:30:33
#1	•••	⌄	Search: **depression** "depressed"[All Fields] OR "depression"[All Fields] OR "depression"[All Fields] OR "depressions"[All Fields] OR "depression s"[All Fields] OR "depressive disorder"[MeSH Terms] OR ("depressive"[All Fields] AND "disorder"[All Fields]) OR "depressive disorder"[All Fields] OR "depressivity"[All Fields] OR "depressive"[All Fields] OR "depressively"[All Fields] OR "depressiveness"[All Fields] OR "depressives"[All Fields]	626,630	13:45:10

Translations

depression: "depressed"[All Fields] OR "depression"[MeSH Terms] OR "depression"[All Fields] OR "depressions"[All Fields] OR "depression's"[All Fields] OR "depressive disorder"[MeSH Terms] OR ("depressive"[All Fields] AND "disorder"[All Fields]) OR "depressive disorder"[All Fields] OR "depressivity"[All Fields] OR "depressive"[All Fields] OR "depressively"[All Fields] OR "depressiveness"[All Fields] OR "depressives"[All Fields]

Showing 1 to 2 of 2 entries

Turning off automatic term mapping (ATM)

(Meta-data)Field Searching

(Meta-data)Fields and their selection either via drop-down on advanced interface (=> "long" syntax) or via direct entry of syntax if known (=> can be either "long" or "short" syntax). For a list of all fields, the short search field tags and further information, see https://pubmed.ncbi.nlm.nih.gov/help/#using-search-field-tags

Understanding free textword searching: multiple concepts

If several PICO aspects are searched for as free textword search, PubMed may or may not pick up certain search blocks and performs **ATM**. The resulting search blocks are combined with the AND operator to form a search string.

Inclusion of synonyms increases the number of hits

ATM searches also the MeSH (Meta-data) field

Check whether the MeSH terms automatically used by ATM are meaningful (in MeSH database).

Alternative to ATM: Disable ATM (see previous slides) and combine text words manually with appropriate MeSH terms
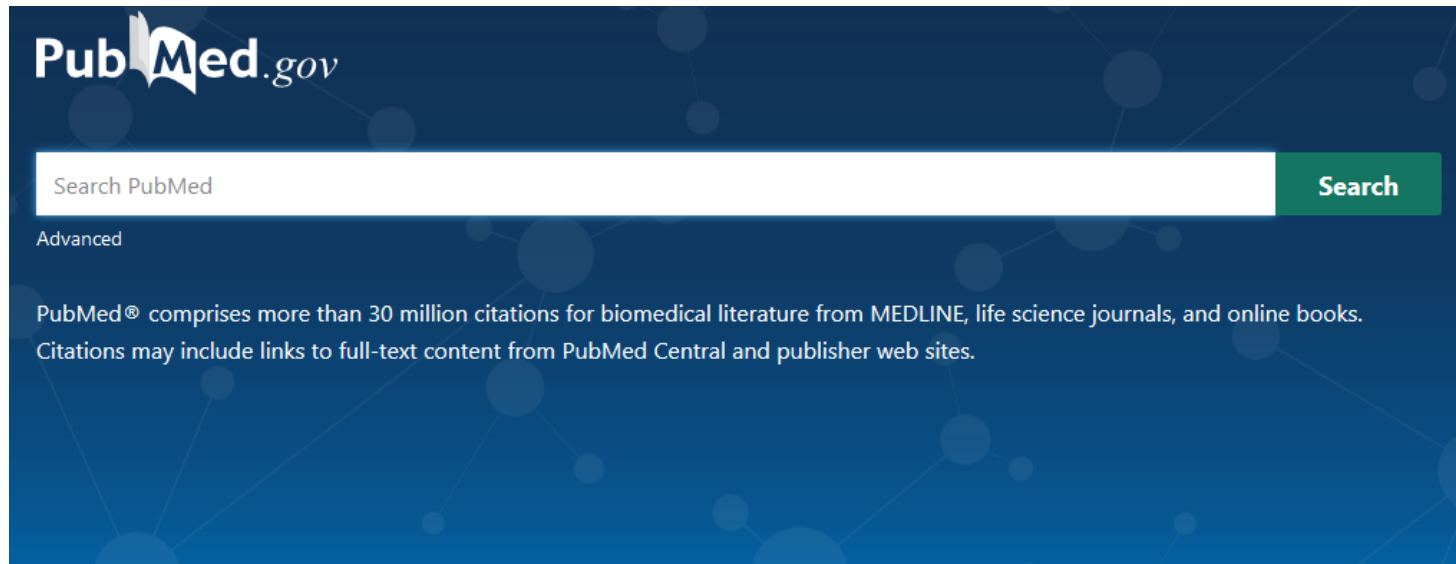
Access to the MeSH database

MeSH Database

MeSH Database

Depression

Depressive states usually of moderate intensity in contrast with MAJOR DEPRESSIVE DISORDER present in neurotic and psychotic disorders.

PubMed search builder options

Subheadings:

☐ blood	☐ epidemiology	☐
☐ cerebrospinal fluid	☐ ethnology	
☐ chemically induced	☐ etiology	☐
☐ classification	☐ genetics	☐ prevention and control
☐ complications	☐ history	☐ psychology
☐ diagnosis	☐ immunology	☐ rehabilitation
☐ diagnostic imaging	☐ metabolism	☐ surgery
☐ diet therapy	☐ microbiology	☐ therapy
☐ drug therapy	☐ mortality	☐ urine
☐ economics	☐ nursing	☐ virology
☐ enzymology		

Subheadings = specifications, e.g. «drug therapy»

MeSH Major Topic: Subject heading is main aspect

☐ Restrict to MeSH Major Topic.
☐ Do not include MeSH terms found below this term in the MeSH hierarchy.

Tree Number(s): F01.145.12...350, F01.470.282
MeSH Unique ID: D003863
Entry Terms:

- Depressive Symptoms
- Depressive Symptom
- Symptom, Depressive
- Emotional Depression
- Depression, Emotional

Default: "Explosion", i.e. MeSH terms found below the respective term in the MeSH hierarchy ("narrower terms") automatically considered as well / **Here, option to overrule the default and avoid "explosion"**

MeSH Database

Entry Terms:

- Depressive Symptoms
- Depressive Symptom
- Symptom, Depressive
- Emotional Depression
- Depression, Emotional

See Also:

- Antidepressive Agents

All MeSH Categories
    Psychiatry and Psychology Category
       Behavior and Behavior Mechanisms
         Behavior
           Behavioral Symptoms
            Depression

All MeSH Categories
    Psychiatry and Psychology Category
       Behavior and Behavior Mechanisms
         Emotions
           Depression

Entry Terms are alternative expressions/ synonyms, that are generally used interchangeably with the respective MeSH term; searches with these entry terms are mapped to the respective MeSH term (i.e. no difference between searches with respective MeSH term or Entry Terms, but it is always preferable to use the respective MeSH term and not an Entry Term – not least to prove your expertise!)

Hierarchical tree

Search for MeSH terms: Search Builder
From MeSH database back to PubMed

Search with known MeSH terms

If you know the MeSH term(s), you can quickly integrate them into your search by using the drop-down menu in the advanced search interface and selecting the respective MeSH (Meta-data) field or – if you also know the syntax – by simply typing the long (e.g. depression[mesh terms]) or short syntax (e.g. depression[mesh]).

Additional search details on PubMed Advanced – Combine separate searches and single line search

Additional search details on PubMed Advanced – Combine separate searches and single line search

Additional search details on PubMed Advanced – Combine separate searches and single line search

Query box

#1 AND #2 AND #3 ✕ **Search** ⌄

Instead of the <Actions> dropdowns, one can also directly type in the respective search numbers, but always REMEMBER: ATTENTION TO BRACKETS IF NEED BE!

History and Search Details   ⬇ Download   🗑 Delete

Search	Actions	Details	Query	Results	Time
#5	•••	›	Search: **#1 AND #2 AND #3**	135	16:01:22
#4	•••	›	Search: **((depression) AND (hypericum)) AND (serotonin uptake inhibitors)**	135	15:56:29
#3	•••	›	Search: **serotonin uptake inhibitors**	53,098	15:50:34
#2	•••	›	Search: **hypericum**	3,430	15:50:16
#1	•••	›	Search: **depression**	626,630	15:50:03

Showing 1 to 5 of 5 entries

Use NOT to compare strategies

- With NOT you can compare two searches you have performed - what is the difference between them?

- In the screenshot:
  - ➤ with #2 NOT #1 you can check which items you will miss if you use search #1 instead of search #2. The additional 14 articles were identified by the inclusion of <st john's wort> as synonym (and again, note: brackets!)

History and Search Details   ⬇ Download   🗑 Delete

Search	Actions	Details	Query	Results	Time
#3	•••	›	Search: **#2 NOT #1**	14	16:12:58
#2	•••	›	Search: **depression (hypericum OR st john's wort) serotonin uptake inhibitors**	149	16:12:23
#1	•••	›	Search: **depression hypericum serotonin uptake inhibitors**	135	16:12:09

Showing 1 to 3 of 3 entries

Find more MeSH terms: Inspiration from relevant articles known to you

Find text word synonyms : Inspiration e.g. from MeSH database under «Entry Terms»

Hypericum

Genus of perennial plants in the family CLUSIACEAE (sometimes classified as Hypericaceae). Herbal and homeopathic preparations are used for depression, neuralgias, and a variety of other conditions. Hypericum contains flavonoids; GLYCOSIDES; mucilage, TANNINS; volatile oils (OILS, ESSENTIAL), hypericin and hyperforin.

Entry Terms:

- Hypericums
- Hypericum perforatum
- Hypericum perforatums
- perforatums, Hypericum
- St. Johns Wort
- Johns Wort, St.
- Wort, St. Johns
- St. Johnswort
- Johnswort, St.
- Saint Johns Wort
- Johns Wort, Saint
- Wort, Saint Johns
- Saint Johnswort
- Johnswort, Saint
- St. John's Wort
- John's Wort, St.
- St. John Wort
- Wort, St. John's
- Saint John's Wort
- John's Wort, Saint
- Saint John Wort
- Wort, Saint John's

Find further articles

Daily administration of low-dose aspirin has proved to be beneficial in preventing recurrent cardiovascular events. However, the role of aspirin for primary prevention in patients with no overt cardiovascular disease is more controversial. In fact, in lower risk patients, the modest benefit in reducing serious vascular events can be offset by the increased risk of bleeding, including intracranial and gastrointestinal hemorrhage. Diabetes mellitus has been associated with a substantially increased risk of both first and recurrent atherothrombotic events, which makes aspirin therapy of potential value in these subjects. Moving from general aspects of aspirin pharmacology and specific issues in diabetes mellitus, this article reviews the literature on the topic of aspirin for primary prevention in general, and in subjects with diabetes mellitus in particular, to culminate with arguments pro and con and a practical risk-based algorithm for aspirin initiation in daily practice.

Keywords: acetylsalicylic acid; aspirin; diabetes mellitus; primary prevention.

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Similar articles

Low-dose aspirin for primary prevention of cardiovascular events in patients with diabetes: Benefit or risk?

Leggio M, Bendini MG, Caldarone E, Lombardi M, Severi P, D'Emidio S, Stavri DC, Armeni M, Bravi V, Mazza A.
Diabetes Metab. 2018 Jun;44(3):217-225. doi: 10.1016/j.diabet.2017.11.002. Epub 2017 Nov 14.
PMID: 29257747   Review.

Aspirin therapy and primary prevention of cardiovascular disease in diabetes mellitus.

Younis N, Williams S, Soran H.
Diabetes Obes Metab. 2009 Nov;11(11):997-1000. doi: 10.1111/j.1463-1326.2009.01068.x. Epub 2009 Jun 16.
PMID: 19531055   Review.

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Neuralgia and Botox	0	4 months ago
("Premature Birth"[Mesh]) AND ((("Adolescent"[M...	0	5 months ago
(((Preterm*[Text Word] OR Premature*[Text Word]...	7	5 months ago

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atrial fibrillation	edit	2	⚙ Private	Mixed

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04:55 AM	MeSH	record	adverse effects [Subheading]
04:55 AM	MeSH	search	adverse effects
04:46 AM	PubMed	search	("Hypericum/therapeutic use"[Mesh])...
04:46 AM	PubMed	search	"Hypericum/therapeutic use"[Mesh]
04:45 AM	MeSH	record	Hypericum
04:45 AM	MeSH	search	hypericum

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and Botox	⚙ 0	4 months ago

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Time	Database	Type
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04:55 AM	MeSH	record
04:55 AM	MeSH	search
04:46 AM	PubMed	search
04:46 AM	PubMed	search
04:45 AM	MeSH	record
04:45 AM	MeSH	search

Pathogenesis of **tuberculosis** and other mycobacteriosis.

Cardona PJ.

Enferm Infecc Microbiol Clin (Engl Ed). 2018 Jan;36(1):38-46. doi: 10.1016/j.eimc.2017.10.015. Epub 2017 Dec 2.

PMID: 29198784   English, Spanish.

The evolution between Mycobacterium **tuberculosis** infection and active **tuberculosis** is multifactorial and involves different biological scales. ...Severe immunosuppression can only explain 10% of active **tuberculosis** cases, while the remainder are attributable ...

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Lover, Andrew A; Baird, J Kevin; Gosling, Roly; Price, Ric N

ISSN: 0002-9637 , 1476-1645; **DOI:** 10.4269/ajtmh.17-0869; **PMID:** 29761762

The American journal of tropical medicine and hygiene : official journal of the American Society of Tropical Medicine and Hygiene. , 2018, Vol.99(1), p.17-23

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Malaria.
Garcia, Lynne S
ISSN: 0272-2712 , 1557-9832; **DOI:** 10.1016/j.cll.2009.10.001; **PMID:** 20513543
Clinics in laboratory medicine. , 2010, Vol.30(1), p.93-129

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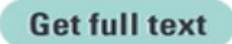
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