Literature Searching in PubMed - Advanced Course

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Overview

Short repetition of *"Basics in Literature searching"*

I

PubMed Live *(some slides on theory)*

II

- What do I find where?
- Understanding free-text search
- Search for fixed word sequences *(Phrasing)*
- Search in specific fields only *(search fields with […])*
- Root term search *(truncation)*
- Using MeSH database (with short exercise)
- Boolean Operator NOT
- Reduce / expand hits (precision vs. sensitivity)

Exercises

III

Aims and search methods

	Daily hospital routine	Literature search, master thesis	Systematic Review
Requirement	Fast, find specific answers	extensive, well built/solid background research	Reproducible, systematic and sensitive search
Ex. **Resources**	– UpToDate – PubMed Clinical Queries	– Google Scholar – PubMed/Embase – Web of Science/Scopus	– PubMed/Embase/Cochrane Library – Web of Science/Scopus – Grey Literature – Complementing search methods
Ex. **Search input** PubMed	Heart failure Spironolactone Mortality	Heart failure AND Spironolactone AND (Mortality OR Death) **vs** (Heart failure[tiab] OR Cardiac Failure[tiab] OR Heart Decompensation[tiab] OR "Heart Failure"[Mesh]) AND (Spironolactone[tiab] OR Aldactone[tiab] OR "Spironolactone"[Mesh]) AND (mortality[tiab] OR death[tiab] OR died[tiab] 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 die[tiab] OR dies[tiab] OR die[tiab] OR died[tiab] OR dying[tiab] OR mortal*[tiab] OR survival*[tiab] OR surviv*[tiab]) AND (systematic[sb] 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] NOT ("animals"[MeSH Terms] NOT "humans"[MeSH Terms])))

Basic course topic

Today's topic

Let information specialists advise you

Formulating the question precisely with PICO(S)

Population:

Intervention:

Control:

Outcome:

Study Design: e.g. randomized controlled trials (RCTs) or systematic reviews (SR) with / without meta-analysis

➢ In addition to PICO there are other systems depending on the context/setting, e.g. PECO, SPIDER, SPICE, CLIP, ECLIPSE, etc.
   → https://libguides.city.ac.uk/c.php?g=663952&p=4696473

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	SSRI
4) **O**utcome	(Intentionally left out for now in the search - reporting bias in abstracts!)		
5) **S**tudy Design	RCTs		

Example for a PE(C)O Question

Population: Teenager

Exposure: advertising tobacco products

(Control: no advertising)

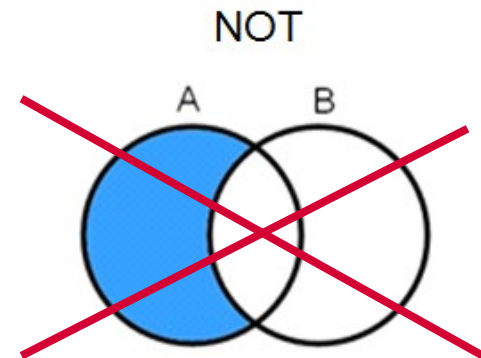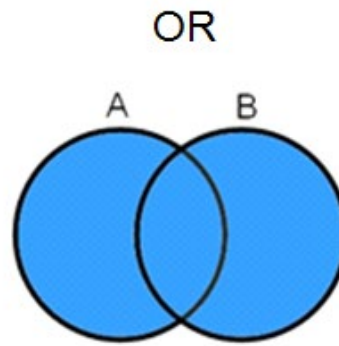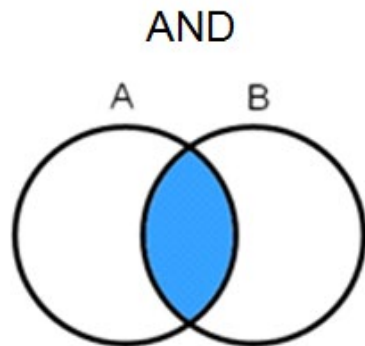**Outcome**: smoking prevalence ↑

PE(C)O question:
Does advertising tobacco products increase smoking prevalence in teenagers?

Boolean operators

AND = both search terms occur

OR   = at least one of the two search terms occurs
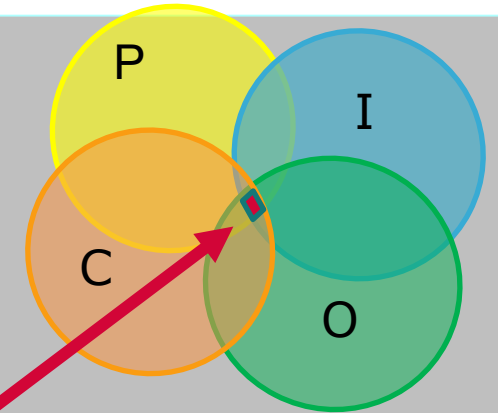
NOT = without this search term

Attention: 'NOT' usually leads to unwanted exclusions. Best to contact an information specialist

Boolean operators: 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

P

I

C

O

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

BUT: Unlike in PICO, the outcome is almost always used in the search terms with the PE(C)O framework.

Databases at a glance: PubMed for clinical medicine and biomedicine

	Clinical medicine	Biomedicine	Biology	Pharmacy Pharmacology	Psychology Psychiatry	Health Sciences	Nursing, 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

- Most 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 download of full text not possible! (abstracts freely accessible)**

PubMed Central (PMC)

– Free archive for full-text biomedical and life sciences journal articles

– If available in PMC → Full text link in PubMed **PMC** Full text **FREE**

– Contains more than 5 million full-text records

– Full text search

– Publisher: NLM's National Center for Biotechnology Information (NCBI)

– More information: https://www.ncbi.nlm.nih.gov/pmc/about/intro/

PMC
US National Library of Medicine
National Institutes of Health

PubMed: Useful Links

I

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

Youtube Tutorials

https://www.youtube.com/watch?v=uyF8uQY9wys&list=PL7dF9e2qSW0YkmxDTsUG6p4hJjYOPT0Uj

PubMed User Guide

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

Training courses at the University Medical Library

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

PubMed Live! What do I find where?

II

Live demonstration in the course
Documented by screenshots in the handout (appendix)

Example

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	SSRI
4) **O**utcome	(Intentionally left out for now in the search - reporting bias in abstracts!)		
5) **S**tudy Design	RCTs		

PubMed Live!

II

Depression Hypericum SSRI

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:

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

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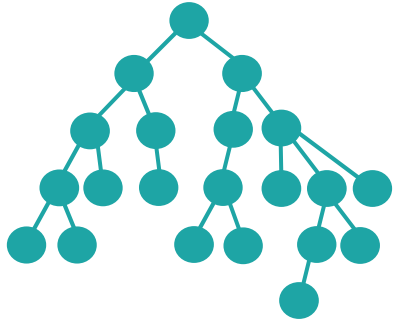
> **MeSH Terms (thesaurus = dictionary)**
> = Controlled vocabulary of biomedical terms → gives uniformity and consistency to the indexing
> = Collection of hierarchically organized, standardized biomedical terms that describe the subject content of articles

- 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:
  "Depressive Disorder"[Mesh] also finds articles in which the abstract only says "melancholia".

MeSH Search:
Possibilities to narrow the scope

Thesaurus «Tree»

- **Major Topic**

- **Subheadings**

- **Not «explode»**

MeSH Search:
Possibilities to narrow the scope

Major Topic

- Limits to articles in which MeSH term is major topic

In MeSH Database:

☑ Restrict to MeSH Major Topic.

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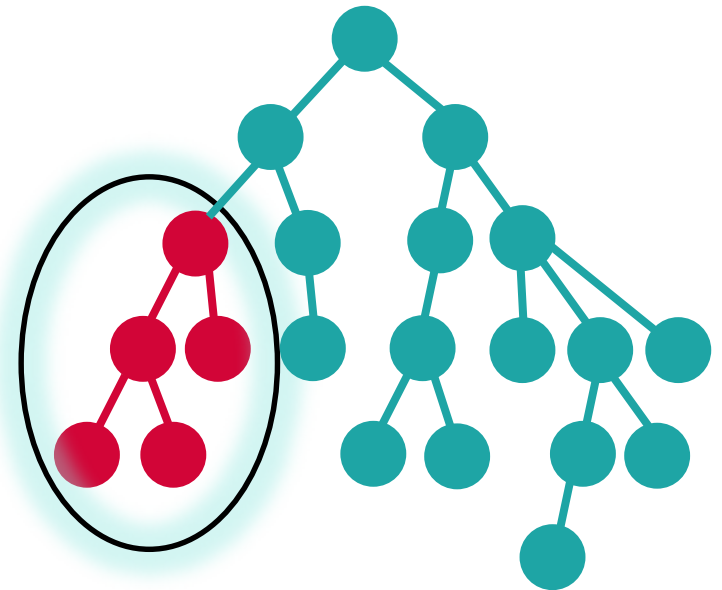
MeSH Search: Possibilities to narrow the scope

Subheadings
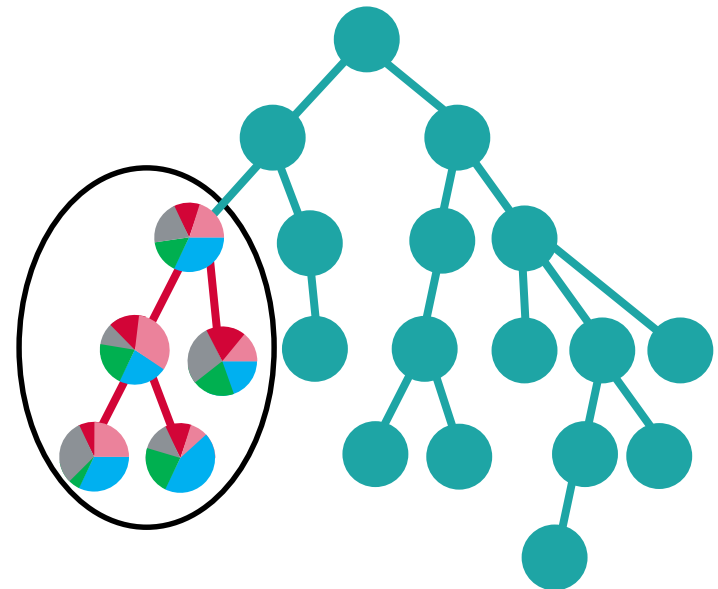
- Limits to articles about particular aspect of the heading

In MeSH Database:

☐ diagnostic imaging
☐ diet therapy
☑ drug therapy
☐ economics
☑ education

Definitions of subheadings:

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

Thesaurus «Tree»

Not «explode»

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

In MeSH Database:

Mood Disorders

Depressive Disorder

Depression, Postpartum

Depressive Disorder, Major

Depressive Disorder, Treatment-Resistant

Dysthymic Disorder

Premenstrual Dysphoric Disorder

Seasonal Affective Disorder
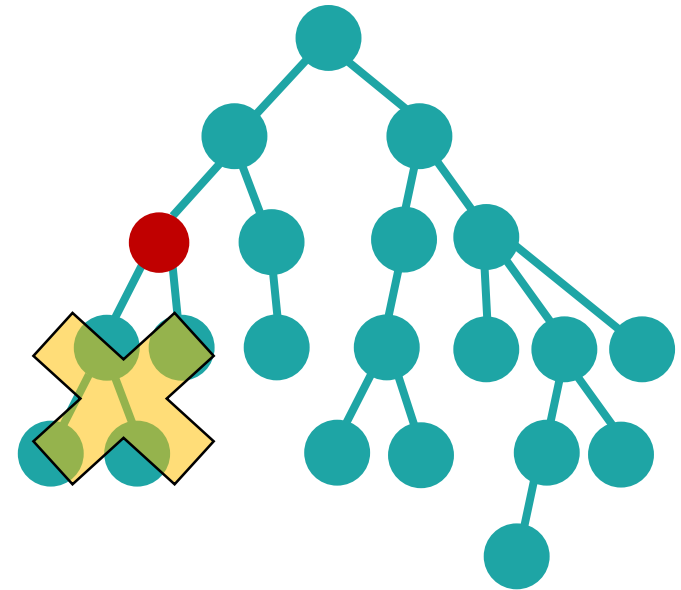
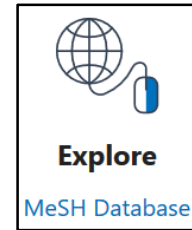☑ Do not include MeSH terms found below this term in the MeSH hierarchy.

Break

Exercise 1 (5 min)

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

2. Go to the MeSH Database (link bottom right).

Explore
MeSH Database

Task: Perform the following searches using PubMed Search Builder and note the number of hits:

1) *"Serotonin uptake inhibitors"[Mesh]*

2) Same search as 1), but now limit to articles where this MeSH term describes the *major topic*
   "Serotonin uptake inhibitors"[Majr]

3) Same search as 1), but now limit to the subheading *therapeutic use*
   "Serotonin uptake inhibitors/therapeutic use"[Mesh]

4) Same search as 2), but now limit to the subheading *adverse effects*
   "Serotonin uptake inhibitors/adverse effects"[Majr]

Bonus task:

Link 1st MeSH search with text words of your choice about same topic

Exercise 1 (5 min) - Solution 🏋️
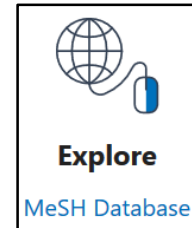
1. Open PubMed
   https://pubmed.ncbi.nlm.nih.gov/?otool=unibaslib

2. Go to the MeSH Database (link bottom right).

Explore
MeSH Database

Task: Perform the following searches using PubMed Search Builder and note the number of hits: (search 11.11.2021)

1) *"Serotonin uptake inhibitors"[Mesh]*   **20,266**

2) Same search as 1), but now limit to articles where this MeSH term describes the *major topic*
    "Serotonin uptake inhibitors"[Majr]   **13,534**

3) Same search as 1), but now limit to the subheading *therapeutic use*
    "Serotonin uptake inhibitors/therapeutic use"[Mesh]   **15,160**

4) Same search as 2), but now limit to the subheading *adverse effects*
    "Serotonin uptake inhibitors/adverse effects"[Majr]   **3,289**

Bonus task:

Link 1st MeSH search with text words of your choice about same topic

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

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

Precision vs. sensitivity

Search

Pubmed

Medical literature
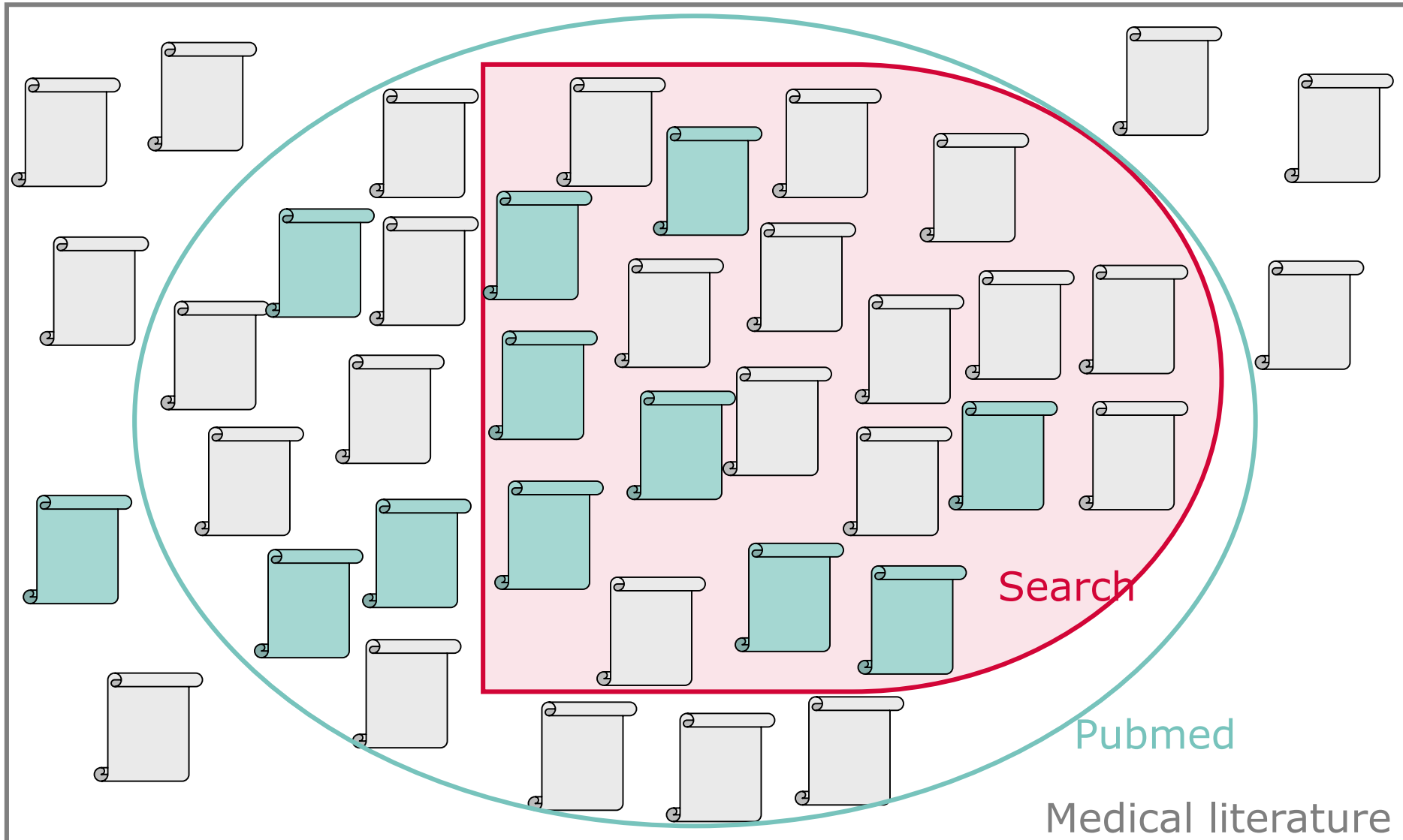
Precision vs. sensitivity

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

Sensitivity: complete, broad; many hits (almost all of the relevant hits found but among
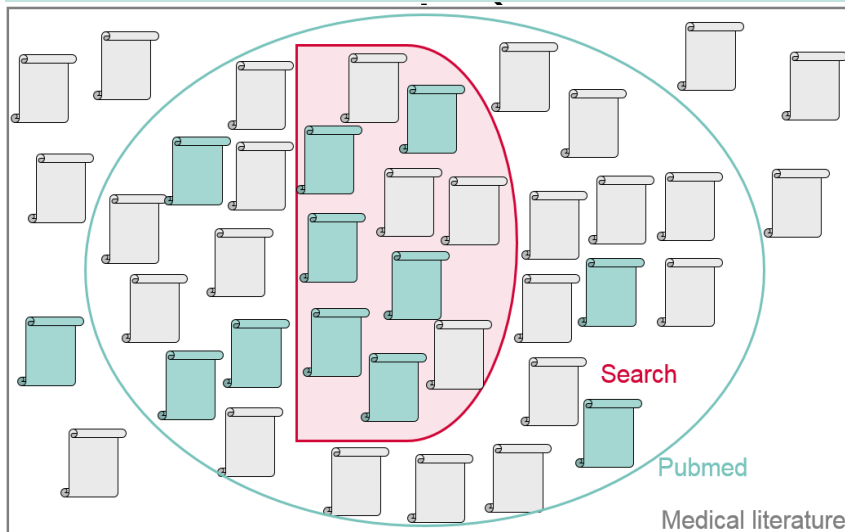
e.g. for daily hospital routine, master thesis?
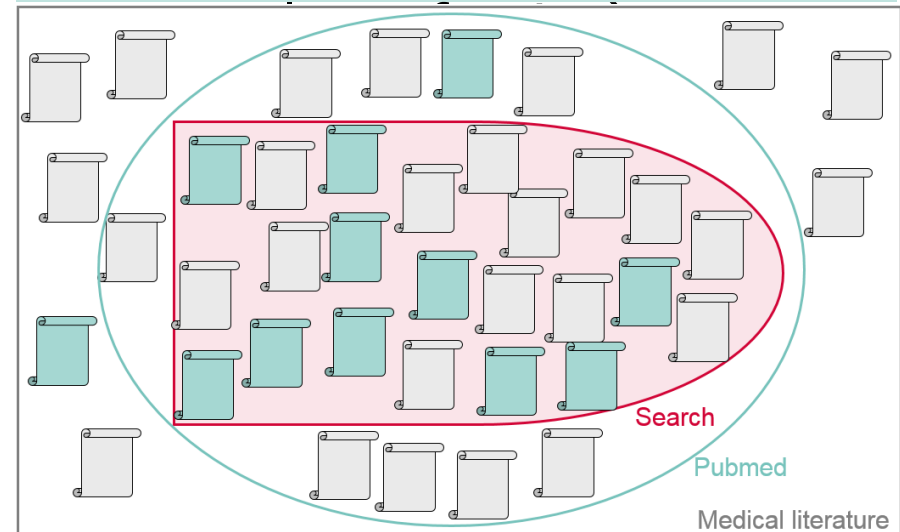
e.g. for Systematic Reviews, Health Technology Assessments

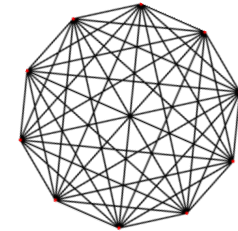→ Try different strategies and observe how this changes the results

Precision vs. sensitivity

Precision (fewer hits)	**vs**	**Sensitivity** (more hits)
Restrict text word search to "Title/Abstract"		
Use MeSH Subheadings, MeSH Major Topic, MeSH no explode		Do not restrict MeSH
Use PubMed filter (non-indexed articles are not found!)		Avoid filters or more specifically use standardized filters with text words and MeSH (e.g. Cochrane RCT filters)
Targeted, few synonyms and word variations		More synonyms and word variations per search block

Filter results: integrated PubMed filters

PubMed Systematic Review Filter:

https://pubmed.ncbi.nlm.nih.gov/help/#systematic-reviews

Filter results: Professional search filters

II

- 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://www.nlm.nih.gov/bsd/pubmed_subsets.html

Find more synonyms and word variations and further articles: Example

Combined MeSH and text word search (59 hits, 19 with RCT filter*):

("Depressive Disorder"[Mesh] OR "Depression"[Mesh] OR depress*[tiab])

AND ("hypericum" [mesh] OR hypericum*[tiab] OR "St. John's Wort"[tiab])

AND ("Serotonin Uptake Inhibitors"[Mesh] OR Serotonin Uptake Inhibitor*[tiab])

How?

New search with more hits (147 hits, 67 with RCT filter*):

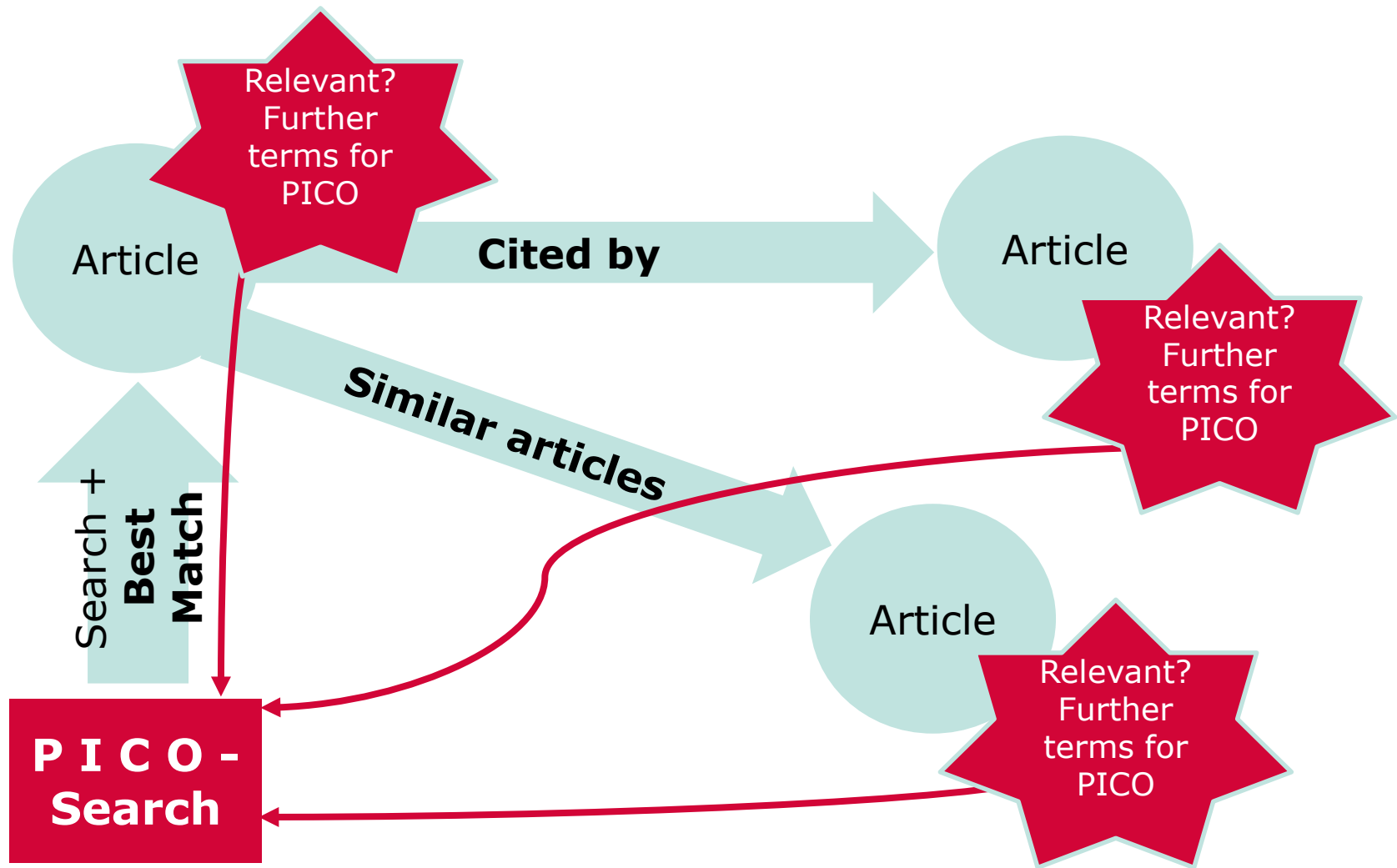("Depressive Disorder"[Mesh] OR "Depression"[Mesh] OR depress*[tiab] OR melanchol*[tiab])

AND ("hypericum"[mesh] OR hypericum*[tiab] OR "St. John's Wort"[tiab] OR "St. Johns Wort"[tiab] OR "St Johns Wort"[tiab] OR "St. Johnswort"[tiab] OR "St John Wort"[tiab] OR "Saint Johns Wort"[tiab])

AND ("Serotonin Uptake Inhibitors"[Mesh] OR "Serotonin Uptake Inhibitors" [Pharmacological Action] OR Serotonin Uptake Inhibitor*[tiab] OR 5-Hydroxytryptamine Uptake Inhibitor*[tiab] OR 5-HT Uptake Inhibitor*[tiab] OR Serotonin Reuptake Inhibitor*[tiab] OR 5-HT Uptake 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 Terms:noexp] OR randomly[tiab] OR trial[ti] NOT ("animals"[MeSH Terms] NOT "humans"[MeSH Terms]))

How to find more synonyms and word variations and further articles

Relevant? Further terms for PICO

Article

Cited by

Article

Relevant? Further terms for PICO

Similar articles

Search + **Best Match**

Article

Relevant? Further terms for PICO

PICO-Search

Exercise 2a
Choose one exercise

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 with the RCT filter from Cochrane(https://work.cochrane.org/pubmed)*

Exercise 2b
Choose one exercise

Question:
Do adults with exposure to mineral fibers have a higher mortality risk than adults without exposure to mineral fibers?

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

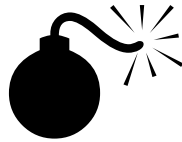e) *Bonus task: Filter your results with the RCT filter from Cochrane(https://work.cochrane.org/pubmed)*
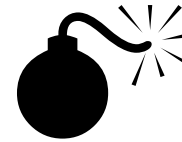
Order of combining MeSH and text words

II

(**P** MeSH **OR** **P** text words) **AND** (**I** MeSH **OR** **I** text words)

AND

(**C** MeSH **OR** **C** text words) **AND** (**O** MeSH **OR** **O** text words)

≠

(**P** MeSH ***AND*** **I** MeSH ***AND*** **C** MeSH ***AND*** **O** MeSH)

OR

(**P** text words ***AND*** **I** text words ***AND*** **C** text words ***AND*** **O** text words)

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

Please evaluate the course:

https://k11331.evasys.de/evasys/online.php?p=SJVT9
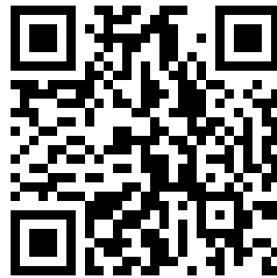
Contact:

Jacqueline Huber, jacqueline.huber@swisstph.ch

Further information:

- Swiss TPH library offers free advice and support for its members on literature searching and using EndNote. We also offer a document delivery service. Contact: library@swisstph.ch

- The University Medical library also offers support: https://ub.unibas.ch/en/locations/university-medical-library/support-for-literature-searching/

Handout Appendix: Overview

I   Short repetition of "Basics in Literature search" (PubMed vs PMC; find and order full-text)

II   PubMed live
- user interface, abstract view, advanced search interface
- Search Details and Advanced Term Mapping (ATM)
- Understanding free-text searching
- 3 things that turn off ATM
- MeSH database
- Search for MeSH terms (PubMed Search Builder)
- Find text word synonyms
  (entry terms from the MeSH database)
- Reuse searches you have performed
  (on advanced search interface)
- Use NOT to compare strategies
- Find more articles (similar articles and cited by)

Searching for technical terms without full text can be frustrating

I

For comparison the full text database PubMed Central (PMC)

From the database to full text via VPN

I

Abstract view of article

Springer Link

Search · Home · Contents · Log in

European Archives of Psychiatry and Clinical Neuroscience
December 2007, Volume 258, Issue 1, pp 59–63 | Cite as

Efficacy of St. John's wort extract WS® 5570 in acute treatment of mild depression

A reanalysis of data from controlled clinical trials

Authors | Authors and affiliations

S. Kasper ✉, M. Gastpar, W. E. Müller, H. P. Volz, A. Dienel, M. Kieser, H. J. Möller

ORIGINAL PAPER
First Online: 14 December 2007

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Abstract

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PubMed: From the database to full text via swisscovery

FULL TEXT LINKS

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> Comparative Study > Int J Psychiatry Clin Pract. 2017 Nov;21(4):314-317.
doi: 10.1080/13651501.2017.1324036. Epub 2017 May 15.

Comparison of depression symptoms between primary depression and secondary-to-schizophrenia depression

Twana Rahim [1], Roshe Rashid [2]

Affiliations + expand
PMID: 28503978   DOI: 10.1080/13651501.2017.1324036

Abstract

ACTIONS

Cite

☆ Favorites

SHARE

If no full text link of publisher on PubMed try swisscovery (Swiss library catalogue)
https://slsp-ubs.primo.exlibrisgroup.com/discovery/search?vid=41SLSP_UBS:live&lang=en

Appears when you go to PubMed via this link:
https://pubmed.ncbi.nlm.nih.gov/?otool=unibaslib

depression like subjective depressed mood, anhedonia, reduced energy and pathological guilt are more prominent in the primary depression.

Keywords: Depression; common symptoms; schizophrenia.

Similar articles

MeSH terms

Related information

LinkOut - more resources

PubMed: From the database to full text via swisscovery

Comparison of depression symptoms between primary depression and secondary-to-schizophrenia depression.

Rahim, Twana; Rashid, Roshe

ISSN: 1365-1501 , 1471-1788; DOI: 10.1080/13651501.2017.1324036; PMID: 28503978

International journal of psychiatry in clinical practice. , 2017, Vol.21(4), p.314-317

Fulltext link via "View Online"

Links

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View Online

Taylor & Francis Medical Library   Show license
Available from 01/01/1997 volume: 1 issue: 1

Look for Open Access version with Unpaywall

PubMed: From the database to full text via swisscovery

[Public health as a social innovation].
Rosenbrock, R
ISSN: 0941-3790 , 1439-4421; **PMID:** 7756762
Das Gesundheitswesen. , 1995, Vol.57(3), p.140-144

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Summary holdings: 54(1992)-69(2007)
Notes: [Bezug eingestellt]

On loan until 25/10/2021 23:00:00 CEST (0 requests)   Jg. 69 (2007)
28 Days Loan

Request / Digitization   ⌄

PubMed: From the database to full text via swisscovery

I

[Public health as a social innovation].
Rosenbrock, R
ISSN: 0941-3790 , 1439-4421; PMID: 7756762
Das Gesundheitswesen. , 1995, Vol.57(3), p.140-144

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Item in place (0 requests)   Jg. 57 (1995)
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- Material Type: Bound Issue
- Location: Basel - UB Hauptbibliothek Magazin UBH Med Zs 779
- Barcode: 0UBU0795784

Request / Digitization ∧

PubMed: What do I find where?

Presentation of the results

PubMed.gov

| depression | ✕ | **Search** |

Advanced   Create alert   User Guide

Save   Email   Send to   Sorted by: Best match ⚙

MYNCBI FILTERS ⬈   549,650 results

RESULTS BY YEAR

☐ Mental health: a world of **depression**.
1   Smith K.
    Nature. 2014 Nov 13;515(7526):181. doi: 10.1038/515180a.
    PMID: 25391942   No abstract available.

    66 Cite ⌣ Share

1788   2020

TEXT AVAILABILITY   ☐ Editorial: A Systematic Review of **Depression**.
                           2   Cui R.
☐ Abstract   Curr Neuropharmacol. 2015;13(4):480. doi: 10.2174/1570159x1304150831123535.
                               PMID: 26412067   **Free PMC article.**   Review.   No abstract available.
☐ Free full text
                               66 Cite ⌣ Share
☐ Full text

ARTICLE ATTRIBUTE   ☐ **Depression**: a change of mind.
                           3   Anthes E.
☐ Associated data   Nature. 2014 Nov 13;515(7526):185-7. doi: 10.1038/515185a.

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

Links to abstract view

Abstract View

II

Links to full text

Comparative Study > Int J Psychiatry Clin Pract, 21 (4), 314-317   Nov 2017

Comparison of Depression Symptoms Between Primary Depression and Secondary-To-Schizophrenia Depression

Twana Rahim [1], Roshe Rashid [2]
Affiliations + expand
PMID: 28503978   DOI: 10.1080/13651501.2017.1324036

FULL TEXT LINKS

View full text

UniBasel S·F·X

ACTIONS

66   Cite

☆   Favorites

Links to all fields in the view

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PAGE NAVIGATION

< Title & authors

Abstract

Similar articles

Cited by

Publication types

MeSH terms

LinkOut - more resources

Direct link to the previous (or next) abstract

PREV RESULT
3 of 549,711

Depression: a change of mind.
Anthes E. Nature. 2014. PMID: 28503978 No abstract available.

Abstract

Objectives: This study exclusively aimed to clinically assess which symptom patter~~~~~lates primary depression from depression-secondary to-schizophrenia.

Methods: A total of 98 patients with primary depression and 71 patients with secondary-to-schizophrenia depression were assessed for identifying the clinical phenomena of depression. Diagnosis of schizophrenia was confirmed by Mini International Neuropsychiatric Interview. Each ~~~~~~~nt was, however, assessed by Patient Health Questionnaire-9 as well as Calgary Depression ~~~~ Schizophrenia (CDSS) for possible concurrent depressive symptoms.

~~~~ Depressed mood, loss of interest, reduced energy and pathological guilt were more common ~~~~~~~~ depression, whereas sleep disturbance and guilty ideas of reference were more amounting towards the diagnosis of depression secondary-to-schizophrenia.

Conclusions: It is clinically hard to differentiate primary from secondary-to-schizophrenia depression, especially in the absence of obvious psychotic symptoms. However, the classical symptoms of depression like subjective depressed mood, anhedonia, reduced energy and pathological guilt are more prominent in the primary depression.

Keywords: Depression; common symptoms; schizophrenia.

Similar articles

Association of physical and social anhedonia with depression in the acute phase of

Access to the Advanced Interface

Here!

PubMed *Advanced* Interface

PubMed Advanced Search Builder

Search queries in defined fields

PubMed.gov

User Guide

Add terms to the query box

All Fields ⬍ | Enter a search term | **ADD** ⌄

Show Index

Search Box

Query box

Enter / edit your search query here | **Search** ⌄

Previous search queries with search details

History and Search Details ⬇ Download 🗑 Delete

Search	Actions	Details	Query	Results	Time
#1	•••	＞	Search: **depression**	549,650	05:48:27

Showing 1 to 1 of 1 entries

Links to previous results

Search details on PubMed Advanced

History and Search Details   ⬇ Download   🗑 Delete

Search	Actions	Details	Query	Results	Time
#1	•••	⌄	Search: **depression** (((((((((((((("consciousness disorders"[MeSH Terms] OR ("consciousness"[All Fields] AND "disorders"[All Fields])) OR "consciousness disorders"[All Fields]) OR "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]	549,650	05:48:27

Translations

depression: "consciousness disorders"[MeSH Terms] OR ("consciousness"[All Fields] AND "disorders"[All Fields]) OR "consciousness disorders"[All Fields] OR "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]

Understanding free-text searching: I

History and Search Details   ⤓ Download   🗑 Delete

Search	Actions	Details	Query	Results	Time
#1	•••	⌄	Search: **depression**	550,547	09:33:20

Search Details

(("consciousness disorders"[MeSH Terms] OR ("consciousness"[All Fields] AND "disorders"[All Fields])) OR "consciousness disorders"[All Fields]) OR "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]

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.

Understanding free-text searching II

If several PICO aspects are searched for, PubMed performs **ATM** for all terms. The resulting search blocks are combined with the AND operator to form a search string.

Search	Actions	Details	Query	Results
#2	•••	⌄	Search: **Depression hypericum serotonin uptake inhibitors**	105

(((((((((((((("consciousness disorders"[MeSH Terms] OR ("consciousness"[All Fields] AND "disorders"[All Fields])) OR "consciousness disorders"[All Fields]) OR "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]) AND ("hypericum"[MeSH Terms] OR "hypericum"[All Fields]) AND (("serotonin uptake inhibitors"[Pharmacological Action] OR "serotonin uptake inhibitors"[MeSH Terms]) OR (("serotonin"[All Fields] AND "uptake"[All Fields]) AND "inhibitors"[All Fields])) OR "serotonin uptake inhibitors"[All Fields])

Translations

Depression: "consciousness disorders"[MeSH Terms] OR ("consciousness"[All Fields] AND "disorders"[All Fields]) OR "consciousness disorders"[All Fields] OR "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]

hypericum: "hypericum"[MeSH Terms] OR "hypericum"[All Fields]

serotonin uptake inhibitors: "serotonin uptake inhibitors" [Pharmacological Action] OR "serotonin uptake inhibitors"[MeSH Terms] OR ("serotonin"[All Fields] AND "uptake"[All Fields] AND "inhibitors"[All Fields]) OR "serotonin uptake inhibitors"[All Fields]

Inclusion of synonyms* increases the number of hits

History and Search Details				⤓ Download	🗑 Delete	
Search	**Actions**	**Details**	**Query**		**Results**	**Time**
#3	•••	›	Search: **Depression (hypericum OR st johns wort) serotonin uptake inhibitors**		112	11:26:58
#2	•••	›	Search: **Depression hypericum serotonin uptake inhibitors**		105	09:50:48
#1	•••	›	Search: **depression**		550,547	09:33:20

*How do I find text word synonyms? → **See later slide!**

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 missing**

Things that turn off ATM: Phrasing

History and Search Details

⤓ Download

Search	Actions	Details	Query	Results
#14	•••	>	Search: **Depression (hypericum OR st johns wort OR "St. john's wort")** **serotonin uptake inhibitors**	113
#9	•••	>	Search: **Depression (hypericum OR st johns wort OR St. john's wort)** **serotonin uptake inhibitors**	112
#3	•••	>	Search: **Depression (hypericum OR st johns wort) serotonin uptake** **inhibitors**	112
#2	•••	>	Search: **Depression hypericum serotonin uptake inhibitors**	105

hypericum: "hypericum"[MeSH Terms] OR "hypericum"[All Fields]

st johns wort: "hypericum"[MeSH Terms] OR "hypericum"[All Fields] OR ("st"[All Fields] AND "johns"[All Fields] AND "wort"[All Fields]) OR "st johns wort"[All Fields]

St. john's: st. john's[Author]

Things that turn off ATM: Field search

e.g. in [Title/Abstract] or [tiab]

Things that turn off ATM: Field search

For field searches, it automatically **phrases**

Search	Actions	Details	Query	Results
#18	•••	⌄	Search: **serotonin uptake inhibitors[Title/Abstract]**	327
			"serotonin uptake inhibitors"[Title/Abstract]	

Things that turn off ATM: Field search

[Title/Abstract] = [tiab]

Search	Actions	Details	Query	Results
#18	•••	⌄	Search: **serotonin uptake inhibitors**[Title/Abstract] "serotonin uptake inhibitors"[Title/Abstract]	327
#17	•••	⌄	Search: **serotonin uptake inhibitors**[tiab] "serotonin uptake inhibitors"[Title/Abstract]	327

Things that turn off ATM: Field search

Fewer hits as:
- Phrasing switches off ATM
- only specified fields are searched
→ more precision, less sensitivity

Search	Actions	Details	Query	Results
#2	•••	∨	Search: **serotonin uptake inhibitor**[Title/Abstract] "serotonin uptake inhibitor"[Title/Abstract]	296
#1	•••	∨	Search: **serotonin uptake inhibitor** ((((("serotonin uptake inhibitors"[Pharmacological Action] OR "serotonin uptake inhibitors"[MeSH Terms]) OR (("serotonin"[All Fields] AND "uptake"[All Fields]) AND "inhibitors"[All Fields])) OR "serotonin uptake inhibitors"[All Fields]) OR (("serotonin"[All Fields] AND "uptake"[All Fields]) AND "inhibitor"[All Fields])) OR "serotonin uptake inhibitor"[All Fields]	45,223

Field searches can help to eliminate inappropriate results

e.g. an abstract found with tuberculosis [all fields]:

7.

Primary ciliary dyskinesia caused by a large homozygous deletion including exons 1-4 of DRC1 in Japanese patients with recurrent sinopulmonary infection.

Keicho N[1], Hijikata M[2], Morimoto K[3], Homma S[4], Taguchi Y[5], Azuma A[6], Kudoh S[7].

⊖ Author information

1   The Research Institute of Tuberculosis, Japan Anti-Tuberculosis Association, Tokyo, Japan.
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3   Respiratory Disease Center, Fukujuji Hospital, Japan Anti-Tuberculosis Association, Tokyo, Japan.
4   Department of Advanced and Integrated Interstitial Lung Diseases Research, School of Medicine, Toho University, Tokyo, Japan.
5   Department of Respiratory Medicine, Tenri Hospital, Nara, Japan.
6   Division of Pulmonary Medicine and Oncology, Graduate School of Medicine, Nippon Medical School, Tokyo, Japan.
7   Japan Anti-Tuberculosis Association, Tokyo, Japan.

Abstract

BACKGROUND: Diffuse panbronchiolitis (DPB) is a sinopulmonary disease mainly affecting Asian populations. Primary ciliary dyskinesia (PCD) is a genetically heterogeneous disorder impairing ciliary structure and function. These two disorders are not easily distinguished by clinical signs and symptoms.

Search term not topic of the article but part of the authors' affiliation

Things that turn off ATM: Truncation

History and Search Details

⤓ Download

Search	Actions	Details	Query		Results
#2	•••	⌄	Search: **depression*** "depression*"[All Fields]		399,816
#1	•••	⌄	Search: **depression** (((((((((((((("consciousness disorders"[MeSH Terms] OR ("consciousness"[All Fields] AND "disorders"[All Fields])) OR "consciousness disorders"[All Fields]) OR "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]		550,655

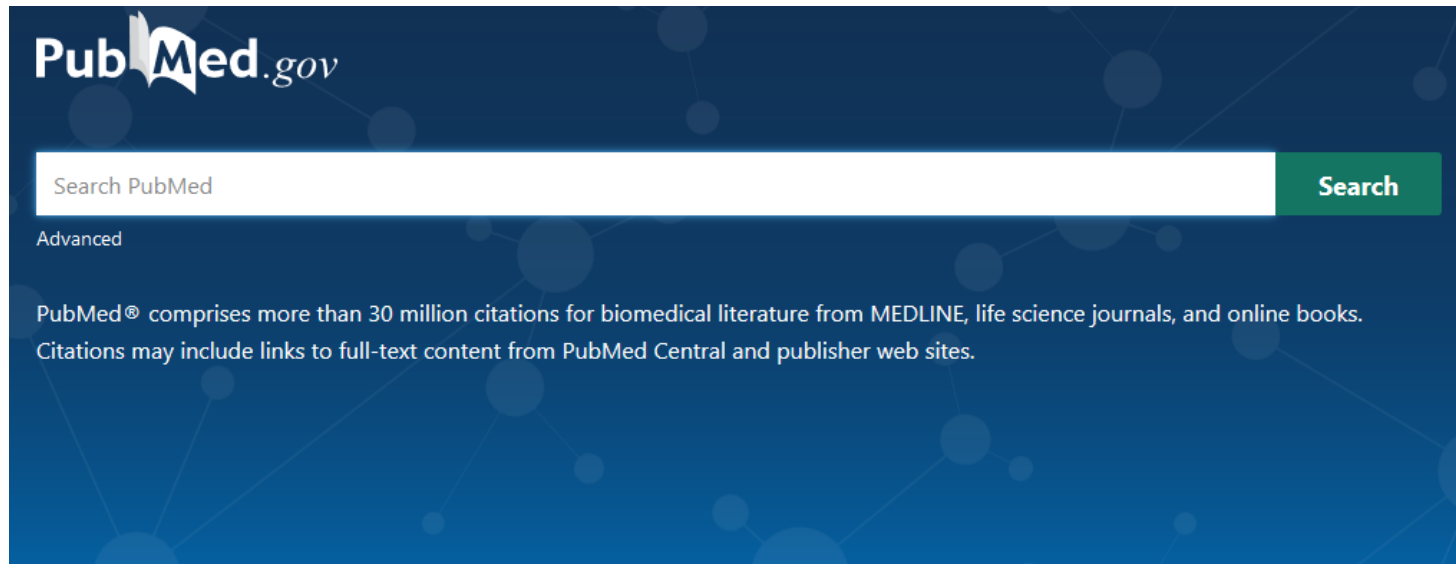In PubMed you can set the asterisk (*) only at the end of the word stem

MeSH terms used by ATM

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

Search **Actions** **Details** Query | **Results**

Search: **Depression hypericum serotonin uptake inhibitors** | 105

((((((((((((("consciousness disorders"[MeSH Terms] OR ("consciousness"[All Fields] AND "disorders"[All Fields])) OR "consciousness disorders"[All Fields]) OR "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]) AND ("hypericum"[MeSH Terms] OR "hypericum"[All Fields]) AND ((("serotonin uptake inhibitors"[Pharmacological Action] OR "serotonin uptake inhibitors"[MeSH Terms]) OR (("serotonin"[All Fields] AND "uptake"[All Fields] AND "inhibitors"[All Fields])) OR "serotonin uptake inhibitors"[All Fields])

Translations

Depression: "consciousness disorders"[MeSH Terms] OR ("consciousness"[All Fields] AND "disorders"[All Fields]) OR "consciousness disorders"[All Fields] OR "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]

hypericum: "hypericum"[MeSH Terms] OR "hypericum"[All Fields]

serotonin uptake inhibitors: "serotonin uptake inhibitors" [Pharmacological Action] OR "serotonin uptake inhibitors"[MeSH Terms] OR ("serotonin"[All Fields] AND "uptake"[All Fields] AND "inhibitors"[All Fields]) OR "serotonin uptake inhibitors"[All Fields]

Access to the MeSH Database

MeSH Database

MeSH Database

Definition of the MeSH term

Depressive Disorder

An affective disorder manifested by either a dysphoric mood or loss of interest or pleasure in usual activities. The mood disturbance is prominent and relatively persistent.

Year introduced: 1981

PubMed search builder options

Subheadings:

Introduction of the MeSH concept perhaps also search for old terms

- □ analysis
- □ anatomy and
- □ blood
- □ cerebrospinal fluid
- □ chemically induced
- □ classification
- □ complications
- □ cytology
- □ diagnosis
- □ diet therapy
- □ drug therapy
- □ economics
- □ enzymology

- □ etiology
- □ genetics
- □ history
- □ immunology
- □ metabolism
- □ microbiology
- □ mortality
- □ nursing
- □ organization and administration
- □ parasitology
- □ pathology

- □ prevention and control
- □ psychology
- □ radiography
- □ radionuclide imaging
- □ rehabilitation
- □ statistics and numerical data
- □ surgery
- □ therapy
- □ ultrasonography
- □ virology

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

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

Tree Number(s): F03.600.300
MeSH Unique ID: D003866
Entry Terms:

- Depressive Disorders
- Disorder, Depressive
- Disorders, Depressive
- Neurosis, Depressive
- Depressive Neuroses

Alternative search terms & synonyms, which are also queried by the MeSH term

---

MeSH Database

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

Tree Number(s): F03.6oo.000
MeSH Unique ID: D003866
Entry Terms:

- Depressive Disorders
- Disorder, Depressive
- Disorders, Depressive

- Neurotic Depressions
- Melancholia
- Melancholias
- Unipolar Depression
- Depression, Unipolar
- Depressions, Unipolar
- Unipolar Depressions

Previous Indexing:

- Adjustment Disorders (1966-1980)
- Depression (1966-1980)

All MeSH Categories
    Psychiatry and Psychology Category
        Mental Disorders
            Mood Disorders
                Depressive Disorder
                    Depression, Postpartum
                    Depressive Disorder, Major
                    Depressive Disorder, Treatment-Resistant
                    Dysthymic Disorder
                    Premenstrual Dysphoric Disorder

MeSH Major Topic (*): Subject heading is main aspect

Automatically included narrower terms **«Automatic explosion» / explode** can be actively excluded

Previously used MeSH terms

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

Pure MeSH term searches return fewer hits

II

History and Search Details   ⤓ Download

Search	Actions	Details	Query	Results
#2	•••	›	Search: **(depression[MeSH Terms] OR depressive disorder[MeSH Terms] OR consciousness disorder[MeSH Terms]) AND hypericum[MeSH Terms] AND serotonin uptake inhibitors[MeSH Terms]**	38
#1	•••	›	Search: **depression (hypericum OR st johns wort OR "St. John's wort") serotonin uptake inhibitors**	113

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

II

Clinical Use of Hypericum Perforatum (St John's Wort) in Depression: A Meta-Analysis

Qin Xiang Ng [1], N
Affiliations + ex
PMID: 28064110

UniBasel S·F·X

ACTIONS

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Publication types

> Meta-Analysis
> Review

Abstract

Introduction: St J
Medicine (TCM) p
countries. Howeve
analysis on St Joh
available.

Methods: Using t
OR johanniskraut
language restricti
Depression, Anxie
Knowledge Infras
1-May-2016.

Results: 27 clinica
wort and SSRI. In
RR 0.983, 95% CI
rate, and significa

64110/?from_t...fs=

MeSH terms

> Antidepressive Agents / therapeutic use ★
> Depression / drug therapy ★
> Humans
> Hypericum ★
> Perylene / analogs & derivatives ★
> Perylene / therapeutic use ★
> Phloroglucinol / analogs & derivatives
> Phytotherapy ★
> Plant Extracts / therapeutic use ★
> Serotonin Uptake Inhibitors / therapeutic use
> Terpenes

Substances

> Antidepressive Agents
> Plant Extracts
> Serotonin Uptake Inhibitors

d by Traditional Chinese
epression in many European
ist, and the last large meta-
o updated meta-analysis

OR hypericin OR hyperforin
prelim ary search (without
e Cochra Collaboration
entary Medic China National
between 1-Jan-1 and

omparing the use of St John
d comparable response (pooled
, 95% CI 0.892-1.134, p<0.001)
, 95% CI 0.478-0.697, p<0.001)
1-D scores (pooled SMD -0.068,

PAGE NAVIGATION

< Title & authors

Abstract

Similar articles

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Publication types

MeSH terms

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

Manually created search strings with MeSH terms and text word synonyms

History and Search Details   ⤓ Download

Search	Actions	Details	Query	Results
#4	•••	›	Search: ("consciousness disorders"[MeSH Terms] OR "depression"[MeSH Terms] OR "depressive disorder"[MeSH Terms] OR depress*[tiab] OR melancholia[tiab]) AND ("hypericum"[MeSH Terms] OR hypericum[tiab] OR st johns wort[tiab] OR st. john's wort[tiab]) AND ("serotonin uptake inhibitors"[MeSH Terms] OR serotonin uptake inhibitor*[tiab] OR serotonin reuptake inhibitor*[tiab] OR 5-HT uptake inhibitor*[tiab] OR SSRI[tiab])	114
#3	•••	›	Search: ("consciousness disorders"[MeSH Terms] OR "depression"[MeSH Terms] OR "depressive disorder"[MeSH Terms]) AND "hypericum"[MeSH Terms] AND "serotonin uptake inhibitors"[MeSH Terms]	38
#2	•••	›	Search: depression (hypericum OR st johns wort OR "st. john's wort") serotonin uptake inhibitors	113

Re-use performed searches I:
Select «Actions»

Re-use searches performed II: Combine search line numbers

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 #23 NOT #25 you can check which items you will miss if you use search #25 instead of search #23.
  - ➢ If you find relevant articles, then you should rather continue working on strategy #23...

Search	Actions	Details	Query	Results
#26	•••	>	Search: **#23 NOT #25**	95,977
#23	•••	>	Search: **"Depressive Disorder"[Mesh] OR "Depression"[Mesh] OR depress*[tiab] OR melancholia[tiab]**	496,171
#25	•••	>	Search: **"Depressive Disorder"[Mesh] OR "Depression"[Mesh] OR depression*[tiab] OR melancholia[tiab]**	400,194

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.

© 2016 American Heart Association, Inc.

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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PAGE NAVIGATION	NEXT RESULT
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