

Universitätsbibliothek

# Literature Searching in PubMed:

## **Advanced Course**

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University Medical Library, SS 2025

### Course attendance certificate for medical students

- Now in Zoom: please enter your correct name (we record the list of participants in Zoom as an attendance check)
- You will receive an email confirmation of your course participation in the next few days (e.g. for WIKO.flex)



### **Overview**

- Short repetition of "Basics in Literature searching"
- 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?



	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	<ul><li>UpToDate</li><li>PubMed Clinical</li><li>Queries</li></ul>	<ul><li>Google Scholar</li><li>PubMed/Embase</li><li>Web of Science/Scopus</li></ul>	<ul> <li>PubMed/Embase/Cochrane Library</li> <li>Web of Science/Scopus</li> <li>Grey Literature</li> <li>Complementary search methods</li> </ul>
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 Myocardial Failure[tiab] OR Heart Decompensation[tiab] OR "Heart Failure"[Mesh])  AND (Spironolactone[tiab] OR Aldactone[tiab] OR
Basic course topic  Today's topic		(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])	"Spironolactone "Imation specialists dead Let information speciali

## Research question: precise formulation, e.g. with PICO or PECO

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, independent mobility, (QoL)

TobiasSchumann,
<a href="https://de.wikipedia.org/wiki/">https://de.wikipedia.org/wiki/</a>
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 independent mobility (or overall quality of life)?

→ Besides PICO or PECO, numerous other systems exist, depending on context/setting, e.g. SPIDER, SPICE, ECLIPSE...

(see <a href="http://dx.doi.org/10.1136/bmjgh-2018-001107">http://dx.doi.org/10.1136/bmjgh-2018-001107</a>, for instance)

## 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) <b>P</b> opulation	
2) Intervention	
3) Control	
4) Outcome	
5) Study 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	ılish)		
1) Population	depression	depressive disorder	melancholia	
2) Intervention	hypericum	St. John's wort	•••	
3) Control	serotonin uptake inhibitors	selective serotonin re- uptake inhibitors	SSRIs	
4) <b>O</b> utcome	(Intentionally left out for now in the search - reporting bias in abstracts!)			
5) Study Design	RCTs			

## **Boolean operators**

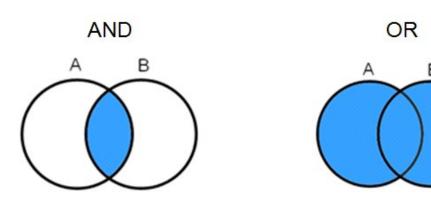


Connecting two terms with ...

AND = both search terms occur

OR = at least one of the two search terms occurs

NOT = second term must not be present



NOT

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

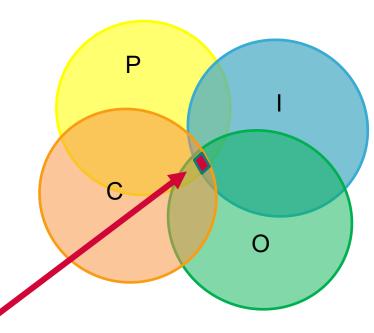
or with synonyms:

(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 ...)



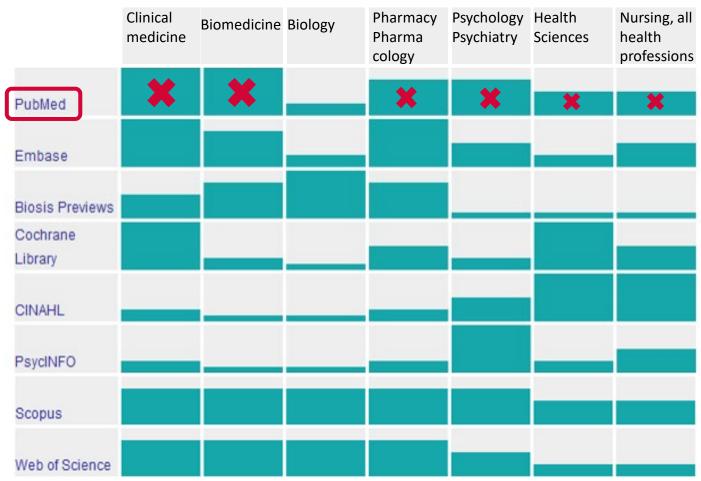
#### Intersection = final search results

**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





Adapted, table by Martina Gosteli

### **PubMed**



- Public access to Medline 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 (not only on PubMed)

https://ub.unibas.ch/de/ub-medizin/#c10083

### PubMed Live! What do I find where?



#### 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):



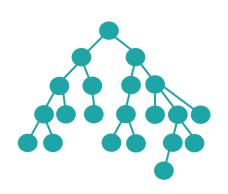
- 1. Phrasing
- 2. Search in specific fields only (field search)
- 3. Root term search (truncation)

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".

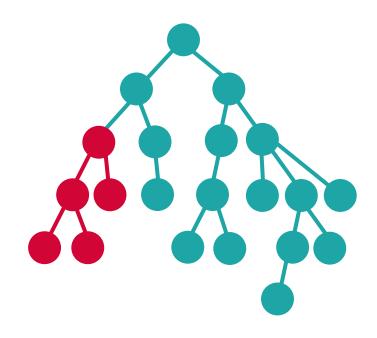
## MeSH Search: Possibilities to narrow the scope

Major Topic

Subheadings

Not «explode»

#### Thesaurus «Tree»



## MeSH Search: Possibilities to narrow the scope

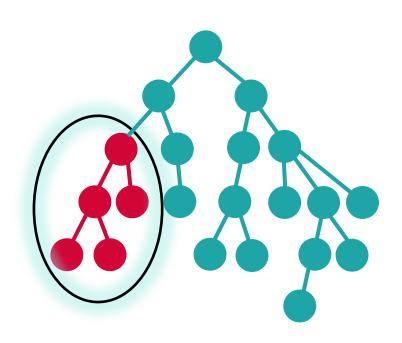
## **Major Topic**

 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**

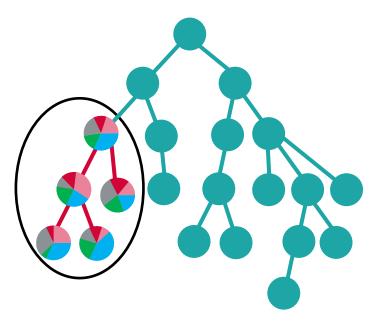
 Limitation to articles for which the subject heading has been further restricted thematically.

#### In PubMed:

- ☐ diagnostic imaging
- $\square$  diet therapy
- ☑ drug therapy
- □ economics

https://www.nlm.nih.gov/mesh/qualifiers\_scopenotes.html

### Thesaurus «Tree»



Heading/Subheading1
Heading/Subheading3
Heading/Subheading4
Heading/Subheading4
Heading/Subheading5

## **MeSH Search:** Possibilities to narrow the scope



## Not «explode»

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

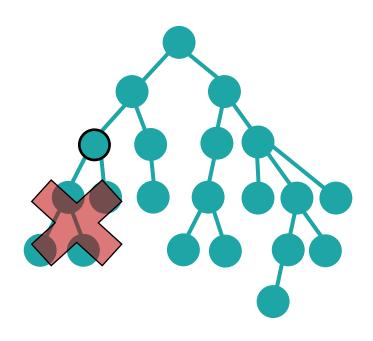
#### <u>Infections</u>

**Vector Borne Diseases** 

#### Malaria



#### Thesaurus «Tree»



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

#### PubMed Live! What do I find where?



#### 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
  <a href="https://pubmed.ncbi.nlm.nih.gov/?otool=unibaslib">https://pubmed.ncbi.nlm.nih.gov/?otool=unibaslib</a>
- Go to the MeSH Database (link on the lower right).



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

- 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





- 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





S



- Thematically matching articles are found. regardless of which terms or
- Completely new articles have no subject headings vet, sometimes
- For a sensitive search combine MeSH search with text word search!

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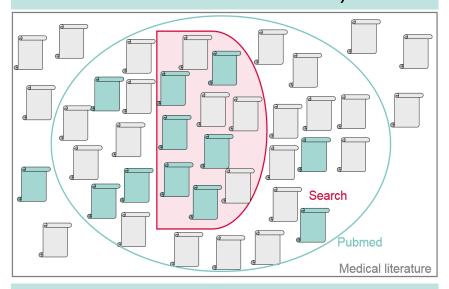


Due to the hierarchical structure,
 broader and narrower terms are easy to find

## Precision vs. sensitivity

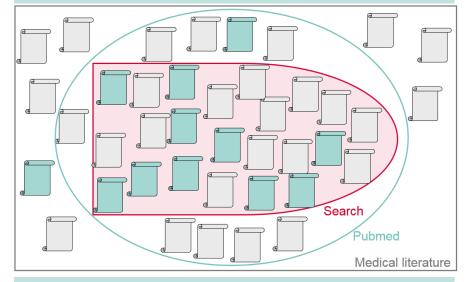


**Precision:** specific, narrow; few hits (only a few of the relevant hits found but little noise)



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)



e.g. for Systematic Reviews, Health Technology Assessments

→ Try different strategies and observe how this changes the results

## Precision vs. sensitivity





ZXXIII

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 PICO aspects with AND, e.g. P AND I AND C AND O	Combine fewer PICO aspects with AND, e.g. P AND I P AND I AND C I AND C		

## Precision vs. sensitivity





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





### 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 (60 hits, 20 with RCT filter\*; 6 May 2025):

(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 synonyms (119 hits, 46 with RCT filter\*; 6 May 2025):

(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. Johnswort[tiab] OR st john wort[tiab] OR saint johns wort[tiab])

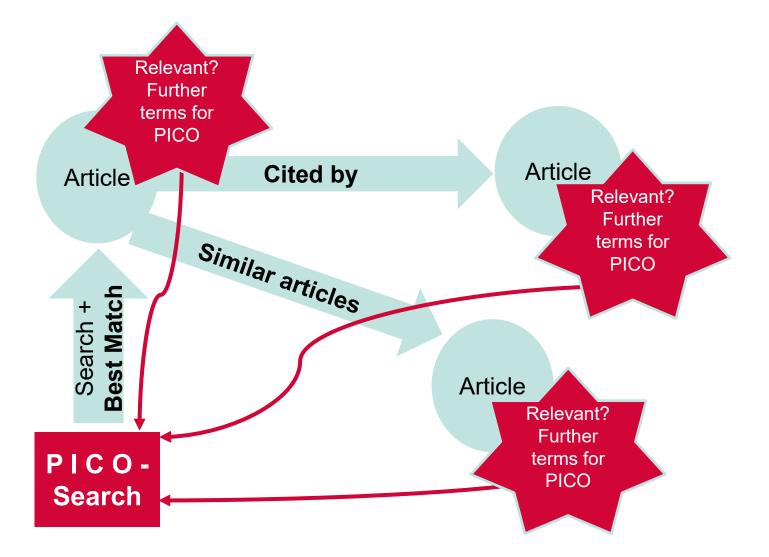
**AND** (selective serotonin reuptake inhibitors[mesh] OR serotonin uptake inhibitor\*[tiab] OR serotonin reuptake inhibitor\*[tiab] OR 5-hydroxytryptamine uptake inhibitor\*[tiab] OR 5-hydroxytryptamine reuptake inhibitor\*[tiab] OR 5-HT uptake inhibitor\*[tiab] OR 5-HT reuptake inhibitor\*[tiab])

#### \*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





#### **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



## Thank you for your attention

#### **Further information:**

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

#### **Kontakt:**



thomas.fuerst@unibas.ch

Course Evaluation/Feedback:



### For additional courses see

## https://ub.unibas.ch/en/locations/universitymedical-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?

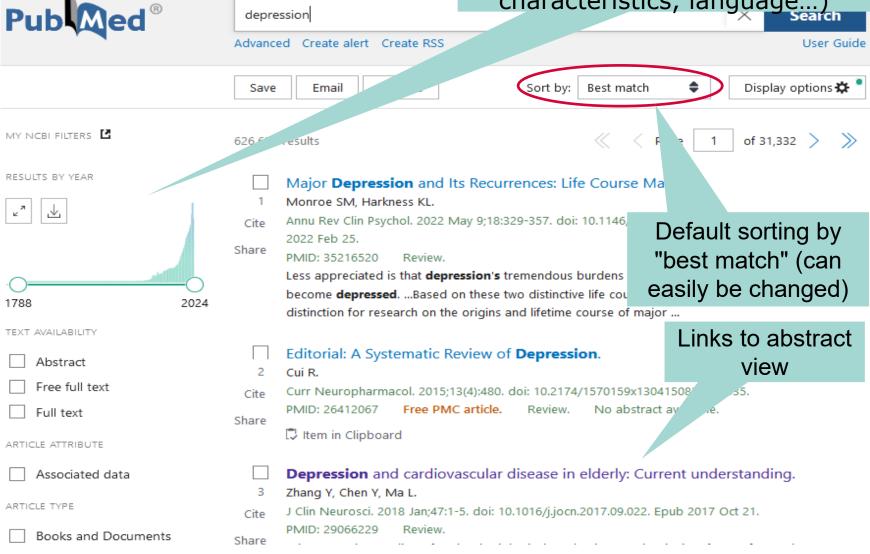
ALL COURSES UBM

### 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...)



### 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

I inks to full text

Share options

FULL TEXT LINKS

ELSEVIER FULL TEXT ARTICLE

Get full text

ACTIONS

Cite

☐ Collections

PREV RESULT 2 of 626.630

#### 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

following review is on current understanding of geriatric depression and cardiovascular disease.

Direct link to the previous (or next) abstract

sion is a highly prevalent risk factor for incident of and is associated with tality of cardiovascular disease. In addition to the proactive and effective diseases, efforts should also be made to improve patients' psychological and rent evidence on antidepressive therapy in patients with coronary diseases is derstanding of pathophysiological mechanisms underpinning depression and ase as well as the complex biological crosstalk of cardiovascular disease epression is particularly important for future therapeutic strategies. The

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

SHARE

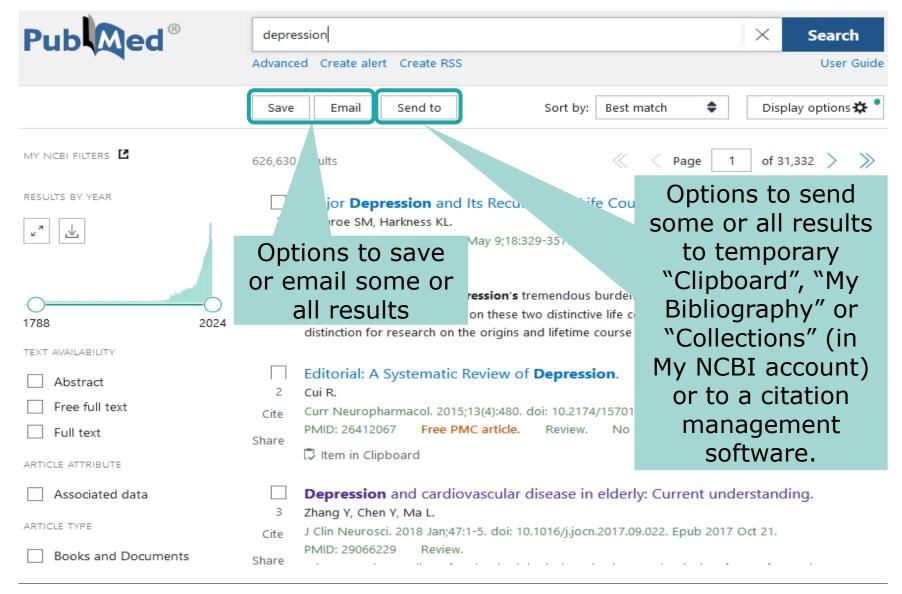




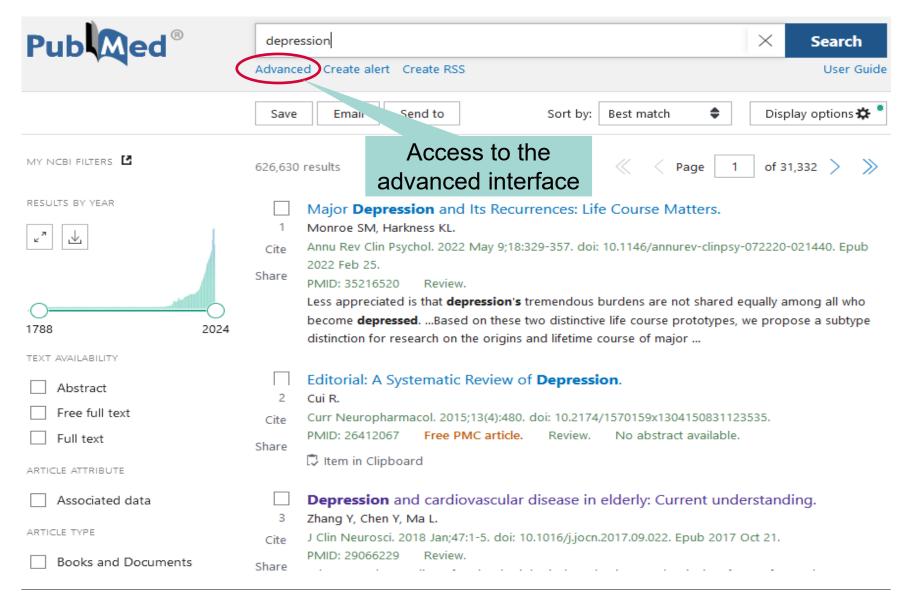


AGE NAVIGATION Title & authors Abstract Similar articles Cited by Publication types MeSH terms Related information LinkOut - more resources

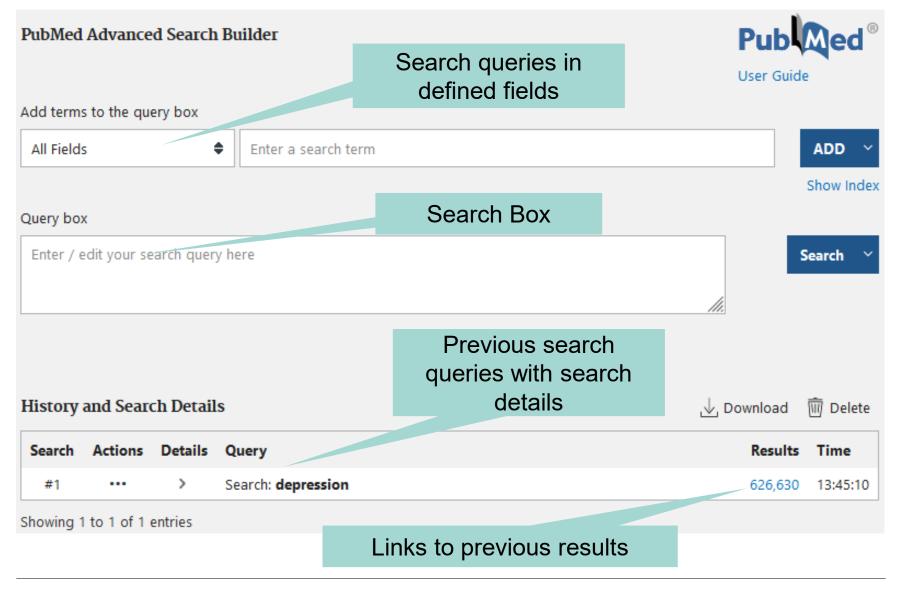
## Presentation of the results



## Access to the advanced interface



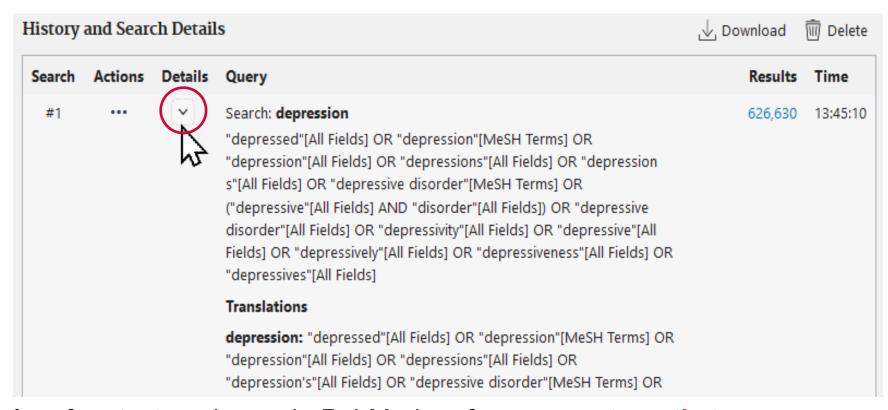
## PubMed advanced interface



# Search details on PubMed advanced

History	and Sear	ch Detail	s	ightharpoonup Download	m Delete
Search	Actions	Details	Query	Results	Time
#1	•••	( )	Search: 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
			Translations		
			depression: "depressed"[All Fields] OR "depression"[MeSH Terms] OR "depression"[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 "depressive"[All Fields] OR "depressive"[All Fields] OR "depressively"[All Fields] OR "depressiveness"[All Fields] OR "depressiveness"[All Fields] OR "depressives"[All Fields] OR "depressives"[All Fields] OR "depressives"[All Fields]		
Showing 1	1 to 1 of 1	entries			

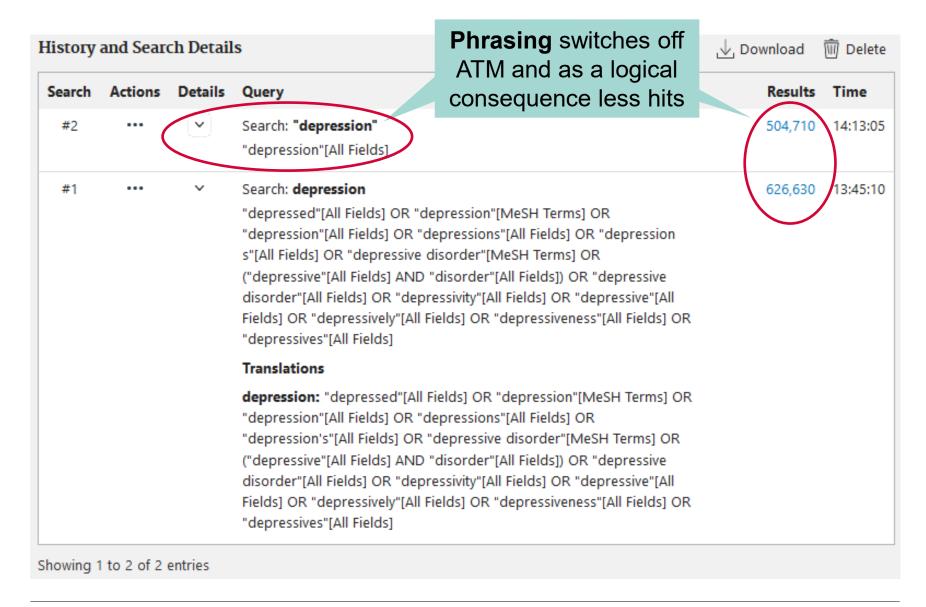
# Understanding free textword searching



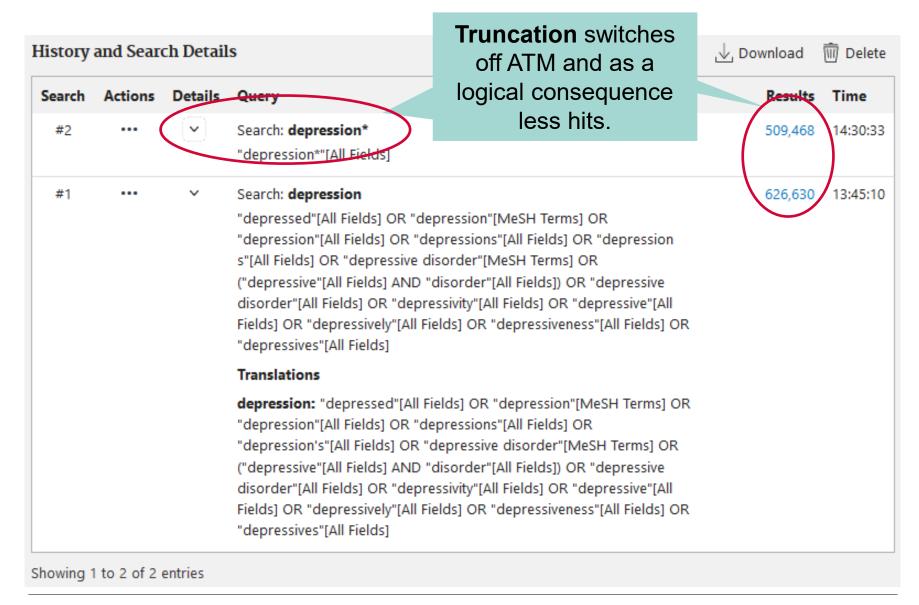
In a free textword search, PubMed performs an **automatic term** mapping (ATM), i.e. a «translation»:

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)



# Turning off automatic term mapping (ATM)

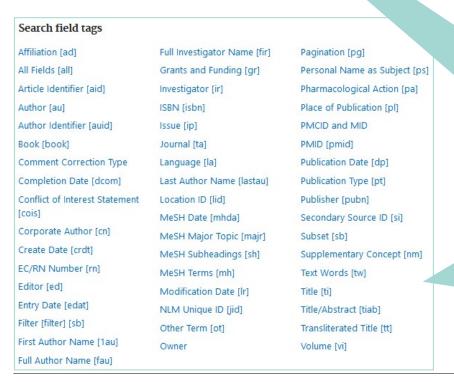


# Turning off automatic term mapping (ATM)

History	and Sear	ch Detail	s	ightharpoons Download	m Delete
Search	Actions	Details	Query	Results	Time
#3		\(\frac{1}{2}\)	Search: depression[tiab] "depression"[Title/Abstract]	435,731	14:21:35
#2	•••	v	Search: depression[Title/Abstract]  "depression"[Title/Abstract]	435,731	14:20:56
#1		~	Search: depression  "depressed"[All Fields] OR "depression"[MeSH Tellor OR  "depression"[All Fields] OR "depressions"[All Fields] depression	626,630	13:45:10
			s"[All Fields] OR "depressive disorder"[MeSH Terms] C ("depressive"[All Fields] AND "disorder"[All Fields]) OR "a disorder"[All Fields] OR "depressivity"[All Fields] OR "depress Fields] OR "depressively"[All Fields] OR "depressiveness"[All Fields] "depressives"[All Fields]	Field searching switches off A and as a logical consequence	
			Translations	less hits. C	
			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 "depressive"[All Fields] OR "depressive"[All Fields] OR "depressives"[All Fields] OR "depressiveness"[All Fields] OR "depressivessiveness"[All Fields] OR "depressivessivess"[All Fields]	there is a and a s version for same field leading to	a long short or the d code
Showing 1	1 to 3 of 3	entries		same re	

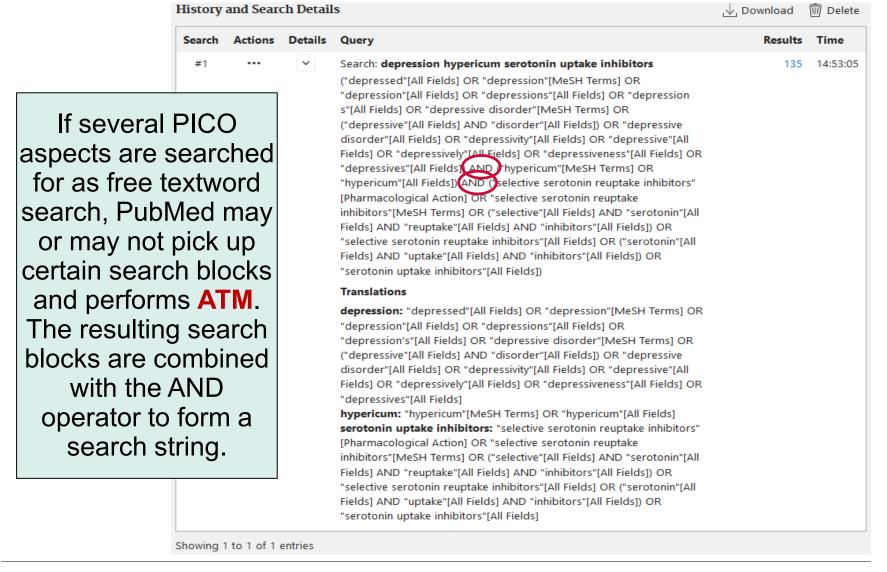
## (Meta-data)Field Searching





(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 <a href="https://pubmed.ncbi.nlm.nih.g">https://pubmed.ncbi.nlm.nih.g</a>
ov/help/#using-search-field-tags

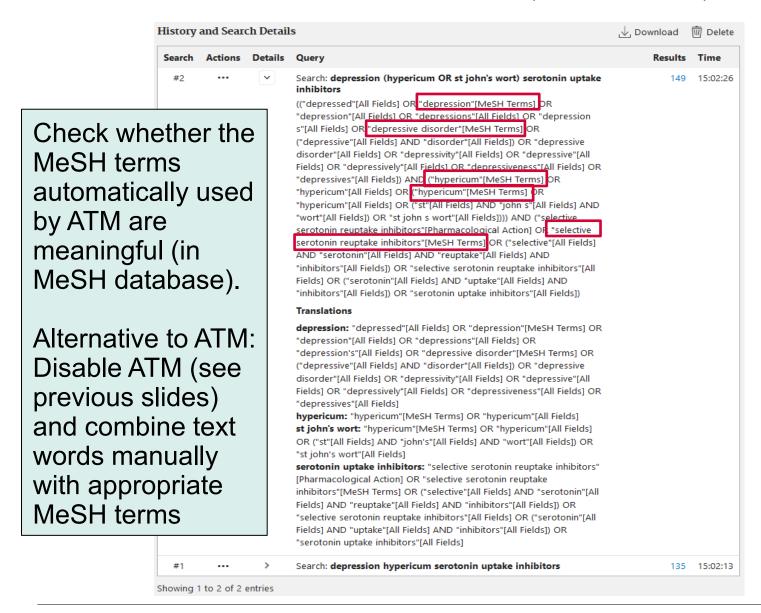
# Understanding free textword searching: multiple concepts



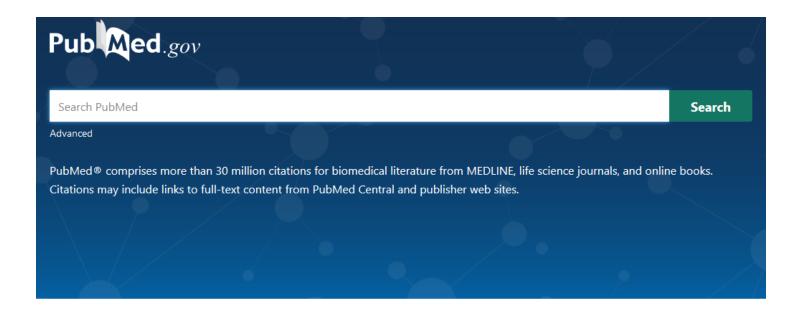
Inclusion of synonyms increases the number of hits

earch	Actions	Details	Query	Resul	ts	Time
#2	•••	(*)	Search: depression (hypericum OR st john's wort) serotonin uptake inhibitors	14	19	15:02:26
			(("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] OR ("hypericum"[MeSH Terms] OR "hypericum"[All Fields] OR ("st"[All Fields] AND "john s"[All Fields] AND "wort"[All Fields]) OR "st john s wort"[All Fields]))) AND ("selective serotonin reuptake inhibitors"[Pharmacological Action] OR "selective serotonin reuptake inhibitors"[MeSH Terms] OR ("selective"[All Fields] AND "serotonin"[All Fields] AND "reuptake"[All Fields] AND "inhibitors"[All Fields]) OR "selective serotonin reuptake inhibitors"[All Fields] OR ("serotonin"[All Fields] AND "uptake"[All Fields] AND			
			"inhibitors"[All Fields]) OR "serotonin uptake inhibitors"[All Fields])			
			<b>Translations depression:</b> "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] st john's wort: "hypericum"[MeSH Terms] OR "hypericum"[All Fields] OR ("st"[All Fields] AND "john's"[All Fields] AND "wort"[All Fields]) OR "st john's wort"[All Fields]			
			serotonin uptake inhibitors: "selective serotonin reuptake inhibitors" [Pharmacological Action] OR "selective serotonin reuptake inhibitors"[MeSH Terms] OR ("selective"[All Fields] AND "serotonin"[All			
			Fields] AND "reuptake"[All Fields] AND "inhibitors"[All Fields]) OR "selective serotonin reuptake inhibitors"[All Fields] OR ("serotonin"[All Fields] AND "uptake"[All Fields] AND "inhibitors"[All Fields]) OR "serotonin uptake inhibitors"[All Fields]			
#1		>	Search: depression hypericum serotonin uptake inhibitors	13	5	15:02:1

## ATM searches also the MeSH (Meta-data)field



### Access to the MeSH database





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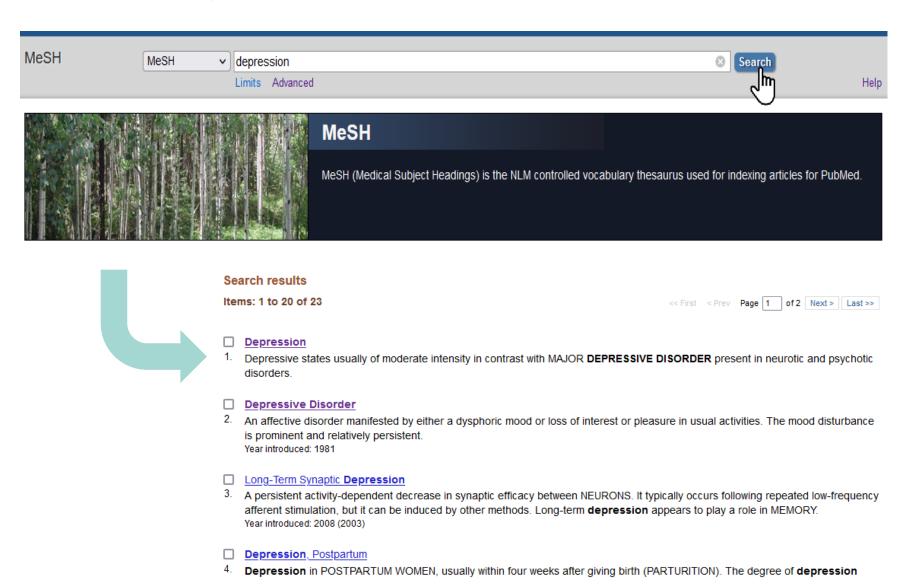
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MeSH Database

### **MeSH Database**



### **MeSH Database**

#### **Definition of the MeSH term**

D	_	n		0	•	•	^	
u	•	u	•	6	-	-	u	ш

spressive states usually of moderate in	tensity in contrast with Mindor DEL NEO	SIVE DISORDER present in neurotic and psychotic disorder
ubMed search builder options		
ubheadings:		Subheadings =
□ blood	epidemiology	□ specifications,             □
cerebrospinal fluid	ethnology	e.g. «drug therapy»
chemically induced	etiology	C.g. wardy therapy"
classification	genetics	prevention and control
complications	history	psychology
diagnosis	:unology	rehabilitation
diagnostic imaging	☐ metabolism	surgery
diet therapy	☐ microbiology	□therapy MeSH Major
drug therapy	mortality	Topic: Subject
economics	nursing nursing	I I VIROLOGY
enzymology		heading is
Restrict to MeSH Major Topic.		main aspect
Do not include MaSH terms found be	low this term in the MoSH 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

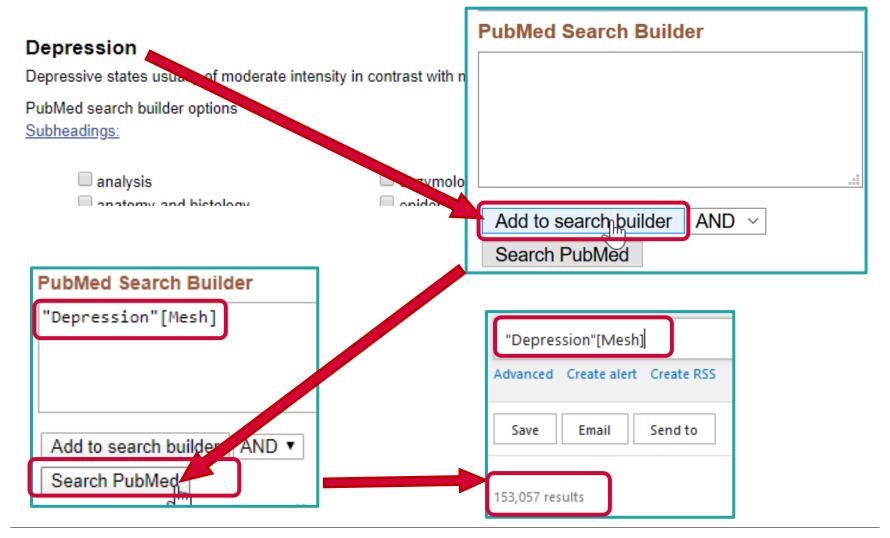
Emotions

Depression

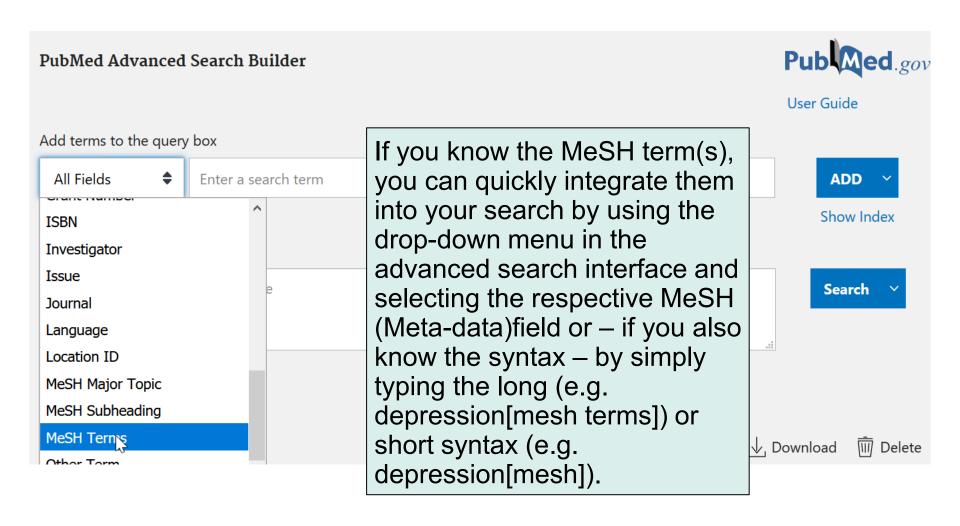
Entry Terms are alternative expressions/ synonyms, that are generally used interchangeably with the respective MeSH term; searches with these entry terms are mapped to the respective MeSH term (i.e. no difference between searches with respective MeSH term or Entry Terms, but it is always preferable to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

#### Hierarchical tree

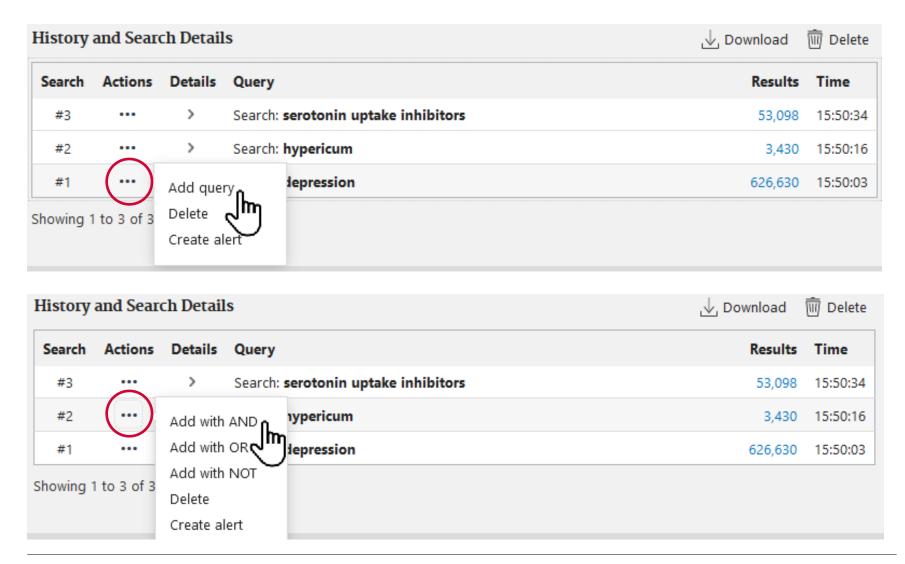
# Search for MeSH terms: Search Builder From MeSH database back to PubMed



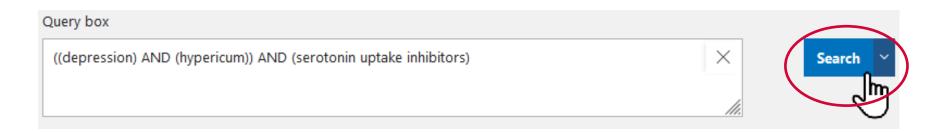
## Search with known MeSH terms



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

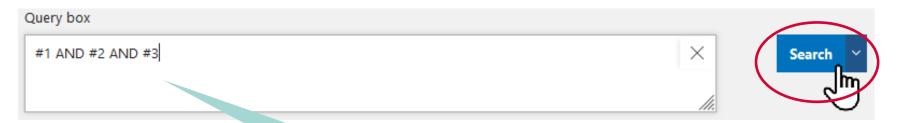


# Additional search details on PubMed Advanced – Combine separate searches and single line search



Search	Actions	Details	Query	Results	Time
#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	15:50:1
#1	•••	>	Search: depression	626,630	15:50:0

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

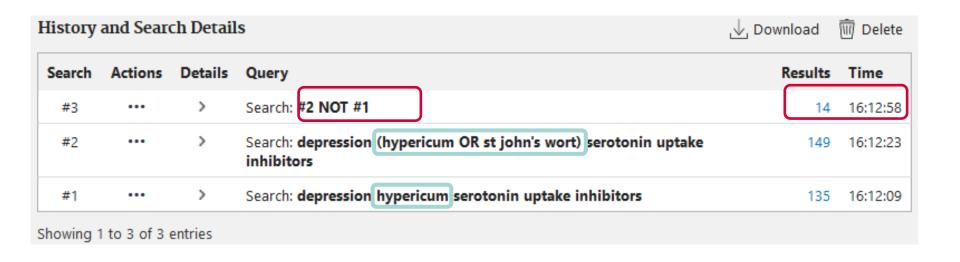


Instead of the <Actions> dropdowns, one can also directly type in the respective search numbers, but always REMEMBER: ATTENTION TO BRACKETS IF NEED BE!

History	and Sear	ch Detail	s	ightharpoons Download	m 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	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!)



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

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

Qin Xiang Ng <sup>1</sup>, N Affiliations + exp

**Publication types** 

PMID: 28064110

> Meta-Analysis

> Review

#### Abstract

#### MeSH terms

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

🖈 Antidepressive Agents / therapeutic use 🖈

- > Depression / drug therapy \*
- > Humans
- ➤ Hypericum ★
- > Perylene / analogs & derivatives \*

- **Methods:** Using t > Perylene / therapeutic use
- OR johanniskraut > Phloroglucinol / analogs & derivatives
- language restrictic > Phytotherapy ★

Depression, Anxie ➤ Plant Extracts / therapeutic use ★

Knowledge Infrast > Serotonin Uptake Inhibitors / therapeutic use

1-May-2016. > Terpenes

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

Substances

- > Antidepressive Agents rate, and significa
  - > Plant Extracts
- 64110/?from t... fs= > Serotonin Untake Inhibitors

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

R hypericin OR hyperforin ary search (without Collaboration ne Cochra entary Medica China National between 1-Jan-1

omparing the use of St John ed comparable response (pooled 3, 95% CI 0.892-1.134, p<0.001) 7, 95% CI 0.478-0.697, p<0.001) 1-D scores (pooled SMD -0.068,

UniBasel S·F·X

**ACTIONS** 





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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

### 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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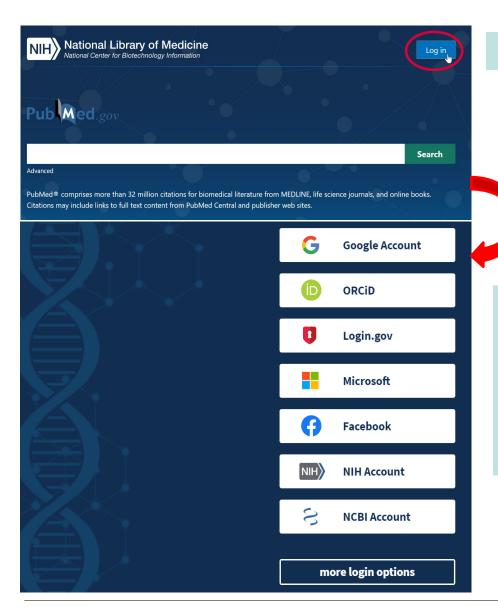
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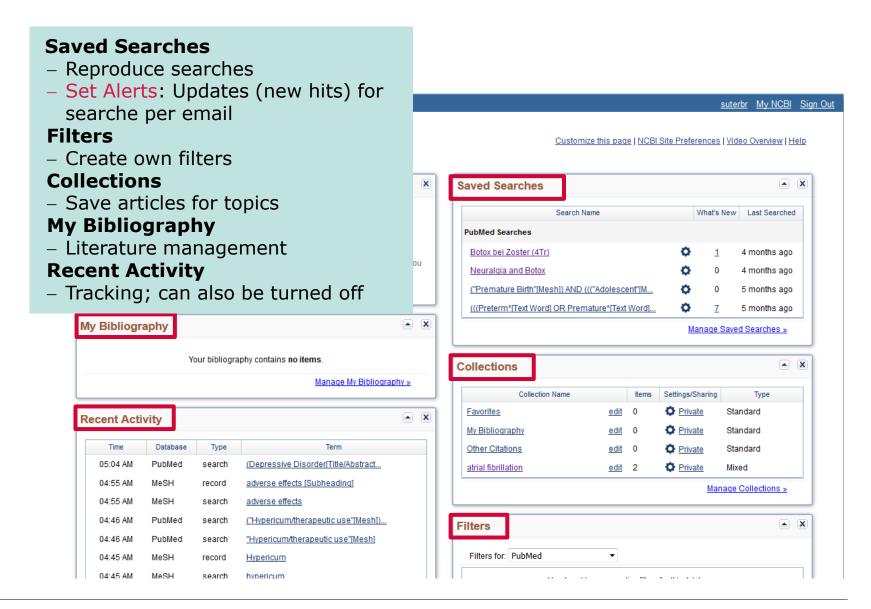
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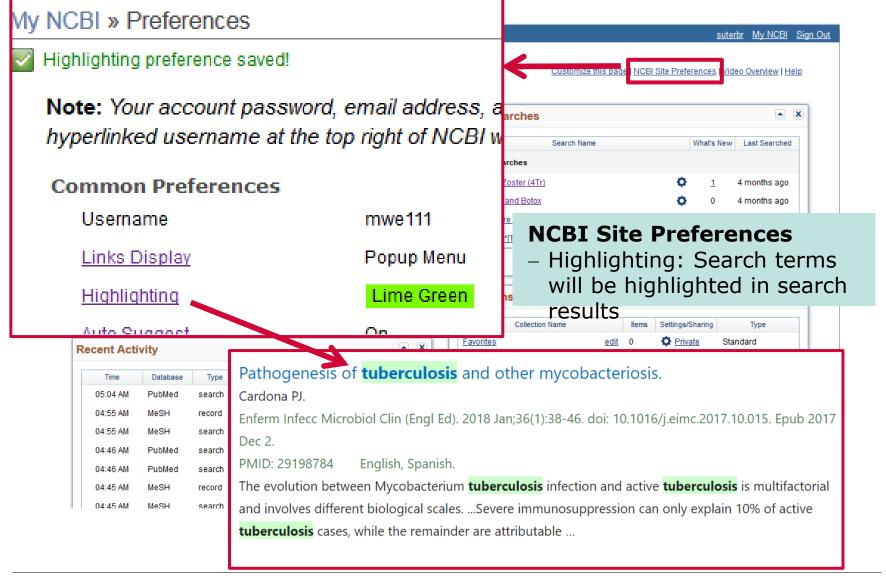
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Lover, Andrew A; Baird, J Kevin; Gosling, Roly; Price, Ric N
ISSN: 0002-9637, 1476-1645; DOI: 10.4269/ajtmh.17-0869; PMID: 29761762
The American journal of tropical medicine and hygiene: official journal of the American Society of Tropical Medicine and

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Hygiene., 2018, Vol.99(1), p.17-23

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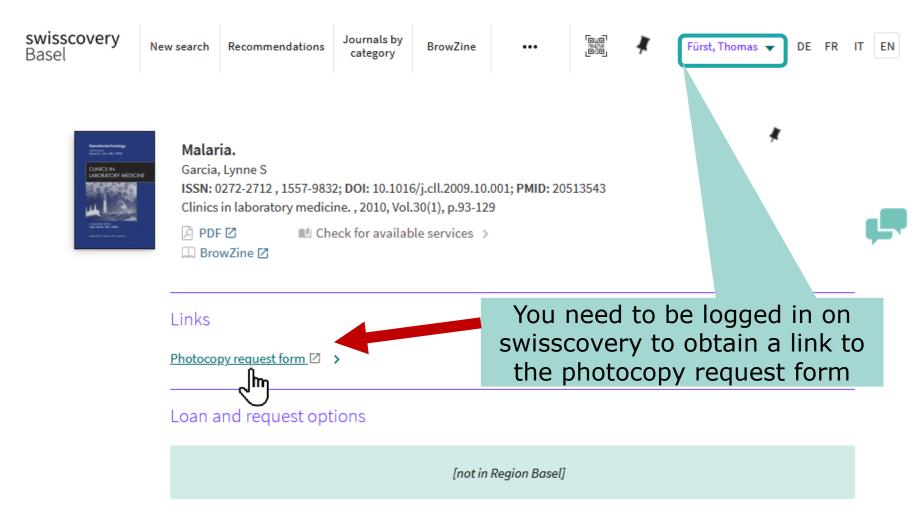
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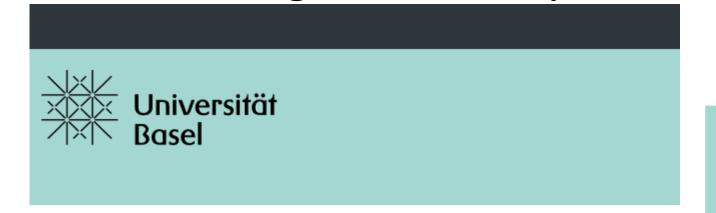
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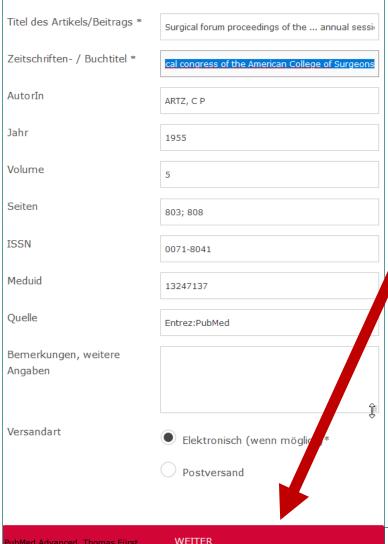
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