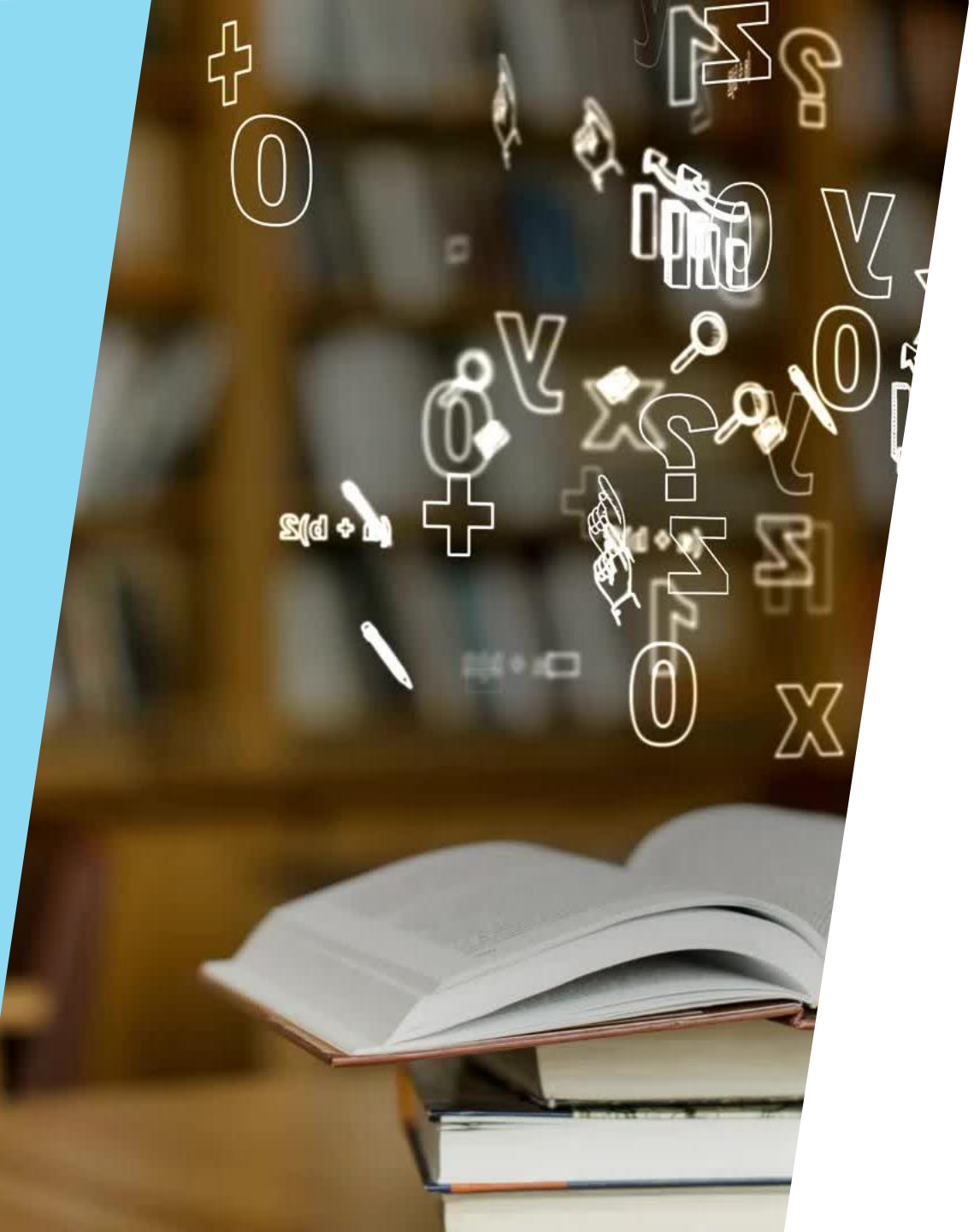


# Lecture #2: Literature searching for systematic reviews

Nicole Askin, MLIS

# References and acknowledgements

- References for this presentation include the *Cochrane Handbook* Chapter 4 and Technical Supplement to Chapter 4, and the *MECIR Manual*
- This presentation incorporates work done by previous librarians for this course, including Becky Skidmore and Christine Neilson

# Housekeeping

Please interrupt!

Expect a more lecture-heavy class today, but with opportunities for discussion

The next two classes will be more practical

# Schedule

| | Class | On your end |
|---|---|---|
| 3 February | Literature searching for systematic reviews | Let me know what you're planning as your topic ASAP |
| 10 February | Search session (+class presentations) | Send me any changes made to your search topic based on feedback on your presentation |
| 17 February | Reference management | Plan to meet with me by this point at the latest |

https://lib-umanitoba.libcal.com/appointments/nicoleaskin

# Objectives for today

- Discuss the principles of searching for a systematic review as opposed to a general literature search
- Map the development of a systematic search strategy from the research question to a complete multi-source search and outline how the search is reported
- By the end of this and the following class session, you should be confident in your ability to EVALUATE search strategies and understand how they work.

# What is a systematic review? The Librarian's Perspective

- A systematic review is a collection, appraisal and summation of the research literature – the quality of the literature search directly affects the quality of the review.
- Cochrane: "Review authors should work closely, from the start of the protocol, with an experienced medical/healthcare librarian or information specialist."
- The role of the librarian, in collaboration with the rest of the research team, includes: development/refining of the review protocol; identifying sources of literature; developing, executing, and documenting searches; updating the search as needed; co-authoring the final draft.

# Principles of SR searches

TRANSPARENT AND (AS MUCH AS POSSIBLE) REPLICABLE

COMPREHENSIVE

MINIMIZES POTENTIAL BIAS

CONSISTENT WITH ESTABLISHED GUIDELINES (MECIR, ETC)

# Transparency

| Database | Interface | Date of Search | Database Dates | Order of Import | Initial Count | Post De-Dup | Total in RMS | Search Name (see tabs for actual/complete strategies) |
|---|---|---|---|---|---|---|---|---|
| MEDLINE | Ovid | 14-May-19 | 1946-2019 | 1 | 1504 | 1493 | 1493 | MEDLINE |
| CINAHL | EBSCO | 14-May-19 | 1981-2019 | 2 | 1139 | 491 | 1984 | CINAHL |
| Cochrane (CI | Wiley | 14-May-19 | 1980-2019 | 3 | 883 | 547 | 2531 | Cochrane |
| PsycINFO | Ovid | 15-May-19 | 1887-2019 | 4 | 288 | 46 | 2577 | PsycINFO |
| SPORTDiscu | EBSCO | 15-May-19 | 1975-2019 | 5 | 467 | 99 | 2676 | SPORTDiscus |
| EMBASE | Ovid | 15-May-19 | 1974-2019 | 6 | 3119 | 1615 | 4291 | EMBASE |

| | | |
|---|---|---|
| 104 | 9 and 31 and 78 | 215 |
| 105 | 9 and 31 and 81 | 163 |
| 106 | 9 and 31 and 84 | 236 |
| 107 | 9 and 31 and 88 | 585 |
| 108 | 9 and 31 and 91 | 548 |
| 109 | 9 and 31 and 92 | 6 |
| 110 | or/93-109 | 1535 |
| 111 | exp animals/ not humans.sh | 4579291 |
| 112 | (comment or editorial or interview or news or newspaper article or (letter not (letter and randomized | 1945955 |
| 113 | 110 not (111 or 112) | 1504 |
| 114 | | |

# Comprehensiveness

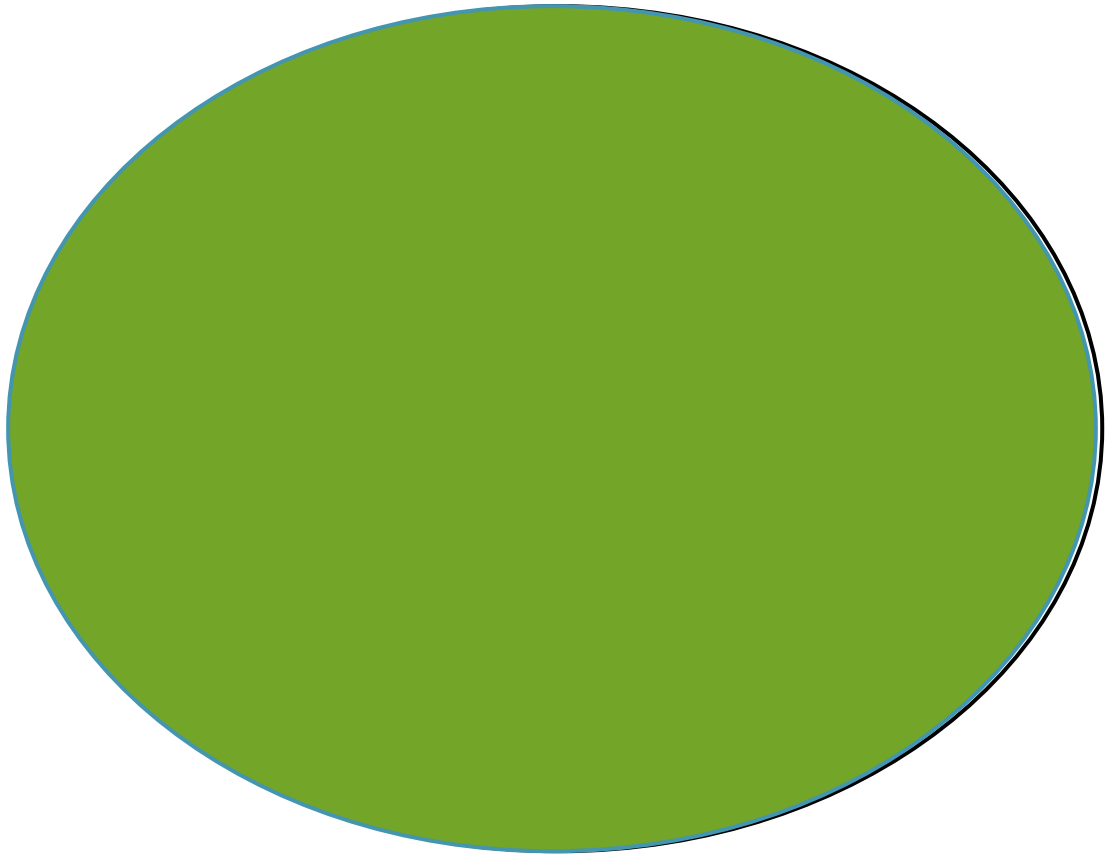
- Search multiple sources of literature
- Attempt to find unpublished studies
- Update search before submission
- Value sensitivity over precision

# Sensitivity vs precision (the theory)

| | **Reports retrieved** | **Reports not retrieved** |
|---|---|---|
| **Relevant reports** | Relevant reports retrieved (a) | Relevant reports not retrieved (b) |
| **Irrelevant reports** | Irrelevant reports retrieved (c) | Irrelevant reports not retrieved (d) |

Sensitivity: fraction of relevant reports retrieved from all relevant reports (a/(a+b))
Precision: fraction of relevant reports retrieved from all reports retrieved (a/(a+c))

# Sensitivity and precision in practice



- Excellent precision, terrible sensitivity
- Excellent sensitivity, terrible precision
- Ideal: both sensitive and precise
- Reality: valuing sensitivity over precision

# Bias

**Table 10.1.a: Definitions of some types of reporting biases**

| Type of reporting bias | Definition |
|---|---|
| Publication bias | The *publication* or *non-publication* of research findings, depending on the nature and direction of the results |
| Time lag bias | The *rapid* or *delayed* publication of research findings, depending on the nature and direction of the results |
| Multiple (duplicate) publication bias | The *multiple* or *singular* publication of research findings, depending on the nature and direction of the results |
| Location bias | The publication of research findings in journals with different *ease of access* or *levels of indexing* in standard databases, depending on the nature and direction of results. |
| Citation bias | The *citation* or *non-citation* of research findings, depending on the nature and direction of the results |
| Language bias | The publication of research findings *in a particular language*, depending on the nature and direction of the results |
| Outcome reporting bias | The *selective reporting* of some outcomes but not others, depending on the nature and direction of the results |

# Bias and limiting a search

- How and why limit a search?

- Study type filters
- Date limits
- Language

# Guidelines

- MECIR C24-C38
  - Mandatory: search general bibliographic databases (Medline, Embase) and Cochrane CENTRAL; search for different types of evidence; searching trial registers; search reference lists; structure search strategies for maximum sensitivity; search using controlled vocabulary and free-text; justify any restrictions; document search process; update searches.
  - Highly desirable: search specialist databases; search grey literature; search by contact; use specially designed search filters; incorporate findings from rerun searches.

# Questions?

# Steps in a systematic review (Khan 2003)

1. Frame the question (PICO) / develop a review protocol
2. **Identify relevant work**
    1. Convert question to concept map
    2. Develop strategy in the primary database – controlled vocabulary, free text, filters
    3. Assess search quality and revise as needed
    4. Adapt strategy to other databases and additional sources of literature (grey lit, etc)
    5. Execute searches and compile results
    6. Screening
    7. Citation searching
3. Assess quality of studies
4. Summarize the evidence
5. Interpret findings
    1. Reporting

# Protocol

- Background
- PICO
- Eligibility criteria – framing the search
- All intended information sources – databases and otherwise
- Draft search strategy
- Data management and analysis plan

# Searching: Concept mapping

PICO

| Clearly defined concepts | | |
|---|---|---|
| What is included within that concept, other ways of expressing it | | |

Study design (and others)

| | | |
|---|---|---|
| Predefined filters or limits (we'll talk about these in a bit) | | |

- In children with anxiety, does fluoxetine improve symptom control versus usual care?

- PICO
  - P: children with anxiety ; I = fluoxetine ; C = usual care ; O = symptom control
- Concepts
  - Fluoxetine; children; anxiety; RCTs; human studies; (other limits as appropriate)
    - Be more specific – eg what age of children
  - **It is very common in SRs to search PI and not CO. Why?**

# Strategy development

- Use search logic to define how terms and concepts interrelate
- Using both controlled vocabulary and free text

# Search (Boolean) logic

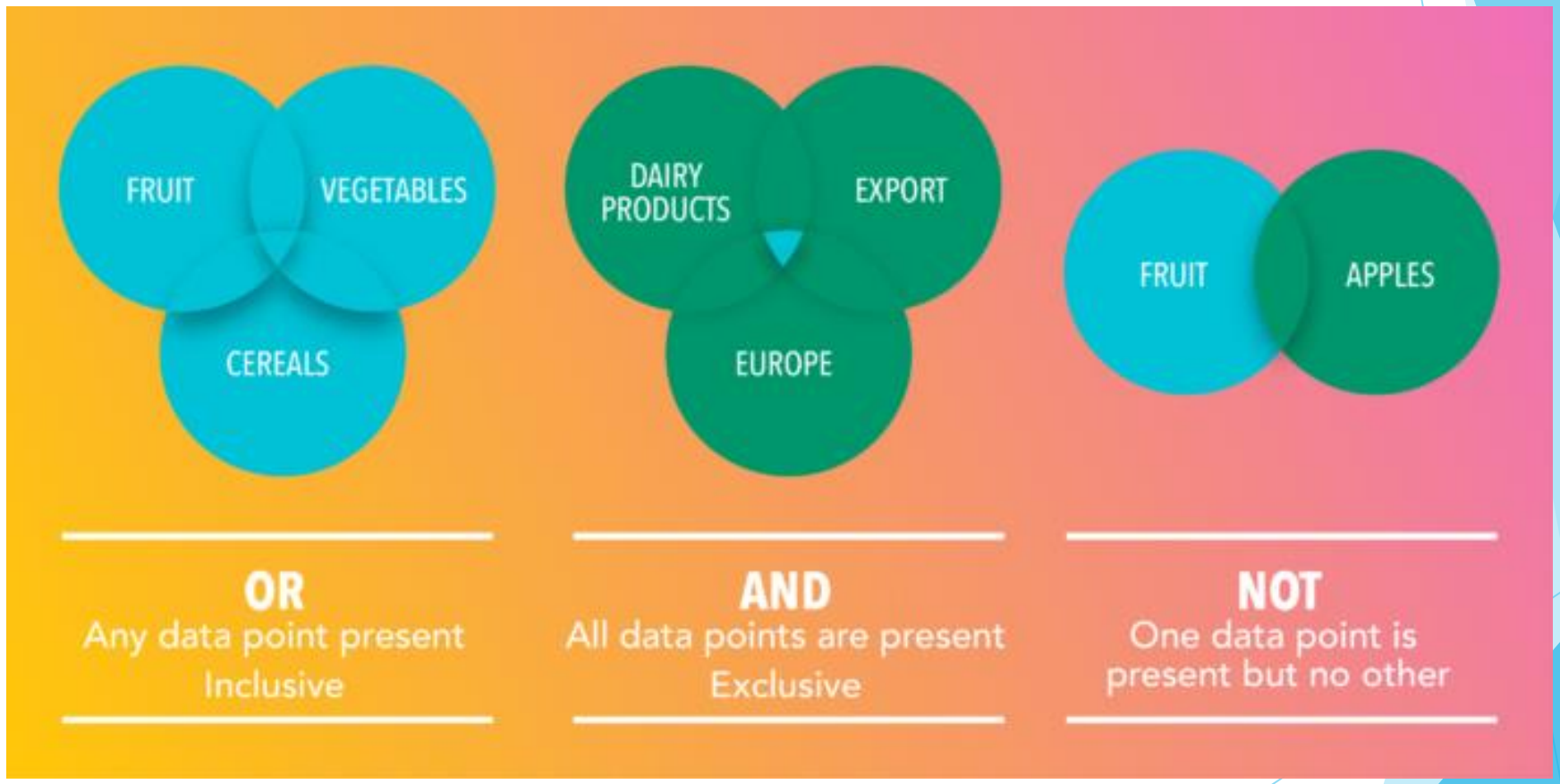



Image: Lotame

(fruit OR vegetable) AND (Europe OR Asia) AND (import OR export)

# The problem with ‘NOT’

- NOT should be used with care if at all in a search strategy, because it tends to result in unintended exclusions
- Example: I’m interested in studies on anxiety but NOT depression
- If I search (anxiety NOT depression), I exclude the following:
  - “This study considers the effects of fluoxetine on children with anxiety. It does not consider the drug’s effects on **depression**.”
  - “Effects on **depression** were also seen but are not detailed in this paper.”
  - “We published our protocol for this RCT on fluoxetine for anxious children in the *Journal of Mood Disorder and **Depression** Research*”

# Controlled vocabulary

- Predefined terms that are used to index a source within a database
- Examples: subject headings (next slide), publication type
- Assigned by indexer based on evaluation of the source
  - Used to be human indexer; now increasingly AI
- Updated regularly

# Subject headings

- Standard index terms used to define the topic of a source
  - What is this article really about?
- In Medline/PubMed/Central: MeSH
  - In Embase: Emtree
- https://meshb.nlm.nih.gov/search

# An aside: PubMed vs Ovid Medline

- 99.9% identical; uses the same subject headings
- Prefer Ovid Medline over PubMed because
  - New PubMed presents replicability challenges
  - Medline has better free-text searching
- Prefer PubMed over Ovid Medline because
  - PubMed is free
    - (but U of M subscribes to Ovid Medline)
  - PubMed can be more intuitive, especially for identifying subject headings
- For the purposes of constructing a systematic search: use PubMed (or MeSH Browser) to find subject headings, but develop the search in Medline

# Subject heading searching

## Anxiety MeSH Descriptor Data 2022

Details | Qualifiers | MeSH Tree Structures | Concepts

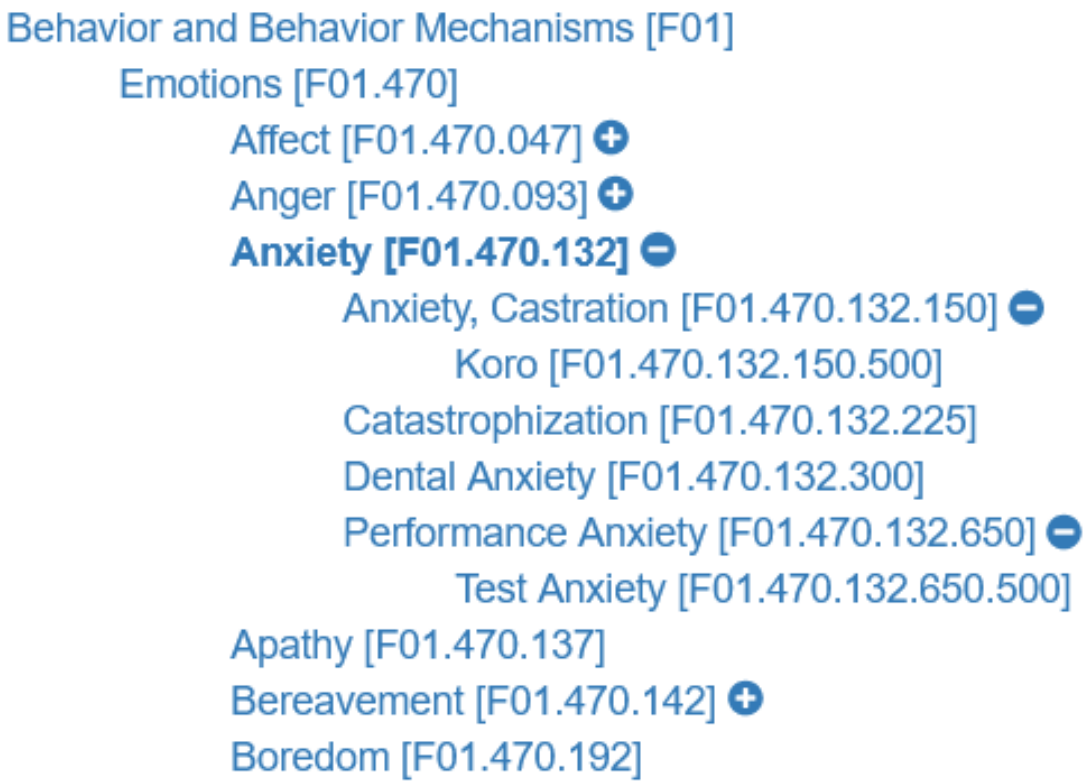
| | |
|---|---|
| **MeSH Heading** | Anxiety |
| **Tree Number(s)** | F01.470.132 |
| **Unique ID** | D001007 |
| **RDF Unique Identifier** | http://id.nlm.nih.gov/mesh/D001007 |
| **Annotation** | human & animal; differentiate from ANXIETY DISORDERS, a psychiatric diagnosis |
| **Scope Note** | Feelings or emotions of dread, apprehension, and impending disaster but not disabling as with ANXIETY DISORDERS. |
| **Entry Term(s)** | Angst<br>Anxiousness<br>Hypervigilance<br>Nervousness<br>Social Anxiety |
| **See Also** | Anti-Anxiety Agents<br>Anxiety Disorders<br>Phobia, Social |
| **Date Established** | 1966/01/01 |

# Qualifiers

**Allowable Qualifiers**

blood (BL)
cerebrospinal fluid (CF)
chemically induced (CI)
classification (CL)
complications (CO)
diagnosis (DI)
diagnostic imaging (DG)
diet therapy (DH)
drug therapy (DT)
economics (EC)
enzymology (EN)
epidemiology (EP)
ethnology (EH)
etiology (ET)
genetics (GE)
history (HI)
immunology (IM)
metabolism (ME)
microbiology (MI)
mortality (MO)
nursing (NU)
parasitology (PS)

# Subject heading trees

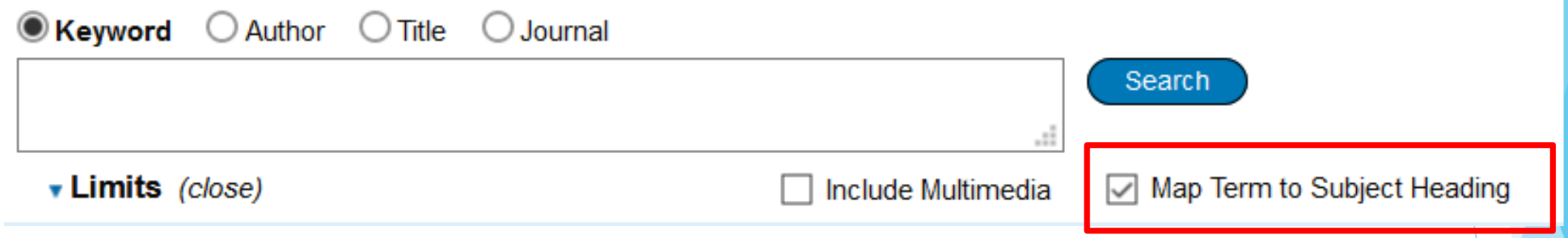



You can move up or down in the tree to broaden or narrow the search.

"Exploding" a term captures all the more specific terms in the tree.

In Medline: exp Anxiety/ would capture castration anxiety, koro, catastrophization, etc.
Anxiety/ (without exploding) would only capture items with the subject heading 'anxiety'

# Accessing subject headings in Medline




**Your term mapped to the following Subject Headings:**

Click on a subject heading to view more general and more specific terms within the thesaurus.

*Term mapped through permuted index*

**Include All Subheadings**

Combine with: OR Continue

| Select | Subject Heading | Explode |
|---|---|---|
| ☑ | fluoxetine | ☐ |
| ☐ | fluoxetine plus olanzapine | ☐ |
| ☐ | fluoxetine.mp. *search as Keyword* | |

# Comparison: Health literacy

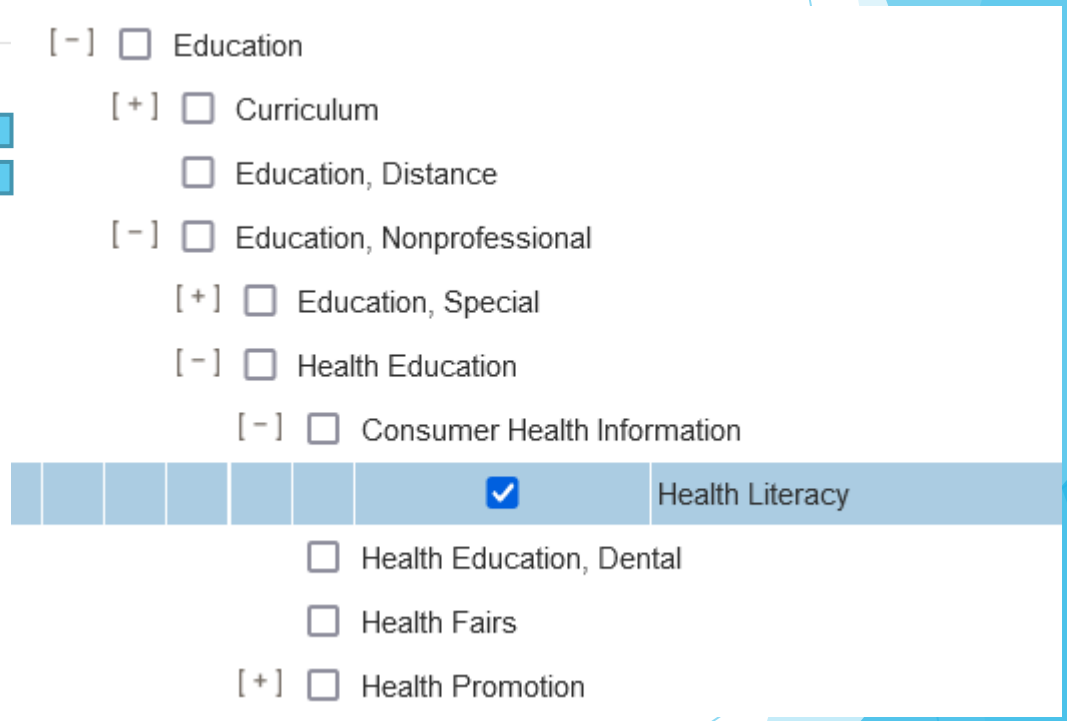
## Health Literacy MeSH Descriptor Data 2022

Details | Qualifiers | MeSH Tree Structures | Concepts

Education [I02]
Education, Nonprofessional [I02.233]
Health Education [I02.233.332]
Consumer Health Information [I02.233.332.186]
**Health Literacy [I02.233.332.186.500]**

Information Science [L01]
Communication [L01.143]
Information Literacy [L01.143.450]
**Health Literacy [L01.143.450.500]**

Health Care Facilities, Manpower, and Services [N02]
Health Services [N02.421]
Preventive Health Services [N02.421.726]
Health Education [N02.421.726.407]
Consumer Health Information [N02.421.726.407.229]
**Health Literacy [N02.421.726.407.229.500]**
Patient Medication Knowledge [N02.421.726.407.229.500.500]



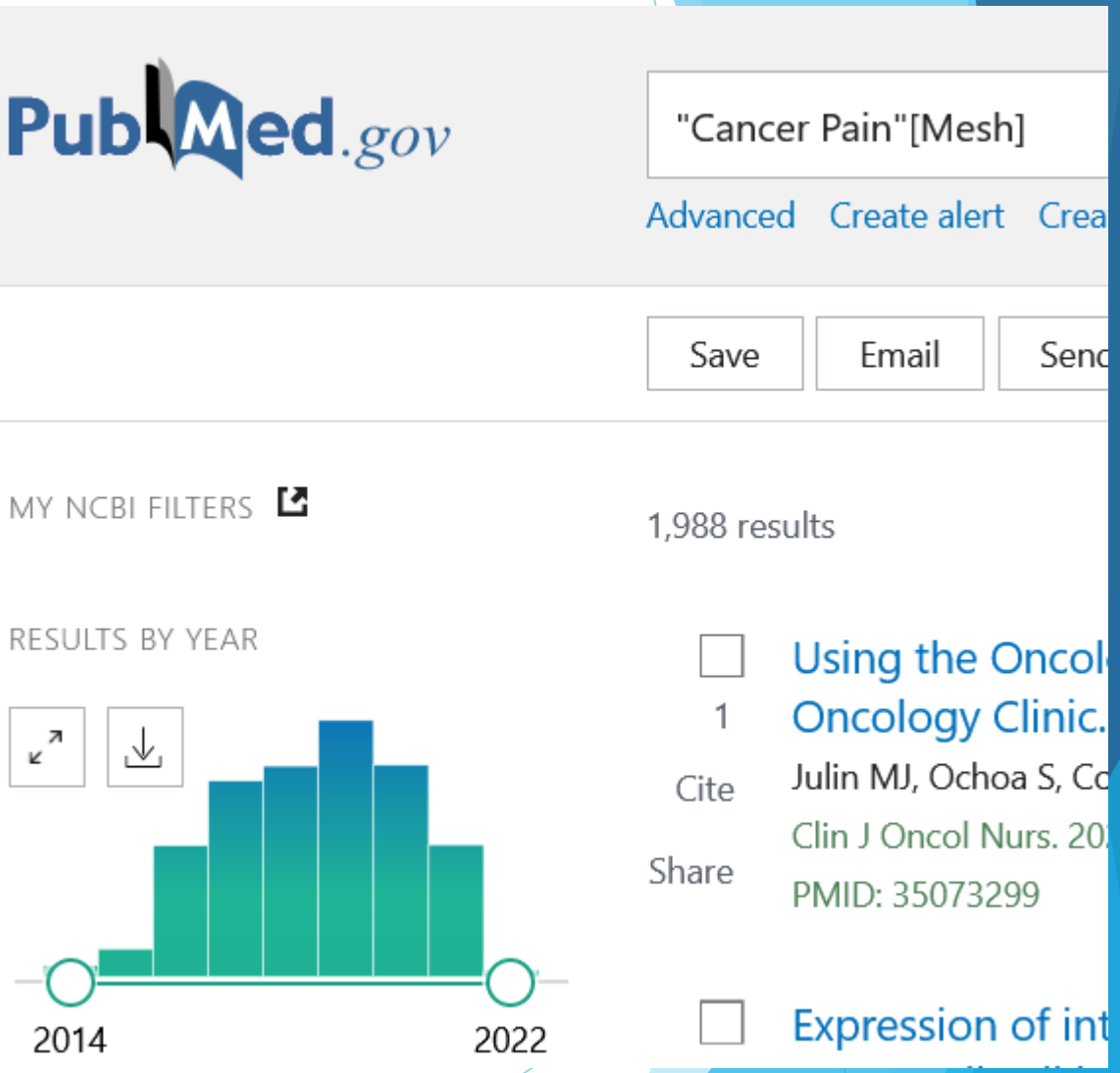
# Why not stop there?

- Not all concepts are well described by subject headings
- Indexers take time and can be wrong
- Indexes are updated regularly but (usually) not applied retrospectively
- Indexes can have their own biases

# Cancer Pain MeSH Descriptor Data 202

Details | Qualifiers | MeSH Tree Structures | Concepts

| | |
|---|---|
| **MeSH Heading** | Cancer Pain |
| **Tree Number(s)** | C23.888.592.612.212 |
| **Unique ID** | D000072716 |
| **RDF Unique Identifier** | http://id.nlm.nih.gov/mesh/D000072716 |
| **Annotation** | not for treatment-related pain |
| **Scope Note** | Pain that may be caused by or related to cellular, |
| **Entry Term(s)** | Cancer-Associated Pain |
| | Cancer-Related Pain |
| | Neoplasm-Associated Pain |
| | Neoplasm-Related Pain |
| | Oncological Pain |
| | Oncology Pain |
| | Tumor-Associated Pain |
| | Tumor-Related Pain |
| **Previous Indexing** | Pain (1983-2016) |
| **Public MeSH Note** | 2017 |
| **History Note** | 2017 |
| **Date Established** | 2017/01/01 |



- What do you notice?

**Physicians [M01.526.485.810]**

- Allergists [M01.526.485.810.020]
- Anesthesiologists [M01.526.485.810.040]
- Cardiologists [M01.526.485.810.128]
- Dermatologists [M01.526.485.810.215]
- Endocrinologists [M01.526.485.810.303]
- Foreign Medical Graduates [M01.526.485.810.390]
- Gastroenterologists [M01.526.485.810.438]
- General Practitioners [M01.526.485.810.485]
- Geriatricians [M01.526.485.810.533]
- Hospitalists [M01.526.485.810.580]
- Nephrologists [M01.526.485.810.628]
- Neurologists [M01.526.485.810.652]
- Occupational Health Physicians [M01.526.485.810.675]
- Oncologists [M01.526.485.810.699]
- Ophthalmologists [M01.526.485.810.705]
- Osteopathic Physicians [M01.526.485.810.722]
- Otolaryngologists [M01.526.485.810.734]
- Pathologists [M01.526.485.810.746]
- Pediatricians [M01.526.485.810.758]
- Physiatrists [M01.526.485.810.764]
- Physicians, Family [M01.526.485.810.770]
- Physicians, Primary Care [M01.526.485.810.800]
- Physicians, Women [M01.526.485.810.820]
- Pulmonologists [M01.526.485.810.865]
- Radiologists [M01.526.485.810.877]
- Rheumatologists [M01.526.485.810.888]
- Surgeons [M01.526.485.810.910]
- Urologists [M01.526.485.810.955]

# Free text

- Natural language – what you might put in Google
  - But remember most databases don't act like Google – they don't interpret your search

- Where do you look for free text terms?
  - own knowledge or content expert; articles from preliminary search; UK/US spellings; plurals; grammar; acronyms; brand names; thesauri (synonyms and antonyms); scope notes, subheadings or entry terms from subject heading search; entry terms for other databases (Emtree); reference sources (eg drug references)…
  - Text mining, eg https://hgserver2.amc.nl/cgi-bin/miner/miner2.cgi

# Sample: fluoxetine

- **fluoxetine**
  - [Used For]
    - 3 (4 trifluoromethylphenox
    - 3 n methyl 3 phenyl 3 (4 tr
    - actan
    - adofen
    - afeksin
    - alzac 20
    - andep
    - andepin
    - ansilan
    - atd 20
    - auroken
    - auscap
    - bioxetin
    - captaton
    - compound 110140
    - daforin
    - dagrilan
    - depren
    - deprex (fluoxetine)
    - deprex leciva
    - deprexetin
    - deprexin
    - dagrilan
    - depren
    - deprex (fluoxetine)
    - deprex leciva
    - deprexetin
    - deprexin
    - deprizac
    - deproxin
    - diesan
    - digassim
    - elizac
    - exostrept
    - felicium
    - fldiss
    - flotinal
    - floxet
    - fluctin
    - fluctine
    - fludac
    - flufran
    - fluketin
    - flunil
    - flunirin
    - fluoksetin
    - fluoksetyna
    - fluox
    - fluox-puren
    - fluoxac
    - fluoxeren
    - fluoxetin
    - fluoxetina
    - fluoxetine hydrochloride
    - fluoxifar
    - fluoxil
    - fluoxone
    - fluoxone divule
    - fluoxtab
    - fluronin
    - flusac
    - flustad
    - flutin
    - flutine
    - flux (drug)
    - fluxemed
    - fluxen
    - fluxet
    - fluxetil
    - fluxet
    - fluxetil
    - fluxetin
    - fluxil
    - fluxomed
    - fluzac
    - fokeston
    - fontex
    - foxetin
    - foxtin
    - fropine
    - fuloren
    - gerozac
    - ladose
    - lanclic
    - lilly 110140
    - lilly110140
    - lorien
    - lovan
    - luramon
    - ly 110140
    - ly110140
    - magrilan
    - margrilan
    - meropan
    - modipran
    - n methyl 3 phenyl 3 (4 trifluoromethylphenoxy)propylamine
    - n methyl 3 phenyl 3 [(alpha,alpha,alpha trifluoro para tolyl)oxy]propylamine
    - nopres
    - nuzak
    - olena
    - oxactin
    - oxedep
    - phenylpropylamine,n methyl 3 (4 trifluoromethylphenoxy)
    - plazeron
    - plinzene
    - portal (drug)
    - pragmaten
    - prizma
    - proctin
    - prodep
    - prosac
    - prozac
    - prozac 20
    - prozac dispersible
    - prozac weekly
    - prozamel
    - prozamin
    - prozep
    - prozit
    - psipax
    - qualisac
    - rapiflux
    - reconcile
    - reneuron
    - rowexetina
    - salipax
    - sanzur
    - sarafem
    - sartuzin
    - selfemra
    - seromex
    - seronil
    - sinzac
    - sofelin
    - stephadilat-s
    - xeredien
    - zactin
    - zepax
    - zinovat

# Techniques to simplify

- **These techniques (especially proximity) are what make Ovid Medline a much more refined search option than PubMed**
- Truncation: anxi* = anxiety, anxious, anxiolytic…
  - Don’t overtruncate! E.g. hypoth* would get you hypothyroid, hypothermia, hypothesis…
- Wildcard: behavio?r = behavior, behaviour
- Phrase searching
- Proximity searching: (lung adj3 cancer) = lung cancer, cancer of the lung…
- Combining these techniques: (lung tumo?r or lung cancer) adj5 (anxious* or anxi* disorder*) = lung tumour and an anxiety disorder, anxiousness during treatment for lung cancer….

# Where to search: field codes

| | |
|---|---|
| **Unique Identifier:** | 25942044 |
| **Title:** | The role of 5-HT1A receptors in mediating acute negative effects of antidepressants: implications in pediatric depression. |
| **Source:** | Transl Psychiatry Psychiatry. 5:e563, 2015 May 05. |
| **Abbreviated Source:** | Transl Psychiatry. 5:e563, 2015 May 05. |
| **Version ID:** | 1 |
| **Record Owner:** | From MEDLINE, a database of the U.S. National Library of Medicine. |
| **Status:** | MEDLINE |
| **Authors:** | Rahn KA; Cao YJ; Hendrix CW; Kaplin AI. |
| **Authors Full Name:** | Rahn, K A; Cao, Y-J; Hendrix, C W; Kaplin, A I. |

- (depression).ti
- .ti,ab,kf
- .mp

depression.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]

# Sample free-text search

- Concept: nerve block (in the context of hip fracture)

| # ▲ | Searches | Results |
|---|---|---|
| 1 | (nerve block* or neural* block* or fnb or fic or ficb or chemodenervation* or chem* denervation*).ti,ab,kf. | 17135 |
| 2 | ((local* or regional*) adj3 (block* or analgesi* or anesthes* or anaesthes*)).ti,ab,kf. | 41927 |
| 3 | (block* adj4 (hip or femur or femoral or obturator or articular or trochant* or intertrochant* or acetabul* or cotyloid* or subtrochant* or intratrochant* or pertrochant* or petrochant* or iliac* or iliofascial* or subcostal* or sciatic* or sacral* or psoas or lumbar)).ti,ab,kf. | 5398 |
| 4 | or/1-3 | 57502 |

# Filters

- Prewritten pieces of a search strategy
- Can be validated or not
- Can be altered to suit a particular search – eg a pediatrics filter might be cut to a more specific age group
- Most common type: study design – but there are many others
  - Eg geography, age

# Positive filters (hedges)

- Written to include content of interest
- Example: Cochrane Highly Sensitive Search Strategy for identifying randomized trials in Medline:

| | |
|---|---|
| 1 | randomized controlled trial.pt. |
| 2 | controlled clinical trial.pt. |
| 3 | randomized.ab. |
| 4 | placebo.ab. |
| 5 | drug therapy.fs. |
| 6 | randomly.ab. |
| 7 | trial.ab. |
| 8 | groups.ab. |
| 9 | 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 |

# Exclusion filters

- Written to exclude content not of interest
- One of the few ways in which Boolean NOT is appropriately used
- Example: Cochrane Highly Sensitive Search Strategy for identifying randomized trials in Medline, part 2:

| | |
|---|---|
| 9 | 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 |
| 10 | exp animals/ not humans.sh. |
| 11 | 9 not 10 |

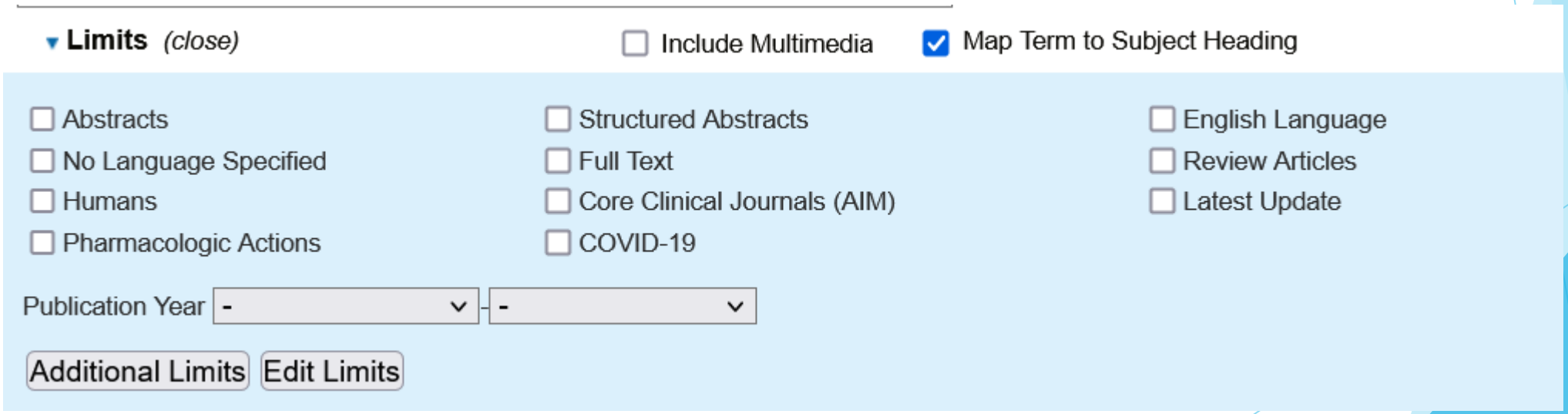
- Why not…
  - 9 and humans.sh
  - 9 not exp animals/

# Sources of filters

- InterTASC (ISSG): https://sites.google.com/a/york.ac.uk/issg-search-filters-resource/home
  - Think of this resource as an overview of filters: for each study design or focus area it lists not only several potential filters by database but also publications that have reviewed filter performance. This site also has information on appraising unfamiliar filters.
- Cochrane: https://community.cochrane.org/search-filters
  - Cochrane has several different versions of RCT filters, split between precision-maximizing and sensitivity-maximizing.
- McMaster (HIRU): https://hiru.mcmaster.ca/hiru/HIRU_Hedges_home.aspx
  - These filters are divided by purpose category – Diagnosis, Prognosis, Quality improvement, etc. They also split between maximizing sensitivity and specificity (precision).
- CADTH Strings Attached: https://www.cadth.ca/resources/finding-evidence/strings-attached-cadths-database-search-filters
  - Very well-designed PubMed-based filters; however, be aware that the equivalents for Ovid are multi-database, meaning they include search terms that aren't always applicable in Medline.
- University of Alberta: https://guides.library.ualberta.ca/health-sciences-search-filters/home
  - Although this site includes a few methodological filters, what's it's most useful for are the population and geographic filters, particularly those specific to Canada – for example, it has a filter for Indigenous peoples in Manitoba specifically. Be aware though that some of the subject filters aren't as sensitive as they could be.

# Limits

- Functionality built into the search interface to screen out certain results based on a particular field
  - Use with caution
  - Commonly used for language or date



# Putting it all together

1. Non-alcoholic fatty liver disease/
2. ((non-alcohol* or nonalcohol*) adj2 (fatty liver* or steatohepati* or steatos*)).ti,ab,kf
3. (nafld or nafl or nash).ti,ab,kf
4. or/1-3
5. probiotics/ or synbiotics/ or exp lactobacillus/ or exp bifidobacterium/
6. (probiotic* or pro biotic* or multiprobiotic* or monoprobiotic* or (benefi* adj2 bacter*) or lactobacill* or lacto bacill* or bifidobacter* or bifidus or bifido-bacter*).ti,ab,kf
7. or/5-6
8. randomized controlled trial.pt
9. controlled clinical trial.pt
10. (randomized or randomised or randomly or rct or placebo*).ab
11. Trial.ti
12. or/8-11
13. exp animals/ not humans.sh
14. 12 not 13
15. 4 and 7 and 14
16. limit 15 to english language

# Assessing the search

- How to do it?
  - Look at the search, look at the results
  - Other reviews
  - Sentinel articles
  - PRESS
  - Statistical techniques (eg relative recall)

# Database selection

- Typical databases for Cochrane reviews: Medline, Embase, Cochrane CENTRAL
- Other bibliographic databases will depend on the specific topic
  - Subject-specific: CINAHL, PsycINFO, SPORTDiscus, IPA…
  - Regional: eg. LILACS, African Index Medicus…
  - Look at what other reviews in the topic area have searched
  - Look at what we have access to (https://libguides.lib.umanitoba.ca/az.php) and what is free online
- Citation indices: Scopus, Web of Science

# Translation: adapting the search to different databases

- Content coverage
  - Subject area
  - Dates
  - Specific journals
  - Types of documents
  - Types of studies
- Interface design
- Syntax
- Default behavior
- Subject headings
- Qualifiers
- Methods of combining search sets
- Limits
- Field codes / search fields
- Truncation
- Wildcards
- Phrase searching
- Getting to full text
- Save and export options
- Accessibility

# Translation: interfaces

Title Abstract Keyword | anxiety

(Word variations have been searched)

+

Search limits | Send to search manager | Run search

Clear all

Cochrane Reviews 548 | Cochrane Protocols 20 | **Trials 57934** | Editorials 3 | Special Collections 1 | Clinical Answers 13 | More

For COVID-19 related studies, please also see the **Cochrane COVID-19 Study Register**

## Filter your results

Year

**Year first published**

2022 ..... 61

2021 ..... 5022

2020 ..... 5139

2019 ..... 4709

2018 ..... 4646

**57934** Trials matching **anxiety in Title Abstract Keyword - (Word variations have been searched)**

Cochrane Central Register of Controlled Trials
Issue 2 of 12, February 2022

Select all (57934) | Export selected citation(s)

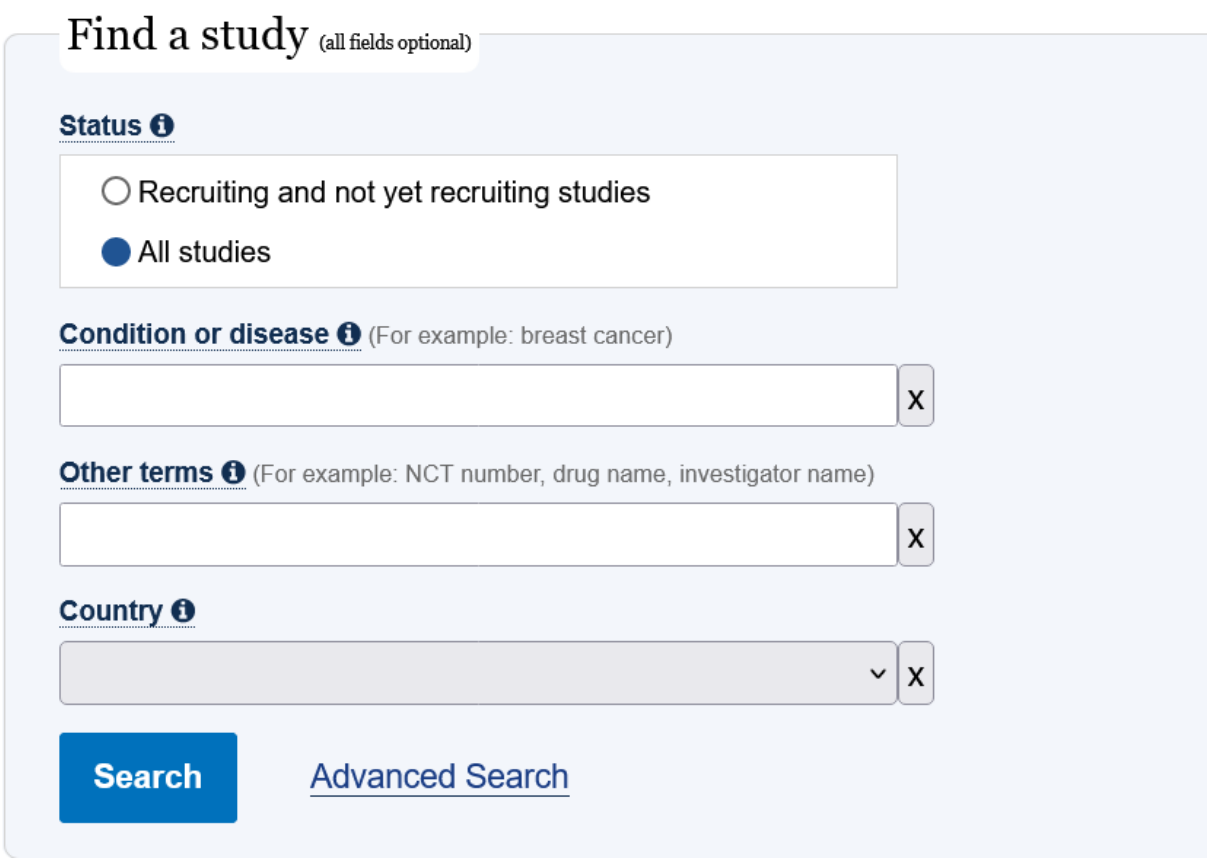
Order by Relevancy | Results per page 25

1 **Weighing psychotherapy options for social anxiety disorder**
Harvard mental health letter, **2011**, 28(5), 6-5 | added to CENTRAL: 30 June 2020 | 2020 Issue 06

# Translation: syntax and vocabulary

- Medline
  - antidepressive agents/ or exp serotonin uptake inhibitors/
  - ((mao or dual monoamine) adj3 inhibit*) or tca or tcas or thymoleptic*).ti,ab,kf
- Embase
  - antidepressant agent/ or exp serotonin receptor affecting agent/
  - ((mao or dual monoamine) adj3 inhibit*) or tca or tcas or thymoleptic*).ti,ab,kw
- CENTRAL
  - [mh ^"antidepressive agents"] or [mh "serotonin uptake inhibitors"]
  - ((mao or "dual monoamine”) NEAR/3 inhibit*) or tca or tcas or thymoleptic*):ti,ab,kw
- CINAHL
  - (MH "antidepressive agents") or (MH "neurotransmitter uptake inhibitors+")
  - (TI ((mao or "dual monoamine") N3 inhibit*) or tca or tcas or thymoleptic*)) OR (AB ((mao or "dual monoamine") N3 inhibit*) or tca or tcas or thymoleptic*))

# Trial registries




- Planned/ongoing trials
- Clinicaltrials.gov is recommended for Cochrane reviews
- Other options include ICTRP

# Grey literature

- What is it?
- How do you find it?
  - Specific search portals (eg MedRxiv)
  - Checklists (eg CADTH Grey Matters)
  - Open web searching (eg. Google) – typically using site limits, format limits, or custom search

# Caution: Predatory journals

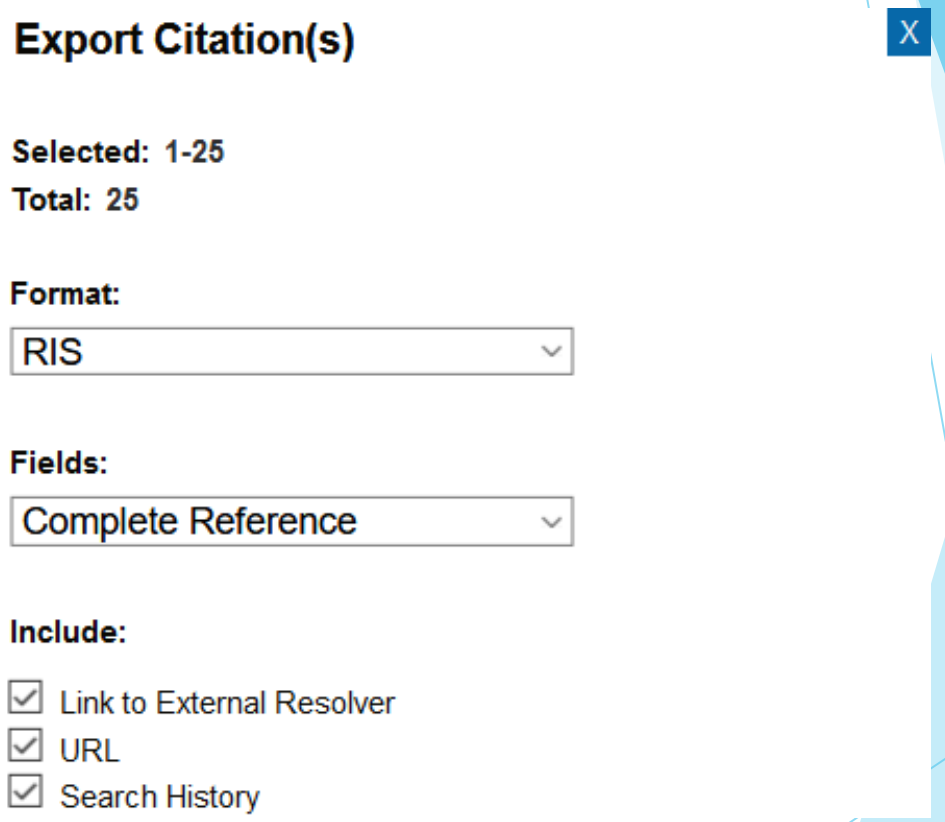
- Look like academic literature, but have questionable editorial, review and business practices impacting quality standard
- Can appear even in traditional databases, but more likely to be picked up in grey literature searching (eg via Google Scholar)

# Other sources

- Sources specific to your search topic – eg industry websites
- Hand searching: preselected journals or conference proceedings
- Contacts
- Citation searching – backwards and forwards
  - Done AFTER included studies have been identified

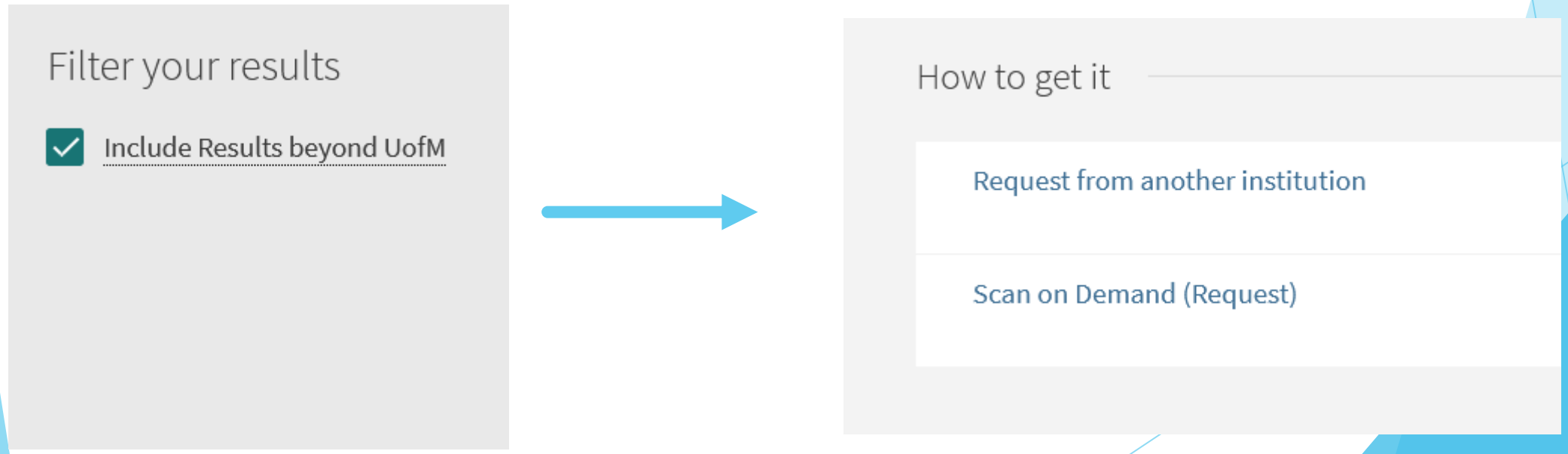
# Compiling results

- Run all searches
- Export to Endnote
- Deduplicate



# Getting access to results (for full text screening)

- EndNote Find Full Text (occasionally - more in the EndNote class)
- Libkey.io (search by DOI or PMID) or Lean Library browser extension
- Library search: https://umanitoba.ca/libraries/
- Request



# Rerunning

- Run full strategy again shortly before publication (within 6-12 months)
- Can also use alerts


# Reporting

- Databases and interfaces used
- Dates of search and coverage of database
- Filters used / limits applied
- All other sources: grey literature, hand searching, citation searching, etc
- Full strategy with line-by-line result counts in appendix

# BINGO! I noticed something in the Systematic Review (mostly search) methods

| B | I | N | G | O |
|---|---|---|---|---|
| Searched only one database, Google Scholar. | Total number of records from search = 10,000<br>Number of records after duplicates removed = 900 | Single author SR | The "comprehensive" search consisted of 3 keywords | A search was conducted following PRISMA standards |
| Searched Ovid PubMed | PRISMA diagram does not include reasons for exclusion during full-text screening | Consulted with a librarian (but did not name them) | Reported in methods: "The search strategy incorporated MeSH" (…but the search strategy doesn't include any!) | The review was conducted based on PRISMA reporting guidelines |
| Searched the following major databases: EBSCO and ProQuest | The Medline search retrieved very few (~20) results, and the research question is a well-researched topic |  | Searched only in the title field | We adhered to PRISMA (…but the search strategy is not included) |
| Searched PsychInfo or CINHAL | Searched using "standardized" terms (everyone knows what those are!) | The search was conducted independently by 2 of the authors | The search strategy only contained one type of Boolean operator: AND | Citing PRISMA 2020, but including the PRISMA 2009 flow diagram |
| We searched Pubmed et al. (end of list!) | Included a search strategy, but not the actual search strategy used (confused? So am I!) | Data availability statement: There are no additional data | Searched 12 unique combinations of different synonyms for their 3-concept search | We adhered to PRISMA (…yet a flow diagram is not included) |

Your goal: produce a replicable description of the search strategy… that doesn't get a bingo.

Source: @SRLibProblems

# Sample methods

## Search methods for identification of studies

### Electronic searches

We conducted systematic searches of the following bibliographic databases on 29 April 2019:

1. Cochrane Central Register of Controlled Trials (CENTRAL) in the Cochrane Library (Issue 4, April 2019)
2. MEDLINE and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily (Ovid, 1946 to 26 April 2019)
3. Embase and Embase Classic (Ovid, 1947 to 26 April 2019)
4. Web of Science Core Collection (Clarivate Analytics, 1900 to 26 April 2019)

We adapted the search strategy for MEDLINE (Ovid) (Appendix 1) for use in the other databases. We applied the Cochrane sensitivity-maximising RCT filter to MEDLINE (Ovid) and adaptations of it to the other databases, except CENTRAL (Lefebvre 2011). We also conducted a search of the US National Institutes of Health Ongoing Trials Register ClinicalTrials.gov (www.clinicaltrials.gov) and the World Health Organization International Clinical Trials Registry Platform (WHO ICTRP) (apps.who.int/trialsearch) for ongoing or unpublished trials, on 29 April 2019. We searched all databases from inception to present and imposed no restriction on language of publication or publication status. We did not perform a separate search for adverse effects of interventions.

### Searching other resources

We handsearched reference lists of all primary studies and review articles for additional references. We also contacted authors for missing data. There were no retraction statements or errata in our included studies.

Kolkailah AA, Doukky R, Pelletier MP, Volgman AS, Kaneko T, Nabhan AF. Transcatheter aortic valve implantation versus surgical aortic valve replacement for severe aortic stenosis in people with low surgical risk. Cochrane Database of Systematic Reviews 2019, Issue 12. Art. No.: CD013319. DOI: 10.1002/14651858.CD013319.pub2.


# Upcoming

- 10 February: search review and practice (first half of class; second half devoted to question presentations)
- 17 February: reference management
- Don’t forget: make an appointment to discuss your search strategy