



**Write a Systematic Review—
a Systematic Literature Search**

Flora Fang & Jayden Chou

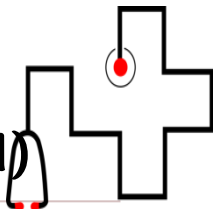
Reference Librarians, Kun-Yen Medical Library

medref@libmail.lib.ncku.edu.tw | 06-2353535 #5122

Primary v. Secondary Research



A	Questionnaires and surveys	F	Articles
B	Observations	G	Books
C	Consumer trials	H	Newspapers
D	Hall tests	I	Internet
E	Focus groups	J	CD/DVD



The Oxford 2011 Levels of Evidence (v.2.1)

OCEBM Levels of Evidence Working Group*. "The Oxford 2011 Levels of Evidence".
<http://www.cebm.net/wp-content/uploads/2014/06/CEBM-Levels-of-Evidence-2.1.pdf>

1 Identify the type of question first

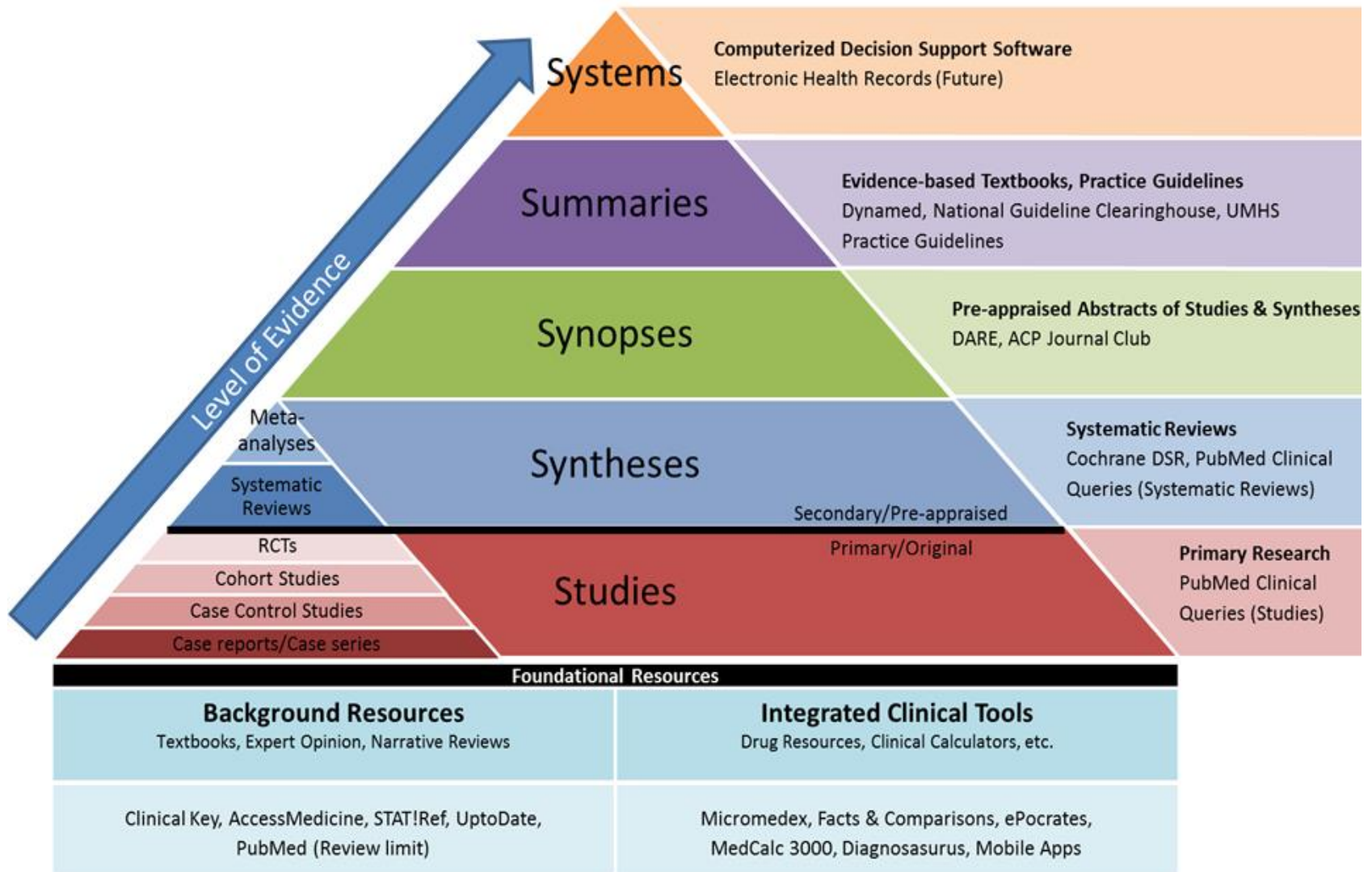
Question	Step 1 (Level 1*)	Step 2 (Level 2*)	Step 3 (Level 3*)	Step 4 (Level 4*)	Step 5 (Level 5)
How common is the problem?	Local and current random sample surveys (or censuses)	Systematic review of surveys that allow matching to local circumstances**	Local non-random sample**	Case-series**	n/a
Is this diagnostic or monitoring test accurate? (Diagnosis)	Systematic review of cross sectional studies with consistently applied reference standard and blinding	Individual cross sectional studies with consistently applied reference standard and blinding	Non-consecutive studies, or studies without consistently applied reference standards**	Case-control studies, or "poor or non-independent reference standard**	Mechanism-based reasoning
What will happen if we do not add a therapy? (Prognosis)	Systematic review of inception cohort studies	Inception cohort studies	Cohort study or control arm of randomized trial*	Case-series or case-control studies, or poor quality prognostic cohort study**	n/a
Does this intervention help? (Treatment Benefits)	Systematic review of randomized trials or n-of-1 trials	Randomized trial or observational study with dramatic effect	Non-randomized controlled cohort/follow-up study**	Case-series, case-control studies, or historically controlled studies**	Mechanism-based reasoning
What are the COMMON harms? (Treatment Harms)	Randomized trial, systematic review of nested case-control studies, n-of-1 trial with the patient you are raising the question about, or observational study with dramatic effect	Randomized trial or (exceptionally) observational study with dramatic effect	Non-randomized controlled cohort/follow-up study (post-marketing surveillance) provided there are sufficient numbers to rule out a common harm. (For long-term harms the duration of follow-up must be sufficient.)**	Case-series, case-control, or historically controlled studies**	Mechanism-based reasoning
What are the RARE harms? (Treatment Harms)	Systematic review of randomized trials or n-of-1 trial	Randomized trial or (exceptionally) observational study with dramatic effect			
Is this (early detection) test worthwhile? (Screening)	Systematic review of randomized trials	Randomized trial	Non-randomized controlled cohort/follow-up study**	Case-series, case-control, or historically controlled studies**	Mechanism-based reasoning

Choose evidence from higher to lower level

2

* Level may be graded down on the basis of study quality, imprecision, indirectness (study PICO does not match questions PICO), because of inconsistency between studies, or because the absolute effect size is very small; Level may be graded up if there is a large or very large effect size. ** As always, a systematic review is generally better than an individual study.

5S Pyramid of Evidence Resources



“Systematic Review” (SR)

“A review of primary literature in health and health policy that attempts to **identify**, **appraise**, and **synthesize** all the empirical evidence that meets specified eligibility criteria to answer a given research question. Its conduct uses **explicit methods** aimed at **minimizing bias** in order to produce more reliable findings regarding the effects of interventions for prevention, treatment, and rehabilitation that can be used to inform decision making.” (MeSH Heading, D000078182)

≠ narrative “Review”

1. Formulate your question
2. Check for other reviews answering your question
3. Define inclusion and exclusion criteria, develop your protocol
4. Design your search strategy and search for studies
5. Manage your search results and document your search strategy
6. Summary of recommendations for research solutions
7. Collect data and critically appraise
8. Analyse and interpret results + Meta Analysis
9. Write up and present results

Library assistance





- Authors
- Reviewer/ Editors · Peer reviewed
- Readers

PRISMA 2020 Statement

Preferred Reporting Items for Systematic Reviews and Meta-analysis



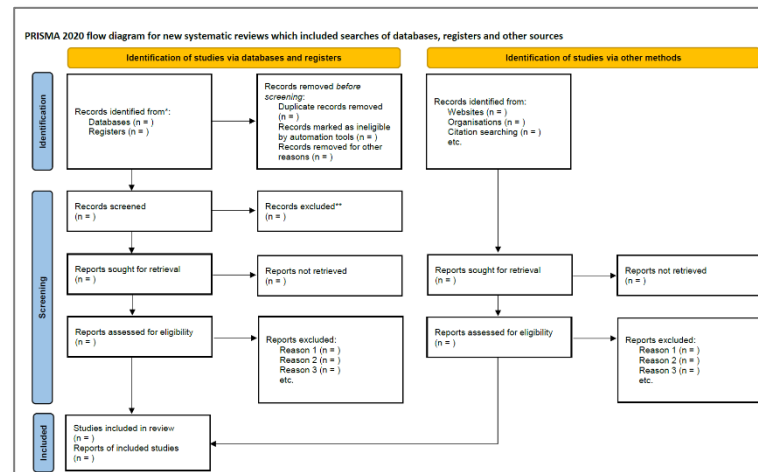
- Ensure the transparency of systematic review → reproducible

PRISMA Checklist

Section and Topic	Item #	Checklist Item	Location where item is reported
PRISMA 2020 Checklist			
Section and Topic			
Item #			
Checklist Item			
Location where item is reported			
TITLE			
1 Identify the report as a systematic review.			
ABSTRACT			
2 See the PRISMA 2020 for Abstracts checklist.			
INTRODUCTION			
3 Describe the rationale for the review in the context of existing knowledge.			
4 Provide an explicit statement of the objectives (or questions) the review addresses.			
METHODS			
5 Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.			
6 Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.			
7 Present the full search strategies for all databases, registers and websites, including any filters and limits used.			
8 Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many references screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.			
9 Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.			
10a List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.			
10b List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.			
11 Specify the methods used to assess risk of bias in the included studies, including details of the tools used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.			
12 Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.			
13a Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #6)).			
13b Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.			
13c Describe any methods used to tabulate or visually display results of individual studies and syntheses.			
13d Describe any methods used to synthesise results and provide a rationale for the choices. If meta-analysis was performed, describe the model(s), methods to identify the presence and extent of statistical heterogeneity, and software package(s) used.			
13e Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).			
13f Describe any sensitivity analyses conducted to assess robustness of the synthesized results.			
14 Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).			
15 Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.			
OTHER INFORMATION			
24a Registration and protocol			
24c			
24c			
25 Support			
26 Compelling interests			
27 Availability of data, code and other materials			
27a Reporting bias assessment			
27b Certainty assessment			

For more information, visit: <http://www.prisma-statement.org/>

PRISMA Flow Diagram



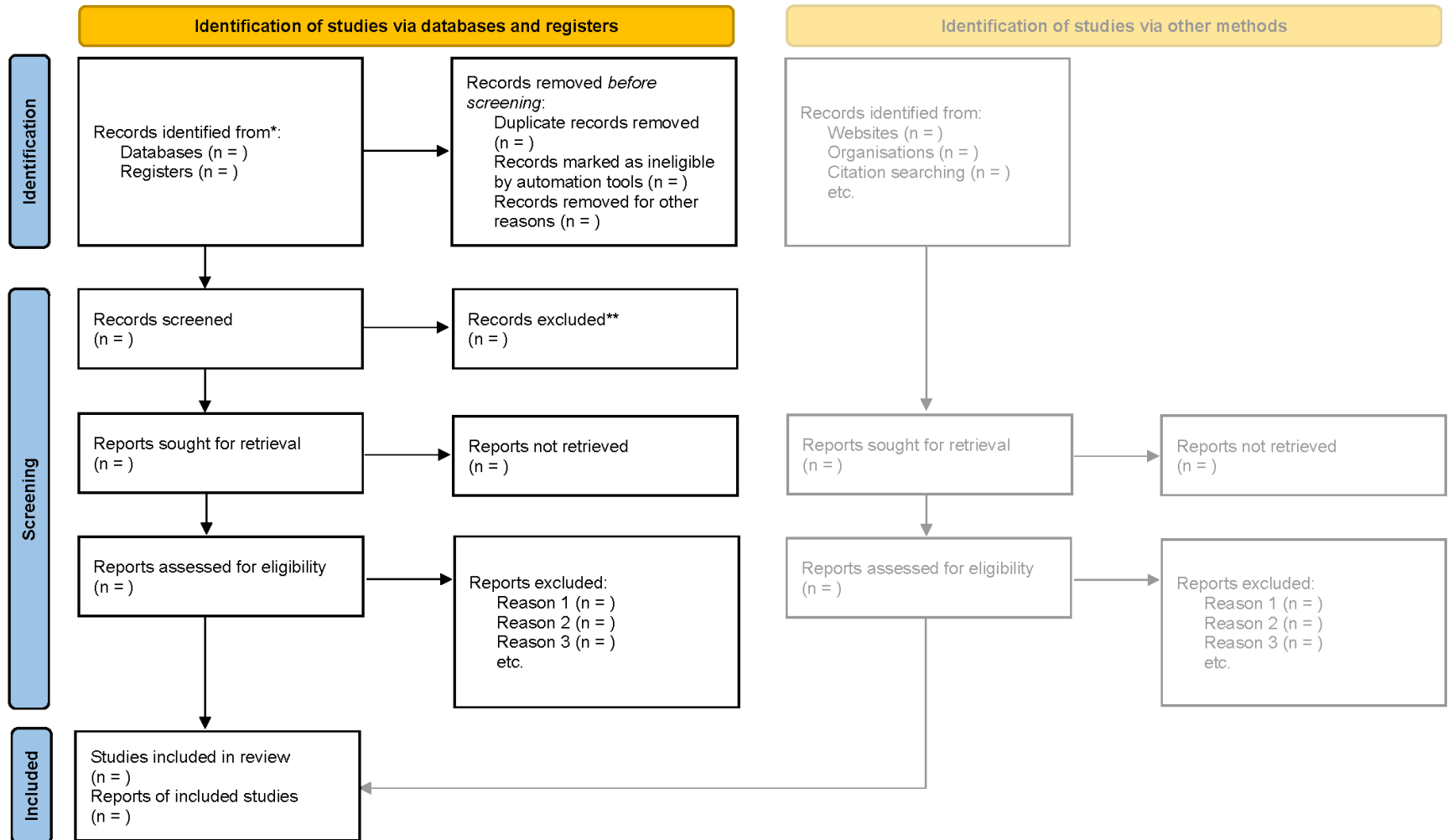
EXTENSIONS

- PRISMA for Abstracts
- PRISMA Equity
- PRISMA Harms (for reviews including Harms)
- PRISMA Individual Patient Data
- PRISMA for Network Meta-Analyses
- PRISMA for Protocols
- PRISMA for Diagnostic Test Accuracy
- PRISMA for Scoping Reviews
- PRISMA for Acupuncture
- PRISMA for Searching
- Extensions in development

27 items in 7 sections: Title, Abstract, Introduction, Methods, Results, Discussions, Other Information

PRISMA flow diagram

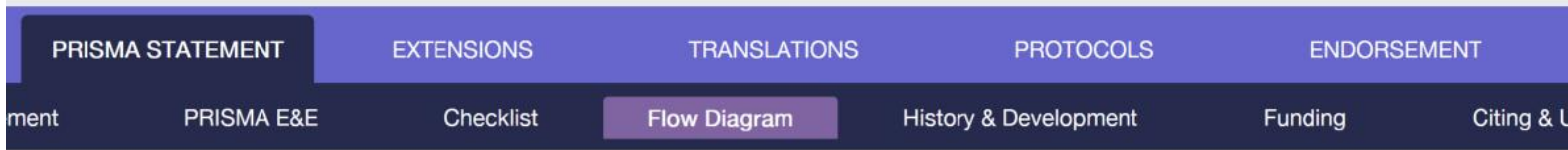
PRISMA 2020 flow diagram for new systematic reviews which included searches of databases, registers and other sources



*Consider, if feasible to do so, reporting the number of records identified from each database or register searched (rather than the total number across all databases/registers).

**If automation tools were used, indicate how many records were excluded by a human and how many were excluded by automation tools.

PRISMA flow diagram



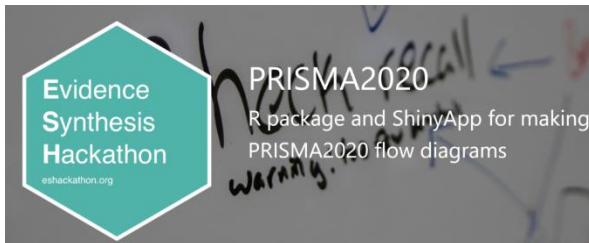
PRISMA Flow Diagram

The flow diagram depicts the flow of information through the different stages of a systematic review: identification, screening, eligibility, and included studies. It shows the number of records identified, included and excluded, and the reasons for exclusions. It is updated) and sources used to identify studies.

- [PRISMA 2020 flow diagram for new systematic reviews which](#)
- [PRISMA 2020 flow diagram for new systematic reviews which](#)
- [PRISMA 2020 flow diagram for updated systematic reviews w](#)
- [PRISMA 2020 flow diagram for updated systematic reviews w](#)

Flow diagrams can also be generated using a [Shiny App](#) available at

For more information about citing and using PRISMA click [here](#).



[Follow this link to access the online tool](#)

PRISMA Flow Diagram Home **Create flow diagram**

Main options

Previous studies: Not included (dropdown) Other searches for studies: Included (dropdown)

Identification

Databases: xxx Registers: xxx

Websites: xxx Organisations: xxx

Citations: xxx

Duplicates removed: xxx

Automatically excluded: xxx Other exclusions: xxx

Screening

Records screened: Records excluded:

Flow Diagram Preview:

```
graph TD
    A[Records identified from:  
Databases (n = xxx)  
Registers (n = xxx)] --> B[Records screened  
(n = xxx)]
    A --> C[Records removed before  
screening:  
Duplicate records (n = xxx)  
Records marked as ineligible by  
automation tools (n = xxx)  
Records removed for other  
reasons (n = xxx)]
    B --> D[Reports sought for retrieval  
(n = xxx)]
    B --> E[Records excluded  
(n = xxx)]
    D --> F[Reports assessed for eligibility  
(n = xxx)]
    D --> G[Reports not retrieved  
(n = xxx)]
    F --> H[New studies included in review  
(n = xxx)  
Reports of new included studies  
(n = xxx)]
    F --> I[Reports excluded:  
xxx (n = xxx)]
```


PRISMA Checklist

PRISMA STATEMENT

EXTENSIONS

TRANSLATIONS

PROTOCOLS

ENDORSEMENT

Statement

PRISMA E&E

Checklist

Flow Diagram

History & Development

Funding

Citing &

PRISMA Checklist

The PRISMA 2020 statement comprises a 27-item checklist addressing the introduction, methods, results and discussion sections of a systematic review report.



PRISMA 2020 Checklist (PDF)



PRISMA 2020 Checklist (Word)

← 1 self checklist (attach to your manuscript of journal article submission)

The checklist can also be completed using a Shiny App available at <https://prisma.shinyapps.io/checklist/>

An expanded checklist, which comprises an abridged version of the reporting recommendations presented in the Explanation and Elaboration paper, with references and some examples removed, is also available.



PRISMA 2020 Expanded Checklist (PDF)

2 Explanation(3 abridged)

For more information about citing a

PRISMA Elaboration and Explanation

It is strongly recommended that the [PRISMA 2020 Statement](#) be used in conjunction with the PRISMA 2020 Explanation and Elaboration Document. This document is intended to enhance the use, understanding and dissemination of the PRISMA 2020 Statement. Through examples and explanations, the meaning and rationale for each [checklist](#) item are presented.

- [BMJ \(OPEN ACCESS\) Page MJ, Moher D, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. PRISMA 2020 explanation and elaboration: updated guidance and exemplars for reporting systematic reviews. *BMJ* 2021;372:n160. doi: 10.1136/bmj.n160](#)

Examples of good reporting for each checklist item in PRISMA 2020: [PDF](#)

For more information about citing and using PRISMA check here

3 explanation and elaboration ↑

4 exemplars ↑

PRISMA Checklist

4 items related to literature search and screening

Topic	#	Check item	Location where item is reported
METHODS			
Information sources	6	Specify all databases, registers, websites, organizations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	P.xx
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	
RESULTS			
Study selection	16 a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	
	16 b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	

Question: For adults over age 65 does a daily 30 minute exercise regimen reduce the future risk of heart attack compared with no exercise regimen?

P

I

C

O

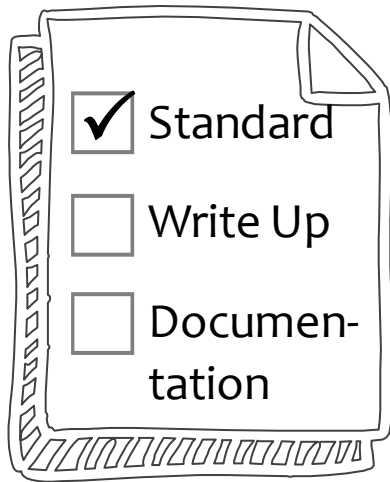
Prevention

**adults
over age 65**

**daily 30 minute
exercise**

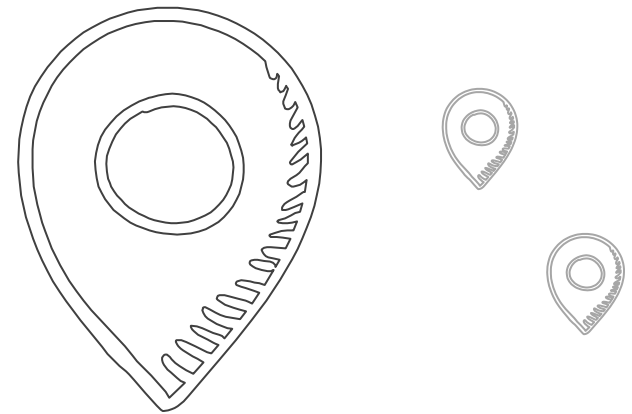
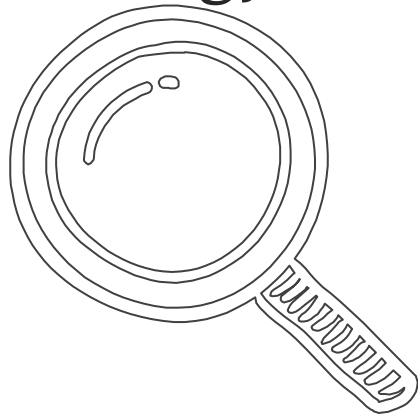
**no exercise
regimen**

**risk of
heart attack**



1 2
4 3

Build up
search strategy



Select databases



Standard

Write up

Documentation

Write Up #7 Information sources

Information Sources

Describe all **information sources** (e.g., databases with **dates of coverage**, contact with study authors to identify additional studies) in the search and **date last searched**.

Acupuncture for treating aromatase inhibitor-related arthralgia in breast cancer: a systematic review and meta-analysis. *J Altern Complement Med.* 2015; 21: 251-60. <http://doi.org/10.1089/acm.2014.0083>

Methods

Data sources and eligibility criteria

The conduct of this systematic review complied with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement to ensure transparent and complete reporting.^{18,19} The following 10 databases were searched for relevant RCTs, with no language restrictions, from their inception dates to February 2014: MEDLINE (Ovid), PubMed (Publisher-Supplied Subset, supplementary to Ovid MEDLINE not yet covered), EMBASE, Cochrane Library, CINAHL, PEDro, Index to Taiwan Periodical Literature System, China National Knowledge Infrastructure, and the Wan-Fang Med-Chinese BioMedical Literature Database. Data from completed clinical trials were also obtained from the World Health Organization International Clinical Trials Registry Platform. Reference lists of eligible articles were reviewed to identify additional studies for possible inclusion. E-mail alerts were established to identify newly released studies from the different databases that fell within the scope of our review.

Write Up

#8 Search Strategy

The purpose of this review is to provide an update which may help physicians to properly manage *H. pylori* infection in patients after gastric surgery. A literature search was conducted mainly in PubMed (1948-), and a supplementary search in Embase (1974-) and Google Scholar. Search keywords used controlled vocabulary (MeSH or Emtree) and text words, including: *Helicobacter pylori*[MeSH], *Helicobacter* infections[MeSH], *Helicobacter*, *Campylobacter*, *H. pylori*, *C. pylori*; gastrectomy[MeSH], gastrectom*, hemigastrectom*, gastric surger*, stomach surger*; gastric stump[MeSH], stump*, residual, remnant*; eradicat*; spontaneous remissions[MeSH], spontaneous clearance, spontaneous regression*, spontaneous eradicat*; atrophic gastritis[MeSH], atrophy[MeSH], atroph*, dysplas*; metaplasia[MeSH], metaplas*; peptic ulcer[MeSH], ulcer*; stomach neoplasms[MeSH], local neoplasm recurrence[MeSH], second primary neoplasms[MeSH], cancer*, malignanc*, carcinoma*, cancerogen*, carcinogen*, neoplasmogen*, oncogen*, tumorigen*. The keywords based on PubMed syntax were adequately revised for the remaining databases. The

Management of *Helicobacter pylori* infection after gastric surgery. *World J Gastroenterol.* 2014; 20: 5274–82. <http://doi.org/10.3748/wjg.v20.i18.5274>

Search

Present full electronic search strategy for every database, including any limits used, such that it could be repeated.

Search strategy

The eight databases searched for this study comprised Medline (Ovid), EMBASE, CENTRAL, PsycINFO, Psychology and Behavioral Sciences Collection (PBSC), CINAHL, Iowa Drug Information Service (IDIS), and Index to Taiwan Periodical Literature System (all from inception to the end of June 2016), and a supplementary search in TRIP Database and Google Scholar. References provided in the selected studies and systematic reviews were further checked for additional citations of published or unpublished reports. Email alerts were established to identify newly released studies from the databases that fell within the scope of our review.

The keywords used in the search were “antipsychotic agents” and “myocardial infarction.” The search strategy included free-text and controlled vocabulary terms (e.g., medical subject headings) for these topics. No language restrictions were applied. On the basis of the MEDLINE (Ovid) search strategy, queries were revised to perform the best searches in the other databases. The MEDLINE (Ovid) search strategy is shown online in Supplementary Table 2.

Myocardial infarction risk and antipsychotics use revisited: a meta-analysis of 10 observational studies. *J Psychopharmacol.* 2017; 31: 1544–55. <http://doi.org/10.1177/0269881117714047>

Write Up #17 Study selection

Study Selection

Give **numbers of studies** screened, assessed for eligibility, and included in the review, with reasons for exclusions **at each stage**, ideally with a **flow diagram**.

Results

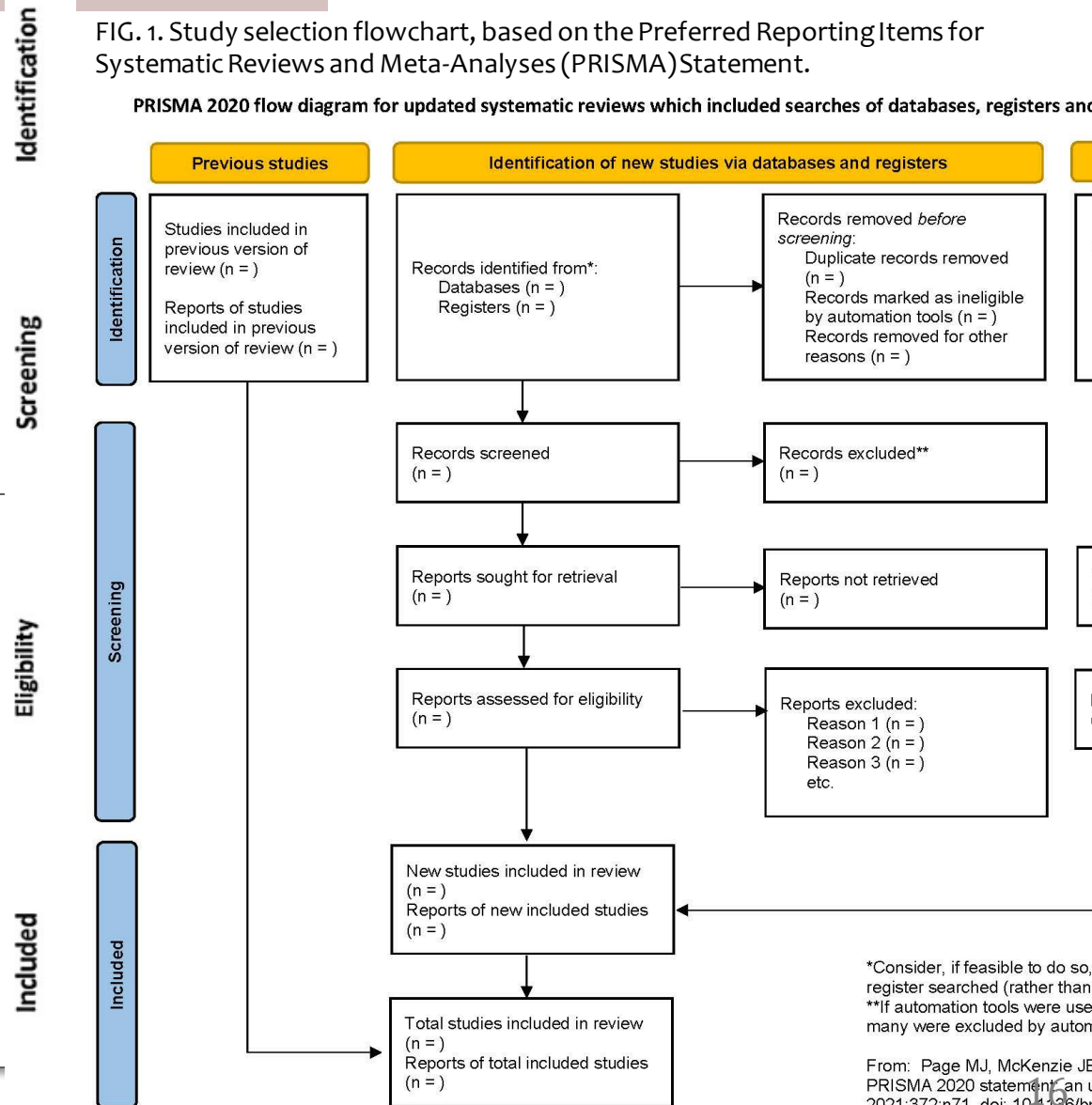
Study description

Searches of the 10 databases led to identification of 263 potentially relevant articles, 251 of which were ultimately excluded. Among the excluded files, 20 articles were duplicates, 223 titles/abstracts were irrelevant, and 8 did not have matching full text or were nonclinical trials (Fig. 1).

J Altern Complement Med. 2015, 21: 251-60.

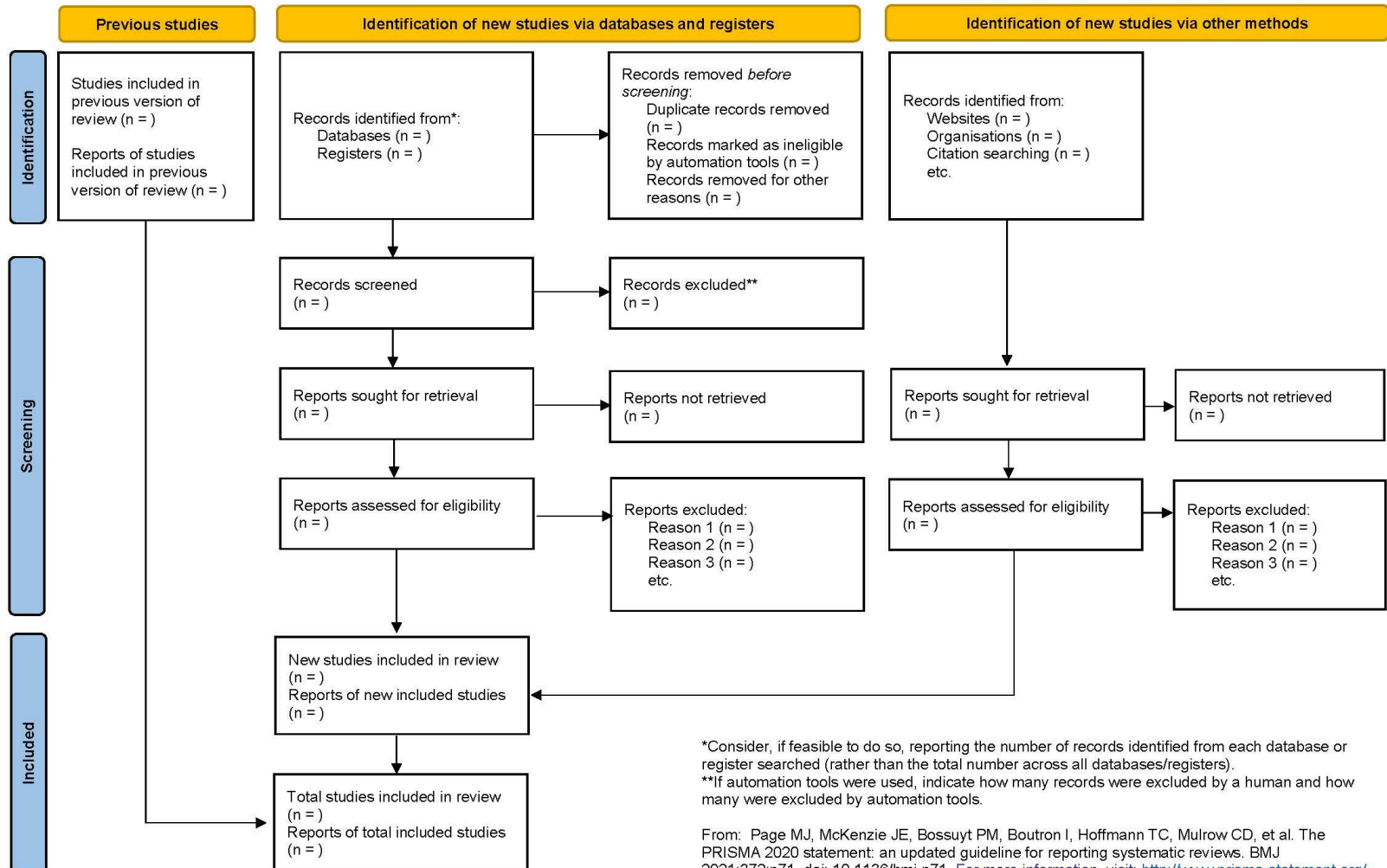
FIG. 1. Study selection flowchart, based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement.

PRISMA 2020 flow diagram for updated systematic reviews which included searches of databases, registers and



PRISMA Flow Diagram 2020

PRISMA 2020 flow diagram for updated systematic reviews which included searches of databases, registers and other sources



PRISMA Flow Diagram 2020_Example

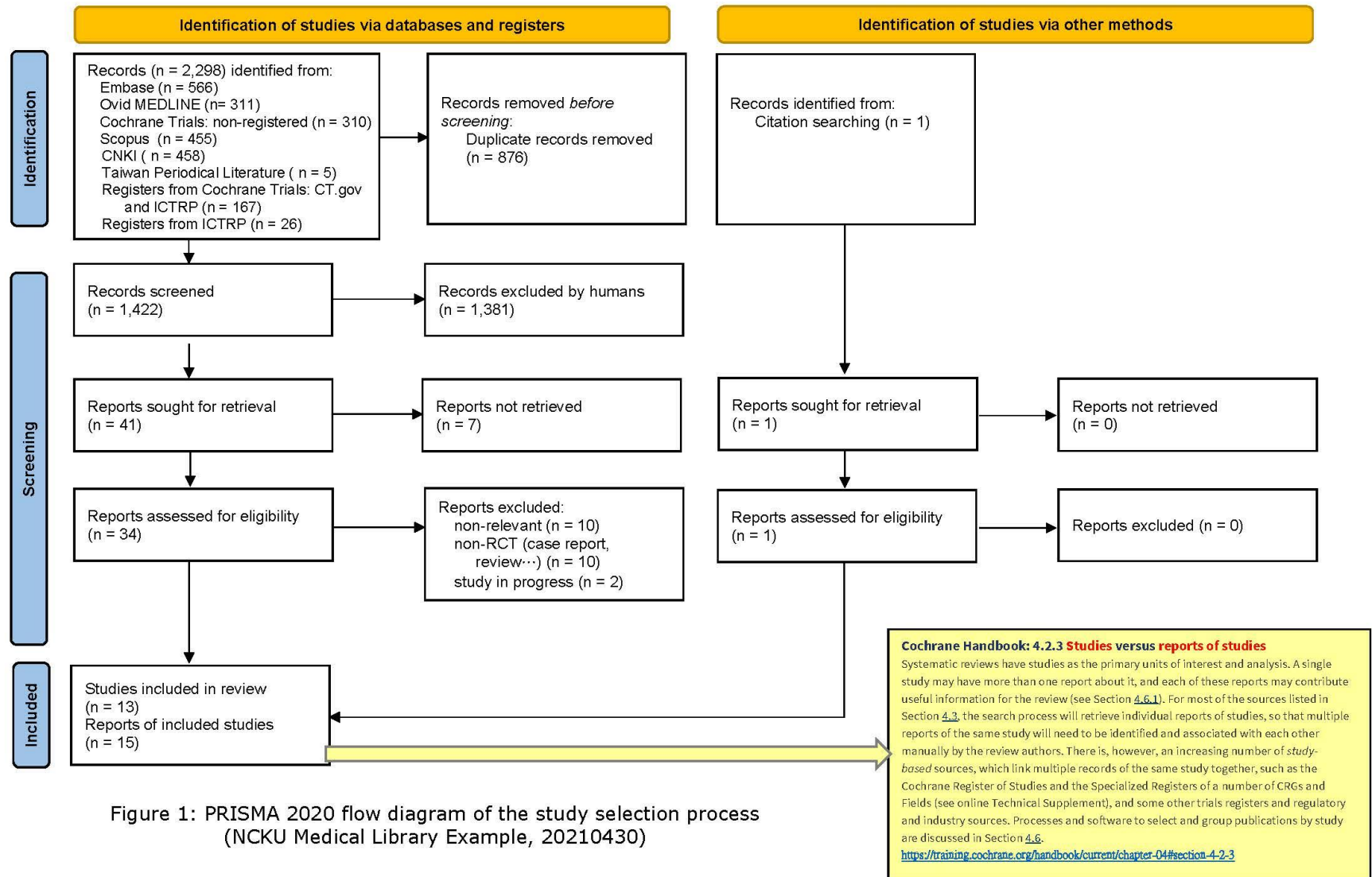


Figure 1: PRISMA 2020 flow diagram of the study selection process (NCKU Medical Library Example, 20210430)

PRISMA Flow Diagram 2020

Glossary of terms

- Study—An investigation, such as a clinical trial, that includes a defined group of participants and one or more interventions and outcomes. A “study” might have multiple reports. For example, reports could include the protocol, statistical analysis plan, baseline characteristics, results for the primary outcome, results for harms, results for secondary outcomes, and results for additional mediator and moderator analyses
- Report—A document (paper or electronic) supplying information about a particular study. It could be a journal article, preprint, conference abstract, study register entry, clinical study report, dissertation, unpublished manuscript, government report, or any other document providing relevant information
- Record—The title or abstract (or both) of a report indexed in a database or website (such as a title or abstract for an article indexed in Medline). Records that refer to the same report (such as the same journal article) are “duplicates”; however, records that refer to reports that are merely similar (such as a similar abstract submitted to two different conferences) should be considered unique.

進行系統性回顧之文獻搜尋紀錄表

Literature Search for Conducting Systematic Review: Documentation Form

1. 研究問題 Question

Question:	
Population	
Intervention	
Comparison	
Outcome	
Type of Question/ Publication Type	

2. 檢索詞 Search Terms

	中文同義字 Chinese Synonyms	英文同義字 English Synonyms	控制詞彙 <i>Emtree / MeSH</i> Controlled Vocabulary
P			
I			
C			
O			

Documentation Form

Documentation Form

3. 搜尋資料庫 Searched Databases

資料庫 Database	新文通知 Alert	搜尋日期 Date searched	書目紀錄筆數 Citations					
			搜尋結果 Records identified through database searching	排除重複後 / 篇名摘要待篩 Records after duplicates removed / Records screened	全文待篩 Full-text articles assessed for eligibility	納入質性綜述 Studies included in qualitative synthesis	納入統合分析 Studies included in quantitative synthesis	
1) Embase								
2) MEDLINE								
3) CENTRAL								
4)								
5)								
additional sources	-	-						
文獻篩選流程 PRISMA flow diagram :			included:	included:	included:	included:	included:	included:
			de-duplicates:	excluded:	excluded:	說明排除理由	excluded:	說明排除理由

註 2: 篩選流程自去除重複後, 每階段都需要兩位評讀者 Reviewers 獨立進行再彙整共識, 必要時由第三位裁決 After deduplication, every screening stage requires two reviewers to check the articles independently, the files will be sent to a third reviewer if necessary.

註 3: 重複排除與篩選流程管理, 可利用相關軟體, 例如 EndNote ([for SR 教材下載](#)後須解壓縮) You can use EndNote software to manage deduplication and screening process.

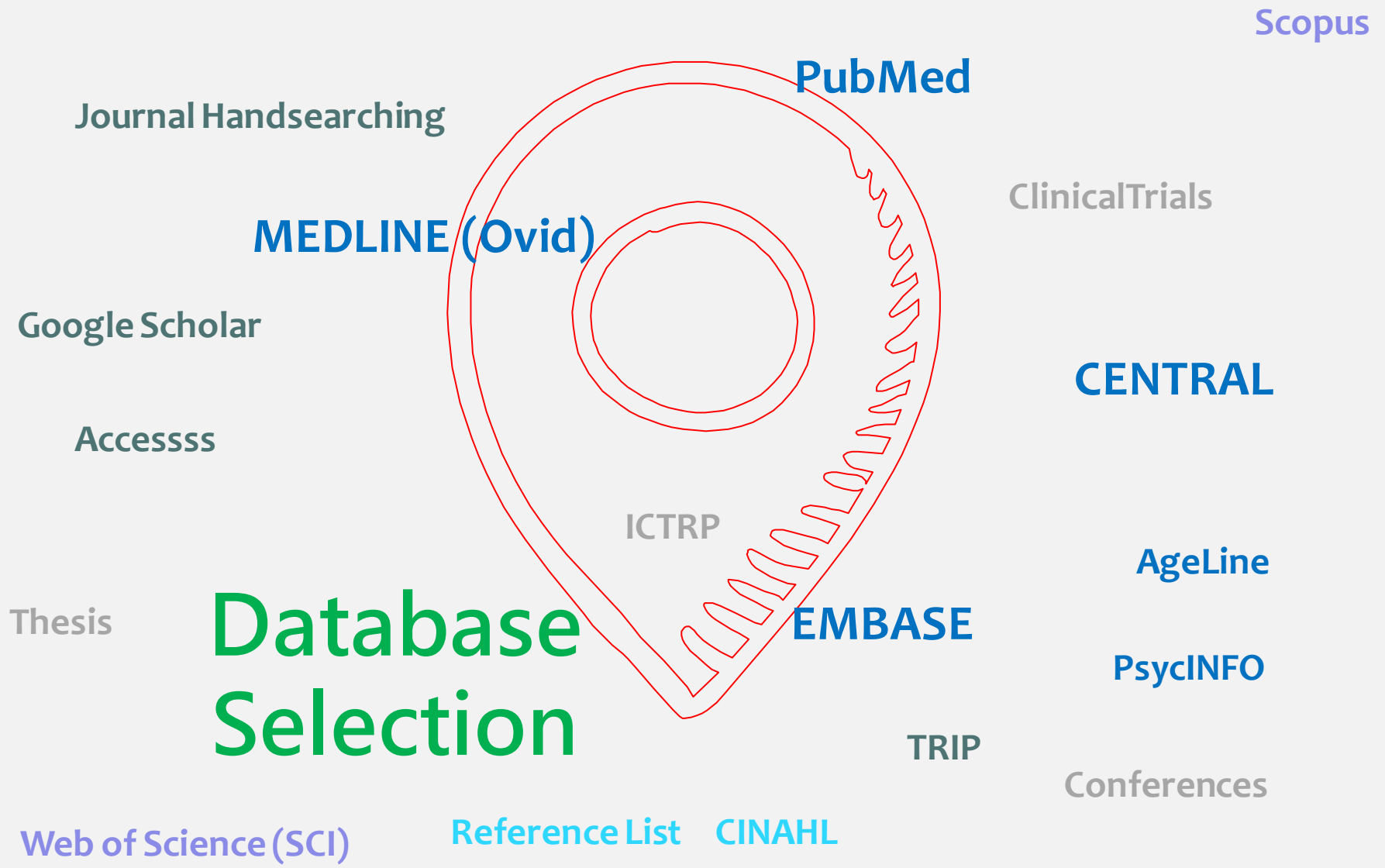
註 4: 請保存自資料庫輸出之各書目紀錄原始檔案, 可供未來更新搜尋比對新增書目使用。Please keep all the original bibliography files exported from databases for future use.

4. 搜尋策略 Search Strategy (投稿時附上此項為 Appendix) This table should be included as an appendix to journal article.

資料庫 Database	#	搜尋語法 Search syntax	結果筆數 Citations found
1) Embase	1		
	2		
	3		

5. 附註 Notes (包含檢索畫面截圖)

Notes: Include  screenshot of search results in advanced search



Database selection

● Coverage

- Core databases– MEDLINE , CENTRAL, EMBASE
- Regional databases
- In specific fields CINAHL(Nursing), AgeLine (Gerontology), Psychology & behavioral Science (Psychology)
- More
 - Citation Index databases: Web of Science (SCI) & Scopus
 - Grey literature: Trial Registers (WHO ICTRP, ClinicalTrials), Proceedings, Thesis
 - Search engines: Google Scholar, Accesssss, TRIP
 - Reference List, Journal Handsearching
 - Alerts

● Search options

- MEDLINE: PubMed, OVID, EBSCO, EMBASE.com...

Databases: Original literatures (2018.6)

Database	Coverage	Controlled vocabulary	Year	Current journal titles	Records	Unique title coverage (Compared to MEDLINE)
MEDLINE	Biomedical literature	MeSH	1946-	5,200+	24 million	
EMBASE	Additional European journal of medicine	Emtree	1947-	8,500+	32 million	Over 2,900 indexed titles
Cochrane Trials (CENTRAL)	Records from MEDLINE Embase, and records through hand-searching to identify RCTs & CCT	MeSH		-	670,000	2/5 of the records
CINAHL	Nursing and allied literature	CINAHL Headings	1960-	3,100+	4 million	Over 1,000 titles
Web of Science (Core Collection)	Complete network of citations underpinning the significant research in multidisciplinary field		1900-	18,000+	90 million	
Scopus	Complete network of citations underpinning the significant research in multidisciplinary field			23,700+	69 million	

Free Text

Synonym

Free-text Term

Text Word

Synonym

Controlled vocabulary

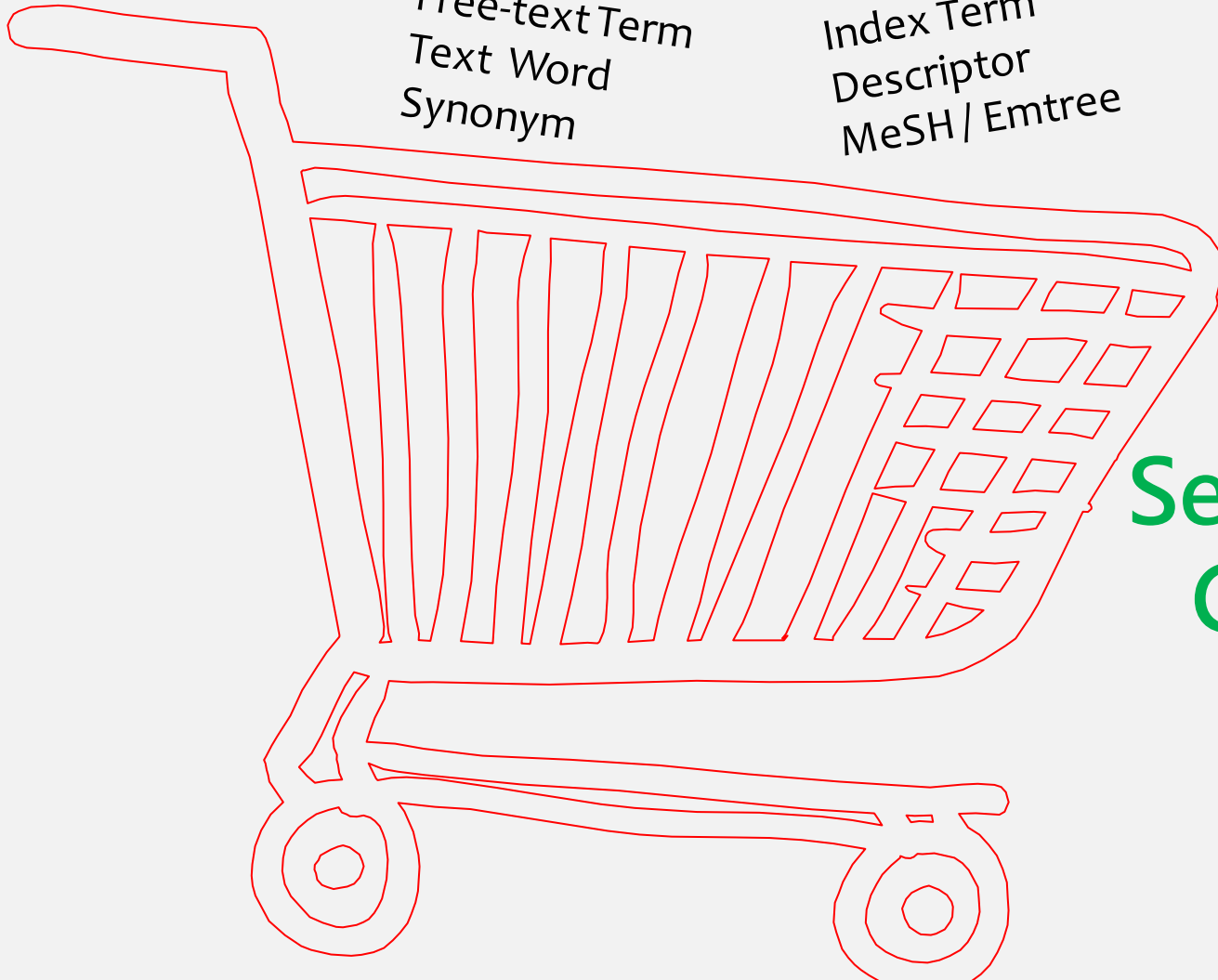
Controlled Vocabulary

Subject Heading

Index Term

Descriptor

MeSH / Emtree



Search terms
Collection

Free text (**Type** of Synonyms)

Single/plural | Parts of speech | Tense

medication compliance

Abbreviation

MC

Contextual terms

noncompliance
persistence
concordance

Synonym

adherence

patient compliance

broader or narrower terms

compliance with oral drug
compliance with injection

compliant
compliance
compliant
compliant*

American or
British

edema
oedema

Free text (Synonym) Inspiration

- Dictionary/ Translator
- Browse for possible articles → EBM Summary Databases, Google
- Controlled vocabularies- Look for synonyms
 - Emtree → Synonyms
 - MeSH → Entry Terms
- Imagination!!

Synonym: DynaMed Plus

Adhesive capsulitis of shoulder

Search Within Text



6 instance(s) of
Hydrodistention found
[Previous](#) | [Next](#)

Related Summaries

- ▶ **General Information**
- ▶ **Epidemiology**
- ▶ **Etiology and Pathogenesis**
- ▶ **History and Physical**
- ▶ **Diagnosis**
- ▼ **Treatment**
 - Treatment overview
 - Activity
 - ▶ Medications
 - Surgery and procedures
 - Consultation and referral
- ▼ **Other management**

Other management

Hydrodistention

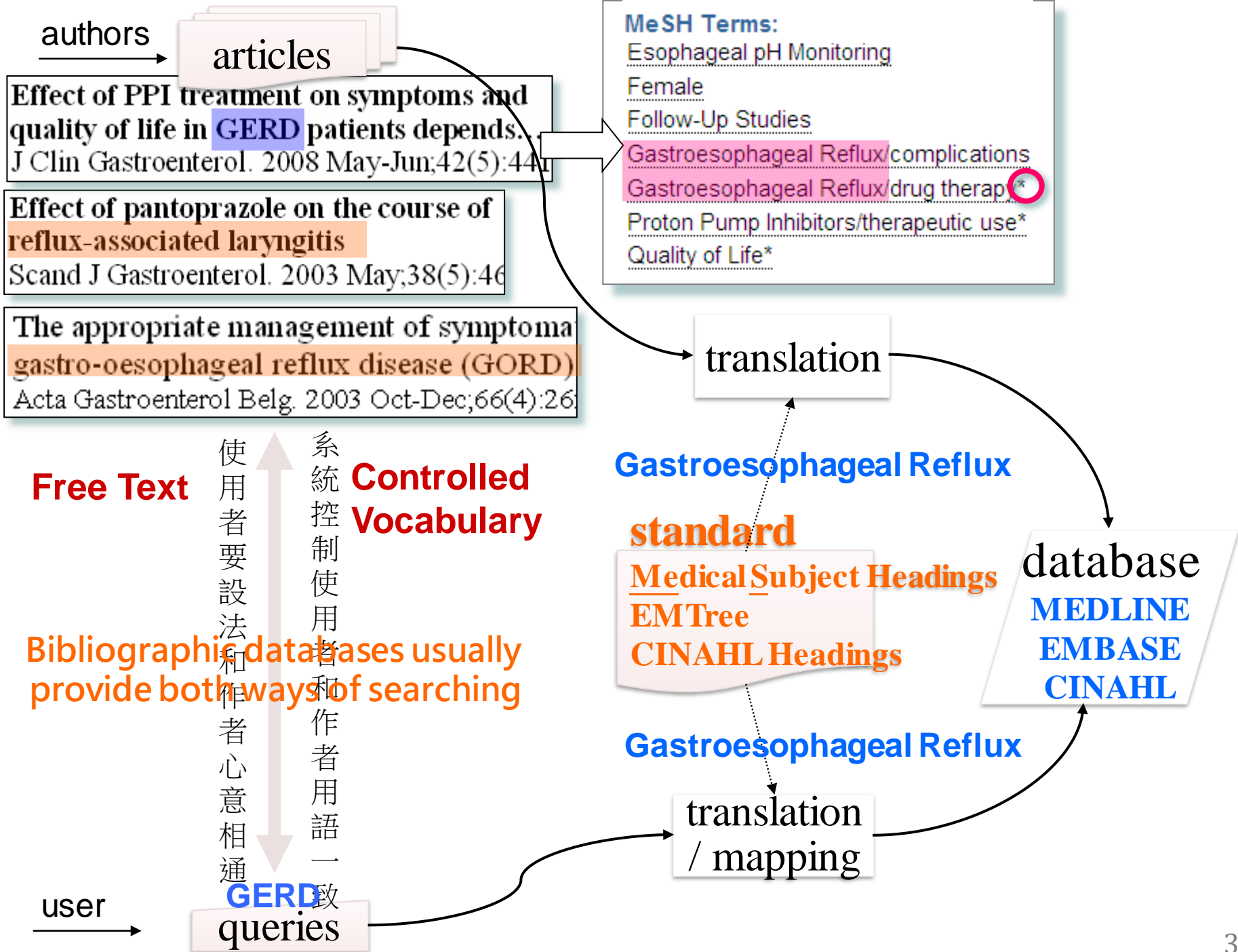
- **hydrodistention with joint manipulation under interscalene block may improve pain and function up to 12 weeks compared to single intra-articular corticosteroid injection in patients with adhesive capsulitis (level 2 [mid-level] evidence)**
 - based on randomized trial without intention-to-treat analysis
 - 136 patients (mean age 53 years) with adhesive capsulitis for ≥ 3 months randomized to hydrodistention with joint manipulation under interscalene block vs. single intra-articular corticosteroid injection and followed for 1 year
 - hydrodistention injection was mixture of 1 mL triamcinolone (40 mg), 10 mL 1% lidocaine, and 30 mL saline
 - intra-articular injection was mixture of 1 mL triamcinolone (40 mg) and 5 mL 1% lidocaine
 - all patients received oral nonsteroidal anti-inflammatory drugs for 2 weeks after procedure and rehabilitation exercises for 1 month (starting immediately after procedure in hydrodistention group and 2 weeks later in corticosteroid injection group)
 - 11% lost to follow-up and excluded from analysis
 - hydrodistention associated with
 - significant improvements in mean pain and Constant score up to 12 weeks
 - patient satisfaction, forward flexion, external rotation, and internal rotation up to 6 weeks
 - no significant differences in **Flexion, rotation, range of motion, function**
 - mean pain and Constant score at 24 and 48 weeks
 - patient satisfaction, forward flexion, external rotation, and internal rotation at 12, 24 and 48 weeks
 - Reference - J Shoulder Elbow Surg 2016 Dec;25(12):1937
- **arthrographic distention with saline plus steroid associated with short-term improvements in pain and function in adults with adhesive capsulitis (level 2 [mid-level] evidence)**
 - based on Cochrane review with limited evidence
 - systematic review of 5 randomized or controlled clinical trials evaluating arthrographic distention of glenohumeral joint in 196 adults with adhesive capsulitis

Search terms (Demo content is not complete)

Synonyms

- P** frozen shoulder*
adhesive capsuliti*
bursiti*
periarthriti*
- I** dilat*
disten*ion
hydrodilata*
hydrodisten*ion
- C** steroid*
corticosteroid*
glucocorticoid*...
- O** joint , articular
AND
motion, motility, mobili*,
rotat*, flexi*





Record Information: E m b a s e

Free text

: ti

Original Title

Clinical efficacy of hydrodistention with joint manipulation under interscalene block compared with intra-articular corticosteroid injection for frozen shoulder: a prospective randomized controlled study

Mun S.W., Baek C.H.

Journal of Shoulder and Elbow Surgery 2016 25:12 (1937-1943)

Go to publisher for the [full text](#) [Find it@NCKU](#)

Original Abstract

Background Hydrodistention is known to be an effective method of treatment for frozen shoulder. However, hydrodistention is accompanied by severe pain during the procedure. An interscalene block may relieve the severe pain associated with the procedure of hydrodistention. This study compared the clinical efficacy of hydrodistention with joint manipulation under an interscalene block with that of intra-articular corticosteroid injection. Methods This prospective randomized controlled study included 121 patients presenting with frozen shoulder. Patients were randomized into 2 groups; those in group A (60 patients) were treated by hydrodistention with joint manipulation under an interscalene block, and those in group B (61 patients) were managed with intra-articular corticosteroid injection. Pain intensity and patient satisfaction were assessed by the visual analog scale. Functional outcomes were assessed by the Constant score and the range of shoulder motion. Results Group A demonstrated better patient satisfaction and earlier restoration of range of motion than group B at 6 weeks ($P \leq .001$). At 12 weeks, the pain score was lower and the Constant score was better in group A than in group B. However, at 12 months after treatment, pain score ($P = .717$), patient satisfaction ($P = .832$), range of motion ($P > .05$), and Constant score ($P = .480$) were similar in the 2 groups. Conclusion Hydrodistention combined with joint manipulation under an interscalene block provided earlier pain relief and restoration of shoulder range of motion and function compared with single intra-articular corticosteroid injection in patients with primary frozen shoulder.

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Drug Terms

corticosteroid, lidocaine, sodium chloride, triamcinolone

[open all drug terms](#)

Disease Terms

frozen shoulder, shoulder pain

[open all disease terms](#)

Other Terms

adult, analgesia, article, Constant score, controlled study, female, functional assessment, human, hydrodistention, interscalene nerve block, joint function, joint manipulation, major clinical study, male, manipulative medicine, nerve block, pain intensity, patient satisfaction, physical medicine, priority journal, randomized controlled trial, range of motion, tissue expansion, visual analog scale

Author Keywords

adhesive capsulitis, corticosteroid injection, frozen shoulder, Hydrodistention, interscalene block, manipulation

Correspondence Address

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Shoulder M.D.: Chemistry, Massachusetts Institute of Technology, Cambridge, MA, United States.

/ exp

Controlled
vocabulary

: de

: kw

Emtree Search

Embase®

Search

Emtree

Journals

Results

My tools

Browse Emtree



Query Builder ▼

Build a multi-term search query

Find Term Browse by Facet

Type word or phrase (without quotes)

joint pain

Find Term > 2

joint pain
use preferred term: [arthralgia](#) 3

hip joint pain
use preferred term: [hip pain](#)

pain, joint
use preferred term: [arthralgia](#)

temporomandibular joint pain
use preferred term: [temporomandibular joint disorder](#)



History

This term was added to Emtree in 1974

Synonyms

arthrodynia; joint pain; pain, joint; polyarthralgia

Dorland's dictionary



arthralgia = pain in a joint; called also arthrodynia

arthrodynia = arthralgia.

polyarthralgia = arthralgia in many different joints.



Identify Controlled Vocabulary— Review highly relevant articles

Title  clowning 

5

Therapeutic **clowning**-history, medicine and evidence

Finlay F., Lenton S., Baverstock A.

Archives of Disease in Childhood 2018 103 Supplement 1 (A180-)

Embase [v Abstract](#) [^ Index Terms](#) [> View Full Text](#) [> Find it@NCKU](#)

Disease Terms

pain^o

Other Terms

Africa^o, anesthesia^o, anxiety^o, apple^o, Asia^o, atmosphere^o, Australia^o, boredom^o, case report^o, clinical article^o, c^o, **history of medicine**^o, human^o, **humor**^o, **laughter**^o, loneliness^o, male^o, music^o, nonhuman^o, nose^o, pediatric^o

15

Clowning as a Complementary Approach for Reducing Iatrogenic Effects in Pediatrics

Dionigi A.

AMA journal of ethics 2017 19:8 (775-782) Cited by: 0

MEDLINE [v Abstract](#) [^ Index Terms](#) [> View Full Text](#) [> Find it@NCKU](#)

Disease Terms

iatrogenic disease^o, pain^o


Other Terms

alternative medicine^o, anxiety^o, child^o, hospitalization^o, hospitalized child^o, human^o, **humor**^o, mental stress^o, **pedi**

MeSH Search Ovid Medline- Smart Search


Basic Search | Find Citation | Search Tools | Search Fields | Advanced Search | Multi-Field Search

1 Resource selected | [Hide](#) | [Change](#)

 Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present

Enter keyword or phrase Keyword Author Title Journal

(* or \$ for truncation)

 Search

Your term mapped to the following Subject Headings:
Click on a subject heading to view more general and more specific

Include All Subheadings

Combine selections with:

Select	Subject Heading	Explode	Focus
<input checked="" type="checkbox"/>	"Wit and Humor as Topic"	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Laughter Therapy	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Child	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Child, Hospitalized	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	Hospitals, Pediatric	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Laughter	<input type="checkbox"/>	<input type="checkbox"/>

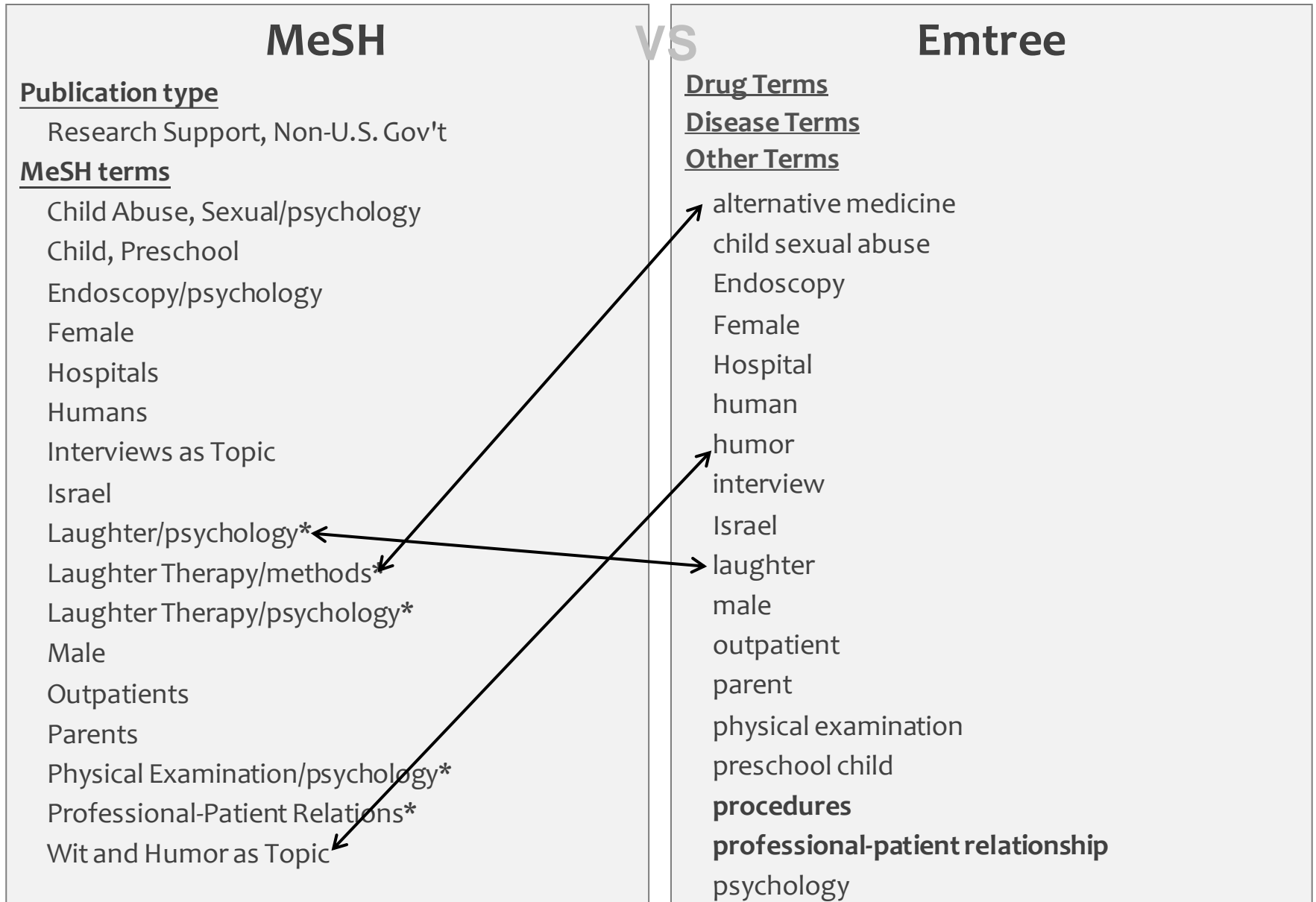
Map Term to Subject Heading

4 Select appropriate controlled vocabularies

Behind the scene:

All literatures related to "clown" will be searched, and the top 10 MeSH terms assigned for the articles will be provided for you to choose.

Seriously clowning: Medical clowning interaction with children undergoing invasive examinations in hospitals. *Soc Work Health Care. 2016 55:296-313.*



Search terms (Demo content is not complete)

Synonyms	Controlled vocabularies
P frozen shoulder* adhesive capsuliti* bursiti* periarthriti*	Frozen Shoulder [Emtree] Humeroscapular Periarthritis Bursitis Bursitis [MeSH]
I dilat* (-ation, -ion) disten*ion hydrodilata* hydrodisten*ion	Intraarticular Drug Administration Hydrodistension [candidate term] Injections, Intra-Articular
C steroid* corticosteroid* glucocorticoid*...	Steroid Corticosteroid Steroid Adrenal Cortex Hormones
O joint , articular AND motion*, motilit*, mobili*, rotat*, flexi*	Joint Characteristics and Functions Joint Limitation Joint Mobility Range of Motion, Articular



Synonym: Appendices of previous SR in Cochrane Library

Zhu(2011): [Acupuncture](#) for pain in endometriosis

Appendix 1. Electronic Searches: Ovid

- 10 exp Acupuncture/ (758)
- 11 exp acupuncture therapy/ or exp acupuncture analgesia/ or exp acupuncture electroacupuncture/ or exp meridians (11341)
- 12 acupressure\$.tw. (321)
- 13 Acupuncture.tw. (8965)
- 14 (electroacupuncture or electroacupuncture.tw. (11341)
- 15 meridian\$.tw. (2643)
- 16 mox\$.tw. (4513)
- 17 (shiatsu or tui na).tw. (513)
- 18 needling.tw. (777)
- 19 shu.tw. (317)
- 20 acup\$ point\$.tw. (752)
- 21 or/10-20

Li (2011): [Acupuncture](#) for Attention Deficit Hyperactivity Disorder...

Appendix 1. Search strategy for MEDLINE (Ovid)

- 14 acupuncture therapy/ or acupuncture, ear/ or electroacupuncture/
- 15 acupunct\$.tw.
- 16 or/14-15

Cheuk (2012): [Acupuncture](#) for insomnia

Appendix 2. Search strategy for MEDLINE

- 1. exp acupuncture/
- 2. acupunc\$.mp
- 3. acupress\$.mp
- 4. electroacupunc\$.mp
- 5. meridian\$.mp
- 6. acupoints\$.mp

Embase[®]

Starts from Embase ...

of search results: two times more than MEDLINE

Easier to modify search

Establish search strategy

Search Options

Use Query String to
formulate search strategy

Embase®

Search

Emtree

Journals

Results

Quick Search

Quick

PICO

PV Wizard

Advanced

Drug

Disease

Device

Article

Authors

Try-out for
Systematic Review

Results: History P I C O- Controlled vocabulary/ Free text

Embase®

Search Emtree Journals Results

Results

"frozen shoulder"/exp OR "humeroscapular periarthritis"/de
searches free-text by default - add 'exp' to explode
("frozen shoulder*" OR "adhesive capsuliti*" OR bursiti* OR peiarthriti*):ti,ab,kw,de

History Save | Delete | Print view | Export | Email using And Or

- | | | | |
|--------------------------|----|---|--------------------------------|
| <input type="checkbox"/> | #8 | motion*:ti,ab,de OR motilit*:ti,ab,de OR mobili*:ti,ab,de OR rotat*:ti,ab,de OR flexibilit*:ti,ab,de | O Free text |
| <input type="checkbox"/> | #7 | 'joint characteristics and functions'/de OR 'joint limitation'/exp OR 'joint mobility'/exp | O controlled vocabulary |
| <input type="checkbox"/> | #6 | steroid*:ti,ab,de OR corticosteroid*:ti,ab,de OR glucocorticoid*:ti,ab,de | C Free text |
| <input type="checkbox"/> | #5 | 'steroid'/exp | C controlled vocabulary |
| <input type="checkbox"/> | #4 | dilat*:ti,ab,de OR disten*ion:ti,ab,de OR hydrodil*at*:ti,ab,de OR hydrodisten*ion:ti,ab,de | I Free text |
| <input type="checkbox"/> | #3 | 'hydrodistension'/exp | I controlled vocabulary |
| <input type="checkbox"/> | #2 | 'frozen shoulder*':ti,ab,de OR 'adhesive capsuliti*':ti,ab,de OR bursiti*:ti,ab,de OR periarthriti*:ti,ab,de | P Free text |
| <input type="checkbox"/> | #1 | 'frozen shoulder'/exp OR 'humeroscapular periarthritis'/exp | P controlled vocabulary |

Results: History

P I C O- Combination of previous searches

Embase®

Search

Emtree

Journals

Results

Results

(#1 OR #2) AND (#3 OR #4) AND (#5 OR #6) AND (#7 OR #8)

History Save | Delete | Print view | Export | Email Combine > using And

<input type="checkbox"/>	#11	(#1 OR #2) AND (#3 OR #4)	206	PI
<input type="checkbox"/>	#10	(#1 OR #2) AND (#3 OR #4) AND (#5 OR #6)	105	PIC
<input type="checkbox"/>	#9	(#1 OR #2) AND (#3 OR #4) AND (#5 OR #6) AND (#7 OR #8)	78	PICO
<input type="checkbox"/>	#8	motion*:ti,ab,de OR motilit*:ti,ab,de OR mobili*:ti,ab,de OR rotat*:ti,ab,de OR flexibilit*:ti,ab,de	860,694	O
<input type="checkbox"/>	#7	'joint characteristics and functions'/de OR 'joint limitation'/exp OR 'joint mobility'/exp	31,146	O
<input type="checkbox"/>	#6	steroid*:ti,ab,de OR corticosteroid*:ti,ab,de OR glucocorticoid*:ti,ab,de	720,550	C
<input type="checkbox"/>	#5	'steroid'/exp	1,427,900	C
<input type="checkbox"/>	#4	dilat*:ti,ab,de OR disten*ion:ti,ab,de OR hydrodil*at*:ti,ab,de OR hydrodisten*ion:ti,ab,de	261,121	I
<input type="checkbox"/>	#3	'hydrodistension'/exp	13	I
<input type="checkbox"/>	#2	'frozen shoulder*':ti,ab,de OR 'adhesive capsuliti*':ti,ab,de OR bursiti*:ti,ab,de OR periarthriti*:ti,ab,de	10,377	P
<input type="checkbox"/>	#1	'frozen shoulder'/exp OR 'humeroscapular periarthritis'/exp	3,074	P

Results: History Limit to Embase (MEDLINE Excluded)

Embase®

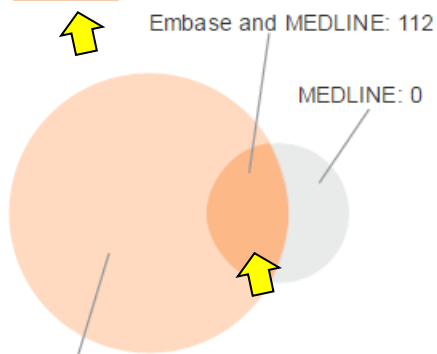
Search Entree Journals Results My tools Register Login

Search > Mapping ▾ Date ▾ Sources ▾ Fields ▾ Quick limits ▾ EBM ▾ Pub. types ▾ Languages ▾ Gender ▾ Age ▾ Animal ▾

Results Filters

+ Expand - Collapse all Apply >

Sources ^



Drugs ∨




Diseases ∨

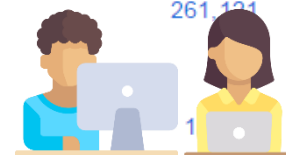
<input type="checkbox"/>	History	Save Delete Print view Export Email	Combine >	using <input checked="" type="radio"/> And <input type="radio"/>
<input type="checkbox"/>	#12	#11 AND [embase]/lim		173
<input type="checkbox"/>	#11	(#1 OR #2) AND (#3 OR #4)		206
<input type="checkbox"/>	#10	(#1 OR #2) AND (#3 OR #4) AND (#5 OR #6)		105
<input type="checkbox"/>	#9	(#1 OR #2) AND (#3 OR #4) AND (#5 OR #6) AND (#7 OR #8)		78
<input type="checkbox"/>	#8	motion*:ti,ab,de OR motilit*:ti,ab,de OR mobili*:ti,ab,de OR rotat*:ti,ab,de OR flexibilit*:ti,ab,de		860,694
<input type="checkbox"/>	#7	'joint characteristics and functions'/de OR 'joint limitation'/exp OR 'joint mobility'/exp		31,146
<input type="checkbox"/>	#6	steroid*:ti,ab,de OR corticosteroid*:ti,ab,de OR glucocorticoid*:ti,ab,de		720,550
<input type="checkbox"/>	#5	'steroid'/exp		1,427,900
<input type="checkbox"/>	#4	dilat*:ti,ab,de OR disten*ion:ti,ab,de OR hydrodil*:ti,ab,de OR hydrodisten*ion:ti,ab,de		261,121
<input type="checkbox"/>	#3	'hydrodistension'/exp		13
<input type="checkbox"/>	#2	'frozen shoulder*:ti,ab,de OR 'adhesive capsuliti*:ti,ab,de OR bursiti*:ti,ab,de OR periarthriti*:t		10,377
<input type="checkbox"/>	#1	'frozen shoulder'/exp OR 'humeroscapular periarthriti*/exp		3,074

Results: History **Apply RCT Filters**

Results

searches free-text by default – add /exp to explode

<input type="checkbox"/> History	Save Delete Print view Export Email	Combine >	using <input checked="" type="radio"/> And <input type="radio"/> Or	^ Collapse	
<input type="checkbox"/> #13	#12 AND (('crossover procedure':de OR 'double-blind procedure':de OR 'randomized controlled trial':de) AND or AND 'single-blind procedure':de OR (random*:de,ab,ti AND or :de,ab,ti AND factorial*:de,ab,ti) OR crossover*:de,ab,ti OR ((cross NEXT/1 over*):de,ab,ti) OR placebo*:de,ab,ti OR ((doubl* NEAR/1 blind*):de,ab,ti) OR ((singl* NEAR/1 blind*):de,ab,ti) OR assign*:de,ab,ti OR allocat*:de,ab,ti OR volunteer*:de,ab,ti)			25	
<input type="checkbox"/> #12	#11 AND [embase]/lim			173	
<input type="checkbox"/> #11	(#1 OR #2) AND (#3 OR #4)			206	
<input type="checkbox"/> #10	(#1 OR #2) AND (#3 OR #4) AND (#5 OR #6)			105	
<input type="checkbox"/> #9	(#1 OR #2) AND (#3 OR #4) AND (#5 OR #6) AND (#7 OR #8)			78	
<input type="checkbox"/> #8	motion*:ti,ab,de OR motilit*:ti,ab,de OR mobili*:ti,ab,de OR rotat*:ti,ab,de OR flexibilit*:ti,ab,de	 Edit	 Email alert	 RSS feed	860,694
<input type="checkbox"/> #7	'joint characteristics and functions'/de OR 'joint limitation'/exp OR 'joint mobility'/exp			31,146	
<input type="checkbox"/> #6	steroid*:ti,ab,de OR corticosteroid*:ti,ab,de OR glucocorticoid*:ti,ab,de			720,550	
<input type="checkbox"/> #5	'steroid'/exp			1,427,900	
<input type="checkbox"/> #4	dilat*:ti,ab,de OR disten*ion:ti,ab,de OR hydrodil*:ti,ab,de OR hydrodisten*ion:ti,ab,de			261,131	
<input type="checkbox"/> #3	'hydrodistension'/exp			1	
<input type="checkbox"/> #2	'frozen shoulder*:ti,ab,de OR 'adhesive capsuliti*:ti,ab,de OR bursiti*:ti,ab,de OR periarthriti*:ti,ab,de			1	
<input type="checkbox"/> #1	'frozen shoulder'/exp OR 'humeroscapular peri arthritis'/exp			3,074	



Search Syntax

Boolean Operator

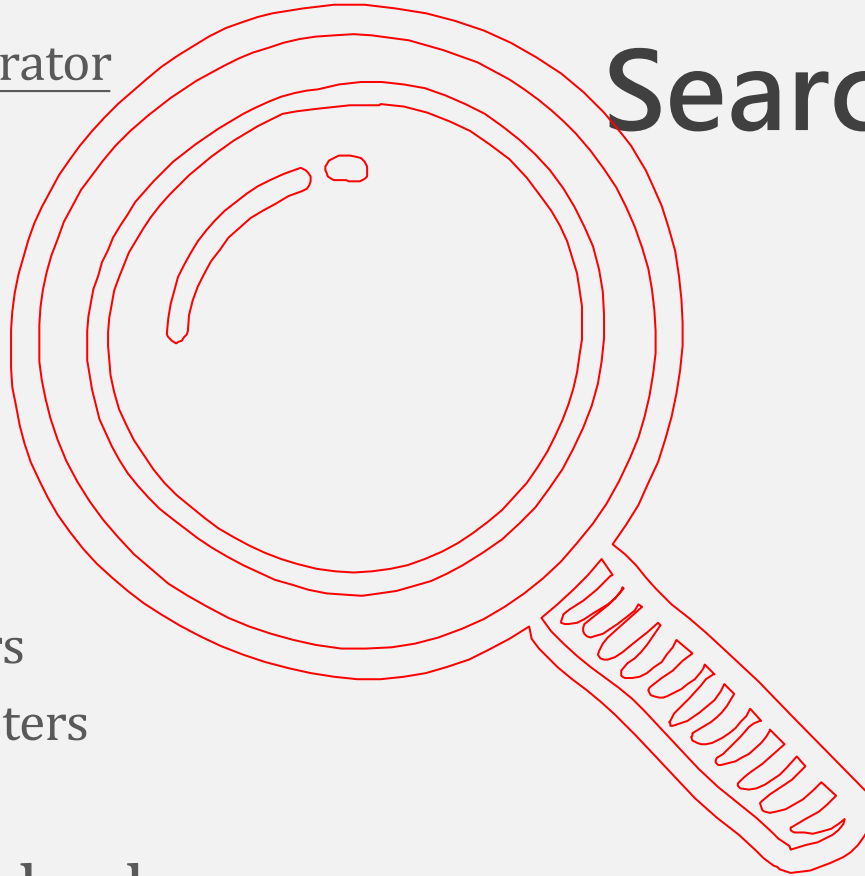
Phrase

Proximity

Truncation

Search fields

Search Strategy



Filters

RCT Filters

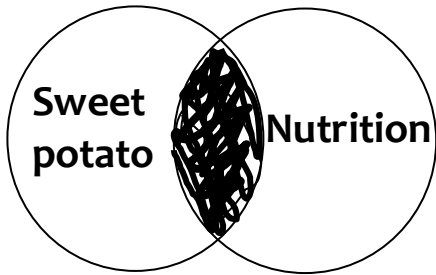
Cohort Filters

Diagnosis Filters

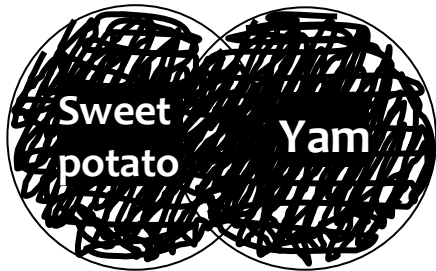
.....

Golden Standard

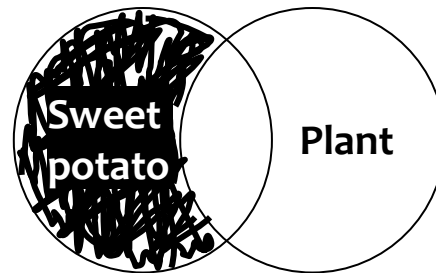
Boolean Operator: **AND/ OR/ NOT**



AND

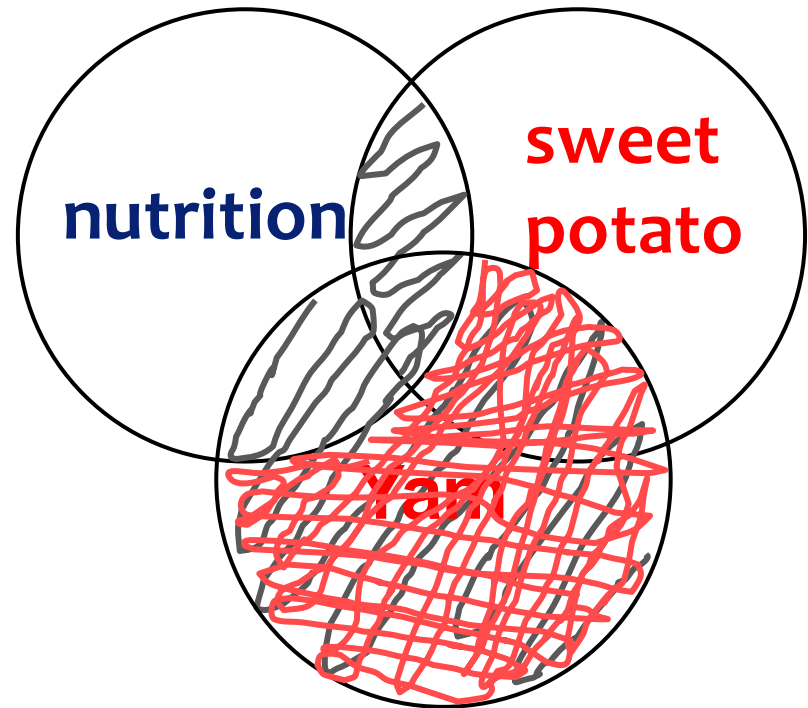


OR



NOT

1. nutrition AND sweet potato OR yam
 2. sweet potato OR yam AND nutrition
 3. nutrition AND (sweet potato OR yam)
- = (nutrition AND sweet potato) OR (nutrition AND yam)



Phrases, Proximity Operator (Embase)

Operator	Hits	Meaning
"high dose"	119,000	Exact phrase search
high next/2 dose	123,000	This will find terms which are within 2 words of each other, in the order specified. ex. Effects of high vs. low dose statin therapy...
high near/2 dose	124,000	This will find terms which are within 2 words of each other, in either direction. ex. H7N9 influenza virus shows low infectious dose, high growth rate ...
high dose ^ AND	435,000	high AND dose → more irrelevant articles ex. A patient complained he would adjust the dose of medication, because of his high or low mood...

Search fields matter

roselle



All fields

Title

Title or Abstract

Title, Abstract, Author keywords

Author keywords

Emtree term - exploded

Abstract

Which one is highly relevant? (Roselle)

[Cost-effectiveness of interferon gamma release assays vs tuberculin skin tests in health care workers.](#)

1

de Perio MA, Tsevat J, **Roselle** GA, Kralovic SM, Eckman MH.
Arch Intern Med. 2009 Jan 26;169(2):179-87.

[Roselle for hypertension in adults.](#)

2

Ngamjarus C, Pattanittum P, Somboonporn C.

Cochrane Database Syst Rev. 2010 Jan 20;(1):CD007894. doi: 10.1002/14651858.CD007894.

[Nutritional composition of minor indigenous fruits: cheapest nutritional source for the rural people of Bangladesh.](#)

3

Abstract

In line of the development of a food composition database for Bangladesh, 10 minor indigenous fruits were analysed for their nutrient composition comprising ascorbic acid, carotenoids and mineral values. Nutrient data obtained have been compared with published data reported in different literatures, book and United States Department of Agriculture-National Nutrient Database for Standard Reference. Ascorbic acid was highest in Wood apple and lowest in **Roselle**. Monkey

Controlled vocabulary

Emtree

/exp

explode narrower terms

/exp/mj

explode narrower terms & major focus

/de

this term only

/mj

this term only & major focus

Free Text

all fields **:all**

:ti, ab, kw, de

title of articles, abstract,
keyword, controlled vocabulary

:ti, ab

title of articles, abstract

:ti

title of articles

"frozen shoulder"**/exp**

broaden

("frozen shoulder*" or
bursiti*):**ti,ab,kw,de**

OR

"frozen shoulder"**/de**

precise

("frozen shoulder*" or
bursiti*):**ti**

"frozen shoulder"**/mj**

Search syntax for **Systematic Review**

(Update: 2020.4)

Syntax	PubMed	OVID	Embase	EBSCOhost	Cochrane L	WoS	Scopus
Truncation (multi-character)	combin*	combin* an*emia*	combin* an*emia*	combin*	combin* an*emia *glip*tin*	combin* an*emia *glip*tin*	combin* an*emia *glip*tin*
Truncation (one character)		combine? g?rd	combine? g?rd ? = 1 character	combine? g?rd ? = 1 character # = 1 or more character	combine? g?rd ?lide	combine? g?rd ?lide ? = 1 character \$ = 1 or more character	combine? g?rd ?lide ? = 1 character
Exact phrase search	"high dose" <small>truncation is not permitted within a phrase search</small>	"high dose"	"high dose" 'high dose'	"high dose"	"high dose"	"high dose"	"high dose"
Proximity (in exact order)			high next/3 dose separated by 2 words	high w2 dose separated by 2 words	high next/2 dose separated by 2 words		high pre/2 dose separated by 2 words
Proximity (unordered)		high adj3 dose separated by 2 words	high near/3 dose separated by 2 words	high n2 dose separated by 2 words	high near/2 dose separated by 2 words	high near/2 dose separated by 2 words	high w/2 dose separated by 2 words
Boolean operator	AND (UPPERCASE)	and (UPPER & lowercase)	and	and	and	and	and
	OR	or	or	or	or	or	or
	NOT	not	not	not	not	not	and not
Free-text search in certain fields <small>more→ less→</small>	pain[tw] OR ache[tw] pain[tiab] OR ache[tiab] add individually	(pain OR ache). mp (pain OR ache). tw	("sore throat" OR pain): ti,ab,kw,de ("sore throat" OR pain): ti,ab,kw	pain OR ache Search in "Select a Field (Optional)" ti (pain OR ache) OR ab (pain OR ache)	(pain OR ache): ti,ab,kw	ts=(pain)	title-abs-key(pain)
Controlled vocabulary search <small>(w/ or w/o narrower terms)</small>	"pain"[mh] "pain"[mh:noexp] add individually	exp "pain"/ "pain"/ add individually	"pain"/ exp "pain"/ de add individually	mh ("pain+" OR "pain management+") mh ("pain" OR "pain management") enter terms in parentheses or add individually	[mh "pain"] [mh ^"pain"] add individually lowercase only	-	-
Subheading	surgery[sh] surgery[sh:noexp]	su. xs su. fs	surgery: lnk	mw "SU"	[mh /SU]	-	-
Combine search sets manually	#1 AND #2	1 AND 2	#1 AND #2	S1 AND S2	#1 AND #2	#1 AND #2	#1 AND #2

RCT Filters: EMBASE

Source	Embase syntax	
Lefebvre et al (UK Cochrane)	('crossover procedure':de OR 'double-blind procedure':de OR 'randomized controlled trial':de OR 'single-blind procedure':de OR (random* OR factorial* OR crossover* OR cross NEXT/1 over* OR placebo* OR doubl* NEAR/1 blind* OR singl* NEAR/1 blind* OR assign* OR allocat* OR volunteer*):de,ab,ti)	1.06 million
Wong et al	sensitivity maximizing strategy: (random*:ab,ti OR (clinical NEXT/1 trial*):de,ab,ti OR 'health care quality'/exp)	3.85 million
	specificity maximizing strategy: ((double NEXT/1 blind*):de,ab,ti OR placebo*:ab,ti OR blind*:ab,ti)	460,000
	best optimization of sensitivity and specificity: (random*:ab,ti OR placebo*:de,ab,ti OR (double NEXT/1 blind*):ab,ti)	1.33 million
SIGN	('clinical trial'/de OR 'randomized controlled trial'/de OR 'randomization'/de OR 'single blind procedure'/de OR 'double blind procedure'/de OR 'crossover procedure'/de OR 'placebo'/de OR 'prospective study'/de OR 'randomi?ed controlled' NEXT/1 trial* OR rct OR 'randomly allocated' OR 'allocated randomly' OR 'random allocation' OR allocated NEAR/2 random OR single NEXT/1 blind* OR double NEXT/1 blind* OR (treble OR triple) NEAR/1 blind* OR placebo*)	1.66 million

RCT Filters: MEDLINE

Search Result	PubMed syntax	Ovid syntax
<p>1</p> <p>sensitivity-maximizing</p>	<p>((randomized controlled trial[pt] OR controlled clinical trial[pt] OR randomized[tiab] OR randomised[tiab] OR placebo[tiab] OR drug therapy[sh] OR randomly[tiab] OR trial[tiab] OR groups[tiab]) NOT (animals [mh] NOT humans [mh]))</p> <p>3.3 million</p>	<p>((randomized controlled trial.pt. or controlled clinical trial.pt. or randomi*ed.ab. or placebo.ab. or drug therapy.fs. or randomly.ab. or trial.ab. or groups.ab.) not (exp animals/ not humans.sh.))</p> <p>3.3 million</p>
<p>2</p> <p>sensitivity- and precision-maximizing</p>	<p>((randomized controlled trial[pt] OR controlled clinical trial[pt] OR randomized[tiab] OR randomised[tiab] OR placebo[tiab] OR clinical trials as topic[mesh:noexp] OR randomly[tiab] OR trial[ti]) NOT (animals[mh] NOT humans [mh]))</p> <p>960,000</p>	<p>((randomized controlled trial.pt. or controlled clinical trial.pt. or randomi*ed.ab. or placebo.ab. or clinical trials as topic.sh. or randomly.ab. or trial.ti.) NOT (exp animals/ not humans.sh.))</p> <p>960,000</p>

Adapt Search Strategy for databases in 3 Steps: Starting from Embase

- ① Mapping controlled vocabulary
- ② Adapt search syntax
- ③ Apply Filters (Type of Question/Study)
 - Type of Questions (Dx, Tx, AE...) or Study Design(RCT, Cohort...)
 - Databases (Embase, MEDLINE...)
 - Interface (Ovid, PubMed...)

Adapt Search Syntax for Different Databases

Steps	Embase	> Ovid Medline	> PubMed	> CENTRAL
① Mapping controlled vocabulary	"Frozen Shoulder"/exp OR "Humeroscapular Periarthritis"/exp OR Bursitis/exp	exp Bursitis/	Bursitis[mesh]	[mh Bursitis]
② Search syntax	("frozen shoulder*" OR "adhesive capsuliti*" OR bursiti* OR periarthriti*):ti,ab,kw,de	("frozen shoulder*" OR "adhesive capsuliti*" OR bursiti* OR periarthriti*).mp	frozen shoulder*[tw] OR adhesive capsuliti*[tw] OR bursiti*[tw] OR periarthriti*[tw]	("frozen shoulder*" OR "adhesive capsuliti*" OR bursiti* OR periarthriti*):ti,ab,kw
③ Apply Filter Study design: RCT	#12 AND ('crossover procedure':de OR 'double-blind procedure':de OR 'randomized controlled trial':de OR 'single-blind procedure':de OR (random* OR factorial* OR crossover* OR cross NEXT/1 over* OR placebo* OR doubl* NEAR/1 blind* OR singl* NEAR/1 blind* OR assign* OR allocat* OR volunteer*):de,ab,ti)	12 AND ((randomized controlled trial.pt. or controlled clinical trial.pt. or randomi*ed.ab. or placebo.ab. or drug therapy.fs. or randomly.ab. or trial.ab. or groups.ab.) not (exp animals/ not humans.sh.))	#12 AND ((randomized controlled trial[pt] OR controlled clinical trial[pt] OR randomized[tiab] OR randomised[tiab] OR placebo[tiab] OR drug therapy[sh] OR randomly[tiab] OR trial[tiab] OR groups[tiab]) NOT (animals [mh] NOT humans [mh]))	N/A

Ovid MEDLINE

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<input type="checkbox"/>	# ▲	Searches	Results	Type	Actions	Annotations
<input type="checkbox"/>	1	exp Bursitis/	4502	Advanced	Display Results More ▼	
<input type="checkbox"/>	2	("frozen shoulder*" or "adhesive capsuliti*" or bursiti* or periarthriti*).mp.	6656	Advanced	Display Results More ▼	

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Enter keyword or phrase
(* or \$ for truncation)

Keyword Author Title Journal

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Include Multimedia

Map Term to Subject Heading

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Please note that the Advanced Search is optimised for English search terms. Certain features, such as search operators and MeSH terms, are only available in English.

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-	+	#1	[mh Bursitis]					304	
-	+	#2	("frozen shoulder*" OR "adhesive capsuliti*" OR bursiti* OR periarthriti*):ti,ab,kw					808	
-	+	#3	Manually type a search term here or click on the S (Search Wizard) or MeSH button to compose one	S	MeSH			N/A	

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Database Search

Databases	Coverage	Date	Result hits			
			# of results	Deduplication	Screened by abstract	Screened by fulltext
1)MEDLINE [Ovid]	1946-	2013/9/22	22	<pre> graph TD A[Records identified through searching 10 databases (n = 262)] --> B[Records identified (n = 263)] C[Additional records retrieved through: checking reference lists (n=0) e-mail alerts for new by databases (n = 1)] --> B B --> D[Records screened by title/abstract (n = 243)] B --> E[Duplicates (n = 20)] D --> F[Full-text articles assessed for eligibility (n = 20)] D --> G[Records excluded (n = 223)] F --> H[Five studies included in qualitative synthesis (n = 12, from 5 journal articles, 3 meeting abstracts, 4 registry)] F --> I[Full-text articles excluded, with reasons: 4 coverage not matched 2 non-clinical trials 2 articles of feasibility trial (n = 8)] H --> J[Five studies included in quantitative synthesis (meta-analysis) (n = 5)] </pre>		
2)Embase	1950-	2013/9/22	44			
3)CENTRAL	-	2013/9/22	17			
4)WHO ICTRP	-	2013/9/22	25			
5)PEDro	-	2013/9/22	22			
6)CINAHL	1960-	2013/9/22	3			
7)Other resources	-		1			
Total			134	100	20	14