



Epidemiological Research Training Course VII – 1
August 16-20, 2016
University of Medicine and Pharmacy
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Conducting a literature search

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Clinical scenario

- A 26 year-old female had Grave's disease for two months. She was treated with PTU.
- Recently, her menstrual period was irregular and she was diagnosed pregnancy by her doctor (OBG)
- However, she was afraid that PTU is not safe for women with pregnancy
- What do you do?

What do you do?

1. “You or me, who is a doctor?”
2. “Please continue your medications and do not worry about this”
3. “I will answer your question next visit”
4. “Sorry, I don’t know”

3

Outline

1. Explore PubMed database
2. Develop the search strategy
3. Run the search in PubMed
4. Homework

4

Five steps for practice of evidence-based medicine (EBM)

Step 1: Formulating answerable clinical

Step 2: Finding the best evidence

Step 3: Appraising critically the evidence

Step 4: Applying the evidence

Step 5. Evaluating performance

→ *The electronic databases*

Sackett DL. Evidence-based medicine. Semin Perinatol. 1997;21:3–5

Web Based Databases of Biomedical Information

Original studies

Individual Journals
Searchable Databases

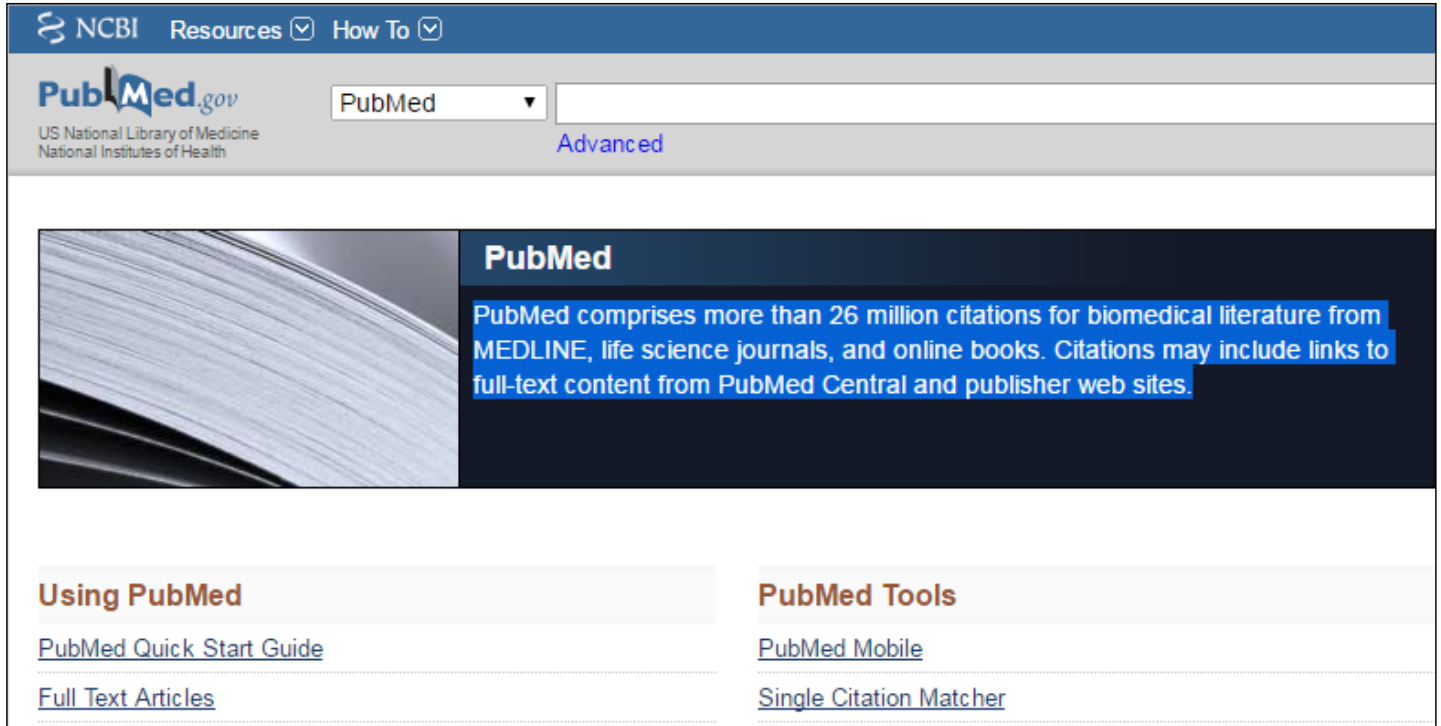
MedLine^F
PubMed^F
EMBASE^S
CINAHL^S
PsycINFO^S
CANCERnet^F
SPORTDiscus^S
POPLINE^F

Synthesized databases

Cochrane Collaboration^S
ACP Journal Club^S
Clinical Practice Guidelines^S
or ^F
UpToDate^S
TRIP database^S
EBM Reviews^S

F = Free; S = subscription based

Database is a collection of data organized to allow easy retrieval



NCBI Resources How To

PubMed.gov
US National Library of Medicine
National Institutes of Health

PubMed

Advanced

PubMed

PubMed comprises more than 26 million citations for biomedical literature from MEDLINE, life science journals, and online books. Citations may include links to full-text content from PubMed Central and publisher web sites.

Using PubMed

[PubMed Quick Start Guide](#)

[Full Text Articles](#)

PubMed Tools

[PubMed Mobile](#)

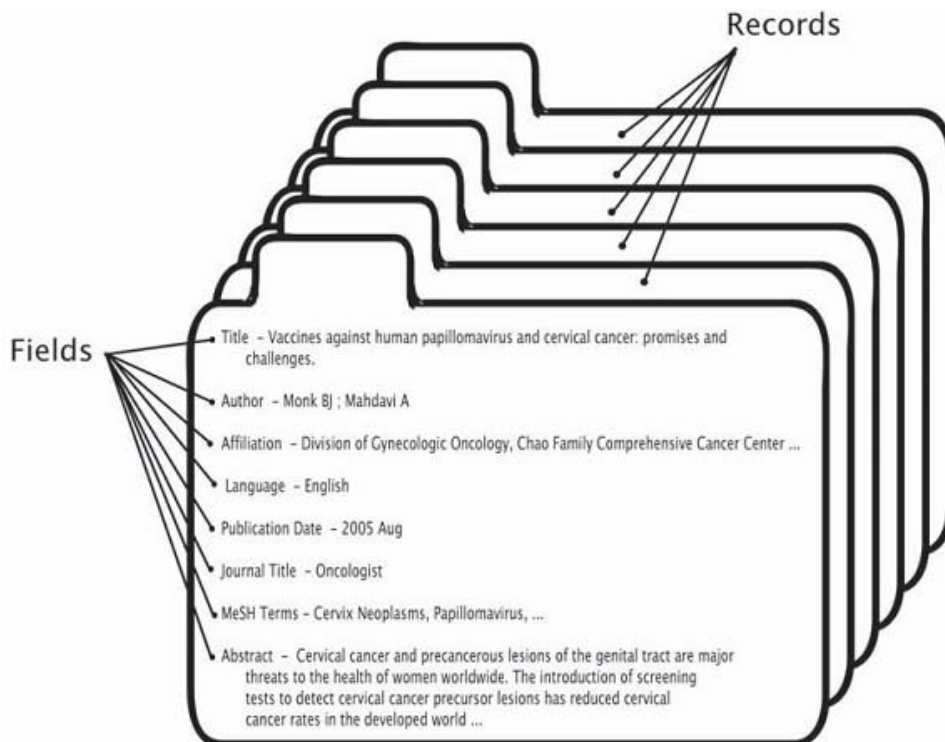
[Single Citation Matcher](#)

<http://www.ncbi.nlm.nih.gov/pubmed/> accessed on 4 August 2016

Pubmed database

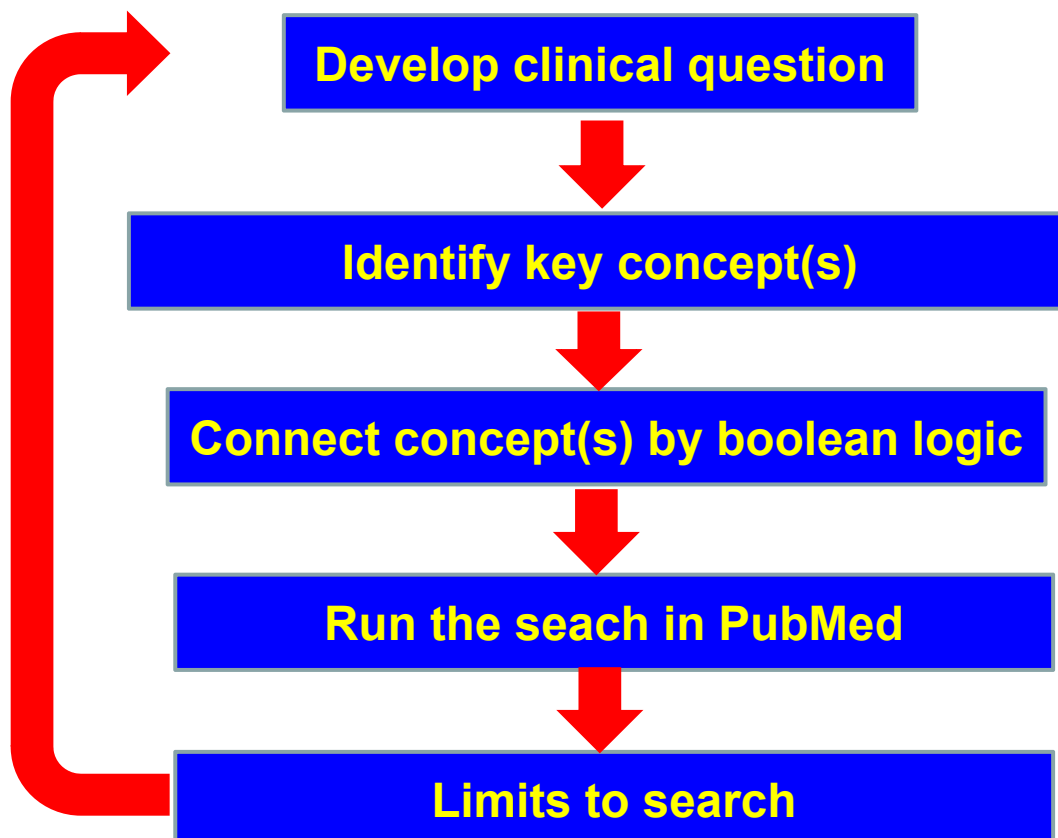
- Developed by National Center for Biotechnology Information (NCBI) at National Library of Medicine (NLM)
- Included MedLine, Old MedLine (1951 to 1965), some non-MedLine journals; published before selection for MedLine indexing, and 'selectively indexed' MedLine
- Search engine: receive a search request → compare it with an index → return the corresponding results.

How information is stored in PubMed database



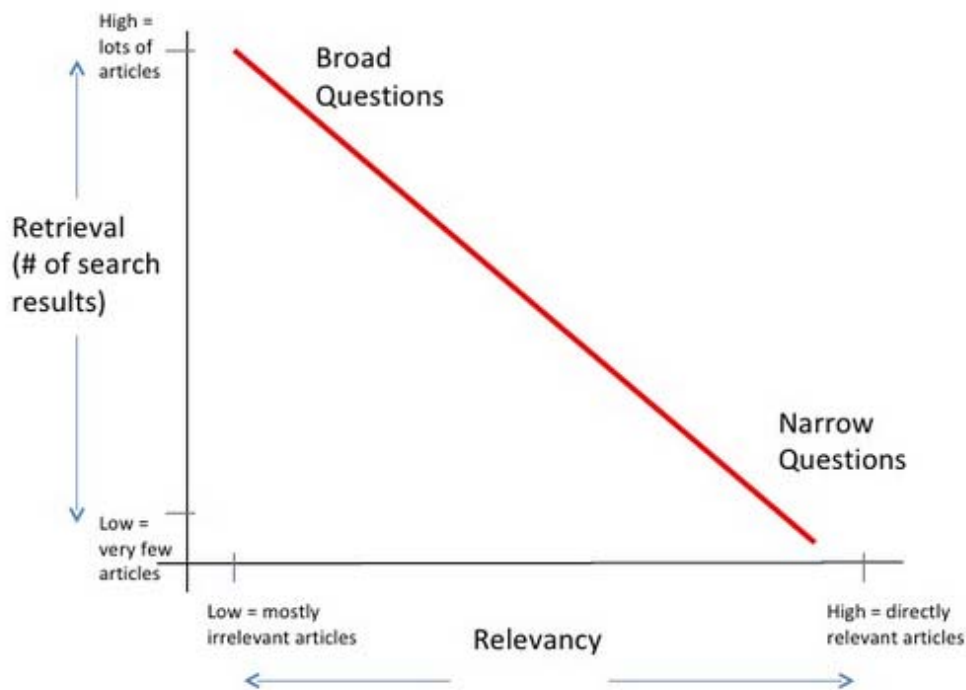
9

A search strategy



10

How questions influence the search results?



Strategies for answering research questions – introduction to health informatisc. 4/8/2010.11
Featherstone R

Possible question

Broad

- *What is the prevalence of sexual disorders in diabetes?*

Narrow

- *What is the risk of pancreas cancer for type 2 diabetes patients treated with DDP-IV inhibitors?*

Too narrow

- *What is the rate of unintended pregnancy for working class women in HCM city between 2000 and 2010?*

Key concept

- Medical term: “tăng huyết áp” → high blood pressure, hypertension
- Acronym: MEN → Multiple Endocrine Neoplasm
- Variant: “khối u” → tumor or tumour
- PICO formatting
 - P (Patient / Population)
 - I (Intervention)
 - C (Comparison)
 - O (Outcome)
- MeSH Tools (Medical Subject Heading Term)

Develop a PICO format

- | | | |
|-------------------------|----------|---------------------|
| • Population/patients | P | • Type 2 diabetes |
| • Intervention/exposure | I | • DPP-IV inhibitors |
| • Comparison | C | • (none) |
| • Outcome/endpoint | O | • Pancreas cancer |

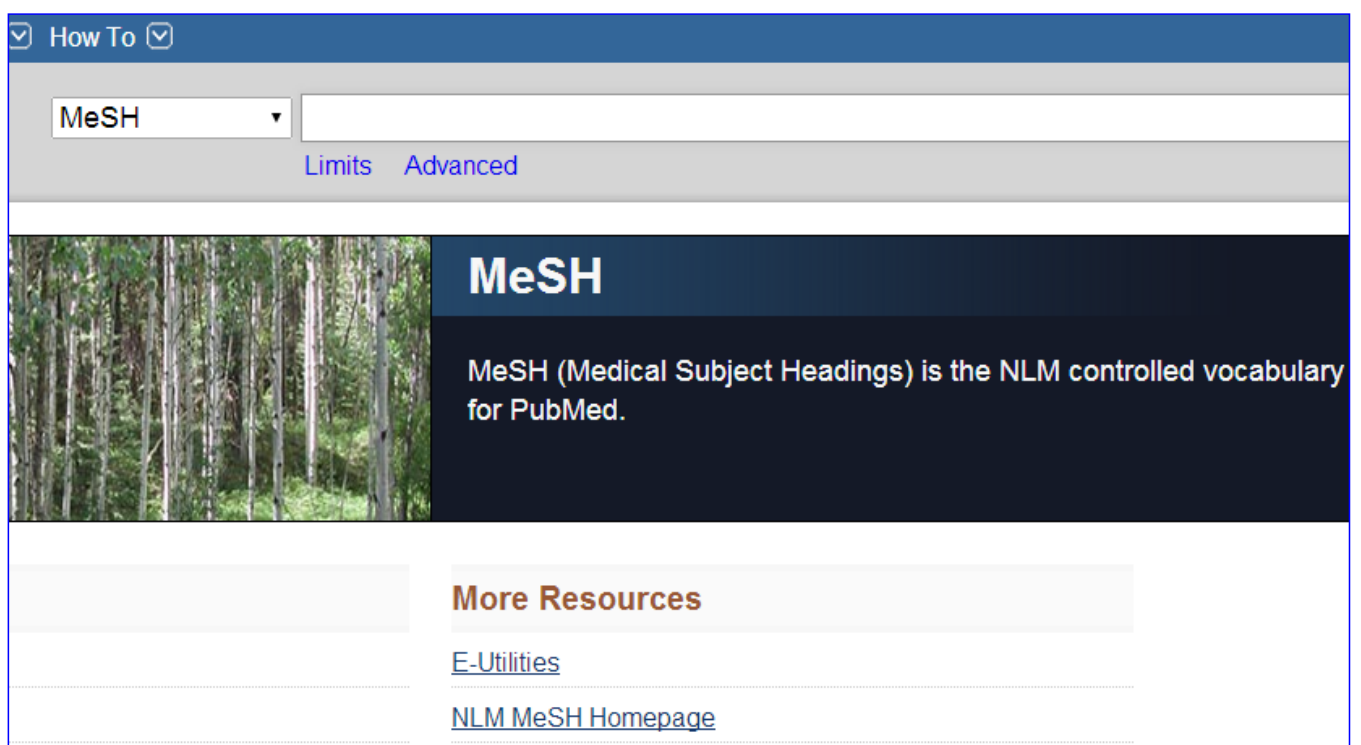
Identify MeSH for concept(s)

What is the MeSH for these concepts?

- Diabetes or Type 2 diabetes
- Dipeptyl-Peptidase IV inhibitors or incretin?
- Pancreas cancer or pancreatic cancer?

15

- On PubMed screen, select MeSH Database link



How To

MeSH

Limits Advanced

MeSH

MeSH (Medical Subject Headings) is the NLM controlled vocabulary for PubMed.

More Resources

[E-Utilities](#)

[NLM MeSH Homepage](#)

16

MeSH  Search[Save search](#) [Limits](#) [Advanced](#)

Results: 1 to 20 of 100

<< First < Prev Page 1 of 5 Next > Last >>

 [Diabetes Mellitus](#)

1. A heterogeneous group of disorders characterized by HYPERGLYCEMIA and GLUCOSE INTOLERANCE.

 [Diabetes Insipidus](#)2. A disease that is characterized by frequent urination, excretion of large amounts of dilute URINE, and excessive THIRST. Etiologies of **diabetes insipidus** include deficiency of antidiuretic hormone (also known as ADH or VASOPRESSIN) secreted by the NEUROHYPOPHYSIS, impaired KIDNEY response to ADH, and impaired hypothalamic regulation of thirst. [National Institute of Diabetes and Digestive and Kidney Diseases \(U.S.\)](#)3. Component of the NATIONAL INSTITUTES OF HEALTH. It conducts and supports basic and applied research for a national program in **diabetes**, endocrinology, and metabolic diseases; digestive diseases and nutrition; and kidney, urologic, and hematologic diseases. It was established in 1948.

Year introduced: 2008

 [Diabetes Mellitus, Type 2](#)8. A subclass of **DIABETES MELLITUS** that is not INSULIN-responsive or dependent (NIDDM), by INSULIN RESISTANCE and HYPERINSULINEMIA; and eventually by GLUCOSE INTOLERANCE; HYPERGLYCEMIA; and overt **diabetes**. Type II **diabetes mellitus** is no longer considered a disease exclusively found in adults. Patients seldom develop KETOSIS but often exhibit OBESITY.

Year introduced: 2005 (1984)

17

Diabetes Mellitus, Type 2

A subclass of DIABETES MELLITUS that is not INSULIN-responsive or dependent (NIDDM). It is characterized initially by INSULIN RESISTANCE and HYPERINSULINEMIA; and eventually by GLUCOSE INTOLERANCE; HYPERGLYCEMIA; and overt diabetes. Type II diabetes mellitus is no longer considered a disease exclusively found in adults. Patients seldom develop KETOSIS but often exhibit OBESITY.

Year introduced: 2005 (1984)

PubMed search builder options

[Subheadings:](#)

- | | | |
|--|---------------------------------------|---|
| <input type="checkbox"/> analysis | <input type="checkbox"/> epidemiology | <input type="checkbox"/> prevention and control |
| <input type="checkbox"/> anatomy and histology | <input type="checkbox"/> ethnology | <input type="checkbox"/> psychology |
| <input type="checkbox"/> blood | <input type="checkbox"/> etiology | <input type="checkbox"/> radiography |
| <input type="checkbox"/> cerebrospinal fluid | <input type="checkbox"/> genetics | <input type="checkbox"/> radionuclide imaging |
| <input type="checkbox"/> chemically induced | <input type="checkbox"/> history | <input type="checkbox"/> radiotherapy |
| <input type="checkbox"/> classification | <input type="checkbox"/> immunology | <input type="checkbox"/> rehabilitation |

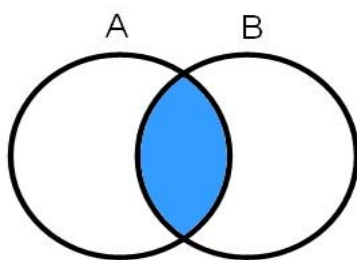
- [Rats, Inbred OLETF](#)
 - [Metabolic Syndrome X](#)
- [All MeSH Categories](#)
[Diseases Category](#)
[Nutritional and Metabolic Diseases](#)
[Metabolic Diseases](#)
[Glucose Metabolism Disorders](#)
[Diabetes Mellitus](#)
Diabetes Mellitus, Type 2
[Diabetes Mellitus, Lipotrophic](#)
- [All MeSH Categories](#)
[Diseases Category](#)
[Endocrine System Diseases](#)
[Diabetes Mellitus](#)
Diabetes Mellitus, Type 2
[Diabetes Mellitus, Lipotrophic](#)

18

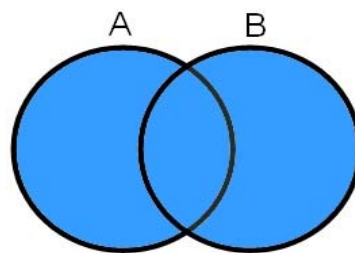
MeSH tools

- MeSH database is the hierarchical library.
- MeSH terms are arranged in a tree like structure with the more general terms representing the stem and narrower and more focused terms representing the distal branches.
- Each citation that is indexed with MedLine is assigned up to 15 MeSH terms based on the content of the article

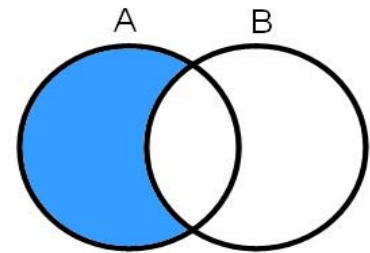
Boolean operators



A AND B



A OR B



A NOT B

For PubMed search:

- boolean connectors in a left-to-right sequence
- must be entered in upper case

Example

- Which one of the following search strategies is the *most correct* if the user were interested in obtaining all citations that included information on lung cancer caused by cigars and pipes?
 1. Lung neoplasm OR smoking
 2. Lung neoplasm AND smoking
 3. Lung neoplasm AND (cigars AND pipes)
 4. Lung neoplasm AND (cigars OR pipes)
 5. Lung neoplasm AND cigars AND pipes

Limits to search

- Publication date: the last 5 years
- Types of article: clinical trial, meta-analysis, systematic review
- Language: english
- Species: human
- Sex: specify
- Age: children or adult
- Field tags: title

Search: PubMed [Limits](#) [Advanced search](#) [Help](#)

Dates

Published in the Last:

Type of Article

Clinical Trial
 Editorial
 Letter
 Meta-Analysis
 Practice Guideline

Languages

English
 French
 German
 Italian
 Japanese

Species

Humans
 Animals

Sex

Male
 Female

Subsets

AIDS
 Bioethics
 Cancer

Ages

All Infant: birth-23 months
 All Child: 0-18 years
 All Adult: 19+ years

Clinical scenario

- A 26 year-old female had Grave's disease for two months. She was treated with PTU.
- Recently, her menstrual period was irregular and she was diagnosed pregnancy by her doctor (OBG)
- However, she was afraid that PTU is not safe for women with pregnancy
- What do you do?

How to run a search in PubMed

- Clinical queries
- MeSH tools
- PICO tools

How to use **Clinical queries**

Clinical query

- **Clinical Study Categories:** Find citations corresponding to a specific clinical study category.
- **Systematic Reviews:** Find citations for systematic reviews, meta-analyses, reviews of clinical trials, evidence-based medicine, consensus development conferences, and guidelines.
- **Medical Genetics:** Find citations related to various topics in medical genetics.

Develop key words

- Key words(Vietnamese): cường giáp, thai, PTU
- Key words (English): hyperthyroidism, pregnancy, propylthiouracil
- Boolean: AND

1. www.pubmed.com, click on Clinical Queries link
2. Type key words on search engine

PubMed Clinical Queries

Results of searches on this page are limited to specific clinical research areas. For comprehensive searches, use [PubMed](#) directly.

hyperthyroidism AND pregnancy AND propylthiouracil

Clinical Study Categories

Category:

Scope:

Systematic Reviews

Medical Genetics

Topic:

Results: 5 of 274

Maternal hyperthyroidism after intrauterine insemination due to hypertrophic action of human chorionic gonadotropin: a case report.

Bakas P, Tzouma C, Creatsa M, Boutas I, Hassiakos D.
Clin Exp Obstet Gynecol. 2016; 43(3):446-7.

Hyperthyroidism and propylthiouracil-induced liver failure in pregnancy.

Results: 5 of 13

Risk of congenital anomalies associated with antithyroid treatment during pregnancy: a meta-analysis.

Li X, Liu GY, Ma JL, Zhou L.

Clinics (Sao Paulo). 2015 Jun; 70(6):453-9. Epub 2015 Jun 1.

Congenital anomalies in children exposed to antithyroid drugs in-utero: a meta-analysis of cohort studies.

Li H, Zheng J, Luo J, Zeng R, Feng N, Zhu N, Feng Q.

Results: 5 of 13

Luteal activity of preg

Silva JF, Ocarino NM, Ser

J Ovarian Res. 2014 Jul 1

Maternal thyroid dysf

inflammatory mediato

migration kinetics.

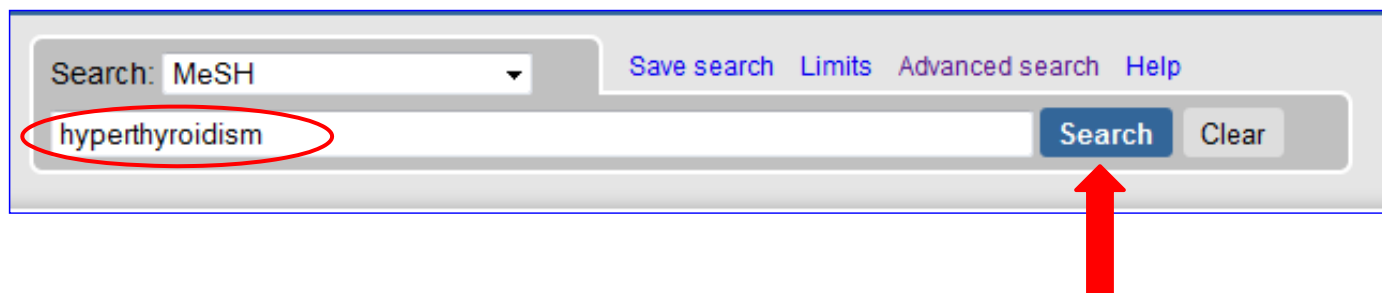
Silva JF, Ocarino NM, Ser

How to use MeSH tools

Setting MeSH-1 and boolean logic

Search: MeSH Save search Limits Advanced search Help

hyperthyroidism Search Clear



Hyperthyroidism

Hypersecretion of THYROID HORMONES from the THYROID GLAND. Elevated levels of thyroid hormones increase BASAL METABOLIC RATE.

PubMed search builder options

Subheadings:

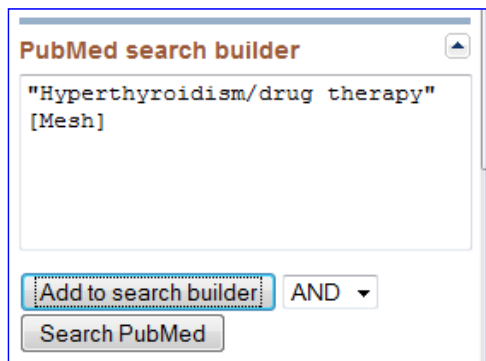
<input type="checkbox"/> blood	<input type="checkbox"/> etiology	<input type="checkbox"/> psychology
<input type="checkbox"/> cerebrospinal fluid	<input type="checkbox"/> genetics	<input type="checkbox"/> radiography
<input type="checkbox"/> chemically induced	<input type="checkbox"/> history	<input type="checkbox"/> radionuclide imaging
<input type="checkbox"/> classification	<input type="checkbox"/> immunology	<input type="checkbox"/> radiotherapy
<input type="checkbox"/> complications	<input type="checkbox"/> isolation and purification	<input type="checkbox"/> rehabilitation
<input type="checkbox"/> congenital	<input type="checkbox"/> metabolism	<input type="checkbox"/> statistics and numerical data
<input type="checkbox"/> diagnosis	<input type="checkbox"/> microbiology	<input type="checkbox"/> surgery
<input type="checkbox"/> diet therapy	<input type="checkbox"/> mortality	<input type="checkbox"/> therapy
<input checked="" type="checkbox"/> drug therapy	<input type="checkbox"/> nursing	<input type="checkbox"/> transmission
<input type="checkbox"/> economics	<input type="checkbox"/> parasitology	<input type="checkbox"/> ultrasonography

PubMed search builder

"Hyperthyroidism/drug therapy"
[Mesh]

Add to search builder: AND

Search PubMed



Setting MeSH-2 and boolean logic

Search: MeSH [Save search](#) [Limits](#) [Advanced search](#) [Help](#)

pregnancy

Results: 1 to 20 of 94 Selected: 1

<< First < Prev Page 1 of 5 Next > Last >>

[Pregnancy](#)

1. The status during which female mammals carry their developing young (EMBRYOS or FETUSES) in utero before birth, beginning from FERTILIZATION to BIRTH.

Year introduced: 1963

[Pregnancy-Specific beta 1-Glycoproteins](#)

2. Glycoproteins with the electrophoretic mobility of BETA-GLOBULINS, secreted by the placental TROPHOBLASTS into the maternal bloodstream during PREGNANCY. They can be detected 18 days after OVULATION and reach 200 mg/ml at the end of pregnancy. They are associated with fetal well-being.

Year introduced: 2005(1980)


PubMed search builder

("Hyperthyroidism/drug therapy"
[Mesh]) AND "Pregnancy"[Mesh]

AND ▾

Setting MeSH-3 and boolean logic

Search: MeSH [Save search](#) [Limits](#) [Advanced search](#) [Help](#)



Propylthiouracil

A thiourea antithyroid agent. Propylthiouracil inhibits the synthesis of thyroxine and inhibits the peripheral conversion of thyroxine to tri-iodothyronine. hyperthyroidism. (From Martindale, The Extra Pharmacopeia, 30th ed, p534)

PubMed search builder options

[Subheadings:](#)

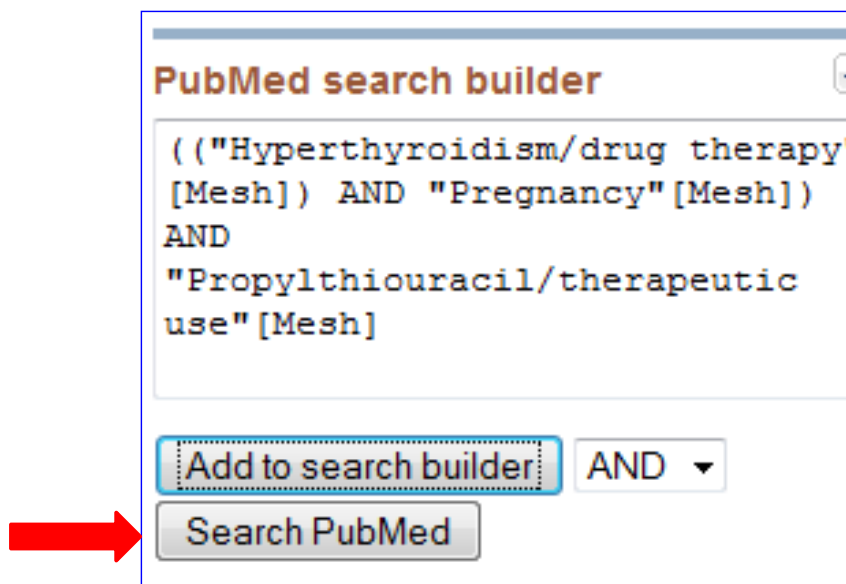
- | | | |
|---|---|---|
| <input type="checkbox"/> administration and dosage | <input type="checkbox"/> chemistry | <input type="checkbox"/> pharmacokinetics |
| <input type="checkbox"/> adverse effects | <input type="checkbox"/> contraindications | <input type="checkbox"/> pharmacology |
| <input type="checkbox"/> analogs and derivatives | <input type="checkbox"/> diagnostic use | <input type="checkbox"/> poisoning |
| <input type="checkbox"/> analysis | <input type="checkbox"/> economics | <input type="checkbox"/> standards |
| <input type="checkbox"/> antagonists and inhibitors | <input type="checkbox"/> immunology | <input checked="" type="checkbox"/> therapeutic use |
| <input type="checkbox"/> biosynthesis | <input type="checkbox"/> isolation and purification | <input type="checkbox"/> toxicity |
| <input type="checkbox"/> blood | <input type="checkbox"/> metabolism | <input type="checkbox"/> urine |
| <input type="checkbox"/> chemical synthesis | <input type="checkbox"/> pathology | |

PubMed search builder

```
(("Hyperthyroidism/drug therapy"[Mesh]) AND "Pregnancy"[Mesh]) AND "Propylthiouracil/therapeutic use"[Mesh]
```

AND

Select Search Pubmed of menu Pubmed search builder



Primary results

Items: 1 to 20 of 185 << First < Prev Page 1 of 10 Next > Last >>

- [Maternal hyperthyroidism after intrauterine insemination due to hypertrophic action of human chorionic gonadotropin: a case report.](#)
1. Bakas P, Tzouma C, Creatsa M, Boutas I, Hassiakos D.
Clin Exp Obstet Gynecol. 2016;43(3):446-7.
PMID: 27328512
[Similar articles](#)
- [Hyperthyroidism and propylthiouracil-induced liver failure in pregnancy.](#)
2. Fung SC, Wyssusek KH.
Anaesth Intensive Care. 2015 Nov;43(6):793-4. No abstract available.
PMID: 26603813
[Similar articles](#)
- [Risk of congenital anomalies associated with antithyroid treatment during pregnancy: a meta-analysis.](#)
3. Li X, Liu GY, Ma JL, Zhou L.
Clinics (Sao Paulo). 2015 Jun;70(6):453-9. doi: 10.6061/clinics/2015(06)12. Epub 2015 Jun 1. Review.
PMID: 26106966 [Free PMC Article](#)
[Similar articles](#)

Limits

Final results

Article types
Clinical Trial
Review
Customize ...

Text availability
Abstract
Free full text
Full text

PubMed Commons
Reader comments
Trending articles

Publication dates
✓ 5 years
10 years
Custom range...

Species
✓ Humans
Other Animals

Languages
✓ English
Customize ...

Items: 1 to 20 of 25 << First < Prev Page 1 of 2 Next > >>

i Filters activated: published in the last 5 years, Humans, English. [Clear all](#) to show 185 items.

- [Maternal hyperthyroidism after intrauterine insemination due to hypertrophic action of human chorionic gonadotropin: a case report.](#)
1. Bakas P, Tzouma C, Creatsa M, Boutas I, Hassiakos D.
Clin Exp Obstet Gynecol. 2016;43(3):446-7.
PMID: 27328512
[Similar articles](#)

- [Hyperthyroidism and propylthiouracil-induced liver failure in pregnancy.](#)
2. Fung SC, Wysusek KH.
Anaesth Intensive Care. 2015 Nov;43(6):793-4. No abstract available.
PMID: 26603813
[Similar articles](#)

- [Risk of congenital anomalies associated with antithyroid treatment during pregnancy: a meta-analysis.](#)
3. Li X, Liu GY, Ma JL, Zhou L.
Clinics (Sao Paulo). 2015 Jun;70(6):453-9. doi: 10.6061/clinics/2015(06)12. Epub 2015 Jun 1. Review.
PMID: 26106966 **Free PMC Article**

How to use PICO tools

Clinical scenario

- A 60 year-old female had type 2 diabetes for two years. She was treated with metformin and pioglitazone.
- Recently, she heard that pioglitazone treatment is associated with (hip) fracture
- What do you do?

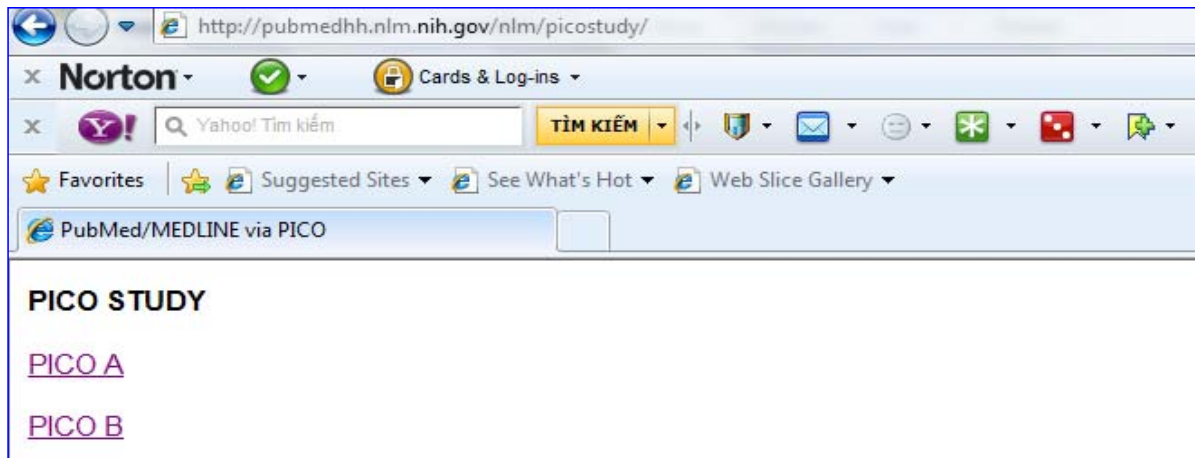
41

Setting PICO

- P: type 2 diabetes
- I: pioglitazone
- C: none
- O: fracture

Log on to:

[http://pubmedhh.nlm.nih.gov/nlm/picostudy/](http://pubmedhh.nlm.nih.gov.nlm.nih.gov/nlm/picostudy/)



Click on one of two links

Search MEDLINE/PubMed via PICO

Patient/Problem:

Intervention:

Compare to (leave blank if none):

Outcome (optional):

Age Group:

Gender:

Select Publication type:

PICO A

Search MEDLINE/PubMed via PICO

Patient/Problem:

Intervention:

Compare to (leave blank if none):

Outcome (optional):

Age Group:

Gender:

Type of question:

- therapy diagnosis etiology prognosis
 specific search (narrow) sensitive search (broad)

OR

Systematic Reviews

OR

NO filters

PICO B

Type key words

Search MEDLINE/PubMed via PICO

Patient/Problem:

Intervention:

Compare to (leave blank if none):

Outcome (optional):

Age Group:

Gender:

Select Publication type:

Results

PubMed for Handhelds
U.S. National Library of Medicine

Results: 18 items

- 1. Effects of TZD Use and Discontinuation on Fracture Rates in ACCORD Bone Study.
Schwartz AV, Chen H, Ambrosius WT, Sood A, Josse RG, Bonds DE, Schnall AM, Vittinghoff E, Bauer DC, Banerji M, A, Williamson JD, Margolis KL.
J Clin Endocrinol Metab; 2015 Nov ; 100(11):4059-66. PubMed ID:
[\[No Abstract\]](#) [\[Full Text\]](#) [\[Related\]](#)
- 2. The effect of thiazolidinediones on bone mineral density and bone turnover: systematic review and meta-analysis.
Billington EO, Grey A, Bolland MJ.
Diabetologia; 2015 Oct ; 58(10):2238-46. PubMed ID:
[\[No Abstract\]](#) [\[Full Text\]](#) [\[Related\]](#)
- 3. The skeletal effects of pioglitazone in type 2 diabetes or impaired glucose tolerance: a randomized controlled trial.
Grey A, Bolland M, Fenwick S, Home A, Gamble G, Drury PL, Reid IR.
Eur J Endocrinol; 2014 Feb ; 170(2):255-62. PubMed ID:
[\[No Abstract\]](#) [\[Full Text\]](#) [\[Related\]](#)

Use MeSH tools

PubMed search builder

(("Thiazolidinediones/therapeutic use" [Mesh]) AND "Diabetes Mellitus, Type 2" [Mesh]) AND "Fractures, Bone" [Mesh]

Add to search builder AND

Search PubMed

Items: 1 to 20 of 83

<< First < Prev Page 1 of 5 Next > Last >>

- [Incidence of Fractures in Patients With Type 2 Diabetes in the SAVOR-TIMI 53 Trial.](#)
1. Mosenzon O, Wei C, Davidson J, Scirica BM, Yanuv I, Rozenberg A, Hirshberg B, Cahn A, Stahre C, Strojek K, Bhatt DL, Raz I.
Diabetes Care. 2015 Nov;38(11):2142-50. doi: 10.2337/dc15-1068. Epub 2015 Sep 10.
PMID: 26358285
[Similar articles](#)
- [Glycemic Control with Thiazolidinedione Is Associated with Fracture of T2DM Patients.](#)
2. Chen HH, Horng MH, Yeh SY, Lin IC, Yeh CJ, Muo CH, Sung FC, Kao CH.
PLoS One. 2015 Aug 28;10(8):e0135530. doi: 10.1371/journal.pone.0135530. eCollection 2015.
PMID: 26317995 [Free PMC Article](#)
[Similar articles](#)
- [Effects of TZD Use and Discontinuation on Fracture Rates in ACCORD Bone Study.](#)
3. Schwartz AV, Chen H, Ambrosius WT, Sood A, Josse RG, Bonds DE, Schnall AM, Vittinghoff E, Bauer DC, Banerji MA, Cohen RM, Hamilton BP, Isakova T, Sellmeyer DE, Simmons DL, Shibli-Rahhal A, Williamson JD, Margolis KL.
J Clin Endocrinol Metab. 2015 Nov;100(11):4059-66. doi: 10.1210/jc.2015-1215. Epub 2015 Aug 25.
PMID: 26305617
[Similar articles](#)

Exception: no MeSH found

- A doctor wants to study about the effect of conversation maps tool in type 2 diabetes education
- Key word “conversation maps” has not been found in MeSH tool
- How do we do?

www.ncbi.nlm.nih.gov/mesh/?term=conversation+map

NCBI Resources How To

MeSH MeSH conversation map

Create alert Limits Advanced

No items found.

Google scholarships tool

- <https://scholar.google.com>
- Type key words “conversation maps”
- See and select results

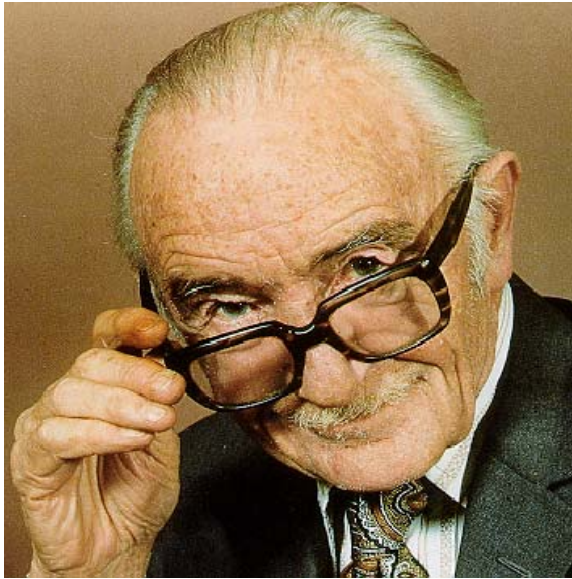
The screenshot shows a Google Scholar search interface. At the top left is the Google logo. To its right is a search bar containing the text "conversation map" and a blue search button with a magnifying glass icon. Below the search bar, the word "Scholar" is displayed in red, followed by the text "About 696,000 results (0.05 sec)".

On the left side, there are several filter options: "Articles", "Case law", and "My library". Below these, there are time filters: "Any time", "Since 2016", "Since 2015", "Since 2012", and "Custom range...". At the bottom left, there are sorting options: "Sort by relevance" and "Sort by date".

The main search results are listed on the right. The first result is titled "Conversation map: a content-based Usenet newsgroup browser" by W Sack, published in "From Usenet to CoWebs, 2003 - Springer". The abstract describes the system as a Usenet newsgroup browser that analyzes the text of an archive of newsgroup messages and outputs a graphical interface. It is cited by 140 sources. The second result is titled "Conversation map: An interface for very large-scale conversations" by W Sack, published in "Journal of Management Information Systems, 2000 - Taylor & Francis". The abstract describes Very large-scale conversation (VLSC) as the exchange of thousands of electronic mail (e-mail) messages among hundreds or thousands of people. It is cited by 137 sources. The third result is titled "Educator experience with the US Diabetes Conversation Map® education program in the journey for control of diabetes: the IDEA study".



The Cochrane Collaboration



“It is surely a great criticism of our profession that we have not organised a critical summary, by specialty or subspecialty, adapted periodically, of all relevant randomized controlled trials”.

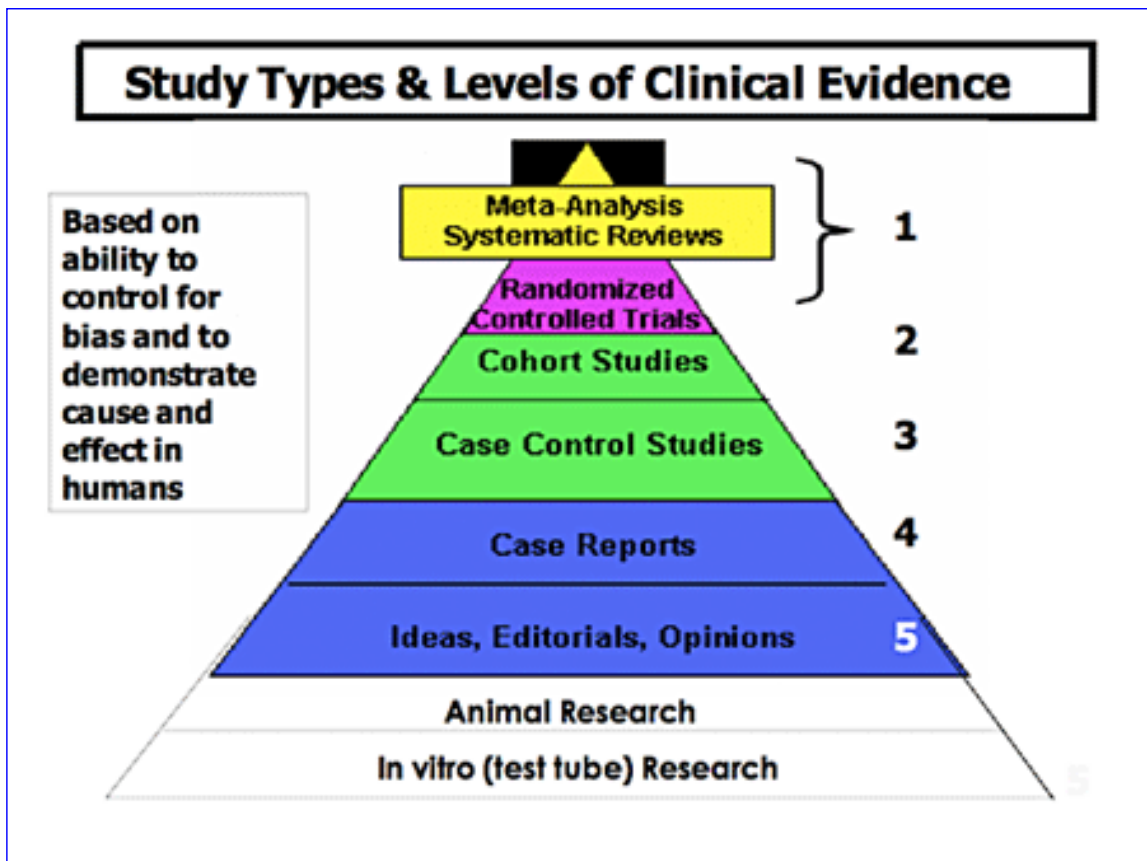
Archie Cochrane, 1979



The Cochrane Collaboration

Cochrane Reviews are systematic reviews of primary research in human health care and health policy, and are internationally recognized as the highest standard in evidence-based health care resources.

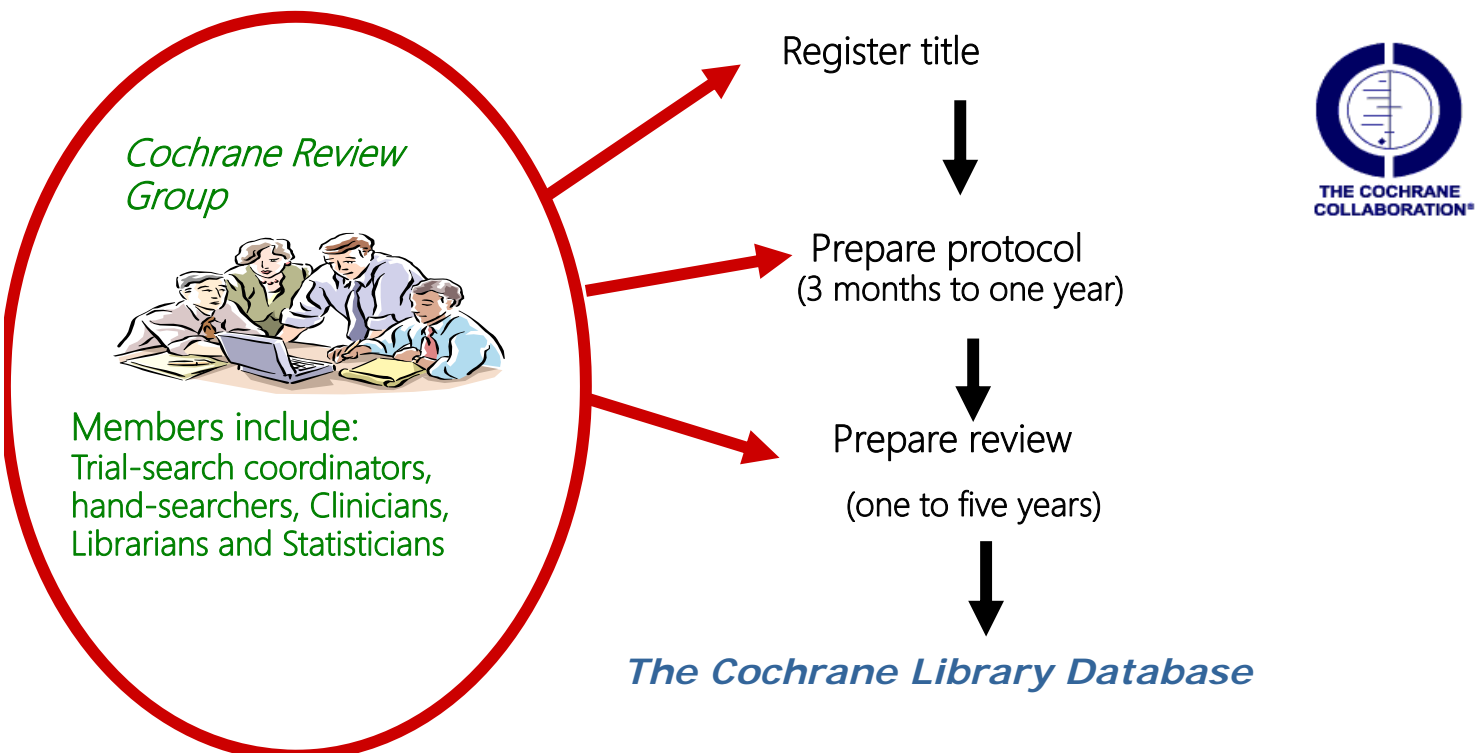
- investigate the effects of interventions for prevention, treatment, and rehabilitation.
- assess the accuracy of a diagnostic test for a given condition in a specific patient group and setting.
- published online in the Cochrane Library.



Long A, Harrison S. The balance of evidence. Evidence-based decision making. Health Services Journal, Glaxo Welcome Supplement 1995;6:1-2.

McKibbon A, Eady A, Marks S. PDQ, Evidence-Based Principles and Practice. Hamilton, Ontario: B.C. Decker Inc., 1999.

Systematic Reviews and Protocols Process



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- Access website: www.onlinelibrary.wiley.com
- Tag “Search” = basic search
- Tag “Search Manager” & “MeSH” = advance search

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Search Search Manager Medical Terms (MeSH)

+ Title, Abstract, Keywords

[Search Limits](#) [Search Help](#) (Word variations have been searched)

Clear

1. Enter key words

2. Select tab **Lookup**

The screenshot shows the MeSH search interface. The search bar contains 'Diabetes Mellitus, Type 2'. The 'Lookup' tab is selected. The search results show 10509 results. The 'MeSH trees' section shows the 'Single MeSH term (unexploded)' option selected. The 'Search results' table shows the following data:

Category	Count
Cochrane Reviews	59
Other Reviews	654
Trials	9285
Methods Studies	0
Technology Assessments	118
Economic Evaluations	393

3. Select **Single MeSH**

4. Select **this link**

The search bar shows the search strategy: #1 MeSH descriptor: [Diabetes Mellitus, Type 2] explode all trees. The number of results is 10509.


The screenshot shows the search results page. The results are sorted by Relevance: high to low. The first result is 'Treatment of periodontal disease for glycaemic control in people with diabetes mellitus' by Terry C Simpson, Jo C Weldon, Helen V Worthington, Ian Needleman, Sarah H Wild, David R Moles, Brian Stevenson, Susan Furness and Zipporah Iheozor-Ejiofor. The second result is 'Interventions for pregnant women with hyperglycaemia not meeting gestational diabetes and type 2 diabetes diagnostic criteria'.

Make every MeSH one by one

Add to top			
⊖	+	#1 MeSH descriptor: [Diabetes Mellitus, Type 2] explode all trees	10509
⊖	+	#2 MeSH descriptor: [Thiazolidinediones] explode all trees	1251
⊖	+	#3 MeSH descriptor: [Fractures, Bone] explode all trees	4675

Combine these MeSH by boolean operators

Add to top				
⊖	+	#1 MeSH descriptor: [Diabetes Mellitus, Type 2] explode all trees	10509	
⊖	+	#2 MeSH descriptor: [Thiazolidinediones] explode all trees	1251	
⊖	+	#3 MeSH descriptor: [Fractures, Bone] explode all trees	4675	
⊖	Edit	+	#4 #1 and #2	841
⊖	+	#5 #3 and #4	7	



Database of Abstracts of Reviews of Effect : Issue 2 of 4, April 2015

There are 2 results from 36795 records for your search on #5 - #3 and #4 in Other Reviews in the strategy currently being edited

Sort by

Select all | Export all | Export selected

- Risk of fracture with thiazolidinediones: an updated meta-analysis of randomized clinical trials (Provisional abstract)
Centre for Reviews and Dissemination
Original Author(s): Zhu ZN , Jiang YF and Ding T
2014, 115-123 New
- Long-term use of thiazolidinediones and fractures in type 2 diabetes: a meta-analysis (Structured abstract)
Centre for Reviews and Dissemination
Original Author(s): Loke Y K , Singh S and Furberg C D
CMAJ: Canadian Medical Association Journal, 2009, 180(1), 32-39

Cochrane Central Register of Controlled Trials : Issue 7 of 12, July 2016

There are 5 results from 957068 records for your search on #5 - #3 and #4 in Trials in the strategy currently being edited

Sort by

Select all | Export all | Export selected

- Effects of TZD Use and Discontinuation on Fracture Rates in ACCORD Bone Study.
Schwartz AV , Chen H , Ambrosius WT , Sood A , Josse RG , Bonds DE , Schnall AM , Vittinghoff E , Bauer DC , Banerji MA , Cohen RM , Hamilton BP , Isakova T , Sellmeyer DE , Simmons DL , Shibli-Rahhal A , Williamson JD and Margolis KL
The Journal of clinical endocrinology and metabolism, 2015, 100(11), 4059
Publication Year: 2015
- Rosiglitazone evaluated for cardiovascular outcomes in oral agent combination therapy for type 2 diabetes (RECORD): a multicentre, randomised, open-label trial.
Home PD , Pocock SJ , Beck-Nielsen H , Curtis PS , Gomis R , Hanefeld M , Jones NP , Komajda M , McMurray JJ and RECORD Study Team
Lancet (London, England), 2009, 373(9681), 2125
Publication Year: 2009

Summary

- Searching literature (in PubMed) is very important
- Three methods
 - MeSH tool → academic users
 - Clinical queries → busy users
 - PICO → advanced user
- Cochrane library: “Trust evidence – Informed decisions – Better health”
- Do practise...practise again...practise more and more

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Exercise 1

A 50-year old male with a newly diagnosed type 2 diabetes consults you for lipid management. The patient's data shows LDL Cholesterol of 96 mg/dl and HDL Cholesterol of 48 mg/dl. He recently heard that diabetic patients with even low LDL cholesterol might benefit from the use of statin medications.

Your question is: Do patients with diabetes and low LDL cholesterol have better outcomes if they are treated with a statin medication compared to no treatment?

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Exercise 2

A 35-year old female presented with a history of chronic backaches. MRI shows no significant abnormalities and her ESR is normal. She is seeking symptomatic relief and asks you if acupuncture is likely to help her symptoms.

You would like to look up a systematic review on this topic.

Exercise 3

- Calcium supplementation is associated with risk of kidney stones?