

Basic Training 2024 for PhD students

# PUBMED

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Nagoya University Graduate School of Medicine

**Medical Library**

Ext : 2509

E-mail : [libmed@t.mail.nagoya-u.ac.jp](mailto:libmed@t.mail.nagoya-u.ac.jp)

# Contents

- Overview
- Basic search
- Advanced search
  - Advanced Search Builder
- How to use the functions
  - MeSH Database
  - NLM Catalog
  - Single Citation Matcher
  - Clinical Queries

# Contents

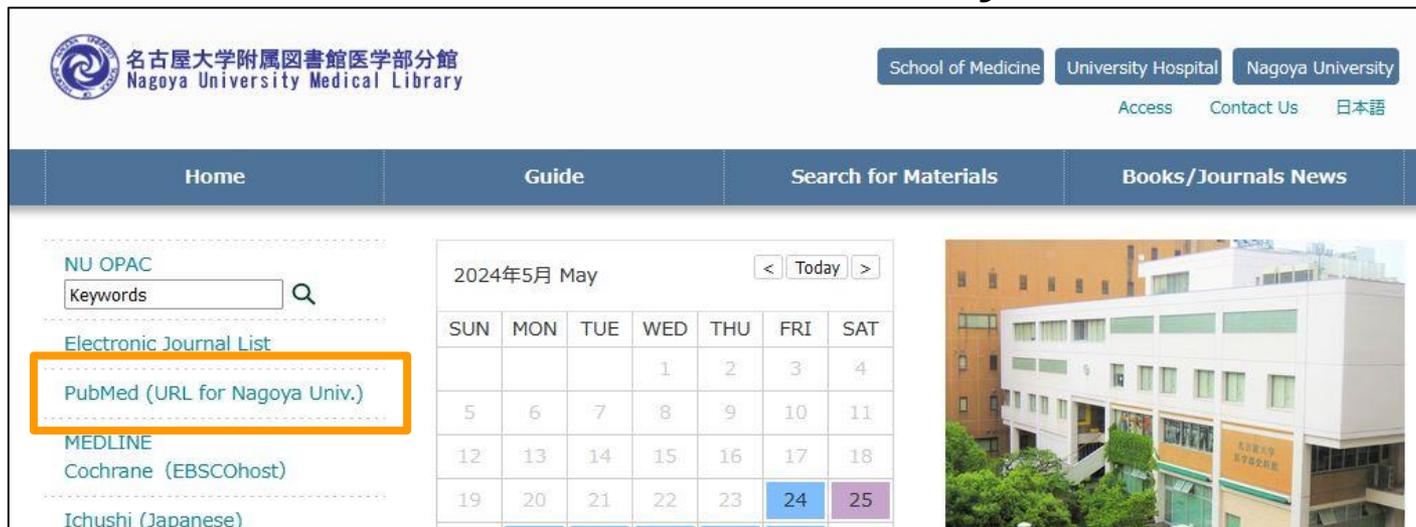
- **Overview**
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# What is "PubMed"?

- Free reference database on internet by National Library of Medicine in the United States
- Most of the included articles were written in English
- Contains Article information of biomedical literature
- Some articles have links to the full text

# How to access it

- At the URL of Nagoya University (<https://pubmed.ncbi.nlm.nih.gov/?otool=ijpnagoulib>), “NU Link” in the library system is available.
- It is also available at the library Web site.



The screenshot shows the Nagoya University Medical Library website. The header includes the library logo and name in Japanese and English, along with navigation links for School of Medicine, University Hospital, and Nagoya University. A main navigation bar contains Home, Guide, Search for Materials, and Books/Journals News. On the left, a search bar is labeled 'NU OPAC' with a 'Keywords' input field. Below it, a list of services is shown, with 'PubMed (URL for Nagoya Univ.)' highlighted by an orange box. Other services include MEDLINE, Cochrane (EBSCOhost), and Ichushi (Japanese). In the center, a calendar for May 2024 is displayed, with the 24th and 25th highlighted. On the right, there is a photograph of a modern multi-story building, likely a hospital or library building.

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# PubMed top page

The image shows the top page of PubMed with several annotations. An orange callout box labeled "Search box" points to the search input field. Another orange callout box labeled "History of search etc." points to the "Advanced" link below the search box. A third orange callout box labeled "Help" points to the "Learn" section in the footer.

NIH National Library of Medicine  
National Center for Biotechnology Information

PubMed.gov

Search PubMed Search

Advanced

PubMed comprises more than 30 million citations for biomedical literature from MEDLINE, life science journals, and online books. PubMed Central and publisher web sites.

**Learn**  
About PubMed  
FAQs & User Guide  
Finding Full Text

**Find**  
Advanced Search  
Clinical Queries  
Single Citation Matcher

**Download**  
E-utilities API  
FTP  
Batch Citation Matcher

**Explore**  
MeSH Database  
Journals  
Legacy PubMed (available until at least 9/30/2020)

# Keywords

- Both upper-case and lower-case letters are accepted.
- Stop words (a, the, in, of, ...) are not necessary.
  - ✘ Lower-case "**and**" is treated as a stop word.
- **Keywords connected by a space are interpreted "AND"**
- **Phrase should be expressed in Double quotation marks.** Ex) "lung cancer"

# Search articles by author and journal

- Search by author

**Family name space initial of given name** (It is possible to search Researcher ID **ORCID**.)

- Search by journal title

Full title: Journal of Clinical Oncology

Abbreviation: J Clin Oncol

ISSN: 0732-183X ← **The hyphen is necessary.**

Journal search : NLM Catalog

# Boolean Operators • truncation

- Operators

**AND OR NOT** in upper-case letters

- Left-hand match

- Put \* (**asterisk**) at the end of a word.

- Be aware of no automatic mapping.

- "librar\*" can search "library", "libraries", "librarian", etc. at the same time.

- No right-hand match nor mid match

# Search filters

- Field tag is used to restrict field of search.
  - **[tab]** after keyword
  - The tag is **[au]** for author, **[ta]** for journal name, **[ti]** for title of article, **[la]** for language, etc
- Frequently applied search
  - Ex) In case of search for article title and abstract, **[tiab]** excludes journal name for search.
- Be aware of no automatic mapping.

# MeSH (Medical Subject Headings)

- MeSH : National Library of Medicine (NLM) controlled vocabulary **thesaurus**
  - 10-15 MeSH terms per one article
  - Major Topic of article are shown with \* (**asterics**) at the end of MeSH terms
- Subheadings
  - They are shown by "/" after MeSH terms.
  - **Analysis, Diagnosis, Therapy, Nursing** etc.
- Search by MeSH includes the lower level of terms as a default.

> Lung Neoplasms / diagnosis  
> Lung Neoplasms / epidemiology\*  
> Lung Neoplasms / mortality\*  
> Lung Neoplasms / therapy

# Automatic term mapping

- The input term is changed to appropriate MeSH term, phrase, journal name, or author name, then start searching.
- The details of changes are shown in the box of **"Advanced"**.

History and Search Details Download Delete

Search	Actions	Details	Query	Results	Time
#1	...	✓	Search: <b>lung cancer</b> "lung neoplasms"[MeSH Terms] OR ("lung"[All Fields] AND "neoplasms"[All Fields]) OR "lung neoplasms"[All Fields] OR ("lung"[All Fields] AND "cancer"[All Fields]) OR "lung cancer"[All Fields] <b>Translations</b> <b>lung cancer:</b> "lung neoplasms"[MeSH Terms] OR ("lung"[All Fields] AND "neoplasms"[All Fields]) OR "lung neoplasms"[All Fields] OR ("lung"[All Fields] AND "cancer"[All Fields]) OR "lung cancer"[All Fields]	371,802	21:24:52

# Summary page

NIH National Library of Medicine  
National Center for Biotechnology Information

Log in

PubMed.gov

lung cancer

Search

Advanced Create alert Create RSS

Order Style

Save and send results

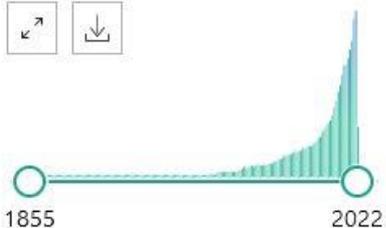
Save Email Send to

Sorted by: Most recent

Display options

MY NCBI FILTERS

RESULTS BY YEAR



394,504 results

Gender based **lung cancer** risks for symptoma  
undergone cardiac CT.

1

Cite Dalah EZ, Obaideen A, Anam S, Alzimami K, Jambi LK, Bradle  
PLoS One. 2022 Apr 11;17(4):e0265609. doi: 10.1371/journ  
Share PMID: 35404962

We estimate the lifetime attributable risk (LAR) of **lung can**  
graphy (CCTA) and

HDAC4 Mediates Smoking-Induced Pancreatic **Cancer** Metastasis.

2

Cite Yang J, Chheda C, Lim A, Hauptschein D, Zayou L, Tang J, Pandol SJ, Edderkaoui M.  
Pancreas. 2022 Feb 1;51(2):190-195. doi: 10.1097/MPA.0000000000001998.

Author name, Journal, volume, page, article type, and language

DISPLAY OPTIONS

Format Summary

Sort by Most recent

Per page 10

Show snippets

Click shows the detailed data and abstract

# Abstract

Review

> Med Clin North Am. 2019 May;103(3):463-473. doi: 10.1016/j.mcna.2018.12.006.

Lung Cancer Journal, date of publication, volume, page

Faria Nasim<sup>1</sup>, Bruce F Sabath<sup>1</sup>, George A Eapen<sup>2</sup>

Affiliations + expand

PMID: 30955514

PubMed  
number

2018.12.006

NULink (Reference guide)  
Search for electric journals or hard  
copies in Nagoya University

FULL TEXT LINKS

ELSEVIER  
FULL-TEXT ARTICLE

NULink  
FIND FULL TEXT

Abstract

Lung cancer is the world's leading cause of cancer death. Screening for lung cancer by low-dose computed tomography improves mortality. Various modalities exist for diagnosis and staging. Treatment is determined by subtype and stage of cancer; there are several personalized therapies that did not exist just a few years ago. Caring for the patient with lung cancer is a complex task. This review provides a broad outline of this disease, helping clinicians identify such patients and familiarizing them with lung cancer care options, so they are better equipped to guide their patients along this challenging journey.

**Keywords:** Chemotherapy; Lung cancer; Screening; Smoking; Staging.

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Similar articles

One hundred years of lung cancer.

Spiro SG, Silvestri GA.

Am J Respir Crit Care Med. 2005 Sep 1;172(5):523-9. doi: 10.1164/rccm.200504-531OE. Epub 2005 Jun 16.

PMID: 15961694 Review.

Favorites

SHARE



PAGE NAVIGATION

< Title & authors

Abstract

Similar articles

Cited by

Publication types

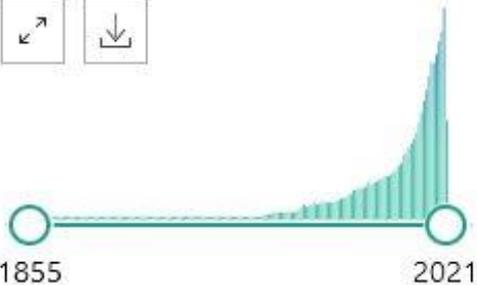
# Refinement of results

- Selection in the side bar
- Addition at “**Additional filters**”
- “Reset all filters” when cancelled
- Default
  - Results by year
  - Text availability
  - Article attribute
  - **Article type**
    - **RCT, systematic review, etc.**

MY NCBI FILTERS 

RESULTS BY YEAR



1855 2021

TEXT AVAILABILITY

Abstract

Free full text

Full text

ARTICLE ATTRIBUTE

Associated data

ARTICLE TYPE

Books and Documents

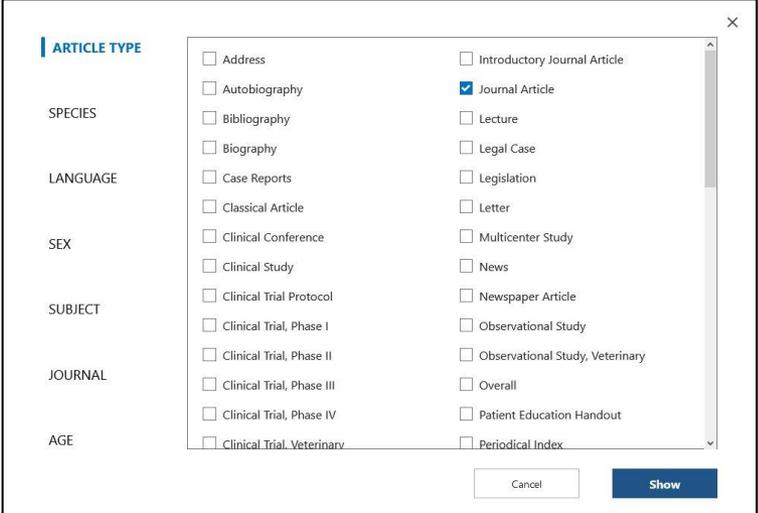
Clinical Trial

Journal Article

# Refinement of results

Items to be added at "Additional filters"

- **Article type**
- Species : human / animal
- Language
- Sex
- Subject
- Journal : main/dental/nursing
- Age



The screenshot shows a dialog box titled "ARTICLE TYPE" with a close button (X) in the top right corner. On the left side, there are labels for filter categories: SPECIES, LANGUAGE, SEX, SUBJECT, JOURNAL, and AGE. The main area contains a list of article types with checkboxes. The "Journal Article" option is checked. At the bottom, there are "Cancel" and "Show" buttons.

Category	Article Type	Selected
SPECIES	Address	<input type="checkbox"/>
	Autobiography	<input type="checkbox"/>
LANGUAGE	Bibliography	<input type="checkbox"/>
	Biography	<input type="checkbox"/>
SEX	Case Reports	<input type="checkbox"/>
	Classical Article	<input type="checkbox"/>
SUBJECT	Clinical Conference	<input type="checkbox"/>
	Clinical Study	<input type="checkbox"/>
JOURNAL	Clinical Trial Protocol	<input type="checkbox"/>
	Clinical Trial, Phase I	<input type="checkbox"/>
AGE	Clinical Trial, Phase II	<input type="checkbox"/>
	Clinical Trial, Phase III	<input type="checkbox"/>
	Clinical Trial, Phase IV	<input type="checkbox"/>
	Clinical Trial, Veterinary	<input type="checkbox"/>
	Introductory Journal Article	<input type="checkbox"/>
	Journal Article	<input checked="" type="checkbox"/>
	Lecture	<input type="checkbox"/>
	Legal Case	<input type="checkbox"/>
	Legislation	<input type="checkbox"/>
	Letter	<input type="checkbox"/>
	Multicenter Study	<input type="checkbox"/>
	News	<input type="checkbox"/>
	Newspaper Article	<input type="checkbox"/>
	Observational Study	<input type="checkbox"/>
	Observational Study, Veterinary	<input type="checkbox"/>
	Overall	<input type="checkbox"/>
	Patient Education Handout	<input type="checkbox"/>
	Periodical Index	<input type="checkbox"/>

Be aware that refinement may cause the leakage of necessary articles.

# Saving the results of search

- **Save** : download
  - Selection of results
  - Format for the saving

Save citations to file

Selection: All results on this page

Format: Summary (text)

Create file Cancel

Summary	The text
PubMed	To the file for sending to reference management soft
PMID	Only PubMed ID
Abstract	The text + Abstract
CSV	The text to a CSV file

# Saving the results of search

- **“E-mail”** to the address specified
- **“Send to”** other software

<b>Clipboard</b>	Temporary saving in PubMed
My Bibliography	Saving in a reference list (NCBI account is necessary)
Collections	Saving in a folder (NCBI account is necessary)
<b>Citation manager</b>	Export to a reference management soft

# How to use "Clipboard"

- Check the box before the title of article  
→ **Send to** → **Clipboard**
- **Save at maximum 500 articles within 8 hours**
- Data in clipboard; Click "**Clipboard**" below the search box → Confirm the data
- When necessary, save in "**My NCBI**"
- To delete it, click "Remove from clipboard" or "**Remove all**".

# Practice 1

## **“Is allergy for egg contraindications of propofol?”**

1. Search articles using the below keywords.
2. Restrict the articles published within 2019-2024.
3. Choose the first two articles, then copy to clipboard.
4. Output the contents in clipboard to a file using Citation manager.

---

**Keywords**    ①propofol    ②egg    ③allergy

---

# Hints

- Search using **Propofol AND "egg" AND allergy**.
- Restrict the period to 2019-2024.
- Click  of the first two articles to put ✓.
- Select "Send to > Clipboard".
- Select "Go to the Clipboard page" in the popup, or select "Clipboard" in search box.
- Select "Send to > Citation manager".

# Answer 1-1

The screenshot shows a PubMed search results page for the query "Propofol AND 'egg' AND allergy". The search bar (1) contains the query. Below the search bar are options for "Advanced", "Create alert", and "Create RSS". The "Send to" button (4) is highlighted, and its dropdown menu (5) is open, showing options: "Clipboard", "My Bibliography", "Collections", and "Citation manager". On the left, the "RESULTS BY YEAR" bar chart (2) shows a peak in 2021. The "TEXT AVAILABILITY" section (3) has checkboxes for "Abstract", "Free full text", and "Full text". The search results list two articles, with the first article's title and abstract partially visible.

**1** Propofol AND "egg" AND allergy

Advanced Create alert Create RSS User Guide

Save Em **4** Send to Sort by: Best match Display options

MY NCBI FILTERS

RESULTS BY YEAR **2**

17 results **5** Clipboard Clear selection Page 1 of 2

My Bibliography

Collections

Citation manager

**3**  **New perspectives on propofol allergy.**

Abstract

Free full text

Full text

and reaction to **propofol** administration in a large pediatric

S, Lobo K, Cravero J.

;31(5):570-577. doi: 10.1111/pan.14147. Epub 2021 Feb 18.

PMID: 33529424

The secondary aim evaluated the relationship between food **allergy** history and **allergy** testing data.

METHODS: A retrospective chart review conducted between May 2012 and October 2018 identified pediatric patients listed allergic to **egg**, soy, and/or peanut, who ...

Johnson JL, Hawthorne A, Bounds M, Weldon DJ.

Am J Health Syst Pharm. 2021 Dec 9;78(24):2195-2203. doi: 10.1093/ajhp/zxab298.

PMID: 34309659

SUMMARY: Literature regarding the history of **propofol allergy** warnings and clinical trial data were

# Answer 1-2

Propofol AND "egg" AND allergy

Advanced Create alert Create **6** Clipboard (2)



Move to page to Clipboard

Save En **7** Send to Sorted by: Order added Display options

My Bibliography  
Collections  
**8** Citation manager

**Create a file for external citation management software**

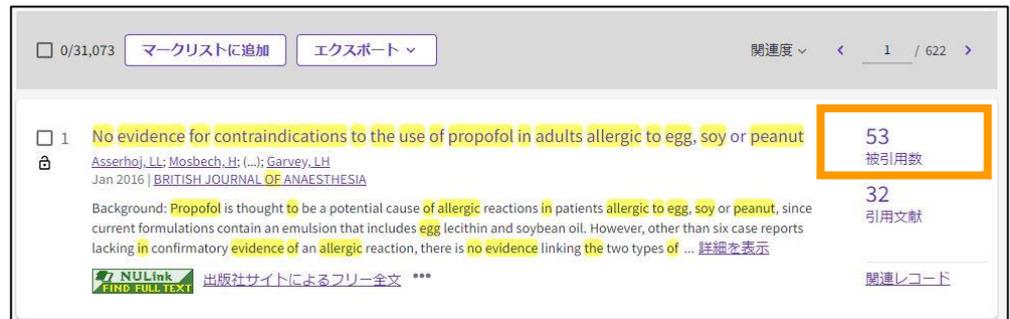
Selection: All results

**9** Create file Cancel

# Additional information

In this search, “**Clinical Practice Guideline for Emergency Department Procedural Sedation With Propofol: 2018 Update**” (Ann Emerg Med. 2019) wasn't searched.

- Use **Web of Science** for citation information search



The screenshot shows a search result in Web of Science. At the top, there are controls for the search: a checkbox for '0/31,073', a 'マークリストに追加' (Add to Mark List) button, and an 'エクスポート' (Export) dropdown menu. On the right, there are navigation options for '関連度' (Relevance) and page numbers '1 / 622'. The main result is for a paper titled 'No evidence for contraindications to the use of propofol in adults allergic to egg, soy or peanut', which is highlighted in yellow. The authors are Asserhoj, LL; Mosbech, H; and Garvey, LH. The journal is BRITISH JOURNAL OF ANAESTHESIA, published in Jan 2016. The abstract text is also highlighted in yellow, stating that propofol is thought to be a potential cause of allergic reactions in patients allergic to egg, soy, or peanut, but no evidence links the two types of allergic reactions. On the right side of the result, there are two orange-bordered boxes: one containing '53 被引用数' (53 Citations) and another containing '32 引用文献' (32 References). At the bottom left, there is a '7 NULink FIND FULLTEXT' button and a link to the publisher's site for a free full-text version. At the bottom right, there is a '関連レコード' (Related Records) link.

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# Advanced Search Builder

- Limit search fields
- Use search results and indexes
- Combine search histories
- Make more complicated formulas

PubMed.gov

Search PubMed

Search

Advanced

Advanced Search Builder

# Advanced Search Builder I

## Search restricting the field

- Input keywords, then select the field of interest. Click **"ADD"** to see automatic display of formula in search box.
- Click "Search" → Search → Results
- **"Add to history"** → add it to the search history

The screenshot illustrates the 'Advanced Search Builder' interface. At the top, a grey bar contains the text 'Add terms to the query box'. Below this, a search input field contains the text 'Lung Neoplasms'. To the left of this field is a dropdown menu with 'MeSH Terms' selected, highlighted by an orange box labeled '1'. To the right of the input field is a blue button labeled 'AND' with a dropdown arrow, highlighted by an orange box labeled '2'. Below the input field is a 'Query box' containing the text 'Lung Neoplasms[MeSH Terms]', which is underlined in red. A callout box, highlighted by an orange box, shows a larger view of this query with a red squiggly line under 'MeSH Terms'. To the right of the 'Query box' is a blue button labeled 'Search' with a dropdown arrow, highlighted by an orange box labeled '3'. A 'Show Index' link is visible below the 'AND' button.

# Advanced Search Builder 2

## Search referring hit number and index

- Select the field, then input keywords.
- Click "**Show Index**" to show the list of keywords.
- Select a keyword from the list (CTRL+click for two or more keywords) , then click "Search", and "Add to History".

The screenshot displays the 'Advanced Search Builder' interface. At the top, there is a section titled 'Add terms to the query box'. Below this, a dropdown menu is open, showing 'MeSH Terms' as the selected field. The search term 'lung neoplasms' is entered in the adjacent text box. The dropdown list displays the following results:

- lung neoplasms (245,051)
- lung neoplasms/analysis (7,423)
- lung neoplasms/anatomy and histology (85,979)
- lung neoplasms/blood (6,492)

The 'lung neoplasms/blood' option is currently selected and highlighted in light blue. To the right of the dropdown, there are three buttons: 'ADD', 'Show Index', and 'Search'. An orange callout box highlights the 'Show Index' button and the dropdown list, with the text 'Automatic term mapping terms off.' written inside it.

# Advanced Search Builder 3

Refer the histories and reuse them

- **"Actions"** of History → **"Add query"**  
→ Automatic display of formula in Query box

The image shows two overlapping screenshots of the 'Advanced Search Builder' interface. The top-left screenshot shows a table with columns 'Search', 'Actions', 'Details', and 'Query'. Row #1 has a three-dot menu icon in the 'Actions' column, which is highlighted with an orange box and labeled '1'. A dropdown menu is open below it, with the 'Add query' option highlighted by an orange box and labeled '2'. An orange arrow points from this 'Add query' option to the 'Query box' in the top-right screenshot. The bottom-right screenshot shows the 'Query box' containing the formula '(Coryza) AND (antibacterial agent)'. Below it, another instance of the 'History and Search Details' table is shown, with the three-dot menu icon in row #1 highlighted by an orange box and labeled '3'. A dropdown menu is open below it, with the 'Add with AND' option highlighted by an orange box. An orange arrow points from this 'Add with AND' option to the 'Query box'.

Search	Actions	Details	Query
#2	1	2	Search: antibacteri
#1	...	Add query	oryza

Showing 1 to 2 of 2

Delete

Create alert

Query box

(Coryza) AND (antibacterial agent)

Search	ons	Detail:	Query
#2	...	Add with AND	antibacterial agent
#1	...	Add with OR	oryza

Showing 1 to 2 of 2

Add with NOT

# Notes on search histories

- To clear the histories: "Delete"
- Automatic deletion 8 hours after
- If necessary, save the histories in **My NCBI**.
- #0 in clipboard

↓ Official video of Advanced Search Builder is available at

[https://www.nlm.nih.gov/oet/ed/pubmed/quickto  
urs/advanced/index.html](https://www.nlm.nih.gov/oet/ed/pubmed/quickto urs/advanced/index.html)

# Practice 2

**" Does antibiotics treatment for acute appendicitis improve the curability in comparison with operation? "**

PICO	Keywords	MeSH
P	Acute appendicitis	"appendicitis"[MeSH Terms]
I	Antibiotics	"anti bacterial agents"[MeSH Terms] "anti bacterial agents"[Pharmacological Action]
Study design	RCT	"randomized controlled trial"[Publication Type]

⌘ Pharmacological Action...search drugs with the same efficacy

# Hints

**"Does antibiotics treatment for acute appendicitis improve the curability in comparison with operation?"**

1. Attach "**drug therapy**" to appendicitis[MeSH] as the subheading, then add it to the History.
2. Add anti bacterial agents[MeSH] to the History.
3. Add anti bacterial agents to History of **Pharmacological Action**.
4. Add the formula "**2 OR 3**" to the History.
5. Make the formula "**1 AND 4**", then search.
6. Limit with Randomized controlled trial.

# Answer 2-1

1. Select **MeSH field**, and input "appendicitis" → Show Index → select "**appendicitis/drug therapy**" [MeSH Terms] → "ADD" → "Add to History"

The image shows a two-step process in a MeSH search interface. In the first step, a dropdown menu is open, showing a list of MeSH terms. The term "appendicitis/drug therapy (592)" is highlighted. In the second step, the term is entered into a search box and the search is executed.

**Step 1:** The interface shows a search box with the text "Enter / edit your search query". A dropdown menu is open, displaying a list of MeSH terms. The term "appendicitis/drug therapy (592)" is highlighted. To the right of the dropdown, there is a button labeled "ADD" and a button labeled "Show Index".

**Step 2:** The search box now contains the text "appendicitis/drug therapy [MeSH Terms]". The "ADD" button is now labeled "Search".

Numbered callouts (1-5) indicate the sequence of actions:

1. Select MeSH field
2. Show Index
3. Select "appendicitis/drug therapy (592)"
4. ADD
5. Search

# Answer 2-2 · 2-3

2. Select **MeSH field**, and input "anti bacterial agents" → "ADD" → "Add to History "

Add terms to the query box

1 MeSH Terms anti bacterial agents 2 ADD

3. Select **Pharmacological Action**, and input "anti bacterial agents" → "ADD" → "Add to History "

Add terms to the query box

1 Pharmacological Action anti bacterial agents 2 ADD

# Answer 2-4

4. Select **Add query** from Actions of formula 2 → Select **Add With OR** from Actions of formula 3

History and Search Details Download Delete

Search	Actions	Details	Query	Results	Time
#3	1	2	Search: anti bacterial agents[Pharmacological Action]	731,193	03:48:58
#2	...	Add query	anti bacterial agents[MeSH Terms]	394,350	03:37:46

Search	Actions	Details	Query	Results	Time
#3	...	4	anti bacterial agents[Pharmacological Action]	731,193	03:48:58
#2	3	Add with OR	anti bacterial agents[MeSH Terms]	394,350	03:37:46

Query box

(anti bacterial agents[MeSH Terms]) OR (anti bacterial agents[Pharmacological Action]) × Add to History ▼

# Answer 2-5

5. Select **Add query** from Actions of formula 1 → Select **Add With AND** from Actions of formula 4

The screenshot displays two overlapping windows of a search history interface. The top window, titled "History and Search Details", shows a table with columns: Search, Actions, Details, Query, Results, and Time. The bottom window, also titled "History and Search Details", shows a similar table. In the top window, the dropdown menu for search entry #1 is open, and the "Add query" option is highlighted with an orange box labeled "2". In the bottom window, the dropdown menu for search entry #4 is open, and the "Add with AND" option is highlighted with an orange box labeled "4". Other search entries in both windows include "anti bacterial agents[MeSH Terms] OR (anti bacterial agents[Pharmacological Action]", "anti bacterial agents[Pharmacological Action]", and "anti bacterial agents[MeSH Terms]".

Search	Actions	Details	Query	Results	Time
#4	...	>	Search: (anti bacterial agents[MeSH Terms]) OR (anti bacterial agents[Pharmacological Action])	760,434	03:23:46
#3	...		Search: anti bacterial agents[Pharmacological Action]	732,076	03:23:41
#2	...		Search: anti bacterial agents[Pharmacological Action]		
#1	...		Search: anti bacterial agents[Pharmacological Action]		

Search	Actions	Details	Query	Results	Time
#4	...		Search: (anti bacterial agents[MeSH Terms]) OR (anti bacterial agents[Pharmacological Action])	759,757	20:15:31
#3	...		Search: anti bacterial agents[Pharmacological Action]	731,419	20:15:18
#2	...		Search: anti bacterial agents[MeSH Terms]	394,539	20:15:06
#1	...		Search: "common cold/drug therapy"[MeSH Terms]	1,196	20:14:57

# Answer 2-6

6. Search using formula 5 → Select **“Randomized Controlled Trial”** from **“Article type”** in side bar.

The screenshot shows a search interface. At the top is a "Query box" containing the search formula: `("appendicitis/drug therapy"[MeSH Terms]) AND ((anti bacterial agents[MeSH Terms]) OR (anti bacterial agents[Pharmacological Action]))`. To the right of the query box is a "Search" button. Below the query box is a list of search results. On the left side of the results list is a filter sidebar titled "ARTICLE TYPE" with several options: "Books and Documents", "Clinical Trial", "Journal Article", "Meta-Analysis", "Randomized Controlled Trial", "Review", and "Systematic Review". The "Randomized Controlled Trial" option is selected, indicated by a blue checkmark and an orange box around it with the number "2" next to it. The search results list shows two entries. The first entry is titled "Five-Year Follow-up of Antibiotic Therapy for Uncomplicated Acute Appendicitis in the APPAC Randomized Clinical Trial." and has a PMID of 25992746. The second entry is titled "Antibiotic Therapy vs Appendectomy for Treatment of Uncomplicated Acute Appendicitis: The APPAC Randomized Clinical Trial." and has a PMID of 30264120. Both entries are labeled as "Free PMC article" and "Clinical Trial".

Query box

("appendicitis/drug therapy"[MeSH Terms]) AND ((anti bacterial agents[MeSH Terms]) OR (anti bacterial agents[Pharmacological Action]))

Search

ARTICLE TYPE

Books and Documents

Clinical Trial

Journal Article

Meta-Analysis

Randomized Controlled Trial

Review

Systematic Review

PMID: 25992746 Free PMC article. Clinical Trial.

Five-Year Follow-up of Antibiotic Therapy for Uncomplicated Acute Appendicitis in the APPAC Randomized Clinical Trial.

3

Cite Salminen P, Tuominen R, Paajanen H, Rautio T, Nordström P, Aarnio M, Rantanen T, Hurme S, Mecklin JP, Sand J, Virtanen J, Jartti A, Grönroos JM.

Share JAMA. 2018 Sep 25;320(12):1259-1265. doi: 10.1001/jama.2018.13201.

PMID: 30264120 Free PMC article. Clinical Trial.

Antibiotic Therapy vs Appendectomy for Treatment of Uncomplicated Acute Appendicitis: The APPAC Randomized Clinical Trial.

4

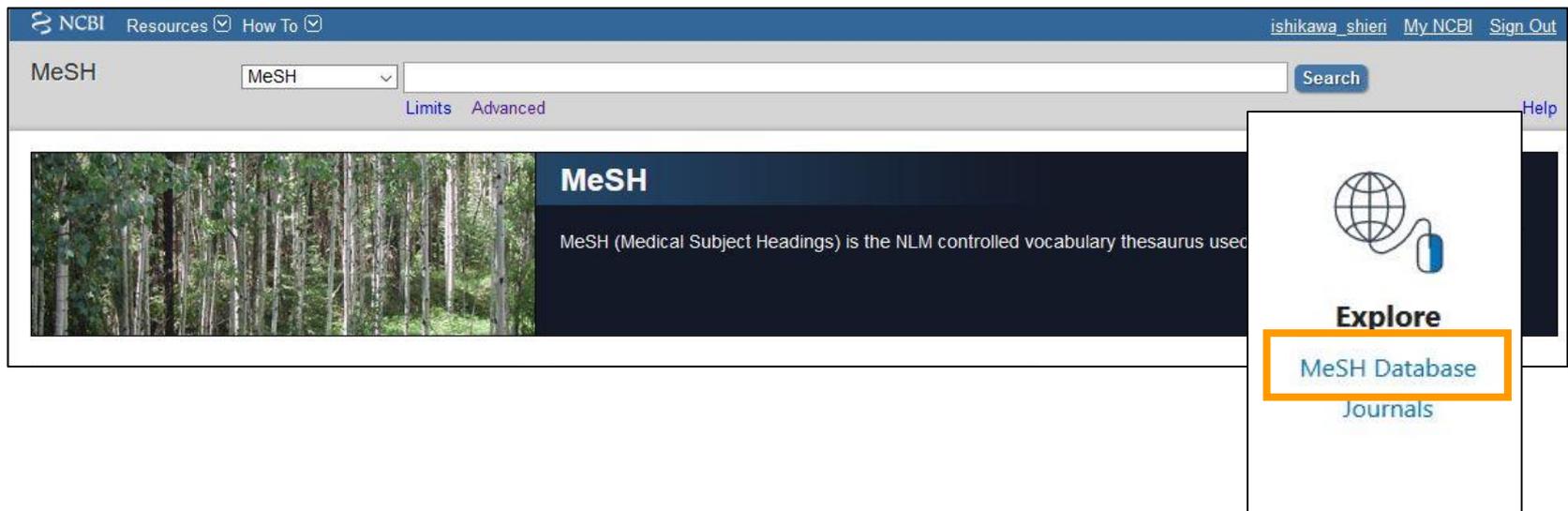
Cite Salminen P, Paajanen H, Rautio T, Nordström P, Aarnio M, Rantanen T, Tuominen R, Hurme S, Virtanen J,

# Contents

- Overview
- Basic search
- Advanced search
  - Advanced Search Builder
- **How to use the functions**
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  - NLM Catalog
  - Single Citation Matcher
  - Clinical Queries

# MeSH Database

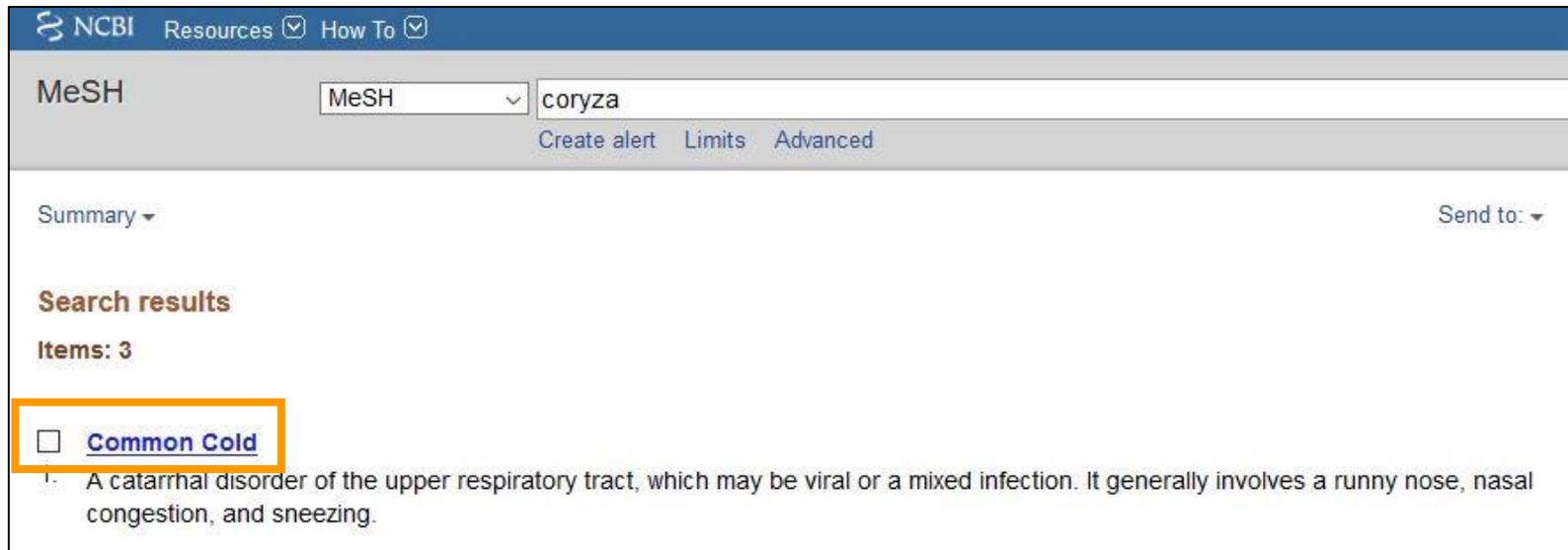
- MeSH is used to search the details.
- Stratified structure of MeSH
- Search is possible by selecting subheading.



The screenshot shows the MeSH database website interface. At the top, there is a navigation bar with the NCBI logo, "Resources" and "How To" dropdown menus, and user options for "ishikawa\_shieri", "My NCBI", and "Sign Out". Below this is a search bar with "MeSH" selected in a dropdown menu, a search input field, and a "Search" button. Links for "Limits" and "Advanced" are also visible. The main content area features a banner image of a forest on the left and a dark blue header with the text "MeSH" and "MeSH (Medical Subject Headings) is the NLM controlled vocabulary thesaurus used". A white tooltip box is overlaid on the right side, containing a globe icon with a mouse cursor, the word "Explore", and a highlighted orange box around the text "MeSH Database Journals".

# MeSH Database

- When a term of interest is input, appropriate MeSH appears.
- It makes possible to confirm that the term is what you intend to know.



The screenshot shows the MeSH database search interface. At the top, there is a navigation bar with "NCBI Resources" and "How To" dropdown menus. Below this, the search bar contains "MeSH" in a dropdown menu and "coryza" in the input field. To the right of the input field are links for "Create alert", "Limits", and "Advanced". Below the search bar, there is a "Summary" dropdown menu and a "Send to:" dropdown menu. The main content area is titled "Search results" and shows "Items: 3". The first item is "Common Cold", which is highlighted with an orange box. Below the item name is a description: "A catarrhal disorder of the upper respiratory tract, which may be viral or a mixed infection. It generally involves a runny nose, nasal congestion, and sneezing."

# MeSH Database

The screenshot shows the MeSH database search results for the term "arthrocentesis". The interface includes a search bar at the top with "arthrocentesis" entered and a "Search" button. Below the search bar, there are options for "Full" and "Send to". The main content area displays the term "Arthrocentesis" with its definition: "Puncture and aspiration of fluid from a joint, sometimes to irrigate or administer drugs into a joint cavity." Below the definition, there is a "Year introduced: 2016" field. To the right, there is a "PubMed Search Builder" section with a text input field, an "Add to search builder" button, an "AND" dropdown, and a "Search PubMed" button. Below the search builder, there is a "Subheadings" section with a grid of checkboxes for various subheadings: "instrumentation", "methods", "organization and administration", "pharmacology", "standards", "statistics and numerical data", "therapeutic use", "utilization", and "veterinary". At the bottom, there are checkboxes for "Restrict to MeSH Major Topic" and "Do not include MeSH terms found below this term in the MeSH hierarchy." Below these checkboxes, there are fields for "Tree Number(s)", "MeSH Unique ID", and "Entry Terms".

MeSH

arthrocentesis

Search

Full

Send to

**Arthrocentesis**

Puncture and aspiration of fluid from a joint, sometimes to irrigate or administer drugs into a joint cavity.

Year introduced: 2016

PubMed search builder options

Subheadings:

- instrumentation
- methods
- organization and administration
- pharmacology
- standards
- statistics and numerical data
- therapeutic use
- utilization
- veterinary

Restrict to MeSH Major Topic.

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

Tree Number(s): E01.370.225.998.329.465, E02.800.550.310, E04.665.600.465, E05.200.998

MeSH Unique ID: D000069237

Entry Terms:

PubMed Search Builder

Add to search builder AND

Search PubMed

YouTube Tutorial

Related information

Year of introduction

Formula

Subheading

Search without the terms in lower strata.

Search articles on the MeSH terms

# MeSH Database

synonyms

## Entry Terms:

- Arthrocenteses
- Arthrocentesis, Temporomandibular Joint
- Arthrocentesis, Temporomandibular Joints
- Joint, Arthrocentesis, Temporomandibular
- Joints, Arthrocentesis, Temporomandibular
- Arthrocentesis, TMJ
- Arthrocenteses, TMJ
- TMJ Arthrocenteses
- TMJ Arthrocentesis
- Temporomandibular Joint Aspiration
- Aspiration, Temporomandibular Joint
- Aspirations, Temporomandibular Joint
- Joint Aspiration, Temporomandibular
- Joint Aspirations, Temporomandibular
- Temporomandibular Joint Aspirations
- Temporomandibular Joint Arthrocentesis
- Arthrocenteses, Temporomandibular Joint
- Arthrocentesis, Temporomandibular Joint
- Joint Arthrocenteses, Temporomandibular
- Joint Arthrocentesis, Temporomandibular
- Temporomandibular Joint Arthrocenteses
- Aspiration, Temporomandibular Joint
- Aspiration, Temporomandibular Joints
- Joint, Aspiration, Temporomandibular
- Joints, Aspiration, Temporomandibular

## Previous Indexing:

- [Paracentesis \(1996-2015\)](#)

[All MeSH Categories](#)

[Analytical, Diagnostic and Therapeutic Techniques and Procedures](#)

[Diagnosis](#)

[Diagnostic Techniques and Procedures](#)

[Clinical Laboratory Techniques](#)

[Specimen Handling](#)

[Paracentesis](#)

**Arthrocentesis**

MeSH terms before the term of interest is established.

Stratified structure

# MeSH Database

- **PubMed search builder**

Click "Add to search builder" to send MeSH term (with subheadings) listed in the left. Select operator to make a formula. Click "Search PubMed" to conduct the search.



# MeSH Database

- “PubMed” under **Related information**  
Search ignoring subheadings.

- **NLM MeSHBrowser**

The detailed information on the MeSH term with rich annotations.



# Practice 3

## **“Is physical exercise effective to the prevention of depression after childbirth”**

1. Search “**postpartum depression**” in MeSH Database.
2. Select “**therapy**” as subheading for the result of 1, and add it to PubMed Search Builder.
3. Search “**exercise**” in MeSH Database.
4. Use “AND” to connect the above result with Formula 2, and add it to “PubMed Search Builder”.
5. Use formula 4 to search.

# Answer 3-1

1. When search "**postpartum depression**", "**Depression, Postpartum**" appear.

The screenshot shows the MeSH (Medical Subject Headings) interface. At the top, there is a navigation bar with 'NCBI Resources' and 'How To' links. The user is logged in as 'ishikawa\_shieri'. The search bar contains 'postpartum depression' and the 'Search' button is visible. Below the search bar, there are options for 'Create alert', 'Limits', and 'Advanced'. The main content area displays the MeSH term 'Depression, Postpartum' with its definition: 'Depression in POSTPARTUM WOMEN, usually within four weeks after giving birth (PARTURITION). The degree of depression ranges from mild transient depression to neurotic or psychotic depressive disorders. (From DSM-IV, p386)'. It also shows the year introduced (1996) and PubMed search builder options. A list of subheadings is provided, each with a checkbox. The subheadings are organized into three columns. On the right side, there is a 'PubMed Search Builder' section with a search box, 'Add to search builder' button, 'AND' dropdown, and 'Search PubMed' button. Below that is a 'YouTube Tutorial' link and a 'Related information' section with links to PubMed, PubMed - Major Topic, Clinical Queries, NLM MeSH Browser, and MedGen.

MeSH   [Create alert](#) [Limits](#) [Advanced](#) [Help](#)

Full

### Depression, Postpartum

Depression in POSTPARTUM WOMEN, usually within four weeks after giving birth (PARTURITION). The degree of depression ranges from mild transient depression to neurotic or psychotic depressive disorders. (From DSM-IV, p386)  
Year introduced: 1996

PubMed search builder options  
[Subheadings:](#)

<input type="checkbox"/> analysis	<input type="checkbox"/> enzymology	<input type="checkbox"/> parasitology
<input type="checkbox"/> anatomy and histology	<input type="checkbox"/> epidemiology	<input type="checkbox"/> pathology
<input type="checkbox"/> blood	<input type="checkbox"/> ethnology	<input type="checkbox"/> physiology
<input type="checkbox"/> cerebrospinal fluid	<input type="checkbox"/> etiology	<input type="checkbox"/> physiopathology
<input type="checkbox"/> chemically induced	<input type="checkbox"/> genetics	<input type="checkbox"/> prevention and control
<input type="checkbox"/> classification	<input type="checkbox"/> history	<input type="checkbox"/> psychology
<input type="checkbox"/> complications	<input type="checkbox"/> immunology	<input type="checkbox"/> rehabilitation
<input type="checkbox"/> diagnosis	<input type="checkbox"/> metabolism	<input type="checkbox"/> statistics and numerical data
<input type="checkbox"/> diagnostic imaging	<input type="checkbox"/> microbiology	<input type="checkbox"/> therapy
<input type="checkbox"/> diet therapy	<input type="checkbox"/> mortality	<input type="checkbox"/> urine
<input type="checkbox"/> drug therapy	<input type="checkbox"/> nursing	<input type="checkbox"/> virology
<input type="checkbox"/> economics	<input type="checkbox"/> organization and administration	

[YouTube Tutorial](#)

### Related information

[PubMed](#)

[PubMed - Major Topic](#)

[Clinical Queries](#)

[NLM MeSH Browser](#)

[MedGen](#)

# Answer 3-2

2. Click **"therapy"** in the subheading list, then click "Add to search builder".

The screenshot shows the PubMed search builder interface for the term "Depression, Postpartum". The main heading is "Depression, Postpartum" with a description: "Depression in POSTPARTUM WOMEN, usually within four weeks after giving birth (PARTURITION). The degree of depression ranges from mild transient depression to neurotic or psychotic depressive disorders. (From DSM-IV, p386) Year introduced: 1996". Below this, there are "PubMed search builder options" and a link to "Subheadings:". A list of subheadings is displayed in three columns, with the "therapy" subheading checked and highlighted by an orange box with the number "1". To the right, a "PubMed Search Builder" window shows the search query: "Depression, Postpartum/therapy" [Mesh]. Below the query window, the "Add to search builder" button is highlighted by an orange box with the number "2". Other elements include a "Send to:" dropdown, a "Search PubMed" button, and a "Related information" section with links to PubMed, PubMed - Major Topic, Clinical Queries, NLM MeSH Browser, and MedGen.

Full ▾ Send to: ▾

### Depression, Postpartum

Depression in POSTPARTUM WOMEN, usually within four weeks after giving birth (PARTURITION). The degree of depression ranges from mild transient depression to neurotic or psychotic depressive disorders. (From DSM-IV, p386)  
Year introduced: 1996

PubMed search builder options  
[Subheadings:](#)

<input type="checkbox"/> analysis	<input type="checkbox"/> enzymology	<input type="checkbox"/> parasitology
<input type="checkbox"/> anatomy and histology	<input type="checkbox"/> epidemiology	<input type="checkbox"/> pathology
<input type="checkbox"/> blood	<input type="checkbox"/> ethnology	<input type="checkbox"/> physiology
<input type="checkbox"/> cerebrospinal fluid	<input type="checkbox"/> etiology	<input type="checkbox"/> physiopathology
<input type="checkbox"/> chemically induced	<input type="checkbox"/> genetics	<input type="checkbox"/> prevention and control
<input type="checkbox"/> classification	<input type="checkbox"/> history	<input type="checkbox"/> psychology
<input type="checkbox"/> complications	<input type="checkbox"/> immunology	<input type="checkbox"/> rehabilitation
<input type="checkbox"/> diagnosis	<input type="checkbox"/> metabolism	<input type="checkbox"/> statistics and numerical data
<input type="checkbox"/> diagnostic imaging	<input type="checkbox"/> microbiology	<input checked="" type="checkbox"/> therapy
<input type="checkbox"/> diet therapy	<input type="checkbox"/> mortality	<input type="checkbox"/> urine
<input type="checkbox"/> drug therapy	<input type="checkbox"/> nursing	<input type="checkbox"/> virology
<input type="checkbox"/> economics	<input type="checkbox"/> organization and administration	

2 Add to search builder AND ▾

Search PubMed

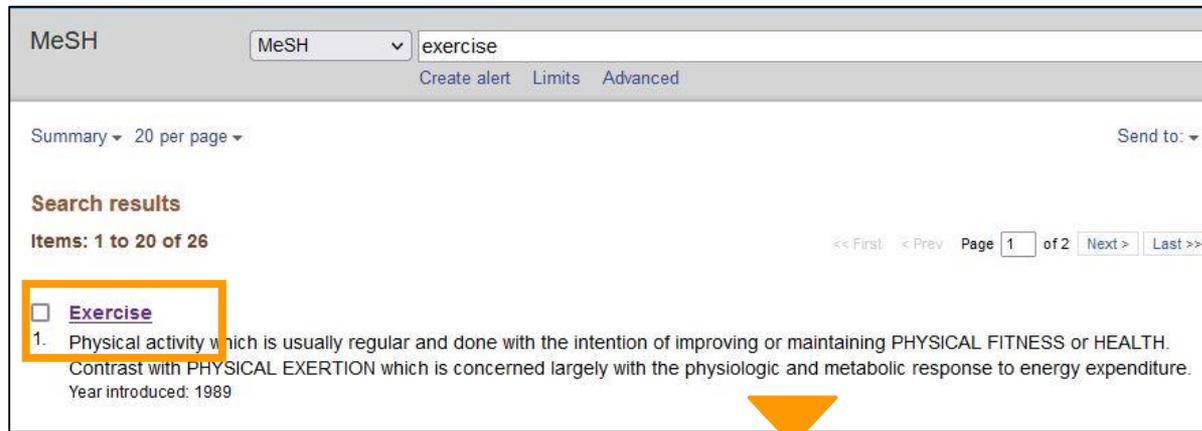
YouTube Tutorial

### Related information

PubMed  
PubMed - Major Topic  
Clinical Queries  
NLM MeSH Browser  
MedGen

# Answer 3-3

## 3. Search "Exercise".



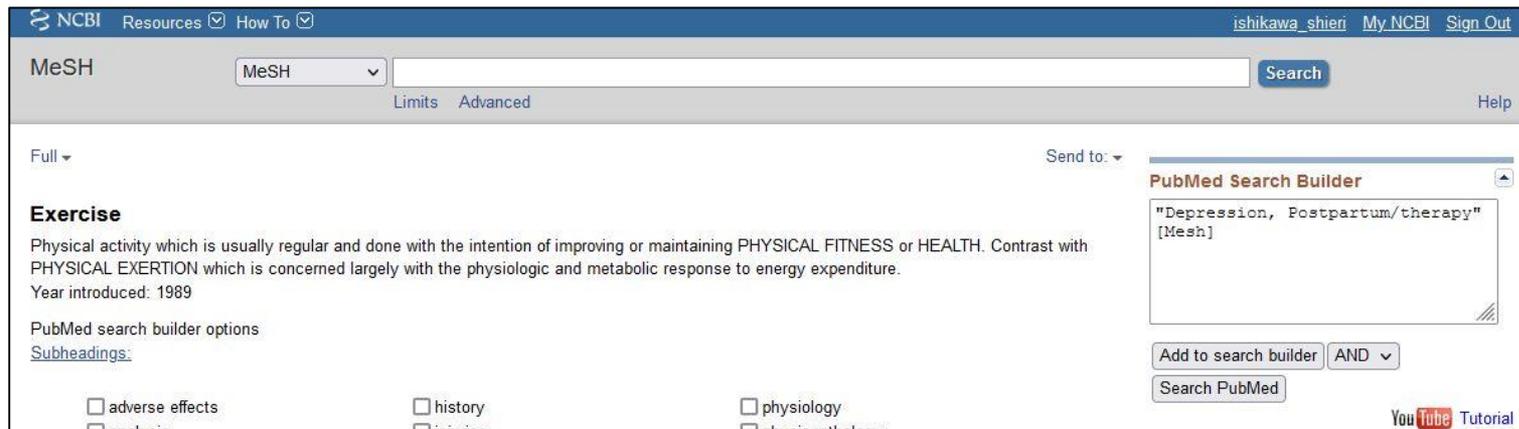
MeSH MeSH exercise  
Create alert Limits Advanced

Summary 20 per page Send to:

**Search results**  
Items: 1 to 20 of 26 << First < Prev Page 1 of 2 Next > Last >>

**Exercise**  
1. Physical activity which is usually regular and done with the intention of improving or maintaining PHYSICAL FITNESS or HEALTH. Contrast with PHYSICAL EXERTION which is concerned largely with the physiologic and metabolic response to energy expenditure.  
Year introduced: 1989





NCBI Resources How To ishikawa\_shierj My NCBI Sign Out

MeSH MeSH Search Limits Advanced Help

Full Send to:

**Exercise**  
Physical activity which is usually regular and done with the intention of improving or maintaining PHYSICAL FITNESS or HEALTH. Contrast with PHYSICAL EXERTION which is concerned largely with the physiologic and metabolic response to energy expenditure.  
Year introduced: 1989

PubMed search builder options  
[Subheadings:](#)

adverse effects  history  physiology  
 analysis  injuries  pathophysiology

**PubMed Search Builder**  
"Depression, Postpartum/therapy"  
[Mesh]

Add to search builder AND Search PubMed

YouTube Tutorial

# Answer 3-4

4. After confirming that the operator is **"AND"**, click **"Add to search builder"**.

The screenshot displays the PubMed Search Builder interface. On the left, there is a sidebar with the heading "Exercise" and a list of subheadings, each with a checkbox: adverse effects, analysis, anatomy and histology, blood, classification, drug effects, economics, education, epidemiology, and ethics. The main area shows a search query: ("Depression, Postpartum/therapy" [Mesh]) AND "Exercise"[Mesh]. Below the query are two buttons: "Add to search builder" and "AND" with a dropdown arrow, and a "Search PubMed" button. A yellow box highlights the "Add to search builder" button and the "AND" dropdown. To the right, a smaller version of the search builder is shown, with a yellow box highlighting the "Add to search builder" button and the "AND" dropdown. The interface also includes a "Send to:" dropdown, a "PubMed Search Builder" header, and a "Related information" section at the bottom.

# Answer 3-5

## 5. Click "Search PubMed".

**PubMed.gov** ("Depression, Postpartum/therapy"[Mesh]) AND "Exercise"[Mesh]

Advanced Create alert Create RSS User Guide

Save Email Send to Sorted by: Most recent

MY NCBI FILTERS

RESULTS BY YEAR

2001 2021

TEXT AVAILABILITY

Abstract

Free full text

Full text

51 results

1 **Feasibility, Acceptability, and Preliminary Effects of "Mindful Moms": A Mindful Physical Activity Intervention for Pregnant Women with Depression.**

Cite Kinser PA, Thacker LR, Rider A, Moyer S, Amstadter AB, Mazzeo SE, Bodnar-Deren S, Starkweather A. Nurs Res. 2021 Mar-Apr 01;70(2):95-105. doi: 10.1097/NNR.0000000000000485.

Share PMID: 33630532

2 **Key stakeholder perspectives on the development and real-world implementation of a home-based physical activity program for mothers at risk of postnatal depression: a qualitative study.**

Cite Teychenne M, Apostolopoulos M, Ball K, Olander EK, Opie RS, Rosenbaum S, Laws R. BMC Public Health. 2021 Feb 16;21(1):361. doi: 10.1186/s12889-021-10394-8.

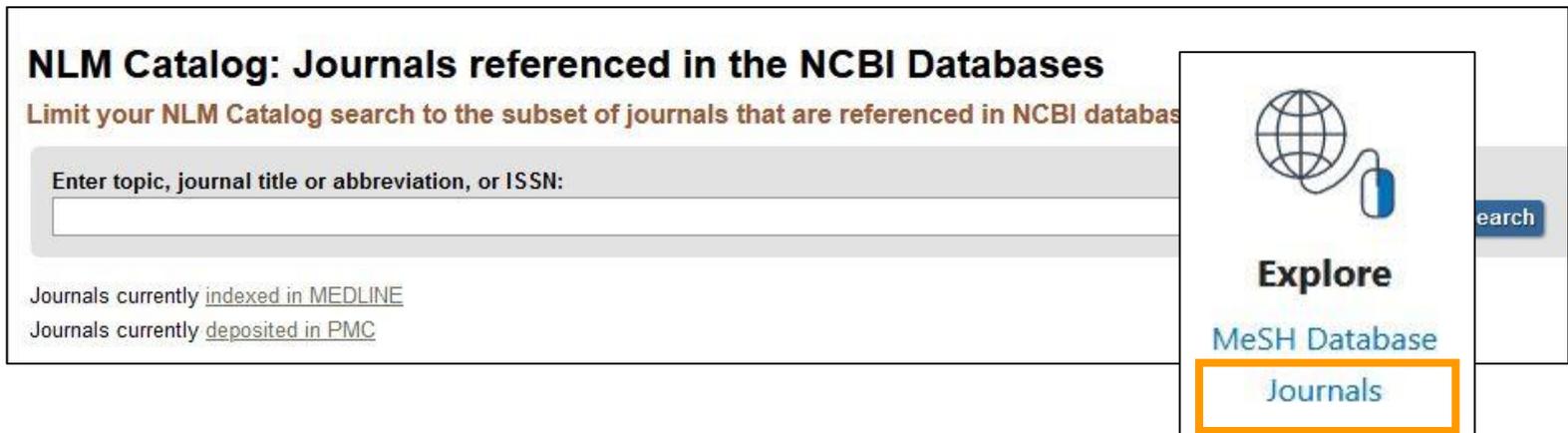
Share PMID: 33593324 **Free PMC article.**

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# NLM Catalog

- Click Explore > Journals at the top page.
- Information on journals appears.
- Search based on journal name, its abbreviation, ISSN, etc.



**NLM Catalog: Journals referenced in the NCBI Databases**  
Limit your NLM Catalog search to the subset of journals that are referenced in NCBI databases

Enter topic, journal title or abbreviation, or ISSN:

[Journals currently indexed in MEDLINE](#)  
[Journals currently deposited in PMC](#)

  
**Explore**  
MeSH Database  
**Journals**

Search

# NLM Catalog

## Nagoya journal of medical science

**Author(s):** Aichi Ika Daigaku  
Nagoya Teikoku Daigaku Igakubu  
Nagoya Daigaku Igakubu  
Nagoya Ika Daigaku

**NLM Title Abbreviation:** Nagoya J Med Sci

**Title(s):** Nagoya journal of medical science.

**Other Title(s):** NAGOYA J MED SCI

**Continues:** Aichi journal of experimental medicine

**Publication Start Year:** 1927

**Frequency:** Quarterly

**Country of Publication:** Japan

**Publisher:** Nagoya : Nagoya University School Of Medicine

**Description:** v. illus.

**Language:** English

**ISSN:** 0027-7622 (Print)  
2186-3326 (Electronic)  
0027-7622 (Linking)

**Coden:** NJMSAG

**LCCN:** 34038485

**Electronic Links:** <https://www.ncbi.nlm.nih.gov/pmc/journals/21863326/>  
PubMed Central  
<http://www.med.nagoya-u.ac.jp/medlib/nagoya-journal-of-medical-science/>  
Free Electronic Resource

## Details of journal

## Search in the given journal

PubMed Search Builder

"Nagoya J Med Sci"[Journal]

Add to search builder

Search PubMed

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# Single Citation Matcher

- Search using journal name, year of publication, volume, page, authors\*, term in the article title. \*It is possible to restrict only the first author.
- Effective in search for References of articles

**PubMed Single Citation Matcher**

Use this tool to find PubMed citations. You may omit any field.

**Journal**  
Journal may consist of the full title or the title abbreviation.

**Date**  
Month and day are optional.

**Year**  **Month**  **Day**

**Volume**  **Issue**  **First page**

**Find**

[Advanced Search](#)

[Clinical Queries](#)

[Single Citation Matcher](#)

# Single Citation Matcher

## PubMed Single Citation Matcher

Use this tool to find PubMed citations. You may omit any field.

### Journal

Journal may consist of the full title or the title abbreviation.

### Date

Month and day are optional.

Year

Month

Day

### Details

Volume

Issue

First page

### Author

Use format lastname initials for the most comprehensive results, e.g., Ostell J. See also: [Searching by author.](#)

### Limit authors

Only as first author

Only as last author

### Title words

2008[Date - Publication] AND 26[Volume] AND 124[Pageination]



Search

[Advanced](#) [Create alert](#) [Create RSS](#)

[User Guide](#)

Save

Email

Send to

Sorted by: Best match

Display options

5 results

only need to fill in some of the fields

# Contents

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  - **Clinical Queries**

# Clinical Queries

- A function to set a filter for clinical articles automatically, simply by inputting a keyword, facilitating the **EBM articles**.
- Clinical Study Categories (The below five are available)
  - I. Therapy
  - II. Clinical Prediction Guides
  - III. Diagnosis
  - IV. Etiology
  - V. Prognosis

Two categories (broad/narrow) can be assigned.



# Clinical Queries

## PubMed Clinical Queries

This tool uses [predefined filters](#) to help you quickly refine PubMed searches on clinical or disease-specific topics. To use this tool, enter your search terms in the search bar and select filters before searching.

Enter your search terms **Search**

**Filter category**

Clinical Studies  
 COVID-19

Clinical Queries filters were developed by [Haynes RB et al.](#) to facilitate retrieval of clinical studies.

**Filter**

Therapy

See [Clinical Queries filter details](#).

**Scope**

Broad

Returns more results: less specific, but more comprehensive. See [filter details](#).

[Reset form](#)

**Selection of category**

# Clinical Queries (COVID-19)

Since February 2021, COVID-19 Article Filters with 9 categories has been available.

- I. General
- II. Mechanism
- III. Transmission
- IV. Diagnosis
- V. Treatment
- VI. Prevention
- VII. Case Report
- VIII. Forecasting
- IX. Long COVID

# My NCBI

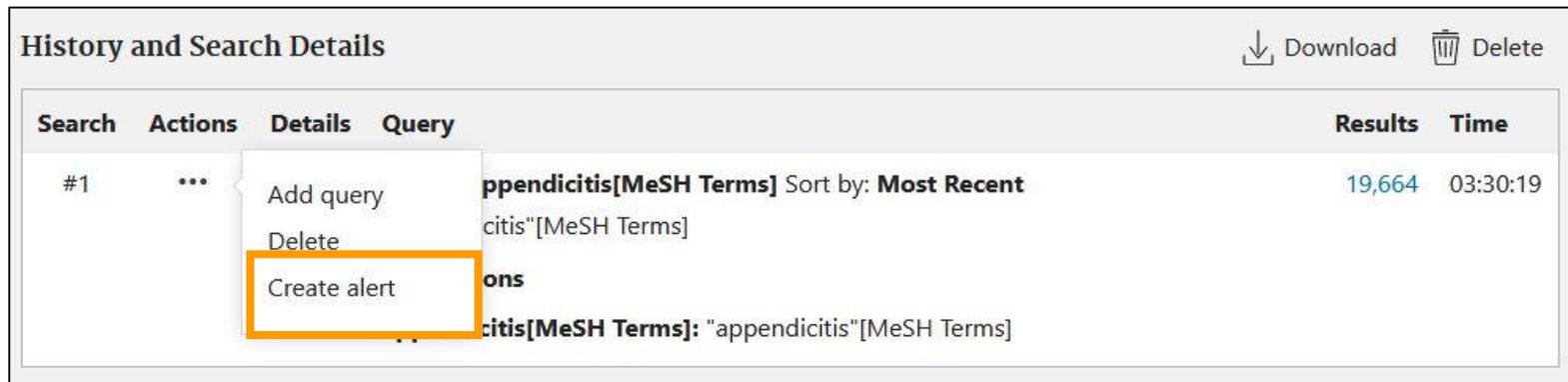
Free user registration allows the below services

- To save and reuse of search formula
- Periodical reports of search results with alert function
- To save the results
- Customization of search page



# My NCBI with alert function

- Periodical e-mail reports according to the formula.
- Select "Actions" in "History" of "**Advanced Search Builder**" → "**Create alert**"



History and Search Details Download Delete

Search	Actions	Details	Query	Results	Time
#1	...	<ul style="list-style-type: none"><li>Add query</li><li>Delete</li><li><b>Create alert</b></li></ul>	appendicitis[MeSH Terms] Sort by: <b>Most Recent</b> citis"[MeSH Terms] ons citis[MeSH Terms]: "appendicitis"[MeSH Terms]	19,664	03:30:19

# My NCBI with alert function

**Your saved search**

Name of saved search:

Search terms:

[Test search terms](#)

Would you like email updates of new search results?

Yes  
 No

Email:

Frequency:

Which day?

- Name the formula.
- Customize frequency, day, number of articles, etc.
- Default address is the address at registration.

# Summary

- Technic to search with a high precision
  - Phrase search
  - Right-hand match
  - Selection of field
  - MeSH/subheading
- Technic to make complicated formula
  - Use of Advanced Search Builder

This is the last slide of "PubMed".

Go on the next video.

If you have questions, please send them to  
[libmed@t.mail.nagoya-u.ac.jp](mailto:libmed@t.mail.nagoya-u.ac.jp).