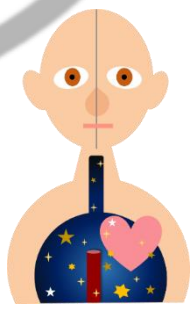
How to use databases and online tools for collecting and utilizing articles

This guide shows you how to search, acquire,
and utilize articles for your research.
Let’s enjoy your research activity with this guide!

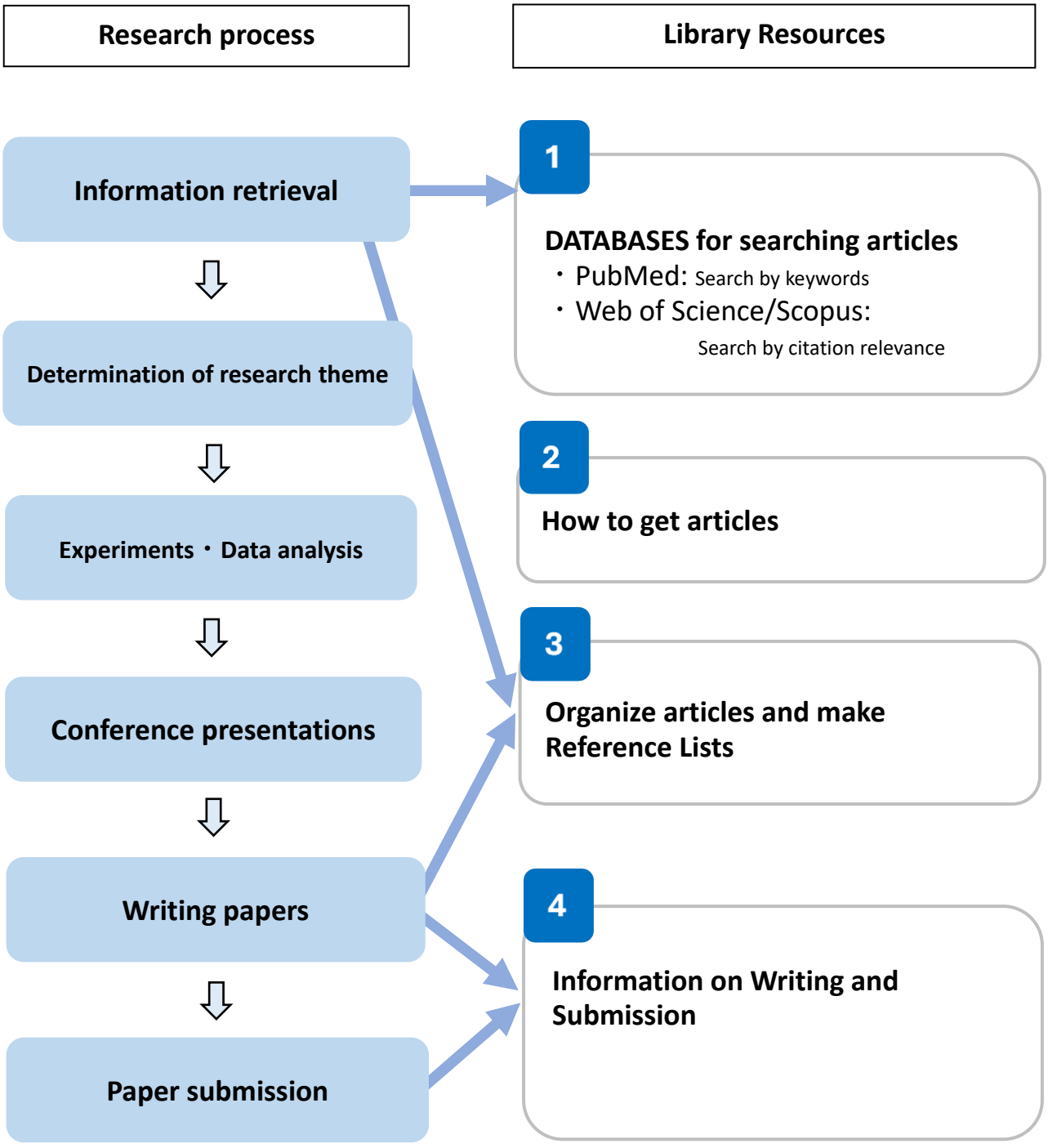


Official Character of Medical Lib.

SEIRYO Jiro

Research process and Library resources

Med (TU) Library offers various bibliographic databases and online tools to support your research. Those are useful for each step of the research process. Please refer to the following diagram and see the appropriate section.



1 DATABASES for searching articles

When you're digging into a research topic, you'll want to collect all sorts of papers that hit the mark. The best way to do that? Check out our library's bibliographic databases! Each one has its unique features, so choose the one that best suits your needs.

For access information and the help function of each database, please visit the Med-Lib website.
https://www.library.med.tohoku.ac.jp/en/search/db_list.html

Bibliographic Databases	Features
PubMed Thesaurus	Keywords-based retrieval, Coverage: Medicine and life sciences, Most widely used
Web of Science / Scopus	Citation relevance-based retrieval, Coverage: various fields
CINAHL Thesaurus	Nursing and allied health
PsycINFO Thesaurus	Behavioral and social sciences, including psychology
EBMR: Evidence-Based Medicine Reviews Thesaurus	Resources offered by Cochrane Collaboration: Cochrane Database of Systematic Reviews, Cochrane Central Register of Controlled Trials, etc.

TIPS *Access from Off-campus*

Accessing databases and e-journals **from off-campus** requires **a VPN connection** or **Gakunin** (Certification via Tohoku University ID). For more information, please visit the following website.

- **Seiryo-VPN: Groupware of the Graduate School of Medicine**
- **Gakunin: https://www.library.tohoku.ac.jp/search/ejournal/remote.html**

TIPS *For constructing a complex search query*

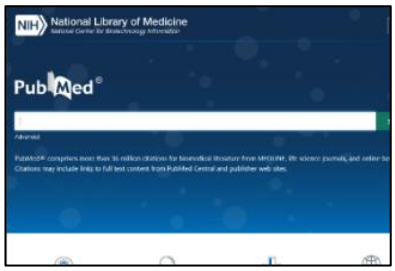
1. Search with a word or a phrase and choose appropriate keywords.
2. Combine terms with the Operators.
   "AND" to combine different concepts (e.g., "diabetes AND exercise").
   "OR" to include synonyms or related terms for a single concept (e.g., "heart attack OR myocardial infarction").
   "NOT" to exclude irrelevant concepts (use cautiously as it can remove relevant articles).

*Check the search results and modify the search query through trial and error.

TIPS *What is "Thesaurus"?*

Thesaurus is a comprehensive controlled vocabulary list. Synonyms and hierarchical relationships between terms are defined in a particular subject. Thesaurus used for PubMed is called MeSH (Please consult the next page for detail). Databases with Thesaurus mark in the above table offer thesaurus.

PubMed



PubMed is a free search engine that primarily accesses the MEDLINE database of biomedical and life sciences journal citations and abstracts and is the most widely used database for searching articles in the fields of medicine and life sciences. It's an essential tool for researchers due to its vast collection and powerful search capabilities.

Access: https://pubmed.ncbi.nlm.nih.gov/?otool=ijptohlib

Start with **Keywords**: Begin by entering your main concepts into the general search bar. PubMed's Automatic term mapping(ATM) will automatically try to add relevant keywords.
For comprehensive or precise searches, use the **MeSH***.

TIPS *What is the MeSH*, and what can be done with it?*

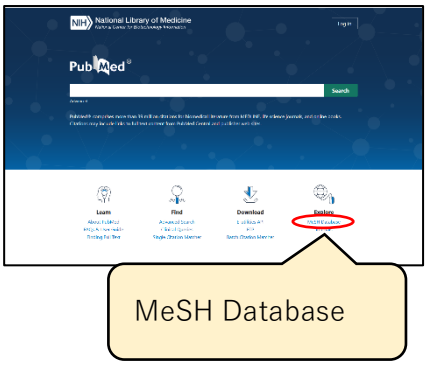
MeSH, short for **Medical Subject Headings**, is thesaurus maintained by the National Library of Medicine (NLM). It is a highly organized dictionary explicitly designed for biomedical and health-related information. MeSH enables advanced search which is difficult to achieve with ordinary keyword.

What are the benefits of a MeSH Search?

- **Better Accuracy & Completeness:** MeSH terms filter out irrelevant results by focusing on specific concepts, ensuring you find articles truly relevant to your topic, even if authors use different words (e.g., "heart attack" and "myocardial infarction" both map to the same term). This also helps you find *more* relevant articles by grouping related terms, so you don't miss essential studies due to synonyms.
- **Bridging Vocabulary Gaps:** MeSH acts as a universal translator, standardizing diverse terminology used by researchers, making it easier to find relevant content regardless of specific phrasing.
- **Flexible Searching:** Its hierarchical structure allows you to easily broaden or narrow your search, moving from general to highly specific topics and fine-tuning your results.

Note

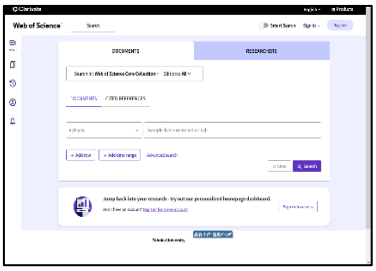
- MeSH is not added for newly arrived data, so you should use ordinary keyword search to search for them.
- MeSH changes with the times. Appropriate MeSH term for searching may differ according to publication year of the article.
- With “MeSH Database”, you can search MeSH term and look up details of each MeSH term.
- Please check the “Entry Terms” of MeSH term (Defined synonyms of MeSH term) with “MeSH Database”. Then, you may find the appropriate search term which you have to add as an ordinary keyword.



*MEDLINE database can also be searched on “Ovid” or “EBSCO”. The available search functions differ from those of PubMed.

Web of Science

Web of Science (WoS) is one of the world's largest academic databases. Alongside Scopus, it's widely used in academia as a primary citation database. It only indexes high-quality, peer-reviewed journals that meet rigorous selection criteria, ensuring high academic reliability. It is the primary source for major citation metrics, such as the Journal Impact Factor.



Key Features

- **Curated Scholarly Content:** Includes peer-reviewed journals selected through a rigorous process, ensuring high reliability.
- **Diverse Citation Indexes:** Covers a wide range of fields including natural sciences, social sciences, arts, and humanities.
- **Robust Citation Tracking:** Lets you see what a paper cited and, crucially, which later papers cited it, helping you trace research influence and development.
- **Journal Metrics:** Provides access to Journal Citation Reports (JCR) for journal impact factors and other evaluation metrics.

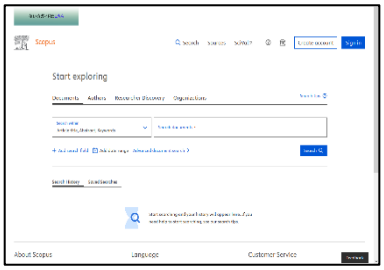
TIPS *When to Use Web of Science?*

Use Web of Science when you need/want to:

- Search for papers in fields related to medicine
- Identify key researchers or influential papers in a specific field
- Check a journal's Impact Factor to select a suitable publication venue for your paper
- Evaluate your own paper's citation status and research impact
- Grasp research trends and developments to find new research topics

Scopus

Bibliographic database offered by Elsevier. The search and analysis function is similar to that of Web of Science. Scopus also includes article information from a wide range of fields.



2 How to get articles

(1) Download e-journals from the DATABASE

From Databases

Please click on LINK button. This is called "Link resolver" and you can confirm if you can access e-journals or not with this button.

From the Journal List (By the title of the journal or ISSN)

https://www.library.tohoku.ac.jp/search/ejournal/index.html

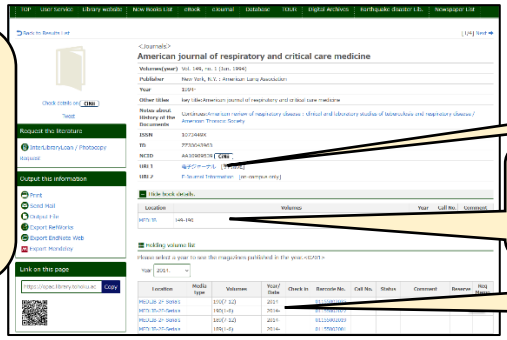
If you cannot find...

(2) Check with Med-Library Holdings via OPAC: Printed copies

If you cannot find the e-journals you need, check for **Printed Copies** **held by the Medical Library** via **OPAC** (Online Public Access Catalog) by the title or ISSN of the journal. You can find the OPAC from the "Search the Holdings of Tohoku University" menu, which appears after clicking the LINK button. If you find it, go to the bookshelf. In the Medical Library, foreign journals are located on the 2nd floor, while Japanese ones are found on the 1st floor of the annex. Both foreign and Japanese newly arrived journals are on the 2nd floor.

→OPAC's URL: https://opac.library.tohoku.ac.jp/opac/opac_search/?lang=1

You cannot search by title or author of the articles in OPAC. **Use the title of the journal as a keyword.**



Detailed search results in OPAC

If you cannot find...

(3) Order Photocopies of the articles from other Libraries

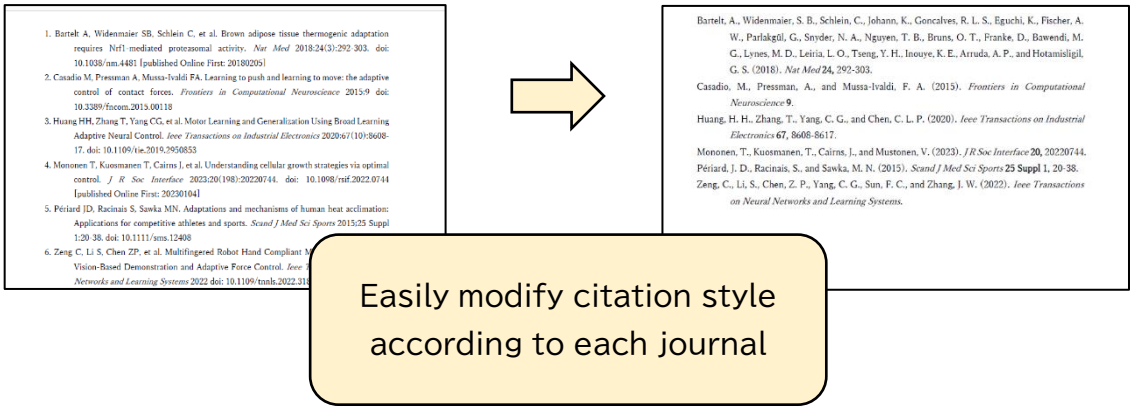
If you can't find the literature you need in e-journals or the Medical Library's collection, you can order Photocopies from other libraries. The fee (20-150 yen per sheet, plus postage) is covered by the university. **You can order from MyLibrary (an online service of the library).**

When you click on the link LINK, you'll see a link to apply for photocopies through MyLibrary. Please log in to MyLibrary using your Tohoku University ID and apply. For more details about MyLibrary, please see the "HOW TO USE MYLIBRARY".

https://www.library.med.tohoku.ac.jp/en/search/db_manual-e/MyLibrary-e.pdf

3 Organize articles and make a Reference List.

When you're writing a paper, these tools can help you organize the articles you've found and properly cite them. They allow you to cite papers and create reference lists formatted for the specific journal you're submitting to.



Tools for Organizing and Citing Research

EndNote Online https://www.myendnoteweb.com/EndNoteWeb.html

Online version of EndNote. Tohoku University members can use EndNote online. Up to fifty thousand articles of information can be organized. You can delete duplicate data imported from different databases.
https://www.myendnoteweb.com/EndNoteWeb.html

Mendeley https://www.mendeley.com/

The Institution version is available, which has a larger data capacity than the free version. Article data can be added by drugging and dropping PDF files into Mendeley.

Zotero https://www.zotero.org/

Free Software, however, a paid service is necessary for synchronizing data between multiple devices or using online storage to share information among group members.

4 Information on Writing and Submission of Articles

■ Various indicators for evaluating journals

・Journal Citation Reports
https://jcr.clarivate.com/
→ You can examine the “Impact factor” of each journal.

・Scopus
https://www.scopus.com/
→ You can examine the “CiteScore” of each journal.

■ A guide to the Article Processing Charge (APC) support program for Tohoku University members

https://sites.google.com/tohoku.ac.jp/apc-kakudai/english
*Log in to Tohoku University Google account is necessary for access.

■ Books available for research written in English

Please search for more books in the OPAC.

・Publishing your medical research, 2nd ed. 2017
MEDLIB-3F-Books WZ345/120

・AMA manual of style: a guide for authors and editors, 11th ed. 2020
MEDLIB-3F-Books WZ345/140

・Clinical epidemiology: how to do clinical practice research, 3rd ed. 2006
MEDLIB-3F-Books WA950/88

・How to read a paper: The basics of evidence-based medicine and healthcare, 6th ed. 2019.
Main Library (Kawauchi) M111/7
*The 5th edition of this book is available online at the following URL.
https://ebookcentral.proquest.com/lib/tohokudai/detail.action?docID=1642418

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