

PUBMED - MESH

MODULE 4.3

MeSH - the Medical Subject Headings

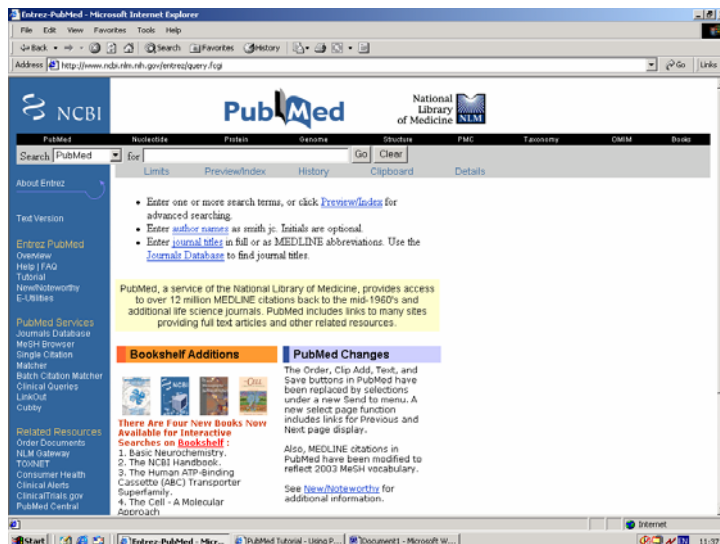
1. Connecting to PubMed

HINARI users can search and access full-text articles directly from the PubMed database.

You will need to have your HINARI log in details to do this.

- First go to the HINARI website found at www.healthinternetwork.org where you can select the **HINARI LOG IN** hyperlink which will take you to the HINARI log in page.
- When the log in page opens enter your personal HINARI user ID and password into the log in boxes and then select the sign on button to access the HINARI site.
- Go to the “**find articles**” section on the page and select the hyperlink “**search for articles through PubMed**”.

The home page for PubMed displays giving you access to PubMed databases.



2. MeSH or Medical Subject Headings and using MeSH in PubMed

MeSH is the controlled vocabulary used to index articles for MEDLINE. The MeSH vocabulary provides a consistent way to retrieve information that may use different terminology to describe the same concept.

It is important to realise that if an article is “**indexed for MEDLINE**” the MeSH terms will be assigned as keywords to each of the indexed articles.

Therefore if you search for articles using MeSH headings alone you will only find those articles that have been indexed for MeSH terms.

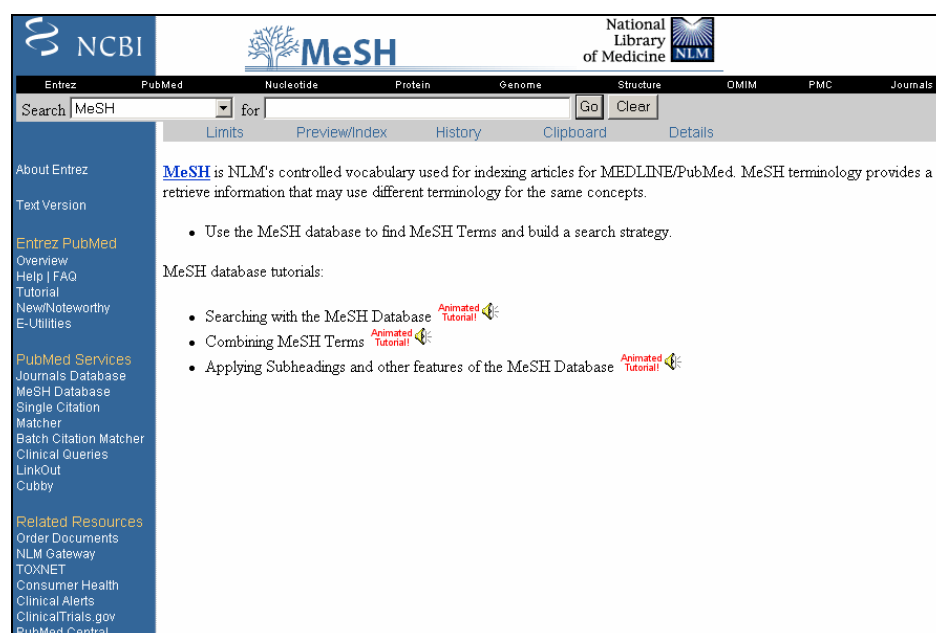
You will miss those articles that are in PubMed, but not indexed for MEDLINE, as they **will not** have MeSH terms assigned to their records.

This workbook will guide you through using the MeSH or Medical Subject Headings. There are exercises incorporated within the workbook to illustrate the use of MeSH in the search process, along with additional exercises to practice at the end.

3. The MeSH Database

To access the MeSH Database you need to go to the blue bar on the left-hand side of the PubMed home page and select the “**MeSH Database**” link under PubMed services. The MeSH Database home page will then be displayed.

You can also open the MeSH Database by selecting it from the dropdown menu next to “**Search**” in the search toolbar.



On the MeSH Database home page the active query box is in the grey horizontal bar running across the top of the page.



To search the MeSH database you need to ensure that the box adjacent to “**Search**” displays MeSH and that you enter your search terms in the longer search box.

To search for the MeSH term that applies to your topic enter your search statement in the search box click on “Go” to run your search. The database will then display the results that match your term.

Tip!

If you use the back button on your browser whilst navigating around PubMed you may find that you need to use the “refresh” feature in order to re-display the webpage.

Exercise 1

- Select and open the **MeSH Database**.
- In this exercise we will look for a MeSH term for cancer
- Enter your search terms in the empty search query box- type in the following statement: **cancer**.
- Then click on the adjacent “Go” button.
- From the results found you can see that the MeSH term for cancer is “**neoplasms**”.
- Click on the hyperlinked term to display more information.
- Look at the definition provided for neoplasms.

The record for a MeSH term contains a definition of the term, associated subheadings, a list of entry terms and the tree view of MeSH.

If you look at the definition of the MeSH term you can see the description and the subheadings which are associated with the term.

Below the subheadings are two check boxes.

One refers to “**Major Topic Headings**” only the other to instruct PubMed not to “**Explode**” a term.

Under this section there are **entry terms** with **see also references**.

Each record also has a tree view of MeSH displaying the term and its position in the MeSH tree structure.

Exercise 2

- Select and open the **MeSH Database**.
- In this exercise we will look for a MeSH term for **Dengue**
- Enter your search terms in the empty search query box- type in the following statement: **dengue**.
- Then click on the adjacent “Go” button.
- From the results found you can see that there are 3 MeSH terms for Dengue.
- Click on the **hyperlinked term for Dengue** to display more information.
- Look at the definition and the subheadings.
- **Check the box** next to the MeSH term for Dengue.
- Then select to “**Send to search box with AND**” by clicking on the **send to** button.
- The term will be entered in the search box as “Dengue” [MeSH].
- Click on the “**Search PubMed**” button.

- **Display** your results in the **citation** format and look at the MeSH terms on the records.

Note:

When your term is entered in the search box you can add further keywords or MeSH terms to the search.

If you wish to search using subheadings select the appropriate subheading by checking the selection box next to it.

Exercise 3

- Select and open the **MeSH Database**.
- Enter your search terms in the empty search query box- type in the following statement: **dengue**.
- Then click on the adjacent **“Go”** button.
- From the results found you can see that there are 3 MeSH terms for Dengue.
- **Click on the hyperlinked term** to display more information.
- Look at the definition and the subheadings and select the one for **“prevention and control”**
- Click on the **“Send to”** button
- The term will be entered in the search box.
- Click on the **“Search PubMed”** button.
- **Display** your results in the **citation** format and look at the MeSH terms on the records. You will notice the occurrence of your terms in the MeSH list.

Restricting to Major Topic Headings only

Restricting a search to the Major Topic Headings means that the items found will be primarily about that Major Term and will not be those that relate to the subject in secondary terms or just mention it in passing. For example if we restrict Dengue to a Major Topic Heading we will be finding articles whose primary subject matter is about Dengue.

Exercise 4

- Select and open the **MeSH Database**.
- Enter your search terms in the empty search query box- type in the following statement: **dengue**.
- Then click on the adjacent **“Go”** button.
- From the results found you can see that there are 3 MeSH terms for Dengue.
- **Click on the hyperlinked term** to display more information.
- Then **tick the check box** for **“Restrict Search to Major Topic Headings Only”**.
- Click on the **“Send to Search Box with AND”** button
- The term will be entered in the search details box.
- Look at the details **Dengue [MAJR]** shows the search restriction to Major Topic Headings.
- Click on the **“Search PubMed”** button.
- **Display** your results in the **citation** format and look at the MeSH terms on the records.

Identifying Major MeSH terms in retrieved records

In the citation format Major MeSH terms are identified with an asterisk next to them e.g. Dengue*

Using MeSH terms

If you look at your search history you can compare the difference in numbers of the records found searching as a keyword, MeSH term and Major MeSH term. The MeSH term describes the content of an article using consistent terminology and is valuable for finding relevant items with some degree of specificity.

Restricting a search to Major MeSH Terms can improve the specificity of a search although you may miss some items where your topic is not the main focus of the article.

Geographical regions

There are also MeSH terms assigned to geographical regions and countries.

Exercise 5

- Select and open the **MeSH Database**.
- Type in the search term **Asia** in the empty search query box.
- Then click on the adjacent “**Go**” button.
- From the results found you can see the MeSH terms for Asia.
- Select the first option for Asia by clicking on the hyperlink and look at the list under the MeSH categories. The tree structure is broken down into regions and countries.
- Select **Myanmar** and a new page opens showing the description , subheadings and entry terms.
- You should find that **Burma and Myanma** are the **Entry Terms** for Myanma.

Exercise 6

- Select and open the **MeSH Database**.
- Enter your search terms in the empty search query box by typing in **developing countries**.
- Then click on the adjacent “**Go**” button.
- From the results found you can see the MeSH term for developing countries. It was introduced in 1971.
- Select the “**developing countries**” hyperlink
- Look at the **Entry Terms** and you will see the terms that will map to the MeSH term.
- Select to search for articles tagged with this search term by placing a **tick** in the check box next to “**developing countries**”
- Click on the “**Send to search box with AND**” button
- The term will be entered in the search box.
- Click on the “**Search PubMed**” button.
- **Display** your results in the **citation** format and look at the MeSH terms on the records and the occurrence of your term.

5 Practice makes perfect!

You have now covered all the features of this module.

If you wish to practice using the features covered in this module you can try the additional exercises in the Appendix.

APPENDIX

Remember- you may need to “refresh” the page if you use the back button on your browser.

Exercise 1

- Open the **MeSH Database**.
- Type **malaria** in the search query box and click on “**GO**”.
- How many MeSH terms are associated with Malaria?
- Choose the term for **Malaria** and check the tick box.
- Then “**Send to Search Box with AND**” and select to “**Search PubMed**”.
- Select the first **6** articles found in your search and display them in the **citation** format.
- You will be able to look at the MeSH terms for each article.

Exercise 2

- Open the **MeSH Database**.
- Type **schistosomiasis** in the search query box and click on “**GO**”.
- Select the hyperlink for the **schistosomiasis** MeSH term.
- Select to “**Restrict to Major Topic Headings**” and the **Subheading** for **etiology**.
- “**Send to Search Box with AND**” and “**Search PubMed**”
- **Display** the articles found in the **citation** format.

Exercise 3

- Open the **MeSH Database**.
- Type **malaria** in the search query box and click on “**GO**”.
- Select **Malaria Falciparum** hyperlink and open the page with further information and the subheadings list.
- Select to “**Restrict to Major Topic Headings**”.
- “**Send to Search Box with AND**” and “**Search PubMed**”.
- Repeat the steps above but do not restrict your search to Major Topic Headings.
- What do you notice about your results?

Exercise 4

- Open the **MeSH Database**.
- Type **tuberculosis** in the search query box and click on “**GO**”.
- Select the **Tuberculosis, Multidrug-Resistant** hyperlink.
- Then select the subheading for **therapy** and “**Restrict to Major Topic Headings**”.
- “**Send to Search Box with AND**” and “**Search PubMed**”.
- Select several articles and **display** them in the **citation** format.
- Have a look at the MeSH Terms.

Exercise 5

- Open the **MeSH Database**.

- Type **Dengue** in the search query box and click on “GO”.
- Select the MeSH term **Dengue** and “Send to Search Box with AND” and “Search PubMed”.
- Go to the **MeSH Database** again.
- Type **disease outbreaks** in the search query box and click on “GO”.
- Select the MeSH term **Disease Outbreaks** and “Send to Search Box with AND” and “Search PubMed”.
- Go to the **MeSH Database** again.
- Type **South East Asia** in the search query box and click on “GO”.
- Select the MeSH term **Asia Southeastern** and “Send to Search Box with AND” and “Search PubMed”.
- Click on “History” and select these last 3 searches and combine them with **AND** e.g. #1 AND #2 AND #3.
- How many articles are there and do they relate to your search terms?

Exercise 6

- Open the **MeSH Database**.
- Type **malaria** in the search query box and click on “GO”.
- Select the MeSH term **Malaria** and “Send to Search Box with AND” and “Search PubMed”.
- Go to the **MeSH Database** again.
- Type **Africa** in the search query box and click on “GO”.
- Select the MeSH term **Africa South of the Sahara** and “Send to Search Box with AND” and “Search PubMed”.
- Go to the **MeSH Database** again.
- Type **infant mortality** in the search query box and click on “GO”.
- Select the MeSH term **Infant Mortality** and “Send to Search Box with AND” and “Search PubMed”.
- Click on “History” and select these last 3 searches and combine them with **AND** e.g. #1 AND #2 AND #3.
- How many articles are there and do they relate to your search terms?

Answers

Exercise 1

There are 7 (at time of writing).

Exercise 2

Your articles found should be restricted to "Schistosomiasis/etiology" [MAJR]

Exercise 3

"Malaria, Falciparum"[MAJR] will be displayed from the restricted search and you will have fewer records than your second search which will display with "Malaria, Falciparum"[MeSH]

Exercise 4

You should be able to see the therapy related terms listed in the MeSH Terms. Also the content of the Articles will reflect your restrictions.

Exercise 5

You will probably have around 80 or more articles that relate to Dengue outbreaks in South East Asia.

Exercise 6

You will find around 60 or more articles relating to your terms.