

Thesaurus mapping in healthcare databases

How can a thesaurus help my literature searching?

Many bibliographic databases use what is known as a 'controlled vocabulary' to index articles. Each common medical concept is given a single subject heading which covers all the words and phrases used to describe that concept. For example, "Cerebral vascular accident" is a subject heading which covers all the words and phrases used for the concept of "stroke".

Each record in a database may have several subject headings given to describe the concepts covered in the article, as well as other details such as title, author, page numbers, etc. If you search using a database's thesaurus only articles that have been labelled as being about the subject heading you choose will be selected. Your results will be more relevant as articles where your search terms are not a significant topic will not be included in the results.

Using a thesaurus also helps overcome problems of inconsistent terminology and alternative terms or spellings. If you type in the word 'paediatric' as a keyword in a search you should also carry out a search for 'pediatric' as well, as databases can use both spellings. Using the thesaurus will label articles with either spelling under one subject heading – so you would only need then to do one search.

Each database uses a different list of subject headings i.e. the BNI thesaurus will have different subject headings to the Medline thesaurus. For this reason, **you can only use a thesaurus if you are searching in one database only in Advanced Search**. If you need to use several databases, search them separately, and compare results when you have finished searching.

How are subject headings arranged?

Subject headings are normally arranged in a hierarchy or tree structure, where broad subjects are subdivided into more specific topics. This picture shows part of the Medical Subject Headings (MeSH) hierarchy in Medline. Narrower, more specific terms (e.g. ear) are indented under broader terms (e.g. head). The yellow helps you keep track of which part of the hierarchy you are viewing.

You are currently browsing Medline

Thesaurus > Anatomy (Non MeSH) > Body Regions > Head

	Select	Explode	Major	Subheadings
	?	?	?	?
- Anatomy (Non MeSH)				
- Body Regions [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Anatomic Landmarks [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Breast [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Extremities [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
- Head [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ear [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Face [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Scalp [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Skull Base [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Neck [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Using Thesaurus Mapping

You will need to be logged in with your NHS Athens password. Go to the NHS Evidence Healthcare Databases advanced search at <http://www.library.nhs.uk/booksandjournals/advanced/default.aspx>

Enter your search term, e.g. healthcare staff, and tick the 'Map to Thesaurus' box. Click 'search'.

healthcare staff IN

Title and Abstract Journal Name *

Any field Abstract

Publication Type Author *

Title ISSN

Map to Thesaurus ?

* For Author and Journal name enter search terms in "quotation marks". ?

Browse Thesaurus

Search

Terms which match the concepts of your keyword search will then be displayed. Select appropriate terms from the list, by ticking the correct box in the "select" column. Then click search.

You are currently browsing Medline

Thesaurus

	Select	Explode	Major	Subheading
+ Health Personnel [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Great Britain [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Medical Staff [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Nursing Staff, Hospital [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ State Medicine [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+ Carrier State [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+ Cross Infection [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+ Attitude of Health Personnel [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+ Nursing Staff [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+ Sexual Harassment [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Any selections made from this list will be OR searched. Select only similar or alternative terms for your keyword.

You may wish to use the **exploded**, **major descriptor** or **subheadings** options instead.

Ticking the **Exploded** box will expand your subject, searching for your term plus any related and narrower terms. To see which terms will be included if you tick **Exploded**, click on the grey subject heading itself. You may need to scroll both up and down the page to see all the information you need. Related and narrower terms for the term **Health personnel** are shown in the darker grey shaded area below.

Thesaurus > Named Groups (Non MeSH) > Persons > Occupational Groups > Health Personnel

	Select	Explode	Major	Subheadings
+ Foreign Professional Personnel [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Health Personnel [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Allied Health Personnel [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Anatomists [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Caregivers [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coroners and Medical Examiners [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+ Dental Staff [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+ Dentists [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Faculty, Dental [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Faculty, Medical [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Faculty, Nursing [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health Educators [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
+ Health Facility Administrators [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Infection Control Practitioners [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medical Chaperones [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

You can click on any one of these terms to go to its place in the thesaurus hierarchy where it appears next to closely related terms: you may find other terms there that you wish to add to your search

Subheadings

It is possible to break down some Descriptors/Subject Headings into subheadings. Subheadings are specific characteristics of a main thesaurus term e.g. ethics or history. They are not narrower terms, so specific professions, e.g. physiotherapy would not appear as subheadings for the term healthcare staff.

Subheadings enable you to focus your search even further. To view the Subheadings attached to a thesaurus term, tick the box in the subheading column:

You can either select individual subheadings or, if you want to search across all the subheadings, simply tick the select all box

Then tick the subheading(s) you want to search for. Click apply and then search to continue.

Major Descriptor

This option will retrieve only articles where the subject matter is predominantly that of your chosen thesaurus term.

Browsing thesaurus headings

To browse thesaurus headings, click on [Browse Thesaurus](#). You will then be shown the top level of the tree structure in the thesaurus. You can then click on the grey plus signs next to each heading to see lower levels of the hierarchy. No plus sign indicates there are no lower levels of the hierarchy.

	Select	Explode	Major	Subheadings
- Anatomy (Non MeSH)				
- Body Regions [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Anatomic Landmarks [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Breast [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Extremities [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
- Head [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ear [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Face [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Scalp [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Skull Base [Scope]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

For the heading you want to select, select a box next to the heading, in the **select**, **exploded**, **major descriptor** or **subheading** column as appropriate. Then click on Search

How do I know if I have done a thesaurus search?

A search history using the thesaurus is displayed below. If / appears after the search term, it shows the thesaurus was used. **Exp** before the search term shows an exploded search was used. * before the search term shows the **major descriptor** option was used. Subheadings appear after the search term, as shown in search 5 below where the subheading **psychology** appears after the term **health personnel**.

Search history

Line	Database	Search Term	View Results
<input type="checkbox"/> 1	MEDLINE	exp HEALTH PERSONNEL/	339152 <input type="button" value="Apply Limits"/> <input type="button" value="x"/>
<input type="checkbox"/> 2	MEDLINE	INFLUENZA VACCINES/	13966 <input type="button" value="Apply Limits"/> <input type="button" value="x"/>
<input type="checkbox"/> 3	MEDLINE	*SICK LEAVE/ OR *ABSENTEEISM/	4466 <input type="button" value="Apply Limits"/> <input type="button" value="x"/>
<input type="checkbox"/> 4	MEDLINE	1 AND 2 AND 3	9 <input type="button" value="Apply Limits"/> <input type="button" value="x"/>
<input type="checkbox"/> 5	MEDLINE	HEALTH PERSONNEL/px [px=Psychology]	2483 <input type="button" value="Apply Limits"/> <input type="button" value="x"/>

AND OR To combine two line numbers using NOT, enter the line numbers in the search box below: for example 1 NOT 2

What are scope notes and why should I read them?

Scope notes are thesaurus definitions. To see the scope note, click on the word **scope** next to the term.

The screenshot shows a 'Browse Thesaurus' window with a modal 'Scope Note for - Influenza Vaccines' open. The modal contains the following information:

- Scope:** Vaccines used to prevent infection by viruses in the family ORTHOMYXOVIRIDAE. It includes both killed or attenuated vaccines. The composition of the vaccines is changed each year in response to antigenic shifts and changes in prevalence of influenza virus strains. The vaccine is usually bivalent or trivalent, containing one or two INFLUENZAVIRUS A strains and one INFLUENZAVIRUS B strain.
- Note:** coordinate IM with specific influenza virus or virus subtype /immunol (IM); SCR records for several specific influenza vaccines are also available; not for Haemophilus influenzae vaccines (= HAEMOPHILUS VACCINES)
- Entry Date:** 2005 (1963)
- Used For:**
 - flumist
 - flu vaccines
 - vaccines influenza

An arrow points from the text 'Along with a definition the scope note usually also tells you the year the MeSH heading was added to the thesaurus...' to the 'Entry Date' field in the modal.

Along with a definition the scope note usually also tells you the year the MeSH heading was added to the thesaurus. It may give any previous terms that were used which you might need to search with. If in doubt about using a thesaurus term – read the scope note.