

Royal Papworth Hospital Library Services

**A step-by-step guide to conducting
an advanced literature search using a
healthcare database**



Select All

AMED

BNI

CINAHL

EMBASE

HBE

HMIC

Medline

PsycINFO

PubMed

Identify your key terms

Before you log in, it is important to think about the different aspects of your topic.

TIP: Databases do not work well with sentences. You will need to identify and search separately for the **keywords/phrases** in your search topic.

Having identified your keywords/phrases, consider synonyms, US spellings or alternative terminology e.g. medical vs general terms.

Example topic:

Is the flu vaccine effective in reducing sick leave?

	Keywords/phrases	
	Flu vaccine	Sick leave
Synonyms /Alternative terminology	Influenza vaccine	Time off work
	Influenza immunisation	Absent
	Influenza immunization	Absenteeism

After planning your search, access the databases at:

<http://hdas.nice.org.uk>



Search the Databases



Find a Journal



Find a Book

Select your database

Log in with your NHS Athens username and password. You are now in the NICE Healthcare Databases Advanced Search.

Select the relevant database for your topic.

Select All AMED BNI CINAHL
 EMBASE HBE HMIC Medline
 PsycINFO PubMed

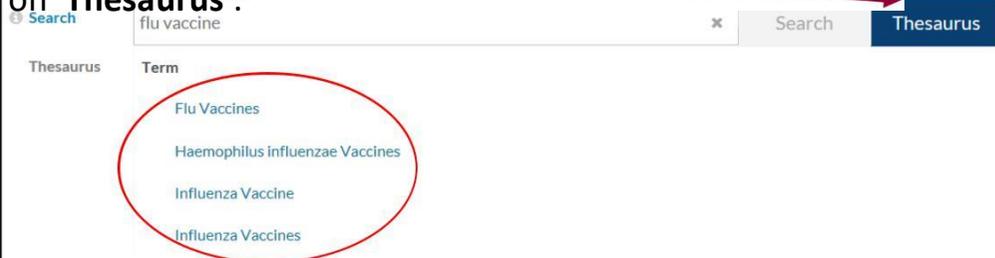


Use the thesaurus to search your keywords

Each database uses controlled subject headings to 'tag' articles with their relevant subjects. These headings can help you locate articles that use different synonyms for your keywords/phrases.

Type your first keyword/phrase into the search box and click

on **'Thesaurus'**.



Search flu vaccine × Search Thesaurus

Thesaurus Term

- Flu Vaccines
- Haemophilus influenzae Vaccines
- Influenza Vaccine
- Influenza Vaccines

This will display the best matches for your term. Select the most relevant option to see the thesaurus features in more detail.

Thesaurus	Select	Explode	Major	Term	Broad	Narrow	Sibling	Used For	Related	Subheadings	Notes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Viral Vaccines						Subheadings	Scope
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Influenza Vaccines	1			10		Subheadings	Scope
Used For											
Afluria											
CAIV-T vaccine											
Flu Vaccines											

Using the thesaurus

Your selected term will appear beneath its broader term (shown in blue). At the bottom of the table, you can see other variants of this term that the thesaurus heading is used for.

Thesaurus	Select	Explode	Major	Term	Broad	Narrow	Sibling	Used For	Related	Subheadings	Notes
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Viral Vaccines						Subheadings	Scope
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Influenza Vaccines	1			10		Subheadings	Scope
				Used For							
				Afluria							
				CAIV-T vaccine							
				Flu Vaccines							

If you are unsure about whether a thesaurus heading is relevant to your search, click on **'Scope'** for a description of the heading.

There are three options next to each heading. Use **'Select'** to locate any articles that are tagged with this heading, or **'Major'** to locate only articles which have this heading as a primary focus. **'Explode'** is covered on the next page.

For an even more specific search, click on **'Subheadings'** to see different aspects of the topic, which can be individually selected.

Thesaurus	Select	Explode	Major	Term	Broad	Narrow	Sibling	Used For	Related	Subheadings	Notes	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Viral Vaccines						Subheadings	Scope	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Influenza Vaccines	1			10		28	Scope	
				ad administration & dosage					ae adverse effects	ag agonists		
				ai antagonists & inhibitors					an analysis	bi biosynthesis	bl blood	
				cf cerebrospinal fluid					ch chemistry	cl classification	cs chemical synthesis	
				ct contraindications					ec economics	ge genetics	hi history	im immunology
				ip isolation & purification					me metabolism	pd pharmacology	pk pharmacokinetics	
				po poisoning					re radiation effects	sd supply & distribution	se secretion	
				st standards					to toxicity	tu therapeutic use	ur urine	

The thesaurus tree

Selecting **'Explode'** will locate articles tagged with the selected heading and any narrower headings (where these exist). In the previous example, there are no narrower terms available for the heading **Influenza Vaccines**, so selecting **'Explode'** would return the same results as **'Select'**.

However, clicking on the broader heading **Viral Vaccines** shows that this heading has 23 narrower terms. Exploding this heading would include the original broad heading plus all of these options.

Alternatively, relevant headings can be individually selected using **'Select'**.

Select	Explode	Major	Term	Broad	Narrow	Sibling	Used For	Related	Subheadings	Notes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vaccines						Subheadings	Scope
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Viral Vaccines	1	23				Subheadings	Scope
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adenovirus Vaccines						Subheadings	Scope
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AIDS Vaccines						Subheadings	Scope
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cytomegalovirus Vaccines						Subheadings	Scope
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Dengue Vaccines						Subheadings	Scope
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ebola Vaccines						Subheadings	Scope
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Herpesvirus Vaccines						Subheadings	Scope
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Influenza Vaccines						Subheadings	Scope

After choosing your desired option(s), click on **'Search Now'** and then close the thesaurus (top of page).

Clear Selection ✖ Close Thesaurus Or And Search Now Search as Individual Queries

Thesaurus	Select	Explode	Major	Term	Broad	Narrow	Sibling	Used For	Related	Subheadings	Notes
	<input type="checkbox"/>	<input type="checkbox"/>		Viral Vaccines						Subheadings	Scope
	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Influenza Vaccines	1			10		Subheadings	Scope

Free text searching

You can also enter your own search terms, which is called free text searching. This ensures that your search is comprehensive, particularly as recent articles added to the database may not yet have been tagged with thesaurus headings.

Things to consider:

Phrases: Put quotation marks (“ ”) around any phrases. This will ensure that the database searches for the exact pattern of words e.g. **“influenza vaccine”**.

Wildcards: To search for different word endings you can use a wildcard (*). Consider carefully at which point to use the wildcard. For example, searching for **vaccine*** would locate articles containing **vaccines**, but using **vaccin*** would also cover **vaccination**, **vaccinations** and **vaccinated**.

Acronyms: Acronyms are common within healthcare so it can be useful to search for these separately. However, **be aware** that acronyms may have multiple meanings, so the search could return results that are irrelevant to your topic. For example, AIDS could signify either the condition or equipment like walking aids.

	Database(s)	Search Term			
<input type="checkbox"/>	1	Medline	"INFLUENZA VACCINES"/	View Results (18,241)	Edit 
<input type="checkbox"/>	2	Medline	("flu vaccin").ti,ab	View Results (930)	Edit 
<input type="checkbox"/>	3	Medline	("Influenza vaccin").ti,ab	View Results (13,307)	Edit 
<input type="checkbox"/>	4	Medline	("influenza immunisation").ti,ab	View Results (146)	Edit 
<input type="checkbox"/>	5	Medline	("Influenza immunization").ti,ab	Viewing (986)	Edit 

All [Rerun Searches](#) [Copy](#)  AND OR [Combine](#) [Delete Selected](#) [Export Options](#)

Search each of your keywords/phrases individually: type them into the search box, make sure **‘Title and Abstract’** are selected and click on **‘Search’**.

The search structure

Having searched separately for the keywords/phrases relating to the first aspect of your topic, you will now need to combine these search lines to produce a single set of results for this part of the search.

Tick the boxes next to each line, select **OR** and click **'Combine'**.

	Database(s)	Search Term		
<input checked="" type="checkbox"/>	Medline	"INFLUENZA VACCINES"/	View Results (18,241)	Edit
<input checked="" type="checkbox"/>	Medline	("flu vaccin").ti,ab	View Results (930)	Edit
<input checked="" type="checkbox"/>	Medline	("influenza vaccin").ti,ab	View Results (13,307)	Edit
<input checked="" type="checkbox"/>	Medline	("influenza immunisation").ti,ab	View Results (146)	Edit
<input checked="" type="checkbox"/>	Medline	("influenza immunization").ti,ab	Viewing (986)	Edit

All [Rerun Searches](#) [Copy](#) AND OR [Combine](#) [Delete Selected](#) [Export Options](#)

This combined line collates the results of the individual searches and removes any repeated results.

	Database(s)	Search Term		
<input type="checkbox"/>	Medline	"INFLUENZA VACCINES"/	View Results (18,241)	Edit
<input type="checkbox"/>	Medline	("flu vaccin").ti,ab	View Results (930)	Edit
<input type="checkbox"/>	Medline	("influenza vaccin").ti,ab	View Results (13,307)	Edit
<input type="checkbox"/>	Medline	("influenza immunisation").ti,ab	View Results (146)	Edit
<input type="checkbox"/>	Medline	("influenza immunization").ti,ab	View Results (986)	Edit
<input checked="" type="checkbox"/>	Medline	(1 OR 2 OR 3 OR 4 OR 5)	Viewing (22,501)	

All [Rerun Searches](#) [Copy](#) AND OR [Combine](#) [Delete Selected](#) [Export Options](#)

You should now follow the same search process with the other aspects of your search topic, using headings and free text.

In this example, the next aspect of the search is sick leave. Search for your keywords/phrases individually and then combine with **OR** as above. The next step is to combine the different aspects of your topic.

The search structure continued...

Use **AND** to combine the different aspects (shown in green) of your topic:

	Database(s)	Search Term						
<input type="checkbox"/>	Medline	"INFLUENZA VACCINES"/	View Results (18,241)	Edit				
<input type="checkbox"/>	Medline	("flu vaccin").ti,ab	View Results (930)	Edit				
<input type="checkbox"/>	Medline	("influenza vaccin").ti,ab	View Results (13,307)	Edit				
<input type="checkbox"/>	Medline	("influenza immunisation").ti,ab	View Results (146)	Edit				
<input type="checkbox"/>	Medline	("influenza immunization").ti,ab	View Results (986)	Edit				
<input checked="" type="checkbox"/>	Medline	(1 OR 2 OR 3 OR 4 OR 5)	View Results (22,501)					
<input type="checkbox"/>	Medline	"SICK LEAVE"/	View Results (4,450)	Edit				
<input type="checkbox"/>	Medline	("sick leave").ti,ab	View Results (3,901)	Edit				
<input type="checkbox"/>	Medline	("time off work").ti,ab	View Results (701)	Edit				
<input type="checkbox"/>	Medline	(absent).ti,ab	Viewing (133,376)	Edit				
<input checked="" type="checkbox"/>	Medline	(7 OR 8 OR 9 OR 10)	View Results (Running)					
<input type="checkbox"/>	All		Rerun Searches	Copy	<input checked="" type="radio"/> AND <input type="radio"/> OR	Combine	Delete Selected	Export Options

TIP: We search with **AND** to combine different parts of the search. We only use **OR** to combine keywords/phrases that are similar.

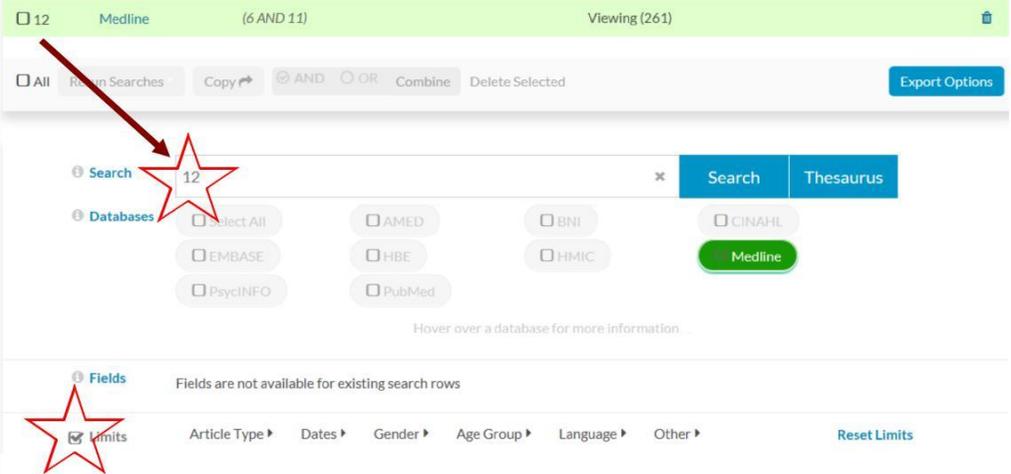
This produces a final search line combining the different parts of the search topic.

	Database(s)	Search Term			
<input type="checkbox"/>	Medline	"INFLUENZA VACCINES"/	View Results (18,241)	Edit	
<input type="checkbox"/>	Medline	("flu vaccin").ti,ab	View Results (930)	Edit	
<input type="checkbox"/>	Medline	("influenza vaccin").ti,ab	View Results (13,307)	Edit	
<input type="checkbox"/>	Medline	("influenza immunisation").ti,ab	View Results (146)	Edit	
<input type="checkbox"/>	Medline	("influenza immunization").ti,ab	View Results (986)	Edit	
<input type="checkbox"/>	Medline	(1 OR 2 OR 3 OR 4 OR 5)	View Results (22,501)		
<input type="checkbox"/>	Medline	"SICK LEAVE"/	View Results (4,450)	Edit	
<input type="checkbox"/>	Medline	("sick leave").ti,ab	View Results (3,901)	Edit	
<input type="checkbox"/>	Medline	("time off work").ti,ab	View Results (701)	Edit	
<input type="checkbox"/>	Medline	(absent).ti,ab	View Results (133,376)	Edit	
<input type="checkbox"/>	Medline	(7 OR 8 OR 9 OR 10)	View Results (140,095)		
<input type="checkbox"/>	Medline	(6 AND 11)	Viewing (261)		

Apply limits to your search

You may also wish to 'Limit' the results, such as by date range, language etc.

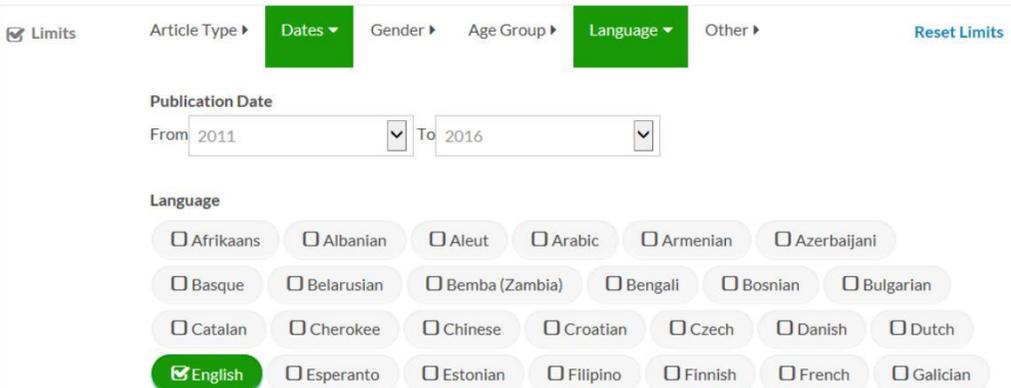
In the search box, enter the line number (in this example 12) to which you want to apply limits and tick the **'Limits'** box.



The screenshot shows a search interface with a green header bar containing '12 Medline (6 AND 11) Viewing (261)'. Below the header, there are buttons for 'All', 'Recent Searches', 'Copy', 'AND', 'OR', 'Combine', 'Delete Selected', and 'Export Options'. The search box contains '12' and has a red star and arrow pointing to it. Below the search box, there are buttons for 'Search' and 'Thesaurus'. The 'Databases' section includes buttons for 'Select All', 'AMED', 'BNI', 'CINAHL', 'EMBASE', 'HBE', 'HMIC', 'PubMed', and 'Medline'. The 'Fields' section shows 'Fields are not available for existing search rows'. The 'Limits' section is checked and shows 'Article Type', 'Dates', 'Gender', 'Age Group', 'Language', and 'Other'.

This will show the limits available in your chosen database. Use the headings to select the required limits and click on **'Search'**.

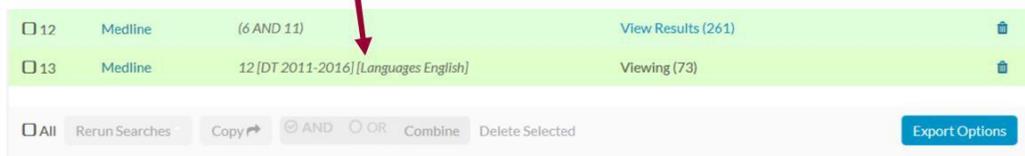
Here, the search has been limited by date range (2011-2016) and language (English).



The screenshot shows the 'Limits' section of the search interface. The 'Limits' checkbox is checked. The 'Dates' and 'Language' headings are highlighted in green. The 'Dates' section shows 'Publication Date' with 'From' set to 2011 and 'To' set to 2016. The 'Language' section shows a grid of language buttons, with 'English' highlighted in green.

Viewing, saving and exporting your results

This produces a final line in your search strategy, with the limits applied to your search.



A screenshot of a search strategy interface. It shows two search lines: Line 12: Medline (6 AND 11) with a 'View Results (261)' button; Line 13: Medline 12 [DT 2011-2016] [Languages English] with a 'Viewing (73)' button. Below the lines is a toolbar with options: All, Rerun Searches, Copy, AND, OR, Combine, Delete Selected, and an 'Export Options' button. A red arrow points from the text above to the search line 13.

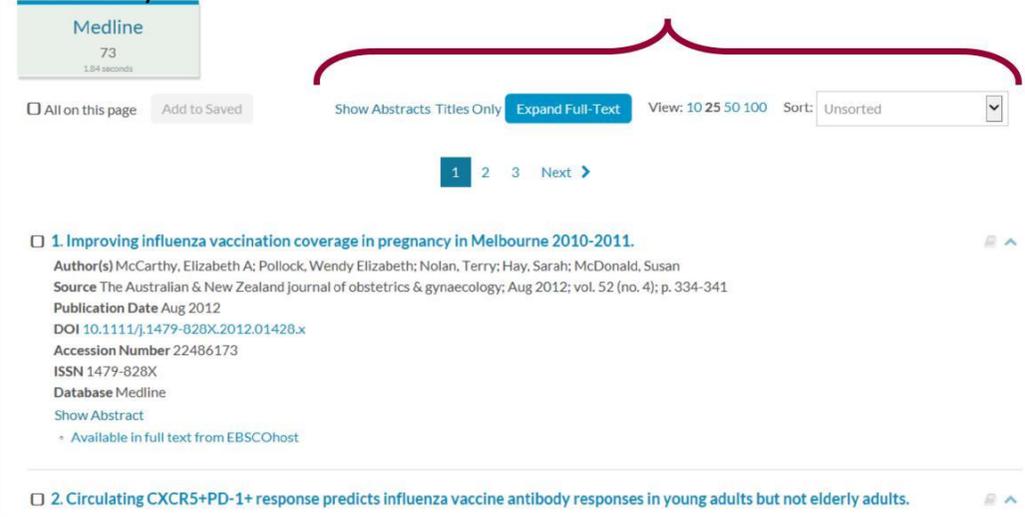
Once you are happy with your search, you should save your search strategy. This allows you to revisit your search at a later date, and makes it easier to save your results.

Give your search a name in the box above the search history and click on **'Save Strategy'**.



A screenshot of the 'Save Strategy' section. It shows a text input field containing 'Flu vaccine & sick leave' and a blue 'Save Strategy' button. Below this is a table with columns 'Database(s)' and 'Search Term'. The first row shows 'Medline' and '"INFLUENZA VACCINES?/'. A red arrow points from the text above to the 'Save Strategy' button.

Scroll down the page to view your results, or click on **'View Results'** in your final search line if they have not automatically appeared. You can change how the results are sorted, how many to view per page and show/hide abstracts.



A screenshot of a search results page. At the top left, a 'Medline' badge shows '73' results and '1.84 seconds'. Below it are buttons for 'All on this page' and 'Add to Saved'. The main area has 'Show Abstracts Titles Only' and a blue 'Expand Full-Text' button. To the right, there are 'View: 10 25 50 100' and 'Sort: Unsorted' options. A pagination bar shows '1 2 3 Next >'. The first result is titled '1. Improving influenza vaccination coverage in pregnancy in Melbourne 2010-2011.' with author(s) 'McCarthy, Elizabeth A; Pollock, Wendy Elizabeth; Nolan, Terry; Hay, Sarah; McDonald, Susan' and source 'The Australian & New Zealand Journal of obstetrics & gynaecology; Aug 2012; vol. 52 (no. 4); p. 334-341'. A red bracket highlights the 'Expand Full-Text' button and the 'View' and 'Sort' options.

As well as saving the search strategy, you can also save selected results.

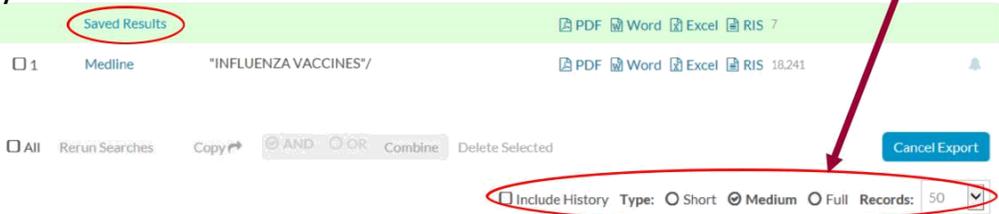
As you review your results, tick those you wish to save and click on **'Add to Saved'** at the bottom of each page before moving to the next page. **If you move to the next page without saving you will lose your previous selections.**



To export your results, scroll up to your search history and select **'Export Options'**.



This will display the format options next to each search line and display options at the bottom (e.g. **short** to show citation only, **medium** to include abstracts). Select your desired display options **first** and then click on the preferred output format for your **'Saved Results'** line.



TIP: Not all articles will be immediately available to you. Contact the library to request any articles you require that do not have a full text option or if you have any problems accessing them. We can usually obtain articles for you through our interlibrary loan service, which is free of charge.

Library Services Enquiry Desk

Usually staffed Monday - Friday: 9:00 – 16:00

Contact

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<https://royalpapworth.nhs.uk/research-and-development/library-services>



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