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## 1. What is PubMed? <http://www.pubmed.gov>

PubMed is a free interface for searching MEDLINE, the most popular bibliographic database in the health sciences. It contains references to millions of journal articles from biomedical journals. You can access PubMed directly at [www.pubmed.gov](http://www.pubmed.gov). UCL staff and students can access PubMed via the UCL Library Services databases list [www.ucl.ac.uk/library/electronic-resources/databases](http://www.ucl.ac.uk/library/electronic-resources/databases) in order to see FindIt@UCL links to UCL subscribed journals.

## 2. Simple search

- Identify the key concepts of your search question, and any limits you wish to apply. For example, if you are looking for **clinical trials carried out since 2000 on endoscopic examinations of Barrett's oesophagus patients**, your search concepts and limits would be:

**Search concepts:** endoscopy, Barrett's oesophagus

**Limits:** clinical trials, 2000-present

- Enter your concepts into the search box and click **Search**. Your results are displayed below the search box.

### Publication dates

5 years

10 years

Custom range...

- Choose your limit filters from the menu on the left. **The limit filters will remain active until you clear one or all of them.**

**Under the bonnet:** PubMed automatically looks for papers covering all the search concepts you enter, within the limits that you set. However, PubMed does not simply search for the exact words you have used. Instead, it 'translates' your terms in a sophisticated way, and searches using **medical subject headings (MeSH – see box below)** as well as **text words** (words anywhere in the record such as in the title or abstract). If you have retrieved few hits, or irrelevant hits, check the Search details on the right-hand column to see exactly how PubMed carried out the search, and whether it identified appropriate MeSH headings.

## MeSH explained

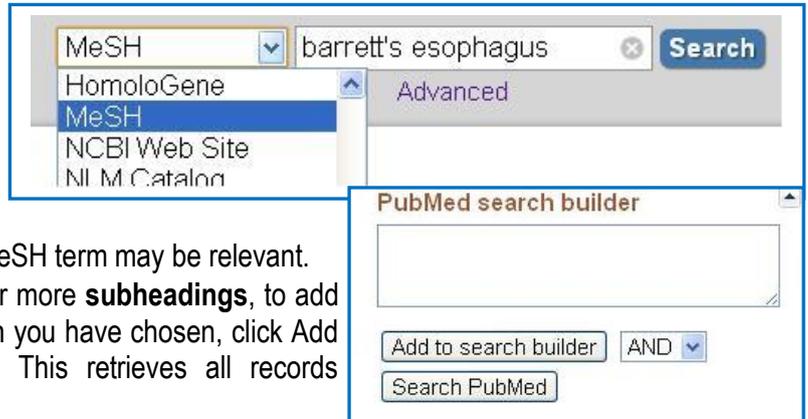
Records in PubMed have been assigned subject headings called MeSH. When a search is carried out using MeSH, you retrieve all records on a subject regardless of the terms used by the author. For example, the subject heading **Barrett Esophagus** will retrieve records that include terms such as *Barrett Epithelium*, *Barrett Syndrome* etc, as well as variant spellings of *oesophagus*. A MeSH search therefore tends to yield fewer but more relevant results.

NB Very recent references will not yet have been assigned MeSH headings. To retrieve these references, PubMed also searches by text word, i.e. words anywhere in the record, such as in the title or abstract, creating a more comprehensive search.

### 3. Searching MeSH

If you prefer, you can search for MeSH directly using the MeSH search facility and Advanced Search mode in order to have more control over your search strategy.

- Check MeSH for your concept by typing your concept into the search box and choosing **MeSH** from the drop-down menu.
- Click Search. You may get more than one term to choose from - click on the option that best suits your needs. More than one MeSH term may be relevant.
- If you wish, you can choose to select one or more **subheadings**, to add a focus to your search e.g. diagnosis. When you have chosen, click Add to search builder, then Search PubMed. This retrieves all records indexed using your chosen MeSH term.
- Do this for each of your concepts.
- For a comprehensive search, or if there is no MeSH term that exactly matches your needs, you may need to also incorporate textword searching into your strategy (searching titles/abstracts). When identifying your search terms, think of things like variant spellings, acronyms, alternative terms etc., and combine them using **OR** in the advanced search mode (see section 4 below).

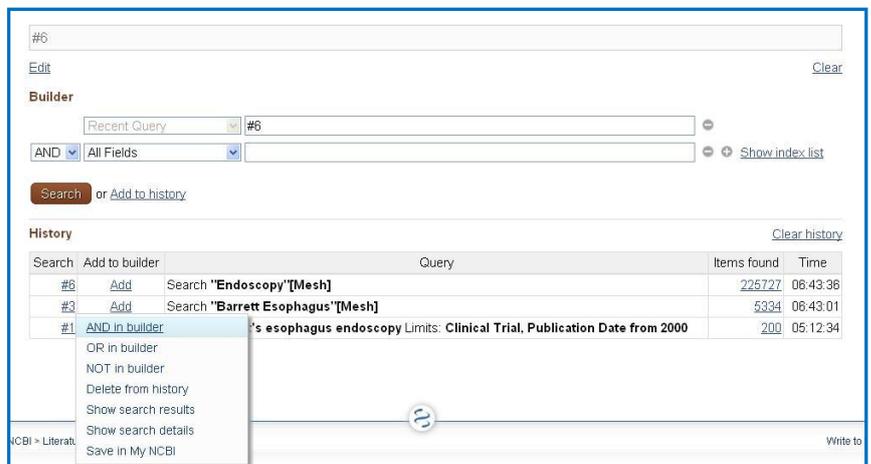


### 4. Combining searches (Advanced Search)

Searches you perform are saved in the Search History. To access your search history, click **Advanced** below the search box.

Each search is given an ID number. This allows you to combine individual search steps into a new search by using the Boolean operators **AND** or **OR** (see box below).

- Click on the search number for the first search you want to combine, and select the appropriate operator.
- Repeat for the second search and any additional searches you want to combine.
- Click Search above the Search History table to see your results or use Add to History if you need to combine further steps and do not want to leave the Advanced Search page.



#### AND and OR explained (BOOLEAN operators)

The words **AND** and **OR** are used in searching to combine search terms or search lines together.

**OR** retrieves records which contain **any** of your concepts. E.g. you might search for **Barrett oesophagus OR Barrett Epithelium OR Barrett Syndrome** to retrieve articles with any of those three terms. Use OR to combine alternative searches around the same concept.

**AND** retrieves articles which contain **all** of your concepts. E.g. If you are interested in *endoscopy for Barrett Oesophagus* you would search for **endoscopy AND Barrett oesophagus**. Use AND to retrieve papers which relate two different concepts together.

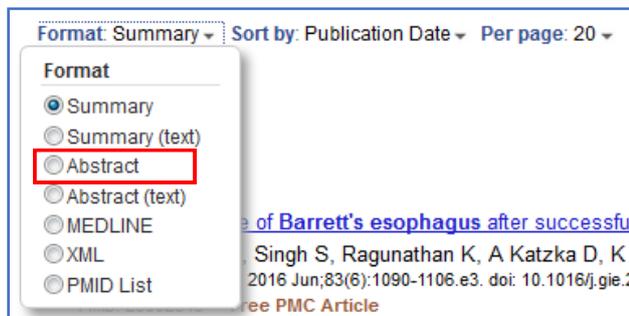
**Note:** It is best practice to use UPPERCASE Boolean terms in PubMed: **OR, AND, NOT**

## 5. Viewing and managing search results

PubMed provides many options to view and manage papers. These options can be applied to all papers on the current screen or to those that you select by checking their boxes. To select all papers on a page, leave all boxes unchecked.



[Non-biopsy detection of intestinal metaplasia and dysplasia in Barrett's esophagus: a prospective multicenter study.](#)  
Sharma P, Marcon N, Wani S, Bansal A, Mathur S, Sampliner R, Lightdale C. Endoscopy. 2006 Dec;38(12):1206-12.  
PMID: 17163320 [PubMed - indexed for MEDLINE]  
[Related citations](#)



Format: Summary | Sort by: Publication Date | Per page: 20

**Format**

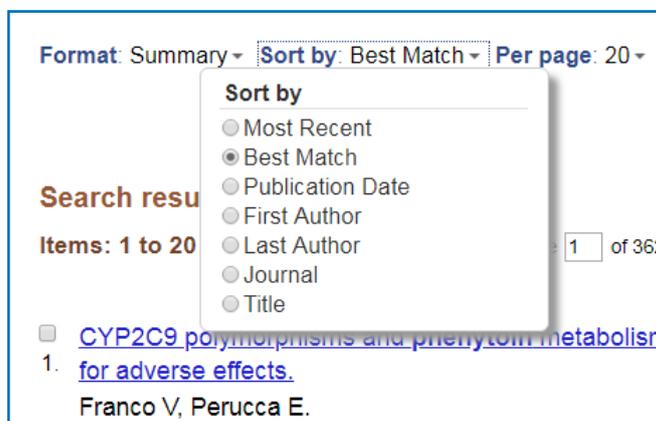
- Summary
- Summary (text)
- Abstract
- Abstract (text)
- MEDLINE
- XML
- PMID List

Once you have selected some articles, you can manage them using the options in the blue drop-down menus above the set of results:

From these menus you can change the display **Format** of references, e.g. to include the abstract, and choose how many **items to display** on a page.

You can also choose how to **Sort** your references.

PubMed will automatically sort your results to 'Most Recent'. However, you can also use the 'Best Match' sort order. This is based on an algorithm which counts of the number of times that your search terms appear in a record. Other criteria applied in order to rank the order of results in 'Best Match' include publication type and year. This feature is intended to help you find highly relevant papers quickly. As the algorithm used is constantly changing, it is not possible to replicate a set of search results generated using this feature. Search operators which you may have used (AND and OR) are not fully applied, and therefore you can not know exactly how your search has been carried out.



Format: Summary | Sort by: Best Match | Per page: 20

**Sort by**

- Most Recent
- Best Match
- Publication Date
- First Author
- Last Author
- Journal
- Title

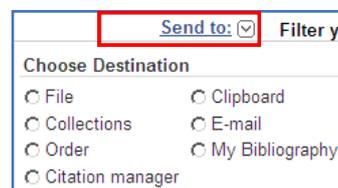
Search results  
Items: 1 to 20 of 36

[CYP2C9 polymorphisms and phenytoin metabolism for adverse effects.](#)  
1. Franco V, Perucca E.

Therefore, if you are doing a structured search, for example using the MeSH feature and Advanced Search to combine terms, you may want to use a sort order option such as 'Publication Date' or 'Last author'.

**Send to:** The **Send to** menu at the top right of your results list allows you to export your references:

- **File** provides the option of saving or opening your results as a text (.txt) file.
- **E-mail** allows you to enter an email address to which your references will be sent.
- **Clipboard** saves selected references temporarily for up to 8 hours. When you have items on your clipboard a **Clipboard** link appears to the right of the **Send to** menu. Click this link to view, print or email results you have added to your clipboard.
- **My Bibliography** allows you to send the selected references to a list of your own publications which you can make available on the Web (A **My NCBI** account is required - see section 7).
- **Citation Manager** allows you to save the references in a format suitable for importing into reference management software



Send to: [icon] Filter by

Choose Destination

- File
- Clipboard
- Collections
- E-mail
- Order
- My Bibliography
- Citation manager

## 6. Clinical Queries

PubMed's **Clinical Queries** feature allows you to restrict your search to high quality research papers in specific clinical research areas (diagnostics, therapies) and within the field of genetics. It is designed for use by clinicians looking for high-quality evidence for the practice of evidence-based healthcare. You can use Clinical Queries to

quickly identify systematic reviews and clinical trials. **Clinical Queries** can be accessed from **PubMed Tools** list on PubMed's homepage.

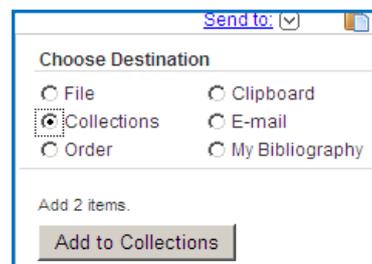
## 7. My NCBI: Saving searches and setting up alerts

You can set up an account with PubMed which will allow you to permanently save searches or individual references, or to set up alerts for searches you want to run regularly.

- Click the **My NCBI** box at the top right of the page and then **Register for an account** from the options menu. If you have already registered, you can sign in by clicking **Sign In** next to the **My NCBI** link.

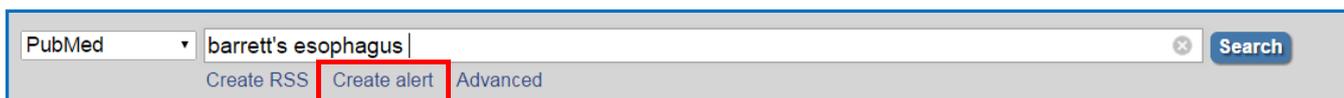
### Saving references

To save references permanently, select the items you want to keep then from the **Send to** menu, select **Collections** and then **Add to Collections**. Enter a name for your new collection, and click Save. Your Collection will be stored in your NCBI account. You can also choose to append your references to an existing collection if you wish. To see your account at any time, click on My NCBI at the top right of the screen.

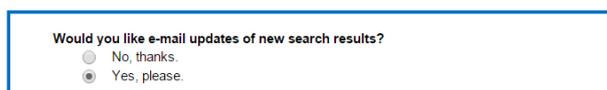


### Saving and rerunning searches and setting up alerts

Once you have run your search, click **Create alert** below the search box.

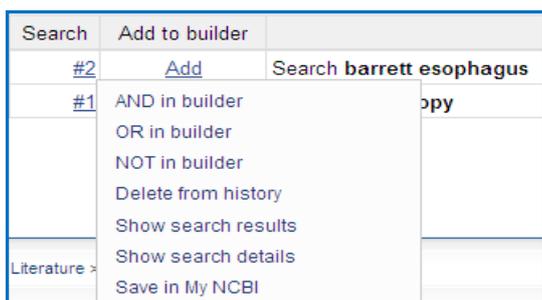
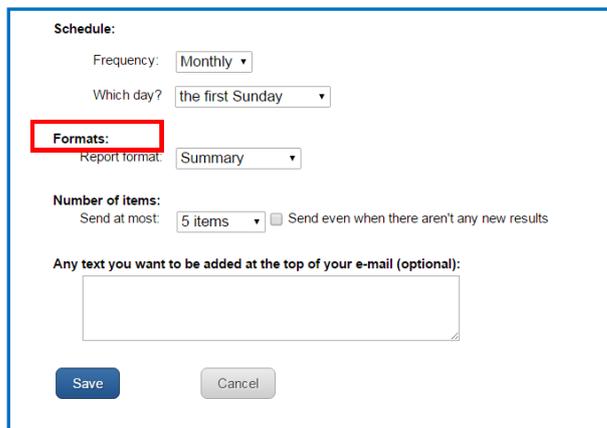


- Enter a name for your search/alert and choose whether you would like to receive e-mail updates of your search.



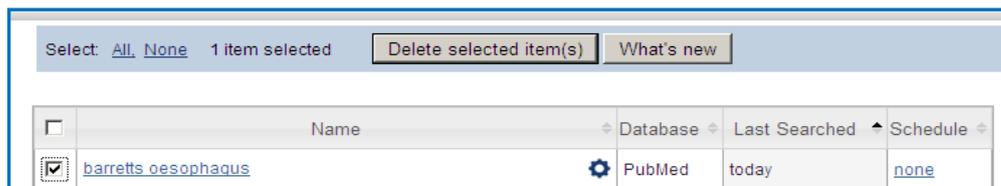
You can create an e-mail update that alerts you when references that fulfil your search criteria are added to PubMed. Choose MEDLINE format if you intend to use the citations in bibliographic software such as EndNote.

- Click on **Save** to save your search with or without alerts.



You can also select a search from your search History and save by clicking on the query number and selecting **Save in My NCBI**.

- To re-run a saved search, in My NCBI, in the **Saved searches** box click **Manage saved searches** and select a search.



- Click **What's New** to view results for any new items on that search topic since the last time that search was run. Alternatively, click on the name of the search to see all references for that search.

## 8. Single Citation Matcher

The **Single Citation Matcher** can help identify the full details of a specific citation if you only have a partial reference.

- The **Single Citation Matcher** can be accessed from the **PubMed Tools** section of PubMed's homepage.

### PubMed Single Citation Matcher

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

Journal	<a href="#">Help</a>	<input type="text"/>	
Date	<input type="text" value="yyyy/mm/dd"/>	(month and day are optional)	
Details	Volume	Issue	First page
	<input type="text"/>	<input type="text"/>	<input type="text"/>
Author name	<a href="#">Help</a>	<input type="text"/>	
Limit authors	<input type="checkbox"/> Only as first author	<input type="checkbox"/> Only as last author	
Title words	<input type="text"/>		

## 9. Further information and support

Online help is available from the **Help** link on the right of the screen. Please contact your local UCL library for further support.

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