EBM Filters in PubMed

Open PubMed in another browser window to work through this tutorial side by side.

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Introduction

If you are unable to find information on your topic in the Cochrane Library or other filtered resources, then it is time to search MEDLINE, using PubMed or Ovid MEDLINE.

This tutorial module only covers PubMed. If you would like to learn more about the evidence-based medicine filters available in Ovid, there is an optional tutorial available, EBM Limits in Ovid MEDLINE.

Navigation

Use the arrow(s) below to move through the tutorial. You may need to scroll down to find the arrows on some pages. Selecting the Single-page view link at the top will display a transcript of this tutorial.

Accessing PubMed

When you search PubMed, there are a variety of evidence-based medicine (EBM) filters you can use to focus your search. Remember to use the Library's link to PubMed to access full text. For the purposes of this tutorial, PubMed is already opened.
Clinical Queries

Let’s begin by using the Clinical Queries filters.

Under *PubMed Tools*, select **Clinical Queries**.

Clinical Queries

There are three different types of search filters available on this page: *Clinical Study Categories*, *Systematic Reviews*, and *Medical Genetics*.

This tutorial will demonstrate how to use the *Clinical Study Categories* and the *Systematic Reviews filter*.

Clinical Study Categories

The Clinical Study Categories are specialized search filters that limit your results to articles reporting research conducted with specific methodologies, including those that report applied clinical research.

Select the **filter information** link on the left to see what PubMed adds behind the scenes to your search terms.

Clinical Study Categories

There are five filter categories available:

- therapy
- diagnosis
- etiology
- prognosis
- clinical prediction guides

Scope Options

Plus, there are 2 scope options available, sensitive/broad or specific/narrow, which you can use to increase or decrease the number of results.

*Sensitive/Broad* retrieves more relevant articles and some less relevant articles.
Specific/Narrow retrieves mostly relevant articles, possibly omitting a few relevant articles.

Filter Search Terms

For example, the diagnosis category adds search terms such as sensitivity and specificity, as well as differential diagnosis to your search terms.

The therapy category uses search terms such as random allocation, clinical trial, and randomized controlled trial.

Which of the following word or words is NOT part of the etiology category?

- Risk
- Qualitative Studies
- Cohort Studies

Filter Search Terms

Click the back button on your browser to return to the PubMed Clinical Queries screen or click here.

The default settings for the Clinical Study Categories are therapy and broad search. If you want to use a different filter, you have to run your search, then select a different filter.

Sample Search

Let’s look for articles on using melatonin to prevent jet lag.

Type melatonin AND jet lag in the search box and click the Search button.

The first five results are displayed for all three search filters. Scan the titles of the first five search results under the Clinical Study Categories.

How many results did you get in the Clinical Study Categories using the Therapy/Broad filter?

Narrow Scope

Now let’s switch the search scope to narrow, which will decrease our retrieval.

Using the drop-down Scope menu, select Narrow. Scan the titles of the first five search results.
How many results did you get in the Clinical Study Categories using the Therapy/Narrow filter?

These filters were designed to identify studies using sound methodology and are not intended for running comprehensive literature searches.

**Systematic Reviews**

PubMed also has a filter for identifying systematic reviews and similar articles. It is located next to the Clinical Study Categories on the Clinical Queries page.

The Systematic Reviews filter retrieves systematic reviews, as well as meta-analyses, reviews of clinical trials, evidence-based medicine, consensus development conferences, and guidelines. Citations from journals specialized in clinical review studies are also included.

How many results did you get with the melatonin AND jet lag search using the systematic reviews filter?

Select the See all link below the first five results to see the rest of the systematic reviews filter results. (*Your search results number in parentheses may be different.*)

The See all link will take you to the regular PubMed search results page.

**Publication Types**

Narrowing your search results by particular publication/article types can be a useful technique for identifying quality articles based on their study design.

To access the article type filters, we must first run a search in PubMed.

Type **melatonin AND jet lag** in the search box and click the **Search** button.
Search Details

Let’s view the “Search details’ to see how PubMed translated our search terms.

Scroll down until you see the “Search details” section appear on the right. The “Search details” section shows you what is going on in the background during a search of PubMed. Sometimes you will want to make edits to your search based on how PubMed is translating it.

Select the See more... link below the “Search details” box to view all of the search terms used.

Search Details

The Search Details screen appears. In the Translations box, you can see that melatonin was searched as a MeSH term (medical subject heading) as well as a word appearing in the citation or abstract.

Which MeSH term was jet lag mapped to?

Jet lag syndrome
Jet lag disorder
Sleep disorder

Search Details

Since PubMed mapped our search to the appropriate MeSH terms, let’s leave the search as it is and return to the results page.

Select the number of results link to return to the citation results.

Your screen should look similar to this (but the number of results may be higher):

![Search Details Screen](image-url)
Article Type Filters

PubMed has a Filters Sidebar that appears on the left side of the screen of your search results.

PubMed offers many article type filters, such as practice guidelines. To view the additional options, select the Customize... link below Article types.

Scroll through the Article types list. Notice there is a Meta-Analysis filter and a Practice Guideline filter. Both of these filters can help you identify secondary studies.

You can also access the same Systematic Reviews filter we used earlier under the Clinical Queries section.

Let’s add the meta-analysis filter to our search.

First, select the Meta-Analysis checkbox on the left.

Now select the Show button. (You may need to scroll down.)
Article Type Filters

Meta-Analysis is now listed as a possible filter under Article types. Click on **Meta-Analysis** to apply the filter to our search results. Your screen should look similar to this:

How many results did you get after applying the Meta-Analysis filter?
Article Type Filters

Please note: any filters you add will remain activated during subsequent searches until you clear them by selecting the Clear all link.

Conclusion

During this module, we explored the EBM-related filters available on the Clinical Queries page and the Article types filters available on the Filters Sidebar of PubMed.

The Clinical Queries can help you target articles based on the type of clinical question you have. The Article types filters can help you narrow down your search results to synthesized publication types, such as systematic reviews, meta-analyses, or practice guidelines. They can also help you focus on primary studies that appear high on the "Hierarchy of Evidence" pyramid, such as randomized controlled trials.

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