

## PubMed in progress: latest changes in MeSH and MyNCBI

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### Abstract

PubMed interface re-engineering has moved further steps with the latest changes in the MeSH – Medical Subject Headings database and in the MyNCBI homepage. Aim of this contribution is to present the most relevant added feature in order to improve your query efficiency.

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PubMed has been quite completely re-engineered with the latest changes in two of its most useful database and tools: MeSH and MyNCBI.

### MeSH new interface

MeSH – Medical Subject Headings is the controlled vocabulary used for indexing articles for MEDLINE/PubMed. There are 26,142 descriptors in 2011 MeSH. There are also over 177,000 entry terms that assist in finding the most appropriate MeSH Heading. MeSH labels are useful for efficient queries, because they provide a consistent way to retrieve information that may use different terminology for the same concepts, and because you can limit your topic by SubHeadings. The hierarchical structure of MeSH, tree and branches-like, makes it possible to view terms in the context of broader and narrower concepts.

MeSH homepage has been redesigned to provide users with the same streamlined interface now available in PubMed.

Entering a term in the MeSH search box, a result list will be provided mapping your query with the corresponding MeSH term. From the results list, you can now:

- directly run a search with the selected term in PubMed (fig. 1): just add the MeSH term to the “PubMed Search builder” box on the right side of the screen by flagging it; when it appears in the box, just click on “Add to search builder” and then “Search PubMed”. If you want to add one or more MeSH terms, you have to flag them, then adding them with the appropriate Boolean operator in the pull-down menu (AND to narrow your search, OR to widen it)

Fig. 1: Searching PubMed from the MeSH database

- enter into the MeSH term to use its SubHeadings or to restrict your search with in-depth options: click on the MeSH term itself (fig. 2). The system will display the MeSH term full view, with all the connected SubHeadings. If you want to narrow your search according to one of these perspectives (e.g., “rehabilitation”), just flag the selected SubHeading, click on “Add to search builder” and then “Search PubMed”. If you want one more SubHeading, restart this process and add the terms with the appropriate Boolean operator.

If you want to restrict your search only to those PubMed article in which your selected MeSH term is the major topic, flag the corresponding “Restrict to MeSH Major Topic” option at the end of the page; if you want the system not to consider the terms which could be hierarchically inferior in the MeSH tree structure, flag the “Do not include MeSH terms found below this term in the MeSH hierarchy” option at the end of the page.

Fig. 2: Using MeSH Subheadings and “Restrict” options

From the MeSH term full view, a useful feature has been added on the right side of the screen, the “All links from this record” section: you can directly run a simple search in PubMed or a limited

one by Major Topic. You can also directly access the corresponding pre-set Clinical Queries or the MeSH Browser, which bring you directly into the tree structure to see your term context.

### **MyNCBI and its new features**

My NCBI is an extremely useful tool that provides customized services for many NCBI databases. It is your personal space which allows you to save searches, select display formats, filtering options, and set up automatic update for your searches that are sent by e-mail. In My NCBI you can save your citations (journal articles, books, meetings, patents and presentations) in My Bibliography. My NCBI includes additional features that allow for setting up preferences for displaying and filtering search results, highlighting search terms. To use My NCBI, your Web browser must accept cookies and allow pop-ups. The first time you access the service you have to freely register by clicking on the MyNCBI link on the upper blue navigation bar, on the right side of the screen. Once registered, you have to simply Sign In each time you need to access the service; the system also allows you to be kept signed.

The new MyNCBI homepage has been streamlined, and you can now view all the section at a glance; you can also customize them, by dragging and dropping each function window to the top, middle, or bottom of the page; you can also minimize or remove each one of them from the homepage (Fig. 3).

Fig. 3: MyNCBI homepage

Set up preferences for PubMed and all the NCBI databases, such as display format, number of records per page, filters and highlighting color, are now displayed in the “NCBI Site Preferences” link, at the top right corner of the My NCBI homepage. From this link you can change your password and e-mail address.

A new feature is the Search box: PubMed and the NCBI databases can now be searched directly from the My NCBI homepage, just by entering your search terms and clicking “Search”.

Let’s see each function window and its new interface.

### **Saved Searches**

The Saved Searches feature allows you to save search queries for PubMed and all the NCBI databases, and can provide automatic e-mail updates for saved searches. You can activate this service just by clicking on the “Save Search” link which displays e.g. in PubMed, in the results list page, once run a query. You can set up your updates on a daily, weekly, or monthly basis. In the Saved Searches window:

- you can view your list of all saved searches, clustered by database;
- if you want to manually re-run the whole search, seeing the results directly in the source database, just click on the search name;
- if you want to manually check for new search results, click on the number of last retrieved items in the "What's New" column;
- if you want to create, change, or delete scheduled e-mail alerts, just click the gear icon image next to a search name.

From the bottom “Manage saved searches” link you can sort or delete multiple saved searches at once.

### **Collections**

The Collections feature is the place where you can store your search results items. From the PubMed results list, you have to flag the selected articles, open the “Send to” pull down menu on the upper right side of the list, select “Collections” and click the “Add to Collections” button. From the Collections window you can:

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- view your list of saved collections and their number of stored items;
  - view all the items available for a collection directly in the source database (e.g. PubMed) just by clicking on the Collection name link;
  - change a collection privacy status — from private to public (to share with others) by clicking the gear icon next to a collection name.
- From the bottom “Manage collections” link you can merge or delete your collection.

## **My Bibliography**

My Bibliography is a reference tool that allows you save your citations directly from PubMed. My Bibliography provides a centralized place where citations are easily accessed, exported as a file, and made public to share with others.

To activate it, run a search in PubMed with your name as an author. From the results list, flag the citations you want to add to My Bibliography and then click the “Send to” drop-down link, selecting the “My Bibliography” option, in the end click “Add to My Bibliography.” From My Bibliography, you can download your citations list just by clicking on the “Download” link in the Homepage. You can also set your preference options in order to sort your list.

From the My Bibliography window in MyNCBI you can view the latest added items and the total number of citations.

## **Filters**

PubMed and other NCBI databases search results can be clustered into smaller groups of data using filters. In the Filters window you can quickly:

- view a list of all active filters according to each database by using the drop-down menu “Filters for”;
  - activate/deactivate filter selections by checking/unchecking the box next to a filter name;
  - change or delete your custom filters by clicking the gear icon.
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