Effective & Efficient Use of PubMed in your Practice

A GUIDE FOR HOW TO MAKE THE MOST OF YOUR NCBI ACCOUNT!

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Why should I get an NCBI account?

The NCBI Account system was designed with customizable tools to support each user’s specific needs. The NCBI Account has an My NCBI dashboard with an integrated set of tools to allow you to set and customize your NCBI website function and display preferences. You can use this to:

- Set your highlighting format for search terms
- Customize your displayed PubMed filters
- Save and automate searches with Emailed notifications of new records
- Save and create collections
- Create and manage citations
- Create and publicly display your professional profile
- Comment on and participate in discussions on PubMed records
- Set LinkOut, Outside tool and document delivery preferences

and much more!

TABLE OF CONTENTS

REGISTERING FOR A NCBI ACCOUNT ................................................................. 2

THE NCBI DASHBOARD........................................................................................ 3

CREATING EFFECTIVE SEARCHES (even without an NCBI Account) .................... 4

  Automatic Term Mapping (ATM)...................................................................... 4
  Searching with a Phrase .................................................................................. 4
  Using Booleans.................................................................................................. 4
  Truncating Search Terms ............................................................................... 4
  Searching Terms in Specific Database Fields................................................. 4
  Using the Advanced Search Builder............................................................... 5
  Combining Searches Using History ............................................................... 5

  Tips on Using Medical Subject Header Terms (MESH) in PubMed .................. 5

USING THE FILTER SIDEBAR & CREATING CUSTOM FILTERS.......................... 6

  Using the Filter Sidebar:............................................................................... 6
  Creating and Managing Filters with Your My NCBI Account:....................... 6

SAVING SEARCH STRATEGIES & AUTOMATING EMAILED ALERTS OF NEW RECORDS .......... 7

SAVING & SHARING COLLECTIONS OF RECORDS ............................................. 7

  Saving Records to a Collection:................................................................. 7
  Sharing Collections:...................................................................................... 7

CUSTOMIZING PUBMED DISPLAYS..................................................................... 8

  Highlighting Query Terms............................................................................ 8
  Setting the Number of Records Displayed and Sort Criteria.......................... 8
REGISTERING FOR A NCBI ACCOUNT

① Use this URL to get started: http://pubmed.gov

② Click “Sign in to NCBI” located on the top right of the toolbar.

③ Click “Register for an NCBI account”.

④ Fill in the form and “Create account”.

⑤ Click the activation link to confirm your account located in your email.

⑥ You may access your account from https://www.ncbi.nlm.nih.gov/account
1. **NCBI** – return to the NCBI homepage.
2. **Resources** – provides quick access to NCBI databases, tools and resources.
3. **How To** – assistance in “how to” use the NCBI database resources.
4. **Username** – change personal preferences (such as: updating email address, changing password, linking 3rd party accounts, etc.)
5. **My NCBI** – return to the My NCBI dashboard.
6. **Sign Out** – log out of your My NCBI account.
7. **Customize this page** – remove/add portlet items (numbers 13 -19) from the My NCBI homepage. Also, the ability to enable the hidden “BLAST History” portlet.
8. **NCBI Site Preferences** – Access and customize database preferences (such as: highlighting text and PubMed/additional NCBI database preferences).
9. **Video Overview & Help** – provides information on how to use My NCBI.
10. **Search NCBI databases** – use the dropdown box to access all of NCBI’s databases to conduct a search.
11. **Saved Searches** – provides automatic e-mail updates of saved search queries on a daily, weekly or monthly basis.
12. **My Bibliography** – save, upload and manually create your citations that can be exported and shared with others.
13. **Collections** – unlimited collections of search results that can be shared with others.
14. **Recent Activity** – a history of searches and records in NCBI databases.
15. **Filters** – narrow down search results based on your preferred filters. (PubMed has a limit of 15 displayed filters, with 5 in all other NCBI databases.)
16. **SciENcv** – create an official online professional profile in multiple formats for National Institutes of Health (NIH), National Science Foundation (NSF) and Institutes of Educational Science (IES) which can be shared.
CREATING EFFECTIVE SEARCHES (even without an NCBI Account)


AUTOMATIC TERM MAPPING (ATM)
The Entrez Search system invokes ATM when there are no quotation marks, tags or asterisks in the query. It first tries to match terms within specific indexed fields, in this order:

1) Subject (using MeSH terms), 2) Journal and then 3) Author

As soon as the Entrez Search system finds a match in the PubMed-indexed Fields, it stops processing the search terms. If no match is found, Entrez breaks apart any phrases phrase and repeats the process until a match is found. At the end, the phrases and individual terms are also searched in All Fields.

**See this process at work by looking at your Search Details portlet in the right-hand column.**

Documentation:

SEARCHING WITH A PHRASE
The Entrez Search system does not perform term adjacency searching. To define a phrase to search, you can use an underscore, _, between each word or you can place quotes, “ ”, around them. However, if the phrase is not found in the indexed list of terms, then the presence of the underscore or quotes is ignored and the phrase is processed with each individual word separately.

USING BOOLEANS
The Entrez Search system employs operators used to exclude or combine search terms.

AND - retrieves results that include all the search terms.
OR - retrieves results that include at least one of the search terms.
NOT - excludes the retrieval of the term from your search.

**PubMed applies the AND Boolean operator automatically between terms, for example, vitamin c common cold is translated to vitamin c AND common cold.**

TRUNCATING SEARCH TERMS
Truncating a search term means to search for all terms that begin with a word and followed by an asterisk (*), the wildcard character (e.g., tox*). Please keep in mind that this turns off ATM. Please keep in mind that the Entrez Search system alphabetically iterates the first 600 variations of a truncated term. If more than 600 variations are found, a warning message displays to lengthen the root word to search for all endings.

SEARCHING TERMS IN SPECIFIC DATABASE FIELDS
Database records are structured in specific fields for specific data. The Advanced Search Builder provides a list of database-indexed fields with the ability to see an alphabetical display of all terms indexed in each database search field.

To increase specificity for your search, you can indicate a specific field in which to search for matches to the term. To do this, after the search term add the specific field name or it’s abbreviation in square brackets, for example: “morris rc”[author] or “morris rc”[au]. Please note that inclusion of indexed field terms manually bypasses the ATM.

Video: https://www.youtube.com/watch?v=uyF8uQY9wys
Documentation: https://www.ncbi.nlm.nih.gov/books/NBK3827/#_pubmedhelp_Search_Field_Descriptions_and
USING THE ADVANCED SEARCH BUILDER

In addition to displaying a list of database-indexed fields, the Advanced Search Builder can assist the step-wise creation of effective searches by helping in the formation of specifically indexed terms in designated fields and encouraging the use of Booleans to connect multiple search terms.

- Go to the Advanced Search Builder page by clicking “Advanced” below the search query textbox.
- To see the list of *Indexing fields, click and scroll down the “All Fields” pull-down menu.
- To see the terms listed in a particular field, click the name of the indexing field of your choice.
- Click “Show Index” to see an alphabetized list of the terms indexed in that field with the number shown in the parentheses (200 are shown at a time).
- To see if a term is listed or to zoom-down through the list quickly, type in the text box next to the field name and then click “Refresh Index”. (You may notice that some fields have an autocomplete feature.)
- Click on a term of interest and notice that it will both be added to the text box next to the field. It will also be added to the Search Builder’s shaded box at the top with the field listed in square brackets. You can edit this text directly, if desired, by clicking the “Edit” below the shaded box.

Video: https://www.youtube.com/watch?v=dncRQ1cobdc

A list of some *PubMed Indexing Fields:
https://www.ncbi.nlm.nih.gov/books/NBK3827/#pubmedhelp.Search_Field_Descriptions_and

More information about using the Advanced Search Builder:
In a traditional search, terms entered in the text box are automatically combined with the Boolean operator AND unless otherwise specified. However, the Advanced Search Builder automatically adds OR terms. In addition, it also processes the terms in a specific order from left-to-right adding parentheses for multiple terms selected from the Search Builder.

COMBINING SEARCHES USING HISTORY

Searches can be combined or used in subsequent searches using the search number from Advanced Search History which is located at the bottom of the Advanced Search Builder page.

- To access the “History” service, click “Advanced” under the search query text box.
- In the History section, click Add to move a previous search into the Builder text box.
  - Alternatively, click the search number to display additional options to add the search to the Builder, including Boolean operators OR or NOT.
- Add additional search terms to the Builder, if desired.
- Click Search.


More information about using History:
The history feature requires your web browser to be set to accept cookies. Click “Clear history” to delete all searches from history or it will be cleared automatically after 8 hours of inactivity on the NCBI web site.

Tips on Using Medical Subject Header terms (MeSH) in PubMed
MeSH is a controlled vocabulary created by the National Library of Medicine for indexing of scientific and medical literature. MeSH terms are manually added to PubMed records to improve searching. However, this takes time, so while PubMed records may be visible in PubMed it may take a few months before a PubMed search exploiting MeSH field indexing is effective in retrieving the record.

Video: https://www.youtube.com/watch?v=uyF8uQY9wys

USING THE FILTER SIDEBAR & CREATING CUSTOM FILTERS

Filters assist in narrowing down search results to smaller groups of data in the NCBI databases. PubMed has a built-in filter sidebar and the ability to create custom filters to achieve more efficient and effective results.

USING THE FILTER SIDEBAR:
Narrow search results by article types, text availability, publication dates, species, languages, sex, subjects, journal categories, ages and search fields.

- Perform a search.
- Click a term in the Filter sidebar (on the left) to filter the list of results.
- Click the “Show additional filters” link to adjust filter categories displayed in the sidebar.

Please note:
A checkmark will appear beside the activated filter. Subsequent searches will be filtered until the selected filters are cleared. Click “Clear all” to remove all filters OR “clear” to remove an individual filter. Citations may be excluded for some filter selections because they have not yet completed the PubMed-Indexing process.

CREATING AND MANAGING FILTERS WITH YOUR MY NCBI ACCOUNT:

- Sign in to your NCBI account using: https://www.ncbi.nlm.nih.gov/account
- Click Manage Filters link in the Filters portlet (on the top, right-hand side of the page).
- Browse and select from the list of filters pre-defined filters:
  - Popular – most commonly requested filters.
  - LinkOut – links to resources provided by outside organizations.
  - Properties -groups based on specific criteria (such as: gender, language, age groups, etc.)
  - Links – other NCBI databases.
- Create a custom filter by clicking Create custom filter button.
  - Custom filters will not automatically be active. You must click to select them for display.
  - Custom filters may be removed by clicking the “Delete” link.
  - Edit custom filters any time by clicking the gear icon. Here, modify the query and click “Save filter”.

Video - Creating Custom PubMed Filters: https://www.youtube.com/watch?v=696R9GbOyvA
SAVING SEARCH STRATEGIES & AUTOMATING EMAILED ALERTS OF NEW RECORDS

Save search queries for PubMed and NCBI databases with the ability to have automatic e-mail updates on a daily, weekly or monthly basis.

SAVING SEARCHES & SETTING AUTOMATIC SEARCHES WITH EMAILED ALERT NOTIFICATIONS

- Sign in to your NCBI account using: https://www.ncbi.nlm.nih.gov/account
- Run a search in PubMed.
- Click Create alert, located below the search box.
  - Click Save search if using a different NCBI database.
- The pop out window will allow you to edit the search name (up to 100 characters).
  **The name of the search will be the in the Subject line of the e-mail**
- Schedule the email saved searches and review the remaining fields.
  **Select “Send even when there aren’t any new results” to verify it is running correctly**

Video - Saving and Automating Searches: https://www.youtube.com/watch?v=WbFjV91YNNY
Documentation: https://www.ncbi.nlm.nih.gov/books/NBK3827/#pubmedhelp.Saving_and_Emailing_Results_a

SAVING & SHARING COLLECTIONS OF RECORDS

Searches can be shared and saved. There is currently no limit on the number of collections you may store in My NCBI, also may be made public to share with others.

SAVING RECORDS TO A COLLECTION:
- In the search results, use the check boxes to select citations.
- Click Send to (at the top-right of the results listing).
- Select an existing or create a new Collection in which to add your citation.

SHARING COLLECTIONS:
Collections within My NCBI are set as “Private” (inaccessible by a URL) by default. A “Public” URL can be generated to share your collection with others. However, please note that you will need to create a collection first before you can make it “Public”.

Creating a Public URL:
- Sign in to your NCBI account using: https://www.ncbi.nlm.nih.gov/account
- Click “MyNCBI” to access your dashboard.
- Locate the Collections portlet.
- Beneath the Settings/Sharing column, click Private.
- Beneath Collection Sharing click the Public radio button.
- Click Save.
  **The public URL will appear above the gold tool bar.**

To retrieve a collection’s Public URL:
- Sign in to your NCBI account using: https://www.ncbi.nlm.nih.gov/account
- Click “MyNCBI” to access your dashboard.
- Locate the Collections portlet.
- Click the gear next to the collection.
- Copy the URL.
CUSTOMIZING PUBMED DISPLAYS

Highlighting, Setting the Number of Displayed Records and Sort Criteria

Customization within the NCBI databases allows users to:

- Highlight search terms to quickly scan results.
- Sort records based on your preference.
- Display up to 200 search results per page.

Video: https://youtu.be/mih7gJwd5HI?list=PL88E9E5EA3BEC0D7
Documentation: https://www.nlm.nih.gov/bsd/viewlet/results/display.html

HIGHLIGHTING QUERY TERMS

The highlighted term(s) will appear in the title and/or abstract and keywords of a record.

- Sign in to your NCBI account using: https://www.ncbi.nlm.nih.gov/account
- Click MyNCBI to access your Dashboard.
- Click NCBI Site Preferences, located on the right.
- Locate the Common Preferences section and click Highlighting.
- Select the designated color from the pop up window and click Save.

SETTING THE NUMBER OF RECORDS DISPLAYED AND SORT CRITERIA

- Sign in to your NCBI account using: https://www.ncbi.nlm.nih.gov/account
- Click MyNCBI to access your Dashboard.
- Click NCBI Site Preferences, located on the right.
- Locate the PubMed Preferences section and click Result Display Settings.
- In the Default items per page section, click the number of records you want to display by default (up to 200 records).
- In the Default sort by section, click your preferred parameter for default sorting (most recent, best match, publication date, first author, last author, journal or title).
- Click Save.