

# New PubMed

New features and improvements

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## The main changes

The new responsive layout offers better support for different types of devices, such as mobile phones and tablets.

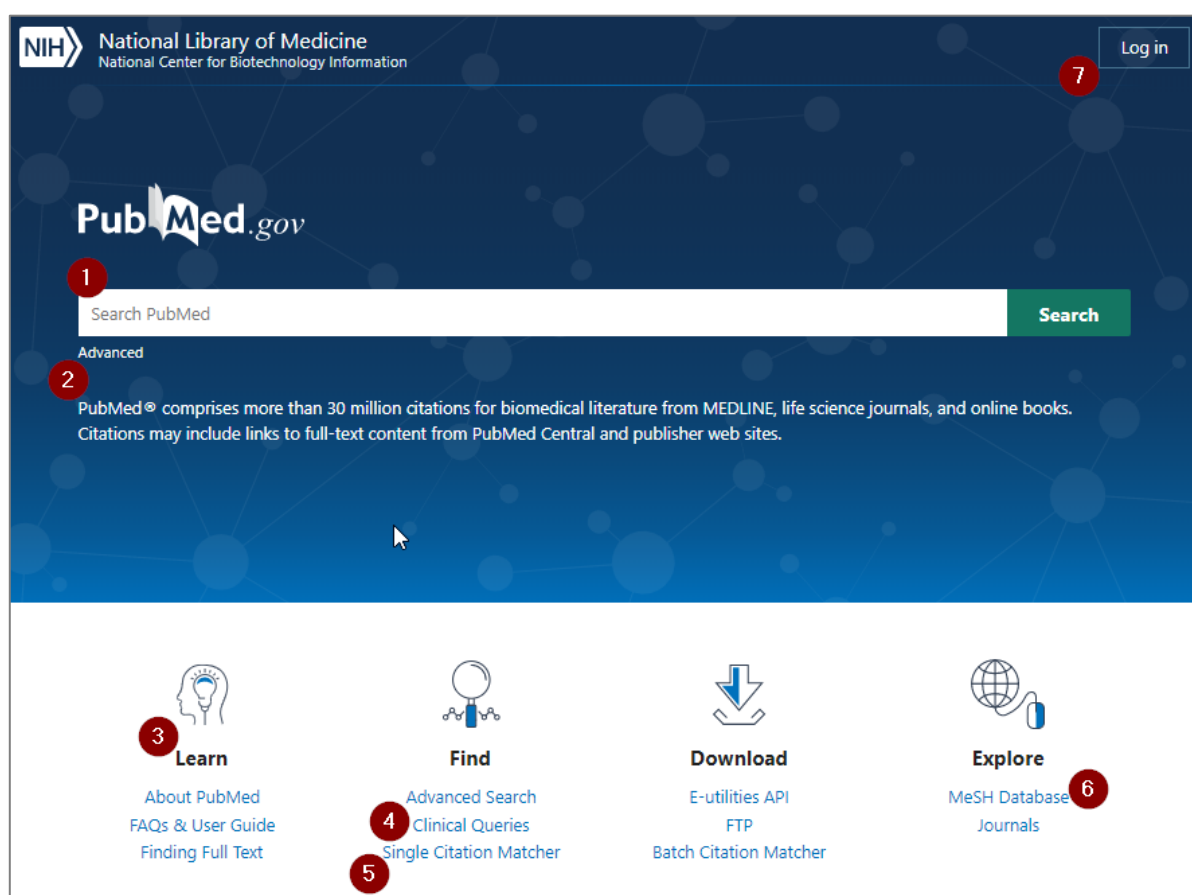
In this document you will find the main changes compared to the legacy version.

The "[Automatic Term Mapping](#)" has been enhanced, the [Best Match](#) sorting order of the results by relevance is now the default *with an improved algorithm*, and there is no longer a limit of 600 words for [truncated](#) search terms.

New features have been added to improve the navigation, [citation](#), [sharing](#) and [exporting references](#).

See also: [Help and FAQ on the PubMed website](#)

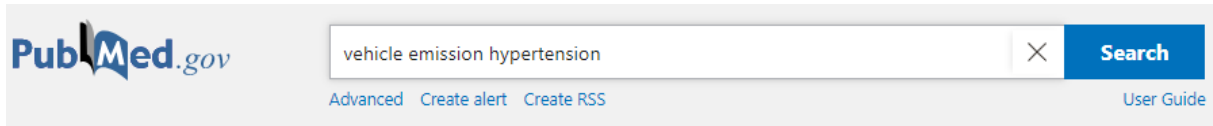
## A fresh new look



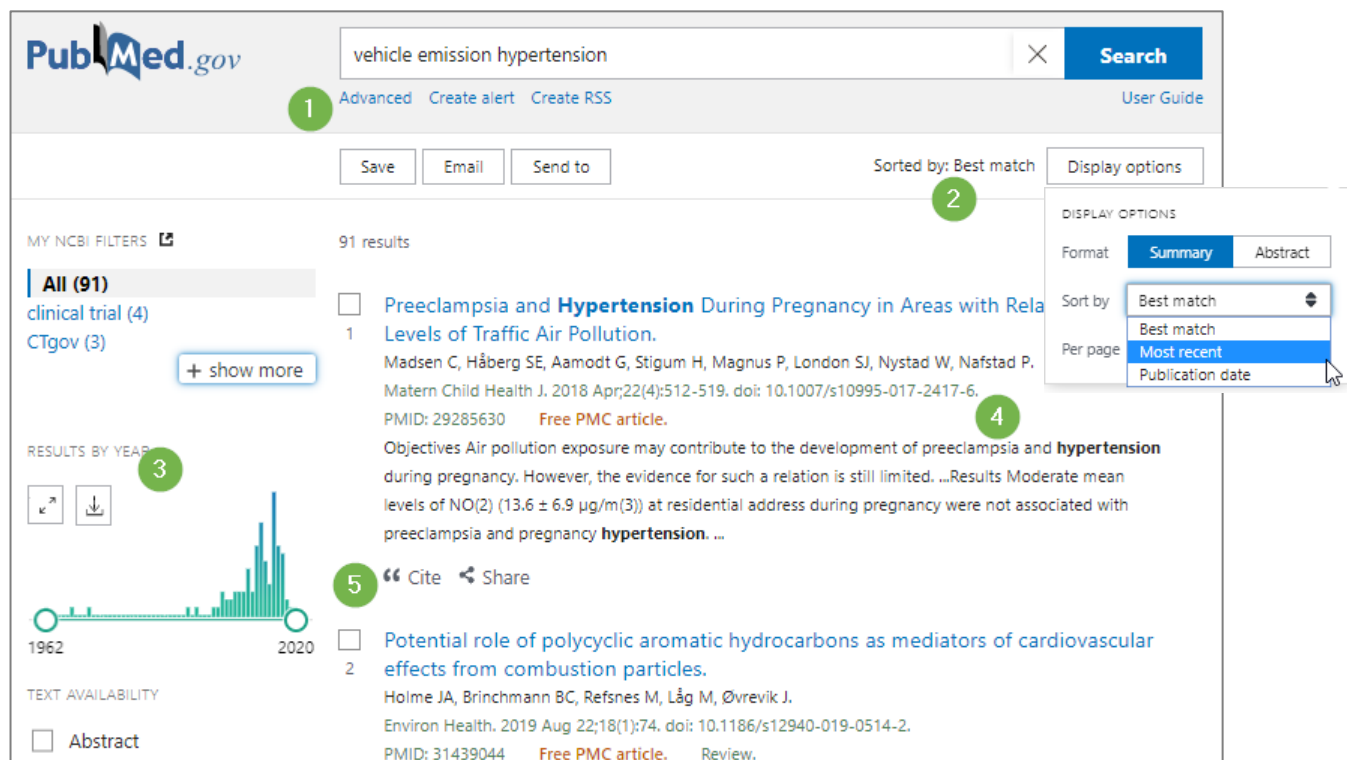
- |   |                                |
|---|--------------------------------|
| 1. Search   | 4. Clinical Queries            |
| 2. Access to the search builder<br>and search history | 5. Finding a single citation   |
| 3. Help and User Guide                                | 6. Access to the Mesh database |
|   | 7. Login to your NCBI account  |

## Searching PubMed

### Subject search



Enter your subject terms in the search box and click *Search*.



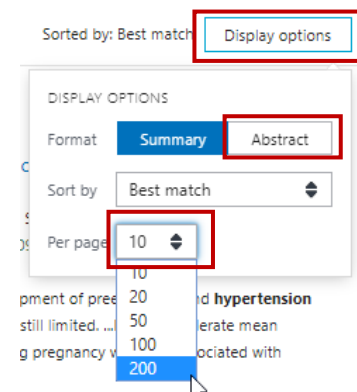
1. **Advanced:** access to search details and search history
2. **Sorted by:** the default sort order is *Best match*, [see below](#) for details
3. **Results by year:** shows the number of references per year. You can use the slider to filter the results by year
4. The **summary view** shows parts of the abstract, highlighting your search terms
5. **Cite** and **Share** buttons are available here, as well as in the full abstract screen, [see below](#) for details

### Best Match

Be careful! The default sort order is now *Best match*, which displays the most relevant records at the top of your results. With the *Best match* sort order the number of results might differ from other sorting options. The order can be changed in the menu under *Display options* to *Most recent* or *Publication date*. Once you change the sort order, PubMed will remember it for your next session.

### Display options

1. Under Display options you can change the default summary listing of the search results, and obtain a more detailed display by selecting the Abstract format
2. You can also change the number of results per page



### Access to the detailed reference

By clicking on the title of a reference, the full reference will open. You will be able to navigate through the references by using the arrows on the left and on the right, or by clicking on *Search results*, which will bring you back to the simplified list.



## Cited by

The **Cited by** button in the right-hand menu will take you to a list of articles referenced in **PubMed Central**<sup>1</sup>, which cite the article you are viewing.

### Cited by 4 articles

Tsantan Sumtang Alleviates Chronic Hypoxia-Induced Pulmonary Hypertension by Inhibiting Proliferation of Pulmonary Vascular Cells.

He Q, Nan X, Li S, Su S, Ma K, Li Z, Lu D, Ge R.

Biomed Res Int. 2018 Nov 28;2018:9504158. doi: 10.1155/2018/9504158. eCollection 2018.

PMID: 30622966 [Free PMC article.](#)

Unilateral Carotid Body Resection in Resistant Hypertension: A Safety and Feasibility Trial.

Narkiewicz K, Ratcliffe LE, Hart EC, Briant LJ, Chrostowska M, Wolf J, Szyndler A, Hering D, Abdala AP, Manghat N, Burchell AE, Durant C, Lobo MD, Sobotka PA, Patel NK, Leiter JC, Engelman ZJ, Nightingale AK, Paton JF.

Version 2. JACC Basic Transl Sci. 2016 Aug 29;1(5):313-324. doi: 10.1016/j.jacbs.2016.06.004. eCollection 2016 Aug.

PMID: 27766316 [Free PMC article.](#)

Increased Cardiometabolic Risk and Worsening Hypoxemia at High Altitude.

Miele CH, Schwartz AR, Gilman RH, Pham L, Wise RA, Davila-Roman VG, Jun JC, Polotsky VV, Miranda JJ, Leon-Velarde F, Checkley W.

High Alt Med Biol. 2016 Jun;17(2):93-100. doi: 10.1089/ham.2015.0084.

PMID: 27281472 [Free PMC article.](#)

Athletes at High Altitude.

Khodaei M, Grothe HL, Seyfert JH, VanBaak K.

Sports Health. 2016 Mar-Apr;8(2):126-32. doi: 10.1177/1941738116630948.

PMID: 26863894 [Free PMC article.](#) [Review.](#)

#### PAGE NAVIGATION

[Title & authors](#)[Abstract](#)[Similar articles](#)[Cited by](#)[Publication types](#)[MeSH terms](#)[LinkOut - more resources](#)

## References

If the article you are viewing is also referenced in **PubMed Central**, you can find the list of references for this article by clicking on the **References** button in the right-hand menu.

### References

1. National Institute for Health and Care Excellence. Low-intensity pulsed ultrasound to promote fracture healing. 2010. <https://www.nice.org.uk/guidance/ipg374/history>.
2. Food and Drug Administration. Approval order for Exogen device. 2000. <http://www.fda.gov/ohrms/dockets/dailys/00/mar00/031300/aav0001.pdf>.
3. Busse JW, Morton E, Lacchetti C, Guyatt GH, Bhandari M. Current management of tibial shaft fractures: a survey of 450 Canadian orthopedic trauma surgeons. Acta Orthop 2008;79:689-94. 10.1080/17453670810016722 [pmid:18839377](#). - DOI - PubMed
4. Wachovia Capital Markets. Equity research: bone growth stimulation 2008 outlook. 2007.
5. Griffin XL, Parsons N, Costa ML, Metcalfe D. Ultrasound and shockwave therapy for acute fractures in adults. Cochrane Database Syst Rev 2014;(6):CD008579.[pmid:24956457](#). - PMC - PubMed

[Show all 56 references](#)

#### PAGE NAVIGATION

[Title & authors](#)[Abstract](#)[Similar articles](#)[References](#)[MeSH terms](#)[LinkOut - more resources](#)

## Automatic Term Mapping (ATM)

PubMed interprets your search using ATM. The terms entered in the search form are compared to vocabulary tables including MeSH terms, and then to indexes of journals and authors.

In the new PubMed, the ATM has been enhanced to include British and American spelling, singular and plural word forms, and other synonyms to allow a more consistent and comprehensive search. [Click here](#) for more information on ATM and how it works.

<sup>1</sup> PubMed Central® (PMC) is a free full-text archive of biomedical and life sciences journal literature at the U.S. National Institutes of Health's National Library of Medicine (NIH/NLM).

For details on the interpretation of your search, open the search history (under *Advanced*). Click on the arrow in the *Details* column. This will display the mapping of your search.

**History and Search Details** [Download] [Delete]

Search	Actions	Details	Query	Results	Time
#2	...	▼	<p>Search: <b>vehicle emission hypertension</b></p> <p>(((((("vehicle emissions"[MeSH Terms] OR ("vehicle"[All Fields] AND "emissions"[All Fields])) OR "vehicle emissions"[All Fields]) OR ("vehicle"[All Fields] AND "emission"[All Fields]) OR "vehicle emission"[All Fields]) AND ((((((("hypertense"[All Fields] OR "hypertension"[MeSH Terms]) OR "hypertension"[All Fields]) OR "hypertension s"[All Fields]) OR "hypertensions"[All Fields]) OR "hypertensive"[All Fields]) OR "hypertensive s"[All Fields]) OR "hypertensives"[All Fields]))))</p> <p><b>Translations</b></p> <p><b>vehicle emission:</b> "vehicle emissions"[MeSH Terms] OR ("vehicle"[All Fields] AND "emissions"[All Fields]) OR "vehicle emissions"[All Fields] OR ("vehicle"[All Fields] AND "emission"[All Fields]) OR "vehicle emission"[All Fields]</p> <p><b>hypertension:</b> "hypertense"[All Fields] OR "hypertension"[MeSH Terms] OR "hypertension"[All Fields] OR "hypertension's"[All Fields] OR "hypertensions"[All Fields] OR "hypertensive"[All Fields] OR "hypertensive's"[All Fields] OR "hypertensives"[All Fields]</p>	90	10:49:02

Showing 1 to 1 of 1 entries

Mapping does not work if search syntax elements such as truncation, quotes, or field labels are used.

## Searching with truncation

Truncation is the use of an asterisk to replace 0, 1 or more characters and allows you to find all the variants of a term beginning with the same root.

Searching with truncation works more effectively in the new PubMed and is no longer limited. Use a character string of at least four letters. With truncation, it is recommended to use field labels such as [tiab] or [tw]. Please note that using truncation disables ATM.

**PubMed.gov** [Advanced] [Create alert] [Create RSS] [User Guide]

Search: diabetes mellitus[tiab] AND therap\*[tiab] [X] [Search]

**History and Search Details** [Download] [Delete]

Search	Actions	Details	Query	Results	Time
#2	...	>	Search: <b>diabetes mellitus[tiab] AND therap*[tiab]</b>	40,313	03:30:08

Under *Details*, unlike the old version, the new PubMed no longer displays the variants found through truncation.

## Using truncation in exact phrase searching



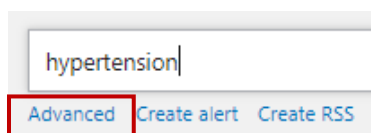
With the new PubMed, it is now possible to use quotation marks to search for expressions with truncation, but only on the last word.

Please note that using truncation disables the mapping.

- ☐ **Acute *Shoulder Injuries* in Adults.**  
1 Monica J, Vredenburg Z, Korsh J, Gatt C.  
Am Fam Physician. 2016 Jul 15;94(2):119-27.  
PMID: 27419328 [Free article.](#) [Review.](#)  
Acute **shoulder injuries** in adults are often initially managed by family physicians. Common acute **shoulder injuries** include acromioclavicular joint **injuries**, clavicle fractures, glenohumeral dislocations, proximal humerus fractures, and rotator cuff tears. ...It is important to recognize the sometimes subtle signs and symptoms of acute **shoulder injuries** to ensure proper management and timely referral if necessary....  
“ Cite [Share](#)
- ☐ **Swimmer's *Shoulder*: Painful *Shoulder* in the Competitive Swimmer.**  
2 Matzkin E, Suslavich K, Wes D.  
J Am Acad Orthop Surg. 2016 Aug;24(8):527-36. doi: 10.5435/JAAOS-D-15-00313.  
PMID: 27355281 [Review.](#)  
Swimmer's **shoulder** is a broad term often used to diagnose **shoulder injury** in swimmers. However, research has elucidated several specific **shoulder injuries** that often are incurred by the competitive swimmer. ...An understanding of the mechanics of the swim stroke, in combination with the complex static and dynamic properties of the **shoulder**, is essential to the comprehension and identification of the painful swimmer's **shoulder**. ...  
“ Cite [Share](#)

## Combining searches

After performing searches in PubMed, you can retrieve your search history by clicking on the *Advanced* button below the search box.



This will open the advanced search page, with your search history at the bottom of the page. After your session, this history will be stored on your computer for 8 hours.

You can use this history to combine different search terms.

History and Search Details						<a href="#">Download</a>	<a href="#">Delete</a>
Search	Actions	Details	Query	Results	Time		
#2	...	1 >	Search: <b>hypertension</b>	530,704	04:09:18		
#1	...	2 >	Search: <b>vehicle emissions</b>	10,944	04:09:05		

Showing 1 to 2 of 2 entries



- Add with AND
- Add with OR
- Add with NOT
- Delete
- Save to My NCBI

"Add with AND" to combine two search concepts

"Add with OR" to search with two synonymous terms

"Add with NOT" to exclude a search concept

"Delete" allows you to delete a line from your search history

The last option allows you to save your search on your NCBI account. This feature will be coming soon.



If you would like to know more about the search fields in PubMed, [see the PubMed user guide](#).

## New features

### Cite

When you click on the *Cite* button next to a reference, a window opens with the citation of the reference. You can choose from different citation formats: AMA, MLA, APA or NLM.

Case Reports > J Fr Ophtalmol. 2014 Oct;37(8):629-34. doi: 10.1016/j.jfo.2014.04.009.  
Epub 2014 Sep 8.

### [High Altitude Retinopathy: Report of 3 Cases]

[Article in French]

A Russo <sup>1</sup>, E Agard <sup>2</sup>, J-P Blein <sup>3</sup>, H El Chehab <sup>2</sup>, C Lagenaite <sup>2</sup>, G Ract-Madoux <sup>2</sup>, C Dot <sup>2</sup>

Affiliations + expand

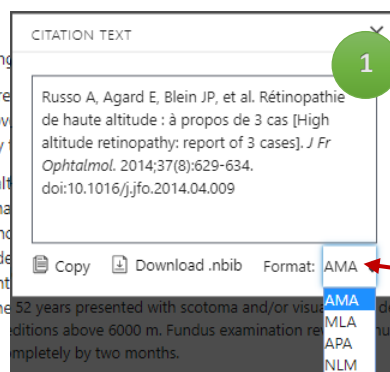
PMID: 25199490 DOI: 10.1016/j.jfo.2014.04.009

### Abstract

**Purpose:** To report three cases of vision loss occurring

**Observations:** Three patients aged 27 to 52 years presented upon their return from high altitude expeditions above 6000 m with posterior pole hemorrhages, resolving completely by two months.

**Discussion:** Exposure to hypobaric hypoxia at high altitude to maintain retinal oxygenation. Certain individuals have developed signs of "high altitude retinopathy" (HAR), including occasional vitreous hemorrhage, optic nerve head edema. The pathophysiology of HAR is not well understood. Identifying rapid ascent and personal susceptibility. Age and fitness



FULL TEXT LINKS

ELSEVIER  
FULL-TEXT ARTICLE

ACTIONS

Cite

Favorites

SHARE

Twitter Facebook LinkedIn

PAGE NAVIGATION

Title & authors

Abstract

Similar articles

Publication types

The NLM format matches the Vancouver citation style.

### Finding the original title

If the original language of a publication is different from English, PubMed translates and displays the titles of most of these references in English. You can find the original title of an article in the citation.

### Share

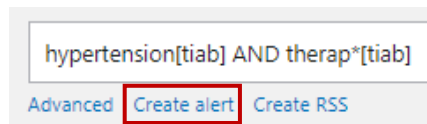


This feature allows you to share an article reference on Twitter, Facebook, or get a permanent link.

### Sharing a research strategy

To share a search strategy, you can copy the URL of the results page to link to your strategy.

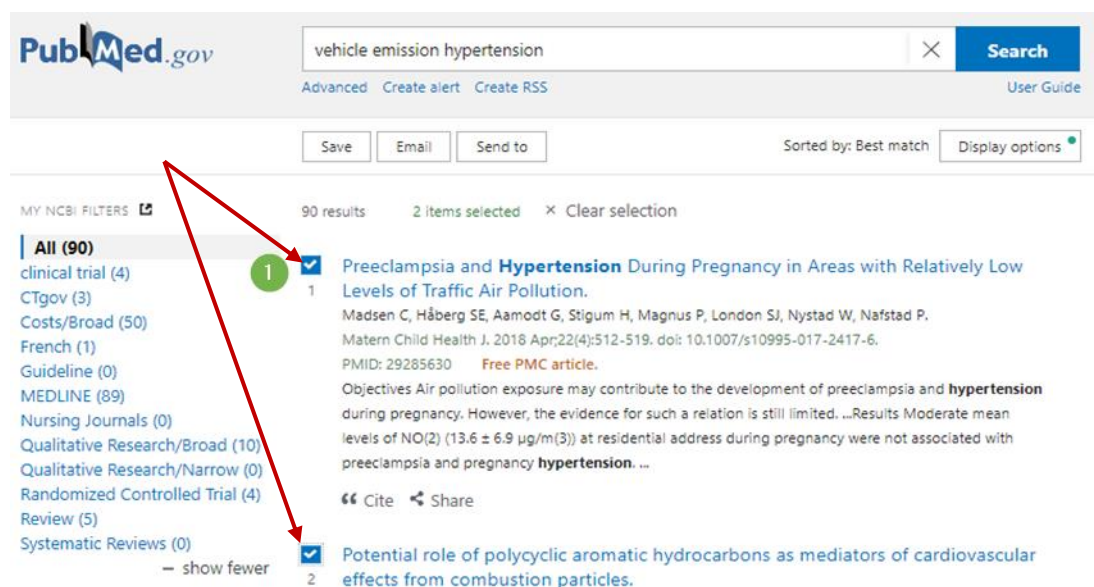
### Create Alert



This option allows you to create an alert for your search strategy.

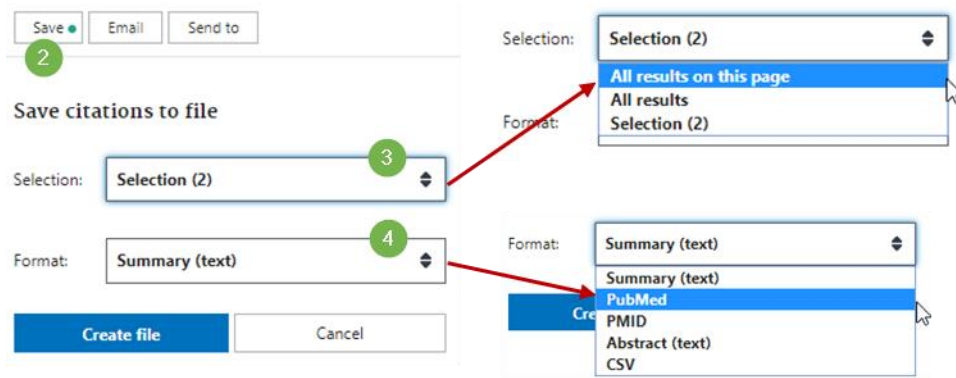
### Save

To save your search results, you can store them in a file. PubMed offers different formats, which may be selected depending on the use of search results.



1. First, select the items you wish to save, or choose *all references* from the drop-down menu.

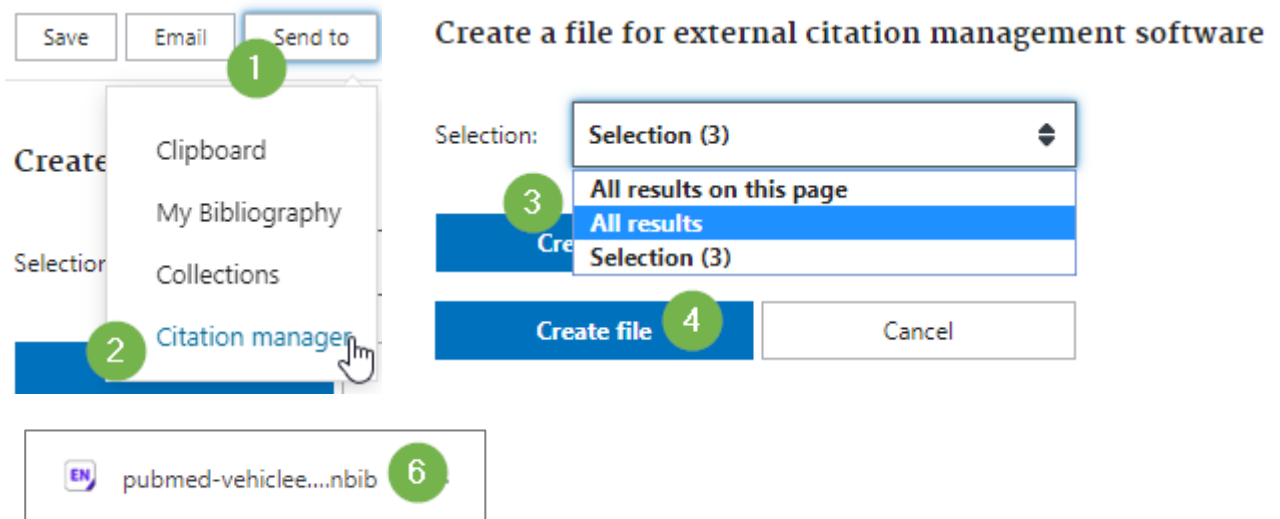
2. Click *Save*
3. Select the references you want to save
4. Select the file format



Format	
<b>Summary (text)</b>	Exports the selected results as text, with a new line for each field in the database. Most complete text file
<b>PubMed</b>	Text file format that can be used for importing into a reference management software (Endnote, Zotero) (Preferably use <a href="#">Send to Citation Manager</a> )
<b>PMID</b>	Plain text list of the PMIDs of the selected references.
<b>Abstract (text)</b>	Exports a list of references with abstract.
<b>CSV</b>	Exports the selected references in a comma-separated file format, which can be used in Excel.

## Send to - Citation Manager

Use *Send to : Citation Manager* to export citations as a .nbib file that can be used by many reference management programs.



1. Select references from your search results or choose to save all of your search results.
2. Click *Send to* and choose *Citation Manager*.
3. Confirm the set of references you wish to export: selection, all results on this page, or all results (up to a maximum of 10,000).
4. Click *Create file*
5. Your web browser will ask you to save the file to your computer.
6. Import this saved file into your bibliographic software.

## Send to - Collections

As in the previous PubMed, you can create a free NCBI account, which can be used to save your personal settings, as well as searches, search results and alerts. If you have created an account before, it is still valid and most features still exist, although some are still under development.

If you have created this account before, you can save your search results in a collection, which is saved in your personal account.

1. In the results display, tick the check boxes to select the items you want to save.  
Note: If no items are checked, all items (up to 10000) are included.
2. Click "Send to" and select Collections. Click "Add to Collections". If you are not yet logged in to My NCBI, you will be prompted to do so.
3. Here you can choose to save only the selected items, all the results of the page, or all the results.

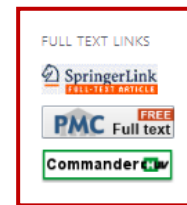
4. You can choose to create a new collection or add it to an existing collection. If you are creating a new collection, name it in the text box.
5. Click *Add*.

The screenshot shows the 'Add to Collections' dialog box. Callout 2 points to the 'Send to' button in the top navigation bar. Callout 3 points to the 'Selection (5)' dropdown menu. Callout 4 points to the 'Create a new collection' radio button. Callout 5 points to the 'Add' button at the bottom of the dialog.

## Full text access

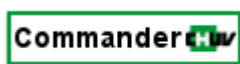
> *Matern Child Health J.* 2018 Apr;22(4):512-519. doi: 10.1007/s10995-017-2417-6.

### Preeclampsia and Hypertension During Pregnancy in Areas With Relatively Low Levels of Traffic Air Pollution



Although PubMed does not store full-text articles, it does provide links to journals and articles. If you are on the CHUV/UNIL campus, you automatically have access to all journals to which we subscribe. If you are not on-site, you can connect with the VPN to create such an access.

Please find all the information on [Remote access to online resources](#) on our website [www.bium.ch](http://www.bium.ch).



The function *Commander CHUV* allows you to order the article directly via our [DocDelivery](#) service.

## Useful links

### PubMed User Guide

The PubMed user guide is available via the PubMed home page. The guide presents the features of PubMed in a step-by-step manner.

Access the guide via: <https://pubmed.ncbi.nlm.nih.gov/help/>

### PubMed online training

Online "quick tours", tutorials, webcasts and videos, live lectures and handouts.

<https://learn.nlm.nih.gov/documentation/training-packets/T0042010P/>

## Search syntax

[Syntax](#) for structured searches in PubMed.



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This guide is based on the PubMed.gov site, the illustrations are screen shots of that site.

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