



Overview of the New PubMed

The new version of PubMed (PubMed 2.0) is now the default version of PubMed.

To view this document not in print mode, [View > \[unchecked\] Print layout.](#)

To view this document's outline, [View > \[checked\] Show document outline.](#)

Table of Contents - headings are hyperlinked

[Interface Overview](#)

[Best Match: Search Algorithm Changes](#)

[Molecular Databases and PubMed](#)

[Accessing the Legacy PubMed](#)

Interface Overview

PubMed's interface has been updated for a cleaner look. More importantly, the interface has been improved for mobile use and is now consistent across devices, with features such as filtering and saving searches available on smartphones. This is an especially important change, as roughly 20% of PubMed searches are done on mobile devices.

Main Search Page

The main search page has not changed greatly. The biggest difference is that there is no longer a dropdown for other National Center of Biotechnology Information (NCBI) databases (Gene, dbGAP, MeSH). You can access the MeSH database through a link in the lower right of the page. Access other NCBI databases by clicking the National Library of Medicine/NCBI link in the upper left.





NIH National Library of Medicine
National Center for Biotechnology Information

Log in

Login to My NCBI

PubMed.gov

Search PubMed Search

Advanced

PubMed® comprises more than 30 million citations for biomedical literature from MEDLINE, life science journals, and online books. Citations may include links to full-text content from PubMed Central and publisher web sites.

Advanced search, search history & search details

For Clinical Queries and the Single Citation Matcher

Look up MeSH terms and/or use the Search Builder



Learn

- About PubMed
- FAQs & User Guide
- Finding Full Text



Find

- Advanced Search
- Clinical Queries
- Single Citation Matcher



Download

- E-utilities API
- FTP
- Batch Citation Matcher



Explore

- MeSH Database
- Journals





Search Results Page

A significant difference on this page is that results are no longer sorted by **Most Recent** by default. Results are sorted by **Best Match** (see section on the Best Match algorithm for more details). You can change the sort order under Display Options.





NIH National Library of Medicine National Center for Biotechnology Information

PubMed.gov

Search: betrayal

Log in

Advanced Create alert Create RSS Search User Guide

Save Email Send to Sorted by: Best match Display options

523 results

MYNCBI FILTERS

- All (523)
- Review (37)
- Systematic Reviews (1)
- Therapy/Treatment (9)
- Diagnosis (4)
- Etiology/Harm (12)
- Prognosis (12)

Download results to a text file (CSV, list of PMIDs, etc.)

Export results for a citation manager

Send results to Clipboard, My Bibliography or another My NCBI Collection

Change sort order, display full abstracts, change number of results per page

Copy the article citation in several styles

Get a permanent link to the article

RESULTS BY YEAR

TEXT AVAILABILITY

- Abstract
- Free full text

CC BY NC



Create Alert

If you create an alert or save a search using this option, the saved search will *not* include any filters added using the filter options on the left-hand side of the page. In order to include filters in your saved search, you must add them to the search query using the MeSH heading. Contact your librarian if you have questions on how to do this. *See screenshot on next page.*





Adding Search Filters





1919 2020

Using a sample of 404 sexual assault st
study employed logistic regression to id
sexual orientation, assault characteristi
institutional betrayal risk. ...

TEXT AVAILABILITY

- Abstract
- Free full text
- Full text

ARTICLE ATTRIBUTE

- Associated data

ARTICLE TYPE

- Books and Documents
- Clinical Trial
- Meta-Analysis
- Randomized Controlled Trial
- Review
- Systematic Reviews

PUBLICATION DATE

- 1 year
- 5 years
- 10 years

Government-mandated instituti
3 Smidt AM, Floyd JJ.
J Trauma Dissociation. 2018 Oct-Dec;18
2018 Jul 31.
PMID: 30058958 No abstract availa
“ Cite “ Share

Betrayal in Teaching-Learning:
4 Yancey NR.
Nurs Sci Q. 2018 Jan;31(1):17-21. doi: 10.1177/0898010117700000
PMID: 29235947
In this article, the human experience of
might be expected and the notion of **be**
experience, the unique perspectives of
faculty are considered through the stori
learning. ...
“ Cite “ Share

Betrayal.
Am Psychol. 2014 Sep;69(6):575-87. doi: 10.1037/xap0000000
PMID: 25197837 Review.
This is institutional **betrayal**. The purpo
examines the role of institutions in traur

Default filters

To include additional filters



Default filters

Reset all filters



ARTICLE TYPE

SPECIES

LANGUAGE

SEX

SUBJECT

JOURNAL

AGE

Child: birth-18 years Adult: 19+ years

Newborn: birth-1 month Young Adult: 19-24 years

Infant: birth-23 months Adult: 19-44 years

Infant: 1-23 months Middle Aged + Aged: 45+ years

Preschool Child: 2-5 years Middle Aged: 45-64 years

Child: 6-12 years Aged: 65+ years

Adolescent: 13-18 years 80 and over: 80+ years

Select the specific filters you would like to include in the interface

Cancel Show

Advanced Search Page

The advanced search page includes the advanced search interface, the search history, as well as some details on how PubMed has interpreted the search string.





PubMed Advanced Search Builder

Enter your query here and then...

PubMed.gov

User Guide

Add terms to the query box

All Fields

Enter a search term

...add it to the query box using AND, OR or NOT

ADD

Show Index

Query box

Enter / edit your search query here

Search

Under "Actions" you can choose to add your search to the query box, delete it or save it to My NCBI

Once your query is complete you can run the search and go to the results page or you can choose to add it to the search history below

"Details" provides details of how your search was interpreted

History and Search Details

Download Delete

Search	Actions	Details	Query	Results	Time
#8	...	>	Search: hard liquor pregnancy	20	19:07:38
#1	...	>	Search: heart attack risk factors	51,611	18:56:51

Showing 1 to 2 of 2 entries





Search Details

PubMed has always interpreted searches by mapping query terms to MeSH headings. The new PubMed also uses stemming (adding variations of a root word) to broaden the search. These translations are sometimes really helpful in understanding how PubMed is using the search terms. It's also good practice to check the translation to see that it matches with your intended search topic. You can see how your search was interpreted by looking at the search details.





History and Search Details

Download Delete

Search	Actions	Details	Query	Results	Time
#8	...	>	Search: hard liquor pregnancy	20	19:07:38
#1	...	∨	Search: heart attack risk factors (((("myocardial infarction"[MeSH Terms] OR ("myocardial"[All Fields] AND "infarction"[All Fields])) OR "myocardial infarction"[All Fields]) OR ("heart"[All Fields] AND "attack"[All Fields])) OR "heart attack"[All Fields]) AND (("risk factors"[MeSH Terms] OR ("risk"[All Fields] AND "factors"[All Fields])) OR "risk factors"[All Fields])	51,611	18:56:51
<p>Translations</p> <p>heart attack: "myocardial infarction"[MeSH Terms] OR ("myocardial"[All Fields] AND "infarction"[All Fields]) OR "myocardial infarction"[All Fields] OR ("heart"[All Fields] AND "attack"[All Fields]) OR "heart attack"[All Fields]</p> <p>risk factors: "risk factors"[MeSH Terms] OR ("risk"[All Fields] AND "factors"[All Fields]) OR "risk factors"[All Fields]</p>					





History and Search Details

Download Delete

Search	Actions	Details	Query	Results	Time
#8	...	▼	<p>Search: hard liquor pregnancy</p> <p>((("hardness"[MeSH Terms] OR "hardness"[All Fields]) OR "hard"[All Fields]) AND (((("amniotic fluid"[MeSH Terms] OR ("amniotic"[All Fields] AND "fluid"[All Fields])) OR "amniotic fluid"[All Fields]) OR "liquor"[All Fields])) OR "liquors"[All Fields]) AND (((("pregnancy"[MeSH Terms] OR "pregnancy"[All Fields]) OR "pregnancies"[All Fields]) OR "pregnancy s"[All Fields])</p> <p>Translations</p> <p>hard: "hardness"[MeSH Terms] OR "hardness"[All Fields] OR "hard"[All Fields]</p> <p>liquor: "amniotic fluid"[MeSH Terms] OR ("amniotic"[All Fields] AND "fluid"[All Fields]) OR "amniotic fluid"[All Fields] OR "liquor"[All Fields] OR "liquor's"[All Fields] OR "liquors"[All Fields]</p> <p>pregnancy: "pregnancy"[MeSH Terms] OR "pregnancy"[All Fields] OR "pregnancies"[All Fields] OR "pregnancy's"[All Fields]</p>	20	19:07:38
#1	...	>	Search: heart attack risk factors	51,611	18:56:51

Sometimes search translations are not what you wanted

We can turn this off by putting quotes around "hard liquor" in our search

Translations

hard: "hardness"[MeSH Terms] OR "hardness"[All Fields] OR "hard"[All Fields]

liquor: "amniotic fluid"[MeSH Terms] OR ("amniotic"[All Fields] AND "fluid"[All Fields]) OR "amniotic fluid"[All Fields] OR "liquor"[All Fields] OR "liquor's"[All Fields] OR "liquors"[All Fields]

pregnancy: "pregnancy"[MeSH Terms] OR "pregnancy"[All Fields] OR "pregnancies"[All Fields] OR "pregnancy's"[All Fields]





Search	Actions	Details	Query	Results	Time
#11	...	▼	<p>Search: coloring books</p> <pre> ((((((((((((((((((((((((("colorant"[All Fields] OR "colorants"[All Fields] OR "coloration"[All Fields]) OR "colorations"[All Fields]) OR "colored" [All Fields]) OR "coloreds"[All Fields]) OR "colorful"[All Fields]) OR "colorfulness"[All Fields]) OR "coloring"[All Fields]) OR "colorings"[All Fields]) OR "colorization"[All Fields]) OR "colorized"[All Fields]) OR "colour"[All Fields]) OR "color"[MeSH Terms]) OR "color"[All Fields]) OR "colourant"[All Fields]) OR "colourants"[All Fields]) OR "colouration"[All Fields]) OR "colourations"[All Fields]) OR "coloured" [All Fields]) OR "coloureds"[All Fields]) OR "colourful"[All Fields]) OR "colourfulness"[All Fields]) OR "colouring"[All Fields]) OR "colourings" [All Fields]) OR "colours"[All Fields]) OR "colors"[All Fields]) AND (("book s"[All Fields] OR "books"[MeSH Terms]) OR "books"[All Fields]) </pre>	274	19:34:25

Here is an example of stemming. In this case, these variations are not helpful to us

Again, we can turn this off by adding quotes around "coloring" or around the phrase "coloring books"

Translations

coloring: "colorant"[All Fields] OR "colorants"[All Fields] OR "coloration"[All Fields] OR "colorations"[All Fields] OR "colored"[All Fields] OR "coloreds"[All Fields] OR "colorful"[All Fields] OR "colorfulness"[All Fields] OR "coloring"[All Fields] OR "colorings"[All Fields] OR "colorization"[All Fields] OR "colorized"[All Fields] OR "colour"[All Fields] OR "color"[MeSH Terms] OR "color"[All Fields] OR "colourant"[All Fields] OR "colourants"[All Fields] OR "colouration"[All Fields] OR "colourations"[All Fields] OR "coloured"[All Fields] OR "coloureds"[All Fields] OR "colourful"[All Fields] OR "colourfulness"[All Fields] OR "colouring"[All Fields] OR "colourings"[All Fields] OR "colours"[All Fields] OR "colors"[All Fields]

books: "book's"[All Fields] OR "books"[MeSH Terms] OR "books"[All Fields]





Individual Record Page

The individual record page now contains a lot of its information on the lower portion of the page. Scroll down to get to what you're looking for. Navigation has been added on the right to allow you to jump directly to where you want to get to.





Search results

Save to a text file, email or send this result to My NCBI, the clipboard or export for a citation manager

Save

Email

Send to

> [Dementia \(London\)](#). 2016 Sep;15(5):895-912. doi: 10.1177/1471301214543958. Epub 2014 Jul 21.

"It Makes Me Feel Like Myself": Person-centered Versus Traditional Visual Arts Activities for People With Dementia

Philip E Sauer¹, Joan Fopma-Loy², Jennifer M Kinney³, Elizabeth Lokon⁴

Affiliations + expand

PMID: 25049353 DOI: [10.1177/1471301214543958](https://doi.org/10.1177/1471301214543958)

Abstract

During a 15-month period between February 2010 and April 2011, video data on (n = 38) people with dementia were collected during a person-centered and intergenerational arts activity program called Opening Minds through Art (OMA) at three different long-term care facilities in Ohio. A subsample of the OMA participants (n = 10) were also video recorded during traditional visual arts activities (e.g. coloring books, scrapbooking). A modified version of the Greater Cincinnati Well-Being Observation Tool[®] was used to code the intensity and frequency of observations of well-being (i.e. social interest, engagement, and pleasure) and ill-being (i.e. disengagement, negative affect, sadness, and confusion). Descriptive results indicate a high percentage of moderate or high intensities of well-being during OMA sessions with little to no ill-being. Paired sample t-tests comparing OMA vs. traditional visual arts activities showed significantly higher intensity scores for OMA in the domain of engagement and pleasure, as well as significantly lower intensity scores for disengagement. The findings of this exploratory study contribute to the overall discussion about the impact of person-centered, creative-expressive arts activities on people with dementia.

View the citation in several styles or add to "favorites" collection in My NCBI

FULL TEXT LINKS

[SAGE journals](#)[NYU](#)

ACTIONS

[Cite](#)[Favorites](#)

SHARE



Use to get a permanent link to the record

Use navigation to jump to MeSH terms or other parts of the record

PAGE NAVIGATION

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

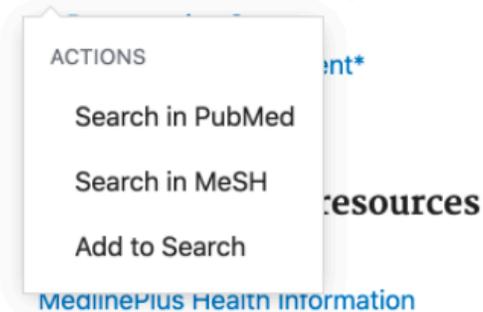


MeSH Terms & Substances

MeSH terms and Substances still work as before. Just click on the term to see the options.

MeSH terms

- > Adolescent
- > Ambulatory Surgical Procedures / nursing*
- > Child
- > Child, Preschool
- > Humans
- > Infant
- > Infant, Newborn
- > Operating Room Nursing*
- ▼ Patient Education as Topic*



A screenshot of a context menu for a MeSH term. The menu is titled "ACTIONS" and contains three options: "Search in PubMed", "Search in MeSH", and "Add to Search". The menu is overlaid on a page that shows the text "ent*" and "resources" in blue. At the bottom of the screenshot, the text "MedlinePlus Health Information" is visible.



Navigating Between Records

Another addition to this page is navigation on the right and left that allows you to move through the list of results without having to go back to the results page.





Search results

> [Front Psychol.](#) 2018 Jan 30;9:56. doi: 10.3389/fpsyg.2018.00056. eCo

When Did Coloring Books Become Mindful? Exploring the Effectiveness of a Novel Mindfulness-Guided Instructions for Coloring to Increase Mindfulness and Decrease Anxiety

[Michail Mantzios](#)¹, [Kyriaki Giannou](#)²

[Affiliations](#) + expand

[PMCID: PMC5797627](#) [DOI: 10.3389/fpsyg.2018.00056](#)

Randomized Controlled Trial of Adult Therapeutic Coloring for the Management of Significant Anxiety in the Emergency Department.

Rajendran N, et al. [Acad Emerg Med.](#) 2020. PMID: 29441038

METHODS: We set out to examine the effectiveness of adult **coloring books** using a randomized placebo-controlled trial at a university emergency department.

been associated with the use of coloring books for adult anxiety. However, the effectiveness of coloring to increase mindfulness has not been addressed. In two randomized controlled trials, we examined whether mindfulness is increased, and whether there is a need for a novel mindfulness practice. In the first randomized controlled trial, participants were assigned to an unguided mandala coloring group (i.e., same as mainstream literature as a mindfulness practice) or to a free-drawing group. Mindfulness and state anxiety were taken pre- and post- experiment. Results showed no change in mindfulness or anxiety. In the second randomized controlled experiment, 72) were assigned to an unguided mandala coloring group (i.e., same as l

Navigation on the far right and far left of the record allows you to move through the result list without having to return to the result page

PREV RESULT
1 of 11





Best Match: Search Algorithm Changes

The Best Match algorithm was introduced in the legacy PubMed in 2017 and appeared as an alternative sort order, by relevance. Best Match doesn't just re-sort the results, though. Selecting Best Match actually uses a different search method to retrieve them. For this reason, the total number of results would sometimes be different between the sort order (by date) vs. sorting with Best Match. The new PubMed strictly uses the Best Match algorithm to return results, regardless of the sort order.

Best Match utilizes machine learning and includes 150 signals to identify “best matches”. These signals include the relative frequency with which terms from the search query appear in the title and/or abstract of PubMed records, the publication type and the publication date of the record, the number of abstract views the record received within the last year, and the length of the search query.

Due to the many changing signals that can impact search results, PubMed searches will not be as transparent or reproducible as they have been in the past, which may be of concern for those who perform comprehensive searches for systematic reviews.

Molecular Databases and PubMed

As mentioned in the interface overview, the new PubMed homepage does not include a dropdown to other NCBI databases. Other features related to PubMed links with molecular data that are currently missing from the new PubMed include:

- Options like “Find Related Data” (from the search results page) and “Related Information” (on the record page) that will identify molecular data related to PubMed search results.
- Search queries that utilize these between-database links
- Searches for a gene symbol in the old PubMed results in quick links to the Gene records, genetic tests, and curated literature related to the gene function

Again, these options are not available in the new PubMed at this time.





However, links from other databases to PubMed will work. For example, Gene records include a Bibliography section that includes links to related articles in PubMed. Clicking on the link to see all related records in the human [ADORA2A](#) (Gene ID: 135) will return results with the 341 articles linked to from that record.

Accessing the Legacy PubMed

Currently the old version of PubMed is not accessible from the New PubMed homepage. All existing links to PubMed should now route to the new version. If you are working on a project that requires using the old version, NLM will provide access to the old version if you request it. This access is limited and unclear for how long it will remain.

Helpful resources:

- [Collins M. The New PubMed is Here. NLM Tech Bull. 2019 Nov-Dec;\(431\):e3](#)

