

# Proximity Searching in PubMed

Amanda Sawyer [C], NCBI PubMed Team



**National Library of Medicine**  
*National Center for Biotechnology Information*

# Agenda



What is proximity searching?



Proximity searching examples



How do I create a proximity search in PubMed?



Q&A

# Proximity Searching

- Search for multiple terms appearing in any order within a specified distance of one another in the [Title] or [Title/Abstract] fields.
- Proximity searching can be particularly helpful when searching for concepts that may be represented in multiple ways, or to capture variations of a phrase.

# Patient Physician Relationship

**Patient-physician relationship** - Communication is the key.

Honavar SG.

Indian

PMID: **The Physician-Patient Relationship.**

Derse AR.

N Engl J Med. 2022

PMID: 35984346

**The patient-parent-physician relationship.**

Elster A, Staunton P.

Virtual Mentor. 2002 Apr 1;5(4):virtualmentor.2002.5.4.ccas1.0204. doi:

10.1007/s12242-002-0004-0 **Impact of social media for the hematologist/oncologist.**

PMID: Abuhadra N, Majhail NS, Nazha A.

Semin Hematol. 2017 Oct;54(4):193-197. doi: 10.1053/j.seminhematol.2017.07.003. Epub 2017 Sep 18.

PMID: 29153080 Review.

In the era of modern communication, the **physician and patient relationship** has evolved to include an entirely new dimension-social media. ...However, these advantages come with challenges such as threats

to patient and professional privacy. In this art

# Proximity Search Syntax

## "search terms"[field:~N]

- search terms = Two or more words enclosed in double quotes
- field = The search field tag for the [Title] or [Title/Abstract] fields
- N = The maximum number of words that may appear between your search terms

# Proximity

# Search

# Syntax

(continued-2)

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# Proximity

# Search

# Syntax

(continued-3)

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# Proximity

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(continued-5)

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# Proximity

# Search

# Syntax

(continued-6)

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# Searching for citations where “hip” and “pain” appear in the Title/Abstract field with no more than 2 words between them



"hip pain"[title/abstract:~2]



Search

Advanced

PubMed® comprises more than 35 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.

# Searching for citations where “hip” and “pain” appear in the Title/Abstract field with no more than 2 words between them (continued-2)

4 Consensus recommendations on the classification, definition and diagnostic criteria of **hip-related pain** in young and middle-aged active adults from the International **Hip-related Pain** Research Network, Zurich 2018.

Cite Reiman MP, Agricola R, Kemp JL, Heerey JJ, Weir A, van Klij P, Kassarian A, Mosler AB, Ageberg E, Hölmich P, Warholm KM, Griffin D, Mayes S, Khan KM, Crossley KM, Bizzini M, Bloom N, Casartelli NC, Diamond LE, Di Stasi S, Drew M, Friedman DJ, Freke M, Gojanovic B, Glyn-Jones S, Harris-Hayes M, Hunt MA, Impellizzeri FM, Ishøi L, Jones DM, King MG, Lawrenson PR, Leunig M, Lewis CL, Mathieu N, Moksnes H, Risberg MA, Scholes MJ, Semciw AI, Serner A, Thorborg K, Wörner T, Dijkstra HP.

Share Br J Sports Med. 2020 Jun;54(11):631-641. doi: 10.1136/bjsports-2019-101453. Epub 2020 Jan 20. PMID: 31959678

There is no agreement on how to classify, define or diagnose **hip-related pain**—a common cause of **hip** and groin **pain** in young and middle-aged active adults. This complicates the work of clinicians and researchers. The International **Hip**-related ...

## Searching for citations where “hip” and “pain” appear in the Title/Abstract field with no more than 2 words between them (continued-3)



14

Effectiveness of Dry Needling Therapy on **Pain, Hip** Muscle Strength, and Physical Function in Patients With **Hip** Osteoarthritis: A Randomized Controlled Trial.

Cite

Ceballos-Laita L, Jiménez-Del-Barrio S, Marín-Zurdo J, Moreno-Calvo A, Marín-Boné J, Albarova-Corral MI, Estébanez-de-Miguel E.

Share

Arch Phys Med Rehabil. 2021 May;102(5):959-966. doi: 10.1016/j.apmr.2021.01.077. Epub 2021 Feb 7. PMID: 33567336 Clinical Trial.

OBJECTIVE: To investigate the short-term effects of dry needling (DN) on physical function, **pain**, and **hip** muscle strength in patients with **hip** osteoarthritis (OA). ...The DN group showed within- and between-groups large effect sizes ( $d > 0.8$ ). CONCLUSIONS: D ...

# “Quoted phrase not found in phrase index”

## Use N=0 to find citations with terms directly next to each other

The screenshot shows a PubMed search interface. At the top left is the PubMed logo. The search bar contains the query "cognitive impairment in multiple sclerosis patients" and a search button. Below the search bar are links for "Advanced", "Create alert", "Create RSS", and "User Guide". A row of buttons includes "Save", "Email", "Send to", "Sorted by: Most recent", and "Display options".

On the left side, there is a "MY NCBI FILTERS" section and a "RESULTS BY YEAR" bar chart showing a rising trend of results over time. The main results area shows "2,642 results" and a message: "Quoted phrase not found in phrase index: 'cognitive impairment in multiple sclerosis patients'".

The first result is a citation for a paper titled "The Effects of SARS-CoV-2 Infection on the Cognitive Functioning of Patients with Pre-Existing Dementia." The authors listed are Dubey S, Das S, Ghosh R, Dubey MJ, Chakraborty AP, Roy D, Das G, Dutta A, Santra A, Sengupta S, and Benito-León J. The citation includes the journal name, volume, issue, pages, and DOI: "J Alzheimers Dis Rep. 2023 Feb 14;7(1):119-128. doi: 10.3233/ADR-220090. eCollection 2023."

**“Quoted phrase not found in phrase index”**

**Use N=0 to find citations with terms directly next to each other (continued-2)**



"cognitive impairment in multiple sclerosis patients"[title/abstract:~0]



**Search**

Advanced

PubMed® comprises more than 35 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.

# “Quoted phrase not found in phrase index”

## Use N=0 to find citations with terms directly next to each other (continued-3)

The screenshot shows a PubMed search interface. At the top left is the PubMed logo. The search bar contains the query "cognitive impairment in multiple sclerosis patients"[title/abstract:~0]. To the right of the search bar are buttons for "Advanced", "Create alert", "Create RSS", and "User Guide". Below the search bar are buttons for "Save", "Email", and "Send to". The search results are sorted by "Publication date" and displayed on page 1 of 1. The results section shows 8 results. The first result is titled "The Expanded Disability Status Scale Score and Demographic Indexes Are Correlated with the Severity of Cognitive Impairment in Multiple Sclerosis Patients." by Sadigh-Eteghad S, Abbasi Garravnd N, Feizollahi M, Talebi M. The second result is titled "The correlation between dyslipidemia and cognitive impairment in multiple sclerosis patients." The left sidebar includes "MY NCBI FILTERS", "RESULTS BY YEAR" (a bar chart showing results from 2002 to 2023), and "TEXT AVAILABILITY" options for "Abstract" and "Free full text".

PubMed®

"cognitive impairment in multiple sclerosis patients"[title/abstract:~0] X Search

Advanced Create alert Create RSS User Guide

Save Email Send to Sorted by: Publication date ↓ Display options ⚙

MY NCBI FILTERS

8 results Page 1 of 1

RESULTS BY YEAR

2002 2023

TEXT AVAILABILITY

Abstract

Free full text

1 The Expanded Disability Status Scale Score and Demographic Indexes Are Correlated with the Severity of Cognitive Impairment in Multiple Sclerosis Patients.

Cite Sadigh-Eteghad S, Abbasi Garravnd N, Feizollahi M, Talebi M.

Share J Clin Neurol. 2021 Jan;17(1):113-120. doi: 10.3988/jcn.2021.17.1.113. PMID: 33480206 Free PMC article.

BACKGROUND AND PURPOSE: Cognitive impairment (CI) is a common symptom of multiple sclerosis (MS). ...METHODS: This study enrolled 115 MS patients. Cognitive performance was assessed using the Minimal Assessment of Cognitive Functio ...

2 The correlation between dyslipidemia and cognitive impairment in multiple sclerosis patients.

# “Quoted phrase not found in phrase index”

## Use N=0 to find citations with terms directly next to each other (continued-4)

PubMed Advanced Search Builder



User Guide

Add terms to the query box

All Fields  Enter a search term

AND 

Show Index

Query box

"cognitive impairment"[title/abstract] AND "multiple sclerosis patients"[title/abstract] 

Search 

# “Quoted phrase not found in phrase index”

## Use N=0 to find citations with terms directly next to each other (continued-5)

PubMed®

"cognitive impairment"[title/abstract] AND "multiple sclerosis patients"[title/abstract] X Search

Advanced Create alert Create RSS User Guide

Save Email Send to Sorted by: Most recent ↓ Display options ⚙

MY NCBI FILTERS

181 results Page 1 of 19

RESULTS BY YEAR

1991 2023

TEXT AVAILABILITY

Abstract

Free full text

Patient-reported outcome measurements in a selective cohort of relapsing-remitting **multiple sclerosis patients**: relationships with physical disability, **cognitive impairment**, and MRI-derived metrics.

1

Cite

Share

London F, El Sankari S, De Haan A, Benyahia Z, Landenne G, Duprez T, van Pesch V.  
Acta Neurol Belg. 2023 Mar 6. doi: 10.1007/s13760-023-02225-x. Online ahead of print.  
PMID: 36877357

BACKGROUND: The added value of patient-reported outcome measures (PROMs) in addition to standard clinical outcome tools in the assessment of relapsing-remitting **multiple sclerosis** (RRMS) **patients'** status is increasingly recognized. ...A cross-sectional logist ...

Early Predictors of Disability and Cognition in **Multiple Sclerosis Patients**: A Long-Term Retrospective Analysis.

2

# Getting Help with Proximity Searching



- **PubMed User Guide:**  
<https://pubmed.gov/help/#proximity-searching>
- **Proximity Searching Tutorial:**  
<https://www.nlm.nih.gov/oet/ed/pubmed/quicktours/proximity/index.html>
- **Proximity Searching Technical Bulletin:**  
[https://www.nlm.nih.gov/pubs/techbull/nd22/nd22/pubmed\\_proximity\\_search\\_available.html](https://www.nlm.nih.gov/pubs/techbull/nd22/nd22/pubmed_proximity_search_available.html)

# Write to the Help Desk



**Reach out to the NLM Help Desk with questions, feedback, and suggestions for the PubMed Team.**

**<https://support.nlm.nih.gov/>**

# Questions?

