

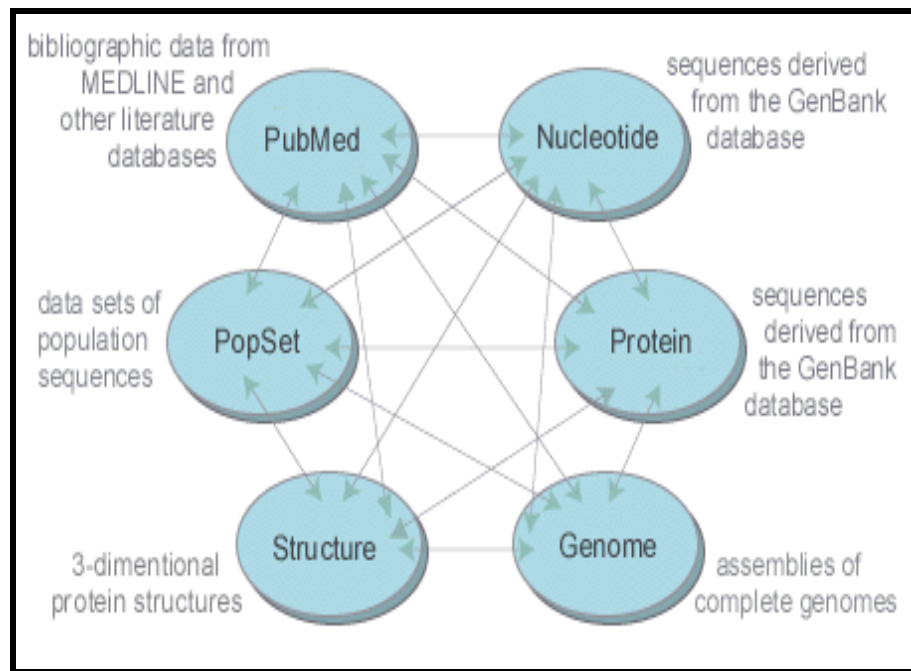


(<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>)

- PubMed is a World Wide Web (WWW) retrieval service developed by the National Center for Biotechnology Information (NCBI) at the National Library of Medicine (NLM).
- PubMed is one of several databases under NCBI's Entrez retrieval system.
- PubMed provides access, free of charge, to MEDLINE, a database of over 10 million bibliographic citations, PREMEDLINE™, and other related databases.
- PubMed also contains links to the full-text versions of articles at participating publishers' Web sites, biological data, sequence centers, etc. from third parties
- PubMed provides access and links to the integrated molecular biology databases maintained by NCBI. These databases contain: DNA and protein sequences, genome mapping data, and 3-D protein structures, aligned sequences from populations, and the Online Mendelian Inheritance in Man (OMIM).

Interrelationships between Entrez Databases

- Links between MEDLINE records and sequence records make it easy to look up MEDLINE abstracts associated with sequence records and vice versa.
- The following diagram illustrates the relationships between the information resources in Entrez:



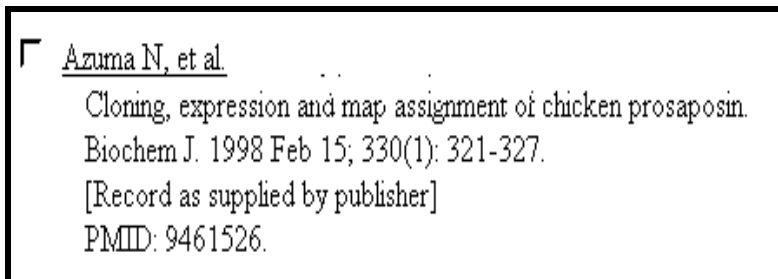
Publisher Supplied Citations

- For a short period of time, some citations may appear in PubMed without the MEDLINE Unique Identifier. This happens when the citations are electronically supplied by the publisher and sent directly to PubMed. These citations are then forwarded to NLM's Indexing Section to be added to PREMEDLINE.
- Citations received electronically have the tag: **[Record as supplied by publisher]**
- Once the citation is added to PREMEDLINE, it receives a UI and [MEDLINE record in process] replaces [Record as supplied by publisher]. Once the MEDLINE record is finished, the [MEDLINE record in process] is removed.

Sample PubMed citation that has been electronically submitted but is not yet in PREMEDLINE:

*Notice the
[Record as supplied
by publisher] tag.*

*Notice the citation
only has a PubMed
Unique Identifier (PMID).*

A rectangular box with a black border containing a PubMed citation. The citation text is as follows:
┐ Azuma N, et al . . .
Cloning, expression and map assignment of chicken prosaposin.
Biochem J. 1998 Feb 15; 330(1): 321-327.
[Record as supplied by publisher]
PMID: 9461526.

PREMEDLINE

- NLM's in-process database for MEDLINE provides basic citation information and abstracts **before** the citation is indexed with NLM's MeSH headings and NLM's quality assurance staff have checked it for errors.
- In addition to an assigned MEDLINE UI, a PubMed unique identifier (PMID) is assigned. PREMEDLINE records also carry the notation, [**MEDLINE record in process**].
- New records are added to PREMEDLINE Tuesday-Saturday, and each record receives a UI in PubMed.
- Each week citations from PREMEDLINE are moved to MEDLINE where they appear with the appropriate MeSH terms, Publication Types, and other indexing data. These "completed" records are also checked for accuracy.
- As soon as the citations are moved to MEDLINE, they are deleted from the interim PREMEDLINE database. The PREMEDLINE record in PubMed is removed and replaced by the fully indexed MEDLINE record.

Sample of a PREMEDLINE citation in PubMed:

*Notice the [MEDLINE
record in process] tag.*

Notice both PMID and UI.

Azuma N, et al.

Cloning, expression and map assignment of chicken prosaposin.
Biochem J. 1998 Feb 15; 330(Pt 1): 321-327.
[MEDLINE record in process]
PMID: 9461526; UI: 98129745.

MEDLINE

- NLM's premier bibliographic database covering the fields of medicine, nursing, dentistry, veterinary medicine, the health care system, and the preclinical sciences.
- Contains bibliographic citations and author abstracts from more than 4,000 current biomedical journals published in the United States and 70 other countries. Coverage is worldwide, but most records are from English-language sources or have English abstracts.
- Approximately 76% of MEDLINE records include abstracts as they appear in the journal.
- There are currently 11 million records dating from 1966 to present. MEDLINE is updated weekly and records are incorporated into PubMed weekly.
- Each MEDLINE record is assigned a PubMed unique identifier (PMID) in addition to the MEDLINE Unique Identifier (UI) in PubMed.

Sample MEDLINE citation in PubMed:

1 : *Biochem J* 1998 Feb 15;330 (Pt 1):321-7
Related Articles, Reviews, References

Cloning, expression and map assignment of chicken prosaposin.

Amme R, Seo HC, Lie O, Fu Q, Gould RM, Hiraiwa M, Burt DW, Paton IR, Morris DR, O'Brien JS, Kishimoto Y

University of California, San Diego, Department of Neuroscience, Center for Molecular Genetics, 0634J, La Jolla, CA 92093, USA.

Prosaposin is the precursor of four small glycoproteins, saposins A-D, that activate lysosomal phospholipid hydrolysis. A full-length cDNA encoding prosaposin from chicken brain was isolated by PCR. The deduced amino acid sequence predicted that, similarly to human and other mammalian species studied, chicken prosaposin contains 318 residues, including four domains that correspond to saposins A-D. There was 59% identity and 74% similarity of human and chicken prosaposin amino acid sequences. The basic three-dimensional structure of these saposins is predicted to be similar on the basis of the conservation of six cysteine residues and an N-glycosylation site. Identity of amino acid sequences was higher among saposins A, B and D than in saposin C. The predicted amino acid sequence of saposin B matched exactly that of purified chicken saposin B protein. The chicken prosaposin gene was mapped to a single locus, PSAF, on chicken linkage group H11C10 and is closely linked to the AC1A2 locus. This confirms the homology between chicken and human prosaposins and defines a new conserved segment with human chromosome 10q21-q24.

MeSH Terms:

- ◊ Actins/genetics
- ◊ Amino Acid Sequence
- ◊ Animal
- ◊ Base Sequence
- ◊ Chickens/genetics*
- ◊ Chromosome Mapping
- ◊ Cloning Molecular
- ◊ Comparative Study
- ◊ Glycoproteins/genetics*
- ◊ Human
- ◊ Linkage (Genetics)
- ◊ Literature as Topic
- ◊ Mice
- ◊ Molecular Sequence Data
- ◊ Polymorphism (Genetics)
- ◊ Rat
- ◊ Sequence Alignment
- ◊ Sequence Homology, Amino Acid
- ◊ Support Non-U.S. Gov't
- ◊ Support U.S. Gov't P.H.S.

Substances:

- ◊ Glycoproteins
- ◊ Actins
- ◊ Insulin

Secondary source id:

- ◊ GENBANK/AF003471

Grant support:

- ◊ N808482/NS000000
- ◊ N813359/NS000000

PMID: 94 61324, UI: 98129745

Other Publisher Supplied Citations

- Some of the citations received electronically from publishers may never become MEDLINE citations.
- These records are assigned Unique Identifiers but are never assigned MeSH terms because they never go through the indexing process.
- These records will carry the notation **[Record as supplied by publisher]**.
- These records remain forever in PubMed even though they are not technically MEDLINE citations.
- There are three sources of these types of records:

1. Out-of-scope articles from a selectively indexed MEDLINE journal

- This may occur when a particular article in a selectively indexed journal is out-of-scope for MEDLINE (such as a geology article in a general scientific journal like *Science* or *Nature*), **and** the publisher provides PubMed with electronic information for the entire journal.

Sample of an out-of-scope article from a selectively indexed electronically submitted MEDLINE journal that remains in PubMed:

Notice the publisher-supplied tag.
PubMed UI tag.

❑ 1 : [Arrigo KR, et al](#)
[Primary Production in Antarctic Sea Ice].
Science. 1997 Apr 18;276(5311):394-7.
[Record as supplied by publisher]
PMID: 9103193

Sample citation from the same selectively indexed electronically submitted journal that is indexed for MEDLINE:

Both Unique
Identifier Tags.

┌ [Chandrasekharappa SC, et al](#) [See Related Articles]
Positional cloning of the gene for multiple endocrine neoplasia-type 1.
Science. 1997 Apr 18; 276(5311): 404-407.
PMID: 9103196; UI: 97258940.

2. PubRef

- PubRef is a service designed to expand the bibliographic linking feature in PubMed.
- PubRef facilitates linking to a broader set of scientific journals (physics, astronomy, etc.) and full-text of these articles at publishers' Web sites.
- PubMed is a subset of PubRef.

Sample PubRef citation:

☐ 1 : [Keiner V.](#)
Covariant diquark-quark model of the nucleon in the Salpeter approach.
Phys. Rev., C Nucl. Phys.. 1996 Dec;54(6):3232-3239. No abstract available.
[Record as supplied by publisher]
PMID: 9971698

3. Citations from back issues of newly-indexed MEDLINE journals

- If publishers choose to supply NLM with electronic data from back issues of newly-indexed MEDLINE journals, those citations will be entered into PubMed.
- These earlier citations will have no MeSH headings.

Example: NLM began indexing the journal, *Molecular Diagnosis* with v. 4, no. 1, 1999. However, the publisher has supplied us with citations from earlier issues. These earlier citations from back issues have been entered into PubMed but will never be indexed with MeSH headings.

Notice that
this citation
is from
volume 2, 1997.

☐ 23 : [Dhir R. et al.](#)
CD44 Expression in Benign and Neoplastic Human Prostates.
Mol Diagn. 1997 Sep;2(3):197-204.
[Record as supplied by publisher]
PMID: 10462610

Future Database Additions

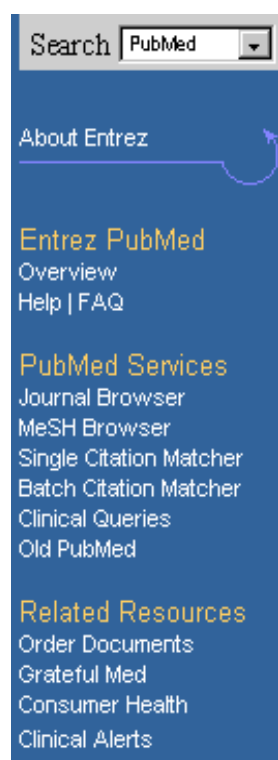
- It is NLM's intent to have all of its databases accessible via the Web.
- Journal and journal-like citations from HealthSTAR moved into PubMed in June 1999. The unique journal and journal-like citations from AIDSLINE will be moved into PubMed next.
- Monographic and audiovisual citations and serial records are now available via NLM's Web-based Online Public Access Catalog (OPAC), called *LOCATORplus* (<http://www.nlm.nih.gov/locatorplus>)

Next Generation Gateway

- A new intelligent gateway system, now under development, will allow NLM's users to initiate searches in NLM's multiple retrieval systems from one interface at one address in cyberspace.
- As a working name, NLM is calling the new search system the Next Generation Gateway. The name is subject to change.
- The target audience for the new search system is the Internet user who comes to NLM not knowing exactly what NLM resources are available or how best to search for information.
- The new gateway will initially be brought up in parallel with Internet Grateful Med. In the first implementation phase, the gateway will search PubMed, *LOCATORplus*, a new full text retrieval system that will include information such as conference abstracts, and *MEDLINEplus*. Access to other systems including TOXNET on the Web, and the forthcoming NIH clinical trials database will follow.

PubMed's Home Page

The Sidebar



Entrez PubMed

- The **Overview** provides a detailed description of the PubMed database including database coverage and PubMed journal information.
- Click on **Help** to get detailed descriptions of all the features and search and retrieval options within PubMed. **FAQs** are frequently asked questions about PubMed.

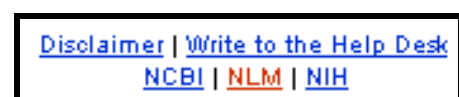
PubMed Services

- Use the **Journal Browser** to search for journals by journal title, title abbreviation, or the International Standard Serial Number (ISSN). The list of journals with links to full-text is also included in the browser.
- The **MeSH Browser** allows you to browse the MeSH Vocabulary in a hierarchical structure.
- The **Single Citation Matcher** is a fill-in-the-blank form that allows users to enter journal citation information to locate a specific single article, issue's content, or entire journal's content.
- The **Batch Citation Matcher** allows you to retrieve the PubMed IDs for many articles all at once. This feature requires that you enter the bibliographic information journal, volume, page, etc.) in a specific format.
- The **Clinical Queries** page was designed for clinicians and has built-in search “filters” that focus retrieval in four study categories: therapy, diagnosis, etiology, and prognosis.

Related Resources

- **Order Documents** is a link to the Loansome Doc feature that allows users to order full-text copies of articles from a local medical library (local fees and delivery methods may vary).
- Click on the **Grateful Med** link to access NLM's other Web-based service which also provides access to MEDLINE and additional NLM databases (e.g., AIDSLINE, HISTLINE, etc.).
- **Consumer Health** is a link to MEDLINEplus, the National Library of Medicine's Web site for consumer health information.
- **Clinical Alerts** expedite the release of findings from the NIH-funded clinical trials where such release could significantly affect morbidity and mortality.

The Footnote



- Click on **Disclaimer** to obtain information on copyright status, disclaimer of liability and endorsement, and NLM downloading policy.
- Click on **Write to the Help Desk** to send an e-mail message to NLM Customer Service.
- Click on **NCBI**, **NLM**, **NIH** to access the Web pages of the agencies responsible for the creation and maintenance of PubMed.

Searching With PubMed

PubMed provides a variety of search modes to meet users' individual needs. You can run a simple search by entering a few search terms in the query box or construct complex search strategies using Boolean commands and using the various functions provided by the Features bar.

PubMed's Features bar provides additional search options:

- **Limits**
- **Preview/Index**
- **History**
- **Clipboard**

In addition, these search features are also available:

- **The MeSH Browser**
- **Clinical Queries**
- **The Journal Browser**
- **The Citation Matchers**



Take Note:

PubMed makes use of **cookies** from your Web browser for several functions. Please enable cookies from your Web browser. This selection may be found under the Edit menu, and then under Preferences (Netscape), or the Tools menu under Internet Options (Internet Explorer). For more information about cookies, see PubMed's FAQs.

N O T E S

How it Works

Subject Searching

Search Request: *Find citations to articles about gallstones and pain.*



The image shows a screenshot of the PubMed search interface. It features a search box with the text "gallstones pain" entered. To the left of the search box is a dropdown menu currently set to "PubMed". To the right of the search box are two buttons: "Go" and "Clear". Below the search box is a blue bar containing several links: "Limits", "Preview/Index", "History", and "Clipboard".

Entering Search Terms

- Enter significant terms in the query box (e.g., *gallstones pain*).
- Click on the **Go** button.
- Use the **Clear** button to erase the contents of the query box.

What is searched?

- PubMed uses **Automatic Term Mapping**

Unqualified terms that are entered in the query box are matched against (in this order):

- MeSH (Medical Subject Headings) Translation Table
- Journals Translation Table
- Phrase List
- Author Index

1. MeSH Translation Table contains:

- MeSH Terms
 - Subheadings
 - See-Reference mappings (also known as entry terms) for MeSH Heading terms
 - Mappings derived from the Unified Medical Language System (UMLS) that have equivalent synonyms or lexical variants in English
 - Names of Substances and synonyms to the Names of Substances
- If a match is found in this translation table, the term will be mapped to the appropriate MeSH term and searched as MeSH **and** as a Text Word.

Example:

gallstones	
------------	--

PubMed Translation: ("cholelithiasis"[MeSH Terms] OR gallstones[Text Word])

- Gallstones is an entry term for the MeSH term Cholelithiasis.

2. Journals Translation Table contains:

- Full journal title
- MEDLINE abbreviation
- International Standard Serial Number (ISSN)

Example:

new england journal of medicine

PubMed Translation: "N Engl J Med"[Journal Name]

**Search Tip:**

If a journal name is also a MeSH heading, PubMed will search the unqualified term both as a MeSH heading and as a Text Word. However, the search will **not** include the term as a journal name. For example, the search for Science unqualified will not search for citations from the journal, *Science*.

3. Phrase List

If no match is found in the MeSH or Journals Translation Tables, PubMed consults a phrase list containing several hundred thousand phrases generated from:

- MeSH
- Unified Medical Language System (UMLS)
- Names of Substances

Example:

cold compresses

PubMed Translation: cold compresses [All Fields]

- PubMed does not find this phrase in the MeSH Translation Table or the Journal Translation Table, but does find it in the Phrase List.

4. Author Index

- If the phrase is not found in the MeSH or Journal Translation Tables or the Phrase List **and** is a word with one or two letters after it, PubMed then checks the Author Index.
- Enter the author's name in the form of Last Name (space) Initials:

o'brien jm
adams sh
pogonka t

- PubMed automatically truncates the author's name to account for varying initials.

Query Box:

- If only an author's last name is entered, PubMed will search that name in All Fields (Author field plus all other searchable fields). It will not default to the Author Index because the last name is not followed by initial(s).

If no match is found?

- PubMed breaks apart the phrase and repeats the above process until a match is found.
- If there is no match, the individual terms will be combined (ANDed) together and searched in All Fields.

Example:**PubMed Translation:**

(pressure [MeSH Terms] OR pressure [Text Word]) AND point [All Fields])

PubMed breaks apart a long phrase from right to left:

Example:

drug therapy asthma children

Searches for:

Results:

Action:

drug therapy asthma children	No match found	Removes term on right to re-run Automatic Term Mapping process.
drug therapy asthma	No match found	Removes term on right to re-run Automatic Term Mapping process.
drug therapy	Match found in MeSH Translation Table	<i>drug therapy</i> will be searched as <i>drug therapy [Subheading] OR drug therapy [MeSH Terms] OR drug therapy [Text Word]</i> .
asthma children	No match found	Removes term on right to re-run Automatic Term Mapping process.
asthma	Match found in MeSH Translation Table	<i>asthma</i> will be searched as <i>Asthma [MeSH Terms] OR asthma [Text Word]</i> .
children	Match found in MeSH Translation Table	<i>children</i> will be searched as <i>Child [MeSH Terms] OR children [Text Word]</i> .

PubMed then combines (ANDs) the found matches to produce a single search strategy:

(drug therapy [Subheading] OR drug therapy [MeSH Terms] OR drug therapy [Text Word])
AND
(asthma [MeSH Terms] OR asthma [Text Word])
AND
(Child [MeSH Terms] OR children [Text Word])



Take Note:

If there is no match, PubMed will then start the Automatic Term Mapping process from left to right. The individual terms with no match will be combined (ANDed) together and processed through the Automatic Term Mapping as single terms.

Phrase Searching (forcing PubMed to search for a phrase)

- PubMed does not actually perform adjacency searching but uses a list of recognized phrases, the Phrase List, against which search terms are matched. PubMed may fail to find a phrase because it is not in the Phrase List.
- The use of quotes around a phrase forces PubMed to check PubMed's Index to attempt to find the phrase. The Index contains several million phrases generated from:
 - citation titles & abstracts
 - UMLS
 - MeSH vocabulary

Example:



PubMed

("pressure"[MeSH Terms] OR pressure[Text Word]) AND point[All Fields]

Translation:

- PubMed does not recognize this as a phrase. PubMed searches for “pressure” and “point” separately.



To force PubMed to search for a specific phrase enter double quotes (" ") around the phrase.

Search Tip:



- Your phrase may actually appear in the citation and abstract data, but may **not** appear in **either** the Phrase List or the Index. If this is the case, then the individual terms are combined (ANDed) together and searched in All Fields.



Take Note:

When you enclose a phrase in double quotes, PubMed will **not** perform automatic term mapping. For example, "health planning" **will** include citations that are indexed to the MeSH heading, Health Planning, but **will not** include the more specific indentations, e.g., Health Care Rationing, Health Care Reform, etc, that are included with automatic MeSH mapping and explosion.

Truncation (finding all terms that begin with a given text string):

- Place an asterisk (*) at the end of a term to search for all terms that begin with that word. The asterisk may only be used at the **end** of a string of characters.

Example: implant* will find all terms that begin with the letters implant; e.g., implant, implants, implantation, implantable, etc.

- PubMed uses the first 150 variations of a truncated term. If a truncated term, e.g., staph*, produces more than 150 variations, PubMed displays the following warning message on the Results screen in a pink area near the top of the screen:

Warnings: Wildcard search for 'term*' used only the first 150 variations. Lengthen the root word to search for all endings.

1. PubMed has no single character truncation.
2. PubMed processes up to 150 variations of a truncated term.
3. PubMed **does not** cross a space boundary. Phrases that include a space in a word after the asterisk will **not** be included; for example, "infection*" includes "infections," but not "infection control."
4. PubMed turns off automatic term mapping. For example, heart attack* will not map to the MeSH term, Myocardial Infarction or include any of its more specific indentions. Native American* will not map to Indians, North American even though Native American and Native Americans are cross references to Indians, North American.



Take Note:

PubMed Stopword List

PubMed also refers to a list of commonly found terms that are referred to as “stopwords.” Stopwords will not be included in your search.

a	cc	hers	my	refs	they	without
about	cm	herself	myself	regarding	this	wk
above	come	him	namely	relate	thorough	would
abs	compare	himself	nearly	said	those	wt
accordingly	could	his	necessarily	same	though	yet
across	de	how	neither	seem	through	you
after	dealing	however	never	seemed	throughout	your
afterwards	department	hr	nevertheless	seeming	thru	yours
again	depend	i	next	seems	thus	yourself
against	did	ie	no	seen	to	yourselves
all	discover	if	nobody	seriously	together	yr
almost	dl	ii	noone	several	too	
alone	do	iii	nor	shall	toward	
along	does	immediately	normally	she	towards	
already	done	importance	nos	should	try	
also	due	important	not	show	type	
although	during	in	noted	showed	ug	
always	each	inc	nothing	shown	under	
am	ec	incl	now	shows	unless	
among	ed	indeed	nowhere	significantly	until	
amongst	effected	into	obtained	since	up	
an	eg	investigate	of	slightly	upon	
analyze	either	is	off	so	us	
and	else	it	often	some	use	
another	elsewhere	its	on	somehow	used	
any	enough	itself	only	someone	usefully	
anyhow	especially	just	onto	something	usefulness	
anyone	et	keep	or	sometime	using	
anything	etc	kept	other	sometimes	usually	
anywhere	ever	kg	others	somewhat	various	
applicable	every	km	otherwise	somewhere	very	
apply	everyone	last	ought	soon	via	
are	everything	latter	our	specifically	was	
arise	everywhere	latterly	ours	still	we	
around	except	lb	ourselves	strongly	were	
as	find	ld	out	studied	what	
assume	for	letter	over	sub	whatever	
at	found	like	overall	substantially	when	
be	from	ltd	owing	such	whence	
became	further	made	own	sufficiently	whenever	
because	gave	mainly	oz	take	where	
become	get	make	particularly	tell	whereafter	
becomes	give	many	per	th	whereas	
becoming	go	may	perhaps	than	whereby	
been	gone	me	pm	that	wherein	
before	got	meanwhile	precede	the	whereupon	
beforehand	gov	mg	predominantly	their	wherever	
being	had	might	present	theirs	whether	
below	has	ml	presently	them	which	
beside	have	mm	previously	themselves	while	
besides	having	mo	primarily	then	whither	
between	he	more	promptly	thence	who	
beyond	hence	moreover	pt	there	whoever	
both	her	most	quickly	thereafter	whom	
but	here	mostly	quite	thereby	whose	
by	hereafter	mr	rather	therefore	why	
came	hereby	much	readily	therein	will	
can	herein	mug	really	thereupon	with	
cannot	hereupon	must	recently	these	within	

Search Results Screen

Once you click on **Go** or press the Enter key, PubMed will automatically:

- Run the search
- Retrieve and display citations

The following is the Results screen returned by PubMed for the search example of :

Citations to articles about experiencing pain due to gallstones.

*Live query box
displaying
current search.*

*Display options
Show pull-down
Save button
Text button
Order button
Details button
Add to Clipboard
button*

*Citations are
displayed in the
Summary format.*

The screenshot shows the PubMed search results interface. At the top, the search query 'gallstones pain' is entered in the search box, with 'Go' and 'Clear' buttons. Below the search box are tabs for 'Limits', 'Preview/Index', 'History', and 'Clipboard'. A row of buttons includes 'Display', 'Summary' (selected), 'Save', 'Text', 'Order', 'Details', and 'Add to Clipboard'. The results are displayed in a list format, showing 'Show: 20' items, 'Items 1-20 of 1295', 'Page 1 of 65', and a 'Select page' dropdown with options 1 through 10 and '>>'. Three results are visible, each with a checkbox, a numbered list item, the authors' names (linked), the article title, the journal name, year, volume, issue, and page numbers, and the PMID and UI numbers. Each result also has a 'Related Articles' link.

gallstones pain Go Clear

☐ Limits Preview/Index History Clipboard

Display Summary Save Text Order Details Add to Clipboard

Show: 20 Items 1-20 of 1295 Page 1 of 65 Select page: 1 2 3 4 5 6 7 8 9 10 >>

☐ 1 : [Kuhn JM, Arlot S, Lefebvre H, Caron P, Cortet-Rudelli C, Archambaud F, Chanson P, Tabarin A, Goth MI, Blumberg J, Catus F, Ispas S, Beck-Peccoz P.](#) Related Articles
Evaluation of the treatment of thyrotropin-secreting pituitary adenomas with a slow release formulation of the somatostatin analog lanreotide.
J Clin Endocrinol Metab. 2000 Apr;85(4):1487-91.
[MEDLINE record in process]
PMID: 10770186; UI: 20230955

☐ 2 : [Kumar R, Nguyen K, Shun A.](#) Related Articles
Gallstones and common bile duct calculi in infancy and childhood.
Aust N Z J Surg. 2000 Mar;70(3):188-91.
[MEDLINE record in process]
PMID: 10765901; UI: 20226968

☐ 3 : [Simon JA, Hudes ES.](#) Related Articles
Serum ascorbic acid and gallbladder disease prevalence among US adults: the Third National Health and Nutrition Examination Survey.
Arch Intern Med. 2000 Apr 10;160(7):931-6.
[MEDLINE record in process]
PMID: 10761957; UI: 20222594

See next page for further explanation.

Results Screen

Query Box containing Current Search

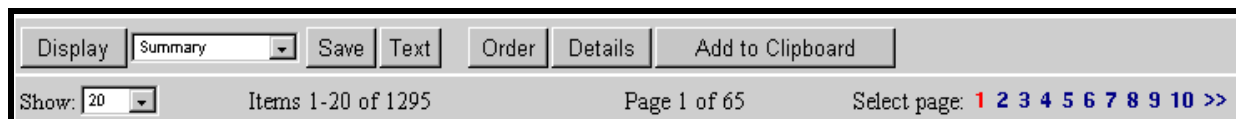


A screenshot of a search query box. The text 'gallstones pain' is entered into the input field. To the right of the input field are two buttons: 'Go' and 'Clear'.

- The query box displays **your** search.
- This box is active; you can modify the current search by adding or eliminating terms and clicking on the **Go** button.
- Click on the **Clear** button to clear out the search in the query box and start a new search.

Action Bar Selections

- These options are available both at the top and the bottom of the Results screens.
- The following workbook pages will explain each function.

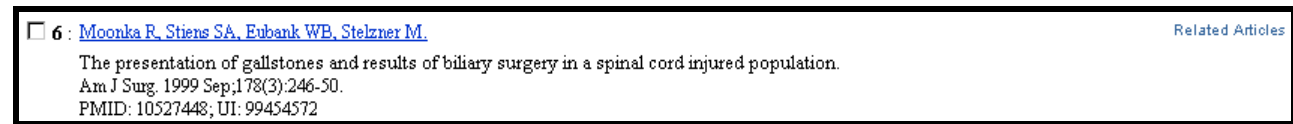


A screenshot of the action bar at the bottom of the results screen. It contains several buttons: 'Display', 'Summary' (with a dropdown arrow), 'Save', 'Text', 'Order', 'Details', and 'Add to Clipboard'. Below these buttons is a row of controls: 'Show: 20' (with a dropdown arrow), 'Items 1-20 of 1295', 'Page 1 of 65', and 'Select page: 1 2 3 4 5 6 7 8 9 10 >>'.

Display Options

Summary Format

PubMed citations are initially displayed in the **Summary** format.



A summary citation consists of the following:

- **Author name:** All authors from the record are displayed.
- **Links:** Available links such as Related Articles, Protein, Nucleotide, etc. (LinkOut, Books not displayed in the Summary format.)
- **Title of the article:** Foreign language titles will be translated into English and placed within brackets.
- **Source:** Provides journal title abbreviation, date of publication, volume, issue, and pagination. Will also include language (for non-English articles) and Publication Type if the article is a review or retracted publication. Articles without abstracts will display the notation: “No abstract available”.
- **[Record as supplied by publisher] or [MEDLINE record in process]** tags may appear.
- **Identification numbers.** Provides the PubMed identifier (PMID) and the MEDLINE Unique Identifier (UI).

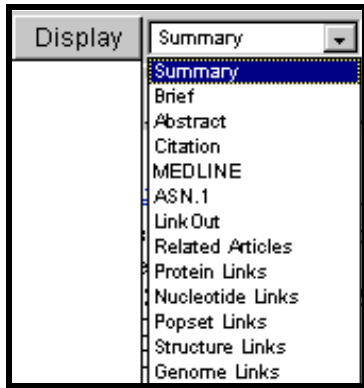
Additional Display Options

You can access other display formats from the Results screen in the following manner:

- **Individual Citations:** Clicking on the Author name hyperlink will display the citation in the default Abstract Report format.
- **All Citations:** Clicking on the **Display** button without selecting any of the citations will display all of the citations listed on the page in the selected display format. Summary is the default format.
- **Selected Citations:** Clicking on the boxes found to the left of the citation number allows you to select multiple records for retrieval. Clicking on the **Display** button will display the citations in the selected display format. Summary is the default format.

Other Display Formats

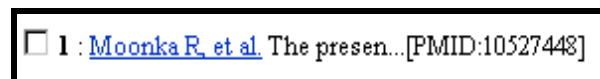
The pull-down menu next to the **Display** button allows the user to select available display formats:



Take Note:

Summary, Brief, Abstract, Citation, MEDLINE, Related Articles, and LinkOut Links are the most appropriate selections for bibliographic information.

Brief Format



A citation displayed in the brief format includes:

- Author name
- first 10 characters of the title
- PubMed Unique Identifier (PMID)

Abstract

Provides the following information:

- Journal Source (journal title abbreviation, date of publication, volume, issue and pagination)
- If necessary, [Record supplied by publisher] or [MEDLINE record in process] tags
- Title
- On non-English language articles, [Article in *language*] tag
- Authors
- Author affiliation (address) of first author at time of publication
- Abstract (if present) from published article
- Publication Types (except for Journal Article Publication Type)
- Erratum strings from Title rubrics
- Comments
- PubMed & MEDLINE Unique Identifiers

1.	<input type="checkbox"/> 1 : <i>Am J Surg</i> 1999 Sep;178(3):246-50	Related Articles, Books
2.	The presentation of gallstones and results of biliary surgery in a spinal cord injured population.	
3.	Moonka R, Stiens SA, Eubank WB, Stelzner M	
4.	Department of Surgery, Seattle Division of the Puget Sound Veterans Affairs Health Care System, University of Washington School of Medicine, USA.	
5.	BACKGROUND: Since spinal cord injured patients lack visceral sensation, their clinical manifestations of gallstones could be relatively occult. A higher proportion of these individuals may present with advanced biliary disease compared with the general population. Prophylactic cholecystectomy for asymptomatic stones may therefore be justified. METHODS: All spinal cord injured patients seen at the Seattle Veterans Hospital over a 5-year period were retrospectively surveyed to define a set of patients who had undergone a cholecystectomy. The operative indications and results were compared with those from a series of cholecystectomies in neurologically intact patients. RESULTS: The presentation of biliary disease in spinal cord injured patients was not more advanced than that of neurologically intact patients. Patients with high cord injuries presented in a similar fashion to those with low injuries. CONCLUSIONS: Since most spinal cord injured patients with biliary disease present with typical findings, prophylactic removal of gallstones in these patients is not warranted.	
6.	PMID: 10527448, UI: 99454572	

Legend:

1. Journal Source
2. Title
3. Authors
4. Author Affiliation (Address)
5. Abstract
6. PubMed and MEDLINE Unique Identifiers

Citation

Provides the following information:

- Journal Source
- If necessary, [Record supplied by publisher] or [MEDLINE record in process] tags
- Title
- On non-English language articles, [Article in *language*] tag
- Authors
- Address or affiliation of first author
- Abstract (if present)
- Publication Types (except for the Journal Article pub. type)
- Erratum strings from Title rubrics
- Comments
- MeSH Terms
- Personal Name as Subject
- Chemical substances (if present)
- Grant numbers (if present)
- PubMed and MEDLINE Unique Identifiers

1 : *Am J Surg* 1999 Sep;178(3):246-50

[Related Articles, Books](#)

The presentation of gallstones and results of biliary surgery in a spinal cord injured population.

Moonka R, Stiens SA, Eubank WB, Stelzner M

Department of Surgery, Seattle Division of the Puget Sound Veterans Affairs Health Care System, University of Washington School of Medicine, USA.

BACKGROUND: Since spinal cord injured patients lack visceral sensation, their clinical manifestations of gallstones could be relatively occult. A higher proportion of these individuals may present with advanced biliary disease compared with the general population. Prophylactic cholecystectomy for asymptomatic stones may therefore be justified. **METHODS:** All spinal cord injured patients seen at the Seattle Veterans Hospital over a 5-year period were retrospectively surveyed to define a set of patients who had undergone a cholecystectomy. The operative indications and results were compared with those from a series of cholecystectomies in neurologically intact patients. **RESULTS:** The presentation of biliary disease in spinal cord injured patients was not more advanced than that of neurologically intact patients. Patients with high cord injuries presented in a similar fashion to those with low injuries. **CONCLUSIONS:** Since most spinal cord injured patients with biliary disease present with typical findings, prophylactic removal of gallstones in these patients is not warranted.

MeSH Terms:

- Biliary Tract Diseases/epidemiology
- Biliary Tract Diseases/diagnosis
- Case-Control Studies
- Cholecystectomy*
- Cholelithiasis/surgery*
- Cholelithiasis/epidemiology
- Cholelithiasis/diagnosis
- Cholelithiasis/complications*
- Colic/epidemiology
- Colic/diagnosis
- Female
- Human
- Male
- Middle Age
- Retrospective Studies
- Spinal Cord Injuries/complications*

PMID: 10527448, UI: 99454572

MEDLINE

- Two-character tagged field format displaying all fields of the MEDLINE record.

```

1 : Moonka R, et al. The presen...[PMID:10527448]

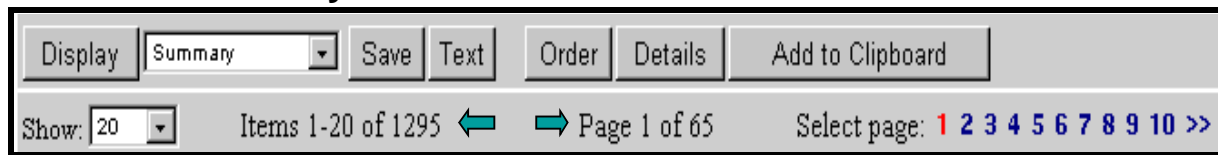
UI - 99454572
AU - Moonka R
AU - Stienka SA
AU - Eubank WB
AU - Stelzner M
TI - The presentation of gallstones and results of biliary surgery in a spinal
    cord injured population.
LA - Eng
MH - Biliary Tract Diseases/diagnosis/epidemiology
MH - Case-Control Studies
MH - *Cholecystectomy
MH - Cholelithiasis/*complications/diagnosis/epidemiology/*surgery
MH - Colic/diagnosis/epidemiology
MH - Female
MH - Human
MH - Male
MH - Middle Age
MH - Retrospective Studies
MH - Spinal Cord Injuries/*complications
PT - JOURNAL ARTICLE
DA - 19991104
DP - 1999 Sep
IS - 0002-9610
TA - Am J Surg
PG - 246-50
SE - A
SE - M
SE - N
CY - UNITED STATES
IP - 3
VI - 178
JC - 384
AA - Author
EM - 200001
AB - BACKGROUND: Since spinal cord injured patients lack visceral sensation,
    their clinical manifestations of gallstones could be relatively occult. A
    higher proportion of these individuals may present with advanced biliary
    disease compared with the general population. Prophylactic cholecystectomy
    for asymptomatic stones may therefore be justified. METHODS: All spinal
    cord injured patients seen at the Seattle Veterans Hospital over a 5-year
    period were retrospectively surveyed to define a set of patients who had
    undergone a cholecystectomy. The operative indications and results were
    compared with those from a series of cholecystectomies in neurologically
    intact patients. RESULTS: The presentation of biliary disease in spinal
    cord injured patients was not more advanced than that of neurologically
    intact patients. Patients with high cord injuries presented in a similar
    fashion to those with low injuries. CONCLUSIONS: Since most spinal cord
    injured patients with biliary disease present with typical findings,
    prophylactic removal of gallstones in these patients is not warranted.
AD - Department of Surgery, Seattle Division of the Puget Sound Veterans
    Affairs Health Care System, University of Washington School of Medicine,
    USA.
PMID- 0010527448
SO - Am J Surg 1999 Sep;178(3):246-50
  
```



Take Note:

Use this format for downloading records into bibliographic management software programs.

Retrieval Summary

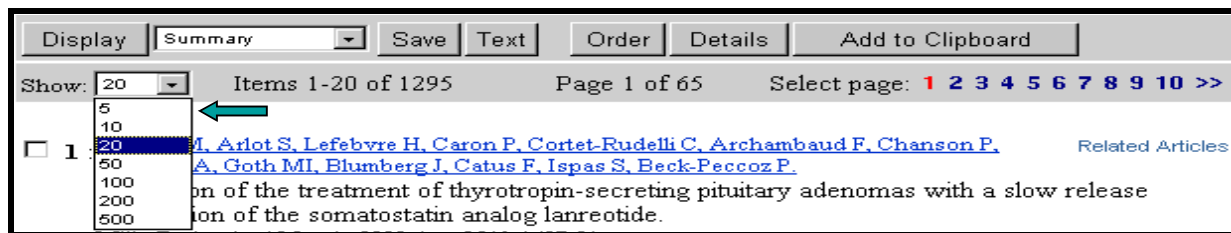


The screenshot shows the top of the PubMed search results page. It features a navigation bar with buttons for 'Display', 'Summary' (selected), 'Save', 'Text', 'Order', 'Details', and 'Add to Clipboard'. Below this, a status bar indicates 'Show: 20' (with a dropdown arrow), 'Items 1-20 of 1295' (with left and right arrows), 'Page 1 of 65', and 'Select page: 1 2 3 4 5 6 7 8 9 10 >>' (where '1' is highlighted in red).

- The retrieval summary line displays the total number of citations that have been retrieved by the current search, and how many pages of citations there are given the selected number of citations per page (default = 20 citations/page).

Show pull-down menu

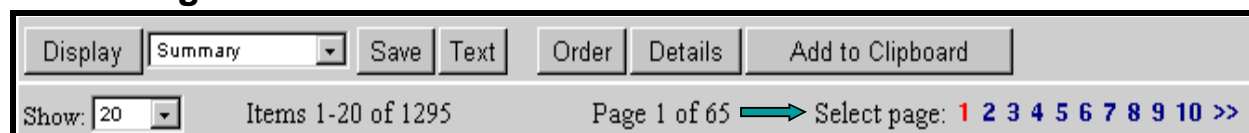
- PubMed displays search results in batches of 20 citations per page.



This screenshot shows the 'Show' pull-down menu open, displaying options: 5, 10, 20 (highlighted), 50, 100, 200, and 500. A green arrow points to the '20' option. The background shows the same navigation bar as the previous screenshot, with 'Page 1 of 65' and 'Select page: 1 2 3 4 5 6 7 8 9 10 >>' (where '1' is red). Below the menu, the first search result is visible, starting with '1. Arlot S, Lefebvre H, Caron P, Cortet-Rudelli C, Archambaud F, Chanson P...'.

- Click on the Show pull-down menu to select a high/lower number and then click Display.

Select Page



This screenshot shows the navigation bar with 'Page 1 of 65' and 'Select page: 1 2 3 4 5 6 7 8 9 10 >>' (where '1' is red). A green arrow points to the right arrow between 'Page 1 of 65' and 'Select page:'. The 'Show' pull-down menu is set to '20'.

- PubMed redispays the citations based on your selection
- The Results screen will have links to the other pages containing the rest of the search results. Click on the next page of results you wish to display.
- The page number you are currently displaying is in red.
- Click on the >> symbol to see page numbers greater than the ones displayed.
- Click on the << symbol to see page numbers less than the ones displayed.

Details

- Clicking on the Details button displays your search strategy as it was translated by PubMed including MeSH vocabulary term mappings as well as mappings from the PubMed phrase index.
- Error messages (e.g., stopwords, truncation warnings, misspellings) are also displayed.
- The PubMed Query box in Details allows you to edit a search strategy and resubmit it.
- Details also allows you to save a search strategy.

Here's a closer look at Details :

You can modify the search strategy if you wish and then click on the **Search** button.

Click on the **URL** button to create a URL that allows you to save your search strategy.

Click on the **Result** number hyperlink to return to the current search results.

PubMed's Translations

((("cholelithiasis"[MeSH Terms] OR gallstones[Text Word]) AND ("pain"[MeSH Terms] OR pain[Text Word])) AND notpubref[sb])

Search URL

Result:
1295

Translations:

gallstones[All Fields]	("cholelithiasis"[MeSH Terms] OR gallstones[Text Word])
pain[All Fields]	("pain"[MeSH Terms] OR pain[Text Word])

Database:
PubMed

User Query:
gallstones pain

**Take Note:**

PubMed is actually a subset of the larger database, PubRef. PubMed searches always exclude PubRef citations unless you delete the “AND notpubref [sb]” from the PubMed Query box and click Search.

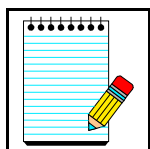
Saving a search strategy from Details:

- Click on the **URL** button. PubMed will return to the search results screen. The translated search strategy will be displayed in the query box and this search strategy will also be embedded as part of the URL.
- Next, use your Web browser’s bookmark function to save the URL as a bookmark. After saving the bookmark, you may want to use your Web browser’s edit functions to rename the bookmark.
- See Caution in PubMed-Features Bar (Section G) about the History feature and saving strategies.

Current Awareness Searching

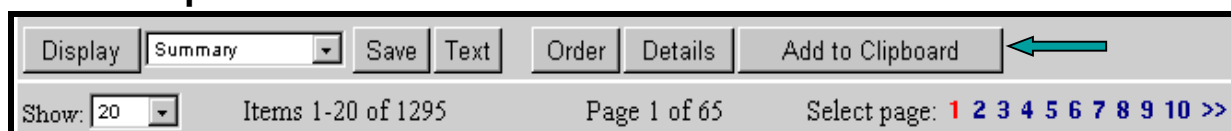
If you wish to run a search periodically to retrieve recent information since you last ran the search, you can:

- Save the strategy using the URL button in Details and then bookmark the results.
- Re-run the strategy by selecting the saved URL from your browser.
- After you run the saved strategy (bookmarked URL), consider using the Entrez date pull-down menu in Limits to restrict the retrieval to a particular Entrez date range (e.g., 30 days, 60 days, etc.).

**Take Note:**

Caution: Be aware that the Entrez Date will remain unchanged and is not updated to reflect the date a Publisher Supplied [Record as supplied by publisher] record is elevated to PREMEDLINE or when a PREMEDLINE [MEDLINE record in process] record is elevated to MEDLINE. Therefore, use caution when your strategy includes only MeSH terms because the addition of MeSH terms to a record will not change the Entrez Date [edat].

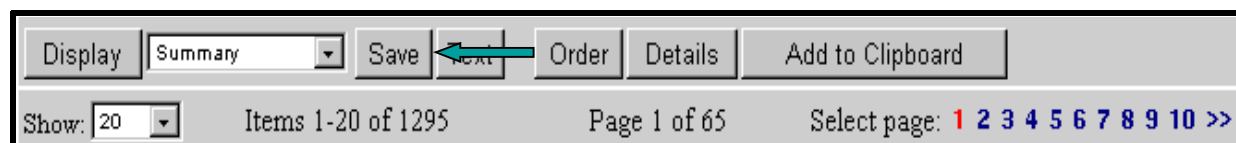
Add to Clipboard



The screenshot shows the PubMed search results interface. At the top, there is a navigation bar with buttons: Display, Summary (dropdown), Save, Text, Order, Details, and Add to Clipboard. A red arrow points to the 'Add to Clipboard' button. Below the navigation bar, there is a status bar showing: Show: 20 (dropdown), Items 1-20 of 1295, Page 1 of 65, and Select page: 1 2 3 4 5 6 7 8 9 10 >>.

- The clipboard allows you save or view selected citations from one search or several searches that you may want to print, save, or order.
- The maximum number of items that can be placed in the Clipboard is **500**.
- The Clipboard will be **lost after one hour of inactivity** on PubMed or any of the other Entrez databases.
- To place an item in the Clipboard, click on the check-box to the left of the citation and then click on the **Add to Clipboard** button.
- Once you have added a citation to the Clipboard, the record number color will change.

Save



The screenshot shows the PubMed search results interface. At the top, there is a navigation bar with buttons: Display, Summary (dropdown), Save, Text, Order, Details, and Add to Clipboard. A red arrow points to the 'Save' button. Below the navigation bar, there is a status bar showing: Show: 20 (dropdown), Items 1-20 of 1295, Page 1 of 65, and Select page: 1 2 3 4 5 6 7 8 9 10 >>.

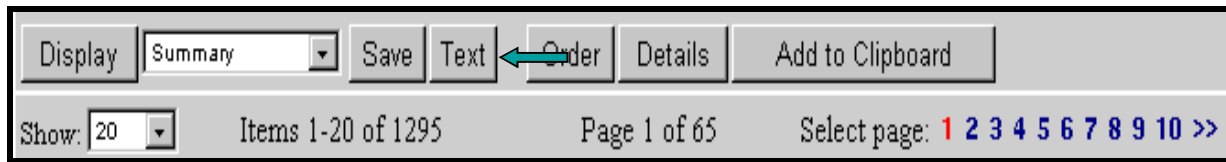
- To **save your entire set of search results**, use the Display pull-down menu to select the desired format, click **Save**. This option saves the entire set of search results in the display format selected.
- To mark **selected citations to save**, click on the check-box to the left of each citation as you go through each page of your retrieval. Once you have marked all of your selected citations and chosen a display format, click the **Save** button.



Take Note:

The maximum number of items that can be saved is **5000**. If you try to save a file with more than 5000 citations, PubMed will display an error message that instructs you to refine your search.

Text

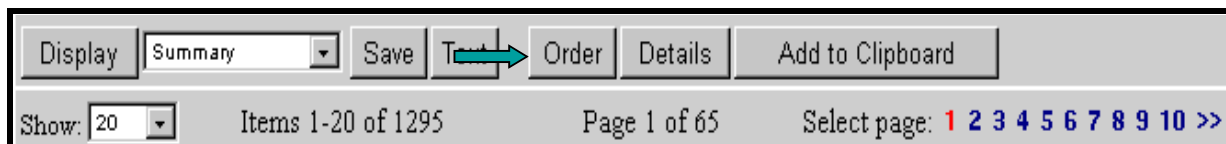


- Use Text to redisplay citations using just the text of the records and omitting the Web or HTML components. When finished with the text display, use your Web browser's Back button to return to your results in HTML.
- You may want to print via your Web browser using this feature so you do not print PubMed's sidebar and buttons unnecessarily.
- The text version will display either selected citations, or if no citations are selected, all the citations on the page.
- Before using the Text button, consider using the Show feature to increase the number of items per page.

Printing

- Use the Print function of your Web browser which will print all the information and citations displayed on your Web page.
- Consider using the Text button described above.
- Think about using the Show pull-down menu to display all of your citations on one Web page. You can only print the citations from the displayed page.

Order



- Click **Order** to use an automated document ordering program called **Loansome Doc**.
- You can also **Order** directly from the Clipboard. See the **Ordering Documents** section of this workbook, pages G-21 through G-25, for detailed information on **Loansome Doc**.

Practice Exercises

1. Find references about shingles and facial paralysis. Display the records in the format that shows the abstract and the MeSH headings. How does PubMed map the term, shingles?
2. Find references about hypertension and a nosebleed. How does PubMed map the term, nosebleed? Display all of the retrieved records on one Web page.
3. Find references about injuries from backpacks or backpacking. Save this search strategy so the search can be run again at a later date.
4. Find references about genetically modified food. Display the retrieved records in the format where you display the abstract but not the MeSH headings.

Suggested Answers:

1. Find references about shingles and facial paralysis. Display the records in the format that shows the abstract and the MeSH headings. How does PubMed map the term, shingles?

Details:

for shingles facial paralysis

☐ Limits [Preview/Index](#) [History](#) [Clipboard](#)

PubMed Query:

```
((("herpes zoster"[MeSH Terms] OR shingles[Text Word]) AND ("facial paralysis"[MeSH Terms] OR facial paralysis[Text Word])) AND notpubref[sh])
```

Result:

[282](#)

Translations:

shingles[All Fields]	("herpes zoster"[MeSH Terms] OR shingles[Text Word])
facial paralysis[All Fields]	("facial paralysis"[MeSH Terms] OR facial paralysis[Text Word])

Database:

PubMed

User Query:

shingles facial paralysis

Use the **Citation** display format to display both the abstract and MeSH headings. The term, shingles, maps to the MeSH heading of **Herpes Zoster**.

2. Find references about hypertension and a nosebleed. How does PubMed map the term, nosebleed? Display all of the retrieved records on one Web page.

Details:

hypertension nosebleed

☐ Limits Index History Clipboard

PubMed Query:

```
((("hypertension"[MeSH Terms] OR  
hypertension[Text Word]) AND ("epistaxis"[MeSH  
Terms] OR nosebleed[Text Word])) AND  
notpubref[sb])
```

Result:

[81](#)

Translations:

hypertension[All Fields]	("hypertension"[MeSH Terms] OR hypertension[Text Word])
nosebleed[All Fields]	("epistaxis"[MeSH Terms] OR nosebleed[Text Word])

Database:

PubMed

User Query:

hypertension nosebleed

The term, nosebleed, maps to the MeSH heading, **epistaxis**. From the **Show pull-down** menu, choose a number higher than your final retrieval set in order to display all the records on one Web page.

- Find references about injuries from backpacks or backpacking. Save this search strategy so the search can be run again at a later date.

Details:

If you truncate
backpack*,
you pick up:

backpack
backpacker
backpackers
backpacking
backpacks

The screenshot shows the PubMed search interface. At the top, a search bar contains the query "injuries backpack*" with "Go" and "Clear" buttons. Below the search bar are tabs for "Limits", "Index", "History", and "Clipboard". The "PubMed Query:" section displays a complex Boolean query in a scrollable box:
(((("injuries"[Subheading] OR "wounds and injuries"[MeSH Terms]) OR injuries[Text Word]) AND (((backpack[All Fields] OR backpacker[All Fields]) OR backpackers[All Fields]) OR backpacking[All Fields]) OR backpacks[All Fields])) AND notpubref[sb])
Below the query box are "Search" and "URL" buttons. The "Result:" section shows a single result link. The "Translations:" section shows a table with two columns: "injuries[All Fields]" and "((\"injuries\"[Subheading] OR \"wounds and injuries\"[MeSH Terms]) OR injuries[Text Word])". The "Database:" section shows "PubMed". The "User Query:" section shows "injuries backpack*".

Use the **URL button** from Details to have PubMed embed the search strategy into a URL. Use the Web browser's bookmark function to save this URL.

4. Find references about genetically modified food. Display the retrieved records in the format where you display the abstract but not the MeSH headings.

Details:

The screenshot shows the PubMed search interface. At the top, a search bar contains the text "genetically modified food" with "Go" and "Clear" buttons. Below the search bar are tabs for "Limits", "Index", "History", and "Clipboard". The "PubMed Query:" section displays the following query: `((genetically[All Fields] AND modified[All Fields]) AND ("food"[MeSH Terms] OR food[Text Word])) AND notpubref[sb])`. Below the query are "Search" and "URL" buttons. The "Result:" section shows a count of [106](#) results. The "Translations:" section shows the query components: `food[All Fields]` and `("food"[MeSH Terms] OR food[Text Word])`. The "Database:" section shows "PubMed". The "User Query:" section shows "genetically modified food".

Use the **Abstract** display to display the records with abstracts (if present) but not MeSH headings.

N O T E S

Features Bar

☐ Limits Preview/Index History Clipboard

The Features Bar allow you to select several additional functions.

Limits

Limits Preview/Index History Clipboard

- Use All Fields pull-down menu to specify a field
- Boolean operators AND, OR, NOT must be in upper case
- If search fields tags are used enclose in square brackets, e.g., rubella [ti]
- Search [limits](#) may exclude PreMEDLINE and publisher supplied citations

Limited to:

All Fields ☐ only items with abstracts

Publication Types Languages Subsets

Ages Human or Animal Gender

Entrez Date

Publication Date From To

Use the format YYYY/MM/DD; month and day are optional.



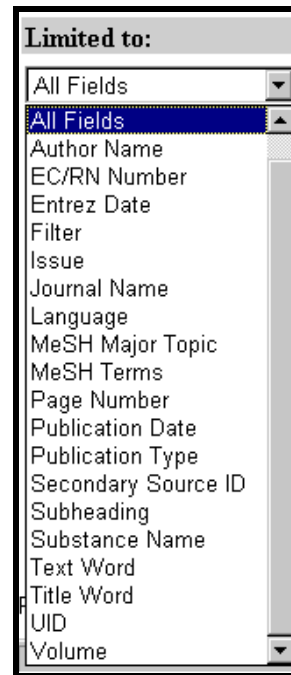
Take Note:

Click on **Limits** from the Features Bar to bring up the Limits page.

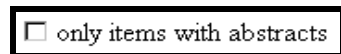
- Allows you to limit your search terms to a specific search field.
- Allows you to limit your search to a specific age group, gender, or human or animal studies.
- Also allows you to restrict your articles published in specific language and to specific types of articles such as review articles.
- You may choose to limit to only citations containing abstracts.
- You can also limit by either Entrez Date or Publication Date.
- You may limit to a specific subset of citations within PubMed, such as citations from *Abridged Index Medicus* or AIDS-related citations.

Field Selection

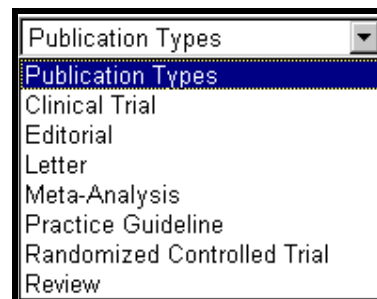
- You may limit your search terms to a specific search field.
- All Fields is the default.
- To select a specific field, click the All Fields pull-down menu and select a search field.

**Only items with abstracts**

- Click in this box to limit your retrieval to only citations having an abstract present on the record.

**Publication Types**

- You may limit your retrieval based on the type of material the article represents.
- The Publication Types pull-down menu contains a list of frequently searched publication types.

**Languages**

- Journals from approximately forty languages are indexed.
- The Languages pull-down menu contains a list of frequently searched languages.



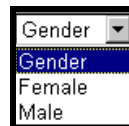
Ages

- To select a specific age group for human studies, click on the Ages pull-down menu.



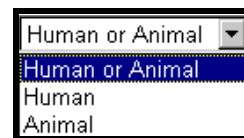
Gender

- To select a specific gender for a human study, click on the Gender pull-down menu.



Human or Animal

- To select a specific study group, click on the Human or Animal pull-down menu.

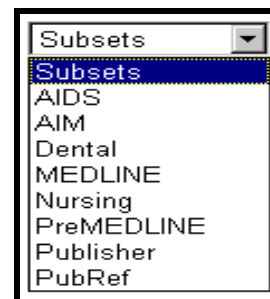


Subsets

- Allows you to limit your retrieval to one of the four types of groupings of records:

1. Level of processing:

- ▶ Publisher: [Record as supplied by publisher] citations
- ▶ PreMEDLINE: [MEDLINE record in process] citations
- ▶ MEDLINE: Fully MeSH-indexed citations



2. Subject Filter:

- ▶ AIDS: Based on a strategy developed for creating NLM's AIDSLINE database

3. Journal groupings

- ▶ AIM: *Abridged Index Medicus* journals; 120 English-language journals
- ▶ Dental: Subset of dental journals
- ▶ Nursing: Subset of nursing journals

4. PubRef: Service designed to expand the bibliographic linking feature in PubMed by facilitating linking to a broader set of scientific journals (physics, astronomy, etc.) and full-text of articles at publishers' Web sites.

If you select the PubRef subset limit, your search will not be limited to only PubMed citations.

Dates

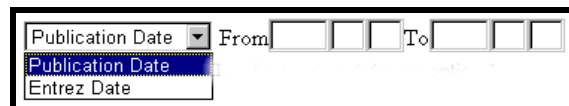
- PubMed contains citations published back to 1966.
- New citations are added Tuesday-Saturday.
- There are two date fields:
 - ▶ Entrez Date: the date the citation was initially added to PubMed
 - ▶ Publication Date: the date the article was published
- When PubMed displays your search results, the citations are displayed in Entrez Date order - last in, first out.

Limiting by Dates

- Use the Entrez Date pull-down menu to limit your search back in time from 30 days to 10 years.



- The Publication Date pull-down menu toggles between Publication Date and Entrez Date



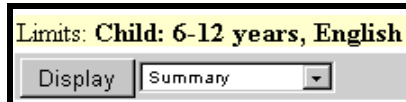
- Use the From and To boxes to specify a range of dates.
- Enter the dates in the format of YYYY/MM/DD (month and day are optional)

Examples:

A screenshot of a search interface showing a 'Publication Date' pull-down menu. The 'From' date is set to 1999/02 and the 'To' date is set to 1999/05. Below the input fields, a note reads: 'Use the format YYYY/MM/DD; month and day are optional.'A screenshot of a search interface showing an 'Entrez Date' pull-down menu. The 'From' date is set to 1999/08/01 and the 'To' date is set to 1999/08/31. Below the input fields, a note reads: 'Use the format YYYY/MM/DD; month and day are optional.'

Limits Indicator

- A check appears in the check-box next to Limits to indicate that limits have been selected.
- If you run a search, the limits in effect will appear in the yellow bar above the Display button:



To **turn off all the limits** before you run your next search, click on the check box to remove the check and turn off the limits.

Take Note:

Preview/Index

☐ Limits **Preview/Index** History Clipboard

This page is home to two functions: Preview and Index

Use Preview/Index to:

- ✓ Preview the number of search results before displaying the citations.
- ✓ Refine search strategies by adding one or more terms one at a time.
- ✓ Add terms to a strategy from specific search fields.
- ✓ View and select terms from the Index to develop search strategies.
- ✓ View your search strategy as you continue to refine your search.

Preview

Previewing the number of search results before displaying the citations

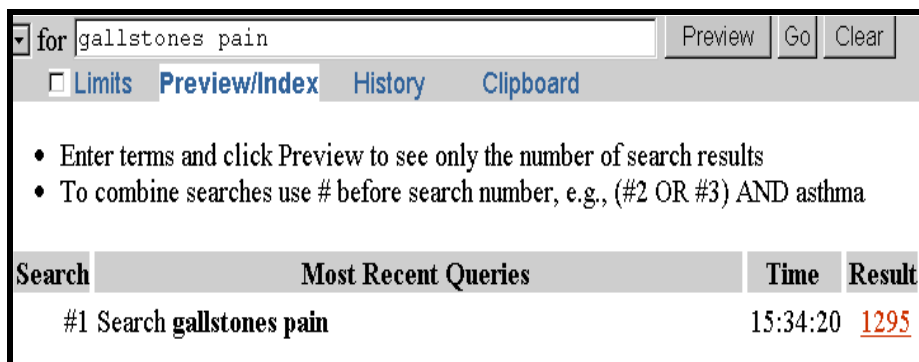
- Enter terms in the query box and click **Preview**.



Search PubMed for gallstones pain Preview ← Clear

☐ Limits **Preview/Index** History Clipboard

- PubMed returns the number of citations but not the actual results.



for gallstones pain Preview Go Clear

☐ Limits **Preview/Index** History Clipboard

- Enter terms and click Preview to see only the number of search results
- To combine searches use # before search number, e.g., (#2 OR #3) AND asthma

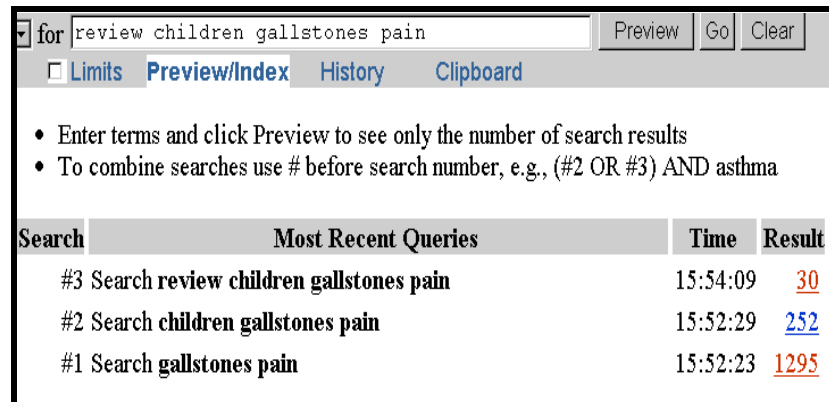
Search	Most Recent Queries	Time	Result
#1 Search	gallstones pain	15:34:20	<u>1295</u>

Result shows the number of citations.

Refining search strategies by adding one or more terms one at a time

- Add another term to the query box and click **Preview**.
- Continue adding terms and clicking **Preview** until your strategy is complete.
- View your search strategy and number of results as you continue to refine your search.

***Preview** shows search strategy and number of results as each term is added.*



for review children gallstones pain [Preview] [Go] [Clear]

☐ Limits **Preview/Index** History Clipboard

- Enter terms and click Preview to see only the number of search results
- To combine searches use # before search number, e.g., (#2 OR #3) AND asthma

Search	Most Recent Queries	Time	Result
#3	Search review children gallstones pain	15:54:09	<u>30</u>
#2	Search children gallstones pain	15:52:29	<u>252</u>
#1	Search gallstones pain	15:52:23	<u>1295</u>



Take Note:

Preview displays the last three queries from History. Use History to review up to the last 100 queries. The Clear History button in History also clears the history information in Preview/Index.

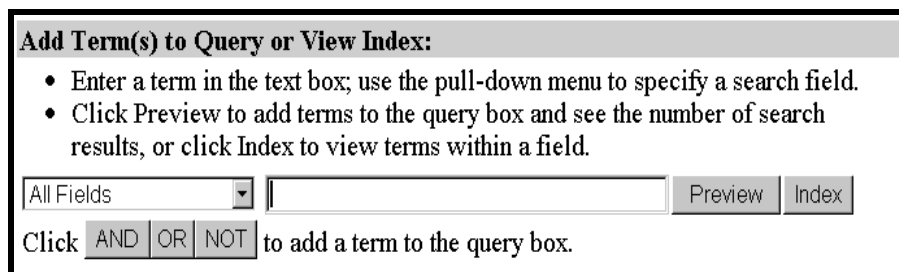


Take Note:

History will be lost after one hour of inactivity on PubMed.

Adding terms to a strategy from specific search fields

- Scroll down Preview/Index to find the “Add Term(s) to Query or View Index” section of the screen.



Add Term(s) to Query or View Index:

- Enter a term in the text box; use the pull-down menu to specify a search field.
- Click Preview to add terms to the query box and see the number of search results, or click Index to view terms within a field.

All Fields [] [Preview] [Index]

Click [AND] [OR] [NOT] to add a term to the query box.

- Use the pull-down menu to specify a search field.
- Enter a term in the text box.

Add Term(s) to Query or View Index:

- Enter a term in the text box; use the pull-down menu to specify a search field.
- Click Preview to add terms to the query box and see the number of search results, or click Index to view terms within a field.

MeSH Terms Preview Index

Click to add a term to the query box.

- Click **Preview** to add terms to the query box and see the number of search results.

Query box shows search term and field.

*Strikes is an entry term for the preferred MeSH heading of **Strikes, Employee**.*

Result shows number of citations.

strikes[MeSH Terms] Preview Go

Preview/Index History Clipboard

- Enter terms and click Preview to see only the number of search results
- To combine searches use # before search number, e.g., (#2 OR #3) AND asthma

Search	Most Recent Queries	Time	Result
#1 Search strikes[MeSH Terms]		11:24:38	740

Now, let's refine this search by adding the MeSH term, Nurses.

- Use the pull-down menu to specify a search field.
- Add another term to the text box.

Add Term(s) to Query or View Index:

- Enter a term in the text box; use the pull-down menu to specify a search field.
- Click Preview to add terms to the query box and see the number of search results, or click Index to view terms within a field.

MeSH Terms Preview Index

Click to add a term to the query box.

- Click **Preview**.
- Continue adding terms and clicking **Preview** until your strategy is complete.
- View your search strategy as you continue to refine your search.

Query box shows search terms and fields.

Search	Most Recent Queries	Time	Result
#2	Search strikes[MeSH Terms] AND nurses[MeSH Terms]	11:32:47	80
#1	Search strikes[MeSH Terms]	11:24:38	740

Results shows number of citations.



Take Note:

Preview automatically ANDs search terms together and previews the search results.

Using Boolean operator buttons

Use the **Boolean operators** to combine search terms as needed. With the Boolean operators, your search terms are added to the PubMed query box, but you must click Preview to see the number of results.

Search example:

Let's say we want to learn more about the health effects of either carbohydrates or soybeans on osteoporosis.

- Use the pull-down menu to specify a search field.
- Add a term to the text box.

Add Term(s) to Query or View Index:

- Enter a term in the text box; use the pull-down menu to specify a search field.
- Click Preview to add terms to the query box and see the number of search results, or click Index to view terms within a field.

MeSH Terms Preview Index

Click to add a term to the query box.

- Click the **AND** button.

Query box shows the search term and field.

But the search has not been previewed and the number of results are not shown.

▼ for Preview Go

☐ Limits **Preview/Index** History Clipboard

- Enter terms and click Preview to see only the number of search results
- To combine searches use # before search number, e.g., (#2 OR #3) AND asthma

Search	Most Recent Queries	Time	Result
#2	Search strikes[MeSH Terms] AND nurses[MeSH Terms]	11:32:47	80
#1	Search strikes[MeSH Terms]	11:24:38	740

We can preview this result or continue building our strategy. Since we also want to know about soybeans in addition to carbohydrates, let's continue building.

- Use the pull-down menu to specify a search field.
- Add another term to the text box.

Add Term(s) to Query or View Index:

- Enter a term in the text box; use the pull-down menu to specify a search field.
- Click Preview to add terms to the query box and see the number of search results, or click Index to view terms within a field.

MeSH Terms Preview Index

Click to add a term to the query box.

- Click the **OR** button.

Soybeans
[MeSH Terms]
is added to the
Query box with
the **OR**
operator.

But the search
has not been
previewed and
the number of
results are not
shown.

▼

for

carbohydrates[MeSH Terms] OR soybeans[MeSH Te

Preview

Go

☐ Limits

Preview/Index

History

Clipboard

- Enter terms and click Preview to see only the number of search results
- To combine searches use # before search number, e.g., (#2 OR #3) AND asthma

Search	Most Recent Queries	Time	Result
#2	Search strikes[MeSH Terms] AND nurses[MeSH Terms]	11:32:47	80
#1	Search strikes[MeSH Terms]	11:24:38	740

Let's add our last term to the strategy.

- Use the pull-down menu to specify a search field.
- Add the last term to the text box.

Add Term(s) to Query or View Index:

- Enter a term in the text box; use the pull-down menu to specify a search field.
- Click Preview to add terms to the query box and see the number of search results, or click Index to view terms within a field.

MeSH Terms ▼

osteoporosis

Preview

Index

Click

AND

OR

NOT

 to add a term to the query box.

- Click the **AND** button.

Osteoporosis
[MeSH Terms]
is added to the
Query box
with the **AND**
operator.

But the search has not been previewed and the number of results are not shown.

☐ for

☐ Limits
 ☒ **Preview/Index**
☐ History
 ☐ Clipboard

- Enter terms and click Preview to see only the number of search results
- To combine searches use # before search number, e.g., (#2 OR #3) AND asthma

Search	Most Recent Queries	Time	Result
#2 Search	strikes[MeSH Terms] AND nurses[MeSH Terms]	11:32:47	80
#1 Search	strikes[MeSH Terms]	11:24:38	740

- Click **Preview** to see the number of results for the strategy.

Query box
shows search
terms, search
fields and
Boolean
operators.

Result shows
number of
citations.

☐ for carbohydrates[MeSH Terms] OR soybeans[MeSH Terms]

☐ Limits **Preview/Index** History Clipboard

- Enter terms and click Preview to see only the number of search results
- To combine searches use # before search number, e.g., (#2 OR #3) AND asthma

Search	Most Recent Queries	Time	Result
#3	Search carbohydrates[MeSH Terms] OR soybeans[MeSH Terms] AND osteoporosis[MeSH Terms]	12:14:34	343
#2	Search strikes[MeSH Terms] AND nurses[MeSH Terms]	12:12:20	80
#1	Search strikes[MeSH Terms]	12:12:15	740

Index

Viewing and selecting terms from the Index to develop search strategies

- Use the **Index** button to view and select terms from the Index of the specific field to add them to your strategy.
- The Index allows you to view a listing of terms within a search field.
- You may also select terms to build a search strategy using Boolean operators.

Selecting a field and entering a term to look up in the Index

Let's select **MeSH Terms** from the pull-down menu, type in the term, **strikes** and click on the **Index** button.

PubMed displays a portion of the alphabetical list of available terms for the selected search field. Scroll up and down this window using the scroll bar.

The number of citations that contain the term appears in parentheses to the right of the term.

*To scroll up or down the entire Index for the field, click the **Up** or **Down** buttons.*

Click **AND** **OR** **NOT** to add terms selected from Index to the query box.

MeSH Terms	Preview	Index
strikes		
Click AND OR NOT to add terms selected from Index to the query box.		
strikes, employee(740)		Up
strikes, employee/economics(14)		
strikes, employee/history(10)		
strikes, employee/legislation and jurisprudence(54)		
strikes, employee/manpower(1)		
strikes, employee/organization and administration(88)		
strikes, employee/statistics and numerical data(10)		
strikes, employee/trends(10)		
strikes, employee/utilization(1)		
stroke volume(13873)		Down

Selecting a term from the Index

- Click on the term(s) to highlight it.

Add Term(s) to Query or View Index:

- Enter a term in the text box; use the pull-down menu to specify a search field.
- Click Preview to add terms to the query box and see the number of search results, or click Index to view terms within a field.
- Multiple terms selected from Index will be ORed; click AND to add to search.

MeSH Terms

Click to add terms selected from Index to the query box.

strikes, employee/economics(14)
 strikes, employee/history(10)
 strikes, employee/legislation and jurisprudence(54)
 strikes, employee/manpower(1)
 strikes, employee/organization and administration(88)
 strikes, employee/statistics and numerical data(10)
 strikes, employee/trends(10)
 strikes, employee/utilization(1)
 stroke volume(13891)

- Click on **Preview**.
- Continuing viewing, selecting, and previewing search terms until your strategy is complete.

Query box shows the search term and search field.

Result shows the number of citations.

for [MeSH Terms]

☐ Limits **Preview/Index** History Clipboard

- Enter terms and click Preview to see only the number of search results
- To combine searches use # before search number, e.g., (#2 OR #3) AND asthma

Search	Most Recent Queries	Time	Result
#5	Search "strikes, employee" [MeSH Terms]	12:33:58	740
#4	Search carbohydrates[MeSH Terms] OR soybeans[MeSH Terms] AND osteoporosis[MeSH Terms] AND "strikes, employee"[MeSH Terms]	12:33:42	0
#3	Search carbohydrates[MeSH Terms] OR soybeans[MeSH Terms] AND osteoporosis[MeSH Terms]	12:14:34	343



Take Note:

Preview automatically ANDs search terms together and previews the search. Use the **Boolean operators** to combine search terms as needed. If you use the Boolean operators, your search terms are added to the PubMed query box, and you must click Preview to see the number of results.

**Search Tip:**

To OR together multiple terms from an Index display and then add (or AND) them to your search, click on each term while holding down the Ctrl-key(PC) or the Command-key(Mac). When all the terms you want are highlighted, click the connector AND to add the terms (ORed together) to the query.

Search example:

- Click to highlight, **strikes, employee** used with the subheading of **legislation and jurisprudence** as well as **strikes, employee** used with the subheading **statistics and numerical data** in the display.
- Click on the **AND** button to select and add the terms to your query.
- Multiple selections are automatically ORed together.

Holding down the Ctrl or Command key; click to highlight the terms.

Click on the AND button.

Multiple selections are automatically ORed together.

MeSH Terms: strikes [Preview] [Index]

Click [AND] [OR] [NOT] to add terms selected from Index to the query box.

- strikes, employee(740)
- strikes, employee/economics(14)
- strikes, employee/history(10)
- strikes, employee/legislation and jurisprudence(54)**
- strikes, employee/manpower(1)
- strikes, employee/organization and administration(88)
- strikes, employee/statistics and numerical data(10)**
- strikes, employee/trends(10)
- strikes, employee/utilization(1)
- stroke volume(13873)

[Up] [Down]

The following search has been added to PubMed's query box:

("strikes, employee/legislation and jurisprudence"[MeSH Terms] OR "strikes, employee/statistics and numerical data"[MeSH Terms])

Let's further refine this search using the **Index**. We want to narrow the search to those citations discussing this situation and **nurses**. Enter **nurses** in the view entry box and click **Index**. Select nurses in the Index and then click on the **AND** button to add it to your query:

Once this term has been added to your search, click on the **Preview** button to get the number of results.

Query box shows search terms, search fields and Boolean operators.

Results shows number of results.

Search	Most Recent Queries	Time	Result
#1	Search ("strikes, employee/legislation and jurisprudence" [MeSH Terms] OR "strikes, employee/statistics and numerical data" [MeSH Terms]) AND "nurses" [MeSH Terms]	15:29:40	4



Take Note:

Author Field Index: PubMed automatically truncates on the author's name to account for varying initials, e.g., smith j will retrieve smith ja, smith jb, smith j jr, etc. In the Author Field Index, when an author's name is displayed with the @ symbol after the first initial, this indicates occurrences of the author name without a middle initial. Selecting smith j@ from the index will only retrieve smith j.

History

☐ Limits ☐ Preview/Index **History** ☐ Clipboard

- History holds all your search strategies and results.
- History is only available after you run your first search.
- The History screen displays:
 - your search query
 - the time of the search
 - the number of citations in your search results

☐ Limits ☐ Preview/Index **History** ☐ Clipboard

- Search History will be lost after one hour of inactivity
- To combine searches use # before search number, e.g., #2 AND #6

Search	Most Recent Queries	Time	Result
#3	Search "strikes, employee/legislation and jurisprudence"[MeSH Terms] AND "nurses"[MeSH Terms]	14:35:10	4
#2	Search gallstones pain Limits: All Child: 0-18 years, Review	14:34:10	13
#1	Search gallstones pain	14:33:48	1295

Using History

- You can use the search statement numbers shown in history in search strategies.

Example:

#1 AND laparoscopy



Search Tip:

Boolean operators must be typed in all caps as shown in the example above.

Other examples:

#8 AND #10
#7 OR #14

History Tips:

- ✓ Maximum number of queries that can be held in History is **100**.
Once the maximum number is reached, PubMed will remove the oldest search from the History to add the most current search query.
- ✓ Your search History will automatically be **lost after 1 hour of inactivity**.
- ✓ PubMed will move a search statement number to the top of the History if the new search is the same as a previous search.
- ✓ A separate Search History will be kept for each of the other Entrez databases although the search statement numbers will be assigned sequentially for all databases.
- ✓ Caution: Search statement numbers from History should ***not*** be used in a strategy that you intend to save using the URL button in Details.

Why Not? Although the strategy will be saved, your History will automatically be lost or cleared after 1 hour of inactivity. Any search statement numbers included in the saved strategy will be gone, or possibly replaced by other searches.

**Search Tip:**

Click on the **Clear History** button available at the bottom of your search History screen to remove *all* searches from the History.

Clipboard



- Clipboard allows you to save or view selected citations from one search or several searches.

Display Summary Save Text Order Details Add to Clipboard

Show: 20 Items 1-20 of 129 Page 1 of 7 Select page: 1 2 3 4 5 6 7

☐ 1 : [Reijnders K, Wagenmakers GJ, van der Drift MA, Eeftink Schattenkerk M, Eddes EH.](#) Related Articles
[Unusual form of ileus, except in elderly patients]?
 Ned Tijdschr Geneesk. 2000 Jan 15;144(3):105-8. Review. Dutch.
 PMID: 10674114; UI: 20139069

☒ 2 : [Chew SP, Sim R, Teoh TA, Low CH.](#) Related Articles
Haemorrhage into non-functioning adrenal cysts--report of two cases and review of the literature.
 Ann Acad Med Singapore. 1999 Nov;28(6):863-6. Review.
 PMID: 10672405; UI: 20136336

☒ 3 : [Kelly SB, Gauhar T, Pollard R.](#) Related Articles
Massive intraperitoneal hemorrhage from a pancreatic pseudocyst.
 Am J Gastroenterol. 1999 Dec;94(12):3638-41. Review.
 PMID: 10606335; UI: 20072351

☒ 4 : [Rissanen A, Fogelholm M.](#) Related Articles
Physical activity in the prevention and treatment of other morbid conditions and impairments associated with obesity: current evidence and research issues.
 Med Sci Sports Exerc. 1999 Nov;31(11 Suppl):S635-45. Review.
 PMID: 10593540; UI: 20059113

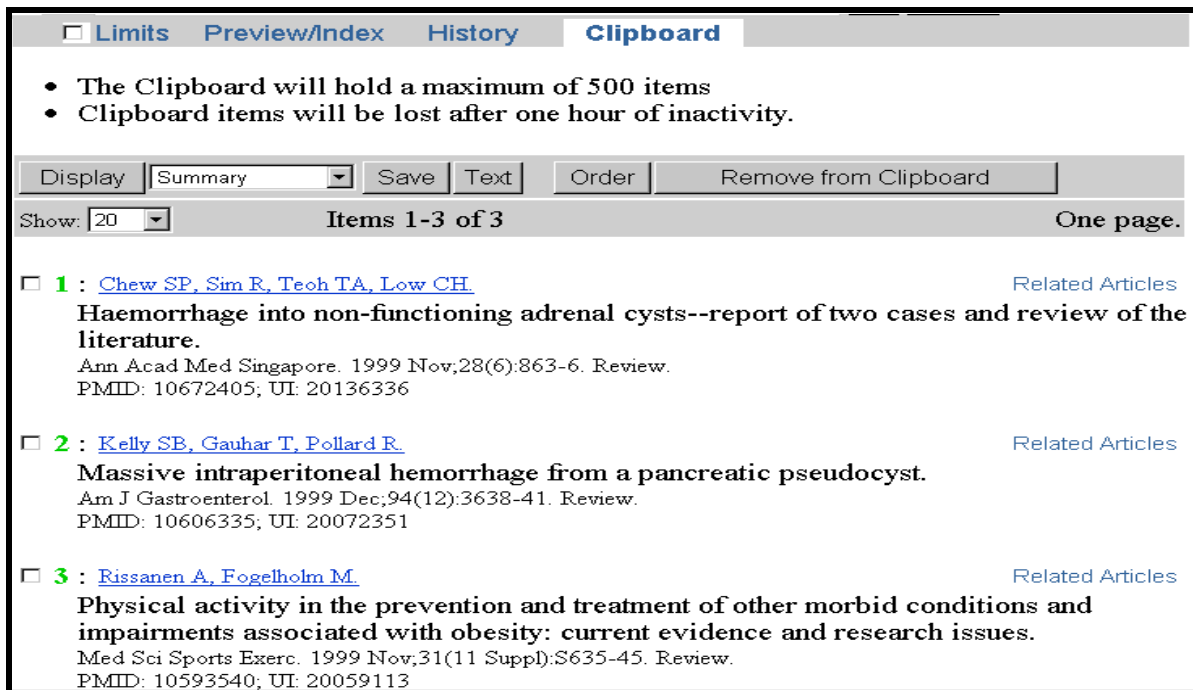
- You can then print, save, or order the citations in the Clipboard.
- To place items in the clipboard, click on the check-box to the left of the citation.
- Then click the **Add to Clipboard** button.
- Once the citation has been added to the Clipboard, the record number color will change.

Clipboard Tips:

- ✓ If you click Add to Clipboard without selecting citations using the check-box, PubMed will add up to 500 citations to the Clipboard.
- ✓ The maximum number of items that can be placed in the Clipboard is **500**.
- ✓ The Clipboard will be **lost after one hour of inactivity**.

Using Clipboard

- To view the contents of your Clipboard, click on **Clipboard** from the Features bar.



Deleting citations from the clipboard:

- To delete selected citations, click on the check-box to the left of the citation and then click on the **Remove from Clipboard** button.
- To empty the Clipboard, simply click on the **Remove from Clipboard** button.

Saving citations in the Clipboard

- Select a display format.
- Select citations you wish to save from the Clipboard (if you want to save all citations, no selection is necessary).
- Click on **Save** button.

Ordering Documents



You can order directly from the results screen, or you can collect citations on the Clipboard and order from there.

Take Note:

The **Order Documents** feature allows you to use an automated document ordering program called **Loansome Doc**.

What is Loansome Doc?

The Loansome Doc feature allows you to electronically order the full text of a citation from a Loansome Doc participating library in your area. Prior to using this feature, you need to establish an agreement with a Loansome Doc participating library. Your Loansome Doc library will provide you with their **Library ID** which is needed when setting up the service within PubMed or IGM.

What does it cost?

The library providing you this service will explain their ordering fees. This service is generally *not* free.

What library can provide me this service?

Call your Regional Medical Library at **1-800-338-7657** Monday-Friday, 8:30 A.M. - 5:00 P.M. in all time zones to find out which medical libraries in your area can provide you Loansome Doc ordering service.

- To order specific citations, click on the check-box to the left of each citation in the Clipboard.



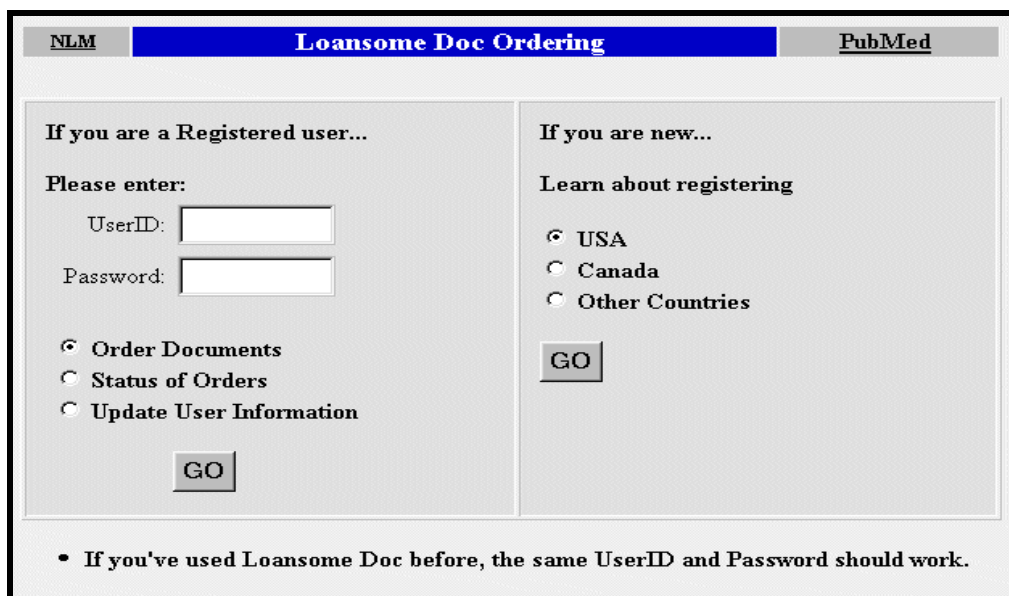
Publisher-supplied citations cannot be ordered through Loansome Doc because they do not have MEDLINE UIs.

Take Note:

- Click the **Order** button.

After clicking on the **Order** button from the Clipboard, you are brought to this next screen allowing you to:

- log into the Loansome Doc Ordering Server
- obtain a status report of your orders
- modify information on your Loansome Doc ID record
- learn about registering for a Loansome Doc code/password



NLM **Loansome Doc Ordering** **PubMed**

If you are a Registered user...

Please enter:

UserID:

Password:

☒ Order Documents

☐ Status of Orders

☐ Update User Information

If you are new...

Learn about registering

☒ USA

☐ Canada

☐ Other Countries

• If you've used Loansome Doc before, the same UserID and Password should work.

- If you are new, and click on the **GO** button to learn about registering, you reach a screen giving you important information about the Loansome Doc service.
- If you click on the **Registration** button at the bottom of this screen, you reach the registration screen as shown on the next page.

*This example uses
a demonstration
Library ID.*

NLM	Loansome Doc Registration	PubMed
IDENTIFICATION INFORMATION		
Ordering		
Library ID :	99999A	(required)
First Name :	Polly	
Last Name :	Smith	(required)
ADDRESS INFORMATION		
Address 1 :	Acme Library	(required)
Address 2 :	12 Acme Blvd.	
City :	Bethesda	(required)
Province/State :	Maryland	(U.S. and Canada Only)
Province/State :		(International Only)
Country :	United States	
Postal Code :	20894	(required)
Phone :	301-555-1212	(required)
DELIVERY INFORMATION		
Method :	<input checked="" type="radio"/> Mail <input type="radio"/> Fax <input type="radio"/> Pickup <input type="radio"/> Internet Address	
Forward Requests ?	<input checked="" type="radio"/> No <input type="radio"/> Yes	
Fax :	301-555-1212	
Internet Address :	polly@email.com	
Requester Note :		
LOGIN INFORMATION		
Use for all future Loansome Doc orders.		
User ID :	abc321	(required)
Password :	*****	(required)
Retype Password :	*****	(required)
<input type="button" value="Register"/>		

- Next, you receive a screen explaining copyright compliance. Click on the **Accept** button.

NLM	Loansome Doc Warning	PubMed
<hr/>		
<p style="text-align: center;">Warning Concerning Copyright Compliance</p>		
<p>The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted material.</p>		
<p>Under certain conditions specified in the law, libraries and archives are authorized to furnish a photocopy or other reproduction. One of these specified conditions is that the photocopy or reproduction is not to be used for any purpose other than private study, scholarship, or research. If a user makes a request for, or later uses, a photocopy or reproduction for purposes in excess of "fair use," that user may be liable for copyright infringement.</p>		
<p style="text-align: center;"><input type="button" value="Accept"/> <input type="button" value="Decline"/></p>		

PubMed now brings you to a screen confirming the citation(s) you are ordering and your user information. Click on the **Send Order** button after reviewing the information.

*Send Order
button.*

*Articles you
checked off
to order.*

*User-supplied
information.*

NLM	Loansome Doc Order	PubMed
<hr/>		
<p style="text-align: center;"><input type="button" value="Send Order"/></p>		
<hr/>		
<p>Print or save a copy of this page for reference. Please confirm ordering of the following documents:</p>		
<p><input checked="" type="checkbox"/> • 99390533 A case of xanthogranulomatous cholecystitis. Korean J Intern Med 1999 Jul;14(2):90-3</p>		
<p><input checked="" type="checkbox"/> • 99392630 Index of suspicion. Case #3. Discussion: hereditary spherocytosis. Pediatr Rev 1999 Aug;20(8):273; discussion 2756</p>		
<hr/>		
<p style="text-align: center;">Delivery Information</p>		
Method	<input checked="" type="radio"/> Mail <input type="radio"/> Fax <input type="radio"/> Pickup <input type="radio"/> Internet Address	
Not Needed After (yyyymmdd)	<input type="text"/>	
Forward Requests ?	<input checked="" type="radio"/> No <input type="radio"/> Yes	
Requester Note	<input type="text"/>	
<hr/>		
<p style="text-align: right;">User Information:</p>		
<p>User ID: ABC123 Polly Smith Acme Library 12 Acme Blvd. Bethesda MD 20894 Fax: 301/555-1212 Email: polly@email.com Library: 99999A NLM TEST LIBRARY/BETHESDA MD Date: 08/31/99</p>		

Next you are brought to the Loansome Doc Confirmation screen which confirms that your order was accepted.

*Order accepted
message.*

NLM	Loansome Doc Confirmation	PubMed
Order accepted You can check the status of your orders from the Loansome Doc site . Order status is updated at 8:15pm EST		
99390533 A case of xanthogranulomatous cholecystitis. Korean J Intern Med 1999 Jul;14(2):90-3		
99392630 Index of suspicion. Case #3. Discussion: hereditary spherocytosis. Pediatr Rev 1999 Aug;20(8):273; discussion 2756		
<hr/>		
User Information:		
User ID: ABC123 Polly Smith Acme Library 12 Acme Blvd. Bethesda MD 20894 Fax: 301/555-1212 Email: polly@email.com Library: 99999A NLM TEST LIBRARY/BETHESDA MD		

Links

Related Articles

- Citations in PubMed will have a **Related Articles** link. Clicking on this link will access the articles in PubMed which are most closely related to the original article.
- PubMed compares words from the Title and Abstract of each citation, as well as the MeSH headings assigned, using a powerful word-weighted algorithm.
- The best matches for each citation are saved and stored in a pre-calculated set.
- The Related Articles citation display is in rank order from most to least relevant. The citation you linked from is displayed first.
- You may see a few citations without a Related Articles link. This simply means the citation has not yet gone through the powerful algorithm. This process may take several days.



A detailed explanation of the **Related Articles algorithm** is available in the PubMed **Help** under **Computation of Related Articles**.

Take Note:

Try this search: **killer pop machines**

The screenshot shows a PubMed search interface. At the top, there is a search bar with the text "killer pop machines" and buttons for "Go" and "Clear". Below the search bar are tabs for "Limits", "Preview/Index", "History", and "Clipboard". Under the "Preview/Index" tab, there are buttons for "Display", "Summary", "Save", "Text", "Order", "Details", and "Add to Clipboard". The search results are displayed below these buttons. The first result is a citation by Spitz DJ, Spitz WU, titled "Killer pop machines." from J Forensic Sci. 1990 Mar;35(2):490-2. The PMID is 2329341 and the UI is 90229856. To the right of the citation, there is a link labeled "Related Articles".

Related articles link.

You retrieve only 1 citation. Now, click on the **Related Articles** link and PubMed will display a list of related citations:


<input type="checkbox"/> 1 : Spitz DJ, et al. Killer pop machines. J Forensic Sci. 1990 Mar;35(2):490-2. PMID: 2329341; UI: 90229836	Related Articles
<input type="checkbox"/> 2 : Cosio MQ. Soda pop vending machine injuries. JAMA. 1988 Nov 11;260(18):2697-9. PMID: 3184337; UI: 89037482	Related Articles
<input type="checkbox"/> 3 : Champa JR, et al. Four cases of injury involving soda vending machines. J Orthop Trauma. 1989;3(1):64-7. PMID: 2709207; UI: 89216201	Related Articles

Refining your Related Articles retrieval set:

- Click History.
- The Related Articles link shows up as: [Link to PubMed from \("PubMed Unique Identifier"\)](#)

☐ Limits Preview/Index **History** Clipboard

- Search History will be lost after one hour of inactivity
- To combine searches use # before search number, e.g., #2 AND #6

Search	Most Recent Queries	Time	Result
	#2 Link to PubMed from (2329341)	09:00:30	114
	#1 Search killer pop machines	09:00:28	1

Clear History

- Use the search statement number and combine with another concept:

- Alternatively, use the search statement number in the query box and a pull-down menu selection from the Limits screen:

Enter search
statement #
found in
History.

Select limit(s).

Click **Go**.

▼ for #2

Go Clear

Limits Preview/Index History Clipboard

- Use All Fields pull-down menu to specify a field
- Boolean operators AND, OR, NOT must be in upper case
- If search fields tags are used enclose in square brackets, e.g., rubella [ti]
- Search [limits](#) may exclude PreMEDLINE and publisher supplied citations

Limited to:

All Fields ▼

☐ only items with abstracts

Publication Types ▼

English ▼

Subsets ▼

Ages ▼

Human or Animal ▼

Gender ▼

Entrez Date ▼

Publication Date ▼

From

To

Use the format YYYY/MM/DD; month and day are optional.

Links to Other Resources and NCBI Databases

- **LinkOut** - A service that provides external links from PubMed citations to publisher Web sites for full-text journal articles, biological data, sequence centers, etc. from third parties.
- **Books** - provides links from individual PubMed journal citations to full text of molecular biology textbooks .
- **Protein** - Protein sequences from Swiss-Prot, PIR, PRF, PDB, and translated protein sequences from the DNA sequences databases.
- **Nucleotide** - DNA sequences from GenBank, EMBL, and DDBJ.
- **PopSet** - The PopSet database contains aligned sequences submitted as a set from a population, phylogenetic or mutation study describing such events as evolution and population variation.
- **Structure** - The Molecular Modeling Database (MMDB) contains 3-dimensional structures determined by X-ray crystallography and NMR spectroscopy.
- **Genome** - Provides access to records and graphic displays of entire genomes and chromosomes for megabase sequences obtained from large-scale sequencing of genomes and chromosomes.

Example: An article in the *Journal of Cell Biology* written by D. A. Starr.

starr da journal of cell biology



Notice the Related Articles, Books, Protein, Nucleotide, LinkOut links on the right:

Take Note:

Display
Abstract
Show: 10
One page

Add to Clipboard
Save
Text
1-1 items of 1

☐ 1 : *J Cell Biol* 1997 Sep 22;138(6):1289-301
Related Articles, Books, Protein, Nucleotide, LinkOut

FREE JCB

Conservation of the centromere/kinetochore protein ZW10.

Starr DA, Williams BC, Li Z, Etemad-Moghadam B, Dawe RK, Goldberg ML

Section of Genetics and Development, Cornell University, Ithaca, New York 14853-2703, USA.

Mutations in the essential *Drosophila melanogaster* gene *zw10* disrupt chromosome segregation, producing chromosomes that lag at the metaphase plate during anaphase of mitosis and both meiotic divisions. Recent evidence suggests that the product of this gene, DmZW10, acts at the kinetochore as part of a tension-sensing checkpoint at anaphase onset. DmZW10 displays an intriguing cell cycle-dependent intracellular distribution, apparently moving from the centromere/kinetochore at prometaphase to kinetochore microtubules at metaphase, and back to the centromere/kinetochore at anaphase (Williams, B.C., M. Gatti, and M.L. Goldberg. 1996. *J. Cell Biol.* 134:1127-1140). We have identified ZW10-related proteins from widely diverse species with divergent centromere structures, including several *Drosophilids*, *Caenorhabditis elegans*, *Arabidopsis thaliana*, *Mus musculus*, and humans. Antibodies against the human ZW10 protein display a cell cycle-dependent staining pattern in HeLa cells strikingly similar to that previously observed for DmZW10 in dividing *Drosophila* cells. Injections of *C. elegans* ZW10 antisense RNA phenocopies important aspects of the mutant phenotype in *Drosophila*: these include a strong decrease in brood size, suggesting defects in meiosis or germline mitosis, a high percentage of lethality among the embryos that are produced, and the appearance of chromatin bridges at anaphase. These results indicate that at least some aspects of the functional role of the ZW10 protein in ensuring proper chromosome segregation are conserved across large evolutionary distances.

PMID: 9298984, UI: 97444363

Book link:

- When viewing a PubMed abstract, click on the "Books" hyperlink.
- This takes you to a facsimile of the abstract, in which some phrases are hypertext links. These phrases correspond to terms that are also found in the books available at NCBI.

The term, *Drosophila* has been clicked.

1 : J Cell Biol 1997 Sep 22;138(5):1289-301

FREE JCB

Conservation of the centromere /kinetochore protein ZW10.

Starr DA, Williams BC, Li Z, Etenad-Moghadam B, Dawe RK, Goldberg ML

Section of Genetics and Development, Cornell University, Ithaca, New York 14853-2703, USA.

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MeSH Terms:

- Animal
- Arabidopsis
- Caenorhabditis elegans
- Cell Cycle Physiology
- Centromere Chemistry*
- Chromosomes Physiology
- Cloning, Molecular
- Drosophila
- HeLa Cells
- Human
- Insect Proteins/genetics*
- Insect Proteins/analysis*
- Mice
- Microinjections
- Molecular Sequence Data
- Mutation Physiology
- Recombinant Fusion Proteins/analysis
- RNA, Antisense/pharmacology
- Sequence Homology, Amino Acid
- Support, U.S. Gov't, P.H.S.

- Clicking on a hypertext link takes the reader to a list of book sections in which the phrase is found. The most relevant sections of the books to the phrase are listed first. The title of the section in which the phrase is found is hyperlinked to that part of the book.

Notice the Overview, Help, FAQ links.

Click on the first book section listed.

NCBI

TEXTBOOKS@

THE NATIONAL CENTER FOR BIOTECHNOLOGY INFORMATION

PubMed Nucleotide Protein Genome Structure Popset

Search PubMed for [] Go Clear

Limits Index History Clipboard

About Entrez

Books Overview Help | FAQ

Entrez PubMed Search Overview Help | FAQ

Introduction
From: *Drosophila* and the Molecular Genetics of Pattern Formation. I. Genesis of the Body Plan > Cellular Mechanisms of Development
Molecular Biology of the Cell, 3rd edn, by Alberts, B., Bray, D., Lewis, J., Raff, M., Roberts, K. and Watson, J., 1994, Garland Publishing, Inc.


Introduction
From: *Drosophila* and the Molecular Genetics of Pattern Formation. II. Homeotic Selector Genes and the Patterning of Body Parts > Cellular Mechanisms of Development
Molecular Biology of the Cell, 3rd edn, by Alberts, B., Bray, D., Lewis, J., Raff, M., Roberts, K. and Watson, J., 1994, Garland Publishing, Inc.

The *Drosophila eve* Gene Is Regulated by Combinatorial Controls
From: How Genetic Switches Work > Control of Gene Expression
Molecular Biology of the Cell, 3rd edn, by Alberts, B., Bray, D., Lewis, J., Raff, M., Roberts, K. and Watson, J., 1994, Garland Publishing, Inc.

***Drosophila* and Yeast Genes Can Also Be Inactivated by Heritable Features of Chromatin Structure**
From: The Molecular Genetic Mechanisms That Create Specialized Cell Types > Control of Gene Expression
Molecular Biology of the Cell, 3rd edn, by Alberts, B., Bray, D., Lewis, J., Raff, M., Roberts, K. and Watson, J., 1994, Garland Publishing, Inc.

Complex Genetic Switches That Regulate *Drosophila* Development Are Built Up from Smaller Modules
From: How Genetic Switches Work > Control of Gene Expression
Molecular Biology of the Cell, 3rd edn, by Alberts, B., Bray, D., Lewis, J., Raff, M., Roberts, K. and Watson, J., 1994, Garland Publishing, Inc.

- That part of the book is then displayed:



Garland Publishing
Taylor & Francis Group

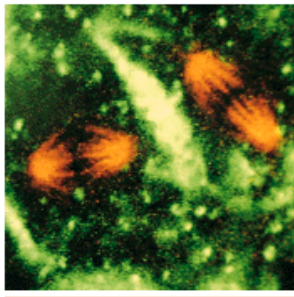
MOLECULAR BIOLOGY OF THE CELL

@NCBI

PUBMED NCBI HOMEPAGE MOLECULAR BIOLOGY OF THE CELL HOMEPAGE

Cellular Mechanisms of Development

Drosophila and the Molecular Genetics of Pattern Formation. I. Genesis of the Body Plan⁴¹



Outline

Introduction

The Insect Body Is Constructed by Modulation of a Fundamental Pattern of Repeating Units

Drosophila Begins Its Development as a Syncytium

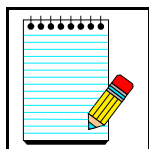
Two Orthogonal Systems Define the Ground Plan of the Embryo

The Patterning of the Embryo Begins with Influences from the Cells Surrounding the Egg

Introduction

The structure of an organism is controlled by its genes: classical genetics is based on this proposition. Yet for almost a century, and even long after the role of DNA in inheritance had become clear, the mechanisms of the genetic control of body structure remained an intractable mystery. In recent years this chasm in our understanding has begun to be filled. In the previous section we used the nematode worm to illustrate some of the general principles of how developmental control genes orchestrate the events of development. But it is the fly *Drosophila melanogaster* (Figure 21-47), more than any other organism, that has really transformed our understanding of how genes govern the patterning of the body. Decades of genetic study, culminating in massive systematic searches, have yielded a large catalogue of developmental control genes in the fly whose specific function is to define the spatial pattern of cell types and body parts. It has become possible not only to identify the key genes, but also to watch them at work: by *in situ* hybridization using DNA or RNA probes, one can observe directly how the internal states of the cells in the embryo are defined by the sets of regulatory genes that they express. By analyzing mutants, transgenic animals, and animals that are a patchwork of mutant and nonmutant cells, one can go on to discover how each gene operates as part of a system to specify the organization of the body. Moreover, the fly has provided a crucial key to our own development; for the genes controlling the pattern of the body in *Drosophila* turn out to have close counterparts in higher animals, including ourselves.

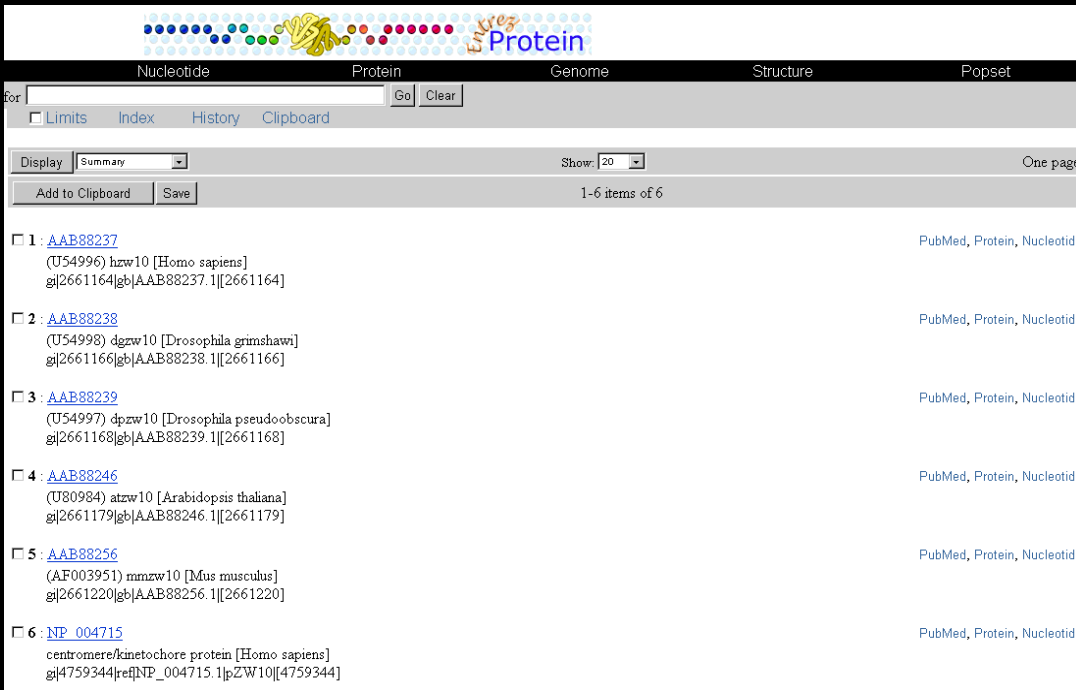
Our account of *Drosophila* developmental genetics is divided into two sections. The first deals with events in the early embryo and describes how the basic body plan is created, with a head rudiment at one end, a posterior rudiment at the other, and in between them an ordered series of segments - the basic modular units from which all insects are constructed. The second section deals with later events and discusses the genetic apparatus that endows cells with positional values that make the cells of one segment different from those of the next; these processes ensure that, for example, the head will develop antennae and the thorax legs - and not, as happens in some mutants we shall encounter, the other way around.



Take Note:

When you are on the textbook linking list page (as on the previous page), you will see an Overview, Help, and FAQs specific for the Books feature.

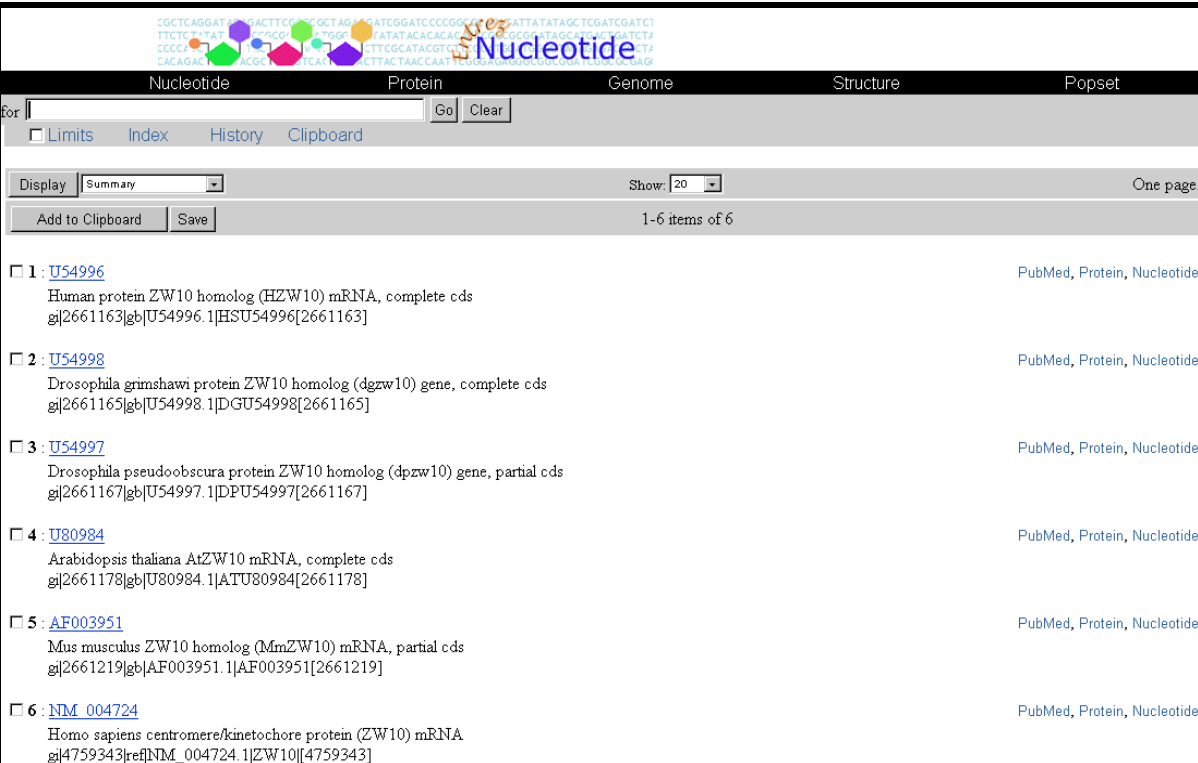
Protein Link:



The Protein Link interface displays a list of protein entries. At the top, there is a navigation bar with tabs for Nucleotide, Protein, Genome, Structure, and Popset. Below this is a search bar with a 'Go' button and a 'Clear' button. A 'Limits' checkbox is also present. The main content area shows a list of protein entries, each with a checkbox, an accession number, a description, and links to PubMed, Protein, and Nucleotide databases. The entries are numbered 1 through 6.

Accession Number	Description	Links
1: AAB88237	(U54996) hzw10 [Homo sapiens] gi 2661164 gb AAB88237.1 [2661164]	PubMed, Protein, Nucleotide
2: AAB88238	(U54998) dgz10 [Drosophila grimshawi] gi 2661166 gb AAB88238.1 [2661166]	PubMed, Protein, Nucleotide
3: AAB88239	(U54997) dpzw10 [Drosophila pseudoobscura] gi 2661168 gb AAB88239.1 [2661168]	PubMed, Protein, Nucleotide
4: AAB88246	(U80984) atzw10 [Arabidopsis thaliana] gi 2661179 gb AAB88246.1 [2661179]	PubMed, Protein, Nucleotide
5: AAB88256	(AF003951) mmzw10 [Mus musculus] gi 2661220 gb AAB88256.1 [2661220]	PubMed, Protein, Nucleotide
6: NP_004715	centromere/kinetochore protein [Homo sapiens] gi 4759344 ref NP_004715.1 pZW10 [4759344]	PubMed, Protein, Nucleotide

Nucleotide link:



The Nucleotide link interface displays a list of nucleotide entries. At the top, there is a navigation bar with tabs for Nucleotide, Protein, Genome, Structure, and Popset. Below this is a search bar with a 'Go' button and a 'Clear' button. A 'Limits' checkbox is also present. The main content area shows a list of nucleotide entries, each with a checkbox, an accession number, a description, and links to PubMed, Protein, and Nucleotide databases. The entries are numbered 1 through 6.

Accession Number	Description	Links
1: U54996	Human protein ZW10 homolog (HZW10) mRNA, complete cds gi 2661163 gb U54996.1 HSU54996[2661163]	PubMed, Protein, Nucleotide
2: U54998	Drosophila grimshawi protein ZW10 homolog (dgzw10) gene, complete cds gi 2661165 gb U54998.1 DGU54998[2661165]	PubMed, Protein, Nucleotide
3: U54997	Drosophila pseudoobscura protein ZW10 homolog (dpzw10) gene, partial cds gi 2661167 gb U54997.1 DPU54997[2661167]	PubMed, Protein, Nucleotide
4: U80984	Arabidopsis thaliana AtZW10 mRNA, complete cds gi 2661178 gb U80984.1 ATU80984[2661178]	PubMed, Protein, Nucleotide
5: AF003951	Mus musculus ZW10 homolog (MmZW10) mRNA, partial cds gi 2661219 gb AF003951.1 AF003951[2661219]	PubMed, Protein, Nucleotide
6: NM_004724	Homo sapiens centromere/kinetochore protein (ZW10) mRNA gi 4759343 ref NM_004724.1 ZW10 [4759343]	PubMed, Protein, Nucleotide

LinkOut link:

☐ 1 : [Starr DA, et al.](#) Conservati...[PMID:9298984]


OMIM

Link provided by [Online Mendelian Inheritance in Man \(OMIM\)](#)

FREE JCB

Link provided by [HighWire Press](#)

- publisher of information in URL
- online full-text

Link provided by [NCBI LocusLink](#)

FlyBase

Link provided by [FlyBase](#)

full text provided by
NIH Library

Link provided by [NIH Library](#)


**Take Note:**

Some journal Web sites may require you to subscribe or pay a fee in order to view the full text of an article.

Linking back to PubMed from references

Links back to citations in PubMed are often provided within the references at the end of an article viewed from a publisher's Web site:

Click on **Medline** link to go to the PubMed record for this reference.

References 

1. Albertson, D.G., and J.N. Thomson. 1982. The kinetochores of *Caenorhabditis elegans*. *Chromosoma (Berl.)*, 86: 409-428 [[Medline](#)].
2. Albertson, D.G., and J.N. Thomson. 1993. Segregation of holocentric chromosomes at meiosis in the nematode, *Caenorhabditis elegans*. *Chromosome Res.* 1: 15-26 [[Medline](#)].
3. Ault, J.G., and T.W. Lytle. 1988. A transmissible dicentric chromosome in *Drosophila melanogaster*. *Chromosoma (Berl.)*, 97: 71-79.
4. Bai, C., P. Sen, K. Hofmann, L. Ma, M. Goebel, J.W. Harper, and S.J. Elledge. 1996. SKP1 connects cell cycle regulators to the ubiquitin proteolysis machinery through a novel motif, the F-box. *Cell*, 86: 263-274 [[Medline](#)].
5. Bajer, A., and J. Mole-Bajer. 1969. Formation of spindle fibers, kinetochore orientation, and behavior of the nuclear envelope during mitosis in endosperm. *Chromosoma (Berl.)*, 27: 448-484.
6. Barstead, R.J., and R.H. Waterson. 1989. The basal component of the nematode dense-body is vinculin. *J. Biol. Chem.* 264: 10177-10185 [[Medline](#)].

Clicking on the Medline link for the 4th reference brings you to that citation in PubMed:

Display Abstract Save Text Order Add to Clipboard

☐ 1 : *Cell* 1996 Jul 26;86(2):263-74 [Related Articles, Books, Protein, Nucleotide, LinkOut](#)

SKP1 connects cell cycle regulators to the ubiquitin proteolysis machinery through a novel motif, the F-box.

Bai C, Sen P, Hofmann K, Ma L, Goehl M, Harper JW, Elledge SJ

Howard Hughes Medical Institute, Baylor College of Medicine, Houston, Texas 77030, USA.

We have identified the yeast and human homologs of the SKP1 gene as a suppressor of *cdc4* mutants and as a cyclin F-binding protein. Skp1p indirectly binds cyclin A/Cdk2 through Skp2p, and directly binds Skp2p, cyclin F, and Cdc4p through a novel structural motif called the F-box. SKP1 is required for ubiquitin-mediated proteolysis of Cin2p, Clb5p, and the Cdk inhibitor Sic1p, and provides a link between these molecules and the proteolysis machinery. A large number of proteins contain the F-box motif and are thereby implicated in the ubiquitin pathway. Different *skp1* mutants arrest cells in either G1 or G2, suggesting a connection between regulation of proteolysis in different stages of the cycle.

PMID: 8706131, UI: 96319729

N O T E S

Practice Exercises

1. Using only the query box, find some information about using a living donor for a liver transplantation. Using Limits, further restrict the search to only review articles. Display the results so you can see the MeSH headings and the entire retrieval is on one page.
2. Find the title, “Baby walkers--an underestimated hazard for our children?”. Link from an author to see the Abstract. Review the related articles.
3. Are there articles by George Barrera-Hernandez referenced in MEDLINE?
4. Locate citations about using a baboon for a bone marrow transplant that were published between 1997-2000.
5. Please find information about wisdom tooth pain. Using the Details screen, determine what MeSH heading wisdom tooth maps to.

Suggested Answers

- Using only the query box, find some information about using a living donor for a liver transplantation. Using Limits, further restrict the search to only review articles. Display the results so you can see the MeSH headings and the entire retrieval is on one page.

living donor liver transplantation

☒ Limits [Index](#) [History](#) [Clipboard](#)

PubMed Query:

```
((("living donors"[MeSH Terms] OR living donor[Text Word]) AND ("liver transplantation"[MeSH Terms] OR liver transplantation[Text Word])) AND Review[ptyp]) AND notpubref[sb])
```

Result:

[23](#)

Translations:

living donor[All Fields]	("living donors"[MeSH Terms] OR living donor[Text Word])
liver transplantation[All Fields]	("liver transplantation"[MeSH Terms] OR liver transplantation[Text Word])

Database:

PubMed

User Query:

living donor liver transplantation

Display the results so you can see the MeSH headings and the entire retrieval is on one page.

living donor liver transplantation

☒ Limits [Index](#) [History](#) [Clipboard](#)

Use the **Citation** display. **Limits: Review**

Show: One page.

Use the **Show** pull-down menu. 1-23 items of 23

2. Find the title, “Baby walkers--an underestimated hazard for our children?”. Link to see the Abstract. Review the related articles.

Find the requested title:

Include the Boolean AND between title words.

▼ for baby AND walkers AND underestimated AND hazard Go Clear

Limits Preview/Index History Clipboard

- Use All Fields pull-down menu to specify a field
- Boolean operators AND, OR, NOT must be in upper case
- If search fields tags are used enclose in square brackets, e.g., rubella [ti]
- Search [limits](#) may exclude PreMEDLINE and publisher supplied citations

Limited to:

*Use the **Title Word** pull-down menu selection.*

Title Word ▼ ☐ only items with abstracts

Publication Types ▼ Languages ▼ Subsets ▼

Ages ▼ Human or Animal ▼ Gender ▼

Entrez Date ▼

Publication Date ▼ From To

Use the format YYYY/MM/DD; month and day are optional

Use the **Abstract** display to see the abstract. Click on **Related Articles** link to review the related articles.

3. Are there articles by George Barrera-Hernandez referenced in MEDLINE?

for barrera-hernandez g

☐ Limits Index History Clipboard

PubMed Query:

```
(barrera-hernandez g[Author Name] AND  
notpubref[sb])
```

Result:

[5](#)

Database:

PubMed

User Query:

barrera-hernandez g

4. Locate citations about using a baboon for a bone marrow transplant that were published between 1997-2000.

baboon bone marrow transplant

[Limits](#) [Index](#) [History](#) [Clipboard](#)

- Use All Fields pull-down menu to specify a field
- Boolean operators AND, OR, NOT must be in upper case
- If search fields tags are used enclose in square brackets, e.g., rubella [ti]

Limited to:

All Fields

Publication Types Languages Subsets

Ages Human or Animal Gender

Entrez Date

Publication Date From 1997 To 2000

Use the format YYYY/MM/DD; month and day are optional.

5. Please find information about wisdom tooth pain. Using the Details screen, determine what MeSH heading wisdom tooth maps to.

Molar, third is the MeSH heading that PubMed is mapping to.

wisdom tooth pain

☐ Limits [Index](#) [History](#) [Clipboard](#)

PubMed Query:

```
{("molar, third"[MeSH Terms] OR wisdom tooth[Text Word]) AND ("pain"[MeSH Terms] OR pain[Text Word]) AND notpubref[sb]}
```

Result:

[336](#)

Translations:

wisdom tooth[All Fields]	("molar, third"[MeSH Terms] OR wisdom tooth[Text Word])
pain[All Fields]	("pain"[MeSH Terms] OR pain[Text Word])

Database:

PubMed

User Query:

wisdom tooth pain

N O T E S

Searching with MeSH

Two selections are available for MeSH searching from the field selection pull-down menu from Limits:

- **MeSH Terms**

Use when you want to qualify a term so that it is searched only as a MeSH heading. Unqualified search terms that are MeSH headings will automatically be searched as a MeSH term *as well as* a Text Word.



When a term is searched as a MeSH heading, PubMed automatically searches that heading and the more specific headings underneath in the hierarchy. This is called exploding a term.

Take Note:

For example, the MeSH term **Face** when searched as MeSH Term in PubMed would search the heading Face as well as all the more specific terms below the term in the hierarchy:

Face

- Cheek
- Chin
- Eye
 - Eyebrows
 - Eyelids
 - Eyelashes
- Forehead
- Mouth
 - Lip
- Nose



Searching with MeSH terms will *exclude* PREMEDLINE citations and publisher-supplied citations as they have not been indexed with MeSH headings.

Take Note:

- **MeSH Major Topic**

Use when you wish to limit to articles where the topic is the main point of the article.

PubMed's MeSH Browser

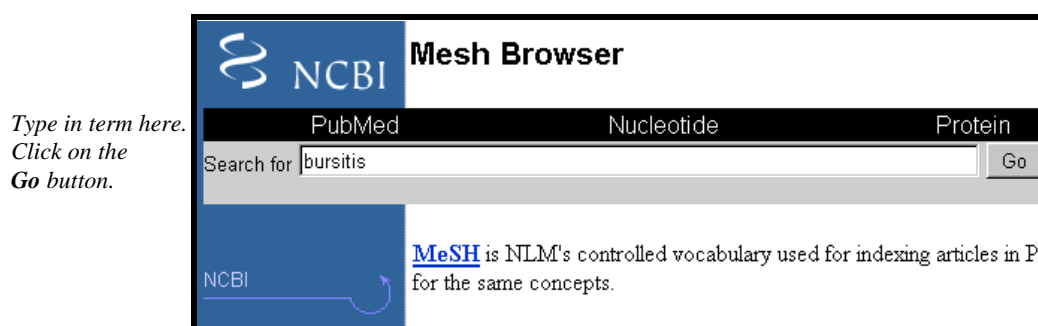
PubMed's MeSH Browser allows you to:

- Display MeSH terms in a hierarchical structure.
- Select MeSH terms for searching.
- Limit MeSH terms to a major concept.
- Attach subheadings.
- Display the preferred MeSH term and its hierarchy if a cross reference is entered.

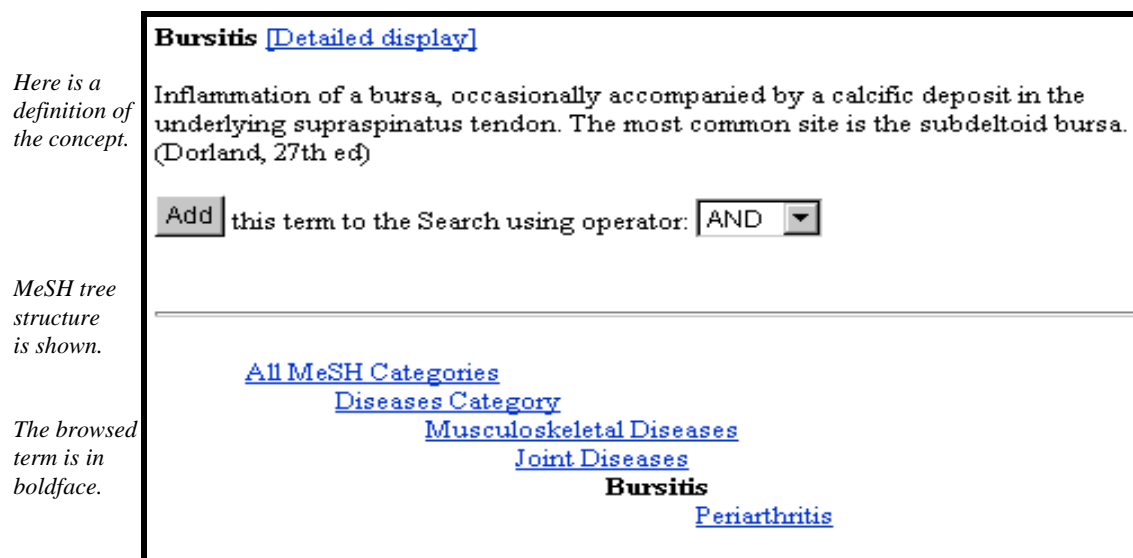
How to Get There

- Click on **MeSH Browser** on the sidebar.

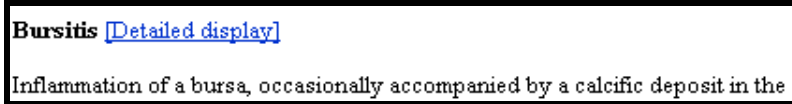
Now, let's use the MeSH Browser to build a search strategy for a search for citations about **bursitis**.



PubMed brings you to this MeSH Browser screen:



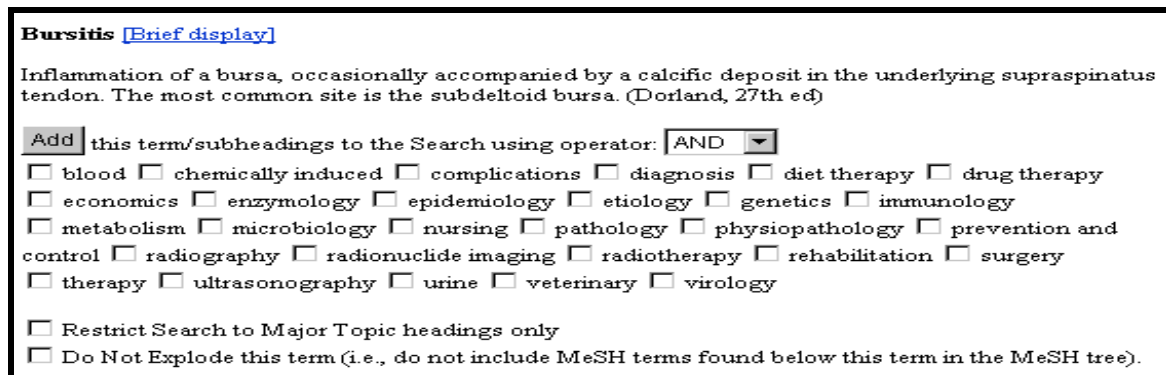
Click on the **Detailed Display** link to the right of the browsed term at the top of the screen as shown below:



This will bring you to another screen providing more information about the browsed term.

- You may search on this term or add this term to an existing strategy. At the same time you may select one or several subheadings, restrict the search to this term as a major point, or select not to explode the MeSH term

Detailed display screen for Bursitis



- Use the **Add** button to add the term to your search.
- You can also change the Boolean operator.
- Subheadings that have been attached to the term on current MEDLINE citations are listed.
- You may also restrict to a major point or choose not to explode the term.

Now, let's adjust our search to:

Citations about the *diagnosis* of bursitis

Select the diagnosis subheading from the MeSH browser screen's Detailed Display. Click on **Add** button when selections are complete.

Bursitis [\[Brief display\]](#)

Inflammation of a bursa, occasionally accompanied by a calcific deposit in the underlying supraspinatus tendon. The most common site is the subdeltoid bursa. (Dorland, 27th ed)

Add this term/subheadings to the Search using operator: **AND**

☐ blood ☐ chemically induced ☐ complications ☒ diagnosis ☐ diet therapy ☐ drug therapy
☐ economics ☐ enzymology ☐ epidemiology ☐ etiology ☐ genetics ☐ immunology
☐ metabolism ☐ microbiology ☐ nursing ☐ pathology ☐ physiopathology ☐ prevention and control ☐ radiography ☐ radionuclide imaging ☐ radiotherapy ☐ rehabilitation ☐ surgery
☐ therapy ☐ ultrasonography ☐ urine ☐ veterinary ☐ virology

☐ Restrict Search to Major Topic headings only
☐ Do Not Explode this term (i.e., do not include MeSH terms found below this term in the MeSH tree).

The MeSH Browser Current Query displays your search strategy. You may also look up another term in the query box.

Now, let's adjust our search and **specifically look for articles discussing the diagnosis of bursitis in the knee joint.**

Enter **knee joint** in the query box, click **Go**.

Searching on
the next term.

Here's the
strategy being
built.

Search for

NCBI

PubMed

Search

Overview

bursitis/diagnosis[MESH]

PubMed Search

This brings you to the MeSH Browser screen for **Knee Joint**. Next click on the **Detailed Display** link to see more information about this term.

Let's restrict to citations that have been indexed to indicate that the major focus of the article is knee joints and add this term to the strategy we are building.

Click here to restrict to a Major Topic.

Knee Joint [\[Brief display\]](#)

Add this term/subheadings to the Search using operator: **AND**

☐ abnormalities ☐ analysis ☐ anatomy and histology ☐ blood supply ☐ chemistry ☐ cytology
☐ drug effects ☐ embryology ☐ enzymology ☐ growth and development ☐ immunology
☐ injuries ☐ innervation ☐ metabolism ☐ microbiology ☐ parasitology ☐ pathology
☐ physiology ☐ physiopathology ☐ radiation effects ☐ radiography ☐ radionuclide imaging
☐ secretion ☐ surgery ☐ transplantation ☐ ultrasonography ☐ ultrastructure ☐ virology

☒ Restrict Search to Major Topic headings only
☐ Do Not Explode this term (i.e., do not include MeSH terms found below this term in the MeSH tree).

Once you have checked off **Restrict Search to Major Topic headings only**, click the **Add** button to continue building our strategy:

bursitis/diagnosis[MESH] AND knee joint[MAJR]

PubMed Search

Click on the **PubMed Search** button to actually run the search in PubMed.

N O T E S

Practice Exercises

Try using the MeSH Browser for searches that require the use of MeSH headings.

1. Find articles discussing the diagnosis of prostate cancer as the main focus of the article. Then limit to articles entered into PubMed in the last 2 years.

2. Find citations to articles discussing the surgical or drug treatment of osteosarcoma in children. Limit to studies involving the drug, cisplatin. Osteosarcoma should be the main point of the article. Also, limit to English language articles.

3. Find citations to references discussing the economics of community-acquired pneumonia.

4.
 - a. Find information on how to save a strategy in PubMed's online Help.

 - b. You need to explain to someone how to import PubMed records into a bibliographic management program such as EndNotes® or Reference Manager®. Use PubMed's FAQs to find this answer.

Suggested Answers

1. Find articles discussing the diagnosis of prostate cancer as the main focus of the article. Then limit to articles entered into PubMed in the last 2 years.

MeSH Browser screen:

prostate cancer is not a MeSH term, but it is associated with the MeSH term **Prostatic Neoplasms**

Prostatic Neoplasms [\[Detailed display\]](#)

this term to the Search using operator:

Term **Prostatic Neoplasms** appears in more than one place in the MeSH tree.

Choosing diagnosis subheading and restricting to major:

Prostatic Neoplasms [\[Brief display\]](#)

this term/subheadings to the Search using operator:

☐ analysis ☐ blood ☐ blood supply ☐ cerebrospinal fluid ☐ chemically induced ☐ chemistry
☐ classification ☐ complications ☐ congenital ☒ diagnosis ☐ diet therapy ☐ drug therapy
☐ economics ☐ embryology ☐ enzymology ☐ epidemiology ☐ ethnology ☐ etiology ☐ genetics
☐ history ☐ immunology ☐ metabolism ☐ microbiology ☐ mortality ☐ nursing ☐ parasitology
☐ pathology ☐ physiopathology ☐ prevention and control ☐ psychology ☐ radiography
☐ radionuclide imaging ☐ radiotherapy ☐ rehabilitation ☐ secondary ☐ secretion ☐ surgery
☐ therapy ☐ transmission ☐ ultrasonography ☐ ultrastructure ☐ urine ☐ veterinary ☐ virology

☒ Restrict Search to Major Topic headings only
☐ Do Not Explode this term (i.e., do not include MeSH terms found below this term in the MeSH tree).

Returned to PubMed with our search strategy built within the MeSH Browser. Now, restrict to those citations entered into the database in the last 2 years:

Prostatic Neoplasms/diagnosis[MAJR] Go Clear

Limits Index History Clipboard

- Use All Fields pull-down menu to specify a field
- Boolean operators AND, OR, NOT must be in upper case
- If search fields tags are used enclose in square brackets, e.g., rubella [ti]

Limited to:

MeSH Terms

Publication Types Languages Subsets

Ages Human or Animal Gender

2 Years

Publication Date From To

Use the format YYYY/MM/DD; month and day are optional.

2. Find citations to articles discussing the surgical or drug treatment of osteosarcoma in children. Limit to studies involving the drug, cisplatin. Osteosarcoma should be the main point of the article. Also, limit to English language articles.

{osteosarcoma/drug therapy[MAJR] OR osteosarc Go Clear

Limits Index History Clipboard

- Use All Fields pull-down menu to specify a field
- Boolean operators AND, OR, NOT must be in upper case
- If search fields tags are used enclose in square brackets, e.g., rubella [ti]

Limited to:

MeSH Terms

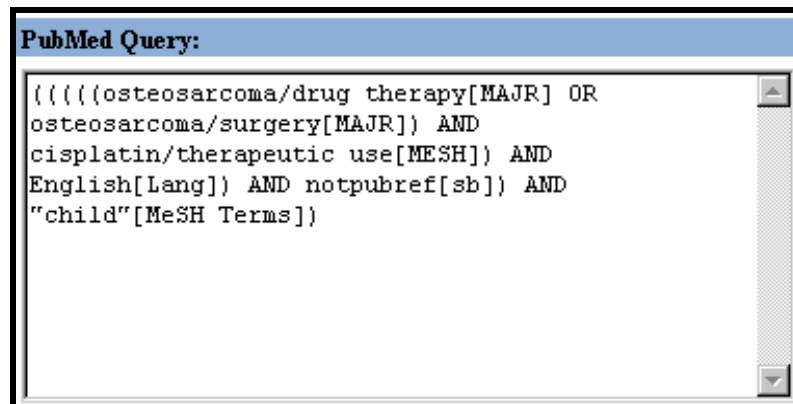
Publication Types English Subsets

All Child: 0-18 years Human or Animal Gender

Entrez Date

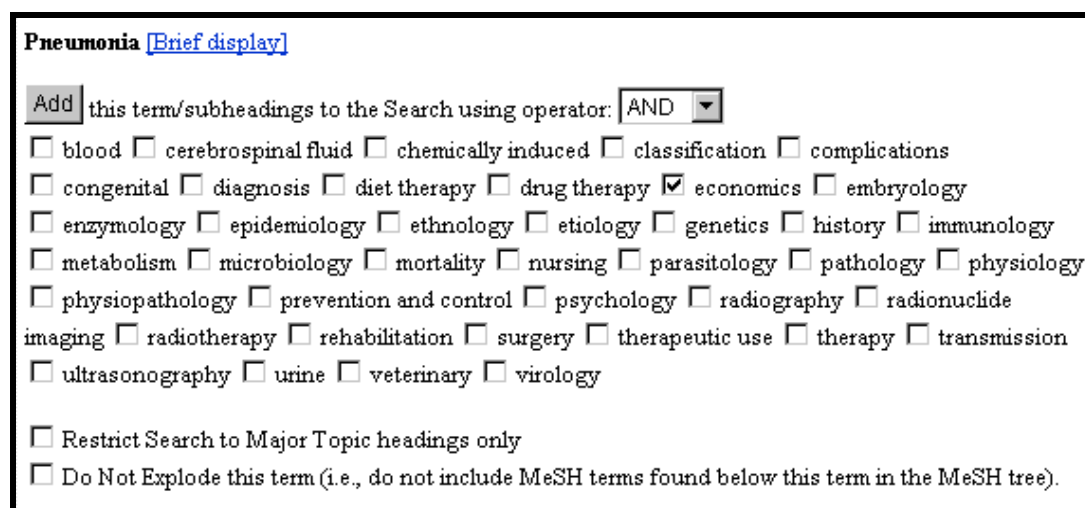
Publication Date From To

Use the format YYYY/MM/DD; month and day are optional.

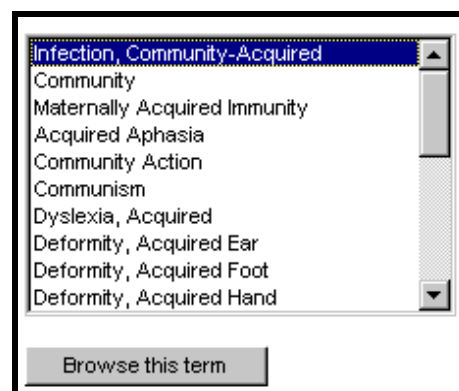


3. Find citations to references discussing the economics of community-acquired pneumonia.

Select the subheading of economics to attach to the MeSH heading, pneumonia from the Detailed display in the MeSH Browser:



Next, the MeSH Browser does not find an exact match for community acquired but leads us to this list of available terms. The term, Infection, Community-Acquired is now browsed. This leads us to Community-Acquired Infection which is Added to our strategy and returned to PubMed.



4.

a. Find information on how to save a strategy in PubMed's online Help.

1. Click on **Help** in PubMed's sidebar.
2. Click on **Saving a Search Strategy** under **Details**.

b. You need to explain to someone how to import PubMed records into a bibliographic management program such as EndNotes® or Reference Manager®. Use PubMed's FAQs to find this answer.

1. Click on **FAQ** in PubMed's sidebar.
2. Click on **Can I import PubMed search results into a bibliographic management program?** under **The New PubMed**.



A quick way to locate information on a Web page is to use the **Find** (in Page) feature under the **Edit** menu of your **Web browser**.

Take Note:

N O T E S

Search Field Descriptions

- Alternatively if you prefer not to use the pull-down menus, you may enter a Boolean search statement directly in the query box when building your search.

Search Rules and Syntax

- The Boolean operators AND, OR, NOT *must* be entered in uppercase letters.
- Boolean connectors are processed left to right.
- **Nesting** of search terms is possible. To change the order in which terms are processed, enclose the concept(s) with parentheses. The terms inside the set of parentheses will be processed as a unit and then incorporated into the overall strategy. This is called nesting.

Example: shoulder joint [mh] AND (baseball [mh] OR hockey [mh]) AND arthroscopy [mh]

Search Field Abbreviations

- Terms may be qualified using PubMed's search field tags. A list of the available field names, abbreviations, and brief field descriptions may be found in the PubMed Help under Search Field Descriptions and Tags. A table listing this same information is provided on the next few workbook pages.
- Each search term should be followed with the appropriate search field tag which indicates which field will be searched. The search field tag must follow the term -- you cannot prequalify.

Correct entry: aromatherapy [mh]

Incorrect entry: [mh] aromatherapy

- Search field tags must be enclosed in **square brackets**.
- Case and space do not matter: ice [mh] = Ice [mh] = ICE [MH]

MeSH headings:

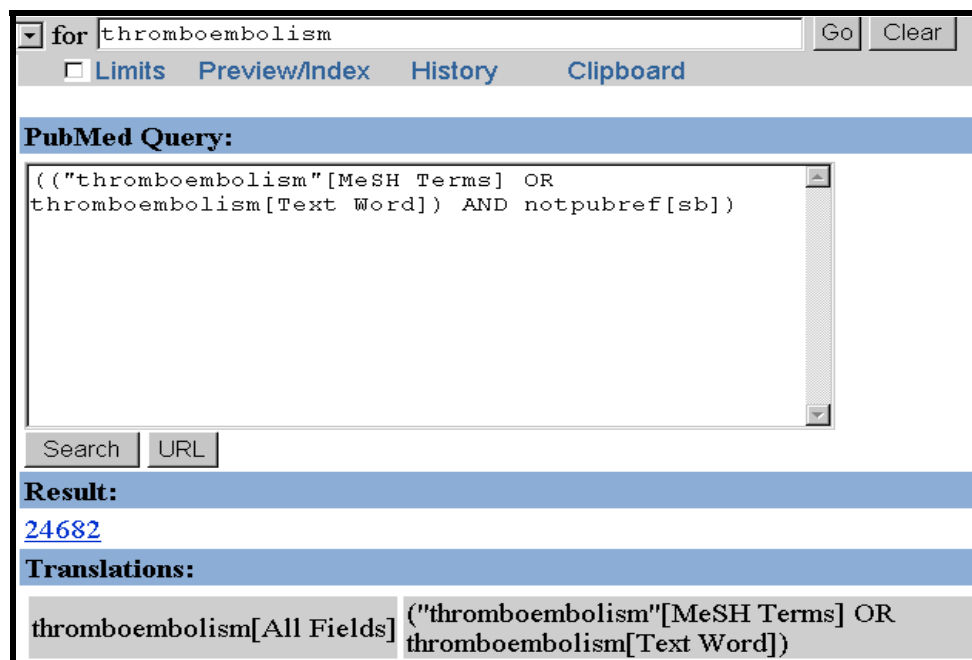
- MeSH headings are qualified using the search field tags:
 - [mh] to search a MeSH heading
 - [majr] to search a MeSH heading which is a major topic of an article
- If a MeSH heading is not qualified, PubMed will search the term as a MeSH heading (exploded) and *OR*-together the term(s) as a Text Word(s) as well.

Example:



thromboembolism Go

Here's the contents of the **Details** screen showing how PubMed translated this search:



for thromboembolism Go Clear

☐ Limits Preview/Index History Clipboard

PubMed Query:

```
((("thromboembolism"[MeSH Terms] OR  
thromboembolism[Text Word]) AND notpubref[sb]))
```

Search URL

Result:

[24682](#)

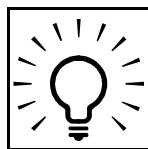
Translations:

thromboembolism[All Fields]	("thromboembolism"[MeSH Terms] OR thromboembolism[Text Word])
-----------------------------	--

- PubMed **automatically** searches the MeSH headings as well as the more specific terms underneath that heading in the MeSH hierarchy; i.e., **the term is exploded**.
- **Turning off automatic explosion** of MeSH headings:

Use one of the following tags: [mh:noexp] or [majr:noexp]

Example: thromboembolism [mh:noexp]
thromboembolism [majr:noexp]



Search Tip:

Alternatively, consider using the Do not explode selection from the Detailed Display in the MeSH Browser:

Thromboembolism [\[Brief display\]](#)

Obstruction of a vessel by a blood clot that has been transported from a distant site by the blood stream.

this term/subheadings to the Search using operator:

☐ blood ☐ chemically induced ☐ classification ☐ complications ☐ congenital ☐ diagnosis
☐ drug therapy ☐ economics ☐ enzymology ☐ epidemiology ☐ ethnology ☐ etiology
☐ genetics ☐ history ☐ immunology ☐ metabolism ☐ microbiology ☐ mortality ☐ nursing
☐ pathology ☐ physiopathology ☐ prevention and control ☐ psychology ☐ radiography
☐ radionuclide imaging ☐ radiotherapy ☐ rehabilitation ☐ surgery ☐ therapy
☐ ultrasonography ☐ urine ☐ veterinary

Click here.

☐ Restrict Search to Major Topic headings only

☒ Do Not Explode this term (i.e., do not include MeSH terms found below this term in the MeSH tree).



Take Note:

Searching with MeSH headings will exclude PREMEDLINE and publisher-supplied citations as they are not indexed with MeSH.

Subheadings:

- You can directly attach subheadings to MeSH headings using the format MeSH heading/subheading.
- Two letter abbreviations for subheadings or the full subheading name may be used.

Examples:

thromboembolism/pc [mh]
thromboembolism/prevention and control [mh]
toes/in [majr]
toes/injuries [majr]

- Only one subheading may be directly attached to a MeSH heading at a time. If you wish to attach multiple subheadings you must combine them with the OR connector or use the MeSH Browser:

thromboembolism/pc [majr] OR thromboembolism/di [majr]

- For a MeSH/subheading combination, PubMed always explodes the MeSH term and also explodes the subheading if it is explodable. In the example below, the explodable subheading (therapy) or one of its indentions (e.g., diet therapy) will be directly attached to the MeSH term (hypertension) or one of its indentions (hypertension, malignant).

Example: hypertension/th

Hypertension with its indentions:**Hypertension**

Hypertension, Malignant

Hypertension, Portal

Esophageal and Gastric Varices

Hypertension, Pulmonary

Persistent Fetal Circulation Syndrome

Hypertension, Renal

Hypertension, Renovascular

Nephrosclerosis

Therapy subheading and its indentions:**therapy**

diet therapy

drug therapy

nursing

prevention & control

radiotherapy

rehabilitation

surgery

transplantation

Sample of citation results:

Platelet eicosanoids and the effect of captopril in blood pressure regulation.

MeSH Terms:

- Angiotensin-Converting Enzyme Inhibitors/pharmacology*
- Animal
- Antihypertensive Agents/pharmacology*
- Arachidonic Acid/metabolism
- Blood Platelets/metabolism
- Blood Platelets/drug effects*
- Blood Pressure/drug effects*
- Captopril/pharmacology*
- Comparative Study
- Eicosanoids/metabolism*
- Fatty Acids, Unsaturated/metabolism
- Fatty Acids, Unsaturated/biosynthesis
- Hypertension/drug therapy
- Lipooxygenase/metabolism
- Male
- Prostaglandin D2/biosynthesis
- Prostaglandin-Endoperoxide Synthase/metabolism
- Rats
- Rats, Inbred SHR
- Rats, Wistar
- Support, Non-U.S. Gov't
- Thromboxanes/biosynthesis



Hypertension in pregnancy.

MeSH Terms:

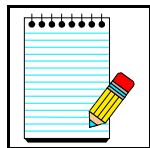
- Antihypertensive Agents/therapeutic use
- Chronic Disease
- Endothelium, Vascular/metabolism
- Female
- Human
- Hypertension/therapy*
- Hypertension/physiopathology
- Hypertension/etiology
- Hypertension/diagnosis
- Kidney Diseases/diagnosis
- Kidney Diseases/complications
- Male
- Pre-Eclampsia/physiopathology
- Pre-Eclampsia/etiology
- Pre-Eclampsia/diagnosis
- Pregnancy
- Pregnancy Complications, Cardiovascular/therapy*
- Pregnancy Complications, Cardiovascular/physiopathology
- Pregnancy Complications, Cardiovascular/etiology
- Pregnancy Complications, Cardiovascular/diagnosis
- Pregnancy Outcome



Salt: blood pressure, the kidney, and other harmful effects.

MeSH Terms:

- Animal
- Blood Pressure/drug effects*
- Comparative Study
- Diet, Sodium-Restricted
- Disease Progression
- Human
- Hypertension, Renal/metabolism
- Hypertension, Renal/etiology*
- Hypertension, Renal/diet therapy
- Rats
- Sodium Chloride/urine
- Sodium Chloride/blood
- Sodium, Dietary/adverse effects*



Take Note:

A list of the current subheadings and subheading explosions appears in PubMed's online Help (under References, see Subheadings and Families of Subheading Explosions) as well as Section B (MeSH Vocabulary) of this workbook.



Search Tip:

To **turn off both** the MeSH heading explosion and subheading explosion, you would enter:

hypertension/th [mh:noexp]

This turns off the explosion in **both** parts, searching for only the subheading therapy attached directly to only the MeSH term hypertension.

- You may also choose to “free-float” a subheading with a MeSH heading using the Boolean AND and the subheading field tag of [sh]. This is typically done if you wish to directly attach a subheading with a MeSH heading that is not an approved combination.

Example:

breast neoplasms [mh] AND trends [sh]

- To **turn off the subheading automatic explosion**, use the tag [sh:noexp]. You may **only** do this when “free-floating” a subheading.

Truncation Symbol:

- The asterisk (*) is the truncation symbol.

**Search Tip:**

There is no single character truncation symbol in PubMed.

Text Words:

- Terms that are qualified with the Text Words [tw] field tag will be searched for in the following fields:
 - Title
 - Abstract
 - Numbers from the Title and Abstract
 - MeSH headings and Subheading
(also fragments and phrases from these 2 fields)
 - Chemical Names of Substances
 - Secondary Source Identifier (The SI field identifies other data sources, databanks and accession numbers of molecular sequences discussed in MEDLINE articles.)
 - Personal Name as Subject

Title Word Searching

- Enter significant terms (numbers, too) from the title of an article.
- Each word must be followed by the [TI] search field tag.
- Words should be combined with the AND operator.

Example: I'm looking for an article. The title is "Memory improvement following cardiac transplantation".

Query box: memory [ti] AND improvement [ti] AND cardiac [ti] AND transplantation [ti]

Details:

PubMed Query:

```
((memory[ti] AND improvement[ti]) AND cardiac[ti]) AND transplantation[ti] AND notpubref[sb])
```

Search URL

Result:

[1](#)

Database:

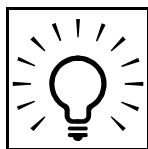
PubMed

User Query:

memory [ti] AND improvement [ti] AND cardiac [ti] AND transplantation [ti]

Result:

☐ 1 : [Roman DD, et al.](#)
Memory improvement following cardiac transplantation.
J Clin Exp Neuropsychol. 1997 Oct;19(5):692-7.
PMID: 9408799; UI: 98073116



Search Tip:

Alternatively, consider using the Title Word selection from the Fields pull-down menu in Limits. When using this method, you do not have to tag each title word.

Example:

for memory AND improvement AND cardiac AND transp Go Clear

Limits Preview/Index History Clipboard

- Use All Fields pull-down menu to specify a field
- Boolean operators AND, OR, NOT must be in upper case
- If search fields tags are used enclose in square brackets, e.g., rubella [ti]
- Search [limits](#) may exclude PreMEDLINE and publisher supplied citations

Limited to:

Title Word ☐ only items with abstracts

Publication Types Languages Subsets

Ages Human or Animal Gender

Entrez Date

Publication Date From To

Use the format YYYY/MM/DD; month and day are optional

Author Searching:

- Use Last Name Initials format with the [au] tag. Example: o'brien j [au]
- PubMed automatically truncates the author's name to account for varying initials.

Example:

o'brien j Go Clear

Limits Index History Clipboard

Display Brief Show: 500

Add to Clipboard Save Text 1-5 items of 5

1 : [O'Brien JM, et al.](#) Haloperido... [PMID:10534216]

2 : [O'Brien JA, et al.](#) Cotransmis... [PMID:10482779]

3 : [O'Brien JD, et al.](#) Pulmonary ... [PMID:10453889]

4 : [O'Brien JA.](#) A foundati... [PMID:10346358]

5 : [O'Brien JP, et al.](#) Actinical... [PMID:10025748]

- To turn off automatic truncation of an author's name, surround the author's name with double quotes and use the [au] search tag.

Search results for "O'Brien J" [au]:

Item	Author	Title	PMID
1	O'Brien J, et al.	Severe dee...	9765166
2	O'Brien J, et al.	Cloning an...	9742134
3	O'Brien J, et al.	Marked imp...	9519075
4	O'Brien J, et al.	Effects of...	9110954

Personal Name as Subject:

- Use the [ps] tag to search for citations to articles about a named individual. The name is searched in the same format as for authors.

Example: lincoln a [ps]



Take Note:

The Personal Name as Subject field is *not* available from the Search Field pull-down menu in Limits.

Example:

Search results for "lincoln a [ps]":

Item	Author	Title	PMID	UI
1	Alexander LL, Atkins NM	Lincoln's last legacy: a narrative of the president's obscured autopsy instruments.	9640910	98305092
2	Dimsdale JE	President Lincoln: an instance of stress and aging.	9492231	98151195
3	McKusick VA	Advisory statement by the panel on DNA testing of Abraham Lincoln's tissue.	9419809	98081125

Journal Name:

- Search by full journal name, MEDLINE abbreviation, or ISSN.

Examples: Journal of Biological Chemistry [ta]
 J Biol Chem [ta]
 0021-9258 [ta]

**Search Tip:**

Any single-word journal title or MEDLINE journal title abbreviation should be qualified with [ta].

Languages:

- First three letters of language may be used as abbreviation when searching.
(There are a few exceptions. Example: JPN for Japanese)

Language values may also be spelled out.

Examples: common cold [mh] AND chi [la]
 common cold [mh] AND chinese [la]
 common cold [mh] AND por [la]
 common cold [mh] AND portugese [la]

**Search Tip:**

Remember, the following languages are available from the Languages pull-down menu in Limits:



Entrez Date:

- The Entrez Date field contains the date that a record was initially added to PubMed, in the format yyyy/mm/dd [edat], e.g.,

1999/07/10 [edat]

- Month and day are optional:

1999 [edat]

1999/07 [edat]



Be aware that the Entrez Date will remain unchanged and is not updated to reflect the date a Publisher Supplied record is elevated to PREMEDLINE or when a PREMEDLINE record is elevated to MEDLINE.



Remember the **Entrez Date** pull-down menus in Limits.

Search Tip:

Publication Date:

- The date that the article was published in the format of YYYY/MM/DD [dp]. Use the [dp] tag.

1984/10/06 [dp]

- Month and day are optional:

1984/10 [dp]

1984 [dp]



Publication Date formats are not standardized from journal to journal.

Take Note:

Ranging:

- The colon (:) is used between ranging values.
- To search on Publication Date from 1993 to 1997, enter:

1993:1997 [dp]

- To search on a date, use the format YYYY/MM/DD

Example 1: Search on citations entered into PubMed from Jan 16, 1998 to Feb 13, 1998

1998/01/16:1998/02/13 [edat] where edat is the abbreviation for Entrez Date

Example 2: Search on citations entered into PubMed in January or February 1998

1998/01:1998/02 [edat]



Search Tip:

Remember the **Publication Date** fill-in-the-blank selection in Limits.

Publication Type :

- Describes the type of material the article represents
- Examples: Twin Study, News, Review, Clinical Trial, Retracted Publication, Letter
- Use the [pt] tag

Example: vascular diseases [majr] AND twin study [pt]



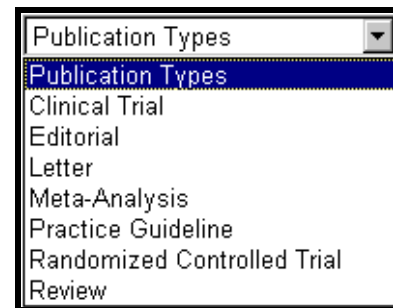
PubMed's Help includes a listing of all available Publication Types.

Take Note:



Search Tip: .

Remember, the following **Publication Types** are available from the pull-down menu in Limits:

**Subset:**

- Allows you to limit your search to a particular portion of PubMed
- Available values include:

MEDLINE	searched as	MEDLINE [sb]
PREMEDLINE	searched as	premedline [sb]
PUBLISHER-supplied	searched as	publisher [sb]
AIDS	searched as	aids [sb]

- Use the [sb] tag
- Example: hospice care AND aids [sb]



Search Tip:

Remember, you may use the **Subset** pull-down menu from Limits.

Limiting to published journal indexes:

- The following values are available:

<i>Abridged Index Medicus</i>	jsubseta
Dental	jsubsetd
Nursing	jsubsetn

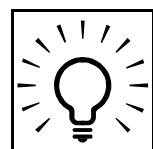


Do **not** use a field qualifier; just use the search value.

Search Tip:

Example:

baseball AND jsubseta



Remember, you may use the **Subset** pull-down menu from Limits to limit to these values.

Search Tip:

Secondary Source Identifier (SI):

- Identifies a secondary source that supplies information, e.g., other data sources, databanks and accession numbers of molecular sequences.
- The field is composed of a source followed by a slash followed by an accession number.

Example: GENBANK/AF113832

Use this field also to limit to or exclude the unique HealthSTAR citations in PubMed.

Unique Identifier Searching:

- To search for either the PubMed Unique Identifier (PMID) or the MEDLINE Unique Identifier (UI), **type in the number with or without the search field qualifier [uid]**.

Example: 98015703

- You can search for several unique identifier numbers by entering each number in the query box separated by a space, PubMed will OR the terms together. Do **not** enter the OR connector.

*Unique
Identifiers as
entered in
search query.*

*PubMed finds
the 2 unique
citations.*

The screenshot shows the PubMed search results page. At the top, the search bar contains the query '95231882 85200930'. Below the search bar, there are tabs for 'Limits', 'Preview/Index', 'History', and 'Clipboard'. The 'Preview/Index' tab is selected. Below the tabs, there are buttons for 'Display', 'Summary', 'Save', 'Text', 'Order', 'Details', and 'Add to Clipboard'. The 'Display' button is selected. Below the buttons, there is a 'Show' dropdown menu set to '20' and a text indicating 'Items 1-2 of 2' and 'One page.'. The search results are listed below, showing two citations. Each citation has a checkbox, a number, a link to the citation, the title, the journal information, and the PMID and UI numbers. The first citation is '1 : Chudler EH, Dong WK. The role of the basal ganglia in nociception and pain. Pain. 1995 Jan;60(1):3-38. Review. PMID: 7715939; UI: 95231882'. The second citation is '2 : Dong WK, Chudler EH, Martin RF. Physiological properties of intradental mechanoreceptors. Brain Res. 1985 May 20;334(2):389-95. PMID: 3873270; UI: 85200930'.

for 95231882 85200930 Go Clear

☐ Limits Preview/Index History Clipboard

Display Summary Save Text Order Details Add to Clipboard

Show: 20 Items 1-2 of 2 One page.

☐ 1 : [Chudler EH, Dong WK.](#) Related Articles
The role of the basal ganglia in nociception and pain.
Pain. 1995 Jan;60(1):3-38. Review.
PMID: 7715939; UI: 95231882

☐ 2 : [Dong WK, Chudler EH, Martin RF.](#) Related Articles
Physiological properties of intradental mechanoreceptors.
Brain Res. 1985 May 20;334(2):389-95.
PMID: 3873270; UI: 85200930

- To search a **Unique Identifier in combination with other terms** you **must** use the search field tag, [uid].

Example:

smith [au] AND (10403340 [uid] OR vaccines [mh]).

Grant Number Searching:

- Grant number information when provided on the article is included in the Author Affiliation or Address field.

Example: LM is the abbreviation used for NLM when grant numbers are assigned. To search for citations to references that indicated that support was from an NLM grant, enter:

lm [ad]

**Search Tip:**

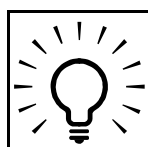
Caution: You may get false hits from other information provided in the Author Affiliation field.

**Take Note:**

PubMed's online Help includes a table listing Grant Abbreviations and Institute Acronyms

Limiting to citations with abstracts:

- Use the value: hasabstract.

**Search Tip:**

Do **not** use a field qualifier; just use the search value.

Example: baseball AND jsubsets AND hasabstract

**Search Tip:**

Remember you can use the check box in Limits to restrict to only items with abstracts.

Search Field Qualifier Tags

<u>Field Name</u>	<u>Abbreviation</u>	<u>Description</u>
Affiliation	[AD, AFFL]	Institutional affiliation and address of the primary author, and grant numbers.
All Fields	[ALL]	Includes all PubMed search fields
Author Name	[AU, AUTH]	Up to 25 authors are included. MEDLINE does not list the full name. The format to search for an author name is last name, followed by a space and the first initial(s), without periods (e.g., Fauci AS). Initials may be omitted when searching.
EC/RN Number	[RN, ECNO]	Number assigned by the Enzyme Commission (E.C.) to designate a particular enzyme and the RN lists the Chemical Abstracts (CAS) Registry Numbers.
Entrez Date	[EDAT]	Contains the date that a record was initially added to PubMed, in the format yyyy/mm/dd [edat], e.g., 1998/01/10 [edat].
Issue	[IP, ISSUE]	The number of the journal issue in which the article is published.
Journal Name	[TA, JOUR]	The journal title abbreviation, full journal name, or ISSN number (e.g., J Biol Chem, Journal of Biological Chemistry, 0021-9258).
Language	[LA, LANG]	The language in which the article was published.
MeSH Major Topic	[MAJR]	A MeSH term that is one of the main topics discussed in the article.
MeSH Terms	[MH, MESH]	NLM's Medical Subject Headings controlled vocabulary of biomedical terms which is used to describe the subject of each journal article in MEDLINE.
Page	[PG, PAGE]	The number of the first journal page that the article appears on.
Personal Name as Subject	[PS]	Use to search for citations about a named individual. Follow Author field search rules.

Publication Date	[DP, PDAT]	The date that the article was published in the format of yyyy/mm/dd (e.g. 1984/10/06). A year with just the month (e.g., 1984/03) will retrieve all for that month. Publication Date formats are not standardized from journal to journal.
Publication Type	[PT, PTYP]	Describes the type of material the article represents (e.g., Review, Clinical Trials, Retracted publications, Letters).
Secondary Source Identifier	[SI]	Identifies a secondary source that supplies information, e.g., other data sources, databanks and accession numbers of molecular sequences.
Subset	[SB]	Allows you to limit your search to a particular portion of PubMed (e.g., MEDLINE, PREMEDLINE, PUBLISHER-supplied, AIDS).
Subheading	[SH]	Use subheadings to further qualify your subject search.
Substance Name	[NM, SUBS]	The name of a chemical discussed in the article (MEDLINE Name of Substance field).
Text Words	[TW, WORD]	All words and numbers in the title and abstract, MeSH terms, subheadings, chemical substance names, personal name as subject, and secondary source identifier fields.
Title Words	[TI, TITL]	Words and numbers found in the title of an article.
Unique Identifier	[UID]	PubMed Unique Identifier PMID and MEDLINE Unique Identifier UI .
Volume	[VI, VOL]	The number of the journal volume in which the article is published.

**Take Note:**

You can print a version of this list from the PubMed Help (Search Field Descriptions and Tags).

Practice Exercises

Use search field abbreviations when doing these exercises. Remember you can use the History feature to combine searches.

1. Find references to articles discussing decision-making by nurse practitioners.
2. Find references to articles about Winston Churchill.
3. Find references to articles discussing video display terminals and carpal tunnel syndrome. Use the Related Articles feature to find similar articles. Limit the list of Related Articles to the publication type, Review. (Hint: Use History.)
4. Using the MeSH Browser, find citations to articles about the prevention of chickenpox or measles during pregnancy. Limit to English language articles that have abstracts.

Suggested Answers

1. Find references to articles discussing decision-making by nurse practitioners.

#1 AND #2 Go

☐ Limits Index **History** Clipboard

- Search History will be lost after one hour of inactivity
- To combine searches use # before search number, e.g., #2

Search

#2 Search **nurse practitioners** [mh]

#1 Search **decision making** [mh]

2. Find references to articles about Winston Churchill.

churchill w [ps] Go

3. Find references to articles discussing video display terminals and carpal tunnel syndrome. Use the Related Articles feature to find similar articles. Limit the list of Related Articles to the publication type, Review. (Hint: Use History.)

History screen:

#1 AND #2 Go Clear

☐ Limits Index **History** Clipboard

- Search History will be lost after one hour of inactivity
- To combine searches use # before search number, e.g., #2 AND #6

Search	Query	Time	Result
#3 Search #1 AND #2		15:11:17	10
#2 Search carpal tunnel syndrome [mh]		15:11:03	3527
#1 Search video display terminals [mh]		15:10:52	656

Limit the list of Related Articles to the publication type, Review. (Hint: Use History.)

Final History screen:

Search	Query	Time	Result
#5	Search #4 AND review [pt]	16:19:28	7
#4	Link to PubMed from (1 document(s))	16:19:10	102
#3	Search #1 AND #2	16:19:05	10
#2	Search carpal tunnel syndrome [mh]	16:18:56	3532
#1	Search video display terminals [mh]	16:18:47	656

4. Using the MeSH Browser, find citations to articles about the prevention of chickenpox or measles during pregnancy. Limit to English language articles that have abstracts.

Chickenpox MeSH Browser Detailed Display screen when selected the subheading of prevention & control:

Click on
Add button
to begin to
build your
strategy.

Chickenpox [\[Brief display\]](#)

A highly contagious infectious disease caused by the varicella-zoster virus (HERPESVIRUS 3, HUMAN). It usually affects children, is spread by direct contact or respiratory route via droplet nuclei, and is characterized by the appearance on the skin and mucous membranes of successive crops of typical pruritic vesicular lesions that are easily broken and become scabbed. Chickenpox is relatively benign in children, but may be complicated by pneumonia and encephalitis in adults. (From Dorland, 27th ed)

Add this term/subheadings to the Search using operator: AND

☐ blood ☐ cerebrospinal fluid ☐ chemically induced ☐ classification
☐ complications ☐ congenital ☐ diagnosis ☐ drug therapy ☐ economics
☐ embryology ☐ enzymology ☐ epidemiology ☐ ethnology ☐ etiology ☐ genetics
☐ history ☐ immunology ☐ metabolism ☐ microbiology ☐ mortality ☐ nursing
☐ pathology ☐ physiopathology ☒ prevention and control ☐ psychology
☐ radiography ☐ surgery ☐ therapy ☐ transmission ☐ ultrasonography ☐ urine
☐ veterinary ☐ virology

Next, you look up measles and display the detailed screen. Select the prevention & control subheading:

Select the **OR** operator. Then click on the **Add** button.

Measles [\[Brief display\]](#)

A highly contagious infectious disease caused by MORBILLIVIRUS, common among children but also seen in the nonimmune of any age, in which the virus enters the respiratory tract via droplet nuclei and multiplies in the epithelial cells, spreading throughout the reticuloendothelial system. (From Dorland, 27th ed)

this term/subheadings to the Search using operator:

☐ blood ☐ cerebrospinal fluid ☐ chemically induced ☐ classification
☐ complications ☐ congenital ☐ diagnosis ☐ diet therapy ☐ drug therapy
☐ economics ☐ embryology ☐ enzymology ☐ epidemiology ☐ ethnology
☐ etiology ☐ genetics ☐ history ☐ immunology ☐ isolation and purification
☐ metabolism ☐ microbiology ☐ mortality ☐ nursing ☐ parasitology ☐ pathology
☐ physiopathology ☒ prevention and control ☐ psychology ☐ radiography
☐ surgery ☐ therapy ☐ transmission ☐ urine ☐ veterinary ☐ virology

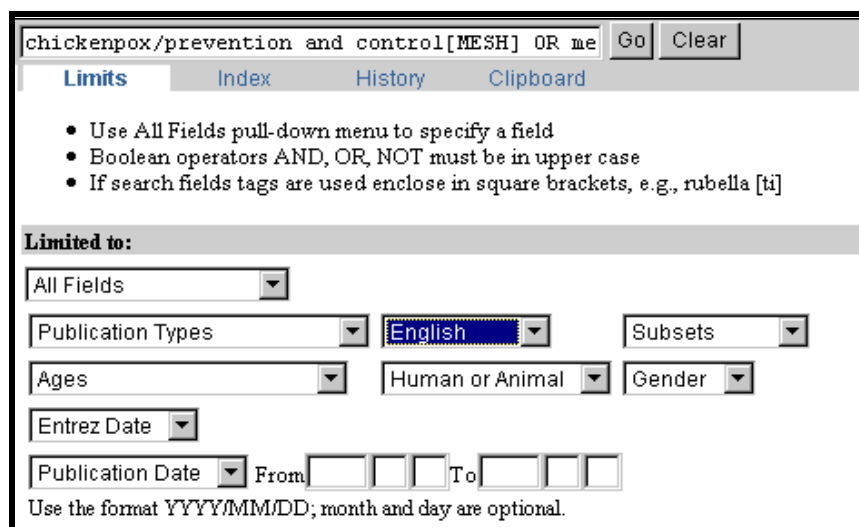
Next, enter pregnancy. No need to look at the detailed display, so just click on the Add button to AND this term into your search strategy:

Pregnancy [\[Detailed display\]](#)

The condition of having a developing embryo or fetus in the body, after union of an ovum and spermatozoon. (Dorland, 27th ed)

this term to the Search using operator:

Next, click on the **PubMed Search** button from the MeSH Browser screen to run the strategy in PubMed. From the Results screen, click on **Limits** and select **English** from the **Languages** pull-down menu and then click the **Go** button.



chickenpox/prevention and control[MESH] OR me

Limits Index History Clipboard

- Use All Fields pull-down menu to specify a field
- Boolean operators AND, OR, NOT must be in upper case
- If search fields tags are used enclose in square brackets, e.g., rubella [ti]

Limited to:

All Fields

Publication Types English Subsets

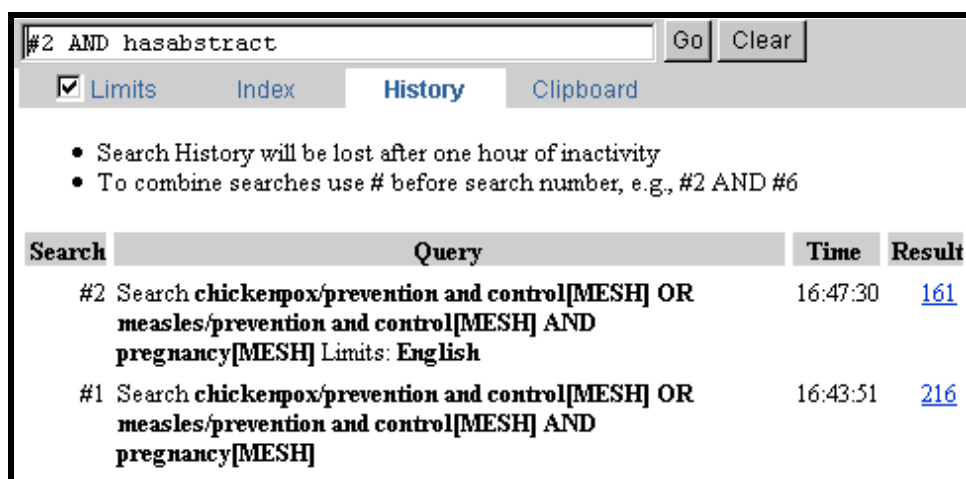
Ages Human or Animal Gender

Entrez Date

Publication Date From To

Use the format YYYY/MM/DD; month and day are optional.

Now, go the History screen, to check the search statement number to use so you can limit to those citations that have an abstract:



#2 AND hasabstract

☒ Limits Index **History** Clipboard

- Search History will be lost after one hour of inactivity
- To combine searches use # before search number, e.g., #2 AND #6

Search	Query	Time	Result
#2	Search chickenpox/prevention and control[MESH] OR measles/prevention and control[MESH] AND pregnancy[MESH] Limits: English	16:47:30	161
#1	Search chickenpox/prevention and control[MESH] OR measles/prevention and control[MESH] AND pregnancy[MESH]	16:43:51	216

N O T E S

Clinical Queries

This specialized search query is intended for clinicians and has built-in search "filters" based on research done by R. Brian Haynes, M.D., Ph.D. at McMaster University in Canada.

Four study categories or filters are provided:

- therapy
- diagnosis
- etiology
- prognosis

Two emphasis categories or filters are provided:

- sensitivity (also referred to as "recall" -- includes relevant articles but probably including some less relevant; will get more retrieval)
- specificity (also referred to as "precision" -- will get less retrieval)

How to get there

- Click on **Clinical Queries** on the PubMed homepage sidebar to access this search feature.

Clinical Queries Screen:

Link to Haynes citation.

Link to details about "filtering."



Take Note:

The **Clinical Queries** page has a link to the Brian Haynes citation and abstract for the article in MEDLINE discussing this research. You can also link to a **Table for Clinical Queries using Research Methodology Filters** that shows a listing of terms using the PubMed and NLM's ELHILL search engines.



Search Tip:

The default filter category is **Therapy**.
The default emphasis is **Specificity**.

Search Example: **Gallstones and pain** -- using the Clinical Queries defaults of
Therapy and Specificity

PubMed

Clinical Queries using Research Methodology Filters

This specialized search is intended for clinicians and has built-in search "filters" based largely upon [Haynes RB et al.](#) Four study categories--therapy, diagnosis, etiology, prognosis--are provided, and you may indicate whether you wish your search to be more sensitive (i.e., include most relevant articles but probably including some less relevant ones) or more specific (i.e. including mostly relevant articles but probably omit a few). See [this table](#) for details regarding filtering.

Indicate the category and emphasis below:

Category: ☒ therapy ☐ diagnosis ☐ etiology ☐ prognosis

Emphasis: ☐ sensitivity ☒ specificity

Enter subject search (do not repeat any of the words above):

NOTE: If you want to retrieve everything on a subject area, you should not use this page. The objective of filtering is to reduce the retrieval to articles that report research conducted with specific methodologies, and retrieval will be greatly reduced.

Search Results using **Therapy category and Specificity emphasis**:

- ☐ 1 : [de los Santos AR, Marti ML, Di Girolamo G, Diego Espinosa J, Morano MA, Tobar JC, Del Prete C.](#) [Related Articles](#)
Propinox in biliary colic: a multicenter, randomized, prospective and parallel double-blind study of three doses of propinox versus placebo in acute biliary colic pain.
Int J Tissue React. 1999;21(1):13-8.
PMID: 10463136; UI: 99392432
- ☐ 2 : [Guma C, Viola L, Thome M, Galdame O, Facelli A, Di Bucci A, Vainberg D.](#) [Related Articles](#)
[Recurrence of vesicular microlithiasis. Controlled study with different dosis of ursodeoxycholic acid].
Medicina (B Aires). 1998;58(5 Pt 1):474-6. Spanish.
PMID: 9922479; UI: 99121234
- ☐ 3 : [Al-Waili N, Saloom KY.](#) [Related Articles](#)
The analgesic effect of intravenous tenoxicam in symptomatic treatment of biliary colic: a comparison with hyoscine N-butylbromide.
Eur J Med Res. 1998 Oct 14;3(10):475-9.
PMID: 9753705; UI: 98428703
- ☐ 4 : [Arendt R, Kundt G, Arendt T.](#) [Related Articles](#)
Placebo in biliary colic study?
Gastroenterology. 1998 Sep;115(3):799. No abstract available.
PMID: 9742005; UI: 98410659

Repeat the search on gallstones and pain using the category **therapy** and the emphasis **sensitivity**. We should see *higher* retrieval.

Search screen:

Select here.

PubMed

Clinical Queries using Research Methodology Filters

This specialized search is intended for clinicians and has built-in search "filters" based largely upon [Haynes RB et al](#). Four study categories--therapy, diagnosis, etiology, prognosis--are provided, and you may indicate whether you wish your search to be more sensitive (i.e., include most relevant articles but probably including some less relevant ones) or more specific (i.e. including mostly relevant articles but probably omit a few). See [this table](#) for details regarding filtering.

Indicate the category and emphasis below:

Category: ☒ therapy ☐ diagnosis ☐ etiology ☐ prognosis

Emphasis: ☒ sensitivity ☐ specificity

Enter subject search (do not repeat any of the words above):

NOTE: If you want to retrieve everything on a subject area, you should not use this page. The objective of filtering is to reduce the retrieval to articles that report research conducted with specific methodologies, and retrieval will be greatly reduced.

Search Results using **Therapy** category and **Sensitivity** emphasis:

Show: Items 1-20 of 223 Page 1 of 12 Select page: [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) >>

- ☐ **1** : [Berger MY, van der Velden JJ, Lijmer JG, de Kort H, Prins A, Bohnen AM](#) [Related Articles](#)
Abdominal symptoms: do they predict gallstones? A systematic review.
 Scand J Gastroenterol. 2000 Jan;35(1):70-6.
 PMID: 10672838; UI: 20135393
- ☐ **2** : [Sand JA, Frey T, Malmiemi K, Nordback IH](#) [Related Articles](#)
Nifedipine is not feasible for biliary pain in patients with gallbladder stones.
 Int J Clin Pharmacol Ther. 1999 Dec;37(12):608-12.
 PMID: 10599953; UI: 20066936
- ☐ **3** : [Rissanen A, Fogelholm M](#) [Related Articles](#)
Physical activity in the prevention and treatment of other morbid conditions and impairments associated with obesity: current evidence and research issues.
 Med Sci Sports Exerc. 1999 Nov;31(11 Suppl):S635-45. Review.
 PMID: 10593540; UI: 20059113
- ☐ **4** : [Hansen KA, Lowman L, Fiedler EP, Tho SP, Martindale R, McDonough PG](#) [Related Articles](#)
Pelvic adhesion formation after intraperitoneal installation of gallstones in a rabbit model.
 Fertil Steril. 1999 Nov;72(5):868-72.
 PMID: 10560991; UI: 20023647

N O T E S

Journal Browser

The PubMed **Journal Browser** allows you to look up information about a journal in both PubMed and PubRef and search for citations from that journal. You can locate a journal using:

- Title
- ISSN (International Standard Serial Number)
- MEDLINE journal title abbreviations

How to get there

- Clicking on the **Journal Browser** link from the PubMed Homepage sidebar takes you to the Journal Browser screen:

journals with links to publisher Web sites is also available.'"/>

Click on **journals with links to publisher Web sites** for a list of full-text journals available on the Web to which PubMed is currently linked. New journals are regularly added.



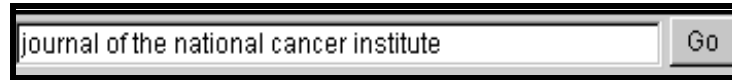
Take Note:

- Some journals may require that you register, subscribe, or pay a fee in order to view the full text of an article.
- Contact the journal publishers as noted on their individual Web sites for specific access information.

Journal Browser Screen:

- Enter the journal information.
- Click on **Go** button to run search.

Search example: *Journal of the National Cancer Institute*



A search input field containing the text "journal of the national cancer institute" and a "Go" button to the right.

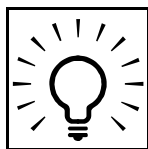
Search Results:

1-1 items of 1		
Title	ISSN	Medline abbr.
JOURNAL OF THE NATIONAL CANCER INSTITUTE	0027-8874	J Natl Cancer Inst

- The **MEDLINE abbreviation** link will search PubMed for citations to that journal.
- The **ISSN** link will take you to a commercial journal Web site called PubList.com which provides further information about the journal.

Single Citation Matcher

The **Single Citation Matcher** allows you to find a single citation using bibliographic information such as journal, volume, issue, page number, and publication date.



Search Tip:

The **Single Citation Matcher** can also be used to get a “Table of Contents” listing of items indexed from a particular issue of a journal. Caution: Remember some MEDLINE journals are selectively indexed and there are indexing policies which might mean that not every article from every journal will be in the database.

How to Get There

- Clicking on **Single Citation Matcher** on the PubMed homepage sidebar takes you to the Citation Matcher for Single Articles screen:

Search Example: *Gene Therapy*, 1999, page 271

- Enter as much information as you have. Only one field is required.
- PubMed will inform you if it can't find a match with the information entered.
- Click on the **Search** button.

Citation Matcher for Single Articles

Nucleotide Protein Genome

Enter information about the article you wish to find.

Journal:

Date:

Volume: Issue: First page:

Author's last name and initials (e.g., Smith BJ)

Search Result:

☐ Limits [Preview/Index](#) [History](#) [Clipboard](#)

Display

☐ 1 : [Wheeler JJ, Palmer L, Ossanlou M, MacLachlan I, Graham RW, Zhang YP, Hope MJ, Scherrer P, Cullis PR.](#) [Related Articles](#)
Stabilized plasmid-lipid particles: construction and characterization.
Gene Ther. 1999 Feb;6(2):271-81.
PMID: 10435112; UI: 99363970



Take Note:

The **Batch Citation Matcher** allows you to retrieve the PubMed IDs for many articles all at once. This feature requires that you enter the bibliographic information (journal, volume, page, etc.) in a specific format.

The Batch Citation Matcher is primarily a tool used by publishers to check their electronic submissions and links.

Practice Exercises

Try to find the references using the following information and PubMed's Single Citation Matcher:

1. Arthritis Rheum
1982
page 1271-7

2. R. G. Johnson
Journal of Thoracic and Cardiovascular Surgery
Jan. 1998
page 148

3. V. Lee
Biochemical Pharmacology
vol. 29
issue 14

4. Vojvoda
Lancet
Jan. 6

Suggested Answers

Try to find the references using the following information and PubMed's Single Citation Matcher:

1. Arthritis Rheum
1982
page 1271-7

Citation Matcher for Single Articles

Enter information about the article you wish to find.

Journal:

Date:

Volume: Issue: First page:

Author's last name and initials (e.g., Smith BJ)

- ☐ 1 : [Tan EM, Cohen AS, Fries JF, Masi AT, McShane DJ, Rothfield NF, Schaller JG, Talal N, Winchester RJ.](#) [Related Articles](#)
The 1982 revised criteria for the classification of systemic lupus erythematosus.
Arthritis Rheum. 1982 Nov;25(11):1271-7.
PMID: 7138600; UI: 83048456

2. R. G. Johnson
Journal of Thoracic and Cardiovascular Surgery
Jan. 1998
page 148

Citation Matcher for Single Articles

Enter information about the article you wish to find.

Journal:

Date:

Volume: Issue: First page:

Author's last name and initials (e.g., Smith BJ)

- ☐ 1 : [Cohn WE, Suen HC, Weintraub RM, Johnson RG.](#) [Related Articles](#)
The "H" graft: an alternative approach for performing minimally invasive direct coronary artery bypass.
J Thorac Cardiovasc Surg. 1998 Jan;115(1):148-51.
PMID: 9451058; UI: 98112888

3. V. Lee
Biochemical Pharmacology
vol. 29
issue 14

Citation Matcher for Single Articles

Enter information about the article you wish to find.

Journal:

Date:

Volume: Issue: First page:

Author's last name and initials (e.g., Smith BJ)

- ☐ 1 : [DiCioccio RA, Srivastava BI, Rinehart KL Jr, Lee VJ, Branfman AR, Li LH.](#) [Related Articles](#)
Structure-activity relationship, selectivity and mode of inhibition of terminal deoxyribonucleotidyltransferase by streptolydigin analogs. Biochem Pharmacol. 1980 Jul 15;29(14):2001-8. No abstract available. PMID: 6985561; UI: 80265281

4. Vojvoda
Lancet
Jan. 6

*Without the
publication year,
the month and day
are not helpful.
Fill in the form with
the significant
information you have.*

Citation Matcher for Single Articles

Enter information about the article you wish to find.

Journal:

Date:

Volume: Issue: First page:

Author's last name and initials (e.g., Smith BJ)

- ☐ 1 : [Vojvoda D, Grinnell K, Sernyak M, Mazure CM.](#) [Related Articles](#)
Monozygotic twins concordant for response to clozapine. Lancet. 1996 Jan 6;347(8993):61. No abstract available. PMID: 8531572; UI: 96129919

N O T E S