

PubMed Workshop

The screenshot shows the PubMed homepage. At the top, there's a navigation bar with links for NCBI, Resources, How To, Sign in to NCBI, Help, and a search bar. Below the search bar are links for PubMed, Advanced search, and a "Search" button. The main content area features a large image of an open book on the left. In the center, there's a "PubMed" section with a brief description of the database. To the right, there's a "PubMed COMMONS" section with a "Featured comment" from Feb 10, a link to a raw data analysis, and icons for social media or sharing. Below these sections are three columns of links: "Using PubMed", "PubMed Tools", and "More Resources".

Using PubMed

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PubMed Tools

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En introduktion til PubMed

PubMed er National Library of Medicine's webadgang til Medline, produceret i samarbejde med tidsskriftudgiverne.

Derudover indeholder PubMed en række citationer fra andre peer-review-tidsskrifter indenfor biomedicinske emner.

Tidsskriftudgiverne leverer data elektronisk til databasen allerede før papirudgaven af tidsskriftet foreligger.

- Opdateres dagligt [PubMed – as supplied by publisher]
- Gennemgår emneindekseringsproces [PubMed - in process]
- Overgår til selve Medline [PubMed - indexed for MEDLINE]
- Forsynes med links til "related articles". De opstilles ikke kronologisk, men i relevans-orden ("ranking") efter hvor meget de har til fælles med den udvalgte artikel
- Eventuelt links til tidsskriftets egen hjemmeside, som muligvis giver fuldtekstadgang
- Eventuelt links til bøger

Søgning

Du kan anvende

- fritekst (PubMed anvender 'term-mapping')
 - frasesøgning
 - trunkering – søgning på ordstammer med brug af *
 - Forfattersøgning samt søgning i andre udvalgte felter
 - Filtre/limits til at afgrænse en søgning
 - MeSH-headings og subheadings (kontrollerede emneord)
 - Avanceret søgning ved brug af de Booleske operatorer (AND, OR, NOT)
 - Søgning på bestemt citation – Single Citation Matcher
- og kombinationer heraf

Simpel søgning - Fritekstsøgning

1. Gå til **søgefeltet**
2. Skriv dit søgeargument, for eksempel **Flu vaccine**
3. Klik på **Search**

The screenshot shows the PubMed search interface with the query 'flu vaccine' entered in the search bar. The results page displays 20 items from 1 to 21408. Each result includes a title, author(s), journal, date, and PMID. To the right of the search results, there are several filters and tools: 'Filters: Manage Filters', 'New feature' (try Display Settings), 'Results by year' (with a 'Download CSV' link), 'PMC Images search for flu vaccine' (with four small thumbnail images), and 'Find related data' (with a 'Database: Select' dropdown and 'Find items' button). At the bottom, there is a 'Search details' section showing the search terms: "influenza vaccines"[MeSH Terms] OR ("influenza"[All Fields] AND "vaccines"[All Fields]) OR "influenza vaccines"[All Fields] OR ("flu"[All Fields] AND "vaccine"[All Fields]) OR "flu vaccine"[All Fields]. There is also a 'Recent Activity' section.

Automatic term mapping:

PubMed forsøger at "oversætte" fritekstord og finde MeSH-termer og synonymer.

Derfor er det en god ide altid at tjekke i **Search details**, hvordan PubMed har "oversat" søgningen.

Her er søgningen oversat til:

"influenza vaccines"[MeSH Terms] OR ("influenza"[All Fields] AND "vaccines"[All Fields]) OR "influenza vaccines"[All Fields] OR ("flu"[All Fields] AND "vaccine"[All Fields]) OR "flu vaccine"[All Fields]

Frasesøgning

I PubMed er det muligt at søge på fraser (sammenhørende ord) ved at bruge citationstegn, for eksempel: "influenza vaccine"

NB: brug af citationstegn sætter 'automatic term mapping' ud af funktion!

Hvis du søger på "influenza vaccine" findes kun de referencer, hvor *influenza vaccine* optræder som sammenhørende ord. Der oversættes ikke til MeSH-termer, eller for eksempel flertalsformer.

The screenshot shows the PubMed search interface. The search bar contains the query "influenza vaccine". Below the search bar, the results summary is displayed: "Results: 1 to 20 of 6817". The results list includes a single study by Lawson EF et al. on patients with systemic lupus erythematosus receiving pneumococcal and influenza vaccinations. The results are sorted by Recently Added. A red circle highlights the search term "influenza vaccine" in the search bar and the results count "1 to 20 of 6817".

Det giver et søgeresultat på 6.817 poster - PubMed har ikke "oversat" søgningen.

PubMed søger automatisk på fraser hvis der anvendes:

Citationstegn: "influenza vaccine"

Felt-søgning: influenza vaccine[ti]

Trunkering: influenza vaccin*

Trunkering

Trunkering betyder at du søger på ordstammen af et ord og alle efterfølgende endelser.

Trunkeringstegnet er *

Eksempel: **surg*** finder poster, der indeholder ordene: surgeon surgery surgical etc.

PubMed søger på de første 600 varianter af det trunkerede ord.

NB: brug af trunkering sætter 'automatic term mapping' ud af funktion!

The screenshot shows the PubMed search interface. The search bar contains the query "influenza vaccin*". Below the search bar, the results summary is displayed: "Results: 1 to 20 of 19871". The results list includes a large number of studies, indicating that the asterisk (*) has triggered trunking. A red circle highlights the search term "influenza vaccin*" in the search bar and the results count "1 to 20 of 19871".

Vær opmærksom på at trunkering af et ord i en 'flere-ords-søgning' kan resulterer i en uventet frasesøgning:

Eks.: **fetus infection* maternal**

Her opfatter PubMed **fetus infection*** som en frase

Avanceret søgning - Søgning i bestemte felter (Advanced Search Builder)

I PubMed er det muligt at begrænse søgningen til udvalgte felter.

1. Klik på **Advanced** under søgerfeltet på forsiden
2. Klik på drop-down listen under **Builder**

The screenshot shows the PubMed Advanced Search Builder. On the left, there's a sidebar with a history section and a dropdown menu labeled "Builder" which is currently set to "Title". Below the sidebar, the URL "You are here: NCBI > Literature" is visible. The main area has a search bar with placeholder text "Use the builder below to create your search" and buttons for "Edit" and "Clear". To the right of the search bar are two "Show index list" links. The bottom right corner of the main area says "Write to the Help Desk".

3. Vælg ønskede felt – og skriv din søgeterm
4. Klik på **Search**

The screenshot shows the PubMed Advanced Search Builder with a search query "influenza vaccin*" entered into the "Title" field. The "Builder" dropdown is still set to "Title". Below the search bar, the "Search" button is visible. The URL "You are here: NCBI > Literature" is also present.

Søgefelterne kan også tilføjes dine søgetermer i søgeboksen på forsiden.
Søgefelterne angives i en skarp parentes [] efter søgetermen:

The screenshot shows the PubMed search interface. The search term 'influenza vaccin*[ti]' is highlighted with a red oval. The results page displays 20 items from page 1 of 357. The first result is 'Influenza Vaccines: Challenges and Solutions' by Houser K. Subbarao K. The second result is 'Prescribing rate of influenza vaccine among internal medicine residents for outpatient continuum care.' by Srivannachakom W. Asavathantanont A. Washirasaksiri C. Chaisathaphon T. Chouriyagune C. Phisalprapa P. Pandepong D. The third result is 'Influenza vaccination during pregnancy: A systematic review of fetal death, spontaneous abortion, and congenital malformation safety outcomes.' by J Med Assoc Thai. 2014 Dec;97(12):1281-9.

Der findes disse muligheder:

Search Field Descriptions and Tags

Affiliation [AD]	Investigator [IR]	Pharmacological Action [PA]
Article Identifier [AID]	ISBN [ISBN]	Place of Publication [PL]
All Fields [ALL]	Issue [IP]	PMID [PMID]
Author [AU]	Journal [TA]	Publisher [PUBN]
Author Identifier [AUID]	Language [LA]	Publication Date [DP]
Book [book]	Last Author [LASTAU]	Publication Type [PT]
Comment Corrections	Location ID [LID]	Secondary Source ID [SI]
Corporate Author [CN]	MeSH Date [MHDA]	Subset [SB]
Create Date [CRDT]	MeSH Major Topic [MAJR]	Supplementary Concept [NM]
Completion Date [DCOM]	MeSH Subheadings [SH]	Text Words [TW]
EC/RN Number [RN]	MeSH Terms [MH]	Title [TI]
Editor [ED]	Modification Date [LR]	Title/Abstract [TIAB]
Entrez Date [EDAT]	NLM Unique ID [JID]	Transliterated Title [TT]
Filter [FILTER]	Other Term [OT]	UID [PMID]
First Author Name [1AU]	Owner	Version
Full Author Name [FAU]	Pagination [PG]	Volume [VI]
Full Investigator Name [FIR]	Personal Name as Subject [PS]	
Grant Number [GR]		

Filtre / Limits – Begrænsen søgningen

Du kan begrænse sine søgeresultater på flere måder:

- Erstat en generel søgeterm med en mere specifik søgeterm
 - (for eksempel "low back pain" i stedet for "back pain")
- Tilføj flere termer til din søgning
- Brug PubMeds filtre

Du kan vælge følgende filtre:

article types - text availability - publication dates - species - languages - sex - subjects - journal categories - ages - search fields

Filtrene ses i venstre side at skærmbilledet.

Klik på **Show additional filters** for at se/vælge alle typer.

Klik på **Costumize/Costum range** for at vælge værdier i den enkelte type.

The screenshot shows the PubMed search interface. On the left, there is a sidebar with various filters: Article types (Clinical Trial, Guideline, Review, Customize...), Text availability (Abstract, Free full text, Full text), PubMed Comm (Reader comm), Publication date (5 years, 10 years, Custom range), Species (Humans, Other Animals), Languages (English, Customize...), Clear all, Show addition, and Related citations. A dropdown menu for 'Languages' is open, showing checkboxes for Danish, English, Esperanto, Estonian, Finnish, French, Georgian, German, Greek, Hebrew, Hindi, Hungarian, Icelandic, Indonesian, Italian, Japanese, and Kinyarwanda. Below this is a 'Show' button. The main content area displays search results for 'Clinical Effectiveness of Split-Virion Versus Subunit Trivalent Influenza Vaccines in Older Adults'. The results list includes several articles with titles like 'Response to the influenza vaccine in obese and nonobese healthcare profiles are affected by vaccine preparation and preexisting immunity.', 'Induced antibody response to circulating influenza a (H3N2) viruses in...', and 'Influenza vaccine in atopic children with egg allergy.'. To the right of the results, there are sections for 'Filters: Manage Filters', 'New feature' (try the new Display Settings option - Sort by Relevance), 'Results by year' (a histogram showing the distribution of publication years from 2000 to 2017), 'Titles with your search terms' (links to related articles), and '669 free full-text articles in PubMed Central' (with links to specific studies). At the bottom right, there is a link 'See all (669)...'.

Husk at slå limitfunktionen fra igen inden du starter en ny søgning!!!

Emnesøgning - Søgning ved hjælp af thesaurus - MeSH

Du kan bruge NLM's kontrollerede emneordsliste – MeSH (Medical Subject Headings) – til at finde egnede søgtermer. MeSH indeholder cirka 26.000 termer og opdateres årligt.

MeSH-terminerne er opbygget hierarkisk – så du kan navigere til bredere/snævrere terminer. MeSH-terminerne inkluderer synonymer, forskellige stavemåder, entals- og flertalsformer for det enkelte begreb.

Til MeSH-terminerne er knyttet et antal subheadings for at angive særlige aspekter ved MeSH-terminen. For eksempel adverse effects, diagnosis, surgery etc.

1. Vælg **MeSH** i drop-down menuen ud for søgerfeltet
2. Skriv **flu vaccine** i søgerfeltet
3. Hvis der er flere mulige MeSH terminer vises de i en liste. Vælg den relevante term. Er der kun én mulighed vises denne med det samme
4. Markér eventuelt **adverse effects** i listen over subheadings, for at begrænse søgningen til artikler, der omhandler bivirkninger ved influenza vaccine
5. Klik på **Add to search builder**
6. - og derefter **Search PubMed** for at udføre søgningen i PubMed

The screenshot shows the NCBI MeSH search interface. In the search bar, 'flu vaccine' is entered. To the right, the 'PubMed Search Builder' window is open, showing the selected term 'flu vaccine' under 'Add to search builder'. An arrow points from the text 'Klik på Add to search builder' to this selection. Below the search bar, a list of subheadings for 'Influenza Vaccines' is shown, including 'administration and dosage', 'adverse effects', 'analysis', 'antagonists and inhibitors', 'biosynthesis', 'blood', 'chemical synthesis', 'chemistry', 'classification', 'contraindications', 'diagnostic use', 'economics', 'etiology', 'genetics', 'history', 'immunology', 'isolation and purification', 'metabolism', 'organization and administration', 'pharmacokinetics', 'pharmacology', 'physiology', 'radiation effects', 'standards', 'statistics and numerical data', 'supply and distribution', 'therapeutic use', and 'toxicity'. At the bottom of the search results page, there are sections for 'Recent Activity' and a search bar for 'influenza vaccines'.

Kombiner søgninger - Advanced Search Builder



Klik på **Advanced** og brug søgningerne i søgehistorien, **History**, til at kombinere søgesættene.

Kombiner søgningen på *Influenza Vaccines/adverse effects* med søgningen på *Egg Hypersensitivity* med **AND**. (i dette eksempel #19 og #20)

1. Klik på **Add** ud for søgning #19
2. Klik på **Add** ud for søgning #20
3. Klik på **Search** for at udføre søgningen og se posterne – eller
4. Klik på **Add to history** for at tilføje søgningen i søgehistorien

The screenshot shows the PubMed Advanced Search Builder. At the top, the search bar contains the query: `("Egg Hypersensitivity"[Mesh]) AND ("Influenza Vaccines/adverse effects"[Mesh])`. Below the search bar is a 'Builder' section where two search terms are listed: `Egg Hypersensitivity"[Mesh]` and `"Influenza Vaccines/adverse effects"[Mesh]`. Each term has an 'All Fields' dropdown and an 'AND' operator. Red arrows point from the 'Add' button in the history table to the 'Add' buttons in the builder section. The 'History' table lists previous searches:

Search	Add to builder	Query	Items found	Time
#20	Add	Search "Egg Hypersensitivity"[Mesh]	414	09:22:41
#19	Add	Search "Influenza Vaccines/adverse effects"[Mesh]	2752	09:15:52
#12	Add	Search influenza vaccine* [ti]	3957	07:57:06
#11	Add	Search influenza vaccine*	18604	07:51:15
#10	Add	Search "influenza vaccine"	6817	07:47:30
#9	Add	Search "flu vaccine"	430	07:47:10
#8	Add	Search flu vaccine	21408	07:43:58

Advanced Search Builder

Fra Advanced Search Builder har du mulighed for at vælge specifikke søgefelter.

Brug for eksempel funktionen til at finde **Cochrane Reviews**:

Vælg Journal fra listen og skriv Cochrane. Vælg Cochrane database of systematic reviews og kombiner med din søgning

The screenshot shows the PubMed Advanced Search Builder. At the top, there's a navigation bar with links to NCBI Resources, How To, PubMed Home, More Resources, and Help. On the right, there are links to Sign in to NCBI and a YouTube Tutorial. The main area has a title "PubMed Advanced Search Builder". Below it is a search bar containing the query: ("The Cochrane database of systematic reviews"[Journal]) AND "Influenza Vaccines/adverse effects"[Mesh]. There are "Edit" and "Clear" buttons next to the search bar. Underneath the search bar is a section titled "Builder" with three search fields. The first field has "Journal" selected and contains "The Cochrane database of systematic reviews", with a "Show index list" link. The second field has "All Fields" selected and contains "'Influenza Vaccines/adverse effects'[Mesh]", with a "Show index list" link. The third field has "All Fields" selected and is empty, with a "Show index list" link. Below the builder section is a "Search" button and an "Add to history" link. Further down is a "History" section with a table of previous searches. The table has columns for Search, Add to builder, Query, Items found, and Time. It lists three entries: #16 (Add) Search "Egg Hypersensitivity"[Mesh] (414 items, 05:44:48); #15 (Add) Search ("Influenza Vaccines"[Mesh]) AND "Egg Hypersensitivity"[Mesh] (57 items, 05:44:38); and #11 (Add) Search "Influenza Vaccines/adverse effects"[Mesh] (2754 items, 05:44:04). There are links to Download history and Clear history at the top of the history table.

Søgning på forfatternavne

Forfatternavne søges ved at angive efternavn efterfulgt af initialer og koden for forfatter [au].
For eksempel *Vorum H* og ikke *Henrik Vorum*.

I de tilfælde hvor det fulde navn optræder på artiklen, kan du også søge på det fulde navn, men det giver en ufuldstændig søgning, da det ikke er kutyme at anføre det fulde navn.
Eksempel:

Search	Add to builder	Query	Items found	Time
#20	Add	Search vorum henrik [Author]	68	06:01:14
#19	Add	Search vorum h [Author]	132	06:01:00

Vær opmærksom på forskellige stavemåder – for eksempel navne med æ, ø og å.

Vær opmærksom på flerleddede navne, og eventuelle navneskift.

Eksempel: Lars Hvilsted Rasmussen.

Oftest affilierer han sig som Rasmussen LH.

Men i enkelte tilfælde har han brugt det fulde navn og skal findes som Hvilsted Rasmussen L.

Find citation – Single Citation Matcher

Funktionen kan med fordel anvendes, hvis du ønsker at finde en bestemt artikel – for eksempel en reference fra en litteraturliste:

Larsen TB, Lip GY, Skjøth F, Due KM, Overvad K, Hvilsted Rasmussen L. Added predictive ability of the CHA2DS2VASc risk score for stroke and death in patients with atrial fibrillation: the prospective Danish Diet, Cancer, and Health cohort study. *Circ Cardiovasc Qual Outcomes.* 2012 May;5(3):335-42.

1. På forsiden – under **PubMed Tools** vælges **Single Citation Matcher**
2. Indtast oplysninger om den pågældende artikel. Vælg de mest præcise oplysninger du har: Eksempelvis **Journal, Date, First page**
3. Klik på **Search**

The screenshot shows the PubMed homepage. At the top, there's a navigation bar with links for NCBI Resources, How To, Sign in to NCBI, and a search bar. Below the search bar, there's a dropdown menu set to 'PubMed'. On the left, there's a sidebar with links for Using PubMed (PubMed Quick Start Guide, Full Text Articles, PubMed FAQs, PubMed Tutorials, New and Noteworthy) and PubMed Tools (PubMed Mobile, Single Citation Matcher, Batch Citation Matcher, Clinical Queries, Topic-Specific Queries). The 'Single Citation Matcher' link is circled in red. On the right, there's a section for PubMed COMMONS featuring a 'Featured comment' about inflammation and pain, followed by links to MeSH Database, Journals in NCBI Databases, Clinical Trials, E-Utilities (API), and LinkOut.

The screenshot shows the 'PubMed Single Citation Matcher' search form. It has fields for Journal ('Circ Cardiovasc Qual Outcomes'), Date ('2012'), Details ('Volume', 'Issue', 'First page' with value '335'), Author name ('[empty]'), Limit authors ('Only as first author' and 'Only as last author' checkboxes), and Title words ('[empty]'). At the bottom are 'Search' and 'Clear form' buttons.

Single Citation Matcher kan også bruges, når du evaluerer din søgning for at tjekke, at en kendt artikel er fundet ved søgning.

Find relaterede artikler til kendt artikel

Når en referencen er fundet, vises den i abstract-format.
De fem mest relaterede artikler er vist til højre i skærbilledet.

Klik på **See All...** for at se alle relaterede artikler

- Eller **See reviews...** hvis det kun er reviews, du ønsker

The screenshot shows the PubMed search results for the article. The search query is "Circ Cardiovasc Qual Outcomes[Jour] AND 335[page] AND 2012[pdat]". The results page displays the abstract of the article, which discusses the added predictive ability of the CHA2DS2VASc risk score for stroke and death in patients with atrial fibrillation. The abstract includes details about the study population, methods, and conclusions. To the right of the abstract, there is a sidebar titled "Related citations in PubMed" which lists five related articles. The fifth article in this list is circled in red. The sidebar also includes links for "Full text links", "Save items", and "See reviews...". At the bottom of the sidebar, there is a link to "PubMed Commons".

I PubMeds hjælpetekst kan du læse mere om PubMeds 'beregning' af relevans.

Gem en søgning i My NCBI

For at gemme en søgning skal du først have registreret en My NCBI account.
Klik på **My NCBI** i øverste højre hjørne.



Vælg **Register for an account** og følg vejledningen på skærmen for at oprette en account.

A screenshot of the "Register for an NCBI Account" form. The page has a blue header bar with "NCBI Resources How To" on the left and "Sign in to NCBI" on the right. Below the header, the URL "My NCBI » Register" is shown. The form itself has several sections:

- Required information:** "Select a username and password". It includes fields for "Username", "Password", and "Repeat password".
- Contact information:** "E-mail".
- In case you forget your password:** Fields for "Question" and "Answer".
- Character recognition:** A CAPTCHA field containing "6VWJ7".
- Buttons:** "Create account" (in blue), "Sign in with an existing account" (in grey), and a "Go" button next to a dropdown menu set to "Azusa Pacific University".

Når du har oprettet en account, kan du for eksempel gemme dine søgningsrækker, gemme
søgesæt eller udvalgte poster. Her vises, hvordan du gemmer en søgning i My NCBI.

Gå til **History** under Advanced Search
Placér musen på den søgning du ønsker at gemme
Klik på **venstre musetast**
Klik på **Save in My NCBI**

History				Download history	Clear history
Search	Add to builder	Query	Items found	Time	
#11	Add	Search "Influenza Vaccines/adverse effects"[Mesh]	2754	05:56:29	
#15	Add	Search ("Influenza Vaccines"[Mesh]) AND "Egg Hypersensitivity"[Mesh]	57	05:56:20	
#17	Add	Search ("The Cochrane database of systematic reviews"[Journal]) AND "Influenza Vaccines/adverse	10	05:56:07	
AND in builder					
#16		hypersensitivity"[Mesh]	414	05:44:48	
OR in builder		"a vaccine" [ti]	3957	05:33:52	
#9		"a vaccine"	18608	05:33:18	
NOT in builder		"a vaccine"	6818	05:33:01	
#8		"a vaccine"	21414	05:32:33	
Delete from history					
#6					
Show search results					
#5					
Show search details					
Save in My NCBI					

Du har nu mulighed for at vælge, om du selv vil opdatere din søgning, eller om du vil have en e-alert, når der kommer nye poster til.