

LUNCH & LEARN



Systematische Literaturrecherche in PubMed Eine Einführung



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Moderation/Host: Dr. Angelika Eisele-Metzger

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Systematische Literaturrecherche in PubMed – eine Einführung

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Institut für Evidenz in der Medizin



Interessenkonflikt

- Seit 2020 wissenschaftliche Mitarbeiterin am Institut für Evidenz in der Medizin (Uniklinik Freiburg)
- ... versichere, dass in Bezug auf den Inhalt des folgenden Vortrags in den letzten 3 Jahren keine Interessenkonflikte bestanden, die sich aus Beziehungen zu einem Unternehmen ergaben, z. B. einem Beschäftigungsverhältnis, einer Beratertätigkeit, finanziellen Zuwendungen für Forschungsvorhaben, Vorträge oder andere Tätigkeiten.

Inhalt

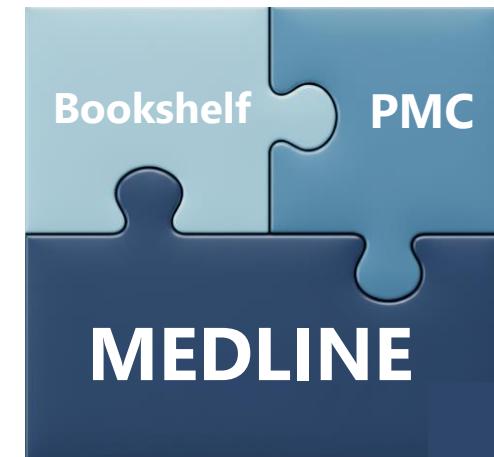
PubMed

<https://pubmed.ncbi.nlm.nih.gov/>

- Was ist PubMed?
 - Suchmöglichkeiten in PubMed
 - Aufbau einer Suchstrategie in PubMed
 - Literatur
-
-
-

Was ist PubMed?

- Frei zugängliche Ressource für die Suche von Literatur aus der Biomedizin und dem Gesundheitsbereich
- National Center for Biotechnology Information, U.S. National Library of Health
- Ca. 5.200 indexierte Zeitschriften
- Ca. 39 Mio. Referenzen (>1 Mio. neue Referenzen/Jahr)
- Enthält verschiedene Publikationstypen
(z.B. klinische Studien, systematische Reviews, Kommentare, Retraction Notice)
- Thesaurus: Medical Subject Headings (MeSH), jährliche Aktualisierung



Suchmöglichkeiten in PubMed

The image shows the PubMed homepage on the left and the Advanced Search Builder on the right. A blue dashed arrow points from the 'Advanced' link on the homepage to the search builder interface.

PubMed Homepage:

- NIH National Library of Medicine logo
- National Center for Biotechnology Information text
- PubMed logo
- An 'Advanced' link is circled in blue.
- A text block: "PubMed® comprises more than 39 million citations for biomedical literature from MEDLINE, life science journals, and online books. Citations may include links to full text content from PubMed Central and publisher web sites."
- Log in button
- Search button

PubMed Advanced Search Builder:

- PubMed.gov logo and User Guide link
- Add terms to the query box:
 - All Fields dropdown
 - Enter a search term input field
 - ADD button
 - Show Index link
- Query box:
 - Enter / edit your search query here input field
 - Search button

Suchmöglichkeiten in PubMed

Darstellung der Suchergebnisse

The screenshot shows the PubMed search interface with the query "smoking prevention" entered. The results page displays 71,768 entries. The left sidebar includes filters for year (1893 to 2026), publication date (1, 5, or 10 years, or custom range), text availability (Abstract, Free full text, Full text), and article attribute. The main content area shows three search results:

- 1** **Smoking prevention** in children and adolescents: A systematic review of individualized interventions.
Cite: Duncan LR, Pearson ES, Maddison R.
Patient Educ Couns. 2018 Mar;101(3):375-388. doi: 10.1016/j.pec.2017.09.011. Epub 2017 Sep 21.
PMID: 28987451
RESULTS: We included 16 studies administered in various settings: seven in health care; four informally during and outside of school hours; three in the home; and two in extra-curricular settings. Positive preventive effects in **smoking** behavior ranging from 3-months to 4-y ...
- 2** Serious games for **smoking prevention** and cessation: A systematic review of game elements and game effects.
Cite: Derkzen ME, van Strijp S, Kunst AE, Daams JG, Jaspers MWM, Fransen MP.
J Am Med Inform Assoc. 2020 May 1;27(5):818-833. doi: 10.1093/jamia/ocaa013.
PMID: 32330255 [Free PMC article.](#)
Most frequently used were general and intermittent rewards, theme and genre features, and punishments. Six studies on **smoking prevention** together assessed 20 determinants and found statistically significant positive effects for 8 determinants (eg, attitude, knowledg ...
- 3** **Smoking Prevention** and Cessation Programs for Children and Adolescents Focusing on Parental Involvement: A Systematic Review and Meta-Analysis.
Cite: Rifat MA, Orsini N, Qazi B, Galanti MR.
J Adolesc Health. 2025 Apr;76(4):532-541. doi: 10.1016/j.jadohealth.2024.10.032. Epub 2024 Dec 28.

Suchmöglichkeiten in PubMed

Darstellung eines Eintrages

Digital Object
Identifier
→ Link zum Journal

Zusammenfassung

> Patient Educ Couns. 2018 Mar;101(3):375-388. doi: 10.1016/j.pec.2017.09.011. Epub 2017 Sep 21.

Smoking prevention in children and adolescents: A systematic review of individualized interventions

Lindsay R Duncan ¹, Erin S Pearson ², Ralph Maddison ³

Affiliations + expand

PMID: 28987451 DOI: 10.1016/j.pec.2017.09.011

Abstract

Objective: This study systematically reviewed the literature to determine what type of cognitive-behavioral based interventions administered outside of formal school settings effectively prevent smoking initiation among children and adolescents.

Methods: Applying the PRISMA guidelines we searched MEDLINE, PsycINFO, CINHAL, Pub Med, SCOPUS, and Sport Discus. Article review, data extraction, and assessment of risk of bias were conducted by two independent reviewers.

Results: We included 16 studies administered in various settings: seven in health care; four informally during and outside of school hours; three in the home; and two in extra-curricular settings. Positive preventive effects in smoking behavior ranging from 3-months to 4-years were observed in eight studies. Social environmental influences (e.g., parental smoking, friends) are salient contributing factors.

Conclusions: Effective approaches involved interventions conducted in health care settings as well as those employing interpersonal communication and support strategies (e.g., via peer leaders, parent support, physicians).

Practice implications: Primary health care settings may be optimal for implementing cigarette

FULL TEXT LINKS
ELSEVIER
FULL-TEXT ARTICLE

ACTIONS
“ Cite
Collections
◀ Permalink

PAGE NAVIGATION

◀ Title & authors

Abstract

Similar articles

Cited by

Publication types

MeSH terms

LinkOut - more resources

Volltext

Zitierung

CITE
Duncan, L. R., Pearson, E. S., & Maddison, R. (2018). Smoking prevention in children and adolescents: A systematic review of individualized interventions. *Patient education and counseling*, 101(3), 375–388. <https://doi.org/10.1016/j.pec.2017.09.011>

Copy

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Format: APA

Suchmöglichkeiten in PubMed

Darstellung eines Eintrages

> Patient Educ Couns. 2018 Mar;101(3):375-388. doi: 10.1016/j.pec.2017.09.011. Epub 2017 Sep 21.

Smoking prevention in children and adolescents: A systematic review of individualized interventions

Lindsay R Duncan ¹, Erin S Pearson ², Ralph Maddison ³

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PMID: 28987451 DOI: 10.1016/j.pec.2017.09.011

Abstract

FULL TEXT LINKS
ELSEVIER
FULL-TEXT ARTICLE

ACTIONS
“ Cite
Collections
Permalink

Hilfreiche Informationen /
Weiterführende Literatur

Similar articles

[Screening and brief intervention for alcohol and other abuse.](#)
Harris SK, Louis-Jacques J, Knight JR.
Adolesc Med State Art Rev. 2014 Apr;25(1):126-56.
PMID: 25022191 Review.

[Risk and protective profile of tobacco and alcohol use among Iranian population- based study.](#)
Baheiraei A, Soltani F, Ebadi A, Foroushani AR, Cheraghi MA.
Int J Adolesc Med Health. 2016 Mar 16;29(3):ijamh.2017.29.issue-3/ijamh-2015-0089/ija10.1515/ijamh-2015-0089.

Cited by

[Prevalence and Factors Influencing Smoking Behavior among Female Inmates in Malaysia.](#)
Jusoh S, Naing NN, Wan-Arfah N, Hajidah WN, Arifin WN, Wong LS, Djearamane S, Antony ACT, Saleem M, Selvaraj S.
Healthcare (Basel). 2023 Jan 9;11(2):203. doi: 10.3390/healthcare11020203.
PMID: 36673571 Free PMC article.

[Tobacco use among adolescents in Qatar: Findings from Global Youth Tobacco Surveys 2004-2013.](#)
Al-Dahshan A, El Zoghbi M, Chehab MAH, Naja S, Selim NAA.
Tob Prev Cessat. 2019 Mar 13;5:10. doi: 10.18332/tpc/105110. eCollection 2019.
PMID: 32411875 Free PMC article.

Publication types

> Systematic Review

MeSH terms

> Adolescent
> Adolescent Behavior
> Humans
> Primary Health Care / methods*
> Smoking / adverse effects*
> Smoking Prevention / methods*

<https://pubmed.ncbi.nlm.nih.gov/28987451/>

Suchmöglichkeiten in PubMed

PubMed Advanced Search Builder

Add terms to the query box

All Fields

Enter a search term

Query box

Enter / edit your search query here

ADD Show Index

Add to History

History and Search Details

Search Actions Details Query

#1 ... > Search: **smoking prevention**

Results Time

71,799 10:29:54

Showing 1 to 1 of 1 entries

Advanced Search Builder

für den „Bau“ komplexer Suchanfragen

Eingrenzung der Suche auf definierte Suchfelder, z.B.

- Author
- Title / Abstract
- Journal

Ergebnisse vorheriger Suchanfragen

<https://pubmed.ncbi.nlm.nih.gov/advanced/>

Aufbau einer Suchstrategie

Schritte einer systematischen Literaturrecherche

Entwicklung der Fragestellung

Festlegung des Rechercheprinzips

Festlegung der Datenbanken

Identifikation von Stichwörtern und Schlagwörtern

Entwicklung der Suchstrings

Überprüfung des Suchstrings

Durchführung der Recherche

Dokumentation, Export

Aufbau einer Suchstrategie

▪ Festlegung der Suchkomponenten

Welche Bestandteile einer Fragestellung werden in die Suche eingeschlossen?

▪ Identifikation von Suchbegriffen:

Schlüsselbegriffe und ihre Synonyme, verwandte Begriffe

Brainstorming, Expert*innen, Thesaurus, KI-Unterstützung

Singular/Plural, britisches/amerikanisches Englisch, Bindestrich/Apostrophe

*Beispiel: child oder children
randomized oder randomised
healthcare oder health care*

Aufbau einer Suchstrategie

Beispiel:

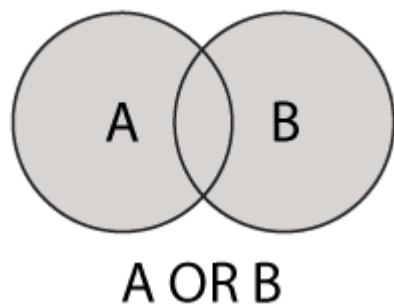


Population	<i>Adults</i>	
Intervention	<i>Milk and dairy products</i>	→ <i>butter, cheese, kefir, buttermilk, cream yogurt, yoghurt</i>
Control	<i>Usual diet</i>	
Outcome	<i>Cardiovascular disease</i>	→ <i>coronary heart disease, stroke, coronary disease, heart disease, vascular disease</i>
Study design	<i>Randomized controlled trials</i>	→ <i>RCT, randomly, randomized, randomised</i>

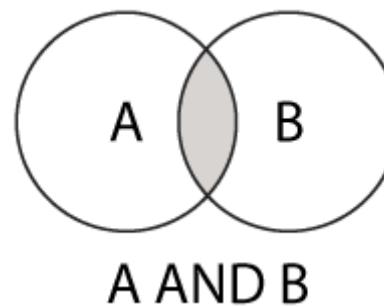
Erstellt mit OpenAI, ChatGPT-5

Aufbau einer Suchstrategie

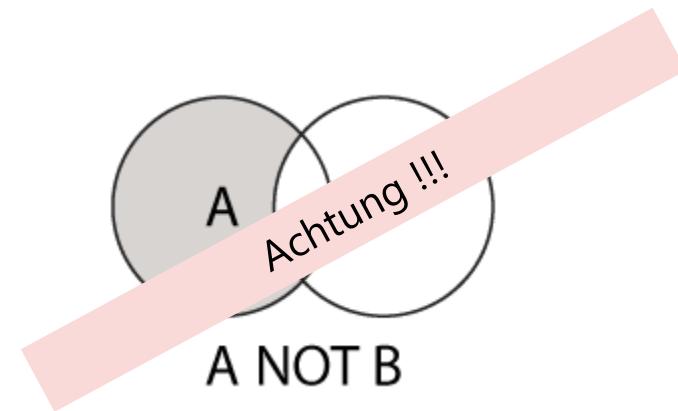
- **Bool'sche Operatoren:** **OR** / **AND** / **NOT**



milk OR cheese



milk AND stroke



adults NOT children

Aufbau einer Suchstrategie

Beispiel:



Suchstrategie in PubMed	
#1	milk OR milks OR dairy OR butter OR cheese OR cheeses OR kefir OR buttermilk OR cream OR yogurt OR yogurts OR yoghurt OR yoghurts
#2	cardiovascular disease OR cardiovascular diseases OR coronary heart disease OR coronary heart diseases OR stroke OR strokes OR coronary disease OR coronary diseases OR heart attack OR heart attacks OR vascular disease OR vascular diseases
#3	RCT OR randomized OR randomised OR randomly OR random
#4	#1 AND #2 AND #3

Erstellt mit OpenAI, ChatGPT-5

Aufbau einer Suchstrategie

- **Klammerung**
- **Trunkierung**
- **Feldersuche**
- **Phrasensuche**
- **Wortabstands-Operator**

Aufbau einer Suchstrategie

▪ Klammerung

*Suche mit mehreren Operatoren, Operatoren-Rangfolge festlegen
Mehrfacheingaben reduzieren*

cardiovascular disease OR cardiovascular diseases
OR coronary heart disease OR coronary heart diseases
OR coronary disease OR coronary diseases
OR vascular disease OR vascular diseases



(cardiovascular OR coronary OR heart
OR vascular) AND (disease or diseases)

▪ Trunkierung (*)

Suche nach Wortvariationen, Abkürzung von Suchbegriffen

random OR randomize OR randomise OR randomly
OR randomized OR randomised OR randomization
OR randomisation



random*

Aufbau einer Suchstrategie

▪ Feldersuche

Suche in definierten Feldern

[Title/Abstract] oder [tiab]

milk*[Title/Abstract] OR butter*[Title/Abstract]

The screenshot shows the PubMed Advanced Search Builder. At the top right is the PubMed logo and a 'User Guide' link. Below the logo is a search bar containing the query 'milk* OR dairy OR butter* OR cream*'. To the left of the search bar is a dropdown menu set to 'Title/Abstract', which is circled in blue. To the right of the search bar are 'ADD' and 'Show Index' buttons. At the bottom is a large 'Query box' with a placeholder 'Enter / edit your search query here' and a 'Search' button.

<https://pubmed.ncbi.nlm.nih.gov/advanced/>

Aufbau einer Suchstrategie

- **Phrasensuche**

"search term"

Suche nach Wortkombination in exakter Reihenfolge,

in exakter Schreibweise

“cardiovascular disease” OR “coronary heart disease”

- **Wortabstands-Operator**

"search terms"[field:~N]

Suche nach Wortkombinationen, die in bestimmten Abständen

zueinander stehen

“cardiovascular diseases”[\[title/abstract:~3\]](#)

Aufbau einer Suchstrategie

Beispiel – Variante 1: *Klammerung*



Suchstrategie in PubMed	
#1	milk*[tiab] OR butter*[tiab] OR cheese*[tiab] OR kefir*[tiab] OR buttermilk[tiab] OR cream*[tiab] OR yogurt*[tiab] OR yoghurt*[tiab]
#2	((“cardiovascul*” OR “coronar*” OR “heart” OR “vascular”) AND disease*) OR stroke* OR “heart attack*”
#3	RCT OR random*
#4	#1 AND #2 AND #3

Erstellt mit OpenAI, ChatGPT-5

Aufbau einer Suchstrategie

Beispiel – Variante 2: Wortabstands-Operatoren



Suchstrategie in PubMed	
#1	milk*[tiab] OR butter*[tiab] OR cheese*[tiab] OR kefir*[tiab] OR buttermilk[tiab] OR cream*[tiab] OR yogurt*[tiab] OR yoghurt*[tiab]
#2	"cardiovascular disease"[tiab:~3] OR "coronary disease"[tiab:~3] OR "heart disease"[tiab:~3] OR "vascular disease"[tiab:~3] OR "cardiovascular diseases"[tiab:~3] OR "coronary diseases"[tiab:~3] OR "heart diseases"[tiab:~3] OR "vascular diseases"[tiab:~3] OR stroke*[tiab] OR "heart attack"[tiab:~3] OR "heart attacks"[tiab:~3]
#3	RCT OR random*
#4	#1 AND #2 AND #3

Erstellt mit OpenAI, ChatGPT-5

Aufbau einer Suchstrategie

Schlagworte (Medical Subject Headings, kurz MeSH)

= Begriffe, die den in einer Datenbank aufgeführten Referenzen anhand von bspw. thematischen und/oder methodischen Gesichtspunkten (bspw. Krankheitsbild, Studiendesign, Dokumenttyp) von den Betreibern der Datenbanken zugeordnet wurden

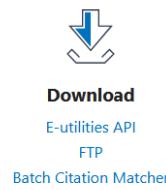
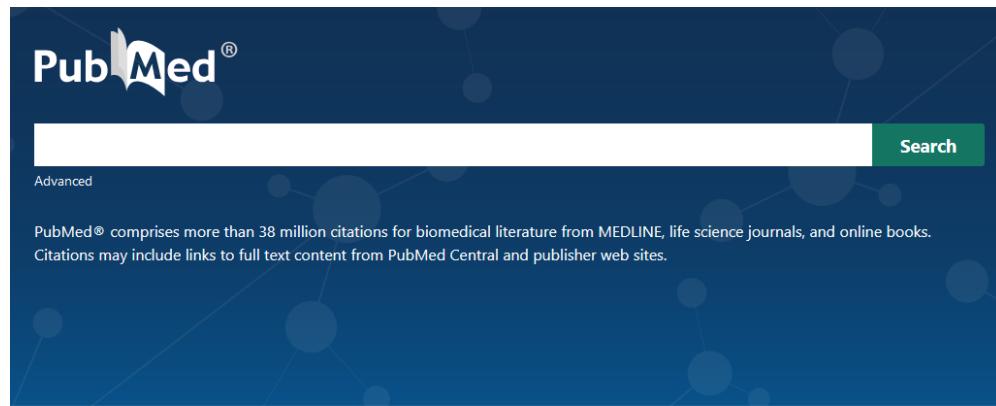
RefHunter, 2024

Wichtig: stammen vom Betreiber der Datenbank

müssen i.d.R. für jede Datenbank spezifisch identifiziert werden

Aufbau einer Suchstrategie

Schlagworte (Medical Subject Headings, kurz MeSH)



Dairy Products

Raw and processed or manufactured milk and milk-derived products. These are usually from cows (bovine) but are also from goats, sheep, reindeer, and water buffalo.

Date introduced: January 1, 1999

PubMed search builder options

Subheadings:

<input type="checkbox"/> adverse effects	<input type="checkbox"/> microbiology	<input type="checkbox"/> statistics and numerical data
<input type="checkbox"/> analysis	<input type="checkbox"/> parasitology	<input type="checkbox"/> supply and distribution
<input type="checkbox"/> classification	<input type="checkbox"/> poisoning	<input type="checkbox"/> toxicity
<input type="checkbox"/> economics	<input type="checkbox"/> radiation effects	<input type="checkbox"/> virology
<input type="checkbox"/> history	<input type="checkbox"/> standards	

Restrict to MeSH Major Topic.
 Do not include MeSH terms found below this term in the MeSH hierarchy.

Tree Number(s): G07.203.300.350, J02.500.350
MeSH Unique ID: D003611

Entry Terms:

- Dairy Product
- Product, Dairy
- Products, Dairy

All MeSH Categories

- Phenomena and Processes Category
- Physiological Phenomena
- Diet, Food, and Nutrition
- Food

Dairy Products

- Butter
- Ghee
- Cultured Milk Products
- Buttermilk
- Cheese
- Kefir
- Koumiss
- Yogurt

Ice Cream
Margarine
Milk

PubMed Search Builder

"Dairy Products" [Mesh]

Add to search builder AND Search PubMed

Aufbau einer Suchstrategie

Beispiel:



Suchstrategie in PubMed

#1	milk*[tiab] OR butter*[tiab] OR cheese*[tiab] OR kefir*[tiab] OR buttermilk[tiab] OR cream*[tiab] OR yogurt*[tiab] OR yoghurt*[tiab] OR " dairy products "[MeSH]
#2	(("cardiovascul*" OR "coronar*" OR "heart" OR "vascular") AND disease*) OR stroke* OR "heart attack*" OR " cardiovascular diseases "[MeSH]
#3	RCT OR random* OR " Randomized Controlled Trial "[Publication Type]
#4	#1 AND #2 AND #3

Erstellt mit OpenAI, ChatGPT-5

Aufbau einer Suchstrategie

Beispiel:



Suche in PubMed am 5. November 2025

History and Search Details					Download	Delete
Search	Actions	Details	Query	Results	Time	
#4	...	>	Search: #1 AND #2 AND #3	1,202	02:41:41	
#3	...	>	Search: RCT OR random* OR "Randomized Controlled Trial"[Publication Type]	1,949,181	02:41:27	
#2	...	>	Search: ((cardiovascul* OR "coronar*" OR "heart" OR "vascular") AND disease*) OR stroke* OR "heart attack*" OR "cardiovascular diseases"[MeSH]	3,659,951	02:41:15	
#1	...	>	Search: milk*[tiab] OR butter*[tiab] OR cheese*[tiab] OR kefir*[tiab] OR buttermilk[tiab] OR cream*[tiab] OR yogurt*[tiab] OR yoghurt*[tiab] OR "dairy products"[MeSH]	250,486	02:36:04	

Showing 1 to 4 of 4 entries

Vielen Dank für Ihre Aufmerksamkeit!

Kontakt: Julia Stadelmaier
julia.stadelmaier@uniklinik-freiburg.de

Literatur

- **PubMed User Guide**
<https://pubmed.ncbi.nlm.nih.gov/help/>
- **EbM-Netzwerk, RefHunter Systematische Literaturrecherche**
https://refhunter.org/research_support/rechercheschritte/
- **Cochrane Deutschland**
US-Shutdown trifft PubMed: Handreichung zeigt alternative Quellen für Literaturrecherche auf"
<https://www.cochrane.de/news/us-shutdown-trifft-pubmed-handreichung-zeigt-alternative-quellen-fuer-literaturrecherche-auf> (letzter Zugriff 04.11.2025)
- **IQWIG**
Auswirkungen der US-Politik auf die Literaturrecherche
<https://www.iqwig.de/presse/im-fokus/us-wissenschaftspolitik/auswirkungen-der-us-politik-auf-die-literaturrecherche/> (letzter Zugriff 04.11.2025)

Evaluation



https://survey.lamapoll.de/Lunch_and_Learn_PubMed/de

workshops@cochrane.de

Lunch & Learn



HANDOUT AUFZEICHNUNG



Weitere Handouts und Aufzeichnungen vergangener Webinare auf
<https://www.cochrane.de/workshops-events/workshops/lunch-learn-kurzwebinare>

Übersetzungen



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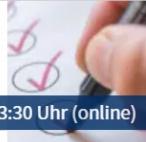


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Systematische Übersichtsarbeiten
kritisch bewerten - AMSTAR 2



14. November 2025 09:00 - 13:30 Uhr (online)

GRADE



02. - 04. Dezember 2025 (online)

Metaanalysen (Grundlagen)



05. - 10. Februar 2026 (online)

Bleiben Sie auf dem Laufenden:



Workshops

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<https://www.cochrane.de/interessentenliste-workshops>

<https://www.cochrane.de/veranstaltungen>

Evaluation



https://survey.lamapoll.de/Lunch_and_Learn_PubMed/de

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für Gesundheit

aufgrund eines Beschlusses
des Deutschen Bundestages