

Finding the Literature

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PMBH Clinical Library



Health
Mid North Coast
Local Health District

In this session

- o Answering your clinical question
- o Search strategy - concepts and limitations
- o Which database?
- o Searching in Ovid Medline – including boolean operators, truncation, MeSH
- o Finding the full-text
- o MNCLHD Library Service

Have you formulated your clinical question

P - Population (or patient, people, problem)

I - Intervention (test, drug, new service etc)

C - Comparison (status quo or alternative)

O - Outcome (what do you hope will happen)

Eg. Does **cranberry juice** help **prevent UTIs** in the **hospitalised elderly**?

Develop a search strategy

- o From your clinical question, identify 2-4 main **concepts**, to become keywords in your search
- o For each concept consider **synonyms** that may be used in the literature, including different spellings.
- o Think about broad or narrow terms – what's your most important concept? Which one is not a deal-breaker?
- o Consider **limits** which may restrict your search – such as English only, date of publication, type of study, age group.



Does **cranberry juice** help **prevent UTIs** in the **hospitalised elderly**?

Concepts

Group similar concepts together. One way to do this is using your PICO :

o Concept 1, Population

- Aged
- Elderly
- Aged care
- Geriatric nursing

o Concept 2, Intervention

- Cranberry juice
- Cranberr*
- Vaccinium

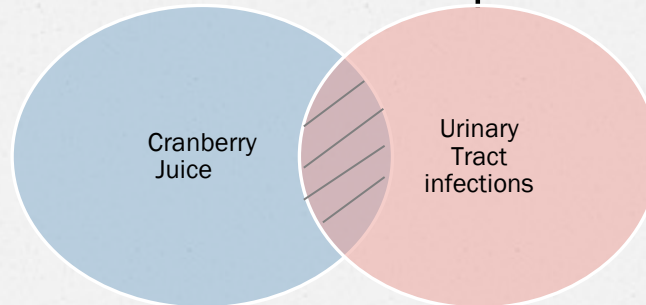
Concept 3, Outcome

- Urinary tract infection*
- UTI*

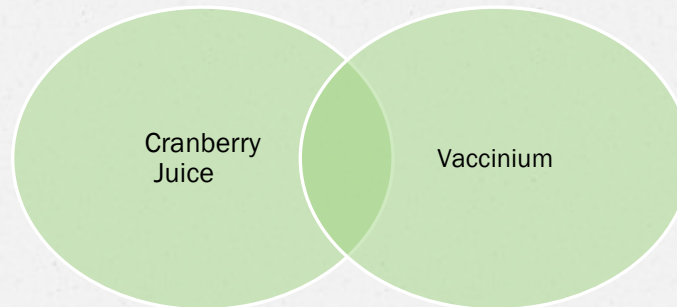


Boolean operators

AND narrows your search by ensuring ALL terms are included. Where different concepts overlap.



OR broadens your search by combining similar concepts



Limiting your search

Consider what limits you want to place on the information you retrieve. For example:

- English language articles
- Articles published in the last 10 years
- Aged 65+
- Peer reviewed journals
- Review articles

Tips!

Resist limiting by full-text – MNCLHD library can usually find the articles for you if they are not readily available via the database

And don't overdo the limiting – you don't want to end up with nothing!

Which database?

- o **Medline** - US National Library of Medicine **23 million references in 5600 journals since 1946**
- o **Embase** – Biomedical & pharmaceutical literature - European
- o **CINAHL** - Nursing and allied health literature (not on CIAP)
- o **Informit Health Collection** – Australian, includes grey literature
- o **PsychInfo** - Psychological, social, behavioural, and health sciences
- o **Cochrane Library** – Systematic reviews and clinical trials
- o **Joanna Briggs** - Australian based evidence, mainly nursing but broadening to allied health

Full text of the articles?

- Sometimes available in the database where you searched
- If using CIAP you can click “request the article”
- Or, try our e-journals site at <http://tinyurl.com/libraryejournals>
- Or - just email library.pmbh@ncahs.health.nsw.gov.au with your list and we'll send what you need within a day or two –sometimes in a flash!

Effectiveness of Cranberry Capsules to Prevent Urinary Tract Infections in Vulnerable Older Persons: A Double-Blind Randomized Placebo-Controlled Trial in Long-Term Care Facilities

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OBJECTIVES: To determine whether cranberry capsules prevent urinary tract infection (UTI) in long-term care facility (LTCF) residents.

DESIGN: Double-blind randomized placebo-controlled multicenter trial.

SETTING: Long-term care facilities (LTCFs).

PARTICIPANTS: LTCF residents (N = 928; 703 women, median age 84).

MEASUREMENTS: Cranberry and placebo capsules were taken twice daily for 12 months. Participants were stratified according to UTI risk (risk factors included long-term catheterization, diabetes mellitus, ≥ 1 UTI in preceding year). Main outcomes were incidence of UTI according to a clinical definition and a strict definition.

RESULTS: In participants with high UTI risk at baseline (n = 516), the incidence of clinically defined UTI was lower with cranberry capsules than with placebo (62.8 vs 84.8 per 100 person-years at risk, $P = .04$); the treatment effect was 0.74 (95% confidence interval [CI] = 0.57–0.97). For the strict definition, the treatment effect was 1.02 (95% CI = 0.68–1.55). No difference in UTI incidence between cranberry and placebo was found in participants with low UTI risk (n = 412).

CONCLUSION: In LTCF residents with high UTI risk at baseline, taking cranberry capsules twice daily reduces the incidence of clinically defined UTI, although it does not reduce the incidence of strictly defined UTI. No difference

in incidence of UTI was found in residents with low UTI risk. *J Am Geriatr Soc* 62:103–110, 2014.

Key words: geriatrics; long-term care facility; urinary tract infection; prevention; cranberry

Urinary tract infection (UTI) is a common bacterial infection in residents of long-term care facilities (LTCF),^{1,2} accounting for nearly 25% of all infections.^{3,4} UTI not only causes several days of illness, but may have more-severe consequences such as delirium, dehydration, uterospasm, hospitalization, or even death.^{5,6}

Interventions to prevent UTI could reduce these severe consequences,⁷ but there are no evidence-based interventions that decrease UTI in institutionalized populations.⁸ The use of prophylactic antibiotics is currently controversial because of side-effects and antibiotic resistance.^{9,9} Prophylaxis with cranberry is a potential prevention strategy.^{10,11} Cranberries contain proanthocyanidins (PACs), which are stable phenolic compounds with anti-adhesion activity against *Escherichia coli*.^{12–14} In vitro, antibacterial activity of concentrated cranberry juice against other pathogens such as *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Klebsiella pneumoniae*, and *Proteus mirabilis* has also been demonstrated.^{15,16}

There is aggregated evidence that cranberry juice may lead to a decrease in the incidence of symptomatic UTIs over a 12-month period, particularly in women with recurrent UTIs.^{17,18} Another recent systematic review indicates that cranberry-containing products are associated with a protective effect against UTI in different subgroups, albeit with heterogeneity across the included trials.¹⁹ A recent study in children without urological abnormalities showed a 65% reduction of UTI with the use of cranberry.²⁰

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Trial Registration: www.trialsregister.nl; Identifier: NTR1266

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PMBH Clinical Library

- o Will do your literature searches for clinical queries!
- o Will find your full-text articles and other documents
- o Will help with current awareness in your specialty
- o Provides access to books, journals and databases
- o Will provide training to you or your team
- o Will support your research process

Website <https://mnclhd.health.nsw.gov.au/i/library/>

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