

Cochrane Systematic Reviews

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Improving Quality in Healthcare: Translating Evidence into Practice

Edinburgh 7th November 2012

The Cochrane Collaboration:

- producing systematic reviews
- supporting guideline development

Cochrane methods

Archie Cochrane

“It is surely a great criticism of our profession that we have not organized a critical summary, by specialty or subspecialty, adapted periodically, of all relevant randomized controlled trials.”



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EDITORIAL

General health checks in adults for reducing morbidity and mortality from disease



Since the latter half of the 20th century, technological advances in modern medicine and a growing emphasis on

preventive care have led to increased enthusiasm for screening in apparently healthy people. In primary care practice, the general health check (also termed periodic health evaluation or routine medical examination) is the usual mechanism used to screen asymptomatic people for disease. Although widely practiced, there is no universally accepted definition of what constitutes a general health...

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How do those reviews get there?



*National Institute for
Health and Clinical Excellence*





Time and money







Quality

Cranberries for preventing urinary tract infections (Review)

Jepson RG, Williams G, Craig JC



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Cranberries for preventing urinary tract infections (Review)
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What do we do to try and help readers put the evidence into practice?

Plain language summary

Jump to...

Cranberries for preventing urinary tract infections

Cranberries (usually as cranberry juice) have been used to prevent urinary tract infections (UTIs). Cranberries contain a substance that can prevent bacteria from sticking on the walls of the bladder. This may help prevent bladder and other UTIs. This review identified 24 studies (4473 participants) comparing cranberry products with control or alternative treatments. There was a small trend towards fewer UTIs in people taking cranberry product compared to placebo or no treatment but this was not a significant finding. Many people in the studies stopped drinking the juice, suggesting it may not be an acceptable intervention. Cranberry juice does not appear to have a significant benefit in preventing UTIs and may be unacceptable to consume in the long term. Cranberry products (such as tablets or capsules) were also ineffective (although had the same effect as taking antibiotics), possibly due to lack of potency of the 'active ingredient'.

Now cranberries are just for Christmas – new evidence suggests cranberry juice unlikely to prevent urinary tract infections

As garlic is to vampires, so cranberries are to urinary tract infections (UTIs); or so many people believe, drinking cranberry juice in the hope of avoiding bouts of this unpleasant complaint. Cranberry products have been used for this purpose for a very long time and though it's unclear how they might help, one theory is that cranberries prevent bacteria from sticking to the walls of the bladder.

Up to now, there has been some Cochrane evidence to support a role for cranberries in preventing UTIs. A review first published in 1998, which looked at the effectiveness of cranberry products in preventing UTIs in people who are susceptible to them, found some evidence to show that cranberry juice can reduce the number of infections in women who tend to get them repeatedly. In the latest update of this review published today in the Cochrane Library, evidence from 14 new studies suggests that cranberry juice is less effective than previously thought.



The review now includes 24 studies with a total of 4,473 people. Adult women were the most studied, but other subgroups at risk of UTIs, such as pregnant women, children and older adults were included. People who were given cranberry juice, capsules or tablets were compared with people given water, methenamine hippurate, antibiotics, lactobacillus, placebo products or nothing.

What did they find?

- A small trend towards fewer UTIs in women taking cranberry products compared with those taking a placebo or nothing was shown in some small studies, but no significant differences when the results of a larger study were added
- No significant benefit of cranberry products compared to placebo or no treatment for any other subgroups of people at risk of UTI
- Cranberry products were not significantly different to antibiotics for preventing UTIs in three small studies
- Many people stopped taking the cranberry products, especially the juice, and dropped out of the studies



How good is the evidence?

The review authors judged the studies to be generally robust but point out some problems, including:

- a lack of information about the amount of active ingredient in cranberry capsules or tablets
- not including in the final analysis a large number of people who were allocated to treatments at the start, which can introduce bias in the results
- most studies were small and lacked power to detect significant differences between groups

The bottom line?

The current evidence suggests that any benefit is likely to be small and people may find taking cranberry products over a long period of time unacceptable.

The UK Cochrane Centre's Scoops from the Groups

Effect of discharge planning on unscheduled readmission rates for

Patient or population: patients with

Settings:

Intervention: Effect of discharge planning on unscheduled readmission rates

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk Control	Corresponding risk Effect of discharge planning on unscheduled readmission rates				
Unscheduled readmission within 3 months of discharge from hospital Follow-up: median 3 months	Study population		RR 0.85 (0.75 to 0.97)	2612 (12)		
	266 per 1000	226 per 1000 (200 to 258)				
	Medium risk population					
	305 per 1000	259 per 1000 (229 to 296)				
Unscheduled readmission within 3 months of discharge from hospital - Unscheduled readmission for those with a medical condition	Study population		RR 0.85 (0.74 to 0.97)	2552 (11)		
	270 per 1000	230 per 1000 (200 to 262)				
	Medium risk population					
	350 per 1000	298 per 1000 (259 to 340)				
Unscheduled readmission within 3 months of discharge from hospital - Older people admitted to hospital following a fall	Study population		RR 1.67 (0.44 to 6.36)	60 (1)		See comment
	100 per 1000	167 per 1000 (44 to 636)				
	Medium risk population					
	100 per 1000	167 per 1000 (44 to 636)				

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; RR: Risk ratio;

GRADE Working Group grades of evidence

High quality: Further research is very unlikely to change our confidence in the estimate of effect.

Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.

Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

Very low quality: We are very uncertain about the estimate.

Summary of Findings tables: 6 elements using a fixed format

1. List of all **important outcomes** (desirable and undesirable)
2. A measure of the typical **burden** of these outcomes on control group
3. Absolute and relative **magnitude of effect** (if both are appropriate)
4. **Numbers** of participants in studies addressing these outcomes
5. Rating of **quality of evidence** for each outcome
6. Space for comments

Schunemann HJ, Oxman AD, Higgins JPT, Vist GE, Glasziou P, Guyatt GH. Chapter 11: Presenting results and 'Summary of Findings' tables. In: Higgins JPT, Green S (editors), Cochrane Handbook for Systematic Reviews of Interventions. Chichester (UK): John Wiley & Sons, 2008.

Effect of discharge planning on unscheduled readmission rates for

Patient or population: patients with

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GRADE Working Group grades of evidence

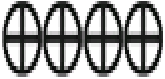
High quality: Further research is very unlikely to change our confidence in the estimate of effect.


Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.


Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

Very low quality: We are very uncertain about the estimate.

GRADE assessment: quality of evidence across studies for the outcome

 **high**: further research is very unlikely to change our confidence in estimate of effect

 **moderate**: further research likely to have impact on confidence in the estimate of effect and may change the estimate

 **low**: further research is very likely to have an important impact on our confidence in the estimate of effect, and is likely to change the estimate

 **very low**: any estimate of effect is very uncertain

Categories of quality – alternative definitions

- **High:** We are confident that the true effect lies close to that of the estimate of the effect.
- **Moderate:** The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.
- **Low:** The true effect may be substantially different from the estimate of the effect.
- **Very low:** Any estimate of effect is very uncertain.

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- producing high quality, up-to-date and relevant systematic reviews
- supporting guideline development
- encouraging translation into practice
 - through design of the product
 - through engagement with stakeholders