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Jepson RG, Craig JC



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[Intervention Review]

Cranberries for preventing urinary tract infections

Ruth G Jepson¹, Jonathan C Craig²

¹Department of Nursing and Midwifery, University of Stirling, Stirling, UK. ²Centre for Kidney Research, The Children's Hospital at Westmead, School of Public Health, The University of Sydney, Westmead, Australia

Contact address: Ruth G Jepson, Department of Nursing and Midwifery, University of Stirling, Stirling, Scotland, FK9 4LA, UK. ruth.jepson@stir.ac.uk.

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ABSTRACT

Background

Cranberries have been used widely for several decades for the prevention and treatment of urinary tract infections (UTIs).

Objectives

To assess the effectiveness of cranberry products in preventing UTIs in susceptible populations.

Search strategy

We searched MEDLINE, EMBASE, the Cochrane Central Register of Controlled Trials (CENTRAL in *The Cochrane Library*) and the Internet. We contacted companies involved with the promotion and distribution of cranberry preparations and checked reference lists of review articles and relevant studies.

Selection criteria

All randomised controlled trials (RCTs) or quasi-RCTs of cranberry products for the prevention of UTIs in all populations.

Data collection and analysis

Two authors independently assessed and extracted information. Information was collected on methods, participants, interventions and outcomes (UTIs - symptomatic and asymptomatic, side effects, adherence to therapy). Risk ratio (RR) were calculated where appropriate, otherwise a narrative synthesis was undertaken. Quality was assessed using the Cochrane criteria.

Main results

Ten studies (n = 1049, five cross-over, five parallel group) were included. Cranberry/cranberry-lingonberry juice versus placebo, juice or water was evaluated in seven studies, and cranberries tablets versus placebo in four studies (one study evaluated both juice and tablets). Cranberry products significantly reduced the incidence of UTIs at 12 months (RR 0.65, 95% CI 0.46 to 0.90) compared with placebo/control. Cranberry products were more effective reducing the incidence of UTIs in women with recurrent UTIs, than elderly men and women or people requiring catheterisation. Six studies were not included in the meta-analyses due to methodological issues or lack of available data. However, only one reported a significant result for the outcome of symptomatic UTIs. Side effects were common in all studies, and dropouts/withdrawals in several of the studies were high.

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Authors' conclusions

There is some evidence that cranberry juice may decrease the number of symptomatic UTIs over a 12 month period, particularly for women with recurrent UTIs. Its effectiveness for other groups is less certain. The large number of dropouts/withdrawals indicates that cranberry juice may not be acceptable over long periods of time. It is not clear what is the optimum dosage or method of administration (e.g. juice, tablets or capsules). Further properly designed studies with relevant outcomes are needed.

PLAIN LANGUAGE SUMMARY

Cranberries for preventing urinary tract infections

Cranberries (usually as cranberry juice) have been used to try and 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 urinary tract infections. This review identified 10 studies (1049 participants) comparing cranberry products with placebo, juice or water. There was some evidence to show that cranberries (juice and capsules) can prevent recurrent infections in women. However, the evidence for elderly men and women was less clear, and there is evidence that is not effective in people who need catheterisation. Many people in the trials stopped drinking the juice, suggesting it may not be a popular intervention. In addition it is not clear how long cranberry juice needs to be taken to be effective or what the required dose might be.