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<http://www.pediatricurologycasereports.com>**Study of cranberry supplements for infection of the urinary tract control in children****Zelal Ekinci****Department of Pediatric Nephrology, Kocaeli University Hospital, Umuttepe, 41380 Kocaeli, Turkey***✉ Zelal Ekinci**

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Description

Anthocyanins and proanthocyanidins, two polyphenols found in abundance in cranberries, have been linked to a number of positive effects on human health, including the prevention of UTI. The fruit's polyphenols have been linked to these effects. The recovery of total anthocyanins in the urine over 24 hours was estimated to be 5.0% of the amount consumed. It was demonstrated that urinary levels of anthocyanins reached a maximum between 3 and 6 hours after ingestion. It was also demonstrated that cranberry products can, in a dose-dependent way, prevent *E. coli* from adhering to biological systems of primary cultured bladder and vaginal epithelial cells.

These are compelling *in vitro* data supporting the idea that reducing bacterial adhesion to uroepithelial cells can prevent UTI. Regular consumption of cranberry products instead of antibiotic prophylaxis may be an alternative strategy for people with recurrent uncomplicated UTI.

Because of this, cranberries especially in the form of cranberry juice have been used extensively for many

years to both prevent and treat UTI. All randomised or quasirandomized controlled trials of cranberry juice/products for the prevention of urinary tract infections in susceptible populations of men, women, or kids were included in the Cochrane Central Register of Controlled Trials. Seven trials (four cross-over, three parallel groups) were eligible for inclusion in this review.

In comparison to placebo/control, cranberry products significantly decreased the incidence of UTI in women after a year in two high-quality randomised controlled trials. In comparison to placebo/control, cranberry products significantly decreased the incidence of UTIs at 12 months (RR 0.65, 95% CI 0.46 to 0.90). Additionally, there was no discernible difference in the frequency of UTI between cranberry juice and cranberry capsules. In that meta-analysis, it is unclear if it is effective for other groups like children and elderly men and women.

The Cochrane Collaboration's findings suggest that cranberry products could be used to prevent recurrent UTI in young and middle-aged women. Cranberry products cannot be routinely advised for the prophylaxis of recurrent UTI due to the heterogeneity of clinical study designs and the lack of agreement on the dosage regimen and formulation to use.

In a study that was released a year after the Cochrane review, 84 girls between the ages of 3 and 14 were randomly assigned to one of three treatment arms: cranberry, lactobacillus, or control and then monitored for six months. They came to the conclusion that children who regularly consume concentrated cranberry juice can significantly reduce their risk of developing symptomatic UTI again.

Even at clinics that specialise in the treatment of such patients, there is no agreement on how to evaluate and manage bacteriuria in patients with spina bifida and neurogenic bladder. An established, national set of evidence-based recommendations is clearly needed to support medical decision-making in this high-risk population and enhance care.

In a review by Opperman, cranberries were assessed for their ability to keep spinal cord injury patients' UTIs at bay (SCI). There were five studies found, including four randomised clinical controls, three cranberry tablet trials versus placebo, one cranberry juice trial, and one pilot study.

Neither urinary pH, urinary bacterial count, urinary White Blood Cell (WBC) count, urinary bacterial and WBC counts in combination, nor episodes of symptomatic UTI were found to be statistically affected by cranberry tablets in three studies. Only one study found that taking cranberry extract tablets reduced the number of UTIs (from 1 UTI per year to 0.3 UTI per

year) compared to taking a placebo year) compared to taking a placebo cranberry does not appear to be helpful in preventing or treating UTI in the SCI population, whether in the form of juice or supplements.

A questionnaire was sent to 169 spina bifida clinics in the US as part of a multicenter study that was published in 2005. 49 clinics (or 39% of them) responded to the survey. For preventing UTIs, 57% of respondents suggested cranberry. 50 percent thought that these products were useful.

Conclusion

It was demonstrated in this placebo-controlled crossover trial that cranberry use significantly reduced the rate of infection and the frequency of pyuria. According to study believe that this is the first prospective, controlled study using cranberry capsules in myelomeningocele-affected kids. As a result, it is concluded that cranberry capsules might be a promising option for children with neurogenic bladder brought on by myelomeningocele who want to avoid recurrent urinary tract infections.