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**File: ■ Cranberry (*Vaccinium macrocarpon*, Ericaceae)
■ Urinary Tract Infection
■ Anthocran®**

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RE: Standardized Cranberry Supplement (Anthocran®) Shows Efficacy for Urinary Tract Infection Prevention in Juvenile Subjects

Ledda A, Belcaro G, Dugall M, et al. Highly standardized cranberry extract supplementation (Anthocran®) as prophylaxis in young healthy subjects with recurrent urinary tract infections. *Eur Rev Med Pharmacol Sci*. January 2017;21(2):389-393.

Recurrent urinary tract infections (UTIs) are defined as having 2 or more occurrences over 6 months or 3 or more occurrences over 1 year. Long-term antibiotic use is the standard therapy for prevention and treatment of recurrent UTIs; however, long-term antibiotic use is correlated with resistance in uropathogens and negative side effects. Cranberry (*Vaccinium macrocarpon*, Ericaceae) extract has been studied for efficacy in prevention of UTIs in various at-risk groups (children, elderly, patients with catheters, etc.). The proanthocyanidins (PACs) of cranberry (specifically, PACs with A-type linkages) have been shown to prevent bacterial adhesion to uroepithelial cells, with a dosage of 36 mg/day found to be most effective.¹⁻⁴ This pilot, registry study is the first to examine the efficacy of a standardized cranberry extract supplement on prevention of UTI in juveniles suffering from recurrent UTIs.

Thirty-six patients (12-18 years old) with recurrent UTIs and previous negative experience or reactions to antibiotics were recruited (location of study and recruitment not disclosed). The patients were separated into 2 groups comparable in age, gender, days of follow-up, and number of UTIs that occurred before inclusion. Patients received either standard management (SM), consisting of lifestyle and hygiene advice (n=17), or SM and 1 capsule daily (n=19; 36 mg PACs/120 mg) of the standardized cranberry extract supplement Anthocran® (Indena S.p.A.; Milan, Italy) for 60 days.⁵ The method for development of Anthocran was not disclosed. UTI occurrence was recorded 2 months prior to the study and during the 60 days of the study.

The number of UTI episodes (mean ± standard deviation) in the Anthocran group significantly decreased from 1.74 ± 1.1 before inclusion to 0.31 ± 0.2 during the study ($P=0.0001$). No significant differences were observed in number of UTIs in the SM control group. In addition, the number of UTIs that occurred in the Anthocran group during the study (0.31 ± 0.2) was significantly lower compared to occurrence of UTI in

the control group during the study (2.3 ± 1.3 ; $P=0.0001$). Twelve of 19 patients (63.1%) in the Anthocran group were asymptomatic during the 60-day study, compared to 4 of 17 (23.5%) patients in the control group ($P<0.05$). No adverse events were reported. Compliance in the Anthocran group was $>91\%$.

This is the first study testing a standardized cranberry supplement on a juvenile population suffering from recurrent UTIs, and the results of this small study are promising and could be compared to those of other cranberry supplements standardized to 36 mg PACs per dose. It should also be noted that 3 of the study authors were either employed or consulting with Indena S.p.A.

—Alexis Collins, MA, MS

References

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Referenced article can be accessed at <http://www.europeanreview.org/article/12109>.