

Cranberry Extract & UTIs in Dogs

UTIs are caused by changes in a host's immune defenses that allow microbes to adhere and persist within the urinary tract. In *in vitro* and *in vivo* studies, cranberries have been shown to affect bacterial adhesion to cells in the urinary tract wall.

In the *in vivo* portion of this study, 12 client-owned dogs that had at least 3 UTIs in the previous year were divided into 2 groups. One group received cephalexin for 2 weeks; the other received powdered cranberry extract daily for 6 months. No dogs developed UTIs during the 6-month evaluation period, and no side effects were noted.

In the *in vitro* portion, the bacteriostatic effects of cranberry extract and the impact on adherence of *Escherichia coli* to Madin-Darby canine kidney (MDCK) cells was tested on urine from 6 healthy dogs receiving cranberry extract for 60 days. After incubation with urine samples obtained at 30 and 60 days, mean *E coli* adherence to MDCK cells was significantly lower than adherence after incubation with the urine sample obtained before cranberry extract administration. The bacteriostasis assay showed no zone of inhibition around any of the canine urine samples. The results suggest cranberry extract does not inhibit bacterial growth but does decrease *E coli* adherence to MDCK cells, and that it therefore has potential clinical benefit in UTI prevention.

Commentary

An exciting alternative to chronic antibiotic therapy, cranberry extract can help fight multidrug-resistant bacteria development in dogs with recurrent *E coli* UTIs. It is important to evaluate the literature behind a suggested cranberry product, as some are purported to have superior efficacy. Also, it may be prudent to prescribe cranberry extract *only* to dogs with recurrent *E coli* infections; there is a lack of evidence suggesting it

will prevent all types of UTIs. As with all supplements, due diligence in finding the appropriate product is critical for success, as regulatory control is lacking.—Heather Troyer, DVM, DABVP, CVA, CVPP

Source

Chou HI, Chen KS, Wang HC, Lee WM. Effects of cranberry extract on prevention of urinary tract infection in dogs and on adhesion of *Escherichia coli* to Madin-Darby canine kidney cells. *Am J Vet Res.* 2016;77(4):421-427.

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