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Cranberry extract confirmed to fight urinary tract infections in breastfed babies under age one

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Researchers from the universities of Granada (Spain) and Kvopio (Finland) have confirmed that cranberry extract fights urinary tract infections (UTIs) in breastfed babies under one year of age. Their work has proven that this compound reduces the need for antibiotics in the prophylaxis for recurrent urinary tract infections in infants with vesicoureteral reflux (VUR), thus preventing the progression of bacterial antibiotic resistance.

This research, published in *Anales de Pediatría* (*Annals of Pediatrics*) magazine, has been funded by the Instituto de Salud Carlos III institute. It has counted with the collaboration of the university's Department of Analytical Chemistry and the Research and Development of Functional Food Centre (CIDAF, for its initials in Spanish), through professor Antonio Segura Carretero, and that of the University of Kvopio, Finland, through professor Tarja Nurmi.

The research involved of 85 children under one year of age and 107 over that age, all of them affected by a recurrent urinary infection. Seventy-five children were administered cranberry extract, while the other 117 were administered trimethoprim, a bacteriostatic antibiotic derived from trimethoxybenzyl pyrimidine, used almost exclusively to treat urinary infections.

Effective in adults and children

The lead author of this work, professor José Uberos Fernández from the Department of Pediatrics (UGR), notes that according to analysis done at CIDAF, the composition of cranberry extracts available on the market is heterogeneous, and not all the polyphenolic fractions in them are equally useful. "Cranberry extract, which in previous research had already shown effectiveness in preventing urinary infection in adults, is also effective and safe for breastfed infants with this condition."

Cranberry extract effects have been, after numerous in-vitro tests, classically linked to the amount of proanthocyanidins present in the extract. "This molecule is quickly metabolized in the intestine, and our studies have proven that the concentration of proanthocyanidins detected in urine is very low," professor Uberos says.

The researcher says, "The in vivo anti-adhesive effect seems to be due to the proanthocyanidins intermediate metabolites and to other polyphenolic molecules present in cranberry extract. In this regard, some phenolic acids derived from metabolized cranberries seem to have some very interesting anti-adhesive properties, and that's something my team of researchers is working on."

Moreover, the researchers intend to clarify if its anti-inflammatory properties (also noted by other authors) can improve nephropathies following pyelonephritis and reflux, present in other patients.

More information: V. Fernández-Puentes et al. Efficacy and safety profile of cranberry in infants and children with recurrent urinary tract infection, *Anales de Pediatría (English Edition)* (2015). DOI: 10.1016/j.anpede.2015.05.007

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