CRANBERRY AS A NATURALLY OCCURRING PRODUCT THAT PREVENTS URINARY TRACT INFECTION RECURRENT AND PROMOTES THE SUSTAINABILITY OF PUBLIC HEALTH AND CARE SYSTEM: CURRENT CLINICAL EVIDENCE AND FUTURE PERSPECTIVES

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Introduction: Urinary tract infections (UTIs) represent a common and costly public health problem, which occur mainly in women, and affect negatively their quality of life, as well as their life expectancy overall. The bacterium Escherichia coli is mainly responsible for most uncomplicated UTIs. Cranberry antibacterial effects have widely been studied in order to understand the molecular mechanisms of action of its bioactive components and their clinical benefits against UTIs. In this aspect, the present review aims to critically summarize the current clinical studies that have evaluated the efficacy of supplementing cranberry products against UTIs in different subpopulations.

Methods: PubMed database was comprehensively searched, using relative keywords in order to identify clinical trials that investigated the efficacy of cranberry supplementation against UTIs.

Results: Currently available clinical evidence indicates a possible benefit overall from the use of cranberries against UTIs. Cranberry consumption may prevent bacterial adherence to uroepithelial cells, reducing UTI related symptoms. Cranberry consumption could also decrease UTI related symptoms by suppressing inflammatory cascades as an immunologic response to bacteria invasion. The existing clinical trials have supported substantial evidence that the beneficial effects of cranberry against UTIs seem to be prophylactic by preventing infections recurrence; however, they exert low effectiveness in populations at increased risk for contracting UTIs. Moreover, a lack of cost-effectiveness for cranberry supplementation has been highlighted.

Conclusions: Additional well-designed, double-blind, placebo-controlled clinical trials that use standardized cranberry products for long study periods are strongly recommended in order to determine the efficiency of cranberry on the prevention of UTIs in susceptible populations. However, cranberry supplementation can safely be suggested as complementary therapy in women with recurrent UTIs. Cranberry, as a naturally occurring product, may exert additional beneficial effects by promoting the sustainability of public health and care system without exhausting natural resources or causing severe ecological damage.