



ADVANCED
ORTHOMOLECULAR RESEARCH

AOR CODE: AOR04286

Premium

UTI Cleanse Now With Cranberry

\$56.95 CAD

A Natural Solution for Urinary Tract Infections

- Provides plant extracts for preventing urinary tract infections (UTIs)
- Helps fight off acute UTIs and prevent their recurrence
- Safe and effective relief without the side-effects of antibiotics
- A unique formula from AOR with clinically researched ingredients



 Gluten Free  Vegan  Non-GMO Immune Support

AOR Code	Variant	Price
AOR04286	60 TABLETS	\$56.95
AOR04282	120 TABLETS	\$89.95

Details

The majority of urinary tract infections (UTIs) are caused by E. coli bacteria, which attach themselves to the residues of d-mannose that are found on the receptors of urinary tract cells. Supplemental d-mannose, a sugar residue, provides an alternate binding site for the bacteria, which can then be flushed out. D-Mannose has earned the enviable reputation of being able to provide relief from UTIs with exceptional speed, often in as little as 24-48 hours in many cases.

UTI Cleanse now with Cranberry contains D-mannose combined with cranberry juice extract which can be used in high doses to treat UTIs caused by E. coli without the continued use of antibiotics. It can also be used in lower doses to prevent their recurrence. UTI Cleanse now with Cranberry, a natural antiseptic, provides a small amount of cranberry with a large dose of D-mannose in both tablet and powder form for your convenience.

Label Info

Discussion

UTI Cleanse Now With Cranberry is used in herbal medicine to help prevent recurrent urinary tract infections (UTIs).

Product Variation

Product Code	Size
AOR04286	60 TABLETS
AOR04282	120 TABLETS

Supplements Facts

Serving Size: 1 Tablet	Amount	% Daily
Dried Cranberry juice (Vaccinium macrocarpon Aiton)	100 mg	

D-mannose (1000 mg), magnesium stearate, sodium stearyl fumarate, sodium carboxymethylcellulose, tricalcium phosphate, rice syrup.

Guarantees

AOR™ guarantees that all ingredients have been declared on the label. Contains no wheat, gluten, nuts, peanuts, sesame seeds, sulphites, mustard, soy, dairy, eggs, fish, shellfish or any animal byproduct.

Adult Dosage

Take 1-2 tablets four to five times daily without food, or as directed by a qualified health care practitioner. Take with water. Use for a minimum of 4 weeks to see beneficial effects.

Cautions

Consult a health care practitioner prior to use if you are pregnant, trying to conceive, taking blood thinners or have a history of kidney stones, or if symptoms persist or worsen with use.

Source

Cranberry juice

Mannose - Corn

Main Application

Urinary tract infections

Disclaimer

The information and product descriptions appearing on this website are for information purposes only, and are not intended to provide or replace medical advice to individuals from a qualified health care professional. Consult with your physician if you have any health concerns, and before initiating any new diet, exercise, supplement, or other lifestyle changes.

Research

Background

A Superior Combination

UTI Cleanse now with Cranberry combines two ingredients that are well known and highly effective for the natural prevention and treatment of UTI's, namely D-Mannose and Cranberry Extract. This superior and convenient combination provides a one-two punch for individuals battling recurrent urinary tract infections caused by E. coli.

What Causes Urinary Tract Infections?

Although urinary tract infections (UTIs) can involve a variety of different bacteria species (including *Staphylococcus saprophyticus* and some *Enterococci* species), nearly all infections of the lower urinary tract and bladder are caused by a few strains of E. coli bacteria called uropathogenic *Escherichia coli* (UPEC). Various harmless strains of E. coli are normally present in the body – but they don't belong in the urinary tract. Infection can occur when they manage to migrate from the gut to the bladder or urethra.

If UPEC manage to migrate from the gut into the bladder or the urethra, the body has ways of fighting them off – including the obvious method of simply flushing them out with the urine. But these bacteria have evolved ways of anchoring themselves to the cells of the urinary tract. The invading UPEC take advantage of D-mannose receptors naturally found on the cells of the mucosal lining of the urinary tract. UPEC use what are called type I pili to first hook on to these receptors, and then to invade the cell.

The Role of D-Mannose in the Prevention and Treatment of UTI's

The chemical attraction between UPEC pili and D-Mannose is their strength – but it also provides a point of vulnerability. If you can interfere with the binding of their pili to the D-Mannose residues in the receptors of your urinary tract cells, then you can also prevent UPEC from getting a foothold for adherence and infection. One way to do this, long known to work in a test tube, is by using D-Mannose itself. When isolated urinary tract cells are bathed in D-Mannose, it acts as molecular “chaff.” The bacterial adhesins bind to the D-Mannose in their environment instead of to the D-Mannose residues on the cells, allowing them to be flushed out in the urine along with the D-mannose.

Cranberry Extract for an Enhanced Effect

Cranberries have been used in the treatment of UTIs for many years and are now regarded as a non-pharmaceutical approach for the treatment and prevention of simple UTI infections. Like D-Mannose, cranberries are effective in the treatment of the majority of UTI caused by E.coli.

Cranberries and cranberry extracts contain certain tannins called proanthocyanidins that have been shown to reduce bacterial adherence to the urinary tract wall by altering the adhesion apparatus of the bacteria in as little as 3 hours after consumption. It is particularly the A-type linkages of the proanthocyanidins found in cranberries that make them effective, since proanthocyanidins with B-type linkages are found to be less effective or ineffective. Cranberries also contain some D-mannose.

Note

Again, not all UTIs are caused by UPEC. So if you try a course of D-Mannose and infection persists, it is likely not caused by these E. coli bacteria but by some other pathogen. In that case, don't just keep going on with the supplement in hopes that it will eventually "kick in;" discontinue use of D-Mannose and consult a physician for treatment appropriate to your case. But for the great majority of urinary tract infections, D-Mannose offers a safe, natural option with a simple, ingenious rationale, no known side-effects, and a great reported success rate.

Research

D-Mannose

It was discovered in the late 1980s that a small amount of D-Mannose is normally present in the urine, apparently acting as a defensive mechanism against pathogenic bacteria. When D-Mannose is taken as a supplement, much more of the carbohydrate passes through the urinary tract, strengthening this natural defense.

A decade after this discovery, Dr. Jonathan V. Wright of the Tahoma Clinic pioneered the use of D-Mannose supplements to fight off UTIs. For some years, he has been reporting the successful results that his patients have experienced in using D-Mannose to rid themselves of infection. Even patients who had remained infected after having been subjected to a wide range of potent, side-effect-inducing antibiotics have successfully rid themselves of chronic or acute infections using D-Mannose. Other nutritionally oriented physicians and health practitioners have since adopted Dr. Wright's protocols, and the feedback is uniformly excellent from UTI sufferers and their caregivers alike.

Recently, there has been greater interest by the pharmaceutical world in the effectiveness of a D-mannose derivative called α -D-mannoside which has begun to show good clinical therapeutic potential.

Cranberry

A Harvard study has demonstrated that regular use of cranberry juice reduced bacterial growth in the urinary tract. Studies have demonstrated that infections can be reduced by over 50% in elderly women drinking 300 ml of cranberry juice per day. Studies have documented that drinking eight glasses of cranberry juice twice a day can eradicate most UTIs. If consumption is maintained, infection is unlikely to recur.

Market Trends

Antibiotics are often prescribed to deal with UTIs. This is somewhat ironic because antibiotics kill friendly flora which help prevent bacteria from migrating into the urinary tract in the first place and are often a cause of UTIs.

Cranberry juice and supplements are the most well-known natural treatments for recurring urinary tract infections. Unfortunately, loading up on cranberry can be acidic, and some people develop

intolerances to large amounts of cranberry with prolonged use.

AOR Advantage

Prevent recurrent UTIs naturally without the negative effects for antibiotics. AOR's UTI Cleanse now with Cranberry provides 1 gram per tablet of natural D-mannose extracted from Norwegian birch bark. It also contains the equivalent of less than a quarter of a teaspoon of cranberry juice per tablet so that those with intolerances to cranberry need not be concerned with such a small quantity. This product is also available as a powder in two sizes for your convenience.

References

Avorn J, Monane M, Gurwitz JH, Glynn RJ, Choodnovskiy I, Lipsitz LA. Reduction of bacteriuria and pyuria after ingestion of cranberry juice. JAMA 1994 Mar 9; 271(10): 751-4.

Head KA. Natural approaches to prevention and treatment of infections of the lower urinary tract. Altern Med Rev. 2008 Sep;13(3):227-44.

Howell AB, Botto H, Combescure C, Blanc-Potard AB, Gausa L, Matsumoto T, Tenke P, Sotto A, Lavigne JP. Dosage effect on uropathogenic Escherichia coli anti-adhesion activity in urine following consumption of cranberry powder standardized for proanthocyanidin content: a multicentric randomized double blind study. BMC Infect Dis. 2010 Apr 14;10:94.

Howell AB. Cranberry proanthocyanidins and the maintenance of urinary tract health. Crit Rev Food Sci Nutr 2002; 42(3 Suppl): 273-8.

Martinez JJ, Mulvey MA, Schilling JD, Pinkner JS, Hultgren SJ. Type 1 pilus-mediated bacterial invasion of bladder epithelial cells. EMBO J. 2000 Jun 15; 19(12): 2803-12.

Klein T, Abgottspon D, Wittwer M, Rabbani S, Herold J, Jiang X, Kleeb S, Lüthi C, Scharenberg M, Bezençon J, Gubler E, Pang L, Smiesko M, Cutting B, Schwardt O, Ernst B. FimH antagonists for the oral treatment of urinary tract infections: from design and synthesis to in vitro and in vivo evaluation. J Med Chem. 2010 Dec 23;53(24):8627-41.

Sauer FG, Mulvey MA, Schilling JD, Martinez JJ, Hultgren SJ. Bacterial pili: molecular mechanisms of pathogenesis. Curr Opin Microbiol. 2000 Feb; 3(1): 65-72.

Stothers L. A randomized trial to evaluate effectiveness and cost effectiveness of naturopathic cranberry products as prophylaxis against urinary tract infection in women. Can J Urol 2002 Jun; 9(3): 1558-62.

Toyota S, Fukushi Y, Katoh S, Orikasa S, Suzuki Y. Anti-bacterial defense mechanism of the urinary bladder. Role of mannose in urine. Nippon Hinyokika Gakkai Zasshi. 1989 Dec; 80(12): 1816-23.

Wright JV. D-Mannose for bladder and kidney infections. Townsend Letter for Doctors and Patients. 1999 Jul; 192:96-98.

Abstract

Oral consumption of cranberry juice cocktail inhibits molecular-scale adhesion of clinical uropathogenic *Escherichia coli*.

J Med Food. 2011 Jul-Aug;14(7-8):739-45.

Tao Y, Pinzón-Arango PA, Howell AB, Camesano TA.

Cranberry juice cocktail (CJC) has been shown to inhibit the formation of biofilm by uropathogenic *Escherichia coli*. In order to investigate whether the anti-adhesive components could reach the urinary tract after oral consumption of CJC, a volunteer was given 16 oz of either water or CJC. Urine samples were collected at 0, 2, 4, 6, and 8 hours after consumption of a single dose. The ability of compounds in the urine to influence bacterial adhesion was tested for six clinical uropathogenic *E. coli* strains, including four P-fimbriated strains (B37, CFT073, BF1023, and J96) and two strains not expressing P-fimbriae but exhibiting mannose-resistant hemagglutination (B73 and B78). A non-fimbriated strain, HB101, was used as a control. Atomic force microscopy (AFM) was used to measure the adhesion force between a silicon nitride probe and bacteria treated with urine samples. Within 2 hours after CJC consumption, bacteria of the clinical strains treated with the corresponding urine sample demonstrated lower adhesion forces than those treated with urine collected before CJC consumption. The adhesion forces continued decreasing with time after CJC consumption over the 8-hour measurement period. The adhesion forces of bacteria after exposure to urine collected following water consumption did not change. HB101 showed low adhesion forces following both water and CJC consumption, and these did not change over time. The AFM adhesion force measurements were consistent with the results of a hemagglutination assay, confirming that oral consumption of CJC could act against adhesion of uropathogenic *E. coli*.

FimH antagonists for the oral treatment of urinary tract infections: from design and synthesis to in vitro and in vivo evaluation.

J Med Chem. 2010 Dec 23;53(24):8627-41.

Klein T, Abgottspon D, Wittwer M, Rabbani S, Herold J, Jiang X, Kleeb S, Lüthi C, Scharenberg M, Bezençon J, Gubler E, Pang L, Smiesko M, Cutting B, Schwardt O, Ernst B.

Urinary tract infection (UTI) by uropathogenic *Escherichia coli* (UPEC) is one of the most common infections, particularly affecting women. The interaction of FimH, a lectin located at the tip of bacterial pili, with high mannose structures is critical for the ability of UPEC to colonize and invade the bladder epithelium. We describe the synthesis and the in vitro/in vivo evaluation of α -D-mannosides with the ability to block the bacteria/host cell interaction. According to the pharmacokinetic properties, a prodrug approach for their evaluation in the UTI mouse model was explored. As a result, an orally available, low molecular weight FimH antagonist was identified with the potential to reduce the colony forming units (CFU) in the urine by 2 orders of magnitude and in the bladder by 4 orders of magnitude. With FimH antagonist, the great potential for the effective treatment of urinary tract

infections with a new class of orally available anti-infectives could be demonstrated.

Dosage effect on uropathogenic *Escherichia coli* anti-adhesion activity in urine following consumption of cranberry powder standardized for proanthocyanidin content: a multicentric randomized double blind study.

BMC Infect Dis. 2010 Apr 14;10:94.

Howell AB, Botto H, Combescure C, Blanc-Potard AB, Gausa L, Matsumoto T, Tenke P, Sotto A, Lavigne JP.

BACKGROUND: Ingestion of cranberry (*Vaccinium macrocarpon* Ait.) has traditionally been utilized for prevention of urinary tract infections. The proanthocyanidins (PACs) in cranberry, in particular the A-type linkages have been implicated as important inhibitors of primarily P-fimbriated *E. coli* adhesion to uroepithelial cells. Additional experiments were required to investigate the persistence in urine samples over a broader time period, to determine the most effective dose per day and to determine if the urinary anti-adhesion effect following cranberry is detected within volunteers of different origins.

METHODS: Two separate bioassays (a mannose-resistant hemagglutination assay and an original new human T24 epithelial cell-line assay) have assessed the ex-vivo urinary bacterial anti-adhesion activity on urines samples collected from 32 volunteers from Japan, Hungary, Spain and France in a randomized, double-blind versus placebo study. An in vivo *Caenorhabditis elegans* model was used to evaluate the influence of cranberry regimen on the virulence of *E. coli* strain.

RESULTS: The results indicated a significant bacterial anti-adhesion activity in urine samples collected from volunteers that consumed cranberry powder compared to placebo ($p < 0.001$). This inhibition was clearly dose-dependent, prolonged (until 24 h with 72 mg of PAC) and increasing with the amount of PAC equivalents consumed in each cranberry powder regimen. An in vivo *Caenorhabditis elegans* model showed that cranberry acted against bacterial virulence: *E. coli* strain presented a reduced ability to kill worms after a growth in urines samples of patients who took cranberry capsules. This effect is particularly important with the regimen of 72 mg of PAC.

CONCLUSIONS: Administration of PAC-standardized cranberry powder at dosages containing 72 mg of PAC per day may offer some protection against bacterial adhesion and virulence in the urinary tract. This effect may offer a nyctohemeral protection.

Mannose-sensitive adherence of *Escherichia coli* to epithelial cells from women with recurrent urinary tract infections.

J Urol. 1984 May;131(5):906-10.

Schaeffer AJ, Chmiel JS, Duncan JL, Falkowski WS.

The effect of D-mannose on adherence of 73 *Escherichia coli* strains to vaginal and buccal epithelial cells from women with recurrent urinary tract infections, and on agglutination of human and guinea pig erythrocytes was tested. Urinary, vaginal or anal isolates from women with such infections were used.

Of the strains 66 (90 per cent) demonstrated adherence to epithelial cells. D-mannose inhibited completely the adherence of 25 strains (42 per cent) that adhered to vaginal cells and inhibited an additional 11 strains (18 per cent) by at least 50 per cent. Similar results were obtained with buccal cells. The inhibitory effect of D-mannose was similar regardless of the origin of the strains. Hemagglutination frequently was inhibited by D-mannose but no consistent association between hemagglutination, and epithelial cell adherence and the effect of D-mannose was observed. The results suggest that mannose-sensitive as well as mannose-resistant adhesins frequently mediate *Escherichia coli* adherence to vaginal epithelial cells, and may contribute to vaginal colonization and cystitis.

Effect of carbohydrates on adherence of *Escherichia coli* to human urinary tract epithelial cells.

Infect Immun. 1980 Nov;30(2):531-7.

Schaeffer AJ, Amundsen SK, Jones JM.

Adherence of *Escherichia coli* cells to voided uroepithelial cells from healthy women was measured by use of [³H]uridine-labeled bacteria filtered through a polycarbonate membrane filter (5-micrometer pore size). At a concentration of 2.5% (wt/vol), D-mannose, D-mannitol, alpha-methyl-D-mannoside, and yeast mannan completely inhibited adherence of the bacteria to the epithelial cells. At this same concentration, D-fructose, D-lyxose, D-arabinose, and D-glyceraldehyde partially inhibited adherence. Reducing the concentration of D-mannose, or its derivatives, to between 1.0 and 0.1% resulted in partial inhibition in the adherence of the bacteria; a further reduction in the concentration to between 0.01 and 0.001% caused an enhancement of adherence up to 160% of the control level. Bacterial preincubation in 2.5% D-mannose for 1 min before epithelial cells were added completely inhibited adherence; similar treatment of the epithelial cells had no significant effect on subsequent adherence of the bacteria. Bacteria that were preincubated for 1 h with D-mannose at concentrations between 0.1 and 0.75% showed enhanced adherence. The inhibitory effect of D-mannose was decreased if bacterial adhesive ability, or cell receptivity, increased. A variety of other carbohydrates tested had no effect on the adherence of *E. coli* to the uroepithelial cells. These results suggest that adherence can be altered by interaction(s) between specific carbohydrate molecules and receptors on the bacterial surface.