

CranRichPAC® 4.5

(*Vaccinium macrocarpon*)

Urinary Tract Health and Beyond

Cranberry benefits the whole body

CranRichPAC by InovoBiologic is highly concentrated (40:1) cranberry and may be the product of choice when fresh, ripe cranberries are hard to find and watery, sugar-laden cocktails are not an option. InovoBiologic's proprietary processing has taken cranberry to another level of effectiveness. InovoBiologic cranberries are picked at their peak of freshness when the key proanthocyanidins (PAC) are the highest. Exquisitely ripened fruits are the foundation for potent, anthocyanin-rich concentrates. We start with grade A berries and concentrate the whole berry including fruit, skin, seeds, fibre and juice. Whereas many quality cranberry products are 18:1 ratio, we have achieved a 40:1 ratio, meaning that 40 grams of cranberries are concentrated into one gram of CranRichPAC.

Why Cranberry?

This tart, shiny North American berry should be a diet staple. While most are familiar with cranberry and reduced urinary tract infections, cranberry can benefit the whole body from the mouth to the heart, lungs, stomach and through to the urinary tract. Research shows that cranberries may help prevent kidney stones, promote cardiovascular health and could even prevent some forms of cancer.

High ORAC (Oxidant Radical Absorbance Capacity) fruits and vegetables may help protect against chronic age-related conditions. Cranberries are very high on the ORAC scale showing that this berry has potential against chronic age-related conditions. Nutritionally dense cranberries contain vitamins A, C, B and folic acid, as well as calcium, iron and potassium. One cup of cranberries has 4 grams of fibre and 20% of the daily value for vitamin C.

The urinary tract connection— Cranberry Proanthocyanidins (PACs)

Cranberry is well known for its ability to keep the urinary system healthy, and rightly so. Cranberry contains unique proanthocyanidins (a type of plant flavonoid) with A-type linkages that have the ability to prevent bacteria from sticking to the cells that line the bladder or urethra walls. Instead of sticking and causing an infection, the bacteria get flushed out in the urine.

University of British Columbia researchers wondered if concentrated cranberry tablets or juice could reduce the incidence of UTIs in women. In a clinical trial 150 sexually active women (21 to 72 years) were randomized to receive either cranberry tablets and 250 ml

of placebo juice, 250 ml of cranberry juice and placebo cranberry tablets, or placebo tablets plus 250 ml of placebo juice, for one year. After 12 months of treatment those taking cranberry had a 40% greater reduction in UTIs 40% compared to placebo.¹

Not for women only—Cranberry for male urinary tract health

Unwelcome bacteria have a much greater chance of adhering to the lining when urine remains in the bladder. The evidence is inconclusive but some holistic practitioners suggest that cranberry might be helpful for men with prostate problems and others who have difficulty emptying their bladder. This could include persons with neurological problems such as stroke or spina bifida. Cranberry may also be useful for those who are on catheters because catheters pose an increased risk for urinary tract infections.²

Prevent cavities and boost oral health

Tissue and cell culture studies show that cranberry interferes with bacterial adhesion to teeth and gums. Dental plaque is a sticky film formed when specific bacteria stick to the surface of teeth. Cranberry proanthocyanidins interrupt this process, potentially reducing dental plaque and cavity formation. But the high sugar content in most cranberry juice cocktails and drinks may counteract cranberry's beneficial effect on teeth, making pure cranberry powder or concentrate a better choice for oral health.

Cardiovascular health

Cranberries contain significant amounts of flavonoids and polyphenols that may inhibit heart disease. Researchers at the University of Wisconsin-Madison School of Veterinary Medicine studied the effects of taking cranberry juice powder regularly over six months and found a pronounced improvement in the ability of blood vessels to relax in animals that had high blood cholesterol and atherosclerosis. "Since the abnormal functioning of blood vessels is an important component of heart disease, finding ways to improve vascular function in patients with high cholesterol and atherosclerosis is critical to helping protect these patients from consequences such as heart attack or stroke," according to lead researcher Kris Kruse-Elliott.³

Cranberry for stomach health

Cranberry PACs have been shown to inhibit the adhesion of *H. pylori* to human gastric mucus in vitro, suggesting cranberry may be

beneficial in the prevention of peptic ulcers through the inhibition of *H. pylori* adhesion to gastric mucus and stomach epithelium in test tube studies.⁴

Kidney and bladder stones

There is evidence that cranberry may decrease the formation of calcium oxalate urinary stones. The authors of one study suggest “cranberry juice has antilithogenic properties and, as such, deserves consideration as a conservative therapeutic protocol in managing calcium oxalate urolithiasis.”⁵

Safety

Cranberry is very safe and there are no known side effects but it does have slight blood thinning effects. Cranberry is also considered safe during pregnancy and lactation.

However, if would be wise to inform your physician that you are using cranberry if you are currently using blood thinning medications or are pregnant. Urinary tract infections during pregnancy should always be reported to a physician.

Note: Recurring bladder infections can eventually involve the upper urinary tract, especially the kidneys, making them more than just a painful nuisance. If you have this problem, or symptoms suggestive of a urinary tract infection (UTI), such as pain or burning on urination; increased urinary frequency; or cloudy, foul-smelling, or dark urine, consult a physician. While cranberries may lower the risk of UTI recurrence and diminish numbers of *E. coli*, in serious cases other medications may be required.

CranRichPAC®—all of the benefits without the sugar

Most cranberry drinks contain up to 30% sugar. All that extra sugar adds calories. This is unacceptable for those watching their weight or sugar intake and particularly troublesome for diabetics. CranRichPAC contains all of cranberry’s unique health promoting compounds without the sugar.

Highly concentrated InovoBiologic CranRichPAC®

- Grade A cranberries
- Contains the whole berry including fruit, skin, seeds, fibre and juice.
- 40 grams of cranberries is concentrated into 1 gram of CranRichPAC
- 10,000 ORAC units per 100 grams. In contrast, the ORAC value of fresh cranberries is only 1750 ORAC units per 100 g (about 3.5 oz.).

- High polyphenols with anthocyanin levels NLT 1.0%
- Lowest acidity level
- No added preservatives, flavours, water—just cranberries
- Tested for pesticide/herbicide residues
- Grown in British Columbia
- Proprietary processing with cutting-edge EnviroSimplex® technology
- Organic CranRichPAC also available

CranRichPAC® can be customized for a wide range of applications

- As a stand alone product it can boost daily ORAC values in the diet as well as contributing to ‘eating a rainbow’ of colour every day.
- As a value-added ingredient it can boost the antioxidant value of nutritional supplements such as in antioxidant formulas, urinary tract formulas, digestive health and probiotic formulas, cardiovascular formulas, and multi-vitamin/mineral preparations, etc.
- CranRichPAC can be added to nutritional bars, healthy snacks, and breakfast cereals to improve ORAC and nutrient density.
- CranRichPAC can be added to breakfast smoothies or other health drinks to increase ORAC without added sugar or calories.

References

- 1 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;9:1558-62.
- 2 Biering-Sorenson, F. Urinary tract infection in individuals with spinal cord lesion. *Curr Opin Urol* 2002 Jan; 12(1):45-9.
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- 4 Burger, O. Weiss, E. et al. Inhibition of *Helicobacter pylori* adhesion to human gastric mucus by a high molecular-weight constituent of cranberry juice. *Crit Rev Food Sci Nutr* 2002; 42(Suppl):279-284.
- 5 McHarg, T. et al. Influence of cranberry juice on the urinary risk factors for calcium oxalate kidney stone formation. *BJU Int* 2003 Nov; 92(7): 765-8.