

Besides being high in **Vitamin C** and **flavonoids**, cranberries contain **tannins**: compounds that keep bacteria from binding to cells, preventing them from multiplying and causing infections. This appears to be the real reason why cranberries are excellent at preventing **urinary tract infections**ⁱ, rather than the previously held notion that it might be due to an acidification of the urinary tract. Therefore, the attention has shifted to the anti-adhesion quality that tannins possess, a quality now being shown just as helpful at reducing the plaque-forming bacteria in our mouths that causes **gingivitis**ⁱⁱ—the precursor to **periodontal disease**. In fact, a toothbrush company in Pennsylvania is now selling a cranberry-coated dental floss.

Tannins also function as antioxidants, bonding with free radicals compounds that damage the body—and reducing their energy level so they're less harmful. Antioxidants may help prevent certain **cancers**ⁱⁱⁱ and **Alzheimer's disease**^{iv}, and they contribute to **cardiovascular health**^v. Studies indicate that on a per-serving basis, cranberry juice, sweetened dried cranberries, cranberry sauce, and cooked cranberries have comparable amounts of tannins. Dr. Amy Howell, a research scientist at Rutgers University's Marucci Center for Blueberry and Cranberry Research, believes that the combination of anti-adhesion and antioxidant qualities makes the cranberry an unusually beneficial health food.^{vi}

Prepared by Charles Armstrong, Cranberry Professional, University of Maine Cooperative Extension. © 2005



Published and distributed in furtherance of Acts of Congress of May 8 and June 30, 1914, by the University of Maine Cooperative Extension, the Land Grant University of the state of Maine and the U.S. Department of Agriculture cooperating. Cooperative Extension and other agencies of the U.S.D.A. provide equal opportunities in programs and employment. 04/05 ⁱⁱ Weiss EI, Lev-Dor R, Kashamn Y, Goldhar J, Sharon N, Ofek I. "Inhibiting interspecies coaggregation of plaque bacteria with a cranberry juice constituent." JADA (Journal of the American Dental Association), Dec., 1998. 129:1719-1723. The researchers warn that people need to be mindful of the high sugar content of most commercial juices, so drinking pure unsweetened cranberry juice or juices with high cranberry content and low sugar content, is the best strategy if attempting to reduce plaque in this manner. More studies are needed before researchers can determine the exact juice to sugar ratios that would still be effective at reducing gingivitis without increasing one's tooth decay.

ⁱⁱⁱ Vinson JA, Su X, Zubik L, Bose P. "Phenol Antioxidant Quantity and Quality in Foods: Fruits." Journal of Agricultural and Food Chemistry. Nov., 2001. Vol. 49, No. 11.

^{iv} Engelhart et al. "Dietary Intake of Antioxidants and Risk of Alzheimer Disease." JAMA, June 26, 2002, Vol. 287, No.24:3223-3229 as well as Morris et al. "Dietary Intake of Antioxidant Nutrients and the risk of Incident Alzheimer Disease in a Biracial Community Study." JAMA, June 26, 2002, Vol. 287, No.24:3230-3237.

^v Reed, J. "Cranberry flavonoids, atherosclerosis and cardiovascular health." *Critical Reviews in Food Science & Nutrition*, 2002. 42 (Suppl.): 301-316.

vi The New England Journal of Medicine. October 8, 1998, No.339:1085-86.

For even more cranberry information of all sorts, visit: <u>http://umaine.edu/cranberries/</u>

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¹ Avorn et al. "Reduction of bacteriuria and pyuria after ingestion of cranberry juice." JAMA (Journal of the American Medical Association), March 9, 1994, Vol. 271, No.10:751-4. Other members of the same botanical family as cranberries, including blueberries, also contain the same kind of tannins and exhibited similar bacterial anti-adherence activity. Other common fruits and vegetables that were tested – including lemons, oranges, apples, bananas, carrots, lettuce and potatoes – did not have this activity.