

WELL-BEING (antioxidant)

Journal of Agriculture and Food Chemistry November 2001

On a fresh weight basis, cranberry were reported to have the highest concentration of polyphenols of 20 fruits tested. Cranberry powder was also a potent inhibitor of LDL oxidation, suggesting a cardioprotective effect of its antioxidant activity.

Vinson JA, Su X, Zubik L, Bose P. Phenol antioxidant quantity and quality in foods: fruits. *Journal of Agriculture and Food Chemistry* 2001; 49:5315-5321.

Journal of Agricultural Food Chemistry June 2004

Cranberries were noted to have the highest total antioxidant capacity (TAC) per gram compared to most other common fruit. Cranberries had a TAC of almost 95 per gram followed by wild blueberries (93), black plums (73), plums (62) and cultivated blueberries (62).

Wu X, Beecher GR, Holden JM, Haytowitz DB, Gebhardt SE, Prior RL. Lipophilic and hydrophilic antioxidant capacities of common foods in the United States. *Journal of Agricultural Food Chemistry* 2004; 52:4026-4037.

USDA Database for the Proanthocyanidin Content of Selected Foods August 2004

Cranberries are reported to have the highest concentration of total PACs per gram compared to other fruits studied. Cranberries had a 418.8 mg/100g followed by wild blueberry (331.9), plum (215.9), cultivated blueberry (179.8) and strawberry (145.0).

U.S. Department of Agriculture, Agricultural Research Service.
USDA Database for the Proanthocyanidin Content of Selected Foods 2004.

Journal of Agriculture and Food Chemistry April 2007

In a clinical study, researchers in the Czech Republic reported that 1200 mg dried cranberry juice per day for over 8 weeks significantly decreased serum levels of advanced oxidative protein products, indicating a protective effect against oxidative damage.

Valentova K, Stejskal D, Bednar P, Vostalova J, Cihalik C, Vecerova R, Koukalova D, Kolar M, Reichenback R, Sknouril L, Ulrichova J, Simanek V. Biosafety, antioxidant status, and metabolites in urine after consumption of dried cranberry juice in healthy women: a pilot double-blind placebo-controlled trial.

Journal of Agricultural and Food Chemistry 2007; 55:3217-3224.

ORAL HEALTH (anti-adhesion)

European Journal of Oral Sciences April 2007

Cranberry juice concentrate was found to inhibit the inflammatory response of two major cell types in gum tissue. This dental research provides an opportunity to build on cranberry's anti-inflammatory properties and support the treatment of periodontitis.

Bodet, C.; Chandad, F.; Grenier, D. Cranberry components inhibit interleukin-6, interleukin-9 and prostaglandin E₂ production by lipopolysaccharide-activated gingival fibroblasts.

European Journal of Oral Sciences 2007; 115:64-70.



Cranberry Health Research Summary

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URINARY TRACT (anti-adhesion)

Journal of the American Medical Association March 1994

Harvard Medical School researchers conduct the first well-controlled, large-scale clinical trial to demonstrate that drinking Cranberry Juice Cocktail regularly significantly reduced the presence of bacteria in the urine. The researchers found that the effect was not because of more acidic urine (the urine of the cranberry juice drinkers was no more acidic than those drinking a non-cranberry placebo drink) and speculated that there was something specific in cranberry that prevented bacteria from adhering to the urinary tract. This research was conducted with 153 women, average age 78, using 10 ounces of Ocean Spray Cranberry juice drink, which contained 27 percent juice.

Avorn J, Monane M, Gurwitz JH, Glynn RJ, Choodnovskiy I, Lipsitz LA. Reduction of bacteriuria and pyuria after ingestion of cranberry juice.

Journal of the American Medical Association 1994; 271:751-754.

Canadian Journal of Urology June 2002

A University of British Columbia urologist found use of cranberry juice and tablets with increased fluid intake are more effective than fluids alone in preventing UTIs in women studied. Forty percent fewer women experienced UTIs when receiving cranberry products vs. placebo, and on average had half the number of UTIs. Antibiotic use was less in the cranberry group vs. placebo. The researcher recommended that cranberry products be offered as an option in the management of recurrent UTIs.

Stothers L. A randomized trial to evaluate effectiveness and cost effectiveness of naturopathic cranberry products as prophylaxis against urinary tract infection in men.

The Canadian Journal of Urology 2002; 9:1558-1562.

Phytochemistry September 2005

In a human study comparing the anti-adhesion effect of cranberry juice cocktail versus other foods that contain PACs, researchers reported that cranberry juice drink inhibited bacteria binding, whereas grape and apple juices, green tea and chocolate did not produce this anti-adhesion activity. In addition, cranberry PACs were found to have a unique structural feature, which may account for this specific microbial anti-adhesion property.

Howell AB, Reed JD, Krueger CG, Winterbottom R, Cunningham DG, Leahy M. A-type cranberry proanthocyanidins and uropathogenic bacterial anti-adhesion activity.

Phytochemistry 2005; 66:2281-2291.

Journal of Alternative and Complementary Medicine October 2005

In a pilot study at Brigham and Women's Hospital, bacterial anti-adhesion activity was found in urine of individuals who had consumed sweetened dried cranberries (SDCs), but not in urine after consumption of raisins.

Greenberg JA, Newmann SJ, Howell AB. Consumption of sweetened dried cranberries versus unsweetened raisins for inhibition of uropathogenic Escherichia coli adhesion in human urine: a pilot study. Journal of Alternative and Complementary Medicine 2005; 11:875-878.

CANCER & CELLULAR HEALTH (antioxidant)

Cancer Letters December 2006

Researchers at Cornell University in Ithaca, New York evaluated cranberry and its extracts on human breast cancer cells and found that cranberry contains components that are able to stop these cells from multiplying. This finding suggests cranberry may contain anti-cancer activities.

Sun J, Liu RH. Cranberry phytochemical extracts induce cell cycle arrest and apoptosis in human MCF-7 breast cancer cells.

Cancer Letters 2006; 241:124-134.

Journal of Agricultural and Food Chemistry January 2009

Researchers at Harbin Medical University in the People's Republic of China, identified that an extract of cranberry was capable of inhibiting proliferation of human gastric cancer cells in culture. This extract of cranberry was found to have potent antiproliferative properties.

Liu M, Lin LQ, Song BB, Wang LF, Zhang CP, Zhao JL, Liu J. Cranberry phytochemical extract inhibits SGC-7901 cell growth and human tumor xenografts in Balb/c nu/nu mice.

Journal of Agricultural and Food Chemistry 2009; 57:762-768.

CARDIOVASCULAR HEALTH (antioxidant)

Metabolism July 2005

A clinical study conducted at Laval University in Quebec City, Canada found that short-term consumption of cranberry juice cocktail resulted in a significant reduction of oxidized LDL cholesterol in the blood, as well as a 6 percent increase in antioxidant capacity. After 21 healthy men consumed a light cranberry juice cocktail four times per day for 14 days, a 10 percent decrease in oxidized LDL cholesterol was seen. These findings suggest that cranberry has beneficial effects on cardiovascular health.

Ruel G, Pomerleau S, Couture P, Lamarche B, Couillard C. Changes in plasma antioxidant capacity and oxidized low-density lipoprotein levels in men after short-term cranberry juice consumption.

Metabolism 2005; 54:856-861.

British Journal of Nutrition August 2006

A clinical study conducted at Laval University in Quebec City, Canada indicated that consuming a daily glass of light cranberry juice drink improved circulation by increasing the level of HDL, or good cholesterol found in the bloodstream. Thirty men with slightly elevated LDL cholesterol levels consumed increasing daily doses of light cranberry juice cocktail. An 8.6 percent increase of HDL cholesterol levels were found among participants studied.

Ruel G, Pomerleau S, Couture P, Lemieux S, Lamarche B, Couillard C. Favourable impact of low-calorie cranberry juice consumption on plasma HDL-cholesterol concentrations in men.

British Journal of Nutrition 2006; 96:357-364.

British Journal of Nutrition February 2008

Continuing previous research, Ruel and colleagues at Laval University report that daily consumption of light cranberry juice drink is associated with decreases in oxidation of LDL cholesterol and cell adhesion molecules (ICAM-1 & VCAM-1) in men.

Ruel G, Pomerleau S, Couture P, Lemieux S, Lamarche B, Couillard C. Low-calorie cranberry juice supplementation reduces plasma oxidized LDL and cell adhesion molecule concentrations in men.

British Journal of Nutrition 2008; 99:352-359.

GASTROINTESTINAL HEALTH (anti-adhesion)

STOMACH HEALTH

Helicobacter March 2005

This clinical study performed at the School of Oncology, Peking University found that daily consumption of cranberry juice showed a modest but significant attenuation of H. pylori in humans, suggesting that regular consumption of cranberry juice may help to retard H. pylori infection in adults.

Zhang L, Ma J, Pan K, Go VLW, Chen J, You W. Efficacy of cranberry juice on Helicobacter pylori infection: a double-blind, randomized placebo-controlled trial.

Helicobacter 2005; 10:139-145.

Molecular Nutrition and Food Research June 2007

In a double-blind, randomized clinical study performed by researchers at Tel Aviv University, Israel, the ability of cranberry juice to potentiate triple antibiotic therapy for H. pylori was tested. The results suggested that cranberry juice with triple therapy was significantly more effective in women than was triple therapy alone. No significant difference was seen in males.

Shmueli H, Yahav J, Samra Z, Chodick G, Koren R, Niv Y, Ofek I. Effect of cranberry juice on eradication of Helicobacter pylori in patients treated with antibiotics and a proton pump inhibitor.

Molecular Nutrition and Food Research 2007; 51:746-751.

Nutrition May 2008

At the University of Chile a multicentric, randomized, controlled, double-blind trial was carried out in 295 asymptomatic children to evaluate whether regular intake of cranberry juice and the probiotic Lactobacillus johnsonii La1 (La1) may result in an additive or synergistic inhibition of H. pylori. The researcher's results suggest that regular intake of cranberry juice or La1 may be useful in the management of asymptomatic children colonized by H. pylori. However, no synergistic inhibitory effects on H. pylori colonization were observed when both foodstuffs were simultaneously consumed.

Gotteland M, Andrews M, Toledo M, Munoz L, Caceres P, Anzini A, Witting E, Speisky H, Salazar G. Modulation of Helicobacter pylori colonization with cranberry juice and Lactobacillus johnsonii La1 in children. Nutrition 2008; 24(5):421-426.

INTESTINAL TRACT HEALTH

Clinical Nutrition December 2005

In a clinical study to evaluate the effect of cranberry juice on colonic bacterial flora in children, researchers at the University of Turkey, Finland report no differences in fecal fatty acid composition compared with control. This suggests that cranberry juice cocktail does not adversely affect the healthy bacterial GI flora.

Kontiohari T, Salo J, Eerola E, Uhari M. Cranberry juice and bacterial colonization in children—a placebo-controlled randomized trial.

Clinical Nutrition 2005; 24:1065-1072.

Phytomedicine January 2007

Resaerchers at Mt. Sinai School of Medicine and New York University reported the first evidence that components of cranberry juice drink can inhibit infectivity of viruses, including a rotavirus, which is a cause of gastroenteritis.

Lipson SM, Sethi L, Cohen P, Gordon RE, Tan IP, Burdowski A, Stoltzky G. Antiviral effects on bacteriophages and rotavirus by cranberry juice. Phytomedicine 2007; 14:23-30.