



CRANBERRY HEALTH NEWS

A publication of the Cranberry Institute

VOLUME 7 - ISSUE 6

SPRING 2009

Research Roundup

"Light" Cranberry Juice is Good for Type 2 Diabetics

In a crossover design study, researchers at Winona State University assessed the acute metabolic effects on the blood sugar control among type 2 diabetics after drinking four different beverages. The study included 6 men and women with type 2 diabetes. Each drank, on separate occasions, 8 oz. of the following: regular sweetened cranberry juice (130 kcal/8 oz); sweetened fruit beverages control (140 kcal/8 oz); low-calorie cranberry juice (19 kcal/8 oz); and a low-calorie control (19 kcal/8 oz).

The researchers reported that when the subject drank the low calorie cranberry juice beverage, the blood sugar response was not significantly different from baseline, with a peak of only 16 percent above baseline values. Similarly, plasma insulin levels were not considered significantly different than baseline after drinking the low-calorie cranberry juice beverage.

The authors concluded that low-calorie cranberry juice cocktail beverages are an acceptable choice for individuals with type 2 diabetes. These results are promising for individuals with type 2 diabetes because they often have insufficient fruit intake and they are at increased risk for developing urinary tract infections (UTIs). An 8 oz. serving of light cranberry juice counts as two fruit servings and may help prevent UTIs.

Source: Wilson T, Meyers SL, Singh AP, et al. Favorable glycemic responses to low-calorie cranberry juice. *J Food Science*. 2008; 73(9):241-45.

IN THIS ISSUE...

New Cranberry Health Research

- [Type 2 Diabetes](#)
- [Oral Health](#)
- [Anti-Cancer Properties](#)
- [Berries, Juice or Sauce: Cranberry Products are Antioxidant-Packed](#)

Meet Deborah Wing, M.D., Associate Professor and Director, Maternal-Fetal Development, University of California, Irvine

- [Cranberry Juice Good for Expectant Moms](#)

Cooking with Cranberry

- [Cranberry Fruit Dip](#)
- [Cranberry Orange Relish](#)

New Cranberry Health Research

The Cranberry Institute tracks and funds cranberry health research around the globe. The CI also partners with industry organizations such as the Wisconsin Cranberry Board and Canadian Cranberry Growers Coalition, to fund research on the health benefits of the cranberry.

Cranberry May Provide Oral Health Benefits

The benefits associated with cranberries may begin as soon as you take a sip or bite. According to a study from the Tokyo Dental College, cranberries may protect the teeth from bacteria that can contribute to cavities, or cariogenesis. Cranberry polyphenol fractions, in dose-dependent fashion, decreased oral bacteria's ability to adhere to the tooth surface, thus decreasing cariogenesis.

This anti-adhesion behavior and affect on oral health has also been evaluated by the Center for Oral Biology and Eastman Department of Dentistry at the University of Rochester Medical Center. The authors note that this indicates that cranberry juice may be a natural way to prohibit oral-diseases. Protecting oral health has added advantages as investigations have started to find links between oral health and cardiovascular disease risk.

Manufacturers are even beginning to add cranberry extracts to oral care products, including toothpaste, mouth rinses and even dental floss.

Source: Yamanaka-Okada A., Sato E, Kouchi, T, et al. Inhibitory effect of cranberry polyphenol on cariogenic bacteria. *Bull Tokyo Dent Coll*. 2008; 49(3):107-112.

Koo H, Nino de Guzman P, Schobel BD, et al. Influence of cranberry juice on glucan-mediated processes involved in *Streptococcus mutans* biofilm development. *Caries Res.* 2006;40(1):20-27.

PAC-Rich Cranberries Exhibit Anti-Cancer Properties

By investigating the polyphenolic extracts found in cranberries, researchers from Rutgers University identified an in vitro anti-cancer affect on ovarian cancer cells. The impact of polyphenolic extracts, the main flavonoid class in cranberries called proanthocyanidins (PACs) was analyzed in vitro on human ovarian, neuroblastoma and prostate cancer cells. Treatment with the PACs promoted cell death or apoptosis in the ovarian cancer cells as well as a decrease in proliferation. PACs had a cytotoxic affect on the other cancer cells, suggesting that they decrease the integrity of the neuroblastoma and prostate cancer cells. The results of this study emphasize the potential for PAC-rich cranberries to impact chronic disease risk in addition to their anti-adhesion properties.

Singh, AP., Smith, RK., Kim, KK., et al. Cranberry proanthocyanidins are cytotoxic to human cancer cells and sensitize platinum-resistant ovarian cancer cells to paraplatin. *Phytother Res.* 2009 Jan 26 [Epub ahead of print].

Berries, Juice or Sauce: Cranberry Products are Antioxidant-Packed

Given the emerging data on the benefit of cranberry polyphenols, investigators from the University of Scranton sought to determine the quantity of both free and total phenolic antioxidants in a variety of cranberry products. The researcher found that, when comparing amounts of total polyphenols on a fresh weight basis, the most polyphenols were in dried then frozen, followed by sauce and jellied sauce.

Further discrimination revealed that per serving size, the order of total polyphenols in products from most to least included: frozen > 100% juice > dried > 27% juice > sauce > jellied sauce. Since cranberry products often contain high fructose corn syrup (HFCS), the researchers then assessed the affect HFCS may have on the antioxidant capacity innate to cranberries.

Ten normal individuals were given the HFCS-containing cranberry juice or a cranberry juice-free control. After an overnight fast, the control saw a modest decrease in antioxidant levels in the blood plasma, while a significant rise in antioxidant capacity was documented after ingesting cranberry juice with HFCS. The researchers concluded that the antioxidant capacity of cranberry products should be evaluated further in human studies in view of the fact that cranberries are an excellent source of antioxidants.

Vinson JA., Bose P, Proch J, et al. Cranberries and Cranberry Products: Powerful in Vitro, ex Vivo, and in Vivo Sources of Antioxidants. *J Agric Food Chem.* 2008 Jul 23;56(14):5884-91.

Cranberry Miscellany: Did you know...

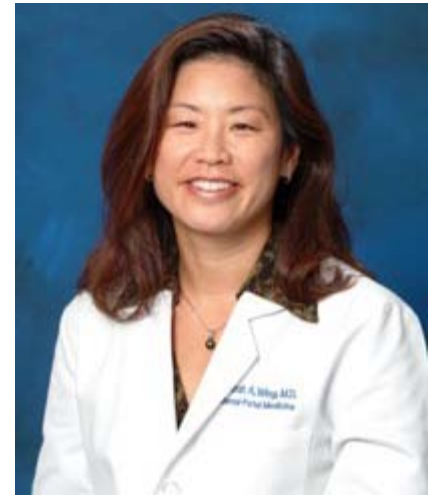
Pucker Up. Raw cranberries are very tart, but they aren't toxic. Some people love to bite into the bitter berries.



Researcher Perspective:

Interview with Deborah Wing, MD
Associated Professor and Director
Maternal-Fetal Development
University of California, Irvine

Cranberry Juice Good for Expectant Moms



One of the lesser-known side effects of pregnancy, due to hormonal changes, is increased risk of urinary tract infections (UTIs), which affects 5-12% of pregnant women. While UTIs are bothersome for non-pregnant women, they pose additional health risk for women who are pregnant and well as their unborn child as they are associated with early delivery and low birth weight babies. Due to the potentially harmful impact of UTIs on pregnant women, researchers are seeking safe ways to help prevent them from occurring during gestation.

Dr. Debra Wing, M.D., associated professor and director, maternal-fetal medicine at the University of California, Irvine, completed a NIH-funded randomized placebo-controlled study with 188 pregnant women who were randomly assigned to receive either one or two servings daily of cranberry juice cocktail (CJC) or a placebo beverage. “We found that multiple daily dosing of cranberry juice cocktail reduced the probability of contracting asymptomatic bacteriuria by 57%, and of contracting any type of urinary tract infection during pregnancy by 41%,” Dr. Wing concluded. While the results showed a trend toward statistical significance, the study was not adequately powered to reach clinical significance, and a larger study is currently in planning.

Other studies have shown that cranberry proanthocyanidins help inhibit bacterial adhesion therefore CJC may provide a cost-effective—and healthy—way for women to help reduce their risk of UTIs during pregnancy.

Wing DA, Rumney PJ, Preslicka CW and Chung JH. Daily cranberry juice for the prevention of asymptomatic bacteriuria in pregnancy: A randomized, controlled pilot study. *The Journal of Urology*. 2008; 180:4:1367-1372



Cranberry Fruit Dip

Serve this dip with assorted fruits like sliced apples, grapes, banana chunks, pineapple spears, or pear wedges. You can also drizzle this over fruit salad.

Ingredients:

1 8-oz. carton low-fat or nonfat vanilla yogurt
1/2cup prepared Cranberry Orange Relish (see recipe on this site)
1/4 teaspoon ground nutmeg
1/4 teaspoon ground ginger³⁵⁰

Directions:

Combine all ingredients in a small bowl. Stir until well blended.

Cranberry Orange Relish

Ingredients:

* 1 12-oz. package fresh or frozen, thawed cranberries
1 unpeeled orange, cut into 8 pieces
3/4 cup granulated sugar

Directions:

Place cranberries and orange pieces in a food processor. Process until the mixture is evenly chopped.

Transfer to a bowl or storage container and stir in sugar.

Cover and refrigerate until ready to use.

Yields: 3 cups

Cover and chill until ready to serve.

Serve with assorted fruits for dipping.

Yields: 1 ½ cups dip, about 6 servings

Recipe provided by Cranberry Marketing Committee [click here](#) for recipe.

* Be sure to thoroughly wash uncooked cranberries before using

Recipe provided by Cranberry Marketing Committee [click here](#) for recipe.

Health and Research Professionals:

The Cranberry Health Newsletter is designed to bring the latest research about cranberry and health to practitioners concerned about the health and well being of patients.

If you would like a colleague to receive updates about cranberry health, subscribe by sending an email to (cinews@earthlink.net).

©2009 Cranberry Institute. All Rights Reserved.
[HOME](#) | [OTHER NEWS](#)