



It is my pleasure to welcome you to the inaugural issue of *Cranberry Health News*, brought to you by the Cranberry Institute and the Cranberry Marketing Committee.

With this monthly newsletter, our goal is to bring you the latest cranberry-related health research and provide you with information that is timely and relevant. Each newsletter will feature research-supported health and nutrition updates, a listing of news and events and practical tips or helpful hints on incorporating cranberries into the diet.

We hope you enjoy this monthly update on cranberries and health, and we welcome your feedback.

Jere Downing
Executive Director
The Cranberry Institute

If you would like to receive a monthly email reminder that will link you to this newsletter, or if you have comments, questions or suggestions, please email: cinews@earthlink.net

Acidification or Antiadhesion? What gives cranberries their bacteria fighting abilities?

Cranberries are probably best known for their ability to prevent urinary tract infection (UTI), a painful condition afflicting six out of 10 women. Contrary to popular belief, it is not the acidity of cranberry juice that provides this UTI protective effect, but rather distinct bacteria-blocking compounds found in this brightly colored fruit. Researchers have recently found that distinct flavonoids found in cranberry, known as proanthocyanidins, irreversibly inhibit certain bacteria from adhering to urinary tract cells and causing infection.

Joining the fight against antibiotic resistance

Antibiotics are the most common treatment for UTIs and antibiotic spending to treat these infections accounts for more than \$1.6 billion annually. Given the mounting concern over the increase in antibiotic resistant bacterial strains, researchers are focusing more attention on alternative measures that can prevent the occurrence of UTIs. Partially in response to this need, the National Center of Complementary and Alternative Medicine, a division of the National Institutes of Health, recently approved funding for additional research on cranberry's UTI-preventive effects.

By preventing urinary tract infections, cranberries can help reduce the need for antibiotics, which then decreases the tendency for bacteria to develop antibiotic resistance. The less exposure bacteria have to antibiotics, the less likely these bacteria are to develop resistance to these often life-saving drugs. Studies have shown that the natural proanthocyanidin cranberry components that prevent certain bacteria from causing UTIs appear to be effective against some bacteria that have become resistant to antibiotics while not increasing selective pressure favoring the development of more resistant strains.

Cranberry's antiadhesion – Beyond the bladder

The same antiadhesion properties that help prevent UTIs may also prevent the formation of certain ulcers and gum disease. New studies suggest that cranberries keep some strains of ulcer-causing *H. pylori* bacteria from attaching to the stomach, which is the first step in the formation of certain ulcers. Additionally, components in cranberries appear to keep certain bacteria from gathering on the surface of the tooth, which could reduce the incidence of gum disease.

Big benefits in a small package

Cranberries are as convenient and flavorful as they are beneficial in fighting certain bacterial infections, confirming the old adage that big benefits often come in deceptively small packages. Current research indicates that it is possible to achieve cranberry's bacteria-blocking benefits by consuming the equivalent of just one 10-ounce glass of cranberry juice cocktail a day. Equivalent amounts of proanthocyanidins can be found in ½ cup cranberry sauce, 1 oz. sweetened, dried cranberries or 1 ½ cups fresh berries.

The annual cost of treating antibiotic resistant infections in the United States may be as high as \$30 billion according to estimates from the Institute of Medicine, a part of the National Academy of Sciences.

Hot off the Presses: The Latest Cranberry News

Calendar of Events

Third International Conference and Exhibition on Nutraceuticals and Functional Foods, November 17-20, 2002, San Diego, CA. For more information, visit www.worldnutra.com

American College For Advancement in Medicine: Fall Conference, November 6-10, 2002, Phoenix, AZ. Spring Conference, May 14-18, 2003, Washington, DC. For more information visit www.acam.org

Cranberries Top the List of Common Fruits for Antioxidant Activity
In a new study that was recently published in the *Journal of Agricultural and Food Chemistry*, Cornell researchers reported that cranberries ranked highest in total phenolics and total antioxidant activity compared to 10 other commonly-eaten fruits. Researchers noted that antioxidant activity of fruits and vegetables had been underestimated in the literature because bound phenolics were not included. This study examined both soluble-free and bound forms of phenolics. The total phenolics in cranberry was nearly double that of the next richest source of antioxidants, which was apple followed by red grape, strawberry, peach, lemon, pear, banana, orange, grapefruit and pineapple.

Also in the news ...

USDA Declares October National Cranberry Month, Americans Discover Bacteria-Blocking Properties of the Native Fruit, October 1, 2002, press release: <http://www.uscranberries.com/eng/admin/documents/NatCranMonthRelease.pdf>. One of North America's only native fruits is being recognized for its versatility, convenience and powerful nutritional benefits as Agriculture Secretary Ann M. Veneman officially proclaims October National Cranberry Month.

Antibacterial Properties of Cranberries to Be Studied by NIH's National Center for Complementary and Alternative Medicine, November 5, 2002, press release: www.cranberryinstitute.org/news/pr/110502.htm
Scientists have studied the urinary tract health benefits of cranberries for decades. Now the National Center for Complementary and Alternative Medicine/National Institutes of Health (NCCAM/NIH) has awarded a contract with Maryland-based McKesson BioServices to manufacture standardized, research-grade cranberry juice cocktail and cranberry extracts that will be used in cranberry clinical trials over the next several years.

Cranberry: Much to be thankful for, October 27, 2002, The News-Gazette, Champaign, Illinois: <http://www.news-gazette.com/story.cfm?Number=12586>
URBANA – Native Americans who settled this country long before Europeans arrived realized there was something special about the blood-red berries they found growing wild in bogs.

Cranberry juice may inhibit respiratory bacteria, October 28, 2002, Reuters Health: http://www.reuters.com/news_article.jhtml?type=healthnews&StoryID=1644145
CHICAGO (Reuters Health) - Preliminary study results suggest that cranberry juice may inhibit a type of bacteria that is a common cause of ear and respiratory infections in children, according to researchers at the annual meeting of the Infectious Diseases Society of America.

Practical Tips Cranberry Preparation and Storage

From September through January you should find fresh cranberries readily available in your local market. If you have ever wondered how to use and store these colorful, flavorful berries you'll find these practical tips very helpful!

Simple preparation tips

Most people find cranberries are too bitter to be eaten raw or in any unsweetened form. Commercial cranberry products are usually sweetened or combined with sweeter fruits such as apples. **Fresh or frozen cranberries can be used raw**, especially in cooked recipes, sauces and relishes. Frozen cranberries should be washed before use. Cranberries can be cooked with a small amount of liquid until they pop open. Frozen apple juice concentrate is an ideal cooking liquid as it helps sweeten the berries. Raw cranberries, either fresh or frozen, can be used in recipes calling for fresh berries and cooked cranberries are ideal as toppings for meats or fish. **Pre-sweetened dried cranberries** can also be substituted for raisins in most recipes or eaten alone.

Easy storage hints

Cranberries can be stored for about two weeks in the refrigerator and up to nine months in the freezer. Bags of fresh cranberries can be placed directly into the freezer. Before using, cranberries should be washed thoroughly. Cleaning cranberries is simple:

- 1) Place the berries in a bowl of cold water (be careful not to soak too long).
- 2) Remove any leaves, stems or floating unripe berries while submerged.
- 3) Drain well and use!

Cranberry Food File: Inspiration for the Holidays! November 2002

Cranberries are abundant this time of year so we thought some cranberry inspiration was in order. We have provided two delicious and healthy recipes below for you to try. The **Apple-Cranberry Chutney** is a delicious accompaniment to turkey, chicken or pork to enhance the flavor of your meal. **Wilted Spinach Salad with Dried Cranberries, Pecans and Feta Cheese** is an appetizing alternative to the traditional green salad.

Apple-Cranberry Chutney

½ cup granulated sugar	¼ teaspoon ground cloves
¼ cup brown sugar	½ cup water
¼ cup golden raisins	½ cup cranberry juice cocktail
½ teaspoon cinnamon	1 ½ cups (6 oz.) fresh or frozen cranberries
⅛ teaspoon ground ginger	2 tablespoons plus 2 teaspoons apple cider vinegar
⅛ teaspoon grated fresh ginger root	1 teaspoon grated orange zest
⅛ teaspoon ground allspice	1 small baking apple, peeled and chopped to make ½ cup

In a 2-quart saucepan, mix cranberries, sugar, raisins, cinnamon, ginger, cloves, allspice, ginger root, water and cranberry juice cocktail. Cook, uncovered, over medium heat until cranberries pop, about 25 minutes. Reduce heat to low and stir in vinegar, apple and orange zest. Simmer uncovered for 20 minutes, stirring occasionally. Makes 12 ¼ cup servings. (Recipe courtesy of Warren Cranberry Festival Inc., *The Best of Cranfest Cranberry Recipes*)

Nutritional Analysis Per Serving: Calories 80; Protein 0 g; Fat 0 g; Carbohydrates 20 g; Cholesterol 0 mg; Fiber <1 g; Sodium 0 mg.

Wilted Spinach Salad with Dried Cranberries, Pecans and Feta Cheese

Salad:

- 1 small red onion, vertically sliced
- 2 8-9 cups spinach leaves, washed and patted dry
- 4 ounces feta cheese, crumbled
- ¼ cup dried cranberries
- 1 tablespoon mint leaves, chopped
- 2 tablespoons sherry vinegar
- Pinch of salt
- 6 tablespoons olive oil
- black pepper, freshly ground

Garlic Crostini:

- 1 tablespoon olive oil
- 1 large garlic clove
- 12 thin slices baguette or other Artisan bread
- ½ cup pecan halves, toasted and very coarsely chopped



Quarter and thinly slice the red onion. Place the slices in cold water and allow to soak for 30 minutes. Drain and pat dry. Meanwhile, make the crostini. Brush the bread slices with olive oil. Toast the slices in a 375°F oven until nicely browned. Peel the garlic clove and smash it. Rub the browned slices of bread with the garlic after they come out of the oven. Set the crostini aside. Place the soaked onion slices, spinach, pecans, feta, cranberries, mint and vinegar in a large mixing bowl. Toss together with a large pinch of salt. In a saucepan, heat the olive oil to just below smoking. Pour the hot oil over the salad in the bowl, tossing well as you do. Taste and correct the seasoning with salt, pepper and vinegar. Serve with crostini. Serves 6. (Recipe courtesy of Spinner Publications, *Cranberry Cooking for All Seasons*)

Nutritional Analysis Per Serving: Calories 358.4; Protein 6.3 g; Fat 28.7 g; Mono unsaturated fat 44%; Poly unsaturated fat 10%; Saturated fat 15%; Carbohydrates 19.6 g; Cholesterol 16.8 mg; Fiber 3.4 g; Sodium 385.8 mg.