



Nutri-Facts

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Greetings all!

Fall is upon us. This is evident by the return of football season, the carving of pumpkins, and, my favorite, the presence of cranberries in the grocery store. For those of you who haven't tried these tart little berries, you are missing on some potential health benefits.

This issue contains nutrition information about cranberries including nutrient content, storage, use, as well as the latest research showcasing their potential health benefits. There is also a brief news article for your use as well as a couple of recipes for using cranberries (both fresh and dried).

As always, I appreciate any comments/suggestions for future issues of Nutri-Facts.

Eat Well,
Jenna

Test Your Cranberry Knowledge (answers given on last page)

1. What is a pakimintzen?
2. In what state was the first cranberry bed planted?
3. The United States produces what percent of the world's cranberry supply?
4. How many berries are in one pound of cranberries?
5. How did the cranberry get its name?

Cranberries - nutrient content and potential health benefits

Fresh cranberries are low in sodium and fat, a good source of dietary fiber (17% daily value), and an excellent source of vitamin C (22.5% daily value) - all for about 50 calories a serving (one-cup). Fresh or dried, this seasonal berry can be a tasty addition to salads, breads, muffins, and other foods. Check out the nutrient composition of fresh cranberries below.

Nutrient	Amount**	Nutrient	Amount**
Protein	0.39 grams	Vitamin A	46 IUs
Total lipid (fat)	0.20 grams	Ascorbic acid	13.5 milligrams
Carbohydrate.	12.7 grams	Calcium	7.0 milligrams
Cholesterol	0.00 milligrams	Iron	0.20 milligrams
Sodium	1.00 milligram		
Total dietary fiber	4.2 grams		

**Based on 1 cup whole fresh cranberries; Source: USDA

Daily values are referenced on the Nutrition Facts panel of food labels and are based on a 2,000 calorie diet.

Cranberries are consumed most often through cranberry juice cocktail, which is a sweetened beverage that contains 27% cranberry juice. Other ingredients include sweetener, water, and vitamin C. A 6-ounce serving of cranberry juice cocktail contains 108 calories and provides the following:

Nutrient	Amount**	Nutrient	Amount**
Protein	0 grams	Vitamin A	8 IUs
Total lipid (fat)	0.20 grams	Ascorbic acid	67 milligrams
Carbohydrate.	27.4 grams	Calcium	6.0 milligrams
Cholesterol	0.00 milligrams	Iron	0.28 milligrams
Sodium	4.00 milligram		
Total dietary fiber	0.2 grams		

Source: Pennington JAT. Bowes & Church's Food Values of Portions Commonly Used. 17th edition. Lippincott-Raven Publishers, 1998.

A Cranberry Phyto-fest

In addition to their nutritional value, cranberries contain beneficial phytochemicals including anthocyanins, quercetin, and proanthocyanidins. Research suggests that proanthocyanidins prevent E. coli (the bacteria that often causes UTIs) from sticking to the walls of the urinary tract, thus preventing them from causing the infection. Anthocyanins may be protective against certain forms of cancer as well as cardiovascular diseases. Quercetin may also have anti-cancer properties. According to research by Leahy et al., dried cranberries had amounts of proanthocyanidins that were similar to amounts found in cranberry juice cocktail. Other phytochemicals include phenolic acids and flavonoids.

Potential health benefits of cranberries: prevention of UTIs and more!

Cranberries' claim to fame has been that they help prevent urinary tract infections (UTIs). UTIs account for more than 11 million physician visits annually in the United States. At least 20% of all women will experience a UTI sometime in their lives.

For more information about UTIs, check out the following National Institutes of Health web site:

<http://www.niddk.nih.gov/health/urolog/pubs/uti/uti.pdf>

Many people swear by the cranberry remedy. In fact, research conducted as early as 1914 identified cranberries as a potential treatment for UTIs. Other individuals have brushed it off as folklore. New research, however, has some health professionals giving cranberries a second look:

Journal of the American Medical Association; June 19, 2002

Samples of E.Coli were taken from 39 women who had confirmed cases of UTI. The bacteria were then incubated in urine or cranberry extract for 20 minutes. The urine was taken from healthy women before and after the consumption of cranberry juice cocktail. After 20 minutes, the bacteria were removed and screened for their ability to adhere (i.e. stick) to uroepithelial cells (these are cells that you would find in the urinary tract). What the researchers found was that the bacteria that had been incubated in urine that was produced following the consumption of cranberry juice cocktail prevented 80% of the bacteria from sticking to the uroepithelial cells. The bacteria that had been incubated in cranberry extract did not stick to any of the cells. On the other hand, all of the bacteria that had been incubated in the urine **before** the cranberry was consumed stuck to the sample of cells. The ability of cranberry juice cocktail and cranberry extract to prevent bacteria from sticking to urinary tract cells continued for as long as 10 hours. This led the authors to suggest that cranberry juice cocktail and selected cranberry extracts may offer protection against UTIs.

Note from Jenna: This made me wonder whether the dried sweetened cranberries had the same protective benefits as cranberry juice cocktail. I contacted the folks at the Cranberry Institute (www.cranberryinstitute.org) and was told that dried cranberries have the same benefit as cranberry juice cocktail. The dietitian who answered my question noted that one ounce of sweetened dried cranberries is equal to about 8 ounces of cranberry juice cocktail.

Eating 1-2 ounces of dried cranberries (or drinking 2-8 ounce glasses of cranberry juice cocktail) was recommended to help prevent UTIs.

Urology, March 2001

This review article summarizes more than 10 different research studies investigating the cranberries' (mainly cranberry juice) potential for preventing UTIs. Based on these research findings, the authors noted that cranberries **may** be beneficial and protective against UTIs, although more research is needed.

But wait - there's more

The health benefits of cranberries may extend north of the urinary tract. The antioxidant properties found in cranberries have been shown to reduce LDL cholesterol oxidation. Other research, although preliminary, has shown that the fruit may actually help reduce LDL cholesterol levels. Both of these actions can help prevent heart disease. Animal studies have found that cranberries may inhibit tumor growth, although more research is needed. In addition, researchers are also investigating the potential role of cranberries as a means of increasing vitamin B₁₂ absorption in persons who have low levels of gastric (stomach) acid.

Buying and storing cranberries

Cranberry season is generally from September to December. The season peaks in November so the opportunities to buy fresh cranberries are limited. If fresh cranberries are not available, consider dried or juice. One 12-ounce bag of fresh cranberries contains about 3 cups whole or 2 ½ cups chopped. A 6-ounce bag of dried cranberries contains about 1 1/3 cups.

Fresh cranberries have a natural preserving compound called benzoic acid. If stored in a plastic bag, cranberries will stay fresh in the refrigerator for up to 4 weeks. Once frozen, they will keep for 9 months (more on freezing cranberries below).

Fresh whole cranberries are firm and will even bounce if dropped. Don't rely only on color to determine freshness; color has more to do with the variety of the cranberry than with age. However, avoid berries that are soft or blackened as this is a sign that they may not be fresh.

Freezing cranberries

Freezing whole cranberries is easy. Although they can be frozen using the syrup pack method, the easiest way to freeze cranberries is by freezing them on a tray and then packing them into rigid containers or flexible freezer bags that are moisture and vapor resistant. Be sure to remove the stems and wash the berries before freezing!

Note to agents: For information on the syrup pack method for freezing cranberries, go to page 220 of *So Easy to Preserve*. For individuals who may be interested in drying cranberries, it should be noted that they are rated "poor" when it comes to their suitability for drying. In addition, it can take 24 hours or longer to dry cranberries. (*So Easy to Preserve*, page 292-293).

Tips for increasing your cranberry intake:

- * drink a glass of cranberry juice/cranberry juice cocktail with breakfast
- * incorporate fresh or dried cranberries into breads, muffins, or fruit salads
- * add dried sweetened cranberries to bran cereal for extra flavor and fiber
- * for a quick and tasty snack, try sweetened dried cranberries such as Craisins®

Note: Brand names are used for illustration purposes only and should not be viewed as an endorsement by Texas Cooperative Extension.

Recipes

Molded Cranberry Fruit Salad **Makes 8 servings.**

What you need:

1 8-ounce can crushed pineapple, drained, reserving juice
 1/2 cup Ocean Spray® Cranberry Juice Cocktail
 2 tablespoons lemon juice
 1 3-ounce package raspberry-flavored gelatin
 1 16-ounce can Ocean Spray® Whole Berry Cranberry Sauce
 1/2 cup chopped celery

How to make it:

1. Wash your hands; make sure your food preparation surface is clean.
2. Combine reserved pineapple juice, cranberry juice cocktail and lemon juice in a medium saucepan.
Bring to a boil. Remove from heat.
3. Add gelatin, stirring until it is completely dissolved.
4. Break up cranberry sauce with a fork. Stir into gelatin mixture.
5. Refrigerate until mixture begins to set.
6. Stir in pineapple and celery. Pour into a 4-cup mold. Chill until firm.

NUTRITIONAL ANALYSIS (per serving): Calories 148, Calories from fat 0, Protein 1 gram, Carbohydrate. 37grams, Fat 0grams, Cholesterol 0mg, Sodium 65mg

Source: Ocean Spray <http://www.oceanspray.com/recipes.asp> (Reprinted with permission)

Cranberry Orange Scones **Makes 8 Scones**

What you need:

2 cups all-purpose flour
 1 tablespoon baking powder
 ½ teaspoon baking soda
 1/4 teaspoon salt
 4 tablespoons sugar
 4 packets of Sweet-N-Low (optional for extra sweetness)
 1 tablespoon dried orange rind
 5 tablespoons butter or margarine, cut up (do not use reduced fat margarine)

1 teaspoon vanilla
2/3 cup buttermilk
1 6-ounce package of dried sweetened cranberries

How to make it:

1. Wash your hands; make sure your food preparation area is clean.
2. Combine the first 6 ingredients and mix well.
3. Cut in butter/margarine with a fork or pastry cutter until mixture is crumbly.
3. Add buttermilk, vanilla, and dried cranberries; stir until moist
4. Place dough on a lightly floured surface and knead 5 to 6 times.
5. Pat dough into an 8-inch circle.
6. Using a knife, cut dough into 8 wedges; place 1-inch apart on a greased cookie sheet
7. Bake at 350 degrees for about 20-25 minutes

These are best served warm and can be reheated in the microwave!

NUTRITIONAL ANALYSIS (per serving based on using margarine): Calories 336, Calories from fat 72, Protein 10 grams, Carbohydrate. 55 grams, Fat8 grams, Cholesterol 4 mg, Sodium 541 mg

NORTHLAND CRANBERRY APPLE PIE
makes 1-9inche pie; 8 servings

What you need:

Pastry for 2-crust, 9-inch pie
2 cups Northland® Fresh Cranberries, whole
4 cups Apples, pared, cored and sliced (about 5 medium apples)
1 cup Sugar
1/3 cup All-purpose flour
2 tablespoons margarine

How to make it:

1. Wash your hands; make sure your food preparation surfaces are clean.
2. Preheat oven to 425 degrees F.
3. Prepare pastry using your favorite recipe or purchase a ready-made crust.
4. Combine sugar, flour, Northland® cranberries and apples in a medium-sized bowl, stirring well to coat fruit.
5. Line a 9-inch pie pan with pastry.
6. Fill with cranberry-apple mixture; dot with margarine. Adjust top crust, cutting slits for escape of steam, or add pastry strips for a lattice crust.
7. Bake at 425 degrees F for 50 minutes.

Source: Northland Cranberries (<http://www.northlandcran.com/recipes.html>) Reprinted with permission.

NUTRITIONAL ANALYSIS (per serving): Calories 365, Calories from fat 120, Protein 2 grams, Carbohydrate. 61 grams, Fat 13 grams, Cholesterol 0 mg, Sodium 245 mg, Fiber 4 gm

Additional cranberry recipes:

Pacific Coast Cranberry Research Foundation:

<http://www.cranberrymuseum.com/pages/recipes.html>

References:

1. The Cranberry Institute. www.cranberryinstitute.org
2. National Kidney Foundation, New Studies Offer Hope to UTI Sufferers. <http://www.kidney.org>
3. Manges AR, et al. Widespread distribution of urinary -tract infections caused by a multidrug-resistant Escherichia coli clonal group. *New England Journal of Medicine*; 2001; 345:1007-1013.
4. Howell AB, Foxman B. Cranberry Juice and Adhesion of Antibiotic-Resistant Uropathogens. *Journal of the American Medical Association*; 2002; 287:3082-3083.
5. Lowe FC, Fagelman E. Cranberry juice and urinary tract infections: what is the evidence? *Urology*; 2001; 57:407-413.
6. Leahy M, Roderick R, Brilliant K. The Cranberry - Promising Health Benefits, Old and New. *Nutrition Today*, 2001; 36:254-265.
7. Wilson T, Porcari JP, Harbin D. Cranberry extract inhibits low density lipoprotein oxidation. *Life Sciences*, 1998; 62:381-386.

Answers to "Test Your Cranberry Knowledge"

1. A pakimintzen is a cranberry eater.
2. The first commercial cranberry bed was planted on Cape Cod in Dennis, Massachusetts in 1816 by Henry Hall. Cranberry beds are long-lived; 100 year old fields are not uncommon.
3. The United States produces 85% of the world's cranberry supply.
4. There are about 500 cranberries in one pound.
5. The cranberry was named from the appearance of the bud and the flower to the neck, head and bill of a crane, hence cranberry, then cranberry.

F.A.Q.s About Cranberries

Cranberries are a tart-tasting fruit packed with fiber, vitamin C, and beneficial phytochemicals. Recent studies have linked cranberry consumption with a lower incidence of urinary -tract infections. Other possible health benefits of cranberries include a reduced risk of cancer and heart disease. Keep reading to learn how to store and use cranberries.

When are fresh cranberries available?

Fresh cranberries are available from September to December. The season peaks in November.



I want to lower my chances of getting a urinary tract infection. How often do I need to consume cranberries?

According to the Cranberry Institute, cranberry juice cocktail and dried sweetened cranberries have the same health benefits similar as fresh cranberries. Most people can find cranberry juice cocktail and dried sweetened cranberries in their local grocery store. In fact, cranberry juice cocktail is the most common method of cranberry consumption.

Consuming 1-2 ounces of dried sweetened berries or 8 ounces of cranberry juice cocktail daily may help prevent urinary tract infections. Check with your doctor if you are concerned about urinary tract infections.

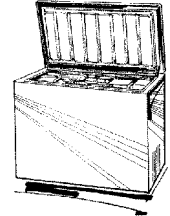


What is the best way to store fresh cranberries?

For best quality, store fresh cranberries in a plastic bag in the refrigerator. They will keep for up to 4 weeks.

Can fresh cranberries be frozen for later use?

Yes. The easiest way to freeze cranberries is by freezing them on a tray and then packing them into rigid



containers or flexible freezer bags that are moisture and vapor resistant. Be sure to remove the stems and wash the berries before freezing. For best quality, use frozen cranberries within 9 months.

Other than juice, how can I increase my consumption of cranberries?

- * incorporate fresh or dried cranberries into breads, muffins, or fruit salads
- * add dried sweetened cranberries to bran cereal for extra flavor and fiber
- * for a quick and tasty snack, try sweetened dried cranberries



Where can I go for recipes that use cranberries?

The Cranberry Institute

<http://www.cranberryinstitute.org/>

Northland Cranberries

<http://www.northlandcran.com/recipes.html>

Ocean Spray Cranberries

<http://www.oceanspray.com/recipes.asp>



Prepared by Jenna Anding, PhD, RD, LD, assistant professor and Extension nutrition specialist 11/02. This fact sheet is not intended as a substitute for professional medical advice. *Educational programs of Texas Cooperative Extension are open to all people without regard to race, color, sex, disability, religion, age, or national origin*