



Why Black Walnuts?

Black Walnuts: Savor the Flavor, and the Nutrition!

As you consider healthy food choices for your family, why not “go nuts?”

Nuts offer a range of excellent health benefits and add flavor, crunch and appeal to every diet. Many nuts are a delicious source of unsaturated fatty acids, protein, fiber and antioxidants like vitamin E.

Why black walnuts?

Black walnuts are a unique member of the tree nut family in that they are a source of the omega-3 fat alpha-linolenic acid, one of the “good fats” linked to several important health benefits including lowering cholesterol, regulating heartbeat and reducing inflammation. (Source: *Environmental Nutrition*, 11/1/2000)

“The black walnut is a treasure chest, filled with precious nourishment.”

- *Environmental Nutrition*

Black walnuts are low in simple carbohydrates and saturated fats, making them a good choice if you’re watching your weight.



Not only are black walnuts a good source of important nutrients, their rich, distinctive flavor lends itself to an incredible variety of recipes.

Try black walnuts in stuffing for poultry, sprinkled on top of cereal and baked into casseroles. They are delicious in breads, muffins and pastries.

Black walnuts make the gourmet difference

You’ll discover a whole new flair in food when you start cooking with black walnuts. Nutritionist and restaurateur Suze Dunville of Springfield, Mo., finds nuts to be a valuable addition to her cooking. “Nuts add taste, richness and crunch. And that adds prestige, which in turn adds to the perception of enhanced value,” she said.



NUTrition and Your Health

Go nuts for your heart!

We've all heard that nuts are filled with fat and are off limits for dieters.

However, a great deal of recent research links nut consumption to several key health benefits. For example, the Food and Drug Administration recently approved claims that eating 1.5 ounces of nuts daily may reduce the risk of heart disease when part of a diet low in cholesterol and saturated fat.

Black walnuts contain phytochemicals, compounds found in plants that seem to decrease the risk of cancer and heart disease. Research results also show that incorporating a moderate amount of walnuts into a cholesterol-lowering diet may decrease serum total cholesterol levels in healthy men. (Source: *Vibrant Life*, 7/1/2002)

Nut consumption also has been linked to a decreased risk of heart disease in several studies. The Adventist Health Study, (35,000 participants), and the Nurses' Health Study (86,000 participants), both concluded a lower



Black Walnuts: Chock Full of Goodness!

- Good source of Omega-3 fatty acids with cholesterol-lowering benefits
- High fiber content makes black walnuts a filling snack
- Cholesterol free
- Black walnuts contain alpha-linolenic acid, which prevents clots, helps regulate heartbeat and reduces inflammation

risk of heart attacks and heart disease for people who ate an ounce or more of nuts at least five times per week. (Source: *Food Processing*, 11/1/2000)

In a 1998 Harvard study of 86,000 women, the findings were quite significant – **35 percent fewer heart attacks were reported among women who consumed a serving of nuts five times per week compared to those who didn't consume nuts regularly.** (Source: *Environmental Nutrition*, 11/1/2000)

Essential minerals, like magnesium, copper, selenium and potassium also make black walnuts a good choice. For reducing high blood pressure, the DASH Diet recommends four to five servings per week of nuts, seeds and beans. This eating plan is from the Dietary Approaches to Stop Hypertension study, a large study of dietary patterns conducted at four major medical centers.

The truth about nuts and fat

Though nuts may show a higher fat content than some snacks, they contain the “good” fat – unsaturated. These polyunsaturated and monounsaturated fats can reduce levels of lipoprotein, the “bad” form of cholesterol. Diets high in monounsaturated fatty acids lower both plasma cholesterol and triglycerides.

Nuts are also satisfying, due to their fiber content and light crunch. Substitute a handful of tree nuts instead of chips or pretzels next time you feel the urge for a snack — they'll stick with you longer and you're likely to consume less calories throughout the day.

Walnuts and the Mediterranean diet

Researchers at Brigham and Women's Hospital and the Harvard School of Public Health have found that people following a Mediterranean-style weight loss diet were able to keep weight off for a longer period of time than those following a traditional low-fat diet. This moderate fat diet, based on the diets of southern Europe and the Mediterranean, allows for a greater variety of foods that are considered very appetizing compared to stricter, blander diets. Participants substituted walnuts and olive oil for saturated fats, like butter. The main fats included in the Mediterranean diet are unsaturated, or “healthy fat” that is associated with lowering cholesterol. Interestingly, those participating on the diet who consumed 3 ounces of walnuts daily showed a significantly lower total and low-density lipoprotein cholesterol concentration. Compared to most nuts, walnuts are higher in linolenic polyunsaturated fatty acids, and this connection to health benefits is under study. (Source: *Nutrition Today* 5/1/2003)

“More omega-3 fatty acids and fewer omega-6 fatty acids can help protect the cells of the brain from inflammation and improve cognitive function.”

- John Morley, M.D., St. Louis University

Nutrient composition, 1 oz. (3.5 Tbsp.) black walnuts

Calories:	175
Protein:	6.8 grams
Total Fat:	16.7 grams
Monounsaturated fat:	4.25 g.
Polyunsaturated fat:	9.9 g.
Carbohydrates:	2.8 grams
Fiber:	11.9 grams
Vitamin C:	11 mg.
Cholesterol:	0 grams
Vitamins:	E (gamma tocopherol)
Minerals:	Magnesium, potassium, iron
Note:	Less omega-3 and folate than English walnuts, but more arginine and selenium.

NUTrition and Your Health

Researchers also found the diet had a blood-thinning effect and may be a good option for sustainable weight loss. (Source: M. Hemmelgarn)



Black walnuts add a rich, gourmet flavor and heart-healthy nutrition to entrees, vegetables and baked goods.

Preparing and storing black walnuts

Whether you savor their richness in creative recipes or enjoy them in fresh baked goods, black walnuts give a unique, bold flavor to any recipe. The distinct flavor actually intensifies during the cooking process! Try them in chicken, seafood or wild rice. They're also great with vegetables or pasta.

Black walnuts stay fresh for up to one year when stored in an airtight container in the refrigerator, and up to two years or more when stored airtight in the freezer. If you freeze them, be sure to use the nuts soon after removing them from the freezer to ensure freshness. (Source: Hammons Black Walnuts)

How to eat black walnuts the right way

As you incorporate more nuts into your diet, remember they do have calories, and calories count! The serving size for maximum health benefits is one ounce per day, or 3.5 tablespoons of black walnuts. Try substituting black walnuts for a handful of chips at lunchtime, or try black walnuts on a salad instead of cheese.

Support Missouri agriculture

The Eastern black walnut is one of the few harvested crops still picked by hand. Gathered in the fall, the nuts are hulled, bagged and sold to a network of buying stations, or "hullers," for Hammons Products Company, a family-owned business in Stockton, Mo., that has grown to be the largest processor of black walnuts in the world.

The University of Missouri Center for Agroforestry (UMCA) is working to increase consumer demand and awareness for Eastern black walnuts. As the market expands for black walnuts, Missouri landowners will experience greater profit potential in producing black walnuts in an agroforestry setting. UMCA researchers are studying improved cultivars for black walnuts

that will provide consistent flavor and yields.

For more information on black walnuts or their use in agroforestry practices, contact the University of Missouri Center for Agroforestry at (573) 884-2874; or visit www.centerforagroforestry.org

The University of Missouri Center for Agroforestry, established in 1998,

One serving of black walnuts per day (3.5 Tbsp.) offers omega-3 fatty acids, fiber, monounsaturated fats and protein.



Nuts and longevity

Walnuts contain protective ingredients linked to longer life

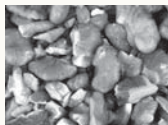


- Monounsaturated fatty acids: These fats lower LDL while not affecting HDL cholesterol. An inverse relationship is shown between monounsaturated fats and age-related cognitive decline.
- Arginine: Amino acid needed to make nitric oxide; helps relax constricted blood vessels and eases blood flow.
- Phytochemicals contain antioxidant vitamins: Vitamin E, flavonoids, plant stanols, ellagic acid and phenols, which protect against oxidative damage to cells.
- Vitamins and minerals: Folic acid, magnesium and potassium.
- Fiber: Nuts help achieve the goal of 25-35 grams daily.

(Source: M. Hemmelgarn)

is an interdisciplinary research, teaching and technology transfer program. The Center is the leading institution for biophysical, economic and social research related to temperate agroforestry and its benefits to landowners and the environment. Agroforestry practices benefit Missouri by increasing and diversifying products, markets and farm income; improving soil quality; and reducing erosion, nonpoint source pollution and damage due to flooding. Agroforestry practices can also enhance land and aquatic habitats for fish and wildlife and improve biodiversity.

**Selections of nutritional information provided by Melinda Hemmelgarn, M.S., R.D., Missouri Department of Health and Senior Services, Division of Community Health, Section for Nutritional Health and Services*



Great ways to enjoy the distinctive flavor of Missouri black walnuts

- Toasted black walnuts sprinkled on oatmeal or cold cereal
- As a topping on yogurt or ice cream
- Mixed into chicken or tuna salads
- Baked into pie crusts
- Stirred into cooked vegetables or pasta
- Mixed into pancake batter
- Add flavor to cookies, muffins and breads
- Instead of chips or pretzels for a healthy snack



Missouri black walnuts are harvested for processing.

Find more information about black walnuts and the University of Missouri Center for Agroforestry black walnut research, at www.centerforagroforestry.org, including:

* *The guide "Growing Black Walnut for Nut Production," detailing the cultural practices and cultivar choices necessary to maximize nut production from black walnut trees*

* *Black walnut recipes*

* *Black Walnut Financial Model to assist growers in decisions about tree spacing, nut harvest and whether to use grafted or unimproved trees*

* *Details of specific projects involving black walnut*

Portions of this information and photos contributed by Hammons Products Company
105 Hammons Drive
P.O. Box 140
Stockton, MO 65785
(888)-4BWNUTS
www.black-walnuts.com



M Center for Agroforestry
University of Missouri-Columbia

Technology Transfer Unit
203 ABNR
Columbia, Mo. 65211
(573) 884-2874
www.centerforagroforestry.org
umca@missouri.edu

Black Walnut Banana Muffins

3 bananas
1/2 cup sugar
1/2 cup brown sugar
2 eggs
1/2 cup margarine, melted
1 cup all-purpose flour
1 cup wheat flour
1 1/2 tsp. baking soda
3 Tbs. buttermilk
2/3 cup black walnuts, chopped

recipe: www.black-walnuts.com

Black Walnut Blondies

1 1/2 cups unsifted self-rising flour
1 cup packed light brown sugar
1 cup sugar
1 cup vegetable oil
4 eggs, slightly beaten
1 cup black walnuts

recipe: www.black-walnuts.com

Black Walnut-Encrusted Chicken Breasts with Peach Sauce

4 boneless chicken breasts without skin
2 cups black walnuts, chopped fine
1/4 cup flour
1/3 cup peach preserves
2 tablespoons honey
1/2 tablespoon mustard
1 cup chicken stock
1 tablespoon cornstarch
1 dash salt and white pepper

Green Beans with Raisins and Black Walnuts

1 lb. green beans, trimmed, cut into 2 inch lengths
2 T. butter
1 tsp. grated fresh ginger
1/4 cup raisins, minced
1/4 cup black walnuts
2 T. lemon juice
Salt & Pepper

recipe: www.black-walnuts.com

Mixed Field Greens with Toasted Walnuts and a Honey Apple Vinaigrette

Salad:

Mixed salad greens
1/4 cup black walnuts
Coarse Salt
Pepper
apple slices

Dressing

1/4 cup red wine vinegar
1/2 cup olive oil
1/4 cup applesauce
honey
salt and pepper to taste

recipe: www.black-walnuts.com

Black Walnut Chicken Salad

Salad:

2 cups chicken breasts, cooked and cubed
2 cups rotini, cooked per package
1 cup frozen asparagus, uncooked and cut into
1 inch pieces
1 cup red seedless grapes
1 cup black walnuts
2 Tbs. pimento pieces or slices

Dressing:

3/4 cup salad dressing
1/4 cup sour cream
1 Tbs. lemon juice
1 Tbs. honey
1/2 Tbs. Dijon mustard
1 tsp. curry powder
1/16 tsp. cayenne pepper
Salt & pepper to taste

recipe: www.black-walnuts.com

Black Walnut Blondies

Preheat oven to 350 degrees. Blend first three ingredients in medium bowl. Combine oil and eggs in separate bowl. Add to dry ingredients, stirring until moistened. Stir in black walnuts. Pour into greased 9" x 13" pan. Bake for 30-35 minutes. Cool. Cut into squares.

Black Walnut Banana Muffins

Preheat oven to 300 degrees;. Mash bananas in a medium bowl. Add sugar, brown sugar, and eggs; mix well. Add margarine. Stir in flour and soda. Add buttermilk and Black Walnuts. Mix until just moistened. Spoon into paper lined muffin tins. Bake for 20 minutes.

Green Beans with Raisins and Black Walnuts

Cook green beans in large pot of boiling, salted water until crisp-tender, about 6 minutes; drain. Rinse under cold water to cool; drain well. Melt butter in heavy, large skillet over medium-high heat. Add ginger, raisins and black walnuts; cook until ginger and black walnuts are just golden brown; stirring constantly; about 2 minutes. Add green beans and lemon juice and cook until beans are heated through and coated with black walnut mixture; stirring constantly, about 2 minutes. Season with salt and pepper.

Black Walnut-Encrusted Chicken Breasts with Peach Sauce

Preheat the oven to 375 degrees. Trim the boneless chicken breasts and pound out evenly. Then mix the preserves, honey and one-quarter cup of the chicken stock in a bowl. In another bowl, take the flour and finely chopped walnuts and mix together. Then dip the chicken breasts in the peach mixture and drain slightly. Then roll the breasts in the walnut mixture and pat down. Place onto a cooking sheet and place in the oven for 20-25 minutes.

To make the sauce: put the peach mixture in a small pan. Then add the cornstarch to the remaining chicken stock and mix. Add the chicken stock to the peach mixture and bring to a boil. Reduce the heat and simmer for 10 minutes. Season with salt and pepper to taste. Remove the chicken from the oven and plate. Take the sauce and spread it across the chicken breast, then serve.

Black Walnut Chicken Salad

Place salad ingredients in a large bowl and toss gently. Set aside.

Mix dressing ingredients well. Pour over the tossed salad and gently toss until all ingredients are covered with dressing. Chill for several hours and allow flavors to blend. Place on lettuce leaves to serve. Makes 6, 1-cup servings.

Mixed Field Greens with Toasted Walnuts and a Honey Apple Vinaigrette

Toast the Black Walnuts in a nonstick skillet over a low flame sprinkled with salt and pepper. Serve warm over a mixed green salad.

For the dressing: Mix all dressing ingredients and add only enough honey to bind.

Assemble salad and garnish with fresh apple slices.