

Health Benefits of Nuts

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Introduction

Nuts (tree nuts and peanuts) are nutrient dense foods with a unique nutrient composition, high in unsaturated fats, vitamins, minerals, plant protein and functional nutrients such as phytosterols and phenolic compounds [1]. Increased nut consumption is associated with a reduced risk of major chronic diseases such as cardiovascular disease and type 2 diabetes [2].

In 2010, Americans consumed 3.97 pounds of nuts per person. Almonds are the most consumed nut in the United States. However, the most popular snack nut is the peanut, which are actually a legume and not a nut. In the U.S., we tend to consume nuts as snacks, desserts, as part of a meal, in spreads, as oils, or hidden in commercial products, mixed dishes, sauces, pastries, ice creams and baked goods [1].

Nutrient Composition of Nuts

Nuts are nutrient dense foods and are one of the natural plant foods richest in fat. However, the fatty acid composition of nuts is beneficial because they have low levels of saturated fat and high levels of monounsaturated fatty acids (MUFA) and polyunsaturated fatty acids (PUFA). Nuts are also a rich source of macronutrients such as protein and

fiber; micronutrients such as folate, B-vitamins, tocopherols (vitamin E), and non-nutrients such as phenolic compounds. Taken together, all of these nutrients have been documented to contribute to a reduced risk of coronary heart disease (CHD) and type 2 diabetes [1-3].

Nuts and Heart Health

Although nuts are high in calories, there are several studies that demonstrate the beneficial health effects associated with the consumption of nuts such as reducing the risk of coronary heart disease and regulation of blood glucose levels due to the high quantity of antioxidants found in nuts. Also, when nuts are eaten, LDL cholesterol is reduced because of their favorable effects on lipoproteins and blood lipids. One example is walnuts, which are part of the tree nut family, and they have high levels of healthy omega-3 fats, fiber, vitamins and minerals [1-3].

A recent study on the relationship between tree nuts, peanuts and peanut butter found that people eating 10 grams or more of nuts each day were less likely to die from cancer, diabetes and heart disease compared to people who did not eat 10 grams of nuts per day. However, they also found that eating peanut butter was not as effective as eating peanuts [4].

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TABLE 1. What does 10 grams of nuts look like? [5]

10 grams of peanuts	12 peanuts
10 grams of almonds	8-9 almonds
10 grams of cashews	6 cashews
10 grams of walnuts	5 walnut halves
10 grams of pecans	5 pecan halves

Glycemic Control Relating to Nut Intake

There is also evidence that consumption of nuts, especially almonds, can improve insulin sensitivity and improve glycemic control in people with type 2 diabetes [6]. In addition, the American Diabetes Association recommends adopting a healthy lifestyle, including eating healthful foods, such as nuts, as a way to control prediabetes [7]. For example, one study found that people with prediabetes who ate 2 ounces of pistachios every day for four months had lower glucose and insulin levels and other signs of diabetes compared to when they did not eat pistachios [8].

Health Claims Related to Nuts

In 2003, the Food and Drug Administration (FDA) concluded scientific evidence suggests that consumption of 43 grams (1.5 ounces) of nuts per day as part of a diet low in saturated fat and cholesterol may reduce the risk of heart disease. Therefore, this claim can be used on whole or chopped nuts or products containing at least 11 grams of whole or

chopped nuts. Nuts eligible for this claim include almonds, hazelnuts, peanuts, pecans, some pine nuts, pistachios and walnuts [10].

Nut Allergies

Tree nut allergy is one of the most common food allergies in children and adults. Tree nut allergies tend to be lifelong. (Only ~9% of children with a tree nut allergy outgrow it.) Nut allergies occur when your immune system mistakenly identifies nut proteins as something harmful. Direct or indirect contact with nuts causes your immune system to release symptom-causing chemicals into your bloodstream [11]. Exposure to nuts can occur in several ways – direct contact, cross-contact and inhalation [11]. The federal Food Allergen Labeling and Consumer Protection Act (FALCPA) requires that all packaged food products sold in the U.S. that contain tree nuts as an ingredient must list the specific tree nut on the label.

Adding Nuts in Your Diet

Salads are great way to include nuts in your diet. Adding nuts such as hazelnuts, walnuts, pistachios, almonds and pecans adds beneficial nutrients and a bit of crunch. Dry roasted nuts can be added during the final stages of any curry or roasted vegetables. You can also add nuts to pastas, chicken dishes, sauces, soups or fruit desserts. In addition, nuts make a great healthy snack by themselves [9]. Finally, one of the easiest ways to incorporate nuts in the diet is by using a nut butter (see Table 2 for nutrition information). Nuts and nut butters are high in calories, so be mindful of the amount you eat.

TABLE 2. Nutrition composition of nut butters

2 Tablespoon Serving Size	CALORIES	TOTAL FAT (g)	SATURATED FAT (g)	CARBS (g)	FIBER (g)	PROTEIN (g)	CALCIUM (mg)
Almond Butter	190	16	1.5	6	4	7	80
Cashew Butter	190	15	3	10	2	5	20
Cashew, Almond and Sunflower Seed Butter	188	15.8	2.2	9	2.2	6	40
Cashew Macadamia Butter	200	18	3	8	1	4	20
Hazelnut Butter	180	17	1	5	3	4	40
Macadamia Nut Butter	230	24	4	4	3	2	20
Peanut Butter	190	16	2	7	3	8	20
Soynut Butter	190	15	2	140	5	9	60
Sunflower Seed Butter	180	12	1.5	8	4	9	0

Nut-Containing Recipes

Raspberry Walnut Salad

(<https://fishernuts.com/recipes/salads/raspberry-walnut-salad>)

4 servings

Salad

1 package (10 ounces) mixed salad greens
1 small cucumber, thinly sliced
½ cup walnuts
1 package (6 ounces) fresh raspberries

Dressing

2 tablespoons white wine vinegar
1½ teaspoons fresh lemon juice
1 clove garlic, minced
1½ teaspoons granulated sugar
½ teaspoon salt
⅛ teaspoon ground black pepper
⅓ cup vegetable oil

Directions

1. For dressing, in small bowl whisk vinegar, lemon juice, garlic, sugar, salt and pepper.
2. Slowly add oil, whisking until well blended.
3. Cover and refrigerate 4 hours or overnight to blend flavors.
4. For salad, in serving bowl combine mixed greens, cucumber slices and walnuts.
5. Whisk dressing; drizzle over top. Toss salad to coat.
6. Scatter raspberries over top. Serve immediately.

Nutrition Information Per Serving: Calories: 280, Fat: 27 grams, Saturated Fat: 3 grams, Carbohydrates: 10 grams, Protein: 4 grams, Cholesterol: 0 milligrams, Sodium: 310 milligrams

Almond Crusted Chicken Fingers

(<http://www.eatingwell.com/recipe/253077/almond-crust-ed-chicken-fingers/>)

4 servings

Ingredients

Canola oil cooking spray
½ cup sliced almonds
¼ cup whole-wheat flour
1½ teaspoons paprika
½ teaspoon garlic powder
½ teaspoon dry mustard
¼ teaspoon salt
⅛ teaspoon freshly ground pepper
1½ teaspoons extra-virgin olive oil
4 large egg whites
1 pound chicken tenders

Directions

1. Preheat oven to 475°F. Line a baking sheet with foil. Set a wire rack on the baking sheet and coat it with cooking spray.
2. Place almonds, flour, paprika, garlic powder, dry mustard, salt and pepper in a food processor; process until the almonds are finely chopped and the paprika is mixed throughout, about 1 minute. With the motor running, drizzle in oil; process until combined. Transfer the mixture to a shallow dish.
3. Whisk egg whites in a second shallow dish. Add chicken tenders and turn to coat. Transfer each tender to the almond mixture; turn to coat evenly. (Discard any remaining egg white and almond mixture.) Place the tenders on the prepared rack and coat with cooking spray; turn and spray the other side.
4. Bake the chicken fingers until golden brown, crispy and no longer pink in the center, 20 to 25 minutes.

Nutrition Information Per Serving: Calories: 270, Fat: 11 grams, Saturated Fat: 1.5 grams, Carbohydrates: 9 grams, Protein: 33 grams, Cholesterol: 85 milligrams, Sodium: 300 milligrams

Basic Pesto

(<http://cooking.nytimes.com/recipes/2653-basic-pesto>)

16 servings

Ingredients

2 cups fresh basil leaves (no stems)
2 tablespoons pine nuts or walnuts
2 large cloves garlic
½ cup extra-virgin olive oil
½ cup freshly grated parmesan cheese

Directions

1. Combine basil leaves, pine nuts or walnuts and garlic in a food processor and process until very finely minced.
2. With the machine running slowly dribble in the oil and process until the mixture is smooth.
3. Add the cheese and process very briefly, just long enough to combine. Store in refrigerator or freezer.
4. Serve with pasta, spread on sandwiches or as a dip for fresh vegetables.

Nutrition Information Per Serving: Calories: 80, Fat: 8 grams, Saturated Fat: 1.5 grams, Carbohydrates: less than 1 gram, Protein: less than 1 gram, Cholesterol: less than 5 milligrams, Sodium: 55 milligrams

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