



The Power of Seeds and Healthful Fats



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THE HEINZ ENDOWMENTS
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UPMC HEALTH PLAN

Outline

- What's the difference between nuts and seeds?
- Overview of Health Benefits
- Key Nutrients:
 - Protein
 - Calcium
 - Iron
 - Magnesium
 - Omega-3s
- Culinary Usage of Nuts and Seeds
- Importance of Dietary Fat
- Let's Talk Fat: Myths and Facts
- Q & A



The background is a solid orange color. It is decorated with various white line-art illustrations of fruits and vegetables, including a whole lemon, a slice of orange, a kiwi, a pear, a strawberry, a banana, a kiwi slice, a cherry, and several leaves. In the bottom right corner, there is a logo for PHIPPS, which consists of a green square icon with a white plant-like shape inside, followed by the word "PHIPPS" in a green, sans-serif font.

**What are your
thoughts on
dietary fat?**

What's the difference between nuts and seeds? ¹

Seeds:

- Culinary seeds come from vegetables (such as pumpkins), flowers (such as sunflowers), or crops grown for a variety of uses (such as flax or hemp).

Nuts:

- Nuts are actually the *seeds of plants*, mainly from trees or legumes (peanuts)
- Often grow inside leathery fruits (walnuts, cashews)
- True botanical nuts: hazelnuts and chestnuts



Health Benefits of Nuts and Seeds^{3,4,5}



- Higher nut intake is associated with reduced risk CVD, total cancer, all-cause mortality, and mortality from respiratory disease, diabetes, and infections.²
- Antioxidant and anti-inflammatory compounds found in nuts and seeds also are thought to have possible effects on gut microbiota structure.³
- Rich source of heart-healthy alpha-linolenic acid (ALA) omega-3s .
 - Shown to reduce risk of heart disease in both those with and without heart disease.⁴
- A 2017 study suggested that consumption of nuts and seeds might delay the aging of cells.⁵

Nuts and Seeds: Protein and Iron ⁶

- 1 oz serving of nuts has 3-7 grams of protein per ounce
 - Peanuts, pumpkin seeds, and almonds are the richest in protein
 - Pair with carbohydrate for a satiating and balanced snack
- Nuts and Seeds are a rich source of non-heme iron
 - Vitamin C and iron consumed at the same meal can improve absorption
 - Bran fiber, large amounts of calcium particularly from supplements, and plant substances like tannins can inhibit the absorption of non-heme iron



Nuts and Seeds: Calcium and Magnesium ^{7,8}



Sesame seeds, chia seeds, and almonds are all good sources of calcium and excellent sources of magnesium

- i.e. 2 TBSP chia seeds have 18% recommended daily intake of calcium and 23% magnesium
- Non-fat milk was 30% RDI in calcium and 7% magnesium

Calcium: mineral that the body needs for building and maintaining bones and teeth, blood clotting, the transmission of nerve impulses, and the regulation of the heart's rhythm.

Magnesium: mineral that is a component of bone. Involved with the activity of bone-building cells and the parathyroid hormone, which regulates calcium levels.

- Magnesium converts vitamin D into its active form so that it can help calcium absorption

Nuts and Seeds: Omega 3 Fatty Acids ⁹

- Omega 3 fatty acids are an integral part of cell membranes throughout the body
- Provide the starting point for making hormones that regulate blood clotting, contraction and relaxation of artery walls, and inflammation

There are 3 types of Omega 3 fatty Acids

- DHA & EPA (Animal based)
 - anchovies, tuna, salmon, sardines
- ALA (Plant based)
 - Walnuts, pumpkin seeds, flaxseeds



- In plant foods, 1-15% of ALA is enzymatically converted to EPA or DHA, which is more readily absorbed form

Summary of Key Nutrients ¹⁰

Higher in protein: peanuts, pumpkin seeds

Higher in fiber: chia, flax, almonds

Higher in phytosterols (cholesterol-lowering compounds): sesame, sunflower, pistachio

Higher in omega-3s: flax, chia, walnuts

Higher in calcium: sesame, chia, almonds

Lower in fat and calories: chestnuts, pumpkin, cashews



Culinary Usage of Nuts and Seeds



- **Use as a breading:** Mix ground seeds with herbs and spices. Cover fish or chicken with egg or mustard and coat with seeds.
- **Egg replacement:** Use 1 tablespoon finely ground chia seeds or flax seeds with 3 tablespoons of water. This ratio will replace one egg.
- **Salad topper:** Add walnuts or pecans to top your salad. Roast for an extra burst of flavor.
- **Mix into baked goods:** Add seeds or nuts to muffin, bread or pancake batter for an extra nutritious crunch
- **Toss into stir fry:** Add cashews or peanuts into a stir fry with sugar snap peas, ginger, garlic, and carrots.
- **Use as thickener:** Nuts and seeds add a wonderful creamy texture to sauces, soups, and smoothies. Chia seed and flax seed are great at absorbing excess liquid

Nuts & Seeds Serving Sizes and Storage¹

- **Shelf life:** up to 3 months in cool, dark place, 6 months in refrigerator, and 1+ year in freezer
 - Store away from fragrant foods
- **Serving sizes:** 1 oz or ¼ cup per serving
 - 49 pistachios
 - 35 peanuts
 - 23 almonds
 - 21 hazelnuts
 - 19 pecan halves
 - 18 medium cashews
 - 14 walnut halves
 - 10 macadamias
 - 6 medium Brazil nuts



Importance of Dietary Fat ¹¹

- Help the body absorb vitamins A, D, E, and K
- Cushion and protects your bones, heart and other vital organs
- Prolongs satiety by slowing down digestion
- Provides insulation and warmth
- Involved in many physiological processes such as blood clotting, wound healing and inflammation
- Supports cell growth
- Enhance the flavor and texture of foods



Fats To Focus On ^{11,12}



Polyunsaturated fat: found in plant and animal foods, such as salmon, vegetable oils and some nuts and seeds. Polyunsaturated fats include omega-3 and omega-6 fats.

- Strong evidence shows that replacing saturated fats with polyunsaturated is associated with reduced blood levels of total cholesterol and of low-density lipoprotein-cholesterol (LDL-cholesterol).

Monounsaturated fat: found in plant foods, such as nuts, avocados and vegetable oils.

- Evidence has shown that replacing saturated fats with plant sources of monounsaturated fats may be associated with a reduced risk of cardiovascular disease

Fats to be Mindful Of ^{11,13}



Saturated fat: found in coconut, palm and palm kernel oils, and in animal fats and animal-derived products.

- Evidence shows that replacing saturated fats with unsaturated fats is associated with better heart-health outcomes.

Trans fat: found in butter, snack foods and prepared desserts. Individuals should limit intake of trans fats as much as possible by limiting foods that contain synthetic sources.

- U.S. The Food and Drug Administration (FDA) ruled in 2015 that artificial trans fats were unsafe to eat and gave food-makers three years to eliminate them from the food supply, with a deadline of June 18, 2018

Let's Talk Fat: Myths and Facts ^{14,15,16,17,18,18}

- **Low Fat Doesn't Always Mean "Healthier":**
 - When food manufacturers reduce fat, they commonly replace it with carbohydrates from sugar or refined grains. Our bodies digest these refined carbohydrates very quickly, spiking blood sugar and insulin levels.
 - Contrary to past dietary advice promoting low-fat diets, newer research shows that diets rich in unsaturated fats are beneficial for health
- **Cutting out Carbs Isn't the Answer Either:**
 - Just like fat, carbohydrates are also essential macronutrients. Sources of whole grains, fruits and starchy vegetables are rich in fiber, vitamins, minerals and are important for endurance, muscle growth, brain function and more.
- Institute of Medicine recommends a macronutrient distribution range of **45-65% of calories from carbohydrates, 10-35% of calories from protein and 20-35% of calories from fat**

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Questions?

Thanks!

Any questions?

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