

Title: Peanut butter- Guilty Pleasure or Power Food?

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Abstract

Peanut butter is a widely consumed food product derived from peanuts (*Arachis hypogaea* L.) and is valued for its nutritional richness, affordability, and versatility. Originally developed as a protein-rich food for individuals with limited digestive capacity, peanut butter has grown into a common dietary staple across the world. This article discusses the concept of peanut butter, its nutritional composition, and its health implications. It examines common myths and facts regarding peanut butter consumption, particularly in relation to heart health, trans fat content, and differences between regular and natural peanut butter. The role of peanut butter as a plant-based protein source for vegetarians is highlighted, along with its contribution to essential nutrients. The article also addresses the higher prevalence of peanut allergy compared to other nut allergies. Finally, the benefits and drawbacks of peanut butter consumption are evaluated to provide a balanced understanding of its role in human nutrition.

Keywords: Peanut butter, Plant protein, Peanut allergy, Unsaturated fat.

Introduction

Peanut butter is a well known and loved snack in North America. Many people consume it on a regular basis. Peanut butter was originally produced in 1890 by a physician in St. Louis for his sick and/or nutrient-deficient patients, as it was a protein-rich food that was easy for them to digest. At first this peanut butter was simply a ground peanut paste, however in 1895 Dr. John Harvey Kellogg and his brother created and patented a method of producing peanut butter that used steamed peanuts. Soon after this peanut butter gained significant popularity and has since grown to become a very common staple in North American homes and around the World.

Nutritional Importance

Peanuts have a nutrient-dense profile and are low in simple carbohydrates, despite their high-calorie content. They are excellent source of healthy fats (46.67%) and good source of proteins (26.67%), carbohydrates (16.67%) and fibers (9%), Peanut butter is rich in B vitamins, including niacin, B6, thiamin or B1 and Riboflavin or B2. Peanut butter is high in folate, the natural form of folic acid & Vitamin E. Peanut butter is good sources of essential minerals such as calcium, copper, phosphorus and zinc. Peanut butter is cholesterol-free, and most of the fat it contains is unsaturated fat. Natural

peanut butter contains no trans fats because it is made without hydrogenated oil.

Is Peanut Butter Really Healthy? Facts vs Myths

MYTH: *Peanut Butter is not heart healthy.*

FACT: Peanut butter is considered heart-healthy because most of its fat (over 80%) is unsaturated fat, which supports cardiovascular health. Being a plant-based food, peanut butter naturally contains no cholesterol. Research published in the American Journal of Clinical Nutrition (1999) showed that diets including peanuts and peanut butter reduced blood cholesterol levels as effectively as olive oil. These diets also helped maintain beneficial HDL cholesterol and lower triglyceride levels, reducing cardiovascular disease risk by 21%, which was higher than the reduction seen with low-fat diets. Additionally, peanut butter provides important nutrients such as niacin, folic acid, phosphorus, vitamin E, and phytosterols.

MYTH: *Peanut Butter should be avoided because it is high in trans fats.*

FACT: Peanut butter also contains extremely low or negligible amounts of trans fats. According to FDA labeling guidelines and independent analyses by the USDA and The Peanut Institute, most peanut butter products can be labeled as having zero trans fats. While some varieties include small amounts of partially hydrogenated vegetable oils to prevent oil separation, these contribute only insignificant levels of trans fats.

MYTH: *There is a huge difference between regular peanut butter and natural peanut butter.*

FACT: There is also minimal nutritional difference between regular and natural peanut butter. By regulation, all peanut butter must contain at least 90% peanuts. Both types may include small amounts of sugar and salt for taste, and some products contain stabilizers to prevent oil separation and maintain freshness. Overall, both regular and natural peanut butter provide similar nutritional value.

Peanut Butter as a Protein Source for Vegetarian

Peanut butter is one of the most popular plant-based foods and an important protein source for vegetarians, especially in countries like India where many people avoid meat and eggs. It is affordable, tasty, easy to store, and versatile, which makes it suitable for people of all age groups.

Protein is essential for:

- Growth and repair of body tissues
- Muscle development
- Enzyme and hormone production

- Maintaining immunity and energy levels

Vegetarians often depend on plant-based proteins such as pulses, legumes, milk products, nuts, and seeds. Among these, peanuts stand out because they are protein-rich and calorie-dense, making them ideal for meeting daily protein needs.

Peanut butter is a valuable protein source for vegetarians, offering a good balance of protein, healthy fats, and essential nutrients. Although it is not a complete protein, when consumed with other plant foods, it can significantly contribute to daily protein requirements.

Benefits and Risks of Consuming Peanut Butter

Benefits:

1. Peanut butter is a highly nutritious food.
2. Peanut butter contains about 9% dietary fiber.
3. It is a protein-dense
4. It provides important micronutrients, including:
 - Vitamin E
 - Vitamin B3 (niacin)
5. It also contains beneficial minerals, such as:
 - Iron
 - Magnesium
 - Potassium
 - Calcium

Risks and Considerations

1. High Caloric Density

Peanut butter is energy dense due to its high fat content. Excess consumption may contribute to weight gain if calorie intake exceeds requirement.

2. Risk of Peanut Allergy

Peanut allergies can be severe or fatal.

3. Omega-6 Fatty Acid Imbalance

Peanut butter contains high omega-6 fatty acids. Excess omega-6 relative to omega-3 may promote inflammatory responses when diet balance is poor.

4. Portion Control

Stick to 1–2 tablespoons (30 grams) per day.

Why Peanut Allergy is More Common Than Other Nut Allergies

Peanut allergens are classified as major and minor allergens, depending on their contribution to the initiation and propagation of an allergic response in sensitive hosts. A major peanut allergen binds specific IgE in more than 50% of allergic patients; otherwise, it would be classified as a minor peanut allergen. Among these proteins, scientists define Ara h 1, Ara h 2, and Ara h 3 as being the major protein allergens. In

addition to their strong IgE-binding capacity, they represent more than 80% of the total protein pool contained in peanuts. Recent studies stated that Ara h 6 displays a great recognition by immunoglobulins in the serum of allergenic patients, and that its biochemical structure and properties show a great similarity to those of Ara h 2.

Conclusions

Peanut butter is a nutrient-dense food that offers numerous health benefits due to its high content of healthy fats, plant-based protein, essential vitamins, and minerals. Its unsaturated fats contribute to cardiovascular health by helping maintain healthy blood lipid levels, while its cholesterol-free nature makes it a heart-friendly option. Peanut butter also provides important micronutrients, which support overall metabolism and physiological functions. It serves as an important protein source for vegetarians, particularly where animal-based protein intake is limited. Although peanut butter is not a complete protein due to low methionine content, it contains most essential amino acids and can meet daily protein needs when combined with

other plant foods. Despite its nutritional benefits, peanut butter should be consumed in moderation. Its high caloric density may lead to weight gain. Peanut allergy is another concern, as potent allergenic proteins can trigger severe reactions in sensitive individuals. Overall, peanut butter is a healthy dietary choice when consumed responsibly.

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