

## Plant-Based Milk: A Pathway to Healthier Living

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Plant-based milk, also known as dairy alternatives or non-dairy milk, refers to beverages that are derived from plant sources rather than animal products like cow's milk. These milk alternatives are often used as substitutes for traditional dairy milk by individuals who are lactose intolerant, have dairy allergies, follow vegan or vegetarian diets or simply prefer plant-based options for health or ethical reasons. It can be made from a variety of plant sources, including nuts (such as almonds, cashews and hazelnuts), seeds (such as soybeans, hemp seeds and flaxseeds), grains (such as oats, rice and quinoa), legumes (such as peas and peanuts) and coconuts. Each type of plant-based milk has its own unique flavor, texture and nutritional profile. The production process for plant-based milk typically involves soaking the plant material, blending it with water and straining out the solids to create a smooth, creamy liquid. Some varieties of plant-based milk may be fortified with vitamins and minerals, such as calcium, vitamin D and vitamin B12, to enhance their nutritional content and make them more comparable to cow's milk in terms of nutrient profile.



Plant-based milk can be used in a variety of ways, including as a beverage on its own, poured over cereal, added to coffee or tea, used in cooking and baking recipes, or incorporated into smoothies and shakes. Its versatility and availability in different flavors and formulations have made plant-based milk a popular choice among consumers seeking dairy-free alternatives that align with their dietary preferences and lifestyle choices. In recent years, the dietary landscape has witnessed a profound shift towards plant-based alternatives, and perhaps one of the most significant transformations has been in the realm of milk consumption. Traditionally, cow's milk has been synonymous with nutrition, revered for its rich content of essential nutrients such as calcium, protein and vitamins. However, in recent years, concerns surrounding lactose intolerance, dairy allergies and ethical considerations have prompted many individuals to seek alternatives. Additionally, growing awareness of the environmental impact of conventional dairy farming has fueled interest in plant-based milk alternatives as a more sustainable option.

### Nutritional and Nutraceutical Properties

Plant-based milk alternatives boast a diverse array of nutritional properties, providing essential nutrients that support overall health and well-being. One notable aspect is the

protein content found in certain varieties such as soy milk. Soy milk is renowned for its high protein content, offering approximately 7-8 grams per serving (8 ounces), making it an excellent option for individuals seeking to meet their protein needs. Additionally, many plant-based milks, including almond milk and rice milk, are fortified with calcium to promote bone health. For instance, fortified almond milk can provide up to 45-50% of the recommended daily intake of calcium, offering a valuable source of this essential mineral for those who avoid dairy. Furthermore, oat milk is often fortified with vitamins and minerals such as vitamin D, vitamin B12 and riboflavin, essential for various bodily functions including immune support and energy metabolism.

In addition to their nutritional content, plant-based milk alternatives offer a wealth of nutraceutical properties derived from bioactive compounds found in various plant sources. For instance, almond milk contains vitamin E, a potent antioxidant that helps protect cells from oxidative damage. Antioxidants like vitamin E are crucial for reducing inflammation and lowering the risk of chronic diseases such as heart disease and cancer. Soy milk is rich in phytochemicals called isoflavones, which have been associated with numerous health benefits, including reduced risk of cardiovascular disease, improved bone health and relief from menopausal symptoms. These bioactive compounds mimic the effects of estrogen in the body and may exert protective effects on overall health. Plant-based milk alternatives offer a rich tapestry of nutritional and nutraceutical properties, each with its unique health benefits. From the protein content of soy milk to the calcium fortification in almond milk and the antioxidant properties of almond milk, these dairy-free options provide a versatile and nutritious alternative to traditional cow's milk.

### Health Benefits

Plant-based milk alternatives offer a myriad of health benefits that make them an attractive option for individuals seeking nutritious alternatives to cow's milk. These benefits include:

**Digestive Ease:** Many people experience digestive discomfort or intolerance to lactose, the sugar found in cow's milk. Plant-based milks, which are naturally lactose-free, provide a gentle alternative that is easier on the digestive system and may be better tolerated by those with lactose intolerance or dairy allergies.

**Lower Calorie Content:** Compared to cow's milk, which can be high in calories and saturated fats, many plant-based milk alternatives are lower in calories and contain healthier fats, making them a suitable option for individuals looking to manage their weight or reduce their intake of dietary fats.

**Heart Health:** Certain plant-based milks, such as almond and oat milk, contain heart-healthy fats, such as monounsaturated and polyunsaturated fats, which have been linked to a reduced risk of cardiovascular disease. Additionally, plant sterols found in some plant-based milks may help lower cholesterol levels and improve heart health.

**Nutrient Density:** It can be a rich source of vitamins, minerals, and antioxidants, depending on the ingredients used. For example, coconut milk contains medium-chain triglycerides (MCTs), which are rapidly absorbed and metabolized by the body, providing a quick source of energy and supporting brain function.

In addition to their nutritional benefits, plant-based milk alternatives are often lauded for their environmental sustainability. Compared to conventional dairy farming, which can be resource-intensive and environmentally damaging, the production of plant-based milks typically requires fewer natural resources, such as water and land, and generates fewer greenhouse gas emissions. Furthermore, the cultivation of plant-based milk ingredients can have a lower environmental footprint compared to livestock farming, making plant-based milks a more sustainable option for eco-conscious consumers. The rise of plant-based milk alternatives represents a significant paradigm shift in the way we approach dairy consumption

and nutrition. With their diverse array of flavors, textures, and nutritional benefits, plant-based milks offer a versatile and sustainable alternative to traditional cow's milk. Whether you're lactose intolerant, vegan, or simply looking to explore new culinary horizons, plant-based milks provide a delicious and nutritious option that aligns with modern dietary preferences and values.