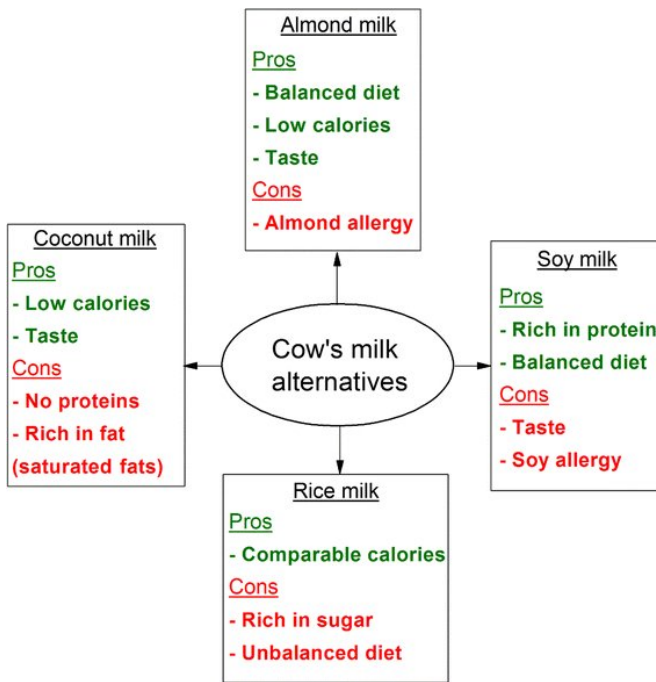


Nutritionally-speaking, soy milk is best plant-based milk

29 January 2018



Cow's milk is compared with various plant-based milk. Credit: McGill University

How healthy is your almond milk really? It may taste good and may not cause you any of the unpleasant reactions caused by cow's milk. But though plant-based milk beverages of this kind have been on the market for a couple of decades and are advertised as being healthy and wholesome for those who are lactose-intolerant, little research has been done to compare the benefits and drawbacks of the various kinds of plant-based milk. A new study from McGill University looks at the four most-commonly consumed types of milk beverages from plant sources around the world - almond milk, soy milk, rice milk and coconut milk - and compares their nutritional values with those of cow's milk. After cow's milk, which is still the most nutritious, soy milk comes out a clear winner.

The researchers compared the unsweetened versions of the various plant-based milks in all cases and the figures below are based on a 240 ml serving.

Soy milk - the most balanced nutritional profile

- Soy [milk](#) is widely consumed for its health benefits linked to the anti-carcinogenic properties of phytonutrients present in the milk known as isoflavones.
- Has been a substitute for cow's milk for 4 decades.
- Concerns, however, are the 'beany flavor' and the presence of anti-nutrients (substances that reduce nutrient intake and digestion).

Rice milk - sweet taste and relatively little nutrition

- Lactose free and can act as an alternative for patients with allergy issues caused by soybeans and almonds.
- Concerns, apart from the high carbohydrate count, is that consumption of rice milk without proper care can result in malnutrition, especially in infants.

Coconut milk - no protein and few calories, but most of them from fat

- Widely consumed in Asia and South America
- Consumption can help reduce levels of harmful low-density lipoproteins ([bad cholesterol](#)) that are associated with cardiovascular diseases.
- Nutritional values are reduced if stored for over 2 months.

Type of milk	Calories	Fats	Proteins	Carbohydrates	Calcium
Cow's milk	158	9.05 g	8.11 g	11.5 g	294.2 mg
Soy milk	95	4.5 g	8 g	4 g	330 mg
Rice milk	130	2.5 g	1 g	26 g	315 mg
Coconut milk	45	4.25 g	0 g	1 g	220 mg
Almond milk	35	2.5 g	1 g	1 g	330 mg

After cow's milk, soy milk offers the most nutrients.
Credit: McGill University

Almond milk - need for complementary sources of food to provide essential nutrients

- Almonds have a high content of monounsaturated fatty acids (MUFA) that are considered helpful in weight loss and weight management. MUFA also helps in reduction of low-density lipoprotein (bad cholesterol).
- Comparison of nutritional elements of various milks - based on averages for 240 ml serving

Cow's milk benefits & drawbacks

- A wholesome, complete food, providing all major nutrients like fat, carbohydrates and proteins.
- Can help humans by providing a wide range of host-defence proteins because various beneficial anti-microbial effects are found in both human and bovine milks. (E.g., a study shows that in the case of infants, consumption of cow's milk has considerably reduced risk of fever and respiratory infections.)
- But the presence of various pathogens like Salmonella spp and Escherichia coli O157:H7 in milk have been associated with disease outbreaks around the world.

Cow's milk allergy & lactose intolerance

- One of the most common allergies among

infants and children affecting 2.2-3.5% of children (a greater percentage than those who are affected by peanuts and tree nut allergies). As many as 35 % of these infants outgrow being allergic to milk by the age of 5-6, and this may increase to 80% by age 16.

- Lactose intolerance, due to the absence or deficiency of the enzyme lactase in the digestive tract, affects somewhere between 15-75 % of all adults depending on race, food habits and gut health.
- Some studies have suggested that 80 % of people of African origin and 100 % of those of Asian and Indigenous American origin are lactose intolerant.

The researchers add that more work will need to be done to understand the effects of various conventional and novel processing methods on the nutritional profile, flavour and texture of these alternative milks.

The review was written by PhD Candidate Sai Kranthi Vanga and his supervisor Vijaya Raghavan of the Department of Bioresource Engineering at McGill and was recently published in *Journal of Food Science Technology*.

More information: Sai Kranthi Vanga et al, How well do plant based alternatives fare nutritionally compared to cow's milk?, *Journal of Food Science and Technology* (2017). [DOI: 10.1007/s13197-017-2915-y](https://doi.org/10.1007/s13197-017-2915-y)

Provided by McGill University

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