
Milk

Summary

- Milk is an excellent source of calcium and other essential nutrients.
- There are many modified milks available such as skim milk and lactose-free milk
- Milk and other dairy products have been favourably linked with many health conditions.
- Lactose intolerance is caused by an inability to digest the natural sugar in milk, but most people can tolerate small amounts of milk.
- Flavoured milks (reduced fat varieties, for children over two years) are preferable to soft drinks and fruit drinks but should be had in small amounts because they have high amounts of added sugar.

Milk is an excellent source of vitamins and minerals, particularly calcium. It has an important role in bone health. Nutritionists recommend that people have milk and other dairy products, such as yoghurt and cheese, every day as part of a balanced diet.

The **Australian Dietary Guidelines** recommend that people over the age of two years have mostly reduced fat products to lower the amount of energy (kilojoules) while still getting all of the other nutritional benefits from dairy foods.

Nutrients in milk

Milk and milk products have a good balance of protein, fat and carbohydrate and are a very important source of essential nutrients, including:

- **calcium**
- riboflavin
- phosphorous
- vitamins A, and B12
- potassium
- magnesium
- zinc.

Milk products also have 'high-quality **proteins**' that are well suited to human needs. For example, having milk (or yoghurt) with cereal can provide amino acids that may be lacking in the cereal product.

Milk and health conditions

There are many myths about the negative impacts of milk on health. Changing how much milk you drink because of these myths may mean you are unnecessarily restricting this highly nutritious drink.

Australians often restrict dairy foods when they try to lose weight, believing them to be fattening. While dairy products naturally contain fat, there are many reduced fat products available.

Dairy foods like milk, yoghurt and cheese (particularly reduced-fat products) are not a threat to good health if had as part of a well-balanced nutritious diet.

Research has shown:

- **cardiovascular health** – there may be a protective effect of milk for stroke risk. The Heart Foundation says that unless you already have coronary heart disease or elevated cholesterol, full fat milk, yoghurt and cheeses are unlikely to increase your risk of heart disease when consumed as part of a healthy eating pattern.

- **osteoporosis** – if milk and milk products are removed from the diet, it can lead to an inadequate intake of calcium. This is especially a concern for women over the age of 50 and the elderly, who have high calcium needs. Calcium deficiency may lead to conditions like osteoporosis (a disease that results in loss of bone).
- **colorectal cancer** – according to the World Cancer Research Fund, people who regularly eat more than one serve of dairy products each day (particularly milk) have a reduced risk of developing colon cancer
- **blood pressure** – having milk and dairy products is associated with lowered blood pressure. And, when low-fat dairy foods are combined with a high intake of fruits and vegetables, blood pressure is lowered more than by just having fruits and vegetables
- **type 2 diabetes** – dairy products in general, particularly those that are low-fat, are protective against developing type 2 diabetes.

Many people in Australia believe that nasal stuffiness or increased mucous is related, in part, to how much milk you drink. However, there is no evidence to support this theory. Milk doesn't encourage extra mucous production.

Flavoured milk

Milk is an important source of nutrients for children. A glass of milk with a small amount of flavouring (such as one level teaspoon of chocolate powder) is a healthier option for children than other sugar-sweetened drinks such as soft drinks, flavoured waters, fruit drinks and cordials. However, if you choose to give your child flavoured milk, this should be in moderation.

As children move into their teenage years, the time when they need the most calcium, they tend to drink less milk and more sugary soft drinks. As milk is a healthier choice, it's worth encouraging teenagers to drink reduced-fat flavoured milk rather than soft drinks.

Water and plain milk are the best drinks for children and teenagers.

Milk and tooth decay

Milk and milk products are thought to protect against **tooth decay**. Eating cheese and other dairy products:

- reduces oral acidity (which causes decay)
- stimulates saliva flow
- reduces plaque formation
- reduces the incidence of dental caries (tooth decay).

Drink pasteurised milk

Most milk on the market is pasteurised (heat treated then cooled). While pasteurisation reduces the amount of some vitamins, such as vitamin C, it also kills bacteria.

Never drink unpasteurised or raw milk, as you have an increased risk of gastrointestinal illness from pathogens (bugs, germs, bacteria). There are many types of pasteurised milks on the market, including:

- full cream – full-cream milk contains around four per cent fat. For children up to the age of two years, full-cream milk is recommended.
- reduced fat – expect around half as much fat in reduced-fat milk as full-cream. Children over the age of two years can drink reduced-fat milk.
- skim milk – has a maximum of 0.15 per cent fat. There are some brands of reduced-fat and skim milk that have vitamin A and D added to replace the naturally occurring vitamins that are reduced when the fat is removed.
- calcium enriched – a 250 ml glass of calcium-enriched milk contains 408–500 mg of calcium
- A2 milk – milks labelled as 'A2' primarily consist of a form of β -casein protein called A2 and generally lack the A1 form. It is thought that the A2 form of β -casein protein is more easily digested by some people than the A1 form
- lactose-free – these milks are the same as regular milks but have had the lactose (sugar) removed to make it easier to digest for people who have difficulty digesting lactose
- flavoured – these milks can either be full cream or reduced fat. However, most varieties contain added sugar and should be consumed only sometimes

- UHT (ultra-high temperature-treated) milk – is treated with very high heat to allow milk to be stored for long periods.

What is permeate?

When shopping for milk, you might have seen the word 'permeate' on the label. **Permeate** is the term used in the dairy industry that refers to the lactose, vitamin and mineral content that has been extracted from milk using ultrafiltration – it is not an addition of anything to milk that was not already there.

The quality and composition of milk varies between different breeds of cows, different farms and at different times of the year. Because of this, sometimes manufacturers use permeate to 'standardise' the milk, to ensure a consistent product is produced year-round.

Cow's milk allergy

An **allergy to cow's milk** and related dairy products affects one in 50 in babies and is different to lactose intolerance. Very few adults are allergic to cow's milk. People who are allergic to cow's milk can also be allergic to milk from other animals such as goats, sheep and buffalo.

If a person has an allergic sensitivity, it's usually because of one or more of the proteins in milk. The proteins in goat's milk are closely related to those in cow's milk, so replacing one type of milk with the other usually doesn't help.

Milk allergies are more common in very young children and most tend to grow out of them or build up a tolerance to milk.

Lactose intolerance

Lactose is a type of carbohydrate or sugar that naturally occurs in milk from any mammal, including humans. Normally, an enzyme in the small intestine called lactase breaks down lactose so it can be absorbed into the bloodstream.

Some people don't produce enough lactase. When they drink milk, undigested lactose is broken up by the bacteria in their large intestine causing gas, bloating, pain and diarrhoea. This condition is called '**lactose intolerance**'.

You can be born lactose intolerant or develop it later in life. If you think you may be lactose intolerant, see your doctor.

Milk and milk products are highly nutritious, so people who are lactose intolerant should not give them up entirely. If you have been diagnosed with lactose intolerance, try using lactose-free milk, or continue to have standard milk but in lower quantities.

Some dairy foods contain less lactose

Most people with lactose intolerance can handle small amounts of lactose such as a glass of milk, which contains 8 to 10 grams of lactose. Natural yoghurts are usually well tolerated because the bacteria have their own lactase that breaks down the lactose in the milk.

Some dairy foods contain less lactose than others and may be better for people who have lactose intolerance. For example:

- Fresh cheeses such as cottage and ricotta tend to have very low levels of lactose and are usually well tolerated in small amounts, for example, three quarters of a cup.
- Fermented milk products, including kefir, some yoghurts, mature cheeses (like cheddar cheese, fetta and mozzarella) and butter, generally pose no tolerance problems. (However, butter is high in saturated fat and is not recommended for good heart health).
- Heated milk products, such as evaporated milk, seem to be better tolerated than unheated foods, because the heating process breaks down some of the lactose.

Foods that contain lactose are better tolerated if eaten with other foods or spread out over the day, rather than being eaten in large amounts all at once.

Soy and other plant-based milks as alternatives

There are many plant-based milks and plant-based milk products (such as custard, cheese and yoghurts) available to buy. These include soy, rice, oat, coconut and nut milks such as almond and macadamia.

These 'milks' are all lactose-free and suitable for people following vegan diets. However, they don't all provide the same nutrient types and amounts as regular cows' milk, so it is important that you read their labels closely.

If choosing plant-based milk and plant-based milk products over dairy milk and dairy milk products, make sure you choose products that are fortified with calcium, and are unsweetened.

Where to get help

- Your **GP (doctor)**
- **Gastroenterologist**
- **Dietitians Association of Australia** Tel. 1800 812 942

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