

A Brief Note on Milk and its Nutritional Components

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Commentary

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DESCRIPTION

Milk is a nutrient-dense liquid food available by mammals' mammary glands. Before they can digest solid food, it is the primary source of sustenance for young mammals (including breastfed human infants). Colostrum, or early-lactation milk, contains antibodies that strengthen the immune system, lowering the risk of several diseases. Other nutrients present in milk include protein and lactose. The Centers for Disease Control and Prevention reported that children over the age of 12 months consume two servings of dairy milk products each day, and children who do not drink cow's milk have a higher risk of developing pre-pubertal bone fractures.

Dairy milk is collected from farm animals as an agricultural product. From 260 million dairy cows, dairy farms produced around 730 million tonnes (800 million short tonnes) of milk in 2011. India is the world's largest milk producer and exporter of skimmed milk powder, but it only exports a few other milk products. India may eventually become a net importer of dairy goods due to the rising demand for dairy products in the country. The top exporters of milk products are New Zealand, Germany, and the Netherlands.

Milk and milk products are eaten by about six billion people worldwide, with 750 to 900 million people living in dairy-farming households.

Types of consumption

Milk consumption can be classified into two parts: young mammals drink milk directly from their mothers' bodies as their sole source of nutrition, and humans receive milk from other animals for use by humans of all ages as part of a diversified diet.

Nutrition for infant mammals: Breastfeeding is fed to babies in almost all mammals, either directly or through expressing milk to be stored and consumed later. Colostrum is the first milk produced by mammals. Colostrum contains antibodies, as well as nutrients and growth factors that protect the new-born baby. The composition of colostrum and the length of time it is secreted differ across animals. The World Health Organization reported breastfeeding solely for six months and breastfeeding in conjunction to other foods for two years or longer in humans. Nursing children for three to five years is common in some cultures, and the period may be longer. Fresh goats' milk is sometimes substituted for breast milk, putting the kid at risk for electrolyte imbalances, metabolic acidosis, anemia, and a variety of allergic reactions.

Human diet: Humans keep consuming milk beyond infancy in many societies, particularly in the West, and then use the milk of other mammals (notably cattle, goats, and sheep) as a source of food. Adults do not manufacture lactase, an enzyme required for processing the lactose in milk; hence their capacity to digest it was initially limited to children. As a result, lactose levels in milk were decreased by converting it to coagulate, curd, and other products. A fortuitous mutation in human populations in north Western Europe thousands of years ago enabled the generation of lactose intolerance in maturity. This mutation allowed milk to be used as a new source of nutrition, allowing communities to survive when other food sources were scarce. Cream, butter, yogurt, buttermilk, ice cream, and cheese are just a few of the goods made from milk. Casein, whey protein, lactose, condensed milk, powdered milk, and a variety of other food additives and industrial products are all made from milk in modern industrial processes.

Saturated fat is plentiful in whole milk, butter, and cream. Lactose is a sugar that can only be found in milk, forsythia flowers, and a few tropical bushes. Lactase, the enzyme needed to digest lactose, rises in the mammalian small intestine right after birth and then decreases gradually unless milk is ingested on a regular basis. Those who continue to accept milk have often used the milk of domesticated ungulates, including sheep, goats, yaks, water buffalo, horses, reindeer, and camels, with great creativity. India is the world's largest producer and consumer of cow milk.