



A review on milk cake: A traditional dairy product

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Abstract

One of India's most well-liked traditional desserts is milk cake, which is particularly well-liked in the country's northern and central regions. Milk cake's high sugar level severely restricts intake. Additionally essential for maintaining strong bones and teeth is the calcium in milk cake. Additionally, it can aid in weight loss and improved blood sugar management. A low-calorie food that is rich in minerals such dietary fibre, phosphorus, and vitamin B₁₂ is milk cake. In this review articles, health benefits of milk cake have been discussed.

Keywords: Calcium, dietary fibre, human health, milk cake, phosphorus

Introduction

Traditional dairy product production accounts for more than 50% of all milk produced, making it extremely important to the Indian dairy industry. One of the widely consumed traditional dairy foods (sweets) in northern and central India is milk cake. Such milk-based Indian sweets have developed home markets and are well-liked by Indian ethnic groups abroad (Meshram, 2018) [11].

Depending on where in the world you are, milk is typically consumed in very different ways. Milk is viewed as a complete food when consumed by humans. All of the nutrients that the body requires for optimum nourishment are found in milk. Milk can either be consumed raw or processed into a variety of milk products, including condensed milk, coagulated milk, fermented milk, fat-rich milk, and frozen milk. The sociocultural life of the Indian subcontinent is inextricably linked to milk sweets. In a variety of traditional Indian sweets, khoa is frequently used as a basic component in India. It is rich in lactose, which provides energy, bone-building minerals, muscle-building protein, and fat. One of the most well-liked khoa-based desserts in India is burfi. India's special adaptability to the khoa-based sweet. A staggering number of burfi variants have emerged as a result of khoa's exceptional capacity to blend with a wide range of meals in terms of taste, body, and texture. In India, individuals from all social classes frequently eat vegetables like bottle gourd, scarlet pumpkin, elephant foot yam, and others. The elephant foot yam lowers blood pressure and cholesterol levels in the body. It is used to cure a variety of ailments, including gas, stomach pain, diarrhoea, and cancer. It is a potent antioxidant that helps in the slowing of the aging process as well as the prevention of cardiovascular disease and stroke. Local producers nowadays only use fruits in the preparation of burfi; no one uses vegetables (Bhutkar *et al.*, 2015) [3].

1. Health benefits of cow's milk

The minerals in cow's milk have numerous health benefits for the body (Lajnaf *et al.*, 2023) [7]. The unique health advantages of cow's milk are covered in further detail in the sections below.

Bone health

Cow's milk can be good for the bones because it provides vitamin D and calcium. In fact, it may help prevent osteoporosis (Chen *et al.*, 2023) [5].

Brain health

According to several studies, older persons who consume more dairy products have higher levels of the potent antioxidant glutathione in their brains.

Antioxidant levels in people who drank three daily portions of milk and milk products were about 30% higher than those in adults who drank less than half a serving (Albuquerque *et al.*, 2023) [1].

Hypertension and cardiovascular health

According to the American Heart Association (AHA), a higher potassium consumption and a lower salt intake are crucial for lowering the risk of cardiovascular disease.

After analysing the data of more than 90,000 postmenopausal women, researchers reported their findings in 2014. A 21% reduced risk of any type of stroke and a 27% lower risk of ischemic stroke was observed in around 25% of the women who ingested the highest potassium.

But the saturated fat included in full-fat dairy products can raise your risk of heart disease and atherosclerosis. For this reason, skim or low-fat milk should be chosen by those who are at risk for stroke or cardiovascular disease (Zhou *et al.*, 2023) [15].

3. Milk cake as a traditional dairy food

One of the most well-liked traditional dairy foods (sweets) in northern and central India, milk cake is becoming more and more popular throughout the rest of the nation. Well-defined grains with a stronger caramelised flavour than Kalakand are the distinctive feature of milk cake. The manufacture of Danedar form of khoa, which is comparable to Kalakand, is required for the traditional milk cake recipe; however, a piece of the mass is caramelised more intensely and sandwiched between the less caramelised portions (Landge, 2009) [8]. Rabri, Khurchan, Khoa, and Milk Cake are indigenous concentrated milk products from Northern India. Indians adore Bengali sweets like rasgulla and Sandesh as well as milk-based delights like gulabjamun, laddoo, and burfi (Chawla *et al.*, 2014). Milk cake is a typical milk-based culinary item in northern India. Although some of the mass is sandwiched between the less caramelised portions and some of the mass is caramelised more intensively, danedar khoa and sugar are utilised in its manufacture (Landge *et al.*, 2009) [8]. The product is essential both financially and nutritionally. The product has clearly defined grains and a stronger caramel flavour (Chawla *et al.*, 2022). The objective of this study was to know the health benefits of milk cake.

Milk is commonly drunk in a variety of ways. When consumed by people, milk is considered to be a complete food. Milk contains all of the nutrients that the body needs for efficient nutrient absorption. Both raw and processed milk products, such as condensed milk, coagulated milk, fermented milk, fat-rich milk, and frozen milk, can be ingested. Milk sweets are integrally related to the social life of the Indian subcontinent. In India, khoa is commonly utilised as a fundamental ingredient in a range of traditional Indian sweets. Lactose, which is abundant in it and gives energy, minerals that help develop bones, protein that helps build muscles, and fat. Burfi is one of India's most popular khoa-based dessert (Oh *et al.*, 2006) [12]. India's unique capacity to adapt to the khoa-based sweet. As a result of khoa's outstanding ability to meld with a wide variety of meals in terms of taste, body, and texture, an astounding number of burfi variations have developed. Every social class in India regularly consumes vegetables like bottle gourd, scarlet pumpkin, elephant foot yam, and others. The elephant foot yam reduces cholesterol and blood pressure in the body. It is used in the treatment of cancer, weight loss, diarrhoea, stomach pain, and gas (Tian *et al.*, 2020) [14].

Chawla *et al.* (2021) [4] reported that in India, milk cake is a well-known khoa-based dairy product that is either made with buffalo milk or using a particular danedar khoa variation. Milk cake typically has a shelf life of 3 to 4 days at room temperature, but it can last up to 12 to 14 days when refrigerated. Therefore, the current study's objective is to assess how modified atmosphere packaging (MAP) might prolong the shelf life of milk cake while maintaining its freshness at 4 °C or lower. According to Aneja *et al.* (2002) [2], once the condensed mass has reached a dough-like consistency, the hot dough should be moved to a greased tray and cooled slowly in an enclosed box for five to six hours. Alternatively, to increase color contrast in the top and bottom layers, the bottom of the tray may be cooled in chilled water. Rao *et al.* (2000) found substantial differences in sensory consistency between Milk cake obtained from the market and Milk cake produced in the laboratory. According to them, variations in the production of sensory qualities of

Milk cake may be due to the amount and stage of addition of citric acid and sugar. The unregulated heat treatment during preparation was blamed for the discrepancies. Variations in colour and appearance can be caused by changes in sugar levels and manufacturing methods.

Kumar *et al.* (2014) [6] examined the sensory and rheological characteristics of Milk cake, finding it to have a high degree of graininess, stickiness, chewiness, gumminess, and mild firmness and juiciness. The light portion of a high-quality Milk cake had a yellowish white color with a lot of luster, while the dark portion had a medium dark brown color with a lot of luster. The taste of high-quality Milk cake was a mixture of high-intensity sweetness and caramel flavor, as well as medium-intensity milk solids and cooked flavor notes.

Conclusion

The calcium in milk cake is also beneficial for maintaining healthy bones and teeth. Additionally, it can help you lose weight and control your blood sugar levels better. In addition, milk cake is a low-calorie snack that is packed with minerals, such as dietary fibre, phosphorous, and vitamin B12.

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