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Popular Article

Functional benefits of Ghee

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Introduction

India ranked first in milk production in the world with per capita availability of milk is 225 grams per day in the year 2001- 2002 to increased 355 grams per day in the year 2016-17 (NDDB, 2018). In ancient time, ghee was produced far back as 1500 BC (Achaya, 1997). Ghee is considered as traditional Indian milk products. The market of ghee is about 37% in urban areas as well as about 21% in rural areas. Cow Ghee is recognized to be digested about 96% which is best as compared to all different types of vegetable and animal supply fats (Mahakalkar *et al*., 2014). Cow Ghee is also utilized in Ayurveda for different medical applications. Ayurveda medicine suggests different treatment protocols for different ailments using medicated ghee manufactured with different herbal extracts. Ghee is one of the highly nutritious, costlier and most acceptable ghee of fat on the Indian subcontinent, because of its high nutritional and sensory characteristics. In ghee preparation, the fermentation of milk to curd may or may not be performed to render fat from the medium. It can also be prepared directly by separating the cream form the milk followed by heat treatment by different methods. Desi ghee is generally manufactured for milk fat obtained from fermented milks whether from cow or buffalo in which curd has to be churned in the form of butter by heat clarification method to separate out fat from non-fat medium. Ghee is considered as an important cooking medium, because of its taste, pleasant flavour and also promotes good health. Ghee is nutritionally more reliable than the other oils or fats due to the fact of its content medium chain fatty acids, which are absorbed directly by the liver and burned to supply energy (Kumar *et al*., 2018). Ghee is highly shelf stable food due to presence of low moisture and also content natural antioxidants (den Berg, 1988). Ghee remains a important choice among households food in India as compared to the other fats or oil. It is popularly known by different brands like Gowardhan, Anik, Madhusudhan, Verka, Amul, Gopaljee, Nestle, Patanjali and Britannia in the market. However, ghee is essential for good health and consuming it beyond the individual limit may show detrimental health effects, because of ghee having cholesterol content and is also contains highly saturated fat.

Health benefits of ghee

Ghee and Ayurveda medicine has very closed relationship since thousands of years. According to Modern Ayurvedic health science, ghee is known by its various properties like ghee is a health booster, offers cooking benefits and is good for the mind and spirit. Ghee content various constituents of fat, phospholipids etc. So, it possesses various health benefits:

1. Ghee is considered as an ideal medium for deep frying because ghee has high smoke point at 250°C which is above the normal cooking temperatures of 180-200°C and also having higher than most of the vegetable oils (Bader, 2010; Deosarkar *et al*, 2016).
2. Ghee is not kept at refrigeration temp.; therefore, it is not spoiled easily. It is not to affect with a dairy or casein intolerance people. Ghee is made from butter but the milk solids and impurities have been removed, so most people who are lactose or casein intolerant have no issue to consume ghee.
3. It is rich in the fat-soluble vitamins A and E (Achaya, 1997) and it is also rich in vitamin K2 and CLA (Conjugated Linoleic Acid).
4. It is better source of essential fatty acids such as linolenic acid and arachidonic acid.
5. It possesses an antioxidant with anti-viral and anti-cancer properties (Dhiman *et al*, 1999, Dhiman *et al*., 2000).
6. Ghee is nutritionally rich to other fats because of its content medium chain fatty acids (MCFAs), which are absorbed directly by the liver. So, for athletes' ghee can be of consistent source of energy. Also, the energy from medium chain fatty acids can be used to burn other fats in the system and to lose weight (St-Onge and Jones, 2008: Nokasa *et al*, 2009). Ghee has the anti-obesity properties of these MCFAs contents.
7. Ghee contains a short chain fatty acid like butyric acid (Kumar *et al*, 2015), which is responsible to its distinct flavour and easy digestion. The intestinal bacteria are converting fibre into butyric acid and then use for energy and intestinal support (Maurice Bugaut, 1987).
8. A healthy body makes its own form of 'ghee' but we are aiding that greatly by consuming of ghee. People with unhealthy digestive tracts do not produce butyric acid and the adequate production of butyric acid supports the production of killer T cells in the gut so a strong immune system developed (Chang *et al*, 2014).
9. Ghee based formulations are well scripted in Ayurvedic system of medicine, it is used for wound healing purposes (Vure and Dorle, 2006).
10. It was also reported that when rats fed with diets containing greater than 2.5% of ghee showed lower levels of serum cholesterol as compared with rats fed diets containing groundnut oil (Matam *et al*, 2000).

11. Ayurvedic physicians have been using ghee enemas for centuries to decrease inflammation.
12. Ghee stimulates the secretion of gastric acid and it also possess the aiding in the digestive process.
13. In Ayurveda medicine, it is considered under most satvic foods, and also to promote positivity, growth and expansion of consciousness. The positive subtle effects of ghee come from the fact that it comes from cows.
14. Cows are domestic animal in most parts of the world, but these are special considered and holy in Hindu religion of India. So, the milk from cows contains the essence of all those energies, and ghee is the essence of the milk.
15. Ghee is considered as a suitable carrier for many herbs and spices with different medicinal properties, which are to be absorbed and transported to targeted areas of the body.
16. Daily consumption of ghee in an adequate amount, it imparts various health benefits like binds toxins, enhances complexion and glow of the face and body, a great rejuvenator for the eyes, increases physical and mental stamina etc.

Conclusion

Ghee is prepared from cow or buffalo milk. Cow Ghee is utilized in Ayurveda for various medical applications. Ghee fat has been considered superior to other fats mainly because of the presence of characteristic short chain fatty acids (SCFA), carrier of fat-soluble vitamins and essential fatty acids such as linolenic acid and arachidonic acid. Daily consumption of ghee in an adequate amount imparts various health benefits. Ghee is a fat-rich dairy product. So, natural antioxidants and other constituents such as phospholipids and protein residues play important role in preventing rancidity. Generally, synthetic antioxidants are also used in ghee to increase the shelf life for preventing oxidative deterioration. Ghee is one of the costlier dairy products; hence ghee manufacturing could be a profitable business for rural India. So, ghee is considered as most suitable fat rich product for health promoting.

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