

Role of Milk and Milk Products in Cookery

Vanishree S.¹, Renuka Biradar² and Aravind Rathod³

¹Assistant Professor H.Sc, AEEC Lingasugur

²SMS Agril. Entomology, AEEC Lingasugur

³SMS Horticulture, AEEC Lingasugur

*Corresponding Author: vaniravipatil@gmail.com

Milk is one food for which there seems to be no adequate substitute. As we know, all mammals produce milk after the birth of the young ones and man uses milk of many animals as his food. The cow is the most important of all these animals as supplier of food. Buffalo and goat milk also used.

According to history, raw milk was widely used in medieval cooking. The first evidence of milking cattle for human consumption is believed to be found among the Neolithic farmers in Britain and Northern Europe. Although milk from the cow is processed, it is not an engineered or fabricated food. It is about 87 percent water, 13 percent solids and fat-soluble vitamins. The solids other than fat include proteins, carbohydrates, water soluble vitamins and minerals. These nutrients in milk help make it nature's perfect food.

As the decades old public health message says – "Piyodoodh for healthy reason, rahoge phir fit aur fine, jiyoge past ninety-nine!" The composition of milk varies with the species, breed, diet, lactation period and interval between milking. Milk and its products contain high quality proteins. The Whey protein itself contains about 28% of the protein content of milk. Casein is the protein that is only found in milk and contains all essential amino acids. Protein helps in building and repairing body tissues and also helps in formation of antibodies to help fight against infections.

Milk also contains calcium, phosphorus, magnesium and potassium. Calcium and phosphorus is found approximately in the same ratio as found in the bones. Milk is also a significant source of riboflavin (vitamin B2) which helps to promote healthy skin and eyes. In adults, a calcium deficiency along with other factors, may result in bone deterioration called osteoporosis. Therefore, it is important to consume calcium in right amounts in order to ensure stronger bones. The recommendations for calcium are 1,000 mg for



adults, 1,300 mg per day for adolescents, 500-800 mg per day for young children and 1,200 mg per day for adults over 51 years of age.

Milk Products

Milk is not only used as such, but many products non-fermented and fermented are used in cookery. About 30-35 per cent of the total milk production is converted to milk products.

- ✓ **Non-fermented products:** whey protein concentrates, skim milk, evaporated milk, sweetened condensed milk, dry milk, khoa, rabri, chhaina, ice-cream, standardised milk, toned milk, double toned milk, recombined milk, sterilized milk, ultra-high temperature processed milk, filled milk, flavoured milk, cream, colostrum etc.
- ✓ **Fermented milk products:** Butter, Cheese, curd, shrikhand.

Functional properties of milk and curd

- ❖ The diet high in dairy foods is an effective strategy for preventing and treating hypertension.
- ❖ Fermented dairy products like yoghurt and curd are probiotic foods. The active cultures in live curd, the probiotics, protect the body from

harmful bacteria. Incidence of dental caries is reduced also with the intake of curds.

Dairy products enriched with Phyto-sterols and stanols or their esters can be viewed as potential novel foods for health promotion in the next few years.

Milk substitutes

Soya milk and groundnut milk are used as substitutes of milk. They are also pasteurized and homogenised before selling in the market. Of course, these milks cannot be real substitutes in terms of nutritive value but can be used when there is intolerance for ordinary milk. Tofu- fermented food made from soybean is used as substitute for cheese which is lower in fat and cholesterol.

Here are some benefits of consuming milk in our diet

Healthier Teeth: Dairy products contain calcium and other nutrients, which helps teeth to grow and keep them healthy.

Bone Health: Dairy products provide calcium, which is essential for bone growth and development. Bone growth is highest during childhood and the teenage years. Therefore, it is important that teenagers consume dairy products.

Controls Obesity: Research has shown that people who consume milk and dairy foods are likely to be slimmer than those who do not. Milk is also not a high fat product. Whole milk contains 4% fat and semi-skimmed milk contains 1.7% fat. Studies have also found that consuming milk and dairy as part of a calorie-controlled diet can help us to lose weight.

Role of milk and milk products in cookery

- ❖ It contributes to the nutritive value of the diet, e.g., milk shakes, plain milk, flavoured milk, cheese toast.
- ❖ Milk adds taste and flavour to the product e.g., payasam, tea, coffee.
- ❖ It acts as a thickening agent although starch, e.g., white sauce or cream soups.
- ❖ Milk is also used in desserts, e.g., ice-cream, puddings.

- ❖ Curd or buttermilk is used as a leavening agent and to improve the texture, e.g., dhokla, bhatura.
- ❖ Curd is used as a marinating agent e.g., marinating chicken and meat.
- ❖ Curd is used as a souring agent e.g., rava dosa, dry curd chillies.
- ❖ Khoa is used as a binding agent, e.g., carrot halwa
- ❖ Milk and curd increase shelf-life purees preserves better when the dough is mixed with milk/curd.
- ❖ To prevent browning in vegetables, e.g., butter milk is used for preventing browning when plantain stem is cut.
- ❖ Variety to the diet, e.g., butter milk sambar, avail and mutter paneer.
- ❖ Cheese is used as garnishing agent.
- ❖ Milk is used as clarifying agent in sugar syrup
- ❖ Salted butter milk is used for quenching thirst.

Points to be remembered in using milk and milk products in cookery

- Prevention of scorching: Too thin vessels and too high a temperature can scorch the milk at the bottom of the vessel. Use double boiler or stir constantly.
- Prevention of curdling of butter milk sambhar: Bengal gram flour or rice flour is added to prevent curdling. The starch that is present in this holds the casein in suspension and prevents it from coagulation.
- Prevention of curdling in fruit milk beverages: Fruit and milk are cooled thoroughly as high temperature favour curdling
- Prevention of curdling in fruit custard: this can be done by adding ripe or canned fruits, sour fruits like grapes and pineapples may curdle custard. Raw pineapples contain brome line and may lead to curdling of milk.
- Prevention of curdling in avail: for this, fresh curds must be used. Increase in acidity favours curdling.

- | | |
|--|---|
| <ul style="list-style-type: none">➤ Prevention of curdling in jaggery payasam: Jaggery is to be added after removing from the fire as sometimes the salts present in that may curdle the milk.➤ Prevention of curdling in tomato soup: This can be done by adding tomato juice to the white sauce.➤ Prevention of over boiling : this can be done by stirring or by using milk cooker. | <ul style="list-style-type: none">➤ Prevention of scum formation: This can be achieved by covering the pan, stirring, using milk cooker or by adding whipped cream.➤ If paneer is made at home, the whey water should not be discarded but should be used in making chapatti dough or as part of water in making pulao or can be added to the curry where paneer is added. |
|--|---|

* * * * *