

Key Message 7



Consume adequate amounts of milk and milk products



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1. Terminology

Milk

Milk refers to cow, goat and sheep milk (fresh, pasteurised, sterilised and ultra-high temperature (UHT) milk) and milk powder (full cream, skimmed and filled milk powder).

is best to boil fresh milk before consumption. Fresh milk generally contains about 3% of milk fat.

Pasteurised milk is similar to fresh milk except that it has been heat treated.

Sterilised milk is milk which has been sterilised, homogenised and thereafter heated to and maintained at a temperature of not less than 100^o C to render it commercially sterile and packed in hermetically sealed containers.

Ultra-high temperature (UHT) milk is milk which has been subjected to heat treatment by being retained at a temperature of not less than 135^oC for at least two seconds to render it commercially sterile and immediately a septically packed in sterile containers.

Recombined milk is the product prepared from the constituents of milk combined with water or milk or both and has been subjected to pasteurisation, sterilisation or UHT.

Flavoured milk is milk or recombined milk to which permitted flavouring substance has been added and may contain sugar or salt or both. It shall have been heat-treated such as pasteurisation or UHT.

Full cream milk powder or dried full cream milk is milk or recombined milk

Milk products

Milk products include products prepared from milk, such as milk shakes, yoghurts, cheeses and ice cream.

2. Introduction

Milk is one of the most complete of all foods, containing nearly all the constituents of nutritional importance to humans. Milk and milk products are the richest source of calcium in the diet that is readily absorbed. These foods are also important contributors of protein, vitamin A, riboflavin, vitamin B₁₂ and zinc to the diet.

2.1 Types of milk

There are various types of milk, the main differences being the process used to produce the final product (MOH, 1985; FNRI/DOST, 2000). Consumers should read the label of milk packages to identify the type of milk.

Fresh milk is directly sourced from cows, goat and sheep. Unless it is pasteurised, it

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from which the water has been removed. Full cream milk powder contains more than 26% of milk fat.

Reconstituted milk is the liquid product prepared by the addition of water to full cream milk powder and shall be subjected to pasteurisation, sterilisation or UHT.

Evaporated milk is the product where part of the water has been removed by evaporation. It is used more for culinary purposes such as in the preparation of desserts.

Filled milk is milk in which the milk fat has been replaced wholly or partly by an equivalent amount of vegetable oil or fat, such as palm oil.

Skim/non-fat milk is milk without the milk fat but with most of the other essential nutrients intact. It is useful for those who want to limit their intake of energy, fat and cholesterol.

Low fat milk is milk which contains not more than 1.5 g of fat per 100 ml of milk.

Fermented milk or cultured milk is the product prepared by culturing milk with suitable lactic acid bacteria and include yoghurt and *lassi*.

Sweetened condensed milk and sweetened condensed filled milk are highly evaporated milk to which sugar has been added. Its high sugar content (up to 40% sugar) gives it a long shelf life even without refrigeration. It is not recommended for feeding infants and young children because after dilution, its nutrient content is very low. It is more often used in baking and the preparation of desserts (FNRI/DOST, 2000). Sweetened condensed milk and sweetened condensed filled milk should therefore not be considered as milk products because of their much lower nutritional value.

3. Scientific basis

Milk and milk products are encouraged to be consumed in the dietary guidelines because they are a rich source of essential nutrients, including protein, retinol, riboflavin, vitamin D, vitamin B₁₂, zinc, magnesium and potassium. The importance of these nutrients has been highlighted in the chapter dealing with fish, meat, poultry, egg, legumes and nuts. Of particular significance is that milk and milk products are also rich sources of calcium (FNRI/DOST, 2000; NHMRC, 2003; USDHHS & USDA, 2005; Health Canada, 2007).

Calcium is used for building bones and teeth and in maintaining bone mass. Vitamin D functions in the body to maintain proper levels of calcium and phosphorus, thereby helping to build and maintain bones. Thus diets rich in milk and milk products help build and maintain bone mass throughout the lifecycle. This may reduce the risk of osteoporosis. The intake of milk and milk products are especially important to bone health during childhood and adolescence, when bone mass is being built. In addition, diets rich in potassium may help to maintain healthy blood pressure (FNRI/DOST, 2000; NHMRC, 2003; USDHHS & USDA, 2005).

Milk and milk products are also convenient to consume and relatively readily available. Their consumption should be encouraged for all groups of the general population through the life cycle.

There is some concern that milk and milk products are high in saturated fats and cholesterol and excessive consumption can have negative effects on health. Adults and children should not avoid milk and milk products because of these concerns. There are many fat-free and low fat choices without added sugars that are available and can be used by individuals who need them, for instance, overweight individuals

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or those with high risk of heart disease. Reduced fat products generally contain 75% (or less) of the fat contained in the equivalent full-fat product. It is important, however, to note that some low fat soft cheeses contain very little calcium (NHMRC, 2003; USDHHS & USDA, 2005; Health Canada, 2007).

4. Current status

In the Malaysian Adult Nutrition Survey (MANS) 2003, a semi-quantitative food frequency questionnaire which consisted of 126 food items was used to evaluate the habitual intake during the previous one year period (Norimah *et al.*, 2008). Milk powder ranked fifth among the 10 most commonly consumed foods daily. It was reported to be consumed daily by 17% of the adult population and the mean frequency was 1.41 per day, with the total amount consumed daily reported to be three teaspoons. On the other hand, sweetened condensed milk was reported to be consumed daily by twice the percentage of adults (35%) and the mean frequency was 1.57 per day, with a daily consumption also of three teaspoons.

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5. Key recommendations

Key recommendation 1

Consume milk and milk products everyday.

How to achieve

1. Increase milk intake by adding milk products which are low in sugar in the preparation of foods and drinks.
2. Add milk instead of water to oatmeal, cereals and puddings.
3. Milk product is preferred to non-dairy creamer.
4. For individuals who need to reduce weight, milk and milk products with lower fat content are healthier choices as compared to whole milk.

Key recommendation 2

Replace sweetened condensed milk and sweetened condensed filled milk with unsweetened liquid or powdered milk.

How to achieve

1. Whenever possible, use plain milk instead of flavoured milk.
2. If sweetened milk products are chosen, do not add sugar.



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Additional recommendation: Lactose intolerance

Lactose intolerance persons may also derive the health benefits associated with milk and milk products by consuming lactose-free predigested milk. They can choose predigested milk products such as yoghurts and consume more calcium fortified or enriched milk products to meet their calcium requirement.

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