Milk

Milk has long been a popular beverage, not only for its flavor, but because of its unique nutritional package. Milk is one of the best sources of calcium in the American diet. It also provides high-quality protein, vitamins and other minerals.

Varieties

- **Whole Milk** (3.25% fat) contains 150 calories and 8 grams of fat per serving (8 fluid oz). Although not required, whole milk may be fortified with vitamin D at a level of 400 International Units (IU) per 1 quart. The addition of vitamin D must be stated on the label.
- **2% Reduced-Fat Milk** (2% fat) contains 120 calories and 5 grams of fat per serving (8 fluid oz). Vitamins A and D are usually added to a level of at least 2,000 IU of vitamin A and 400 IU of vitamin D per 1 quart. The label must indicate the addition of these vitamins.
- **1% Low-Fat Milk** (1% fat) contains 100 calories and 2.5 grams of fat per serving (8 fluid oz). Vitamins A and D are usually added as in reduced-fat milk.
- **Fat-Free Milk** (also called Skim or Non-fat Milk) (0% fat) contains 80 calories and 0 grams of fat per serving. Vitamins A and D are usually added as in reduced-fat milk.
- **Chocolate Milk** (fat-free, 1% low-fat, 2% reduced-fat, whole milk) is milk to which chocolate or cocoa and a sweetener have been added. This milk is just as nutritious as its unflavored counterpart. Compared to white milk, chocolate milk contains about 30 more calories per serving (8 fluid oz).
- **Evaporated Milk** (6.5% fat) is made by removing about 60% of the water from whole milk. The milk is then homogenized, fortified with vitamin D to a level of 25 IU per 1 fluid ounce, canned and heat sterilized. The addition of vitamin A is optional.
- **Evaporated Fat-Free Milk** (0.5% fat or less) is a concentrated, fortified (vitamins A and D), fat-free (skim or non-fat) milk that is canned and sterilized.
- **Sweetened Condensed Milk** (8% fat or less) is a canned milk concentrate of whole milk to which sugar has been added. The sweetener used (usually sucrose) prevents spoilage.
- **Non-fat Dry Milk** is made by removing water from pasteurized skim milk. It contains 5% or less moisture (by weight) and 1.5% or less milk fat (by weight).

Processing Terms Explained

What is pasteurization?

This is the process of heating raw milk at a high enough temperature for a sufficient length of time to make milk bacteriologically safe and increase its shelf-life. Most milk sold in the U.S. is pasteurized. Pasteurization has little effect on milk's nutritional content.

What is ultrapasteurization?

Milk that is ultrapasteurized has been heated to a higher temperature than pasteurized milk. Ultrapasteurized milk stays fresher longer under refrigeration than pasteurized milk. This process is often used for cream and eggnog.

How does UHT or Ultra High Temperature milk differ from ultrapasteurized milk?

The major difference is that UHT milk is packaged in sterilized containers. UHT milk can be stored at room temperature for up to 3 months. Once opened, it should be refrigerated.

Why is milk homogenized?

Homogenization breaks up and disperses milk fat throughout milk, resulting in a smooth, uniform texture. Most whole milk is homogenized to prevent the cream from rising to the top.

Storing and Handling

Milk is perishable. To preserve its safety and quality, the following tips are recommended.

- Refrigerate milk at 40˚F or less as soon as possible after purchase and store in the original container.
- Return milk to the refrigerator immediately after pouring out the amount needed. Never return unused milk to the original container.
- Keep milk containers closed to prevent the absorption of other flavors.
- Protect milk from exposure to strong light since light can reduce its riboflavin content.
- If properly handled, milk generally stays fresh for 2 to 3 days after the "sell by" or "pull" date.
- Keep canned milks like evaporated and sweetened condensed milks in a cool, dry place and invert the cans every 2 months. These milks generally keep for about a year at room temperature.
- Store dry milks in a cool, dry place and keep in an airtight container after opening. Once reconstituted, dry milk should be refrigerated and handled like other fluid milks.
- Freezing of milk is not recommended. It causes undesirable changes in milk's texture and appearance.
- Microwaving milk is not recommended to extend milk's shelf life or as a means of pasteurization.

Nutrition Facts

Milk is a nutrient-dense food. This means that it provides a high level of essential nutrients compared to its calories. Each serving of milk – regardless of fat content or flavor – provides 10% or more of the recommended daily intake for calcium, vitamin D (if fortified), high-quality protein, potassium, vitamin A, vitamin B12, riboflavin (B2) and phosphorus. The chart below gives the nutritional profiles of several varieties of milk.

Commonly Asked Questions about Milk

Should I be concerned about giving my child chocolate milk?

No. Chocolate milk is just as nutritious as unflavored milk. Both milks are excellent sources of calcium. Many children do not get the recommended amount of calcium in their diets. Because kids like chocolate milk, they are more likely to consume this beverage and, at the same time, boost their calcium intake.

If I'm lactose intolerant, should I avoid milk?

Not necessarily. Many individuals who have difficulty digesting lactose (milk's sugar) can tolerate small amounts of milk with a meal. Lactose-free milk is also an option.

Isn't milk fattening?

Overweight results from consuming too many calories and getting too little exercise. There are a variety of milks with different calorie and fat contents. Fat-free milk, for example, has only 80 calories, no fat and all the calcium of other milks. Use the Nutrition Facts panels to compare calorie, fat and nutrient content of different milks.

A Nutritional Look at Milk

1 cup (8 oz)	Calories (Kcal)	Fat (g)	Protein (g)	Calcium (mg)
Whole	149	8.0	8	276
2% Reduced-fat	122	5.0	8	293
1% Low-fat	102	2.5	8	305
Non-fat	83	0	8	299
Chocolate, Whole	208	8.5	8	272
Chocolate, 1% Low-fat	157	2.3	8	286

Source: USDA Nutrient Database for Standard Reference, October 2013.

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