Texas Cooperative EXTENSION
The Texas A&M University System

SIMPLY GOOD FOOD

Milk

History: Milk goes back to the beginnings of civilization. Prehistoric drawings from the Sahara featured picture-stories of cattle. An old mosaic frieze (3500 B.C.) found near Babylon, depicts a dairy scene with milk containers and strainers. Even the earliest writings, in now-extinct Sanskrit, mention milk as one of the essential foods. As a matter of fact, the word,"milk" comes from the Sanskrit, "mrjati," used to describe the milking action.

Dairying in the U. S. is older than the nation itself. Dairy cows first came to Jamestown in 1611 helping to end the terrifying starvation. Other cattle had been brought to this country by Spanish explorers. As pioneers moved westward nearly every covered wagon had its cow, the family's mobile "food factory."

Milk Industry Today: Modern, Technical: Today's dairy herds barely resemble the pioneers' cattle. They're much more productive, more scientifically cared for than the herds of only a few decades ago. Single dairy herds comprise from 40 to many hundreds of cows, milked mechanically. Milk flows directly into a refrigerated tank where it's quickly cooled and help for pick up. From there the milk is pumped into refrigerated tank trucks which carry it to the processing plan where it is standardized to adjust the fat for whole, lowfat and skim milk. Next it is fortified.

Fortification with vitamin D is optional for all forms of milk. However this is added to about 98% of the country's milk in the amount of 400 International Units (IU) per quart. Vitamin A is added to lowfat and skim milk; it is optional for whole milk. If added, it must be present in the amount of 2000 IU per quart. Following this all milk is pasteurized or ultra-pasteurized. Homogenization, which is optional, comes next. However, this is generally used throughout the country. Automatic machines package cold milk in paper, glass or plastic containers. It is refrigerated until purchased or delivered.

Milk is a Natural: Although milk is processed it's not an engineered or fabricated food. It naturally has two major components: fat, including fat-soluble vitamins and solids-not-fat, which includes proteins, carbohydrates, water-soluble vitamins and minerals. These nutrients in milk make it a food not duplicated by modern science.

Milk's Nutrients: Milk contains high-quality proteins due to the presence of all the animo acids found in proteins, including the eights which are "essential." Casein, a protein found only in milk, comprises 78% of the total protein in milk. Protein's main functions are to build and repair body tissues, for antibodies, hormones and enzymes.

Milk's minerals include among others, calcium, phosphorus, magnesium and zinc. Milk also has Vitamin A, Vitamin D, Vitamin B-12, riboflavin and niacin. Riboflavin and B vitamin is needed for healthy skin and nerves. It is best known for biologically available calcium, which is more

difficult to obtain in other foods. Phosphorus is needed in the proper ratio to calcium to form bone. Milk provides these two minerals in approximately the same ratio as found in bone. One serving is one cup.

Shopping for Milk: Make a shopping list for the week, adding the recommended amounts of milk each member of the family should consume, to have sufficient quantity on hand. Nutritionists recommend three to four cups (8 oz.) of milk per day for children, four or more for teenagers and two or more for adults

Storing Milk: ■Milk is a perishable food which needs refrigeration at 40 degrees F. or below to protect flavor and freshness. At this temperature milk will keep for 10 days or more.
■ Pour out only the amount of milk you will use and return the container to the refrigerator immediately, resealing to prevent absorption of other food flavors. (Do not pour milk which has been standing at room temperature back into the container. Store it separately in a covered container). Exposure to light destroys milk's flavor and riboflavin.
■Freezing milk isn't recommended. When milk is frozen and thawed, a flaky protein deposit may show as fine flecks on the glass. This doesn't affect the nutritional value. If frozen, hold for only a short time unless covered with protective freezer wrap. Thaw frozen milk slowly in the refrigerator (about 48 hours for 1 quart) or by immersing the carton in cold water for several hours.

Cooking Hints: ■To scald milk, heat to just below the boiling point. Tiny bubbles will form at edge of pan. Prevent skin formation during heating by covering pan or floating butter on milk's surface.
■Use evaporated milk just as it pours from the can in sauces and gravies; as a binder in meat loaves; for dipping chicken, fish, chops or cutlets when coating with crumbs.
■Because of its high sugar content, sweetened condensed milk cannot be used interchangeably with evaporated milk in recipes.
■Instant nonfat dry milk is measured like flour or any other dry ingredient, but not sifted. Because it is in a dry form, it can be easily added to either dry or liquid ingredients in a recipe in which liquid milk in as great a proportion could not be used.

Old-Fashioned Chocolate Milk Shakes

2 cups chocolate ice cream
½ teaspoon vanilla extract
½ cup milk
2 tablespoons malt-flavored chocolate drink mix

Process all ingredients in container of an electric blender until smooth, stopping once to scrape down sides. Serve immediately.
Variation: Chocolate-Peanut Butter Milk Shakes: Add 3 tablespoons creamy peanut butter to the ingredients in the electric blender.

Quick Cream of Potato Soup

1 ½ cups cubed potatoes
1 tablespoon chopped onion
¼ teaspoon salt
¼ cup boiling water
1 tablespoon butter or margarine
1 cups milk

Cook potatoes, onion and salt in the water until the potatoes are done. Blend fat and flour and stir into the hot potato mixture. Cook, stirring constantly, until thickened. Add the milk and reheat. Makes 4 servings.
Sources: National Dairy Council, Handbook of Food Preparation

Supporting State Extension Goal: Health, Safety and Well Being

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