

Milk's Nutrient Contribution to School Lunches

Recently, there has been much attention paid to the nutritional content of school meals and other foods sold in schools. Along with the challenge of providing nutritious meals within the guidelines of new regulations, directors must also address factors influencing childhood obesity and determine how to stretch a food dollar in times of rising food costs.

Since milk is central to school meals this seems like the ideal time to revisit the nutritional contribution of milk—a beneficial meal component across the board because it is nutrient rich, moderate in calories and an excellent dollar value.

Benefits of Milk

Providing milk ensures that children have access to essential nutrients necessary for normal growth and development. California standards for fluid milk meet or exceed the federal standards through the fortification of milk with nonfat milk solids. This offers improved taste and nutritional benefits, including more protein, calcium and potassium than federal milk. Here are some of milk's nutritional benefits:

Protein in the diet ensures that children have the nutrients necessary for proper growth. The Recommended Dietary Allowance (RDA) for protein for children ages 9-13 is 34 grams per day. One cup of 1% California milk provides 11 grams of protein, one-third of children's daily requirement.

Calcium requirements are the highest during childhood. Growing bodies require adequate calcium to build strong bones to protect against fractures and possible problems later in life such as osteoporosis. The Adequate Intake (AI) for calcium for children 9-18 years old is 1300 milligrams per day. One cup of 1% California milk provides 380 milligrams of calcium, nearly one-third of the daily requirement.

Vitamin D intake promotes healthy bone growth by balancing levels of calcium and phosphorus, the two primary bone-building minerals in the body. The AI for vitamin D for children 9-13 is 200 IU per day and very few foods naturally contain significant amounts of vitamin D. While the body can produce vitamin D through exposure to the sun, sunscreen and less sunlight during winter months can limit production. Vitamin D fortified milk provides a guaranteed year-round source of vitamin D. Although vitamin D levels in milk vary, a typical cup of 1% California milk may contain about 100 IU of vitamin D—approximately one-half of the daily requirement for children.

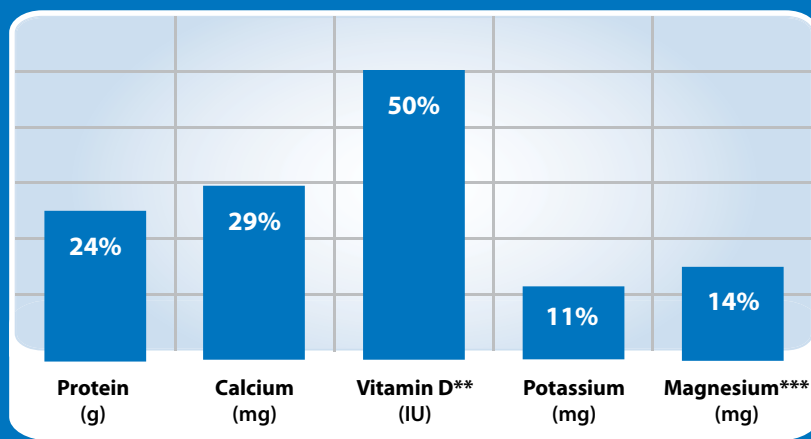
Potassium is required for muscles, including the heart, to function properly. Healthy hearts and muscles keep kids strong and physically active. The AI for potassium for children 9-13 is 4500 milligrams per day. One cup of 1% California milk provides 511 milligrams of potassium.

More Vitamin D Benefits

Research suggests that vitamin D may reduce cancer risk. Emerging research suggests that vitamin D may also improve immune function and cognitive performance, while reducing the risk of some types of dementia, autoimmune diseases, type 1 diabetes and periodontal disease. When vitamin D levels are not optimal, these health-promoting functions may not be fully realized.

Magnesium helps maintain normal muscle and nerve function, keeps heart rhythm steady, supports a healthy immune system and keeps bones strong. Magnesium also helps regulate blood sugar levels and promotes normal blood pressure. The RDA for magnesium for children 9-13 is 240 milligrams per day. One cup of 1% California milk provides approximately 34 milligrams of magnesium.

Percentage of Daily Needs Fulfilled by One Cup of 1% California Milk*



*Values are based on California standards for fluid milk.

**Vitamin D fortified milk can be an excellent source of vitamin D; however, levels in milk vary considerably. Read the food label or contact manufacturer for specific levels.

***Magnesium value based on USDA data for fluid milk, 1% milk fat, with added nonfat milk solids and vitamin A.

Source: www.dairyCouncilofca.org

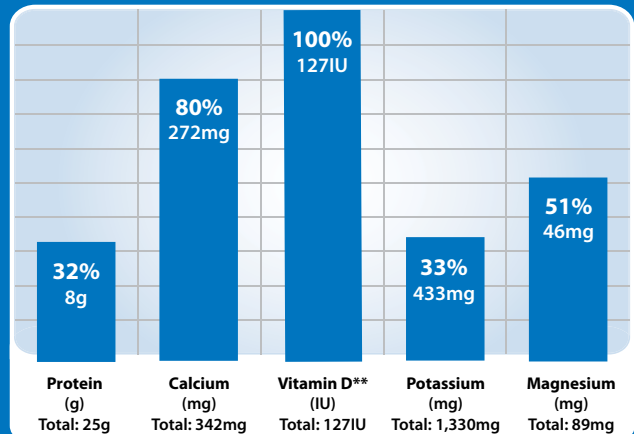
Sample School Meals Showing the Percentage of Nutrients Provided by the Milk

Despite rising food costs, milk is a smart purchase because it contributes so significantly to children's nutrient intake—on the right are some examples.

Example School Lunch 1

Chicken Nuggets (1 serving)
 Marinated Garden Salad (3/8 cup)
 Applesauce (3/8 cup)
 Graham Crackers (1 package)
 Milk, Nonfat Chocolate (1 cup)

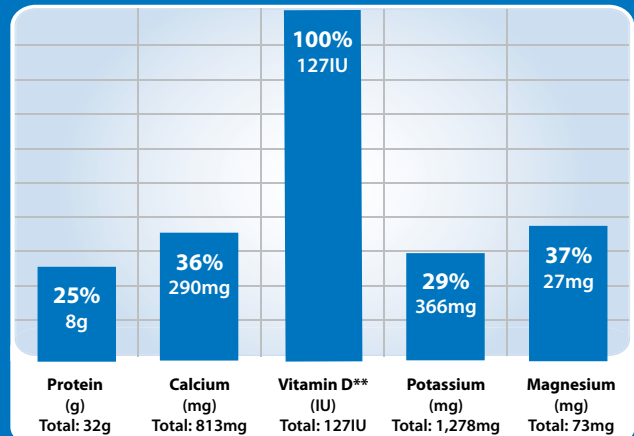
Contribution of Milk to Total Meal Nutrients*



Example School Lunch 2

Meat and Cheese Sandwich (1 serving)
 Super Salad (1/2 cup)
 Cherries with Bananas (3/8 cup)
 Assorted Pudding (3/8 cup)
 Milk, Lowfat 1% (1 cup)

Contribution of Milk to Total Meal Nutrients*



Milk is a good economic value because of its outstanding nutritional value. Milk and flavored milk may account for close to 20 percent of the raw food cost of the school meal, but it contributes more than or close to 25 percent of the nutritional value for key health-promoting nutrients. And that's why milk is the cornerstone of the school meal program.

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These calculations are made using the federal standards for milk. In California, contributions to calcium and protein would be even higher than those reflected in the above graphs

Source: ESHA Research – Food Processor SQL