

# Cheese: A Nutrition Plus for Schools

## Summary

Cheese is a popular menu item with children. The essential nutrients cheese provides improves the nutritional quality of diets. Cheese is a nutrient-rich food and its beneficial roles in health make it an important dairy food to include in a healthful diet - both at school and at home.

## Cheese: A Popular and Pleasing Choice for School Menus

Whether served as part of school breakfast, lunch or snack programs, or at school events, cheese and cheese-containing menu items are popular with children. A 2005 survey of 200 children ages 6-12 found that 81% loved the taste of cheese by itself and on sandwiches.<sup>1</sup> Additionally, 77% of the children liked the fun of eating string cheese. The 2006 School Nutrition Association *Back to School Trends* survey found that pizza, Mexican foods, sandwiches and wraps were some of the most popular entrees served in schools. Among the most popular breakfast foods were breakfast-style pizzas and burritos.<sup>2</sup> Cheese's popularity is attributed to its great taste, the availability of new and different varieties, its convenience and versatility of use.<sup>3</sup>



## Cheese: A Natural Source of High Quality Nutrients

Cheese is considered a nutrient-rich food. Cheese is an excellent source of calcium and a good source of protein and phosphorus. In fact, cheese contributed 26% of the calcium in the U.S. diet in 2000.<sup>3</sup>

Both the USDA 2005 *Dietary Guidelines for Americans* and *MyPyramid* urge Americans to choose nutrient-dense foods within and among the basic food groups, including the Milk group. Nutrient-dense foods contain higher levels of beneficial nutrients in relation to their calories. The *Dietary Guidelines* specifically recommends three servings of low-fat or fat-free milk, cheese or yogurt every day.<sup>4</sup> Consuming nutrient-rich cheese and cheese items daily is a way to meet the recommended servings of dairy foods, and to help improve the overall nutrient intake of children.



Additionally, focusing on nutrient-rich foods such as cheese can help people make smarter choices and get more nutrients for their calories. In fact, an index to help identify nutrient-dense foods within food groups is currently in development, and dairy foods score highly.<sup>5</sup> Once completed, the nutrient density index will help consumers easily choose nutrient-rich foods to help them build healthy diets.

## Children's Health and Dairy Products

Nine out of ten girls and seven out of ten boys don't get the calcium they need.<sup>6,7</sup>



The 2006 report on optimizing bone health from the American Academy of Pediatrics (AAP) encourages adequate calcium intake to decrease risk of fractures during childhood and adolescence, and to prevent future osteoporosis.<sup>8</sup>

The AAP recommends children ages 4-8 consume three servings of low-fat dairy products per day and children ages 9-18 consume four servings per day. One serving of dairy is equal to 1.5 ounces of cheese, 1 cup of milk or 1 cup of yogurt.

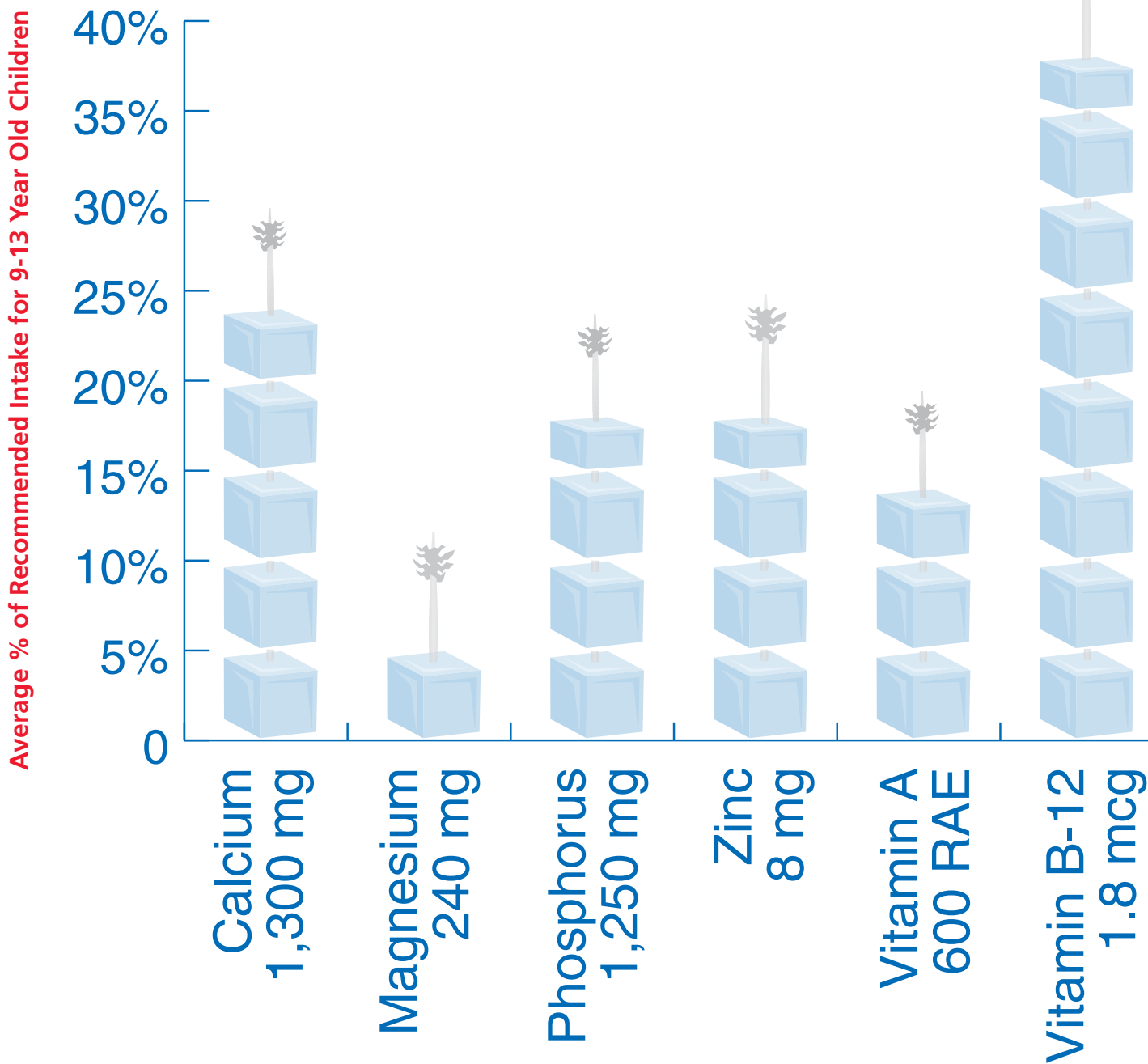
Misunderstandings about lactose intolerance are common.<sup>9</sup> The AAP 2006 report on lactose intolerance recommends children with lactose intolerance include dairy foods as part of a healthy diet.<sup>10</sup> Hard cheeses such as Cheddar and Swiss contain very little lactose<sup>11</sup> and can be well tolerated.<sup>10</sup>

The American Academy of Pediatric Dentistry recommends cheese as one of the healthiest snacks for children's teeth.<sup>12</sup> In addition to providing much-needed calcium, cheese also does its part to fight cavities. Cheddar, Swiss, mozzarella and Monterey Jack stimulate the body's salivary glands and disrupt the development of cavities, especially when eaten as a snack or at the end of a meal. In addition, calcium and phosphorous found in cheese work to re-mineralize the enamel of children's teeth.

Today, concerns about dietary fat intake are top-of-mind. However, children can readily include cheese in a diet meeting fat recommendations in the *Dietary Guidelines for Americans*.<sup>4</sup> It should be remembered that fat is actually a nutrient needed by the human body to carry fat-soluble vitamins and provide satiety. Cheeses of varied fat content are readily available. Children participating in the Bogalusa Heart Study experienced a decline in their percentage of energy from total and saturated fat, despite an increase in their cheese consumption.<sup>13</sup>

Sodium is a nutrient of concern for some. The sodium content of cheese differs depending upon variety due to the various amounts of salt added during cheese-making. In general, natural cheeses such as Swiss (54 mg sodium/oz) and Monterey Jack (152 mg sodium/oz) contain less sodium than many process cheeses, which contain about 400mg sodium/oz.<sup>11</sup>

# Percentage of Recommended Intake of Six Important Vitamins and Minerals Provided by 1.5 Oz. Cheese\*



Nutrient and Recommended Intake



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\*Average of nutrient values for Commodity Cheddar, part skim mozzarella, Swiss, Cheddar, Monterey Jack and American cheese.  
Source: USDA National Nutrient Database for Standard Reference, Release 19 (2006), Institute of Medicine Dietary Reference Intakes: Recommended Intakes for Individuals (Children aged 9-13 years) <http://www.iom.edu/Object.File/Master/21/372/0.pdf>

## Tips for Success with Cheese

The 2005 *Dietary Guidelines for Americans* recommends eating more fat-free or low-fat milk and milk products, fruits, vegetables and whole grains.<sup>4</sup> Whether you are planning meals and snacks at school or at home, cheese makes eating occasions more appealing. Cheese is available in a variety of flavors, types and forms to meet the nutrition needs and taste preferences of today's students.

Cheese manufacturers are continually working to lower fat content and optimize the flavor and texture of cheeses. A variety of cheeses is currently used by food manufacturers to lower the fat content and increase nutrients in children's favorite foods such as pizza and burritos. Research on new flavors, shapes and colors is ongoing. For example, cheese cut in shapes of stars and moons is available and will bring cheese to the attention of children. Fun variations, such as pizza-flavored string cheese, are already available and proving popular with children.

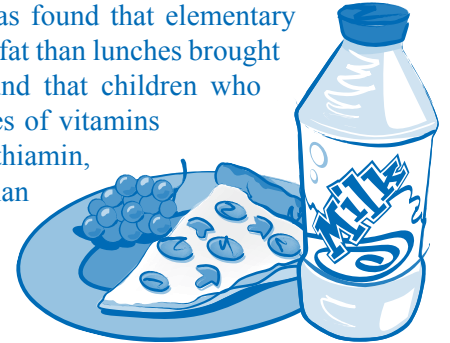
Familiar cheeses, such as Cheddar, Swiss, mozzarella and American, can be used in new ways to add flavor, color, nutrition and appeal to menu items. Cheeses such as Monterey Jack and provolone will liven up favorite menu items. Cheese variety names such as Asiago and Parmesan help position menu items as gourmet or upscale. Blends such as Four Cheese Italian and Pepper Jack appeal to those with more adventurous taste preferences. When used as an ingredient in low-fat entrees or side dishes, a small amount of cheese such as Parmesan or Cheddar delivers an appealing taste.



## Dairy Products Boost Nutrient Quality of School Meals

Participating in child nutrition programs such as the National School Lunch Program (NSLP) and School Breakfast Program (SBP) improves dairy food consumption and nutrient intake. The higher intake of dairy foods by NSLP participants compared to nonparticipants results in higher intakes of several nutrients, including calcium, vitamins A and D, and magnesium, among others.<sup>15</sup> Children who participate in both the NSLP and SBP consume more dairy products (2.2 servings versus 0.9 servings) and less soda and fruit drinks than nonparticipants for these meals combined and over 24 hours.<sup>16</sup>

The variety of foods offered in reimbursable lunches increases the nutrients available to children. Research has found that elementary school lunches have more nutrients and less fat than lunches brought from home.<sup>15</sup> A study of 570 lunches found that children who consume school lunches have higher intakes of vitamins A, B-6, B-12 and D, calcium, protein, thiamin, riboflavin, niacin, folate, iron and zinc than children who consume lunches from home.<sup>16</sup> School lunches contained more food variety and three times the dairy products compared to lunches from home.<sup>16</sup>

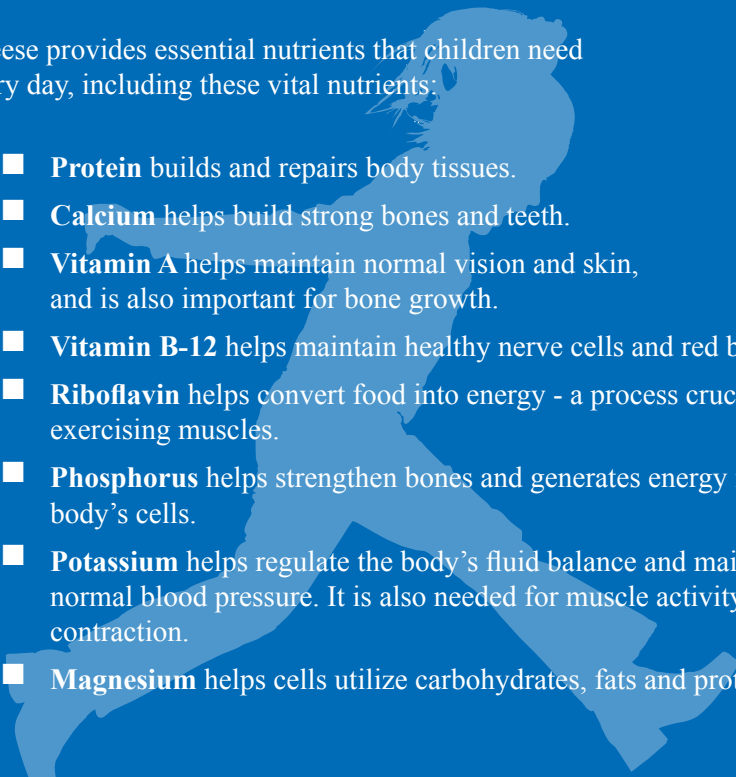


## Vital Nutrients

According to the American Dietetic Association, all foods can fit into a healthful diet "if consumed in moderation with appropriate portion size and combined with regular physical activity."<sup>14</sup>

Cheese provides essential nutrients that children need every day, including these vital nutrients:

- **Protein** builds and repairs body tissues.
- **Calcium** helps build strong bones and teeth.
- **Vitamin A** helps maintain normal vision and skin, and is also important for bone growth.
- **Vitamin B-12** helps maintain healthy nerve cells and red blood cells.
- **Riboflavin** helps convert food into energy - a process crucial for exercising muscles.
- **Phosphorus** helps strengthen bones and generates energy in the body's cells.
- **Potassium** helps regulate the body's fluid balance and maintain normal blood pressure. It is also needed for muscle activity and contraction.
- **Magnesium** helps cells utilize carbohydrates, fats and proteins.



## School Wellness Policies

School wellness policies are now in place to address nutrition education, physical activity and nutrition guidelines for all foods sold on campus (not just the cafeteria). Wellness policies should encourage consumption of naturally nutrient-rich foods. Cheese, along with other foods such as nuts, nut butters and seeds, provides essential nutrients for children's growth and development. Many states have developed nutrition guidelines for schools that include a recommendation that cheese not be included in restricted foods because of its contribution to children's overall diet.

The American Academy of Pediatric Dentistry encourages school officials and parent groups to consider the importance of maintaining healthy choices in school vending machines and urges the promotion of foods and beverages of high nutritional value.<sup>17</sup> Including a variety of dairy foods, such as cheese, in vending machines keeps choices nutritious and appealing. Individually packaged cheeses make it easy for schools to offer this nutrient-rich choice in refrigerated vending machines.

## Kid-Approved Cheese Favorites — Anytime, Any Place!

- Individually wrapped portions are perfect for breakfast, lunch and snacks.
- Pair string cheese and fruit for a popular choice for students of all ages.
- Shredded cheese can be used in salads and pastas, on baked potatoes, or melted to make a sauce for vegetables and pretzels.
- Sliced cheese is perfect for whole grain sandwiches, burgers, wraps and snacks.
- Turn cubed cheese and fruit chunks into kabobs.
- Add a variety of cheese cubes to salad bars.
- Serving a savory cheese dip with vegetables and whole grain crackers encourages selection of this sort of snack.

## Conclusion

There are so many reasons to include nutritious, naturally nutrient-rich cheese as an important part of a healthy school nutrition environment. School breakfasts, lunches, after-school snack programs, extracurricular activities, vending and even fundraisers are opportunities to enjoy cheese. Discover the many varieties of cheese, its versatility on menus and how it increases acceptability of other nutrient-rich foods. Opportunities for including cheese in healthy school environments are numerous, and most importantly, beneficial to students.

## Additional Resources

- For recipe ideas using cheese, visit [http://www.nfsmi.org/Information/school\\_recipe\\_index\\_alpha.html](http://www.nfsmi.org/Information/school_recipe_index_alpha.html)
- For more information on cheese, visit [www.nationaldairycouncil.org](http://www.nationaldairycouncil.org)
- For school nutrition resources available from Midwest Dairy Council, visit [www.midwestdairy.com](http://www.midwestdairy.com)

## For More Information

**Web Site:** [www.midwestdairy.com](http://www.midwestdairy.com)  
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- <sup>11</sup>U.S. Department of Agriculture, Agricultural Research Service. USDA National Nutrient Database for Standard Reference, Release 19, 2006. Nutrient Data Laboratory Home Page <http://www.ars.usda.gov/ba/bhnrc/ndl>
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- <sup>17</sup>American Academy of Pediatric Dentistry. Policy on Vending Machines in Schools. [http://www.aapd.org/media/Policies\\_Guidelines/P\\_VendingMachines.pdf](http://www.aapd.org/media/Policies_Guidelines/P_VendingMachines.pdf)

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