

Nutrient Contributions of Dairy Foods in the Diet of Children Ages 2 to 8 Years

The dairy group (milk, cheese and yogurt) is a top contributor of many essential nutrients in the diet of children 2-8 years old.¹

Calcium

- Calcium is a nutrient of public health concern according to the 2010 Dietary Guidelines for Americans.²
- The dairy group is the leading source of calcium for 2-8 year old children - providing 63% of their daily calcium.
- White milk supplies 39% of total calcium in their diet.
- Flavored milk supplies another 6%.
- Cheese contributes 15% of children's daily calcium.
- Three percent of calcium is provided by the rest of the dairy group - yogurt and milk drinks.

Potassium

- Many children 2-8 years old are consuming below recommended intakes for potassium,³ a nutrient of public health concern according to the 2010 Dietary Guidelines for Americans.²
- Dairy is the main provider of potassium in the diet, contributing almost one-third of dietary potassium (30%) for 2-8 year old children.
- Milk is the No. 1 food source of potassium – with white milk supplying 23% of the total potassium in the diet.
- Flavored milk contributes another 4% of potassium.
- Four percent of potassium in the diet is provided by cheese, yogurt and milk drinks.

Phosphorus

- Most children ages 1-3 years old and 4-8 years old are meeting the daily recommended intakes of phosphorus (380 mg and 405 mg, respectively).⁴
- Dairy foods provide 43% of dietary phosphorus for 2-8 year old children.
- Twenty seven percent of their daily phosphorus intake is from white milk and 4% of their intake is from flavored milk.
- Cheese contributes 10% to daily phosphorus.
- The remaining phosphorus contributed by the dairy group is from yogurt and milk drinks (2%).

Protein

- Most children ages 1-3 years old and 4-8 years old are meeting the daily recommended 0.87g per kg body weight and 0.76 g per kg body weight, respectively, for protein.³
- Dairy products provide almost one-third (31%) of protein, slightly more than meat, poultry and fish provide, in the diets of 2-8 year olds.
- White milk provides 18% of total dietary protein.
- Flavored milk provides 2% in their diet.
- Cheese further contributes 9% of daily protein.
- Yogurt and milk drinks supply 2% of daily protein.

Vitamin A

- Most children ages 2-8 years old are consuming the recommended amount of vitamin A (210 retinol activity equivalents per day for 1-3 year olds and 275 retinol activity equivalents per day for 4-8 year olds).³
- The dairy group supplies 40% of the vitamin A in the diets of 2-8 year old children.
- A little over a quarter of their total vitamin A is from white milk (26%)
- Five percent of their vitamin A is from flavored milk.
- Cheese also contributes 7% to vitamin A intake.
- One percent comes from the rest of the dairy group - yogurt and milk drinks.

Vitamin D

- Vitamin D is a nutrient of public health concern according to the 2010 Dietary Guidelines for Americans.²
- Dairy is by far the largest contributor of vitamin D in young children's diets. The dairy group supplies 77% of their vitamin D.
- Fortified milk is one of the few food sources of vitamin D in the diet.
- White milk supplies 64% of all vitamin D for children.
- Flavored milk provides 9%.
- Four percent of vitamin D is contributed from cheese, yogurt and milk drinks.

Vitamin B₁₂

- Most children ages 1-3 years old and 4-8 years old are meeting their daily recommended intakes of vitamin B₁₂, 0.7 µg and 1.0 µg, respectively.³
- Children 2-8 years old get 41% of vitamin B₁₂ from dairy foods.
- Thirty percent of vitamin B₁₂ in the diet is from white milk.
- Another 3% of vitamin B₁₂ is from flavored milk.
- Cheese, yogurt and milk drinks supply 8% of vitamin B₁₂ in the diet.

Riboflavin

- Most of the population ages 1-3 years old and 4-8 years old are meeting the daily recommended intakes (0.4 mg and 0.5 mg, respectively) for riboflavin.³
- Dairy foods are the main food source of riboflavin in the diets of 2-8 year olds – providing 39% of total intake.
- White milk contributes 29% of riboflavin in their diet.
- Flavored milk contributes 4%.
- Cheese, yogurt and milk drinks provide 6% of the riboflavin in their diet.

Magnesium

- Most children 2-8 years old are meeting their estimated needs for magnesium, 65 mg per day for 1-3 year olds and 110 mg per day for 4-8 year olds.⁴
- Milk, cheese, yogurt and milk drinks supply one-fourth of the magnesium in the diets of 2-8 year old children.
- Milk is the No. 1 food source in their diets – with white milk providing 17% of all magnesium.
- Flavored milk contributes 3% of children's intakes.
- Five percent of daily magnesium intake comes from cheese, yogurt and milk drinks.

Zinc

- The majority of children ages 1-3 and 4-8 years old are meeting the recommend intakes for zinc, 2.5 mg and 4.0 mg per day, respectively.³

- A quarter of the zinc in 2-8 year olds' diets is supplied by the dairy group.
- Fourteen percent of all zinc is provided by white milk and 3% is supplied by flavored milk.
- Cheese contributes 7% of the total zinc in the diet.
- Milk drinks and yogurt provide 2% of zinc in the diet.

Fat

- It is recommended that children ages 2-3 years old get 30-40% of their total calories from fat and children ages 4-8 years old get 25-35% of their total calories from fat.²
- The average fat intake for children ages 2-8 years old is 65 g which means 33% of their total average daily calories (1,782) are coming from fat.
- The dairy group contributes 7% of total calories from fat in the diet of 2-8 year olds.
- White milk supplies 4% of the total calories from fat in their diet.
- Cheese contributes 3% of the total calories from fat in their diet.
- Flavored milk, yogurt and milk drinks do not contribute a significant percentage of the total calories from fat in the diets of 2-8 year olds (1%).
- In comparison, desserts, sweets, fats and oils contribute 9% of the calories from fat in their diet.

Saturated Fat

- The 2010 Dietary Guidelines for Americans recommend that less than 10% of calories come from saturated fat.²
- The average saturated fat intake for children ages 2-8 years old is 23 g, which is 12% of their daily calories.
- The dairy group contributes 4% of calories from saturated fat in the diet of 2-8 year olds.
- White milk supplies 2% of the calories from saturated fat in their diet.
- Cheese contributes 2% of the calories from saturated fat in their diet.
- Flavored milk contributes less than 1% of the calories from saturated fat in their diet.
- Yogurt and milk drinks do not contribute a significant percentage of the calories from saturated fat in the diets of 2-8 year olds (less than 1%).

Sodium

- The 2010 Dietary Guidelines for Americans recommend less than 1,500 mg per day of sodium for children 2-3 years old and less than 1,900 mg per day for 4-8 year olds. Although all African Americans or children who have hypertension, diabetes or chronic kidney disease are encouraged to consume no more than 1,500 mg per day of sodium.²
- The average sodium intake for children ages 2-8 years old (2,638 mg per day) is significantly higher than the recommendation.
- The dairy group contributes 15% of the sodium in the diet of 2-8 year olds.
- White milk supplies 5% of the sodium in their diet and flavored milk supplies only 1%.
- Cheese contributes 8% of the sodium in their diet.
- Yogurt and milk drinks do not contribute a significant percentage of the sodium in the diet of 2-8 year olds (1%).
- In general, sodium comes from a combination of several foods in the diet of children 2-8 years old.

Values include dairy in food mixtures (e.g. pizza, smoothies). Milk refers to whole, reduced-fat, low-fat, non-fat and acidophilus milk; buttermilk, and reconstituted dry milk. Flavored milk includes chocolate and other flavored milks. Milk drinks are milk based drinks with caloric additions, including cocoa based milk drinks, malted milk and eggnog; includes milk substitutes such as soy beverage, which contributes less than 1% of total daily nutrient intakes.

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1. Dairy Research Institute™. NHANES (2003-2006). Data Source: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health and Nutrition Examination Survey Data. Hyattsville, MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, [2003-2004; 2005-2006]. [<http://www.cdc.gov/nchs/nhanes.htm>]
 2. U.S. Department of Health and Human Services and U.S. Department of Agriculture. Dietary Guidelines for Americans, 2010. 7th Edition, Washington, DC: U.S Government Printing Office, December 2010.
 3. Moshfegh, Alanna; Goldman, Joseph; and Cleveland, Linda. 2005. *What We Eat in America*, NHANES 2001-2002: Usual Nutrient Intakes from Food and Water Compared to Dietary Reference Intakes. U.S. Department of Agriculture, Agricultural Research Service.
 4. Moshfegh, Alanna; Goldman, Joseph; Ahuja, Jaspreet; Rhodes, Donna; and LaComb, Randy. 2009. *What We Eat in America*, NHANES 2005-2006: Usual Nutrient Intakes from Food and Water Compared to 1997 Dietary Reference Intakes for Vitamin D, Calcium, Phosphorus, and Magnesium. U.S. Department of Agriculture, Agricultural Research Service.

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