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Fast Facts on Dairy Milk for Childhood Health

Drinking milk helps children, adolescents and adults in the U.S. meet their nutrient needs, including nutrients of public health concern. Leading health organizations recommend drinking dairy milk as a critical component of healthy diets for young children, and the 2020 Dietary Guidelines for Americans (DGA) recommends choosing low-fat or fat-free milk as part of healthy eating patterns for Americans 2 years and older.

Emerging science indicates that dairy foods at a variety of fat levels, such as whole- and reduced-fat milk, can be a part of overall balanced healthy eating patterns and may play a more complex role in childhood health than previously thought (1–6). This backgrounder aims to provide a brief overview of the evolving research and public health landscape on whole milk and its potential benefits for children's development and well-being.

Dairy Milk Nutrition

- All dairy milk, whether whole, low-fat or fat-free, lactose-free or chocolate (flavored), provides 13 essential nutrients, including high-quality protein, calcium, vitamins A, D and B12, riboflavin, niacin, phosphorus, pantothenic acid, zinc, selenium, iodine and potassium.

- See specific amounts of nutrients per 1-cup serving of dairy milk for each fat level below:

	Whole Milk (3.25%)	Reduced-Fat Milk (2%)	Low-Fat Milk (1%)	Fat-free Milk (Skim)
Calories	152	122	106	84
Total Fat	8 g	5 g	2 g	0 g
Saturated Fat	5 g	3 g	1 g	0 g
Total Carbohydrate	12 g	12 g	12 g	12 g
Total Sugars (Includes 0g Added Sugar)	12 g	12 g	12 g	12 g
Protein	8 g	8 g	8 g	8 g
Calcium	306 mg (25% DV)	309 mg (25% DV)	310 mg (25% DV)	325 mg (25% DV)
Vitamin D	2.39 mcg (10% DV)	2.77 mcg (15% DV)	2.61 mcg (15% DV)	2.71 mcg (15% DV)
Vitamin A	80 mcg (10% DV)	203 mcg (25% DV)	143 mcg (15% DV)	157 mcg (15% DV)
Potassium	374 mg (8% DV)	390 mg (8% DV)	391 mg (8% DV)	411 mg (8% DV)

g = grams; mg = milligrams; mcg = micrograms

- Whole milk is often characterized by its significant saturated fat content (5 g per serving). However, saturated fat in dairy foods is complex and includes a diverse array of unique fatty acids – including short-, medium-, branched- and odd-chain fatty acids – that have been linked with health benefits on satiety, gut health and body composition (5,7–9).

- A 2020 study found one of the three recommended servings of dairy foods can be a whole milk (3.25% milkfat) or reduced-fat (2% milkfat) option for Americans 9 years and older while staying within the current DGA recommendations for saturated fat, calories and sodium intake, especially if the choices are reduced-fat or whole milk (10).

Dairy every day is a healthy way to nourish brains, bones and bodies

- Early childhood is a critical period for growth and development, which requires the right balance of nutrients, including fat, high-quality protein and vitamins and minerals while keeping weight gain on the right track (Infant & Toddler Science Summary).

- Dairy foods as part of a healthy diet provide high-quality protein and other nutrients that support healthy brain development (11–13). Whole milk within an overall balanced healthy eating pattern can be an important source of energy, while providing key nutrients to fuel healthy growth and development. Based on this evidence, it is recommended for 12-24 month olds, by leading health organizations like the American Academy of Pediatrics and DGA.

- Dairy milk, including whole milk, is a good source of high-quality protein and carbohydrates that can help fuel an active lifestyle for children and adolescents. Dairy milk also provides fluids and electrolytes that support hydration (US Dairy Article).

- Research shows that what children drink – from birth through age 5 – can significantly impact their health. Experts at the American Academy of Pediatrics, the Academy of Nutrition and Dietetics, the American Academy of Pediatric Dentistry and the American Heart Association recommend plain dairy milk and water as the go-to beverages for children 1 to 5 years of age and school-aged children and adolescents.

  Recommendations for dairy milk consumption by age are listed below:

  - 1-1 2/3 cups per day of whole milk for children 12-24 months
  - 2-2 ½ cups of low-fat or fat-free milk for children 2-3 years
  - 2½ cups of low-fat or fat-free milk for children 4-8 years
  - 3 cups of low-fat or fat-free milk for children and adolescents 9-18 years

  - The DGA and Healthy Beverage Recommendations noted above align in their recommendations that children should not consume plant-based alternative beverages, except for fortified soy beverage.

Recent studies indicate consuming dairy foods at a variety of fat levels is linked with beneficial or neutral cardiometabolic health outcomes in children and adolescents

- In 2020, a systematic review and meta-analysis of three observational studies evaluated the relationship between whole- and reduced-fat milk consumption and adiposity in children and adolescents 1–18 years of age (1). This research showed that the odds of having overweight or obesity were 49% lower for those who consumed whole- compared with reduced-fat milk. Heterogeneity of studies was noted as high.

- A 2020 systematic review evaluated studies reporting associations of whole- and reduced-fat dairy consumption with biomarkers of cardiometabolic disease risk and adiposity in children and adolescents 2–18 years old (4). Studies consistently showed that whole milk dairy foods were not associated with increased measures of weight gain or adiposity.

- A 2021 cohort study conducted in 7,467 children (average 2.7 year follow-up; 9 months to 8 years old) found that whole milk consumption was associated with lower odds of having overweight or obesity (2).

- In 2022, McGovern et al. (3) reported that consumption of high-fat milk during early childhood was not associated with increased adiposity or cardiovascular health risks over a decade later.

- A 2025 cross-sectional study in 267 Canadian children (1.5–5 years old) found that consuming saturated fat from dairy milk and saturated fat from total dairy foods was neutrally associated with body composition (6).

Some evidence suggests that dairy foods may enhance satiety

- Diets higher in protein can help you feel fuller longer. Milk, cheese, and yogurt are all good sources of protein (14–20).

- Whole milk is made up of a diverse array of unique fatty acids – including short-, medium-, branched- and odd-chain fatty acids – that have been linked with health benefits on satiety, gut health and body composition (5,7–9).

- In a study of 50 children ranging from 10-12 years old with obesity, whole milk consumption promoted greater satiety compared to skim milk or apple juice (21).

    - **Note**: Although the relationship between whole milk dairy foods and satiety has been an area of scientific study, findings are largely limited to short-term studies and require further research to define the long-term benefits of whole milk dairy foods on healthy weight maintenance (7).

The 'whole' opportunity: Connecting the dots on whole milk and consumers' modern wellness needs

- Insights, gathered from consumer surveys and purchasing data, indicate that increased offerings of whole milk may encourage children to meet daily dairy servings and nutrient recommendations.

    - Dairy foods continue to be a staple of American diets. Dairy foods are found in 97% of all U.S. households (22), and the higher-fat varieties are the biggest sellers at retail, suggesting that many children are consuming whole- or reduced-fat milk at home (data available upon request). Consumer data from Circana Group also shows that whole milk represents a larger share of milk purchases among Black, Asian and acculturated Hispanic households, and in households with children, this preference for whole milk is more pronounced (23).

    - Results from a 2024 survey conducted by the International Food Information Council (IFIC) of 3,032 Americans (18 to 80+ years old) found that whole- and reduced-fat milk are the most preferred levels of fat content, with whole milk more often used while cooking and reduced-fat milk used as an addition to foods or beverages (24).

- As taste is the top motivator for food choices (24), flexibility and choice to incorporate a variety of nutrient-dense dairy foods that are affordable, accessible and enjoyable could be part of a public health strategy for sustainable diet and health behavior changes among Americans, helping Americans meet the recommended daily servings of dairy foods and improve their overall diet quality.

Perspectives from authoritative nutrition guidance and a prominent physician

- The Scientific Report of the 2025 Dietary Guidelines Advisory Committee continues to maintain recommendations for Americans of all ages to consume low-fat and fat-free dairy foods. The report's findings did not find evidence that consuming saturated fat from dairy foods had an impact on cardiometabolic risk factors (blood lipids or blood pressure) compared to other foods among children and adolescents. The report also did not find evidence that consuming higher-fat dairy foods has a significant impact on blood lipids, blood pressure, and cardiovascular disease morbidity and mortality compared to lower-fat dairy foods among adults or older adults (25).

- Dr. Dariush Mozaffarian – a globally recognized physician and leader in the science of nutrition, cardiometabolic diseases, policy, and Food is Medicine – states in a recent article, "…The DGAC found no meaningful evidence that consuming higher-fat vs lower-fat dairy adversely affected body weight, blood lipids, blood pressure, cardiovascular morbidity, or cardiovascular death or that replacing dairy with plant oils, nuts, or fish improved health outcomes" (26).

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