CENTER FOR Science IN THE Public Interest

The Facts on Whole Milk: Why Experts Recommend, and School Meals Only Provide, Fat- and Low-Fat Free Milk

School meals served under the National School Lunch Program (NSLP) and School Breakfast Program (SBP) must meet nutrition standards, which include increased offerings of fruits, vegetables, and whole grains; staying within age-appropriate calorie ranges; reducing sodium; eliminating trans fat and limiting saturated fat. These standards are established by the U.S. Department of Agriculture (USDA) and are required by law to meet the federal Dietary Guidelines for Americans (DGAs). The DGAs are reviewed and revised every five years and are based on an extensive review of scientific evidence.

Since 2012, whole and reduced-fat (2 percent) milk have not been permitted in school meals,[1,2,3] which is consistent with the DGA recommendation to choose or switch to fat-free or low-fat milk to limit saturated fat consumption in the diet.[4] Whole and reduced-fat milk are higher in saturated fat than fat-free and low-fat milk. Saturated fat is well-established to contribute to elevated LDL ("bad") cholesterol, which is associated with increased risk of heart disease.[5,6] The 2020 Dietary Guidelines Advisory Committee found strong evidence that diets lower in saturated fat and cholesterol during childhood result in lower levels of LDL cholesterol throughout childhood.[7]

To rein in other food sources high in saturated fat, school meals also have to meet an overall saturated fat limit: less than 10 percent of average daily calories in school meals over the course of the week may come from saturated fat,[8,9] which is consistent with the DGA recommendation that less than 10 percent of calories should come from saturated fat per day starting at age two.[10] In addition to the DGA recommendations, other expert groups recommend lowering consumption of saturated fat. The American Heart Association,[11] American College of Cardiology,[12] and National Heart, Lung, and Blood Institute[13] recommend a dietary pattern that limits saturated fat and includes low-fat dairy products. Furthermore, the National Heart, Lung, and Blood Institute,[14] the American Heart Association,[15] the American Academy of Pediatrics,[16] and the Academy of Nutrition and Dietetics[17] all recommend that children aged 2 or older drink low-fat or fat-free milk.

According to USDA data, one cup of whole milk (the serving size of a school milk carton) contains around 4.5 grams of saturated fat, or approximately 18-34 percent of the maximum saturated fat recommended for school aged-children in a day (depending on sex, age, and activity level).[18,19] It is so high in saturated fat that the government prohibits its labels from touting the health benefits of its other nutrients; fat-free and low-fat milk, however, can make these claims.[20] Even with the current nutrition standards that limit saturated fat in school meals,

most children, on average, still consume more saturated fat than is recommended. According to the 2020-2025 DGA, more than 80 percent of 5-8 year-olds, 85 percent 9-13-year-olds, and 75 percent of 14-18-year-olds consume too much saturated fat.[21]

Lawmakers have introduced legislation that would override, or in the case of state legislation, circumvent, federal school meals standards, and permit whole and reduced-fat milk in school meals. The following table outlines the key pieces of the Dietary Guidelines, current NSLP meal pattern, and federal legislation under consideration.

2020-2025 Dietary Guidelines for Americans[22]	*National School Lunch Program and School Breakfast Program Meal Patterns*[23,24]	*Whole Milk for Healthy Kids Act*[25,26] *(applies to lunch only)*
Milk types: "The core elements that make up a healthy dietary pattern include…fat-free or low-fat milk" (page ix). "Move to low-fat or fat-free dairy milk" (page 13). "Strategies to lower saturated fat intake include…choosing … fat-free or low-fat milk instead of 2 percent or whole milk" (page 44).	**Milk types:** "All fluid milk must be fat-free (skim) or low-fat (1 percent fat or less). Milk may be flavored or flavored, provided that unflavored milk is offered at each meal service."	**Milk types:** Expands offerings to include flavored and unflavored whole and reduced-fat milk. (H.R.1147) Expands offerings to include unflavored whole and reduced-fat milk. (S.1957)
Saturated fat: "Less than 10 percent of calories per day starting at age two." (page x).	**Saturated fat**: Less than 10 percent of calories on average over a 5-day week. Discretionary sources of calories (solid fats and added sugars) may be added to the meal pattern if within the specifications for calories, saturated fat, trans fat, and sodium.	**Saturated fat:** Milk fat shall **not** be considered saturated fat for purposes of measuring compliance with the allowable average saturated fat content. (emphasis added) (H.R.1147 and S.1957)

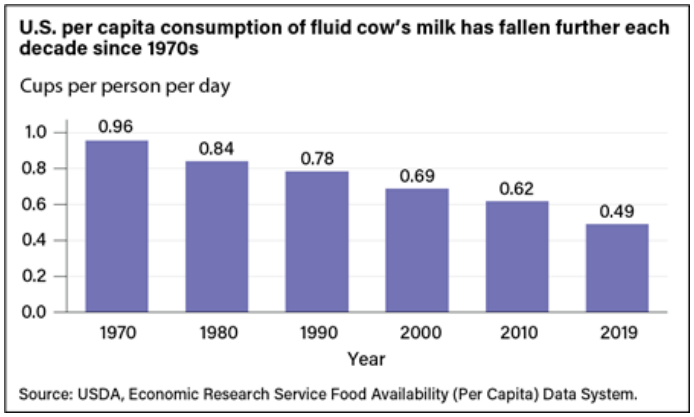
The following claims have been made in support of offering whole milk in schools. Evidence-based responses are provided for each.

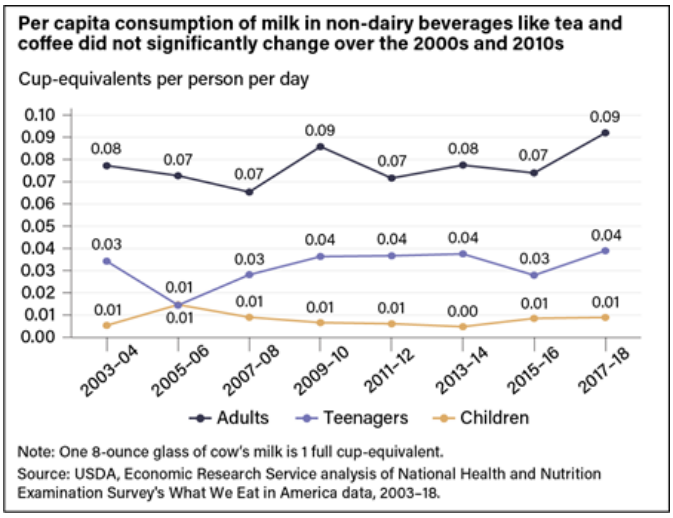
Claim: Children dislike the taste of low-fat or non-fat milk, so much of it ends up in the trash.

Facts:
Milk waste (and all food waste) in school cafeterias is a problem that must be addressed, but evidence does not support that waste is due to the fat content of milk. When it comes to taste, it appears that flavors like chocolate matter more than fat content. [27] In a blind taste test funded and conducted by the dairy industry, 425 children aged 8 to 16 rated the taste of lactose-free milks on a scale of 0 to 100 for liking, where 0= hate and 100= love. One percent fat chocolate milk ranked highest (81 points), unflavored one percent (62) and unflavored two percent fat milk (61) were rated virtually identically, and unflavored fat-free milk was rated slightly lower (57). (Whole milk, which is 3.25 percent fat, was not tested.) An analysis, funded in part by the Dairy Research Institute, of milk shipments to school before, during, and after a change to lower-calorie flavored milk found no change in average daily shipment of flavored or unflavored milk.[28] Research funded by the American Dairy Association Northeast and the National Dairy Council found that, while students preferred skim milk the least, there was no significant difference in preference between unflavored one percent, two percent and whole unflavored milk, when visual cues were present (when milk was served in clear cups). [29] Further, no differences were observed in flavor, mouthfeel, or liking for unflavored milk in the absence of visual cues (when milk was served in an opaque cup). For chocolate milk, at least one percent milkfat was preferred by students.

Claim: School nutrition standards have ruined a generation of milk drinkers; limiting milk fat makes children turn to soda and other sugary drinks.

Facts:
Fluid milk consumption has been on the decline for decades, long before the 2012 revisions to school nutrition standards. According to a 2013 Economic Research Service (ERS) report, younger generations consume less milk than preceding generations, but this trend is not exclusive to schoolchildren starting in the 2010s. [30] According to the ERS economists, "individuals born in the 1970s, for example, drank less milk in their teens, 20s, and 30s than individuals born in the 1960s did at the same age points. Those born in the 1980s and 1990s, in turn, appear likely to consume even less fluid milk in their adulthood than those born in the 1970s" (see tables below). Lactose malabsorption (the reduced ability to digest lactose) should also be considered. According to the National Institute of Diabetes and Digestive and Kidney Diseases, the national average of lactose malabsorption (the inability to fully digest lactose) is approximately 36 percent, but African Americans, American Indians, Asian Americans, and Hispanics/Latinos are more likely to experience lactose malabsorption.[31]





There is no evidence to support the claim that children turn to soda when they're not provided whole milk. Full-calorie soda is not permitted to be sold in schools, so there is not an option to "substitute" fat-free or low-fat milk with full-calorie soda. Diet soda is permitted to be sold in high schools but cannot be provided as part of a reimbursable meal.

The bottom line: claims supporting whole milk in schools are not supported by the Dietary Guidelines, which are based on an extensive review of the scientific evidence. School meals must be aligned with the recommendations of the DGA. Lawmakers should honor the independent and science-based process of updating the school meal nutrition standards consistent with the DGA and not put corporate interests over children's health.

For more information, please contact the Center for Science in the Public Interest at policy@cspinet.org.

For more details on the relationship between dairy fat, saturated fat, and disease risk, see https://www.cspinet.org/resource/cspi-comment-2020-dgac-re-dietary-fats-and-cardiovascular-disease.

December 4th, 2023

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[26] S.1957

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