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Submitted Via www.regulations.gov

RE: Child Nutrition Programs: Transitional Standards for Milk, Whole Grains and Sodium

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To Whom It May Concern:

We appreciate the opportunity to comment on USDA’s final rule and to also provide comment on school meals in general.

The School Breakfast Program (SBP) and National School Lunch Program (NSLP) programs have served as important sources of nutritious meals for decades, helping to support positive health and development outcomes for children while improving food security for our nation’s children. Milk, yogurt, cheese, and other dairy products have remained central to healthy, nutritious school meals. In fact, school meal programs served 5.5 billion meals during the 2020-2021 School Year¹—an amazing feat considering the pandemic’s impacts to society. While the importance of the school meal programs have become clear over the past two years, there are significant obstacles to sourcing and serving meals that are healthy, widely available, and acceptable to children. That is why we support USDA’s goal to set school meals standards that are “ambitious, achievable and durable” and keeping dairy as a core component of healthy meal patterns used for school lunches and breakfasts will help meet that goal.

The International Dairy Foods Association (IDFA), Washington, D.C., represents the nation’s dairy manufacturing and marketing industry, which supports more than 3.3 million jobs that generate \$41.6

¹ School Nutrition Association. School Nutrition Meals Served and Reimbursement During the COVID-19 Pandemic. Published September 24, 2021. www.schoolnutrition.org. Based on preliminary data from USDA FNS June 2021 Keydata Report, published September 10, 2021.

billion in direct wages and \$753 billion in overall economic impact. IDFA's diverse members make 90 percent of the milk, cheese, ice cream, yogurt and cultured products, and dairy ingredients produced and marketed in the United States and sold throughout the world. Safe, nutritious, affordable, and sustainable, dairy foods offer unparalleled health and consumer benefits to people of all ages.

The National Milk Producers Federation (NMPF), established in 1916 and based in Arlington, VA, develops and carries out policies that advance the well-being of dairy producers and the cooperatives they own. The members of NMPF's cooperatives produce the majority of the U.S. milk supply, making NMPF the voice of dairy producers on Capitol Hill and with government agencies. NMPF provides a forum through which dairy farmers and their cooperatives formulate policy on national issues that affect milk production and marketing.

Support of Transitional Standards

In 2020, the federal Dietary Guidelines Advisory Committee report found that a staggering 79 percent of 9- to 13-year-olds are not meeting the recommended intake of dairy foods and thereby under consuming a variety of nutrients during childhood and adolescence, including potassium, calcium, and. Children of all ages are falling short of these recommendations, and they rely on school meals to meet their nutritional needs. The transitional standards published in February 2022 allow schools to continue to serve milk that students prefer to drink while remaining consistent with the Dietary Guidelines. The rule gives clarity to school meals professionals and dairy food makers as they plan amid supply chain challenges, and it will improve students' access to dairy products, particularly milk and its 13 essential nutrients, and cheese as a nutrient-rich protein alternate. Notably, the transitional rule permits low-fat flavored milk in school meals and sets sodium levels that will serve as an important means of helping children reach their nutritional goals as indicated in the 2020-2025 Dietary Guidelines for Americans (DGA).

Low-fat Flavored Milk

Low-fat flavored milk provides the same micronutrients as white milk, but with a flavor that many children prefer. Flavored milks, like all cow's milk, are a source of 13 essential nutrients, including calcium, vitamin D, and potassium. Flavored milk currently sold in schools has been reformulated to provide these nutrients with lower levels of calories and added sugars.² Most flavored milk in schools now meets or beats the sugar limit recommended by the National Academies of Science, Engineering, and Medicine (formerly the Institute of Medicine).³ This small amount of added sugar results in a product that students prefer, with more students selecting milk and students drinking more of that milk when flavored milk is available. This drives increased consumption of the essential nutrients that milk provides, a recommendation made by the 2020-2025 DGA as a means of helping children reach their nutrient needs.

We appreciate aligning competitive food options with the school meals permitting low-fat flavored milk for a la carte and other competitive sales. This will ease the bidding process for schools while providing a variety of nutritious options for students.

² Prime Consulting. All Channel Tracking: The Projection of Milk Volume by Sales Channel, 2019 Edition, August 2020.

³ Institute of Medicine. 2007. Nutrition Standards for Foods in Schools: Leading the Way Toward Healthier Youth. Washington, DC: The National Academies Press. <https://doi.org/10.17226/11899>.

We also agree with USDA’s decision to permit low-fat flavored milk as an option in the Child and Adult Care Food Program (CACFP) for children older than 5 years. This will ease the bidding and meal planning process for schools that participate in both CACFP and school meal programs.

Reduced Lactose Dairy Options

We support the clarification that lactose-free and reduced lactose milk is an acceptable option in CACFP meals and snacks. Milk with lower lactose provides the same important package of nutrients as conventional milk, meaning that it is an important nutrient-dense beverage for those with lactose intolerance. If children avoid dairy completely due to concerns about lactose intolerance, this can adversely affect their intake of calcium, potassium, and vitamin D -- nutrients already lacking in the American diet.^{4,5} Since lactose-free and reduced lactose milk will provide these same essential nutrients, the inclusion of lower lactose options in CACFP is consistent with other federal nutrition programs and with the 2020-2025 DGA.

Sodium

We appreciate the extra time allowed for manufacturers to reformulate milk products to achieve lower sodium targets, as finalized in the February rule. This will facilitate research and development efforts by allowing for sufficient time needed to conduct work on product development, including but not limited to reformulation, shelf life, stability, packaging, labeling and safety testing, as well as with consumer taste adjustments. The 10% sodium reduction in Target 1A for NSLP is a helpful step to allow time for these efforts.

However, there will still be a limit of how much further some products can lower sodium content. Many products have reached a point of diminishing returns. For example, cheesemakers have worked over the last decade or more to develop cheeses with lower sodium content. Nevertheless, the functionality of salt in cheese makes it particularly difficult to continue to lower sodium levels without starting to encroach on the critical role that sodium plays in food safety.

Comments about Future of School Meals Nutrition Criteria

USDA’s stated goal is to set nutrition standards for school meals that are “ambitious, achievable and durable.” We agree with such a goal for school breakfasts and lunches and assert that dairy foods are central to making meals that meet these requirements. Our understanding of this goal is to promulgate nutrition standards that are ambitious while being reasonable. Such standards are achievable from an implementation perspective because they affirm gradual, phased-in changes that are accepted by students because they also prioritize palatability. Finally, the standards are durable because they adhere to the DGA and offer flexibility to evolve with emerging nutrition science.

⁴ U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015-2020 Dietary Guidelines for Americans 8th Edition

⁵ Savaiano DA, Boushey CJ, McCabe GP. Lactose intolerance symptoms assessed by meta-analysis: a grain of truth that leads to exaggeration. J Nutr. Apr 2006;136(4):1107-1113

School meals are already a nutritional success story. The 33.8 million meals served each day during the 2020-2021 school year⁶ provide a variety of healthy foods and beverages, including fruits, vegetables, and dairy. School meals are a key source of nutrition for children and these meals are often the healthiest of the day, often much healthier than the meals brought from home, resulting in significantly more milk consumed.^{7,8,9} American parents support these healthy school meals: in a recent survey by Morning Consult, 88% of parents identify making public school meals healthy and nutritious as a top or important priority.¹⁰ A recent study of eating trends has demonstrated that school is the healthiest location for American children to eat, and school meals are getting healthier: the HEI-2015 score for food eaten in school was 44.1 in 2003-2004 and 51.6 in 2017-2018, the only location where meal quality improved over that time period.¹¹

Unfortunately, changes to school schedules and school meals during the pandemic have reduced the number of school meals served to students each day. The 33.8 million daily school meals represent a loss of 4.7% of school breakfasts and 30.7% of school lunches from the 2018-2019 school year.¹² This further underscores the importance of setting policies that will enhance participation in school meals programs and encourage intake of healthy options.

Nutrition standards need to be implementable for school food authorities and food manufacturers, as well as attractive and tasty for the children who will be eating these meals. No matter what nutrition requirements are put into place for school meals, the meals and each component of the meals must be eaten to contribute to nutritious eating patterns and overall health. Dairy products, particularly flavored milk, have been shown to increase participation in school meal programs and to reduce food waste because students consume more milk, and hence students and schools throw less away.

While waivers are not a replacement for permanent program policies, they are important to keep programs running during emergencies. The success of waivers during the pandemic should highlight the importance of the use of waivers as an essential tool to help with emergencies and other disruptions to the food supply to allow for the continued, uninterrupted delivery of nutritious and healthy foods to students.

⁶ Food Research and Action Center. The Reach of Breakfast and Lunch: A Look at Pandemic and Pre-Pandemic Participation. February 2022. Available at: <https://frac.org/research/resource-library/breakfast2022>.

⁷ Liu J, Micha R, Li Y, Mozaffarian D. Trends in Food Sources and Diet Quality Among US Children and Adults, 2003-2018. *JAMA Netw Open*. 2021;4(4):e215262. doi:10.1001/jamanetworkopen.2021.5262.

⁸ Farris AR, Misyak S, Duffey KJ, Davis GC, Hosig K, Atzaba-Poria N, McFerren MM, Serrano EL. Nutritional comparison of packed and school lunches in pre-kindergarten and kindergarten children following the implementation of the 2012-2013 National School Lunch Program standards. *J Nutr Educ Behav*. 2014 Nov-Dec;46(6):621-6. doi: 10.1016/j.jneb.2014.07.007. Epub 2014 Nov 7. PMID: 25457731.

⁹ U.S. Department of Agriculture, Food and Nutrition Service, School Nutrition and Meal Cost Study, Alexandria, VA: April 2019. Available online at: www.fns.usda.gov/research-and-analysis.

¹⁰ Morning Consult-IDFA. National Tracking Poll on Low-fat Flavored Milk in School Meals. Survey conducted online February 16, 2022.

¹¹ Liu J, Micha R, Li Y, Mozaffarian D. Trends in Food Sources and Diet Quality Among US Children and Adults, 2003-2018. *JAMA Netw Open*. 2021;4(4):e215262. doi:10.1001/jamanetworkopen.2021.5262.

¹² Food Research and Action Center. The Reach of Breakfast and Lunch: A Look at Pandemic and Pre-Pandemic Participation. February 2022. Available at: <https://frac.org/research/resource-library/breakfast2022>.

As nutrition standards are implemented, USDA should develop and implement measures with defined metrics that would capture the impact of the changes to the nutrition standards, such as participation, nutritional adequacy, waste, and program costs.

Aligning School Meals with the Dietary Guidelines for Americans

We agree with the goal of aligning the School Breakfast Program and National School Lunch Program with the current Dietary Guidelines for Americans (DGA). The DGA repeatedly recommended increased intake of dairy products, identifying dairy as an under-consumed food group.¹³ This is true even of many school age children, with between 68% and 76.2% of school age males and between 77.4% and 94.3% of school age females failing to meet recommended levels of dairy.¹⁴ Among youth ages 9-13, 79 percent fall short of recommended dairy intakes. For all youth aged 19 and younger, mean intake of dairy is only 1.9 cup-equivalent per day.¹⁵

To support the goal of aligning with the DGA, the USDA should ensure that the nutrition standards encourage dairy consumption within the school meal programs. School meals are a significant source of dairy, with the School Breakfast Program providing 40% of the dairy needed by students each day and the NSLP providing 47%.¹⁶ For children, dairy is the number one source of three of the four food substances of public health concern as identified by the DGA: calcium, potassium, and vitamin D.¹⁷

Strengthening school meals will support an overall goal of supporting food and nutrition security for American schoolchildren. School meals have proven to be an incredibly important source of good nutrition through the COVID pandemic, a time when many children were facing food security challenges.

School Meal Programs Should Adopt Policies that Encourage Increased Dairy Consumption

The school meal programs are required to align with the goals of the DGA. The 2020-2025 DGA recommended three daily servings of milk or other dairy foods for adolescents and most children, but the DGA also shows that nearly all age groups, including all school-age groups, of both males and females, consume significantly less than the recommended amounts.¹⁸

¹³ U.S. Department of Agriculture and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans, 2020-2025*. 9th Edition. December 2020. Available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov).

¹⁴ Dietary Guidelines Advisory Committee. 2020. *Scientific Report of the 2020 Dietary Guidelines Advisory Committee: Advisory Report to the Secretary of Agriculture and the Secretary of Health and Human Services*. Online Materials, Table 1.15. U.S. Department of Agriculture, Agricultural Research Service, Washington, DC. Available at: <https://doi.org/10.52570/DGAC2020>.

¹⁵ Dietary Guidelines Advisory Committee. 2020. *Scientific Report of the 2020 Dietary Guidelines Advisory Committee: Advisory Report to the Secretary of Agriculture and the Secretary of Health and Human Services*. Online Materials, Table 1.15. U.S. Department of Agriculture, Agricultural Research Service, Washington, DC. Available at: <https://doi.org/10.52570/DGAC2020>.

¹⁶ U.S. Department of Agriculture, Food and Nutrition Service, School Nutrition and Meal Cost Study: Volume 1 - School Meal Program Operations and School Nutrition Environments, by Sarah Forrestal et.al. Project Officer, John Endahl, Alexandria, VA: April 2019. Available online at: www.fns.usda.gov/research-and-analysis.

¹⁷ Keast, Fulgoni, Nicklas, O'Neil. Food Sources of Energy and Nutrients among Children in the United State: National Health and Nutrition Examination Survey 2003-2006. *Nutrients* 2013, 5, 283-301, doi: 10.3390/nu5010283

¹⁸ Dietary Guidelines Advisory Committee. 2020. *Scientific Report of the 2020 Dietary Guidelines Advisory Committee: Advisory Report to the Secretary of Agriculture and the Secretary of Health and Human Services*. Online

An overall decline in school milk consumption has been identified, with reductions in both average daily participation (ADP) in school lunch programs and school milk consumption. Annual school and processor surveys conducted by the Milk Processor Education Program (MilkPEP), which is overseen by the Department of Agriculture, regularly found declines in milk consumption – specifically, a decline of 9 percent in total volume between the 2011-12 and 2015-16 school years. The percentage of reduction is even higher for flavored milk (12.5 percent),¹⁹ indicating that children are not pleased with the fat-free versions of flavored milk. This decline coincided with the 2012 regulations which, among other things, prohibited low-fat flavored milk in school lunches, breakfasts and (through a subsequent regulation) foods sold in competition with school meals. Until the 2011-12 school year, low-fat (1 percent) flavored milk had been the most widely purchased variety of milk by schools.²⁰

With the reintroduction of low-fat flavored milk, 15 million gallons of low-fat flavored milk were sold in schools during the 2017-18 school year.²¹ Data from schools in Texas and Oklahoma that reintroduced low-fat flavored milk in 2018 showed that this change resulted in an 8% increase in flavored milk consumption in schools, with a 2% increase in total school milk consumption.²²

The School Nutrition and Meal Cost Study (SNMCS) found that flavored milk was less likely to be wasted than unflavored fat-free or low-fat milk.²³ If there is less waste with low-fat flavored milk, more milk and more essential nutrients are being consumed when low-fat flavored milk is a part of school meals. SNMCS analysis also showed that one-quarter or more of available vitamin A, vitamin C, vitamin D, calcium, and potassium in school meals were wasted, with four of these five nutrients present in dairy products.²⁴

Therefore, policies that uphold the intent of the DGA, by increasing dairy consumption, should be a goal of the school meal programs and as demonstrated above, policies that eliminated low-fat flavored milk reduced milk consumption in school meals.

Materials, Table 1.15. U.S. Department of Agriculture, Agricultural Research Service, Washington, DC. Available at: <https://doi.org/10.52570/DGAC2020>.

¹⁹ Prime Consulting. School Milk Information: From Milk Processor Education Program Data. 2015 Edition. August 2016.

²⁰ Prime Consulting. School Milk Information: From Milk Processor Education Program Data. 2015 Edition. August 2016.

²¹ Prime Consulting. September 2018.

²² Prime Consulting for DairyMax. VOLUME IMPACT FROM REINTRODUCTION OF 1% FLAVORED MILK IN SCHOOLS. Spring 2019.

²³ U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, School Nutrition and Meal Cost Study, Final Report Volume 4: Student Participation, Satisfaction, Plate Waste, and Dietary Intakes by Mary Kay Fox, Elizabeth Gearan, Charlotte Cabili, Dallas Dotter, Katherine Niland, Liana Washburn, Nora Paxton, Lauren Olsho, Lindsay LeClair, and Vinh Tran. Project Officer: John Endahl. Alexandria, VA: April 2019.

²⁴ U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, School Nutrition and Meal Cost Study, Final Report Volume 4: Student Participation, Satisfaction, Plate Waste, and Dietary Intakes by Mary Kay Fox, Elizabeth Gearan, Charlotte Cabili, Dallas Dotter, Katherine Niland, Liana Washburn, Nora Paxton, Lauren Olsho, Lindsay LeClair, and Vinh Tran. Project Officer: John Endahl. Alexandria, VA: April 2019.

If schools implement changes to their meal programs that would have the effect of reducing milk consumption, students are missing out on the 13 essential nutrients provided by milk. Schools that eliminated flavored milk found that less milk was consumed.^{25, 26}

Therefore, it is imperative that the regulations of the school meal programs include measures that will encourage consumption of milk. These policies would appropriately include low-fat flavored milk as an option in school meals for students who prefer this type of milk. Providing low-fat flavored milk as an option in schools also aligns with the preferences of American adults. A national survey conducted for IDFA by Morning Consult shows that 85% of parents with children in public school support including low-fat flavored milk in school meals.²⁷

Milk

Milk has been a core element of school meals and other federal child nutrition programs since their inception. Milk provides 13 essential nutrients, including three of the four nutrients identified as nutrients of public health concern in the 2020-2025 DGA—calcium, vitamin D, and potassium.²⁸

In a study of low-income children, 77% of their daily milk intake comes from school meals.²⁹ Without milk in the school meals program, these children would consume even lower levels of milk and dairy, which is already under-consumed. Therefore, policies that keep milk in school meals and encourage children to select and consume the milk included in school breakfast and lunches are essential to ensuring students are receiving the nutrition they need to thrive.

Flavored Milk

Flavored milks provide the same micronutrients as white milk, but with a flavor that many children prefer. Flavored milks, like all cow's milk, are a good or excellent source of 13 essential nutrients, including calcium, vitamin D, and potassium. Flavored milk aligns with the DGA base. Specifically, the DGA recommend both low-fat and fat-free milk as nutrient-dense foods and note that small amounts of added sugars can be added to nutrient-dense foods – including low-fat or fat-free milk – to help meet food group recommendations.

A recent study identifies the impact of flavored milk on children's diets. Children from 2 to 18 years of age who drank flavored milk drank more milk than children who did not drink flavored milk, and

²⁵ Quann EE, Adams D. Impact on milk consumption and nutrient intakes from eliminating flavored milk in elementary schools. *Nutrition Today*. 2013;48(3):127–134

²⁶ Hanks AS, Just DR, Wansink B. Chocolate milk consequences: a pilot study evaluating the consequences of banning chocolate milk in school cafeterias. *PLoS One*. 2014;9(4):e91022[PubMed]

²⁷ Morning Consult-IDFA. National Tracking Poll on Low-fat Flavored Milk in School Meals. Survey conducted online February 16, 2022. Of 750 American adult parents surveyed, response to the survey question "Do you support or oppose including low-fat flavored milk (i.e. chocolate or strawberry milk) in public school meals for children in your community?" was as follows: 45% strongly support, 40% somewhat support, 6% don't know, 2% somewhat oppose, 7% strongly oppose.

²⁸ U.S. Department of Agriculture and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans, 2020-2025*. 9th Edition. December 2020. Available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov).

²⁹ Cullen KW, Chen TA. The contribution of the USDA school breakfast and lunch program meals to student daily dietary intake. *Prev Med Rep*. 2016 Nov 28;5:82-85. doi: 10.1016/j.pmedr.2016.11.016. PMID: 27957411; PMCID: PMC5149064.

therefore the flavored milk consumers had significantly higher intakes of vitamin D, calcium, potassium, and other nutrients.³⁰

Children consuming flavored milk in their diets had superior nutrient intakes compared to children that consumed only plain milk with no differences in body mass index.³¹ Another more recent study demonstrated that flavored milk consumption is associated with improvements in nutrient intake, but not associated with increased body weight of normal weight children.³²

Milk processors have significantly reduced the calorie and added sugar contents of flavored milk. Between the 2006-2007 and 2019-2020 school years, average added sugar levels declined by 57 percent, going from 16.7 grams to 7.1 grams in an 8-ounce serving of flavored school milk.³³ In fact, flavored milk consumption has been found, in or out of schools, to only make up 4% of the added sugars in children's diets.³⁴

In addition to reducing the added sugars in flavored school milk, processors have also reduced the average number of calories. The average calorie content of flavored school milk declined significantly by 40 calories on average between school years 2006-2007 and 2019-2020.³⁵ A similar survey also demonstrated that flavored school milk is just 25 calories more than the white milk served in schools.³⁶

With these formulation changes, the nutritional benefits of low-fat flavored milk are available with slightly higher calories than white milk and the same or slightly higher calories than fat-free flavored milk. As USDA FNS pointed out in the preamble to the 2017 interim final rule, an 8-ounce serving of low-fat flavored milk has 20-40 more calories than the same serving of fat-free flavored milk.³⁷ The USDA data also shows that the difference in fat and saturated fat content is relatively small: 1 g of total fat and 0.6 g of saturated fat per cup of low-fat chocolate milk and 0 g of total fat and 0 g of saturated fat per cup of fat-free chocolate milk.³⁸ Switching from fat-free to low-fat flavored milk may represent a small

³⁰ Nicklas TA, Saab R, Fulgoni VL. Is Flavored Milk Really a Bad Beverage Choice? The Nutritional Benefits of Flavored milk Outweigh the Added Sugars Content. *Acta Scientific Nutritional Health*. 2022; 6(1):114-132.

³¹ Murphy MM, Douglas JS, Johnson RK, Spence LA. Drinking flavored or plain milk is positively associated with nutrient intake and is not associated with adverse effect on weight status in US children and adolescents. *J Am Diet Assoc* 2008. 108:631-639.

³² Fayet-Moore F. Effects of flavored milk vs plain milk on total milk intake and nutrient provision in children. *Nutrition Reviews*, 2016. 74(1):1-17.

³³ Prime Consulting. All Channel Tracking: The Projection of Milk Volume by Sales Channel, 2019 Edition, August 2020.

³⁴ Dairy Research Institute®, NHANES 2007-2010. (Nutrition Impact, LLC analysis. Ages 2+ years). Data Source: U.S. Department of Agriculture, Agricultural Research Service. 2013.

³⁵ Prime Consulting. All Channel Tracking: The Projection of Milk Volume by Sales Channel, 2019 Edition, August 2020.

³⁶ Prime Consulting. August 2016.

³⁷ The preamble to the interim final rule notes that low-fat flavored milk contains 20-40 more calories per cup than fat-free flavored milk. However, the USDA-ARS National Nutrient Database for Standard Reference (Release 28 slightly revised May 2016) reports low-fat and fat-free unflavored milks contain 102 and 83 calories, respectively, which is only a 19-calorie difference. As the rule's preamble states, the calorie difference between low-fat and fat-free flavored milks is "almost entirely due to a difference in fat content", therefore we would expect a difference in calories closer to the lower end of the range presented in the interim final rule.

³⁸ Chocolate milk, ready to drink, fat free, Food code 11511300, 0 g total fat and 0 g saturated fat per 248 g
Chocolate milk, ready to drink, low fat, Food code 11511400, 1.11 g total fat and 0.616 g saturated fat per 248 g.

increase in calories, if any, and a small increase in fat, without compromising on the nutrient properties of milk.

Yogurt

Yogurt is a nutrient rich dairy product that provides many of the same essential nutrients as milk, such as calcium and protein. As with milk, yogurt is widely available in both unflavored and flavored varieties to be used either as an ingredient, eaten on its own or in conjunction with other foods, such as fruit. Yogurt is also widely available in a variety of formats, in large tubs for use as an ingredient or portioned out, or in individual cups or containers. These individual servings are particularly convenient for serving, especially for grab-and-go meals or in-classroom breakfast.

Consumption of yogurt has been associated with higher diet quality in children, with higher intake of multiple nutrients, including calcium, potassium, magnesium, and vitamin D.³⁹ Yogurt consumption has been associated with lower incidence of cardiovascular risk factors in adolescents, particularly total and abdominal excess body fat.⁴⁰

In flavored yogurt, the amount of added sugar can also help increase the consumption of dairy, in keeping with recommended intakes of the DGA. This use of added sugar aligns with the recommendations of the 2020-2025 DGA that added sugars may be used to increase the intake of nutrient-dense foods and beverages.⁴¹

The protein content is such that yogurt has been included as a meat alternate in the school meal programs. This role as a meat alternate is particularly key in the School Breakfast Program. In addition to being well-accepted as a breakfast food, a study identified yogurt inclusion at breakfast triggering an improvement in nutrient intake and in other nutrient dense foods, like fruit.⁴² When considering a variety of breakfast options, the optimal breakfast pattern for children was characterized by the inclusion of yogurt and milk among other foods and beverages.⁴³

Scientific studies are pointing to the favorable effect of yogurt on the gut microbiome and related health status. Yogurt, including both low-fat and full-fat yogurt, has been shown to have beneficial influence on the microbiome, as well as associations with healthier dietary patterns and reduced visceral fat mass.⁴⁴

³⁹ Cifelli CJ, Agarwal S, Fulgoni V. Association of Yogurt Consumption with Nutrient Intakes, Nutrient Adequacy and Diet Quality in American Children and Adults. *Nutrients* 2020, 12, 3435; doi:10.3390/nu12113435.

⁴⁰ Moreno LA, Bel-Serrat S, Santaliestra-Pasías A, Bueno G. Dairy products, yogurt consumption, and cardiometabolic risk in children and adolescents. *Nutr Rev.* 2015 Aug;73 Suppl 1:8-14. doi: 10.1093/nutrit/nuv014. PMID: 26175484.

⁴¹ U.S. Department of Agriculture and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans, 2020-2025*. 9th Edition. December 2020. Available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov).

⁴² López-Sobaler AM, Cuadrado Soto E, Salas González M[®]D, Peral Suárez Á, Jiménez Ortega AI, Ortega RM. Papel del yogur en el desayuno de los niños [Role of yogurt in children's breakfast]. *Nutr Hosp.* 2019 Aug 27;36(Spec No3):40-43. Spanish. doi: 10.20960/nh.02806. PMID: 31368331.

⁴³ Drewnowski A, Rehm CD, Vieux F. Breakfast in the United States: Food and Nutrient Intakes in Relation to Diet Quality in National Health and Examination Survey 2011-2014. A Study from the International Breakfast Research Initiative. *Nutrients.* 2018 Sep 1;10(9):1200. doi: 10.3390/nu10091200. PMID: 30200424; PMCID: PMC6163505.

⁴⁴ Le Roy CI, Kurilshikov A, Leeming ER, Visconti A, Bowyer RCE, Menni C, Fachi M, Koutnikova H, Veiga P, Zhernakova A, Derrien M, Spector TD. Yoghurt consumption is associated with changes in the composition of the

Diets high in fermented foods, including yogurt, can increase microbiota diversity and decrease markers of inflammation.⁴⁵

Cheese

Cheese is a significant source of nutrition in school meals. While different varieties of cheese have different nutrient profiles, cheeses do provide the dairy nutrient package, including calcium, high quality protein and other nutrients.

Cheese is available in many configurations of packaging and format. It can be used as an ingredient in other dishes or can be packaged individually in sticks or shapes. These individual servings can be a key part of grab and go or pre-packed meals.

Cheese is also identified as a meat alternate in the school meal programs. In many cases cheese is a major component of meal entrees. Cheese as a meat alternate becomes even more important as schools serve meat-free meal options. In many cases, these vegetarian options rely on cheese as the meat alternate to meet meal pattern requirements.

Dairy at All Fat Levels

Research on milkfat and dairy products at all fat levels is progressing and will likely be considered in the 2025 DGA. Flexibility for dairy products should be provided to reduce delays in adjusting to the next DGA. In fact, the Australian Heart Foundation has changed their dietary recommendations to include dairy at all fat levels for the general population, while recommending reduced-fat varieties for those with high cholesterol.⁴⁶ Dairy products at all fat levels, including reduced-fat and full fat milk, should be permitted as options for school meals, if the saturated fat and calorie levels do not exceed the weekly average per meal.

Whole milk contains the same nutrients as all other fluid milk, including calcium, phosphorus, protein, vitamins A, D and B12, pantothenic acid, riboflavin, and niacin. This is true of other dairy products at all fat levels. While they do have higher levels of saturated fat than low-fat versions, a growing body of evidence indicates that consumption of full-fat dairy foods (milk, cheese, and yogurt) is not associated with higher risk of negative health outcomes, including obesity, diabetes, and heart disease.^{47,48}

Reduced-fat and whole milk make up most retail sales of milk, in turn being the milks that are consumed in students' homes. In fact, a recent survey shows that of American parents, 43% and 35% believe that

human gut microbiome and metabolome. *BMC Microbiol.* 2022 Feb 3;22(1):39. doi: 10.1186/s12866-021-02364-2. Erratum in: *BMC Microbiol.* 2022 Feb 28;22(1):66. PMID: 35114943; PMCID: PMC8812230.

⁴⁵ Wastyk HC, Fragiadakis GK, Perelman D, Dahan D, Merrill BD, Yu FB, Topf M, Gonzalez CG, Van Treuren W, Han S, Robinson JL, Elias JE, Sonnenburg ED, Gardner CD, Sonnenburg JL. Gut-microbiota-targeted diets modulate human immune status. *Cell.* 2021 Aug 5;184(16):4137-4153.e14. doi: 10.1016/j.cell.2021.06.019. Epub 2021 Jul 12. PMID: 34256014.

⁴⁶ "Milk, yoghurt and cheese." *Heart Foundation*. National Heart Foundation of Australia.

<https://www.heartfoundation.org.au/healthy-eating/food-and-nutrition/dairy-foods>. Accessed October 2, 2019.

⁴⁷ Dariush Mozaffarian, Dairy foods, dairy fat, diabetes, and death: what can be learned from 3 large new investigations?, *The American Journal of Clinical Nutrition*, , nqz250, <https://doi.org/10.1093/ajcn/nqz250>.

⁴⁸ Mozaffarian D. Dairy Foods, Obesity, and Metabolic Health: The Role of the Food Matrix Compared with Single Nutrients. *Adv Nutr.* 2019;10(5):917S–923S. doi:10.1093/advances/nmz053.

whole milk and 2% (reduced fat) milk respectively are the healthiest options for their children.⁴⁹ These milks provide the same 13 essential nutrients as all other milk, but with a different saturated fat and calorie content. If the current saturated fat and calorie limits are kept in place, the difference from reduced fat and whole milk would not make a material difference in the overall diets of these students for these nutrients but could greatly help increase milk intake.

Full fat cheese is also the most sold cheese type in retail markets, with relatively low levels of low-fat versions being produced, due to lack of demand.

Several recent research studies (including systematic reviews and meta-analysis) examining the effect of higher fat milk consumption found that it was associated with lower childhood obesity and concluded that dietary guidelines that recommend reduced-fat milk versions might not lower the risk of childhood obesity.^{50,51,52,53} One of these systematic reviews⁵⁴ also examined cardiometabolic health in children (2 to 18 y) in addition to adiposity and concluded that full-fat dairy consumption was not associated with increased body weight and adiposity, or with cardiometabolic risk in children.

Higher consumption of full-fat dairy has been shown to be associated with lower risk of total body fat mass in children.⁵⁵ Whole milk has been found to increase satiety in children when served with breakfast.⁵⁶ A systematic review showed that high-fat dairy products were inversely associated with risk of obesity.⁵⁷

A summary of multiple studies on full fat dairy foods found that the evidence showed no association with high blood pressure, cardiovascular disease, and type 2 diabetes. Some of the studies reviewed showed full fat dairy was associated with lower risk of obesity.⁵⁸

⁴⁹ Morning Consult-IDFA. National Tracking Poll on Low-fat Flavored Milk in School Meals. Survey conducted online February 16, 2022.

⁵⁰ Vanderhout SM, Aglipay M, Torabi N, Jüni P, da Costa BR, Birken CS, O'Connor DL, Thorpe KE, and Maguire JL. Whole milk compared with reduced-fat milk and childhood overweight: a systematic review and meta-analysis. *Am J Clin Nutr* 2019;00:1–14.

⁵¹ O'Sullivan TA, Schmidt KA, and Kratz M. Whole-Fat or Reduced-Fat Dairy Product Intake, Adiposity, and Cardiometabolic Health in Children: A Systematic Review. *Adv Nutr* 2020;00:1–23.

⁵² Dougkas A, Barr S, Reddy S and Summerbell CD. A critical review of the role of milk and other dairy products in the development of obesity in children and adolescents. *Nutrition Research Reviews* (2019), 32, 106–127.

⁵³ Kang K, Sotunde OF, and Weiler HA. Effects of Milk and Milk-Product Consumption on Growth among Children and Adolescents Aged 6-18 Years: A Meta-Analysis of Randomized Controlled Trials. *Adv Nutr* 2019;10:250-261

⁵⁴ O'Sullivan TA, Schmidt KA, and Kratz M. Whole-Fat or Reduced-Fat Dairy Product Intake, Adiposity, and Cardiometabolic Health in Children: A Systematic Review. *Adv Nutr* 2020;00:1–23.

⁵⁵ Bigornia SJ, LaValley MP, Moore LL, Northstone K, Emmett P, Ness AR, Newby PK. Dairy intakes at age 10 years do not adversely affect risk of excess adiposity at 13 years. *J Nutr*. 2014 Jul;144(7):1081-90. doi: 10.3945/jn.113.183640. Epub 2014 Apr 17. PMID: 24744312; PMCID: PMC4056647.

⁵⁶ Kavezade S, Mozaffari-Khosravi H, Aflatoonian M, Asemi M, Mehrabani S, Salehi-Abargouei A. The effects of whole milk compared to skim milk and apple juice consumption in breakfast on appetite and energy intake in obese children: a three-way randomized crossover clinical trial. *BMC Nutr*. 2018 Dec 10;4:44. doi: 10.1186/s40795-018-0253-8. PMID: 32153905; PMCID: PMC7050899.

⁵⁷ Kratz M, Baars T, Guyenet S. The relationship between high-fat dairy consumption and obesity, cardiovascular, and metabolic disease. *Eur J Nutr* 2013;52:1-24.

⁵⁸ Astrup A, et al Regular-fat dairy and human health: a synopsis of symposia presented in Europe and North American (2014-2015). *Nutrients* 2016, 8, 463.

Consumption of full fat dairy has been found to be associated with neutral or lower risk of heart disease.⁵⁹ A meta-analysis of 29 studies indicated that there is no negative effect on heart health of dairy, milk and yogurt, no matter whether those dairy products were full fat or low-fat.⁶⁰

A review of the recent science stated: “No long-term studies support harms, and emerging evidence suggests some potential benefits, of dairy fat or high-fat dairy foods”⁶¹ Another stated, “The present evidence suggests that whole-fat dairy foods do not cause weight gain, that overall dairy consumption increases lean body mass and reduces body fat, that yogurt consumption and probiotics reduce weight gain, that fermented dairy consumption including cheese is linked to lower CVD risk, and that yogurt, cheese, and even dairy fat may protect against type 2 diabetes. Based on the current science, dairy consumption is part of a healthy diet, without strong evidence to favor reduced-fat products; while intakes of probiotic-containing unsweetened and fermented dairy products such as yogurt and cheese appear especially beneficial.”⁶²

Reduced Lactose Dairy Options

Our previous comments point to the important nutritional role of dairy foods, such as milk, yogurt, and cheese. However, the predominance of lactose maldigestion is a real concern for many Americans, especially among certain sub-groups of the population. Fortunately, abundant reduced lactose or lactose-free options are available, while some dairy foods are naturally lower in lactose than others.

A review points to the link between low intake of dairy due to concerns over lactose intolerance and decreased bone density. This review recommends that consumers with lactose intolerance consume the recommended three servings of lactose-free dairy to avoid nutrient shortfalls and ensure healthy bones.⁶³ Avoiding dairy can impact getting enough calcium, potassium, and vitamin D - nutrients already lacking in the American diet.^{64,65}

Cow’s milk with lower levels of lactose, such as milk with lactase enzyme added, provides the same nutrients as regular milk. However, the lower amount of lactose may ensure that the milk is more comfortable for students with lactose maldigestion to include in their meals. These types of milk will still provide the same dairy nutrition.

⁵⁹ Lordan R, A Tsoupras, B Mitra, I Zabetakis. Dairy fats and cardiovascular disease: do we really need to be concerned? *Foods* 2018;7, 29.

⁶⁰ Guo J et al. Milk and dairy consumption and risk of cardiovascular diseases and all-cause mortality: dose-response meta-analysis of prospective cohort studies. *Eur J Epidemiol* 2017 32(4): 269-287.

⁶¹ Mozaffarian D. Dietary and Policy Priorities for Cardiovascular Disease, Diabetes, and Obesity: A Comprehensive Review. *Circulation* 2016; 133: 187-225.

⁶² Mozaffarian Dariush, Dairy Foods, Obesity, and Metabolic Health: The Role of the Food Matrix Compared with Single Nutrients, *Advances in Nutrition*, Volume 10, Issue 5, September 2019, Pages 917S–923S, <https://doi.org/10.1093/advances/nmz053>

⁶³ Hodges JK et al. Lactose Intolerance and Bone Health: The Challenge of Ensuring Adequate Calcium Intake. *Nutrients*. 2019, 11, 718.

⁶⁴ U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015-2020 Dietary Guidelines for Americans 8th Edition.

⁶⁵ Savaiano DA, Boushey CJ, McCabe GP. Lactose intolerance symptoms assessed by meta-analysis: a grain of truth that leads to exaggeration. *J Nutr.* Apr 2006;136(4):1107-1113.

In addition, yogurt is, for many people, a more easily digestible alternative to conventional milk because, on average, it contains less lactose than milk.⁶⁶ In addition, yogurt's live and active cultures continue to have activity in the intestinal tract and may allow lactose intolerant individuals to enjoy dairy products with fewer associated symptoms.⁶⁷

Natural cheese is naturally low in lactose. For people who choose to not regularly consume fluid milk products because of their lactose content, cheese is an excellent way of obtaining the nutrition of dairy foods. Natural cheeses such as cheddar, Colby, Monterey Jack, mozzarella and Swiss contain minimal amounts of lactose, because most of the lactose is removed when the curds are separated from the whey in the cheesemaking process. According to the Institute of Medicine, those with lactose intolerance can rely on cheese as a source of calcium: "... virtually unrestricted amounts of reduced-fat hard cheeses with very low amounts of lactose may be ingested to ensure adequate intakes of calcium."⁶⁸

A National Institute of Health expert committee urged Americans who think they may be lactose intolerant to get tested before they unnecessarily eliminate dairy foods from their diet.⁶⁹ The 2020-2025 DGA recommended low lactose or lactose-reduced dairy products such as lactose reduced milk, yogurt and cheese, as a way for individuals to avoid lactose, yet still obtain the nutritional benefits of dairy.⁷⁰

This advice is doubly important when considering the nutrient contribution of lactose-free milk and dairy products. If students avoid dairy due to concerns over lactose content, the intake of these nutrients can be negatively affected. The National Medical Association has taken a position that the nutrients provided by dairy products are important and that avoiding these products due to a concern about lactose intolerance could lead to negative health outcomes.⁷¹

Based on the nutrient package that is unique to dairy foods and the loss of nutrients when dairy is not consumed, school meal nutrition standards should encourage yogurt, cheese and lactose-reduced milk as the first choice in school meals for lactose intolerant children.

Nutrient Limits

Eating patterns recommended by the DGA include a variety of foods and beverages. It is this combination of intake of foods and beverages over a week or longer that contributes to overall health. The school meal programs are based on a similar approach, considering an overall intake, best demonstrated by the weekly average used as the basis for limits on calories, saturated fat, and sodium.

⁶⁶ Webb D, Donovan SM, Meydani SN. The role of yogurt in improving the quality of the American diet and meeting dietary guidelines. *Nutr Rev.* 2014; 72(3):180-189.

⁶⁷ Lomer MC, Parkes GC, Sanderson JD. Review article: lactose intolerance in clinical practice—myths and realities. *Aliment Pharmacol Ther.* 2008;27:93–103.

⁶⁸ IOM (Institute of Medicine). *Dietary Reference Intakes for Calcium and Vitamin D.* Washington, D.C.: The National Academies Press; 2011:498.

⁶⁹ Suchy FJ, Brannon PM, Carpenter TO, Fernandez JR, Gilsanz V, Gould JB, Hall K, Hui SL, Lupton J, Mennella J, Miller NJ, Osganian SK, Sellmeyer DE, Wolf MA. NIH Consensus Development Conference Statement: Lactose Intolerance and Health. *NIH Consensus Scientific Statements.* 2010 Feb 22-24; 27(2):1-27).

⁷⁰ U.S. Department of Agriculture and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans, 2020-2025.* 9th Edition. December 2020. Available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov).

⁷¹ Bailey RK et al. Lactose Intolerance and Health Disparities Among African Americans and Hispanic Americans: An Updated Consensus Statement. *J Natl Med Assoc.* 2013; 105; 112-127.

This weekly average approach should be continued rather than setting levels for individual foods. The weekly average permits some days or menu items to be higher in a particular nutrient while being offset by lower content on other days. This permits a wider variety of options, while keeping the overall diet within nutritional goals.

Added Sugar

Responding to the discussion from the rule, if a limit is placed on added sugar, it would be most appropriate to set this on a weekly average basis, as is currently done with sodium and saturated fat. It would not be appropriate to set limits on a single food basis.

Another key consideration is what food the sugars are added to and what other nutrients may be consumed with that product with added sugar. The 2020-2025 DGA stated that “[a] small amount of added sugars, saturated fat, or sodium can be added to nutrient-dense foods and beverages to help meet food group recommendations...” The 2015-2020 DGA were even more explicit, stating “Healthy eating patterns can accommodate other nutrient-dense foods with small amounts of added sugars, such as... fat-free yogurt, as long as calories from added sugars do not exceed 10 percent per day, total carbohydrate intake remains within the Acceptable Macronutrient Distribution Range, and total calories intake remains within limits.”⁷² The 2015-2020 DGA also states, “Some sweetened milk and yogurt products may be included in a healthy eating pattern as long as the total amount of added sugars consumed does not exceed the limit for added sugars, and the eating pattern does not exceed calorie limits.”⁷³

Flavored dairy products such as yogurt and milk are prime examples of using added sugars to increase consumption of nutrient-dense foods. Flavored, sweetened dairy products, such as milk and yogurt, contain the same composition as their unflavored counterparts and count toward the recommended servings of the dairy group.

Flavored milks, like all cow’s milk, are a source of 13 essential nutrients, including calcium, vitamin D, and potassium. Yogurt is a nutrient-dense source of high-quality protein, calcium, potassium, riboflavin, vitamin B12, and phosphorous. Some yogurts have vitamin D added. For many people, added flavors and sweeteners make yogurt more palatable, meaning that they are more likely to increase their intake of calcium, protein, potassium, vitamins A and D and other important nutrients present in each serving of yogurt.

Sweetened milk and yogurt can fit into the DGA’s recommended eating patterns because the limit on added sugar applies to the diet as a whole, not to a single food or beverage. Flavored milk and yogurt are nutrient dense and provide significant nutritional benefits. The moderate levels of added sugars in these products increase palatability, thereby encouraging Americans to eat these nutrient-dense foods. This is one policy that can encourage increased consumption of dairy, meeting one of the goals of the Dietary Guidelines for Americans and providing essential nutrients in the diets of children participating in the school meal programs.

⁷² U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015-2020 Dietary Guidelines for Americans 8th Edition.

⁷³ U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015-2020 Dietary Guidelines for Americans 8th Edition.

Sodium

While we appreciate USDA's more gradual approach to reducing sodium for the next two school years, there continue to be challenges and concerns with further reductions of sodium, especially in cheese where salt and sodium provide significant functionality and safety. As USDA works toward any further sodium reductions in school meals, we encourage the Department to engage with stakeholders and food suppliers to identify levels that will support nutritious meal patterns that can include a wide range of foods, as well as providing an adequate timeframe needed to reformulate without jeopardizing food safety, student acceptance or increasing food waste.

Making any further reductions gradually and with stakeholder consultation would be helpful to the many schools that have found it challenging to obtain food items with lower sodium that are also acceptable to students, especially for school districts that are not set up for from-scratch cooking. The additional time would be particularly useful as school food authorities are currently undergoing significant changes to the school meal programs to adapt to restrictions resulting from the COVID-19 pandemic. Expecting a swift change to sodium levels would be unrealistic as this has not been one of the changes for which they had been preparing.

If changes are made to sodium requirements, there must be sufficient time after publication of these new requirements, but prior to mandatory implementation, to provide for several steps, including reformulation of both ingredients and final products, taste testing and adjustment of student tastes, and the lead time needed to meet the bidding process. Even with this time, there may be some products or ingredients that just are not able to meet sodium requirements without significant food safety, food waste and functionality implications.

While there continue to be efforts from food companies to develop lower sodium products, there are some foods such as cheese for which salt and hence sodium serves a functional and food safety role that makes it particularly difficult to formulate new options. In cheese, salt promotes food safety by affecting fermentation, which can influence pH and water activity, while also preventing the growth of pathogens. Salt is not added to cheese beyond levels necessary for functionality and for food safety parameters. There are multiple hurdles to reducing sodium levels in many types of cheese, including technological feasibility, efficacy of salt substitutes and regulatory requirements. While some reductions may be technically feasible, the final product may not be acceptable due to flavor. In some cases, reducing sodium could result in product that would present a significant food safety risk, increased food waste and decreased shelf-life.

The regulatory requirements for meat alternates can also make sodium reductions more difficult. When cheese is used as a meat alternate in school meals, either on its own or as part of an entrée, two ounces of cheese must be served to satisfy the meat alternate requirement for school lunch. When cheese is used as part of an entrée and combined with other components of that entrée, such as sauce and crust in a pizza, the meal pattern requirements and functionality of salt in each component add further challenges to sodium reductions.

Saturated Fat

As indicated above, while milkfat in dairy foods contains various types of saturated fatty acids, a growing body of emerging research has shown the role of milkfat in the diet and health is different from

saturated fats from other sources. We ask USDA FNS to consider these health differences as nutrition standards are set for saturated fat and for dairy products in the school meal programs. With recent research on the health effects of diets that include dairy at all fat levels, limiting milk to low-fat and fat-free varieties does not reflect the current state of nutrition science.

Flexibility in the school meal nutrition standards that accommodates this emerging science, which ultimately could be reflected in the 2020-2030 DGA, including how total fat intake levels should be considered over a weekly time period, would enable the standards to be more flexible and durable as the nutrition science evolves.

Based on recent research regarding the health effects of milkfat, we ask USDA to include dairy products at all fat levels in the school meal programs, provided that the total amount of saturated fat remains within the weekly limits.

Conclusion

The transitional standards published in February 2022 allow schools to continue to serve milk and dairy products that students prefer while remaining consistent with the Dietary Guidelines, delivering a variety of nutrients that children need for development, including potassium, calcium, and vitamin D. We urge USDA to embrace school food nutrition standards that encourage students to consume more dairy in keeping with the 2020-2025 DGA. These policies should include:

- Allowing low-fat flavored milk and yogurt in school meals
- If necessary, setting nutrient limits on a weekly basis as opposed to a daily or per-food basis
- Setting sodium limits that permit use of nutrient-rich cheese in school meal products and continue to allow for a safe and flavorful product
- Permit dairy at a variety of fat levels
- Encourage lower lactose dairy products as an option

We thank USDA for its dedication in developing school meal standards that are reflective of the evolving nutrition science, and yet allow for pragmatic approaches to achieving nutrition goals, while ensuring children continue to consume products that can help them to achieve nutrition requirements needed for their healthy development and wellness.

Sincerely,



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