

# School Nutrition Standards: Evidence-Based Standards Protect and Improve Children's Health

## *Background*

Foods and beverages offered at school play a critical role in shaping children's health and well-being. Children consume as much as one-half of their daily calories during the school day<sup>1</sup> and for many children, school meals are the only meals they receive in a day. Before the pandemic, nearly 30 million students participated in the National School Lunch Program (NSLP).<sup>2</sup> While overall rates of food insecurity in the US remained steady during the pandemic, the rates of food insecurity for households with children increased significantly. And, among children experiencing food insecurity, there was an increase in the severity of food insecurity where more children were reported going hungry, skipping meals, or not eating for a whole day because there was not enough money for food, particularly in households headed by Black individuals.<sup>3</sup>

The Healthy, Hunger-Free Kids Act of 2010 (HHFKA) removed full-calorie soda and other junk food from schools, and in school meals, reduced salt and unhealthy fat while increasing whole grains, fruits, and vegetables beginning in 2012. The U.S. Department of Agriculture (USDA) conducted the 2019 School Nutrition and Meal Cost Study (SNMCS), the first nationally-representative study to assess school meals after HHFKA and most comprehensive assessment of school meals to date. The SNMCS found that the nutritional quality of school breakfasts and lunches under HHFKA, as measured by the Healthy Eating Index (HEI) score, increased on average by at least 21 percent and 23 percent, respectively, for all school types, between school years 2009-10 and 2014-15.<sup>4</sup> Researchers estimated that the updated nutrition standards could prevent up to two million cases of childhood obesity and save up to \$792 million in healthcare costs over 10 years.<sup>5</sup> Another study found that for children in poverty, the risk of obesity declined substantially each year after implementation of HHFKA such that the risk of obesity would have been 47 percent higher in 2018 if the nutrition standards had not been updated.<sup>6</sup> Finally, a 2021 study found that school meals are the single most healthy source of nutrition for children—more nutritious than grocery stores, restaurants, worksites, and others.<sup>7</sup>

The updated standards have been a resounding success; more than 80 percent of lunch menus were compliant with the standards<sup>8</sup>, and schools with healthier meals experienced higher participation rates.<sup>9</sup> Despite this progress, in 2018, the USDA issued a rule that weakened the standards by locking in unhealthy levels of sodium and allowing schools to serve fewer whole grains and flavored low-fat milk.<sup>10</sup> In 2020, a federal district court tossed out the rule over procedural errors, effectively reinstating the 2012 standards.<sup>11</sup> Later in 2020, the USDA responded to the vacatur by issuing a new proposed rule with the same 2018 rollback measures,

and in 2022 the USDA adjusted and finalized that rule with transitional standards that replaced sodium Target 2 and 3 with a weaker Interim Target 1A, maintained the flavored low-fat milk allowance, and modestly decreased the whole-grain-rich requirement.<sup>12</sup> The USDA says that this rule is a bridge for school years 2022-2023 and 2023-2024 and that it plans to issue a new proposed rule in the fall of 2022 with updated nutrition standards for school year 2024-2025 and beyond.<sup>13</sup>

### What are the school nutrition standards?

<b>Reimbursable Meals</b>	
USDA Meal Pattern SY 2019-2020 <sup>14,a</sup> (Amounts shown are ranges from grades K-12)	
Child Nutrition Programs: Transitional Standards for Milk, Whole Grains, and Sodium <sup>15</sup>	
<b>Breakfast (amounts per day)</b>	<b>Lunch (amounts per day)</b>
Fruits: 1 cup	Fruits: ½-1 cup
Grains:* 1 oz eq	Grains:* 1-2 oz
Fluid milk: 1 cup	Fluid milk: 1 cup
Min-max calories: 350-600 kcal	Min-max calories: 550-850 kcal
Saturated fat: <10 percent of total calories	Saturated fat: <10 percent of total calories
Sodium Target 1 (July 1, 2022): ≤540-≤640	Sodium Target 1 (July 1, 2022): ≤1,230-≤1,420 Sodium Interim Target 1A (July 1, 2023): ≤1,110-≤1,280
Trans fat: zero grams of trans fat per serving.	Trans fat: zero grams of trans fat per serving.
Vegetables: N/A	Vegetables: ¾-1 cup <ul style="list-style-type: none"> <li>• Dark green: ½ cup (per week)</li> <li>• Red/Orange: ¾-1¼ cup (per week)</li> <li>• Beans and peas (legumes) ½ cup (per week)</li> <li>• Starchy: ½ cup (per week)</li> <li>• Other: ½-¾ cup (per week)</li> <li>• Additional vegetables to reach total: 1-1½ cup (per week)</li> </ul>
Meats/Meat Alternatives: N/A	Meats/Meat Alternatives: 1-2 oz eq
*Starting July 1, 2022, at least 80 percent of grains offered during the week must be whole-grain-rich (i.e., 50 percent or more whole grains by weight). This is a decrease from the previous standard that 100 percent of grains offered during the week be whole-grain-rich.	
<b>Competitive Foods<sup>16</sup></b>	
To be allowable, a competitive food item must:	
(1) meet all of the proposed competitive food nutrient standards; and	
(2) be a grain product that contains 50 percent or more whole grains by weight or have whole grains as the first ingredient*; or	
(3) have as the first ingredient* one of the non-grain main food groups: fruits, vegetables, dairy, or protein foods (meat, beans, poultry, seafood, eggs, nuts, seeds, etc.); or	
(4) be a combination food that contains at least ¼ cup	
*If water is the first ingredient, the second ingredient must be one of items 2, 3 or 4 above.	

<b><i>Entrée and Snack Items Sold A la Carte</i></b>	
Any entrée item offered as part of the lunch or breakfast program is exempt from all competitive food standards if it is sold as a competitive food on the day of service or the day after service in the lunch or breakfast program	
Sugar-Free Chewing Gum	Exempt from all competitive food standards
Grain Items	50 percent or more whole grains by weight, or have whole grains as the first ingredient
Total Fats	≤ 35 percent calories from total fat as served
Saturated Fats	< 10 percent calories from saturated fat as served
Trans Fats	Zero grams of trans fat as served (≤ 0.5 g per portion)
Sugar	≤ 35 percent of weight from total sugar as served
Sodium	<ul style="list-style-type: none"> <li>• Snack items and side dishes: ≤200 mg sodium per item as served</li> <li>• Entrée items: ≤480 mg sodium per item as served</li> </ul>
Calories	<ul style="list-style-type: none"> <li>• Snack items and side dishes: ≤ 200 calories per item as served</li> <li>• Entrée items: ≤350 calories per item as served</li> </ul>
Accompaniments	<ul style="list-style-type: none"> <li>• Use of accompaniments is limited when competitive food is sold to students in school</li> <li>• The accompaniment must be included in the nutrient profile as part of the food item served and meet all proposed standards</li> </ul>
Caffeine	<ul style="list-style-type: none"> <li>• Elementary and Middle School: foods and beverages must be caffeine-free with the exception of trace amounts of naturally occurring caffeine substances</li> <li>• High School: foods and beverages may contain caffeine</li> </ul>
<b><i>Beverages</i></b>	
Plain water or plain carbonated water (no size limit);	
Low fat milk, flavored or unflavored (grades K-5: ≤8 fl. oz.; grades 6-12: ≤12 fl. oz.)	
Non-fat milk, flavored or unflavored, including nutritionally equivalent milk alternatives as permitted by the school meal requirements (grades K-5 : ≤8 fl. oz., grades 6-12: ≤12 fl. oz.)	
100 percent fruit/vegetable juice <i>or</i> juice diluted with water (with or without carbonation), and no added sweeteners (grades K-5: ≤8 fl. oz., grades 6-12: ≤12 fl. oz.)	
Grades 9-12 only: Other flavored and/or carbonated beverages (≤20 fl. oz.) that are labeled to contain ≤5 calories per 8 fl. oz., or ≤10 calories per 20 fl. oz.	
Grades 9-12 only: Other flavored and/or carbonated beverages (≤12 fl. oz.) that are labeled to contain ≤40 calories per 8 fl. oz., or ≤60 calories per 12 fl. oz.	

<sup>a</sup> The 2012 rule (and resulting standards) was reinstated per the vacatur of the 2018 rule, but in practice, schools are likely not meeting these standards. Pandemic meal pattern waivers are available until June 30, 2022.

### *What Impact has the COVID-19 Pandemic Had on Nutrition Standards?*

In March 2020, the Families First Coronavirus Response Act (FFCRA)<sup>17</sup> established a meal pattern waiver<sup>18</sup> for child nutrition programs during the COVID-19 pandemic. The waiver allows local child nutrition program operators to waive specific aspects of the meal pattern (e.g., the nutrition standards). The waiver was made available to all states, but the USDA required that operators request approval from their State Agency to implement the waiver, which is currently available until June 30, 2022.

Given the pandemic's impact on food and nutrition insecurity, school nutrition standards that are strong and evidence-based are more important than ever to ensure meals are healthiest. Schools are currently required to meet the nutrition standards, but they are not currently enforced under the meal pattern waivers.

### *Are the Standards Aligned with the Latest Science?*

The standards are aligned except for in three key areas on sodium, added sugars, and whole grains.

**Sodium:** The 2020 Dietary Guidelines for Americans (DGA) lowered the maximum amount of safe levels of sodium intake for younger school-aged children: from 2,200 mg to 1,800 mg for children aged 9-13 y and from 1,900 mg to 1,500 mg for children aged 4-8 y.<sup>19</sup> While the USDA is expected to update the school nutrition standards in the fall of 2022, the final reduction target in place (i.e., Target 1 for breakfast; Interim Target 1A for lunch) will not align school meals with safe levels of sodium, and further reductions will be needed to meet the recommendations in the DGA for younger children. Children consume more sodium than recommended by the DGA, increasing their subsequent risk of elevated blood pressure, heart disease, and stroke.<sup>20</sup>

**Added Sugars:** Both the 2015 and 2020 DGA recommend that no more than 10 percent of calories come from added sugars. School meal nutrition standards do not address added sugars, and the competitive foods standards only address total sugar by weight. Among children, intake of added sugars has been associated with weight gain, dental decay, and an increase in risk factors for cardiovascular disease.<sup>21,22</sup>

**Whole Grains:** The DGA recommends that whole grains be at least half of total grain consumption. The transitional standard which rolls back the whole-grain-rich requirement from 100 percent to at least 80 percent no longer aligns with the DGA and must be reversed.

### *Policy Recommendations:*

Congress must protect the nutrition standards from further rollback attempts, strengthen the standards to align with the most recent DGA, and support the USDA and schools by boosting funding and technical assistance. The USDA can promulgate a rule to strengthen the standards, absent congressional action, and improve technical assistance with schools and collaboration

with the food industry. States and localities should also pass policies that protect and strengthen standards, to ensure students are able to receive healthy meals.

Standard	Current Status	Federal, State, and Local Policy Recommendation (state/local law must be at least as stringent as federal law)
<b>Sodium</b>	<ul style="list-style-type: none"> <li>• Target 1 for NSLP and SBP.</li> <li>• Interim Target 1A (a 10 percent reduction from Target 1) will go into effect for NSLP on July 1, 2023.</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Establish new guidelines with realistic timelines to align school meals with updated sodium recommendations in 2020 DGA.</li> </ul>
<b>Whole Grains</b>	<ul style="list-style-type: none"> <li>• 80 percent whole-grain-rich requirement.</li> </ul>	<ul style="list-style-type: none"> <li>• Restore 100 percent whole-grain-rich requirement.</li> </ul>
<b>Added Sugars</b>	<ul style="list-style-type: none"> <li>• There is no standard for added sugars in meals.</li> <li>• There is no standard for added sugars in competitive foods.</li> </ul>	<ul style="list-style-type: none"> <li>• Establish a new added sugars standard for school meals in alignment with 2020 DGA recommendations.</li> <li>• Update competitive foods total sugar standard to an added sugars standard.</li> </ul>

### Resources

- [10 Years of the Healthy, Hunger-Free Kids Act](#)
- [Implementation of COVID-19 meal pattern waivers: Best practices and comparisons by state](#)
- [Model State School Foods Bill](#)
- [Tips for Reducing Added Sugar While Maintaining Great Taste](#)
- [Tips for Successfully Transitioning to Healthier Menu Options](#)
- [Tips for Serving Whole Grains That Kids Love \(or Don't Even Notice are Whole Grains\)](#)
- [Tips for Reducing Sodium Without Sacrificing Taste or Participation](#)

*For more information, please contact the Center for Science in the Public Interest at [policy@cspinet.org](mailto:policy@cspinet.org).*

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<sup>1</sup> Centers for Disease Control and Prevention. *School Nutrition*. 2021. <https://www.cdc.gov/healthyschools/nutrition/schoolnutrition.htm>. Accessed February 16, 2022.

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- <sup>2</sup> U.S. Department of Agriculture. *National School Lunch Program: Participation and Lunches Served*. 2022. <https://fns-prod.azureedge.net/sites/default/files/resource-files/slsummar-1.pdf>. Accessed February 16, 2022.
- <sup>3</sup> Coleman-Jensen A, et al. *Household Food Security in the United States in 2020*. USDA Economic Research Service ERR-298. September 2021. <https://www.ers.usda.gov/webdocs/publications/102076/err-298.pdf?v=9918.1>. Accessed February 16, 2022.
- <sup>4</sup> U.S. Department of Agriculture. *School Nutrition and Meal Cost Study: Volume 2 – Nutritional Characteristics of School Meals*. 2019. <https://fns-prod.azureedge.us/sites/default/files/resource-files/SNMCS-Volume2.pdf>. Accessed April 12, 2022.
- <sup>5</sup> Gortmaker SL, et al. Three Interventions that Reduce Childhood Obesity Are Projected to Save More Than They Cost to Implement. *Health Aff*. 2015;34:1932-1939.
- <sup>6</sup> Kenney EL, et al. Impact of the Healthy, Hunger-Free Kids Act on Obesity Trends. *Health Aff*. 2020;39:1122–1129.
- <sup>7</sup> Liu J, et al. Trends in Food Sources and Diet Quality Among US Children and Adults, 2003-2018. *JAMA Netw Open*. 2021;4(4):e215262.
- <sup>8</sup> U.S. Department of Agriculture. *School Nutrition and Meal Cost Study: Volume 2 – Nutritional Characteristics of School Meals (Summary)*. 2019. <https://fns-prod.azureedge.net/sites/default/files/resource-files/SNMCS-Volume2-Summary.pdf>. Accessed February 16, 2022.
- <sup>9</sup> U.S. Department of Agriculture. *School Nutrition and Meal Cost Study: Volume 4 – Student Participation, Satisfaction, and Dietary Intakes (Summary)*. 2019. <https://fns-prod.azureedge.net/sites/default/files/resource-files/SNMCS-Volume4-Summary.pdf>. Accessed February 16, 2022.
- <sup>10</sup> 83 Fed Reg. 63776. Child Nutrition Programs: Flexibilities for Milk, Whole Grains, and Sodium Requirements.
- <sup>11</sup> *Center for Science in the Public Interest, et al. v. Sonny Perdue, et al.*, No. 8: 19-cv-01004-GJH, Document 57 (D. Md. 2020).
- <sup>12</sup> 87 Fed Reg. 6984. Child Nutrition Programs: Transitional Standards for Milk, Whole Grains, and Sodium.
- <sup>13</sup> U.S. Department of Agriculture. *The Road Ahead: Building Back Better with School Meals*. 2022. <https://fns-prod.azureedge.net/sites/default/files/resource-files/bbbsm-road-ahead.pdf>. Accessed February 16, 2022.
- <sup>14</sup> U.S. Department of Agriculture. *Meal Patterns SY19-20*. 2019. <https://fns-prod.azureedge.net/sites/default/files/cn/MealPatternsSY19-20.pdf>. Accessed February 16, 2022.
- <sup>15</sup> 87 Fed Reg. 6984. Child Nutrition Programs: Transitional Standards for Milk, Whole Grains, and Sodium.
- <sup>16</sup> U.S. Department of Agriculture. *Nutrition Standards for All Foods Sold in School*. 2013. <https://www.fns.usda.gov/cn/nutrition-standards-all-foods-sold-school-summary-chartf>. Accessed April 12, 2022.
- <sup>17</sup> Families First Coronavirus Response Act. P.L. 116-127.
- <sup>18</sup> U.S. Department of Agriculture. *Nationwide Waiver to Allow Meal Pattern Flexibility in the Child Nutrition Programs*. 2020. <https://www.fns.usda.gov/cn/covid-19-child-nutrition-response-4>. Accessed February 16, 2022.
- <sup>19</sup> U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2020-2025 Dietary Guidelines for Americans. 2020. <https://www.dietaryguidelines.gov/>. Accessed April 12, 2022.

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<sup>20</sup> Appel LJ, et al. Reducing Sodium Intake in Children: A Public Health Investment. *J Clin Hypertens*. 2015;17:657-62.

<sup>21</sup> Vos MB, et al. Added Sugars and Cardiovascular Disease Risk in Children: A Scientific Statement from the American Heart Association. *Circulation*. 2017;135(19):e1017-e1034.

<sup>22</sup> Moynihan PJ, Kelly SA. Effect on Caries of Restricting Sugars Intake: Systematic Review to Inform WHO Guidelines. *J Dent Res*. 2014;93(1):8-18.