

Executive Summary: Rapid Health Impact Assessment on Changes to School Nutrition Standards to Align With 2020-2025 Dietary Guidelines for Americans

Healthy Eating Research

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Introduction

The national school breakfast and lunch programs administered by the United States Department of Agriculture (USDA) are cornerstone federal nutrition assistance programs. Ensuring that schools offer nutritious foods and beverages is especially important for the more than 29 million school-age children receiving school lunches, as well as the 15 million children receiving school breakfasts. School meals are one of the healthiest sources of foods for school-age children, which is significant as some children receive up to half of their daily calories at school.

In 2010, the Healthy, Hunger-Free Kids Act (HHFKA) directed USDA to update the school meal nutrition standards for the first time in several decades, established the Smart Snack nutrition standards for competitive foods (i.e., snack foods and beverages sold in schools outside of school meal programs), and strengthened requirements for local wellness policies. As a result, the nutritional quality of school meals increased as schools were required to offer more fruit, more servings and varieties of vegetables, more whole grain-rich foods, and less saturated fat and sodium. However, school meal nutrition standards related to sodium, whole grains, and milk were weakened by several federal actions between 2017 and 2019.

The COVID-19 pandemic turned national attention back to the importance of school meal programs and the need to enhance nutrition standards. There are two upcoming policy opportunities that could further improve the nutritional quality of school meals: 1) In early February 2023, USDA released a proposed rule entitled, “[Child Nutrition Programs: Revisions to Meal Patterns Consistent With the 2020 Dietary Guidelines for Americans](#)”; and 2) Congress may pass Child Nutrition Reauthorization (CNR), which is a legislative mechanism for updating and/or improving the child nutrition programs that typically occurs every five years but has not occurred since Congress passed the HHFKA in 2010. Both policy opportunities could align the school meal nutrition standards with the [2020-2025 DGA](#).



Healthy Eating Research (HER) conducted a Rapid Health Impact Assessment (HIA) to better understand how these changes may impact the nutritional quality of school meals and school meal participation and the impact of meal consumption on students’ health and academic performance. This report follows a Rapid HIA conducted by HER in 2020 on a USDA-proposed rule to roll back many of the school meal nutrition standards at that time.

HIA Background

An HIA is a prospective research tool that guides decision-makers in considering the possible health impacts, and in some cases financial considerations, of proposals. HIAs are not intended to make definitive or causal predictions about how a policy proposal will affect health and wellbeing; rather, they are a tool for policymakers to use as they consider the full implications of a particular proposal based on the best available evidence.

This HIA is intended to connect existing research on school nutrition and health with the upcoming policy opportunities that would align the school meal nutrition standards with the 2020-2025 DGA. Specifically, this Rapid HIA examines the potential impacts of changes to the nutritional quality of school meals on school meal participation, student dietary consumption, students’ health and wellbeing, and academic performance. [Read the full HIA to find more information about the methodology, detailed findings, and a full list of references.](#)

Recommended Requirements to Align School Meal Nutrition Standards with 2020-2025 Dietary Guidelines for Americans

Program Change	Current Requirement	Recommended Changes
Whole Grains	At least 80% of weekly grains in the school lunch and breakfast menus must be whole grain-rich.	Require 100% of grains to be whole grain-rich at breakfast and lunch (instead of at least 80%).
Meat/Meat Alternate	Offer a daily meat/meat alternate at lunch only. Once schools meet the daily minimum grain quantity for breakfast, they are allowed to offer a meat/meat alternate in place of grains.	Require meat/meat alternate to be offered at breakfast (as well as lunch), no more than half of which can be processed (e.g., hot dogs, sausages, ham).
Milk	All fluid milk must be fat-free (skim) or low-fat (1% fat or less). Milk may be unflavored or flavored, provided that unflavored milk is offered at each meal service.	Milk may not be flavored. All fluid milk must adhere to the new added sugars standard (with no more than 10% of total calories from added sugars).
Saturated Fat	Fewer than 10% of total calories can be from saturated fat per day. 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. Foods of minimal nutritional value and fluid milk with fat content greater than 1% milk fat are not allowed.	Require discretionary sources of calories (e.g., from solid fats and added sugars) to meet the added sugars specifications (in addition to meeting the specifications for calories, saturated fat, trans fat, and sodium as already required).
Sodium	Implement Sodium Target 1 for school lunch and breakfast in SY 2022-2023 and implement a Sodium Interim Target 1A effective for school lunch beginning SY 2023-2024.	Require two to three interim and final sodium targets to align with age-based sodium recommendations in the 2020-2025 DGA (current sodium targets are higher than those recommended by the 2020-2025 DGA).
Added Sugars	No requirement.	New added sugar standard; fewer than 10% of calories should be from added sugars for the overall meal pattern.
Fruits	Offer fruit daily at breakfast and lunch; offer fruits and vegetables as two separate meal components.	No change.
Vegetables	Offer vegetables daily at lunch, including specific vegetable subgroups weekly (dark green, red/orange, legumes, and starchy).	No change.
Calories	Offer meals that meet specific calorie ranges for each age/grade group.	No change.
Trans Fat	Nutrition label or manufacturer specifications must indicate zero grams of trans fat per serving.	No change.
NSLP/SBP Meal Patterns	Offer meals that meet requirements established for three age/grade groups (K-5, 6-8, 9-12), based on calorie and nutrient limits for age and developmental period.	No change.



Key Findings

This HIA considers several key research questions related to diet and nutrition, meal participation and revenue, and academic performance.

Diet and Nutrition:

The healthfulness of the foods and beverages served and sold in schools are likely to improve as a result of aligning school nutrition standards with the 2020-2025 DGA.

- There is **STRONG EVIDENCE** showing that strong nutrition standards positively affect the availability of foods and beverages served in reimbursable school meals, student participation in meals, and student consumption of these meals at school.
- There is **STRONG EVIDENCE** that stronger standards reduce the availability of unhealthy foods and beverages sold in schools through competitive foods, as well as student purchases and consumption of these items.
- There is **STRONG EVIDENCE** showing that the nutritional quality of school meals served positively impacts students' overall diet quality over a 24-hour period and foods consumed outside of school can significantly negatively impact students' overall diet quality.
- There is **STRONG EVIDENCE** showing that changes in student consumption of foods and beverages served and sold in schools affect overweight and obesity outcomes, while the effects on other near- and long-term health outcomes are **NOT WELL-RESEARCHED**.

Meal Participation and Revenue:

Evidence reviewed in this HIA suggests that improved nutrition standards will lead to increased participation in school meals, which leads to both increased school food service revenue and increased food security for students.

- There is **MODERATE EVIDENCE** showing that strong nutrition standards positively affect the rates of student participation in school meal programs and school food service revenue.
- There is also **MODERATE EVIDENCE** showing an association between students' participation in meal programs and food security. Numerous peer-reviewed original articles have found a strong relationship between participation in child nutrition programs and reduction in food insecurity, especially among children from families with low incomes.
- The relationship between changes in school meal nutrition standards and stigma and mental health are **NOT WELL-RESEARCHED**.

Academic Performance and Health Outcomes:

Existing evidence supports that improved nutrition standards may impact children's attendance, classroom behavior, cognitive functioning, and test scores.

- There is **MODERATE EVIDENCE** showing an association between nutrition standards and improved dietary consumption with academic performance. The relationship between consumption of nutrient dense foods and adequate calories and cognitive functioning is well-documented in the literature. Existing research suggests that children's cognition, behavior, and learning are impacted by nutritional status and that participation in school meals is associated with better academic outcomes.

Policy Recommendations

1. Update Nutrition Standards to Align With the 2020-2025 DGA

The following revisions are needed to align school meals with the 2020-2025 DGA:

- Require 100% of grains offered to be whole grain-rich.
- Require meat/meat alternate to be served at breakfast and lunch, and require that no more than 50% of the meat/meat alternate ounce equivalents be processed meats.
- Introduce a nutrient standard for added sugars (this may be a phased approach) that ultimately requires no more than 10% of calories in weekly menus, including beverages such as flavored milk, come from added sugars.
- Update sodium reduction targets to ultimately align meals with sodium recommendations in the 2020-2025 DGA as the current targets are above these limits.

2. Ensure Schools and Districts Have Adequate Resources for Successful Implementation

Adequate training and technical assistance, consistent messaging, and access to updated school equipment are vital to schools' success in implementing and meeting school meal nutrition standards. Training and technical assistance are particularly important when school meal nutrition standards are changed. Additionally, USDA should engage with industry to ensure that palatable products are made available that meet these standards. Regional *Team Up* trainings and *What's Shaking?* resources were successful past USDA initiatives that could be reinstated and modified to align with new school meal standards.

3. Expand Access to School Meals

Strategies that improve access to school meals for all students, like universal free school meals and expansion of the Community Eligibility Provision, should be prioritized. Recent research has demonstrated the benefits of offering free school meals to all students. Most importantly, offering free meals to every student improves access to nutritious foods and beverages and improves equity by eliminating barriers such as filling out applications, reduces lunch shaming, and eliminates income eligibility cut-offs. Offering universal free school meals has also been shown to increase school meal participation, improve diet quality and attendance, and reduce food insecurity.

4. Reevaluate Reimbursement Rates

Meal reimbursement rates should be reevaluated and increased regularly, taking into account inflation, supply chain issues, and other challenges schools experience, to allow school food directors the ability to successfully order and procure foods and beverages that are healthy and appealing to students, while being able to train and retain skilled staff. Schools received a higher reimbursement rate during the COVID-19 pandemic through waivers. The waiver has since ended, resulting in a drop of reimbursement rates, although schools are still facing many of the same challenges experienced during the pandemic.

5. Monitor and Evaluate

The School Nutrition and Meal Cost Study-I offers data that are critical to understanding the impact of school meal nutrition standards on school- (e.g., revenue, policies, school food operations) and student-level (e.g., diet quality, participation) outcomes. This comprehensive evaluation of the school meal programs should be updated every five years, and the objectives and outcomes of interest should be regularly re-evaluated. We also recommend that USDA develop more robust routine monitoring of schools' breakfast and lunch menus, student food and beverage selection, meal program participation, and revenue. Boosting the current monitoring efforts would not only allow USDA and collaborating researchers the opportunity to explore various relationships but would also more readily identify needs for technical assistance.

Conclusion

The available research indicates that implementation of strong nutrition standards following the passage of the HHFKA resulted in healthier meals. The evidence reviewed for this Rapid HIA suggests that aligning the school meal nutrition standards with the 2020-2025 DGA will result in healthier meals served in schools, which can have significant positive implications for child nutrition and overweight and obesity outcomes. Strong nutrition standards and the presence of healthier meals are also likely to increase student participation in school meal programs and school food service revenue and improve food security and academic performance. More research is needed to examine the relationship between improved school meal nutrition standards and near- and long-term health outcomes, stigma and mental health, and the relationship between school meal participation stigma and academic performance. Further, we recommend that USDA support efforts to monitor and evaluate the school meal program and provide training and technical assistance to school meal operators.



About Healthy Eating Research

Healthy Eating Research (HER) is a national program of the Robert Wood Johnson Foundation. Technical assistance and direction are provided by Duke University under the direction of Mary Story PhD, RD, program director, and Megan Lott, MPH, RDN, deputy director. HER supports research to identify, analyze, and evaluate environmental and policy strategies that can promote healthy eating among children and prevent childhood obesity. Special emphasis is given to research projects that benefit children and adolescents and their families, especially among lower-income and racial and ethnic minority population groups that are at highest risk for poor health and well-being and nutrition related health disparities. For more information, visit www.healthyeatingresearch.org or follow HER on Twitter at [@HERResearch](https://twitter.com/HERResearch).

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