

# School Meals are Essential for Student Health and Learning



**E**ach day, millions of students fuel their minds and bodies with the good nutrition provided by the National School Lunch Program and School Breakfast Program. There is considerable evidence of the effective role that participation in these programs plays in alleviating food insecurity and poverty, and in providing the nutrients students need for growth, development, learning, and overall health, especially for the nation's most vulnerable children and adolescents. This brief reviews the many benefits of the school meals programs, and summarizes the latest research on recent policy changes and innovative strategies that are increasing program access and improving student outcomes.



## School Meals Play a Critical Role in Student Health, Well-Being, and Academic Success

More than 14.6 million students eat a school breakfast and 29.7 million students eat a school lunch on a typical school day, based on data from the 2018–2019 school year.<sup>1</sup> The vast majority of these students are low-income and receive a free or reduced-price meal.

A considerable body of evidence shows that the school meals programs are profoundly important for students, especially low-income students, with well-documented benefits.

## School Meals Alleviate Food Insecurity and Poverty

School meals are a critical component of the U.S. safety net. Multiple studies find improvements in food security through participation in the school meals programs.<sup>2,3,4,5,6</sup> For example, school breakfast availability reduces low food security and very low food security among elementary school children.<sup>7</sup> For school lunch, participation is associated with a 14 percent reduction in the risk of food insufficiency among households with at least one child receiving a free

or reduced-price school lunch.<sup>8</sup> Conversely, research shows that rates of food insecurity and food insufficiency among children are higher in the summer — a time when students do not have access to the school meal programs available during the academic year.<sup>9,10,11</sup>

Nationally, school lunch also lifted 1.2 million people — including 722,000 children — above the poverty line in 2017, based on Census Bureau data on poverty and income in the U.S.<sup>12</sup>

## School Meals Support Good Nutrition

School meals support good nutrition throughout the school day. Program participants are less likely to have nutrient inadequacies and are more likely to consume fruits, vegetables, and milk at breakfast and lunch.<sup>13,14</sup> For school breakfast, similar dietary benefits are observed among students attending schools that provide breakfast at no cost to all students, when compared to students who eat away from school or through a traditional means-tested breakfast program.<sup>15,16</sup> For school lunch, researchers conclude “school lunches provide superior nutrient quality than lunches obtained from other sources, particularly for low-income children.”<sup>17</sup> This is consistent with other studies comparing school lunches to packed lunches brought from home or elsewhere.<sup>18,19,20</sup>

The school meals programs also have favorable impacts on overall dietary quality, as measured by the Healthy Eating Index.<sup>21,22</sup> In a national assessment conducted by the U.S. Department of Agriculture (USDA), school lunch participants and school breakfast participants consumed lunches and breakfasts of higher nutritional quality, respectively, than their nonparticipating peers.<sup>23</sup> In many cases, particularly for school lunch participants, these differences in overall dietary quality persisted over a 24-hour time period. Meaning, school meal participants had better dietary quality not just at school, but throughout the entire day. Similarly, there is evidence that more frequent school meal consumption has nutritional advantages for daily dietary intake: elementary and middle school students who eat school breakfast every day consume more fruits and vegetables, whole grains, dairy, fiber, and calcium per day, when compared to students who eat school breakfast less frequently (i.e., 0 to 4 days per week).<sup>24</sup> Students who eat school lunch daily consume more dairy and calcium per day compared to those who eat school lunch less frequently. As Frisvold and Price write, “exposure to healthier meals at school increases the healthfulness of foods acquired by children throughout the day.”<sup>25</sup>

### School Meals Improve Health Outcomes

School meals support and improve student physical and mental health, including weight-related outcomes. For instance, free or reduced-price school lunches reduce rates

of poor health by at least 29 percent and rates of obesity by at least 17 percent, based on estimates using national data.<sup>26</sup> Multiple studies find an association between school breakfast participation and lower body mass index (BMI), lower probability of being overweight, and lower probability of obesity.<sup>27,28,29,30</sup> School breakfast, including breakfast offered at no cost to all students in a school, also has been linked with fewer visits to the school nurse, particularly in the morning,<sup>31</sup> and positive impacts on mental health, including reductions in behavioral problems, anxiety, and depression.<sup>32,33</sup>

### School Meals Boost Learning

School meals programs are linked with improvements in the classroom. Students who participate in school breakfast programs have improved attendance, behavior, academic performance, and academic achievement as well as decreased tardiness, based on decades of research on the topic.<sup>34,35,36,37</sup> These effects also are observed when implementing innovative models to increase breakfast participation. For example, providing students with breakfast in the classroom is associated with lower rates of tardiness, fewer disciplinary office referrals, improved attendance rates, and improved math and reading achievement test scores.<sup>38,39,40</sup>

Improvements in student behavior have been observed with the Community Eligibility Provision\* as well: multiple out-of-school suspension rates fell by about 15

percent for elementary students and 6 percent for middle school students after implementation of community eligibility in one study.<sup>41</sup> These reductions were even larger, at about 25 percent, for elementary school students in counties with high rates of food insecurity.

Finally, research demonstrates that the impacts of program participation can be long-lasting. In a study examining the effects of school lunch participation between 1941 and 1956 on adult outcomes, participation was associated with long-term educational attainment for men and women.<sup>42</sup>



\*Under the Community Eligibility Provision created by the Healthy, Hunger-Free Kids Act (HHFKA) of 2010, high-poverty schools and school districts can offer school meals at no charge to all students.

## Updated School Meals Nutrition Standards Improve Student Dietary Intake Without Harming Program Participation

The Healthy, Hunger-Free Kids Act (HHFKA) of 2010 created a process for enhancing the quality of all food and beverages served and sold in schools by empowering USDA to set new nutrition standards for school meals and for “competitive foods.”<sup>†</sup> These new nutrition standards are vital to improving the dietary intake and health of students, especially low-income students. USDA issued a final rule on the school meal nutrition standards in January 2012. Overall, the rule required schools to offer more fruits, vegetables, and whole grain-rich foods; offer only fat-free or low-fat (1 percent) fluid milk; limit saturated fat and sodium; minimize trans fat; and limit the calories that can be offered in a meal. The lunch standards began to take effect in the 2012–2013 school year; the breakfast standards began to take effect in the 2013–2014 school year.

An analysis by FRAC in 2016 found that the revised nutrition standards have had a positive impact on the school nutrition environment as well as student food selection and consumption, especially for fruits and vegetables.<sup>43</sup> Research published since then supports these conclusions.<sup>44,45,46</sup> Perhaps most notably, USDA recently issued the first national, comprehensive assessment of school meal programs since the implementation of the updated school meal nutrition standards.<sup>47</sup> The nutritional quality of school lunches increased by 41 percent, and by 44 percent for school breakfasts, after the implementation of the nutrition standards. The assessment also found that serving lunches of higher nutritional quality was associated with higher school lunch participation rates, but not with higher costs per lunch.

In addition to the favorable nutrition impacts, there is growing evidence that the standards have not had a negative impact on school meal participation over time (as some had feared) and, in fact, may contribute to modest improvements in participation.<sup>48,49</sup> For instance, the number of students choosing a school meal (versus no school



meal) increased by 13.6 percent after the implementation of improved school meal and competitive food nutrition standards in Massachusetts.<sup>50</sup>

In spite of widespread support, overwhelming evidence of compliance, and positive nutrition impacts, efforts have been underway to roll back the nutrition standards issued in January 2012.<sup>51,52,53</sup> Unfortunately, such efforts were successful with the weakening of the standards for whole grains, sodium, and milk in a final rule issued by USDA in December 2018. USDA scaled back the whole grain requirements, delayed the requirement to further lower sodium levels in school meals, and allowed low-fat flavored milk (instead of only allowing non-fat flavored milk). In response, FRAC released a statement that “USDA’s final rule on nutrition standards is a step backwards for children’s health and learning.”<sup>54</sup> Regardless of this setback, FRAC will continue to work with schools and districts to implement the stronger nutrition standards issued in January 2012, since those aspects of the standards issued in December 2018 are optional for schools. On the national level, FRAC will work with allied organizations in efforts to protect the nutrition standards from rollbacks, and advocate for USDA to ensure adequate support, technical assistance, and resources for schools to continue robust implementation of the nutrition standards.

<sup>†</sup> The new competitive foods standards rule, known as the Smart Snacks in School rule, is a separate initiative governing foods provided or sold in schools (e.g., vending machines, food sold in competition with federal meals) other than those from the federal nutrition programs. It was issued by USDA in June 2013 and began to take effect in the 2014–2015 school year. In general, these standards promote whole grains, low-fat dairy, fruits, vegetables, and leaner protein, while limiting the calories, fat, sugar, and sodium of items.

## Innovative Policies and Practices for Providing School Meals Increase Program Access

Across the country, innovative school meal policies and practices are being implemented to increase access to these critical and effective programs. For school breakfast and lunch, this includes implementing community eligibility. For breakfast, this includes providing breakfast at no cost to all students (possibly through community eligibility), and using breakfast in the classroom, “grab and go” breakfast, and second chance breakfast models. Such approaches can address common barriers to program participation, such as stigma, cost, and, for breakfast, arriving to school too late. (For more information and resources on these policies and models, visit [www.frac.org](http://www.frac.org).)

Research shows that these strategies are effective in increasing program participation. According to an analysis by FRAC, 28,542 schools (64 percent of those eligible) participated in community eligibility in the 2018–2019 school year, compared to 14,214 in the 2014–2015 school year when the provision first became available nationwide.<sup>55</sup> While community eligibility has only been implemented nationwide a few years, preliminary evidence indicates that the provision increases student participation in school breakfast and lunch,<sup>56,57</sup> and FRAC’s analysis points to a consistent increase in the number of students enrolled in schools offering community eligibility.

The evidence is clear that programs offering breakfast at no cost to all students and breakfast in the classroom increase breakfast participation.<sup>58,59,60,61,62,63,64,65</sup> (Typically, breakfast in the classroom is offered at no cost to all students.) For example, in a study of North Carolina public schools, serving breakfast at no cost to all students boosted breakfast participation, including among students otherwise ineligible for free or reduced-price meals.<sup>66</sup> The participation impacts were larger when breakfast at no cost to all students was implemented in combination with breakfast in the classroom, second chance breakfast, or breakfast in the classroom plus “grab and go.”

“Grab and go” and second chance breakfasts show particular evidence of success for middle and high school students, although these models tend to receive less attention in the research literature.<sup>67,68</sup> In an evaluation



of a “grab and go” breakfast program in Minnesota high schools, average school-level breakfast participation increased from 13 percent to 22.6 percent of students after implementation.<sup>69</sup> Among a subsample of students with irregular breakfast habits, breakfast participation increased among students eligible for free or reduced-price school meals (from 13.9 to 30.7 percent) and among students paying full price for school meals (from 4.3 to 17.2 percent).

## Conclusion

Research shows that the school breakfast and lunch programs are effective in alleviating food insecurity and poverty, supporting good nutrition, and improving health and learning. In addition, recent policy changes (e.g., community eligibility, updated nutrition standards) and innovative models of program delivery (e.g., breakfast in the classroom) are connecting more students to these critical programs and producing more positive and healthier outcomes. Continuing to increase access to, and strengthen, the school meals programs will further their role in supporting and improving student health and well-being.

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