

Summer Nutrition and Enrichment Programs: Effective Tools to Support Child Food Security, Health, and Learning During the Summertime



During the summer, far too many children and adolescents experience food insecurity, weight gain, and learning loss, compromising their health and ability to thrive during summer break and beyond. A key strategy to address these issues is to connect more students — especially low-income students — to high-quality summer meal and enrichment programs, which support student food security, health, and learning. This brief first summarizes important research on summertime food insecurity, weight gain, and learning loss, and then describes the value and effectiveness of the federal Summer Nutrition Programs and summer enrichment programming.



Food Insecurity and Weight Increase in the Summer

Rates of food insecurity and food insufficiency* among children are higher in the summer — at a time when students do not have access to the school nutrition programs available during the academic year.^{1,2,3,4,5} Students who receive a free or reduced-price school lunch during the school year are especially at risk in the summer: research shows these students are more likely to experience increases in food insecurity and food insufficiency in summer months when compared to their eligible, nonparticipating peers.^{6,7} A considerable body of evidence demonstrates that food insecurity is associated with harmful consequences for health, well-being, and learning in the short and long terms, including lower health status,^{8,9} poor dietary quality,¹⁰ behavioral and social-emotional problems,^{11,12,13} mental health problems (e.g., depression, anxiety),^{14,15} and poor educational performance and academic outcomes.^{16,17,18,19}

Summer Nutrition Programs

The Summer Nutrition Programs provide nutritious meals that replace the school breakfasts and lunches that low-income children rely on during the regular school year. Schools, local government agencies, and private nonprofit organizations can sponsor the Summer Nutrition Programs to receive federal funding to provide meals at sites in low-income communities or that serve primarily low-income children. Sites can be schools, recreation centers, parks, YMCAs, Boys & Girls Clubs, and other locations where children congregate during the summer months. Camps also can participate.

* Food insecurity is a term defined by the U.S. Department of Agriculture that indicates that the availability of nutritionally adequate and safe food, or the ability to acquire such food, is limited or uncertain for a household. Food insufficiency, a related concept, is commonly defined as inadequate food intake due to lack of money or resources.

As with food insecurity, children are more vulnerable to accelerated weight gain, increases in body mass index (BMI), and obesity during the summer months.^{20,21,22,23,24} For example, overweight and obesity prevalence increased between the fall of kindergarten and spring of second grade in a national sample of children, but the increases only occurred during summer vacations (not during the school year).²⁵ These summertime trends are alarming given that nearly 1 in 5 children in the U.S. are obese.²⁶ There also is some evidence that these unfavorable weight-related outcomes in summer disproportionately impact children at higher risk of obesity, including Hispanic and Black children, which may exacerbate existing health disparities.²⁷

The increase in food insecurity in the summer is not too surprising given the effectiveness of the school nutrition programs in alleviating food insecurity during the academic year^{28,29,30,31} and the low participation rates in Summer Nutrition Programs during the summer. (Only 1 in 7 children who ate a free or reduced-price school lunch during the 2016–2017 school year were reached by the Summer Nutrition Programs in July 2017.³²) The factors contributing to weight gain and obesity in the summer are less clear and warrant further study. The potential mechanisms, according to recent reviews of the literature, may include poorer dietary intake, decreased physical activity, increased screen time and other sedentary behaviors, irregular sleep patterns, unstructured time and schedules, and less access to school meals in the summer compared to the regular school year.^{33,34,35,36}

Summer Learning Loss is a Reality for Many Children, but Especially Low-Income Children

Summer learning loss has detrimental impacts on academic achievement, which can be long-lasting. Also known as the summer slide or summer setback, summer learning loss refers to the decline in academic knowledge and skills over summer break. According to one seminal meta-analysis on summer learning, students lose at least one month of learning over the summer months, with the most profound impacts for math.³⁷ While some summer learning loss is common, the meta-analysis finds that summer learning loss disproportionately impacts low-income students and students in later grades.³⁸ The latter findings are reinforced in more recent reviews of the summer learning literature.^{39,40}

One group of researchers has examined summer learning loss disparities over time, revealing short- and long-term implications. In one classic study of elementary students, reading comprehension test score gains throughout the school year were fairly comparable across socioeconomic status (SES) levels over five years; however, during the four summer vacations, scores continued to improve for “better off” students, but were unchanged or declined among disadvantaged students.⁴¹ Similar trends were observed for mathematics.

Additional research by this team reveals that the SES disparity in early summer learning loss contributes to gaps in academic achievement and opportunity that persist and widen with time. For example, about two-thirds of the reading achievement gap in ninth grade between students of low and high SES could be attributed to the summer achievement gap in the early elementary years.⁴² Summer learning loss disparities also had unfavorable consequences on high school track placement (college preparatory or not), high school completion, and college attendance. The researchers concluded, “since it is low SES youth specifically whose out-of-school learning lags behind, this summer shortfall relative to better-off children contributes to the perpetuation of family advantage and disadvantage across generations.”

Gaps in summer achievement by SES are likely driven in large part by a family’s income and the availability of summer enrichment activities, although more research on the topic would allow us to better understand these relationships.^{43,44,45} Students with higher incomes generally have better access to stimulating summer activities — e.g., camps, recreational activities, library visits, and academic programs — that can prevent or minimize summer learning loss. Such programs and activities are often out of reach for lower income students in terms of cost, availability, and transportation barriers, putting them at a disadvantage in the summer and beyond.

Summer Nutrition Programs Support Child Food Security and Health

There is strong support for increasing access to the federal Summer Nutrition Programs to improve food security, nutrition, and health in the summer months. While research on the Summer Nutrition Programs is limited, there is growing evidence that summer meals have positive impacts on student food security and health during the summer. First and foremost, several studies demonstrate that greater summer meal availability or accessibility has beneficial effects on food insecurity, especially on very low food security (the most severe level of food insecurity).^{46,47} For instance, among households with school-aged children, seasonal differences in food insecurity (i.e., higher rates in the summer months than in the school year) are smaller in states with more widespread participation in summer meal programs.⁴⁸

In terms of obesity, participation in federally funded child care nutrition or school meals provided in child care, preschool, school, or summer settings is associated with a significantly lower BMI among young, low-income children.⁴⁹ These findings lead researchers to conclude that “subsidized meals at school or day care are beneficial for children’s weight status, and we argue that expanding access to subsidized meals may be the most effective tool to use in combating obesity in poor children.” Similarly, after reviewing the literature on summer weight gain, another group of researchers proposed that the summer nutrition programs are “a potential mechanism for improving eating habits among populations that have unhealthy summer weight gain.”⁵⁰

Summer Nutrition and Enrichment Programs can Minimize Summer Learning Loss

Most Summer Nutrition Program sites offer educational or enrichment activities,⁵¹ which can help students maintain and enhance their knowledge and skills in a safe, structured environment when school is out in the summer. In other words, such programming can help curb the summer learning loss that compromises academic achievement and opportunity. For example, in a study of summer learning programs for low-income youth that included free meals, students with high attendance in the first summer benefited in mathematics and those with high attendance in the following summer benefited in both mathematics and language arts.⁵² The positive effects each summer persisted through the following spring, based on state assessments. (The food provided through these summer learning programs was reimbursed primarily through the Summer Nutrition Programs.)

In a library-based approach to summer meals at 10 sites in California, children received a free lunch through the Summer Food Service Program and adults received a free lunch through a private funding stream.⁵³ In qualitative interviews, parents reported that the enrichment programs offered at the library provided opportunities “to engage children while preventing summer learning loss.” Going to the library for enrichment activities and the free meal also allowed their children to socialize and participate in active play with other children. The interviews further revealed that the free meal had the additional benefit of helping families stretch their limited household budgets during the summer.

These positive findings are echoed in decades of research on the value of summer learning and enrichment programs in boosting achievement, particularly in mathematics and reading.^{54,55,56} There is also an emerging body of research demonstrating the positive return on investment from summer learning programs.⁵⁷ These achievement and economic impacts are noteworthy, and so, too, is the potential for health-related improvements. For instance, students who spend a greater proportion of time in structured environments in the summer (e.g., camp, summer school) engage in healthier behaviors, including being more physically active, and are better able to maintain their body weight during the summer months.^{58,59} Overall, high-quality, summer programming can produce achievement gains and support health during the summer.

Conclusion

Research shows that when school lets out for summer, there is an increased risk for summer learning loss and food insecurity, especially for those who live in low-income households, which puts students at a disadvantage when school resumes and even later in life. Students, and particularly students of color, also face a greater risk for excess weight gain during the summer months. To help address these complicated issues, effective and meaningful strategies are needed to connect vulnerable children and adolescents to summer programming that pairs enrichment opportunities with the good nutrition provided through the Summer Nutrition Programs.

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Endnotes

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