

Impact of Nutrition and Food Insecurity on Child Health



Health and Policy Context

Experts agree that *proper nutrition* is critical for optimal *growth* and development of children and adolescents, starting *in utero*.¹ In fact, extensive research demonstrates that “*sound and appropriate nutrition*” in early childhood is one of the basic foundations of lifelong health established during early childhood.² Furthermore, chronically hungry and malnourished *children* are more likely to experience adverse health outcomes.

While malnutrition may be caused by medical (e.g., malabsorption disorders) or mental health conditions (e.g., depression, eating disorders), often malnutrition is attributable to *food insecurity*, defined by the United States Department of Agriculture (USDA) as the condition of limited or uncertain access to adequate food, or a lack of *nutrition security*, defined by the USDA as “consistent and equitable access to healthy, safe and affordable foods that promote optimal health and well-being”.³ In 2022, 17.3% of households with children were affected by food insecurity, though in some of these households only adults experienced food insecurity. Notably, *children of color* are disproportionately impacted by food insecurity.⁴ Black households experience food insecurity at over *triple* the rate than white households. In the U.S., food insecurity is *often* associated with overweight or *obesity* among children, which may be related to consuming foods with low-nutritional value that may be more accessible and *affordable*.⁵

Several *federal nutrition programs*, including the Supplemental Nutrition Program for Women, Infants and Children (WIC) and the Supplemental Nutrition Assistance Program (SNAP) and others, can reduce the risk of *food insecurity* and promote better *health outcomes*.⁶ *Providers* can also screen children and families for food insecurity and refer them to these programs.

This document highlights how childhood nutrition and food insecurity can have short- and long-term impacts on physical and behavioral health outcomes, while also impacting a child’s educational and long-term economic outcomes. Nutrition programs can play an important role in addressing nutrition and food insecurity to improve health and well-being for children.

Impact of Nutrition on Child Health, Development and Well-Being

Poor nutrition is the leading cause of *illness* in the United States, with over half a million *deaths* due to diet-related diseases. Moreover, 85% of health care spending is associated with diet-related chronic disease. Access to sufficient, nutritious food during *childhood* can impact a child’s *physical and behavioral health, development* and *well-being* throughout childhood and into adulthood. Often, malnutrition is due to food insecurity, which can be short- or long-term and can be influenced by a number of *social factors* including employment and income, disability status, and resources available in the family’s neighborhood (i.e., if the neighborhood is a food desert).

What are food deserts?

The *2008 Farm Bill* defines a *food desert* as “an area in the United States with limited access to affordable and nutritious food, particularly such an area composed of predominately lower-income neighborhoods and communities.” A 2017 study showed that nearly *40 million Americans* lived in a food desert, and another *study* showed that across all poverty levels, predominantly black neighborhoods had the fewest supermarkets.



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Impact of Malnutrition on Child Health

Malnutrition can have short- and long-term effects on the physical and mental health of children and youth, with *symptoms* including short stature, low *energy* levels, being thin or bloated, or having a weak immune system. In the longer-term, malnutrition may lead to *high blood pressure*, heart diseases, type 2 diabetes, obesity and other diseases. Children and youth who are *malnourished* may also experience anxiety, mood changes or other psychiatric symptoms.

Impact of Food Insecurity on Child Health

A *2019 study* suggests that food insecurity may be associated with lower quality diets among children and substantial evidence suggests that *food insecurity* negatively impacts health. In 2022, one in five children were at risk of *hunger*, and hunger disproportionately impacted *children of color*.

- **Prenatal Health:** Food insecurity experienced during *pregnancy* can lead to adverse effects for both the pregnant person and child, including increased *nutritional deficiencies*, preterm labor, low birth weight and birth defects.
- **Child Development:** Poor *nutrition* can lead to increased absorption of *toxins*, including lead, which can impact child development. Proper *nutrition* may mitigate the potential impacts of lead poisoning.
- **Diet-Sensitive Diseases:** People experiencing food insecurity are at greater risk of *diet-related diseases* like *obesity* and *cardiometabolic disease*, including *diabetes*, hypertension and stroke. Such diseases can often be mitigated by a healthier diet.
- **Social, Emotional and Mental Health:** Food insecurity is associated with adverse social, emotional and mental health outcomes among children, including symptoms of *depression*, externalizing and internalizing behaviors, and hyperactivity, as well as *psychological distress*, which can include worrying about not having enough food or their parents' well-being, anger, embarrassment or sadness related to their family's food situation. Limited research also suggests that the stressors related to food insecurity can increase children's risk for *behavioral* and emotional problems. Notably, food insecurity can negatively affect the mental health of *parents* and caretakers, which can in turn negatively impact their children.
- **Health Care Access:** One *study* demonstrated that children in food-insecure households had a nearly 180% higher rate of foregone medical care and 26% higher rate of emergency room utilization.

Impact of Food Insecurity on Other Outcomes

Not only does food insecurity impact a child's physical and mental health and development, but it can also impact a child's academic outcomes, which can result in long-term, adverse health and economic outcomes in adulthood.

- **Academic Outcomes:** Research suggests that food insecurity is associated with poorer *academic performance* across childhood and into college, impacting *standardized tests scores*, *grades* and *grade point average*, and likelihood of *grade repetition*. Decreased academic performance could be attributable to lower *academic skills* (e.g., problem solving, vocabulary) or *academic enablers* (e.g., engagement, motivation or interpersonal skills) among children experiencing food insecurity. Furthermore, another study found that *children* who were at high risk of experiencing food insecurity were more likely to experience peer bullying and school drop out potential at age 15.

Conclusion

Children who endure inadequate nutrition and food insecurity during childhood can experience poor health outcomes with lifelong impacts. Not only can poor nutrition and food insecurity contribute to poor physical health, but the stressors related to food insecurity can also impact children's social, emotional and mental health and their ability to succeed in school. However, *evidence* suggests that *programs* that increase individuals' and families' access to healthy food can reduce the risk of food insecurity and associated negative health outcomes. Supporting access to affordable, sufficient and healthy foods could have lifelong impacts on children's health and well-being.

Endnotes

- 1 Note that malnutrition can include undernutrition, nutrient deficiencies, or excess, and overweight, obesity and diet-related noncommunicable diseases.
- 2 The [Center on Developing Child](#) at Harvard University cites three basic foundations of lifelong health, including a stable and responsive environment of relationships, safe and supportive physical, chemical and built environments, and sound and appropriate nutrition.
- 3 The [USDA](#) has built on its efforts to address food insecurity by expanding its efforts to encompass both food and nutrition security. Note that food security and nutrition security are not synonymous. Many of the citations included in this issue brief specifically discuss food security, as language and research have more recently [shifted](#) to focus on nutrition security.
- 4 Note that in the referenced study, the USDA uses the term “food insufficiency.” Households were “classified as having child food insufficiency [...] if children in the household were not eating enough “sometimes” or “often” in the last seven days because the household could not afford enough food.”
- 5 There is [mixed evidence](#) regarding the relationship between food insecurity and obesity among children.
- 6 In 2022, on average, over [6 million](#) people participated in WIC each month; over 75% of monthly participants were children and infants. In 2021, over [41 million people](#) (12% of the U.S. population) received SNAP benefits.

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