

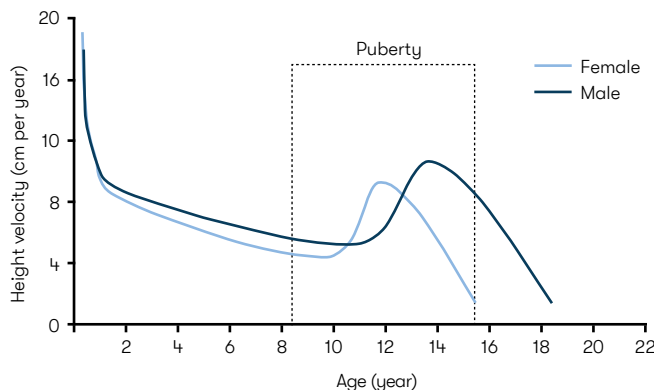
SCIENCE SPOTLIGHT

# Providing Stable Access to Healthy Food Supports Adolescents’ Brain Development as Well as Physical and Mental Health

**A**dolescence is a period of remarkable growth and opportunity. During these years, from about 10 to 25, we are growing and maturing faster than at any point in our lives, second only to early childhood. This makes adolescence a critical window for physical, cognitive, and social development, when our experiences and environments can have a profound effect on our trajectories throughout adulthood.

One of our most basic needs throughout our lives, and particularly during adolescence, is reliable access to healthy food. Yet adolescents are more likely to face food insecurity than younger children,<sup>1</sup> and face unique consequences from limited or uncertain access to food.

## SPEED OF PHYSICAL GROWTH THROUGHOUT CHILDHOOD AND ADOLESCENCE<sup>2</sup>



Graph adapted from Dahl, Allen, Wlibrecht, & Suleiman, 2018

**Adolescents experience food insecurity both at home and on campus, and at higher rates than younger children.**

**Food insecurity** refers to limited access to nutritious food, but also to uncertain access, such as when the availability of food fluctuates from paycheck to paycheck or between the school year and school breaks.

Adolescents are more likely to experience food insecurity than younger children, and they face unique consequences from limited or uncertain access to food. Households with children ages 13 to 15 are more than twice as likely to be food insecure than those with children 4 or younger.<sup>1</sup> Among families with both younger and older children, the adolescents are more likely to miss meals so that younger siblings have enough.<sup>3</sup> Being away from home does not always help—nearly one-quarter of college students experience food insecurity as well.<sup>4</sup>

**For young people in this key developmental window,<sup>2</sup> which spans the ages of about 10 through 25 years old, the consequences of food insecurity include more than hunger.**

Lack of stable and adequate food during adolescence may have long term effects on physical, cognitive, and mental health.

### Physical health

Physically, adolescence is a time of rapid growth (see figure 1) and important brain development that requires more calories and nutrients than earlier in childhood.<sup>5</sup> Malnutrition during this important period of growth can not only stunt adult height, but also shorten overall life expectancy.<sup>1</sup> Research clearly shows food insecurity is associated with worse long-term health outcomes including greater risk for diabetes.<sup>6</sup>

### Cognitive development and mental health

The second decade of life is a sensitive period of brain development,<sup>7</sup> similar to the first three years, particularly for socioemotional learning. Early adolescents, about 10 to 12 years old, who face food insecurity may have more trouble concentrating<sup>8</sup> in school and may have

lower high school math and English scores<sup>9</sup> compared to youth who have more reliable access to food. Young people who face food insecurity during adolescence are also less likely to attend or complete college.<sup>10</sup> Food insecurity in adolescence has also been linked to worse sleep quality,<sup>11</sup> which has been shown to have a range of negative impacts on youth mental health.<sup>12</sup> Even when controlling for family income, adolescents who experience food insecurity are about 2.3 times more likely to have depression and suicidal thoughts compared with their peers.<sup>13</sup> These effects on mental health also harm academic performance in college.<sup>14</sup>

### Social Development

Adolescence is a time of increased sensitivity to social evaluation, and many young people feel embarrassed to be seen accessing charitable help or to be unable to participate in food-related social activities including holiday feasts, inviting friends over for meals, or

dining out with peers.<sup>15</sup> At the same time, their increasing empathy for others may leave them feeling responsible for solving this problem for their families by eating at friends' houses, going without food to ensure that younger siblings have enough to eat, or sometimes turning to illegal routes to secure food.<sup>15</sup>

### There are long-term benefits to addressing food insecurity during adolescence, and young people are well-positioned to partner on solutions.

Although young people in this key developmental window face unique impacts from food insecurity, they also have the cognitive capabilities and drive to contribute to others that make them essential partners in tackling this problem for themselves and their families. Asking young people for their insights, opinions, or ideas can help improve the effectiveness of programs and policies that address food insecurity.

Following are three suggestions for using insights from the science of adolescent development to help ensure that adolescents get the reliable nutrition their developing bodies and minds need:

- ◆ **Provide sufficient support for households to access enough food for healthy growth and development of all family members.** The structure of food benefits or assistance programs should recognize the increased need for food to fuel the physical and cognitive growth of the adolescent years. Changes to benefits such as the Supplemental Nutrition Assistance Program (SNAP),<sup>16</sup> free and reduced-price school lunch programs,<sup>17</sup> and Summer Electronic Benefits Transfer (EBT) should weigh the long-term societal benefits of adequate nutrition during our adolescent years.
- ◆ **Consider adolescent perspectives when planning food distribution.** Youth need to feel comfortable accessing food, so distribution methods should be discreet (by ordering food online, for example). Young people receiving food assistance have suggested that locations that combine teen-friendly programming with food assistance can engage youth who don't want to be seen going places solely for food.<sup>15</sup>
- ◆ **Engage adolescents in finding solutions.** Many adolescents are already acutely aware of food insecurity within their own families and among their peers, and actively work to solve this problem by helping acquire food for their families, sharing food with friends, and rationing their own food intake to support younger siblings.<sup>15</sup> Around the country, young people are working on solutions, including mapping food sites through their tech clubs<sup>18</sup> and working at urban farms to increase supply for local food banks.<sup>19</sup> Including adolescents in the planning and execution of solutions to food insecurity will lead to more robust solutions for communities.

Consistent, reliable access to healthy food is a fundamental need for all of us, but is even more critical amidst the rapid growth and development of the adolescent years. Youth are not only uniquely affected by food insecurity, they are uniquely capable of being an essential part of any successful solution.

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## ENDNOTES

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