

The Benefits of Breakfast: Health & Academics

Breakfast is often said to be the most important meal of the day. Research shows that students benefit from eating breakfast in two primary ways. First, students' overall dietary health is positively affected by breakfast consumption, particularly meals provided through the School Breakfast Program¹. Second, there is significant evidence of positive academic effects due to breakfast consumption. Schools experience improvements in standardized test scores and improvements in school attendance in addition to other outcomes that create positive learning environments. Serving school breakfast to all students helps ensure that they are well nourished and ready to learn.

Who's Eating Breakfast?

- From a nationally representative sample of over 2,500 students ages 6-18ⁱ
 - 1 out of every 5 kids does not eat breakfast.
 - 34% of female adolescents do not eat breakfast.
 - 37% of food insufficient² students miss out on the benefits of breakfast.
- Classroom Breakfast programs³ greatly increase participation in school breakfast compared to conventional programs that serve school breakfast before the start of the school day.^{ii iii}

Student Health

Nutritional Intake

- School Breakfast Program participants consume less added sugar at breakfast than nonparticipants consume at breakfast.^{iv}
- Students who participate in the School Breakfast Program consume more servings of fruit than nonparticipants, both at breakfast and throughout the day.^v
- Breakfast eaters have higher daily intakes of micronutrients⁴ and are more likely to meet nutrient intake recommendations compared with individuals who don't eat breakfast, particularly for:^{vi}
 - Vitamin A
 - Calcium
 - Vitamin C
 - Riboflavin
 - Zinc
 - Iron

¹ **The School Breakfast Program** (SBP) is a federal child nutrition program administered at the national level by the United States Department of Agriculture.

² For the cited study, individuals were classified as **food insufficient** if respondents reported that the family "sometimes or often did not get enough food to eat."

³ **Classroom Breakfast** is a model of serving school breakfast in which all students are offered breakfast in the classroom at the start of the school day.

⁴ **Micronutrients** are essential elements, such as vitamins and minerals, that are needed in very small quantities for optimal health.

- Children who eat school breakfast are more likely to meet the Recommended Dietary Allowances (RDA)⁵ for vitamin A, vitamin D, calcium, magnesium, thiamin, riboflavin and zinc as compared to students who eat breakfast at home.^{vii}
- Compared to nonparticipants, students who eat school breakfast are more likely to:
 - Consume milk and are significantly less likely to consume beverages other than milk or 100% juice.^{viii}
 - Consume more milk, both at breakfast and throughout the day.^{ix}

Overall Health

- After the implementation of universal school breakfast⁶, school nurses report a decrease in student complaints of stomachaches and headaches.^x
- Compared to those who do not eat breakfast, children and adolescents who do eat breakfast tend to make healthier food choices throughout the day.^{xi}
- Students in schools with universal school breakfast programs are less likely to skip breakfast due to concerns of body image or stigma of eating in the cafeteria.^{xii}

Obesity Prevention

- Breakfast consumption can increase the feeling of fullness throughout the morning. Compared to students who do not eat breakfast, those who eat a breakfast rich in protein, such as eggs, consume fewer calories at lunch. High-protein breakfasts may help regulate appetite throughout the day.^{xiii}
- In a nationally representative sample of children in grades 1 – 12, participation in the School Breakfast Program was significantly associated with healthier body weights and lower BMI⁷.^{xiv}

Student Academics

Learning Environment

- In a recent Classroom Breakfast study, which examined over 50 schools in Maryland, more than 80 percent of teachers and non-teaching staff thought that implementing Classroom Breakfast improved the school learning environment.^{xv}
- After the implementation of Classroom Breakfast, principals report that disciplinary suspensions decrease at their schools.^{xvi}

⁵ **Recommended Dietary Allowance** is the average dietary intake level of a nutrient required to prevent a deficiency in 98% of a population.

⁶ **Universal school breakfast programs** provide breakfast to all students free of charge, regardless of family income.

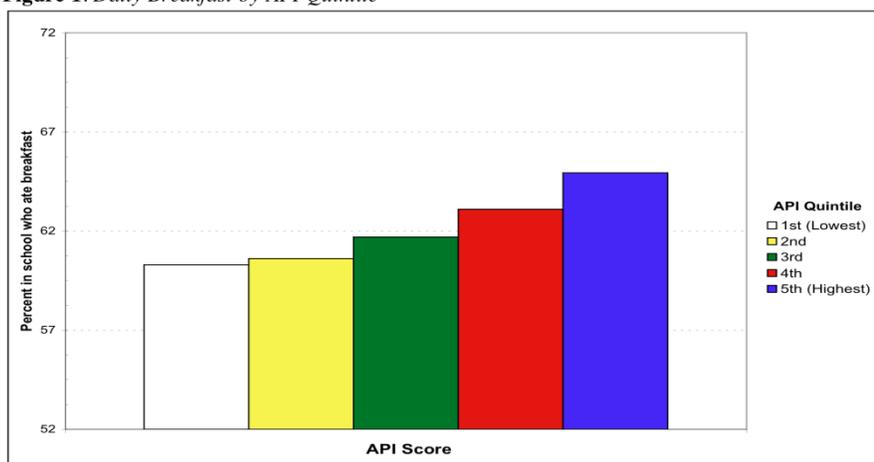
⁷ **BMI – Body Mass Index** is a measure of body weight relative to height.

- Students who eat breakfast report feeling more motivated at school than students who had no breakfast.^{xvii}
- Food-insufficient children and teenagers are more likely to have difficulty getting along with their peers. Food-insufficient teenagers also have increased likelihood of being suspended from school.^{xviii}

Academic Achievement

- In a survey of students in grades 7, 9 and 11, schools with higher percentages of students who ate breakfast on the day of the survey also had higher Academic Performance Index⁸ scores (see Figure1).^{xix}

Figure 1. Daily Breakfast by API Quintile



Source: Calculations based on the California Department of Education's Healthy Kids Survey and API database (1999-2001). Breakfast is measured by the percentage of students who reported eating breakfast on the day of the survey. Analytic sample consists of 1,395 schools.

- A study of the effects of universal school breakfast, through which all students are offered a school breakfast free of charge, found that math and reading achievement scores increased each year the program was in place.^{xx}
- Compared to students whose participation in school breakfast either stayed the same or did not increase, students whose participation did increase had significantly higher increases in math grades.^{xxi}
- After reviewing more than 100 studies and evaluations of the School Breakfast Program, researchers found that serving breakfast to children who don't get a morning meal elsewhere significantly improves their cognitive and mental abilities.^{xxii}
- Breakfast consumption can increase cognitive performance, especially in young children.^{xxiii}

⁸ **Academic Performance Index (API)** is a school-level, summary measure for California schools based on the national percentile ranking of student scores on the *Stanford 9 Achievement Test*.

- Visual perception and spatial memory ability, such as being able to copy an image or memorize the location of items on a map, significantly increased when students had breakfast compared to no breakfast.^{xxiv}
- Results for short-term memory tests were better for students, particularly female students, who ate low glycemic foods⁹, such as oatmeal, for breakfast compared to those who did not eat breakfast.^{xxv}

Attendance and Tardiness

- After the implementation of Classroom Breakfast, schools experience a decrease in tardiness^{xxvi} and improved attendance.^{xxvii}
- After the implementation of the School Breakfast Program, schools experience improvements in attendance.^{xxviii}
- The positive impact of breakfast on nutritional status can decrease rates of illness at school, consequently improving school attendance.^{xxix}

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⁹ **Low glycemic index foods** produce smaller spikes in blood sugar and insulin levels, releasing glucose into the blood more steadily than high glycemic index foods.

References

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