

CHILD NUTRITION POLICY BRIEF

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Nutrition For Learning

Recent scientific research on the link between children's nutrition and academic performance

Recent academic research has found consistent connections among hunger reduction, improved nutrition and children's learning. Many of the most recent studies have focused on the School Breakfast Program.

Missing meals and experiencing hunger impair children's development and achievement

Researchers have documented in the *American Journal of Clinical Nutrition*, *Pediatrics* and the *Journal of the American Academy of Child and Adolescent Psychiatry* the negative effects of hunger on children's academic performance and behavior in school:

- Hungry children have lower math scores and are more likely to have to repeat a grade.
- Behavioral, emotional and academic problems are more prevalent among hungry children.
- Hungry children are more likely to be hyperactive, absent and tardy.
- Children who skip breakfast are less able to distinguish among similar images, show increased errors, and have slower memory recall.

Eating breakfast at school helps children perform better

Researchers have published in the *Archives of Pediatric and Adolescent Medicine*, *International Journal of Food Science and Nutrition* and *American Journal of Clinical Nutrition* the results of studies that found that eating breakfast, especially school breakfast, improves cognitive performance in children:

- Students who eat school breakfast at the start of the school day show a general increase in math and reading scores.
- Students who eat school breakfast more often improve their math grades.
- Children who eat a complete breakfast, versus a partial breakfast, make fewer mistakes and work faster in math and number checking tests.
- Schools that serve breakfast to all students in the classroom show increases in standardized test scores.
- Children who eat breakfast at school – closer to class and test-taking time – perform better on standardized tests than those who skip breakfast or eat breakfast at home.
- Providing breakfast to mildly undernourished students at school improves their speed and memory in cognitive tests.

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School breakfast improves student behavior and learning environments

In studies of school breakfast programs in Minnesota, Massachusetts, Maryland and Rhode Island, scientists have found positive effects on student attendance, behavior, and overall school environments:

- Children who participate in school breakfast have lower rates of absence and tardiness.
- Students who increase their participation in school breakfast exhibit decreased behavioral and psychological problems.
- Students who eat breakfast before starting school have fewer discipline problems and visit school nurses' offices less often.
- Schools that serve breakfast at no cost to all students report improvements in student behavior and attentiveness.

Academic reviews of the scientific research on nutrition and learning show links among hunger, nutrition and learning

Academics from the University of California–Davis and the Center on Hunger and Poverty at Brandeis University have reviewed and analyzed the existing scientific research on the link between nutrition and learning. Research reviews in the *Journal of the American Dietetic Association* and *American Journal of Clinical Nutrition* conclude that there are significant correlations among hunger, nutrition and learning:

- There is a significant correlation between eating in the morning and test results, memory and verbal skills.
- Hungry children perform less well on standardized tests than non-hungry children do.
- Skipping breakfast interferes with students' cognition and learning.