



BREAKFAST FOR LEARNING

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

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Missing breakfast and experiencing hunger impair children

- Children who skip breakfast are less able to distinguish among similar images, show increased errors, and have slower memory recall.¹
- Hungry children have lower math scores and are more likely to have to repeat a grade.²
- Behavioral, emotional and academic problems are more prevalent among hungry children.³
- Hungry children are more likely to be hyperactive, absent and tardy.⁴

Eating breakfast at school helps children perform better

- Students who eat school breakfast at the start of the school day show a general increase in math and reading scores.⁵
- Students who increase their participation in the school breakfast program improve their math grades.^{6,7}
- Children who eat a complete breakfast, versus a partial breakfast, make fewer mistakes and work faster in math and number checking tests.⁸
- Schools that serve breakfast to all students in the classroom show increases in standardized test scores.⁹
- 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.¹⁰
- Providing breakfast to mildly undernourished students at school improves their speed and memory in cognitive tests.¹¹

*Breakfast for Learning**Page 2***School breakfast improves student behavior and learning environments**

- Children who participate in school breakfast have lower rates of absence and tardiness.^{12,13}
- Students who increase their participation in school breakfast exhibit decreased behavioral and psychological problems.¹⁴
- Students who eat breakfast before starting school have fewer discipline problems and visit school nurses' offices less often.¹⁵
- Schools that provide breakfast in the classroom to all students show decreases in tardiness and suspensions as well as improved learning environments.¹⁶
- Schools that serve breakfast at no cost to all students report improvements in student behavior and attentiveness.¹⁷

Academic reviews of the scientific research on nutrition and learning

- There is a significant correlation between eating in the morning and test results, memory and verbal skills.¹⁸
- Hungry children perform less well on standardized tests than non-hungry children do.¹⁹
- Skipping breakfast interferes with students' cognition and learning.²⁰

What researchers say about school breakfast

- "Students require nutrients and energy for concentration on academic tasks.... Breakfast can provide those nutritional necessities and prevent symptoms such as headache, fatigue, restlessness and sleepiness from competing with educational outcomes. We have perhaps always known that breakfast is the most important meal, especially for children, now we have the research to prove it."²¹
- "What we find particularly exciting is that this [school breakfast] is a relatively simple intervention that can significantly improve children's academic performance and... well-being."²²



Breakfast for Learning Endnotes

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- ¹³ Murphy JM, Pagano M, Bishop SJ. "Impact of a Universally Free, In-Classroom School Breakfast Program on Achievement; Results from the Abell Foundation's Baltimore Breakfast Challenge Program." Massachusetts General Hospital, Boston, MA, 2001.
- ¹⁴ Murphy, Pagano, Nachmani, Sperling, Kane, Kleinman, 1998.
- ¹⁵ Minnesota Department of Children and Learning, 1998.
- ¹⁶ Murphy JM et. al., 2001.
- ¹⁷ Murphy, Pagano, Patton, Hall, Marinaccio, Kleinman, 2000.
- ¹⁸ Pollitt E. "Does Breakfast Make a Difference in School?" *Journal of The American Dietetic Association* 1995;95(10):1134-39.
- ¹⁹ Center on Hunger, Poverty and Nutrition Policy. "Statement on The Link Between Nutrition and Cognitive Development in Children." Center on Hunger, Poverty and Nutrition Policy, Tufts University, Medford, MA, 1998.
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