# Studies Relating To The Benefits Of School Meals

### **Better Memory, Cognition and Test Scores**

**Improved School Achievements** A review of 18 studies showed students who ate breakfast consistently showed improvement in verbal fluency, arithmetic, tests of attention, memory, creativity, physical endurance, and general tests of academic achievement and cognitive functioning. - "Nutrition and Student Performance at School." The Journal of School Health 2005

**Improved Standardized Test Scores:** Scores on the Comprehensive Test of Basic Skills improved significantly in schools that had larger participation in their school breakfast programs. -- "School Breakfast Program and School Performance." American Journal of Diseases of Children 1989

**Improved Scores in Language, Reading, Math:** Low-income students in a breakfast test program in the United States improved their combined scores in language, reading and math. --"Breakfast and Cognition: An Integrative Summary." American Journal of Clinical Nutrition 1998

**Improved Math Scores, Participation:** Researchers found students who ate breakfast improved math scores and participated more in class. --"Diet, Breakfast, and Academic Performance in Children." Annals of Nutrition & Metabolism 2002

**Improved Memory, Listening Skills:** A Tufts University study showed elementary school students who ate breakfast listened better and had both better spatial memory and short-term memory than students who skipped breakfast. -- "Effect of Breakfast Consumption on Cognitive Processes in Elementary School Children." Physiology & Behavior 2005

**Improved Vocabulary:** Research from the University of California showed eating breakfast had a significant positive effect on vocabulary test performance. --Food and Nutrition Bulletin 1996

**Skipping Breakfast = Slower Brain Function:** A study conducted by the University of California Davis showed skipping breakfast alters brain function and had an adverse affect on the speed and accuracy with which children were able to retrieve information from memory. -- "Does Breakfast Make a Difference in School?" Journal of the American Dietetic Association 1995

#### **Better Behavior**

**Calmer, More Obedient:** Researchers noted a significant decrease in behavioral "oppositional scores" for students eating school breakfast. "Oppositional scores" measure whether or not students are likely to break the rules, have problems with authority or are quick to anger than most individuals in their age groups. -- "Evaluation of the School Breakfast Program Pilot Project: Findings from the First Year of Implementation." U.S. Department of Agriculture, Food and Nutrition Service 2002.

**Better Behaved:** Researchers found low-income students who ate meals at school were less likely to be hyperactive and had fewer behavioral or attention problems than their hungry peers. -- "Relationship Between Hunger and Psychosocial Functioning in Low-Income American Children." Journal of the American Academy of Child & Adolescent Psychiatry 1998

**Fewer Disciplinary Referrals Needed:** Researchers conclude that classroom breakfast works and that a pilot program in New York resulted in decreased hunger and improvements in factors critical to student learning such as tardiness and disciplinary referral rates. -- "Academics & Breakfast Connection Pilot: Final Report on New York's Classroom Breakfast Project." Nutrition Consortium of New York State. Albany, New York. July 2005.

**Fewer Emotional Problems:** Increased school breakfast participation is associated with fewer emotional or behavioral problems. Teachers at schools that increased participation in their school breakfast programs reported a positive change in student behavior (60%) and improved in student attentiveness (63%). "The Boston Public Schools Universal Breakfast Program: Final Evaluation Report." Massachusetts General Hospital, Boston, MA, 2000

#### **Better Attendance Rates**

**Higher Rates Of Attendance:** Studies show that universal school breakfast program participation is associated with higher rates of attendance and declines in tardiness. "Universal-Free School Breakfast Program Evaluation Design Project. Review of the Literature on Breakfast and Learning. Final Report." Mathematica Policy Research 1999

**Lower Rates Of Tardiness:** Schools with increased participation in school breakfast programs had their proportion of children chronically tardy decreased by 67%. -- "Evaluation of a Universally-Free School Breakfast Program Demonstration Project, Central Falls, Rhode Island," Tufts University, 1996

## Better Health/ Weight

**Lower Obesity Rates:** Girls from "food insecure" households are significantly less likely to become overweight (68 percent) if they participate in school lunch and breakfast programs. -- "Lower Risk of Overweight in School-aged Food Insecure Girls Who Participate in Food Assistance: Results from the Panel Study of Income Dynamics Child Development Supplement." Archives of Pediatric and Adolescent Medicine 2003.

**More Physically Active**: Students who ate breakfast daily were more likely to participate in physical activity three or more times a week than breakfast skippers. --"Smoking, Physical Activity and Breakfast Consumption among Secondary School Students in a Southwestern Ontario Community." Canadian Journal of Public Health 2003

**More Vitamins:** Children who consumed breakfast at school had significantly higher mean daily intakes of energy and protein were more likely to obtain two-thirds of the RDA for vitamins A, E, D, and B6, as well as other minerals than children who did not eat school breakfast. -- "Breakfast Consumption Affects Adequacy of Total Daily Intake in Children." Journal of the American Dietetic Association 1993