Nutrition Reports

Say Yes to School Breakfast

School Breakfast: An Overview

The U.S. Congress, recognizing the link between a healthful diet and children's ability to develop and learn, authorized the creation of the School Breakfast Program (SBP) as a pilot program in 1966 and then as a permanent entitlement program in 1975. The SBP is administered at the federal level by the U.S. Department of Agriculture (USDA) through its Food and Nutrition Service, and at the state level by the state Department of Education or Agriculture. Household income determines whether students receive school breakfasts free, or at a reduced price, or pay full price.

New nutrition standards for school meals, including the SBP, were finalized on January 26, 2012. These healthier meal requirements, which are a key component of the Healthy, Hunger-Free Kids Act of 2010 (Public Law 111-296), are the most comprehensive changes to school nutrition in more than 15 years. The changes are based on recommendations by a panel of experts convened by the Institute of Medicine and on the 2010 Dietary Guidelines for Americans to help combat childhood obesity and the rise in childhood hunger.

The final standards for SB meals, to be gradually implemented over the next few years, help ensure that students are offered both fruits and vegetables every day, increase offerings of whole-grain foods, offer only fat-free (unflavored and flavored) or low-fat (unflavored) milk, limit calories based on children's age, and reduce the amounts of saturated fat, *trans* fat, and sodium. Sample school breakfast menus for students in grades K-5, 6-8, and 9-12 are available on National Dairy Council's website, www.nationaldairycouncil.org/CHILDNUTRITION/Pages/NutritioninSchools.aspx.

Nationally, participation in the SBP has increased over the years, reaching an estimated 12.84 million students in FY 2012, a 57% increase since 2002, according to USDA data. In FY 2012, 84.2% of school breakfasts were served to students eligible for free or reduced-price breakfasts. According to the Food Research and Action Center (FRAC), school breakfast reached two important milestones in 2011-2012. For the first time, more than half (50.4%) of all eligible low-income students who participated in the national school lunch program (NSLP) also participated in the SBP. In addition, more than 90% (91.2%) of schools that offered the NSLP also offered the SBP. Despite this success, the SBP continues to be underutilized. Efforts are underway to reach more and more children, especially eligible low-income children, with school breakfast.

Research suggests that consuming breakfast, particularly school breakfast, contributes to children's nutritional intake, helps alleviate hunger or food insufficiency, may help achieve a healthy body weight, and may improve cognition and academic performance.

Michigan School Breakfast Stats for the School Year 2011-2012

- 51.7% of low-income students who participated in the NSLP also participated in the SBP.
- 86.7% of schools that offered the NSLP also had a SBP.
- On an average school day, 373,378 Michigan students participated in the SBP. Of these, 84.8% received free or reduced-price breakfasts.

USDA, Food and Nutrition Service. School Breakfast Program. http://www.fns.usda.gov/cnd/Breakfast/Default.htm.
USDA, Food and Nutrition Service. Nutrition Standards in the National School Lunch and School Breakfast Programs: Final Rule. Federal Register 77 (17): 4088-4167, 2012.
USDA, Food and Nutrition Service. Discover School Breakfast Toolkit. http://www.fns.usda.gov/cnd/Breakfast/toolkit/Default.htm.
Food Research and Action Center (FRAC). School Breakfast Scorecard. School Year 2011-2012. January 2013. http://frac.org/pdf/Scorecard_SY2011-2012.pdf.

The United Dairy Industry of Michigan is the umbrella organization for Dairy Council of Michigan and the American Dairy Association of Michigan. These non-profit organizations provide nutrition education services and dairy product promotion.

Consuming Breakfast Helps Improve Kids' Nutrient Intake

Breakfast is labeled as the most important meal of the day, in part because of its nutritional benefits. Unfortunately, many children skip this morning meal.

Numerous studies support breakfast's positive effect on children's overall nutrition. Children who participate in the SBP are more likely to consume diets that meet or exceed standards for key nutrients needed for their health and development than their breakfast-skipping peers. A USDA systematic review of 11 studies found that children who consumed breakfast on a daily basis consistently had higher intakes of a number of nutrients, including dietary fiber, several vitamins, calcium, phosphorus, magnesium, potassium, and iron, among others. Children who skip breakfast generally have lower intakes of many nutrients compared to those who regularly consume breakfast. Further, these missed nutrients are rarely made up for at other meals during the day.

Consuming a healthful breakfast as provided by the SBP can help increase children's and adolescents' intake of four nutrients of concern identified by the 2010 Dietary Guidelines for Americans. Dairy foods such as milk provide three of these nutrients (calcium, vitamin D, potassium), while whole grains, fruits and vegetables provide fiber.

The new school meal standards allow fat-free flavored milk to be offered in the SBP. Just like white milk, flavored milk such as chocolate milk provides nine essential nutrients for children's growth and development: calcium, potassium, phosphorus, protein, vitamins A, D, and B-12, riboflavin, and niacin (niacin equivalents). In recent years, the dairy industry has proactively reformulated flavored milk to meet children's tastes and nutrient needs. See Nutrition Reports No. 2, 2012 "Rethink Chocolate Milk" for more information.

Bhattacharya, J., J. Currie, and S.J. Haider. Breakfast of champions? The School Breakfast Program and the nutrition of children and families. J. Hum. Res. 41: 445-466, 2006.
USDA Center for Nutrition Policy and Promotion. Breakfast Consumption, Body Weight, and Nutrient Intake: A Review of the Evidence. Nutrition Insight 45, November 2011. http://www.cnpp.usda.gov/Publications/NutritionInsights/Insight45.pdf.
Deshmukh-Taskar, P.R., T.A. Nicklas, C.E. O'Neil, et al. The relationship of breakfast skipping and type of breakfast consumption with nutrient intake and weight status in children and adolescents: The National Health and Nutrition Examination Survey 1999-2006. J. Am. Diet. Assoc. 110: 869-878, 2010.
Rampersaud, G.C., M.A. Pereira, B.L. Girard, et al. Breakfast habits, nutritional status, body weight, and academic performance in children and adolescents. J. Am. Diet. Assoc. 105: 743-760, 2005.

School Breakfast Decreases Risk of Food Insecurity

Far too many children live in food insecure households - households lacking assured access to sufficient food for health and an active lifestyle. As a result, many children are at risk of starting their day hungry. In 2011, almost one in four children in the U.S. – 22.4% or 16.6 million children – lived in food insecure households, according to USDA data.

In children, food insecurity is associated with a wide range of adverse effects on growth, development, behavior, and learning. Studies of school children with insufficient food reveal poorer class performance, more days of school missed, and a decline in academic achievement.

Participating in the SBP can potentially reduce the risk of hunger and food insecurity. Decreased symptoms of hunger have been reported in students whose nutrient intake improved as a result of participating in a SBP offered free to all students. A study of low-income third-grade students found that increasing the availability of school breakfast decreased risk of marginal food insecurity and breakfast skipping. The researchers concluded that "increasing the availability of school breakfast may be an effective strategy to maintain food security among low-income households with elementary school children."

In Michigan, poverty affected 24.8% of children in 2011, and 42.8% of children were below 185% of the poverty level, making them income-eligible for free or reduced-price breakfasts.

Food Research and Action Center. Hunger and Poverty 2011. September 2012. http://frac.org/reports-and-resources/hunger-and-poverty/.
Taras, H. Nutrition and student performance at school. J. Sch. Health 75: 199-213, 2005.
Kleinman, R.E., H. Green, D. Korzec-Ramirez, et al. Diet, breakfast, and academic performance in children. Ann. Nutr. Metab. 46 (suppl.1): 24-30, 2002.
Bartfeld, J.S., and H.-M. Ahn. The school breakfast program strengthens household food security among low-income households with elementary school children. J. Nutr. 141: 470-475, 2011.

Breakfast Linked to Reduced Childhood Obesity

Approximately one-third of American children and adolescents are overweight or obese, which can increase their risk of preventable chronic diseases such as type 2 diabetes. Some short- and long-term studies in kids have shown that regularly consuming breakfast is associated with a lower body mass index (BMI), which is an indicator of excess body fat; lower waist circumference; and less likelihood of being chronically obese compared to breakfast skippers. Participation in school breakfasts is linked to lower BMI and risk of obesity. A systematic review of 15 studies by USDA found that breakfast intake was associated with lower body weight in children in the majority of studies examined. Other studies associate skipping breakfast with increased risk of obesity in children and adolescents.

A recent pilot study in 28 children aged 9 to 13 years found that both the frequency and composition of breakfast have important implications for the risk of obesity and type 2 diabetes. The researchers suggested that daily breakfast consumption of fiber-and nutrient-rich grains, fruit, and low-fat dairy may favorably affect appetite control and blood sugar control, thereby reducing risks of obesity and type 2 diabetes. Because many children, and especially adolescents, skip breakfast, health professionals and parents should encourage healthful breakfast habits among youth, a population group whose behavioral patterns are developing.

The 2010* Dietary Guidelines for Americans *encourages children and adults to eat a nutrient-dense breakfast every day to help manage body weight and meet nutrition recommendations.

Ogden, C.L., M.D. Carroll, L.R. Curtin, et al. Prevalence of high body mass index in US children and adolescents, 2007-2008. JAMA 303: 242-249, 2010.
Food Research and Action Center. Breakfast for Health. Fall 2011. http://frac.org/wp-content/uploads/2011/08/breakfastforhealth.pdf.
Deshmukh-Taskar et al. 2010. Ibid.
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Pereira, M.A., E. Erickson, P. McKee, et al. Breakfast frequency and quality may affect glycemia and appetite in adults and children. J. Nutr. 141: 163s-168s, 2011.

Fueling Kids' Academic Performance with Breakfast

The influence of breakfast on children's cognition and academic performance has been investigated for decades. In general, studies show that consuming a healthful breakfast is one of the best ways to fuel kids' brains and positively impact their academic performance.

Some studies in children, especially nutritionally at-risk children, show that consuming school breakfast is associated with higher math and verbal fluency scores and better performance on standardized tests, as well as improved memory, concentration, alertness, attention, comprehension, and problem solving. In addition, consuming school breakfast is associated with reduced absenteeism, tardiness, depression, anxiety, and visits to the school nurse – behavioral and emotional factors that can influence children's ability to learn.

An emerging body of research is documenting why consuming breakfast is a key to students' cognitive functions. Advances in neuroscience indicate that specific nutrients affect molecular and cellular processes in the brain, which influence cognitive functions. A recent study in school-aged children found that neural network activities in the brain involved in mathematical thinking were different between breakfast eaters and breakfast skippers. Compared to children who ate breakfast, breakfast skippers made significantly more math errors, and brain wave frequencies showed that greater mental effort was needed to solve simple arithmetic problems.

Knowledge of breakfasts' cognitive and academic benefits for children is one more reason why efforts are being made to ensure that all children have an opportunity to start the school day with a healthful breakfast.

Food Research and Action Center. Breakfast for Learning. Fall 2011. http://frac.org/wp-content/uploads/2009/09/breakfastforlearning.pdf.
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Basch, C.E. Breakfast and the achievement gap among minority youth. J. Sch. Health 81: 635-640, 2011.
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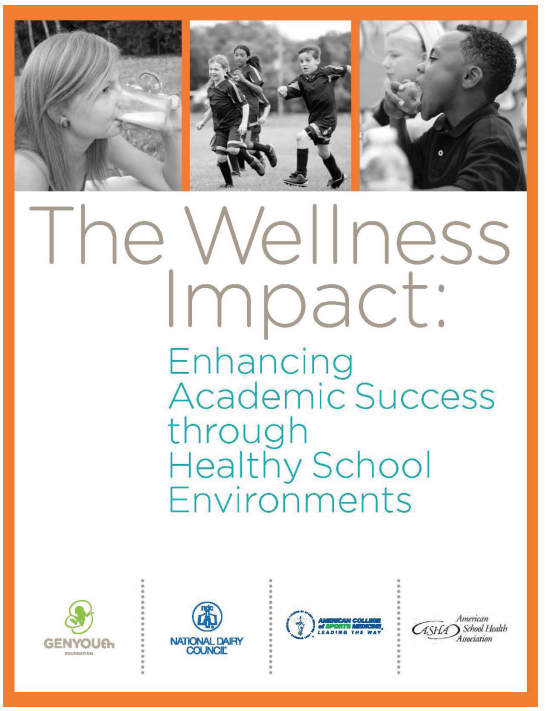
Strategies to Increase School Breakfast Participation

Increasing participation in the SBP helps to reduce hunger and support the health and educational potential of children, particularly low-income children. While significant progress has been made in recent years to expand SBP participation, opportunities exist to accelerate growth. These include alternative service approaches such as offering breakfast in the classroom, or providing "grab and go" breakfasts to be eaten on the go or on the bus, or giving students (usually middle or high school) the opportunity to eat breakfast after first period. Offering breakfast free to all students, especially in schools with many low-income children, can increase SBP participation.

Schools participating in the Fuel Up to Play 60 (FUTP 60) program are identifying and implementing strategies to increase SBP participation such as offering breakfast at new times and locations in school, including new healthy foods that appeal to students, and conducting student-led promotions encouraging breakfast access and consumption. FUTP 60, which is offered in more than 73,000 schools with a potential reach of 38 million students nationwide, is an in-school nutrition and physical activity program created by National Dairy Council and the National Football League in cooperation with USDA. When the FUTP 60 team at a Michigan middle school began to deliver breakfast to the classroom on rolling carts, student breakfast participation nearly tripled.

Food Research and Action Center (FRAC). School Breakfast Scorecard. School Year 2011-2012. January 2013. http://frac.org/pdf/Scorecard_SY2011-2012.pdf.
School Nutrition Foundation. Breakfast in the Classroom Toolkit. http://docs.schoolnutrition.org/SNF/BIC/
Fuel Up to Play 60. Expanding Breakfast. http://school.fueluptoplay60.com/tools/nutrition-education/view.php?id=23965654.

New Report Highlights School Breakfast's Positive Impact on Children's Nutrition & Learning



"Of all the steps schools can take toward creating healthier, higher-achieving students – and a culture of wellness in schools – implementing school breakfast is perhaps the simplest and most cost-effective, with very possibly the most direct impact," states a new report, *The Wellness Impact: Enhancing Academic Success through Healthy School Environments* (www.genyouthfoundation.org).

This report, released by the GENYOUth Foundation, National Dairy Council, American College of Sports Medicine, and the American School Health Association, reinforces the "learning connection" – the crucial link between quality nutrition, including breakfast, physical activity, and academic performance.

The report is a call to action to engage schools and communities (e.g., health professionals, parents, etc.) to work together to create change in the school environment to positively impact students' nutrition, including breakfast, physical activity, and ability to learn.

Healthy students are better students. Research shows that improved nutrition, daily breakfast, and increased physical activity can lead to improved academic performance.

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Dairy Council of Michigan
United Dairy Industry of Michigan
2163 Jolly Road, Okemos, MI 48864-3961
www.udim.org

Author/Editor: Lois D. McBean, M.S., R.D.
Design: Emma Bumstead

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