

**Comparison of NSLP Lunches and Lunches Brought
from Home in Four Elementary Schools Receiving
HealthierUS School Challenge Awards**



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**National Food Service Management Institute
The University of Mississippi**

Building the Future Through Child Nutrition

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The purpose of the National Food Service Management Institute is to improve the operation of child nutrition programs through research, education and training, and information dissemination.

MISSION

The mission of the National Food Service Management Institute is to provide information and services that promote the continuous improvement of child nutrition programs.

VISION

The vision of the National Food Service Management Institute is to be the leader in providing education, research, and resources to promote excellence in child nutrition programs.

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**COMPARISON OF NSLP LUNCHEAS AND LUNCHEAS BROUGHT FROM HOME IN
FOUR ELEMENTARY SCHOOLS RECEIVING
HEALTHIERUS SCHOOL CHALLENGE AWARDS**

EXECUTIVE SUMMARY

The United States Department of Agriculture (USDA) oversees the National School Lunch Program (NSLP), and in doing so is able to provide meals to students who may not otherwise have access to a complete meal during the school day (USDA, 2012d). A primary goal of the NSLP has always been to level the field of success for school children of varying backgrounds by providing foods necessary for proper growth and development (Stitzel, 2004). Insufficient nutritious foods in the proper proportions, or “under nutrition,” and the over consumption of some nutrients, or “over nutrition,” are major concerns for the health of American youth for reasons pertaining to short- and long-term health, wellness, growth, and success. Both under nutrition and over nutrition bear a heavy burden on the health of children. The NSLP is one way the USDA works to improve the integrity of child nutrition in the United States (US).

National School Lunch Program meals are an opportune place to address the nutrition-related health concerns that plague US children, and it is important those meals meet the nutritional needs of students. Since the inception of the NSLP in the 1940s, policies have been enacted to improve the quality of meals served in schools (Stitzel, 2004). In 2011, thirty-one million children ate NSLP lunch each school day (USDA, 2012d). Because of the numbers of students who consume NSLP lunch daily, experts in the field of health and nutrition believe that school meals are advantageous places to address malnutrition-related health issues facing US children. The Academy of Nutrition and Dietetics has published position papers that

state continued importance of support for the government sponsored NSLP to fight malnutrition in American children and also calls for those meals to meet Dietary Guidelines for Americans (Stang, 2010).

Not all students eat NSLP meals. Some students eat packed lunches brought from home (LBFH). Very few studies give insight into the nutritional quality of lunches the children bring from home compared to NSLP meals.

In addition to implementing more strict standards for target nutrients in school meals served to students through the NSLP, the USDA has developed a voluntary program for schools to implement in an effort to address school-related activities that can contribute to wellness. The HealthierUS School Challenge (HUSSC) encourages schools to promote healthy lifestyles by encouraging participation in the NSLP. The HealthierUS School Challenge also encourages serving more whole grains, fruits, and vegetables during meals, as well as enacting a curriculum that includes nutrition education, physical education, and wellness policies that promote healthy eating and exercise behaviors (USDA, 2012b). The HealthierUS School Challenge has specific menu requirements for NSLP meals. These include serving foods that meet current standards but also have less added sugar, fat and sodium (USDA, 2012b). Schools participating in HUSSC also make efforts to increase students' physical activity and focus on school-wide wellness standards and goals (USDA, 2012b).

The purpose of the current investigation was to compare the nutritional content of lunches brought from home (LBFH) and lunches served in school as part of the NSLP in elementary schools that earned HUSSC awards. Lunches served and lunches consumed were considered separately.

Results were based on the nutrient content of 1,085 lunches from 560 individual students in four HUSSC schools. In addition, demographic data for 759 of these lunches was obtained (354 from NSLP and 404 LBFH).

Chi-squared tests indicated a statistically significant difference ($p < 0.05$) between the sex of a student and where they obtained their lunch. Of the meals examined, a majority of LBFH (64.9%) were brought by females, whereas a majority of NSLP meals (64.9%) were eaten by males.

For lunches served, two sample t -tests revealed that several differences were statistically significant ($p < 0.05$). Lunches obtained from the NSLP contained more of the following nutrients compared to LBFH: protein, calcium, cholesterol, iron, sodium and Vitamin C. However, lunches obtained from the NSLP contained less of the following nutrients: food energy, percentage of calories from total fat, percentage of calories from saturated fat, carbohydrates, and fiber. Similarly for lunches consumed, these same differences were found to be statistically significant ($p < 0.05$) with the addition of the fact that lunches obtained and consumed from the NSLP contained more Vitamin A than LBFH.

When considering both lunches served and consumed independently, Chi-squared tests indicated a statistically significant ($p < 0.05$) difference between the percent of NSLP meals and LBFH that met the various School Meal Initiative (SMI) guidelines. National School Lunch Program meals met guidelines for lunches both served and consumed more often for the percentage of calories coming from total fat, protein, calcium, iron, and Vitamins A and C. Lunches brought from home met guidelines more often for food energy both served and consumed.

A relatively low percentage of all served lunches, whether NSLP or LBFH, met all the SMI nutrient standards. Moreover, an even lower percentage of lunches consumed met the standards. Nonetheless, NSLP lunches tend to meet the SMI standards more often than LBFH.