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# A Healthy School Meal Environment

## Food Assistance Research Brief

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**Issue:** A “healthy school meal environment” not only gives students opportunities to make healthy meal choices but also encourages them to do so. The extent to which a healthy school meal environment affects the success of USDA’s school meals programs is currently a subject of debate. The policy strategies that can be used to encourage such an environment for the National School Lunch Program (NSLP) and the School Breakfast Program (SBP) also are subjects of debate.

Environmental factors considered to be important include: (1) the nutritional quality, variety, and acceptability of program meals; (2) meal scheduling; (3) nutrition education; and (4) sales of non-USDA (“competitive”) foods. Other factors contributing to an overall healthy nutrition environment in the school include a commitment to physical activity, and promotion of healthy eating and physical activity. This issue brief reviews information on the first three of these school meal environment factors. Competitive foods are discussed in a separate issue brief.

**Background:** In fiscal year 2001, USDA school meals programs provided more than 6 billion lunches, breakfasts, and after-school snacks to over 27 million children, at an annual cost of about \$7.9 billion. In 1995, the School Meals Initiative modernized nutrition standards for these programs, limiting fat and saturated fat in meals for the first time. USDA’s Food and Nutrition Service (FNS) indicates the fat and saturated-fat content of the average school lunch has declined since this initiative, but is still above standards. Concerns about the increase in the number of overweight and obese children in the United States and the number of children falling short of dietary guidelines have increased interest in the programs.

Program funding covers cash reimbursements to schools for providing free or reduced-price meals, a small reimbursement for full-price meals, and the value of commodity foods donated by USDA. Besides meeting nutrient

standards, participating schools must comply with other regulatory restrictions. These include limits on how early or how late school lunches may be served, and some limits on sales of foods of minimal nutritional value during meal times in participating schools. However, many aspects of the school meal environment are subject to local control.

**Findings:** An Economic Research Service report summarized the following potential improvements to the school meal environment, and suggested some approaches to improvement. While these approaches may increase NSLP quality and/or acceptance, their effects and costs need further study.

### Improving Quality, Variety, and Acceptability of Program Meals

The more attractive school meals are to children, the more likely they are to eat them. Of particular importance is encouraging consumption of fruits, salad, and other vegetables served with the meals. These foods are underconsumed by American children compared with the USDA Food Guide Pyramid recommendations, and are also the components of USDA school meals most likely to be discarded uneaten by children (plate waste). ERS reviewed several strategies for increasing the appeal of school meals to children. Among the most promising are:

**(1) Increasing choices and student input into food-service decisions.** Offering more food choices may increase acceptance of healthful foods. When Oregon school nutrition staff developed a “Food Pyramid Choice Menu” that features six or more fruit and vegetable choices, daily food waste decreased by as much as 36 percent in participating school districts and students ate more fruits, vegetables, and grains.

“Seek[ing] student opinions regularly about menus” was the second most frequent recommendation from cafeteria managers to reduce plate waste in a 1996 General Accounting Office (GAO) survey. Studies

where students participate in menu selection also support this.

**(2) Improving the selection of USDA-donated commodities.** The GAO study found that 71 percent of school cafeteria managers “wanted all or almost all of the different commodities received,” but wanted greater quantities and variety. One study found that increasing the amount of fresh produce made available to schools decreased plate waste.

**(3) Increasing use of produce and local foods, and improving preparation.** Case studies of “farm-to-school” programs suggest that using local fresh foods increases school meal participation and consumption of salad and other vegetables, the food categories most likely to be wasted. USDA initiatives that facilitate increased produce use include the “farm-to-school” initiative, the Fruit and Vegetable Pilot Program, and joint collaborations with the Department of Defense.

Research also suggests that instituting food preparation training programs can improve meal quality, though it may also increase operating and purchasing costs.

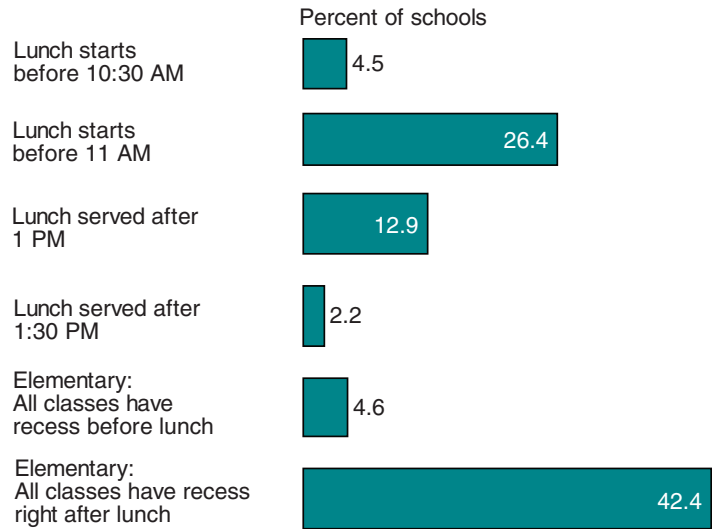
**Improving Scheduling**

Meals scheduled before recess encourage students to rush meals. Several studies, while geographically limited, consistently reported that plate waste was lower when lunch was scheduled after recess, a result supported by observations of school cafeteria managers (fig. 2). Yet over 40

percent of elementary schools in a national study scheduled recess immediately after lunch (Wechsler et al.) (fig. 1).

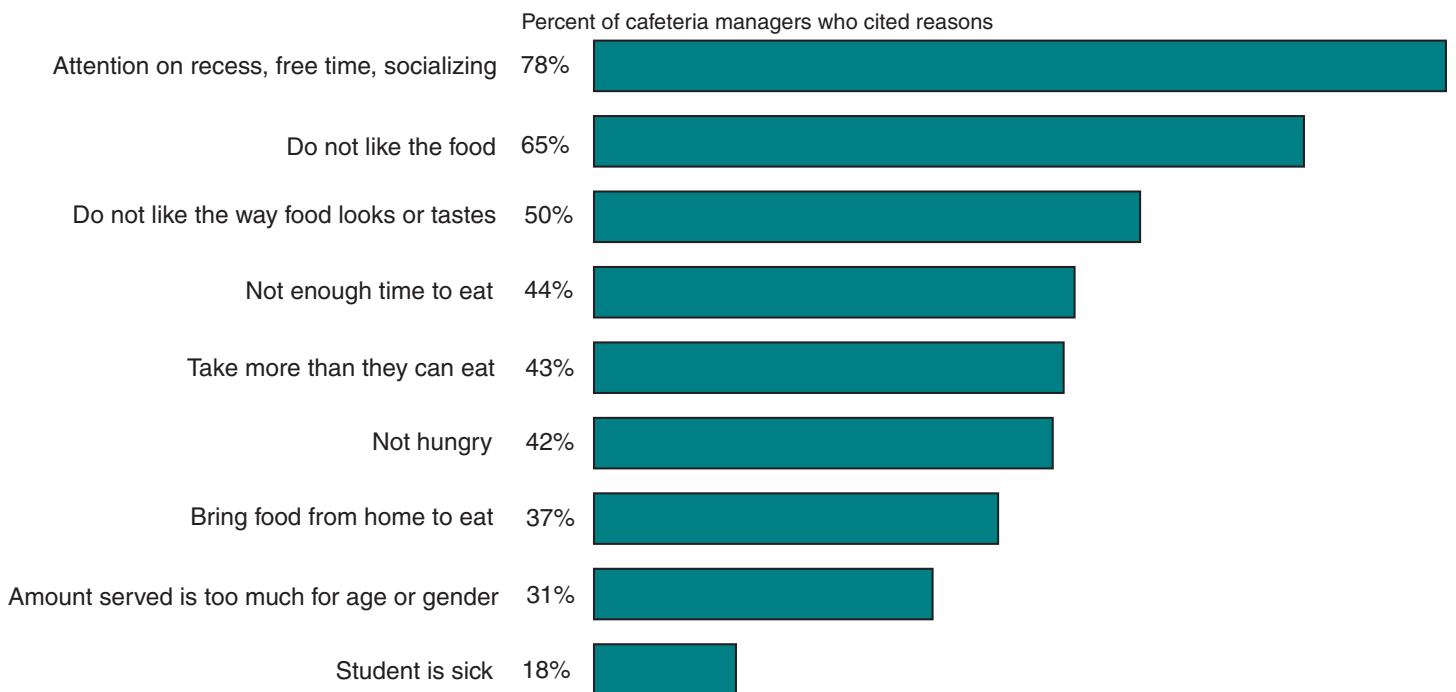
Meals served very early or late, long lines, and inadequate time to eat have also been raised as problems, but there are no conclusive data on their effects. Forty-two percent of NSLP cafeteria managers cited children being “not hungry” as a reason for plate waste in a 1996 GAO survey (fig. 2).

**Figure 1. Few schools have early or late lunch but many have recess right after lunch**



Source: Wechsler et al., 2001.

**Figure 2. Reasons for plate waste cited by cafeteria managers**



Source: GAO's analysis of survey data, July 1996.

Only 20 percent of schools offer less than 20 minutes for lunch after seating, while time use studies suggest that students spend only 8 minutes actually eating. However, students may avoid long lines even if the time to eat once seated is adequate. Only 3 percent of cafeterias nationally were above capacity, but some cafeterias may appear to be less crowded because students have already found other meal options.

### Providing Effective Nutrition Education

Several studies show that nutrition education can maintain participation as nutritional quality of meals improves (e.g. lower fat offerings). Coordinating nutrition education with foods offered at school is particularly effective. USDA's Team Nutrition program provides technical assistance, training, and resources, including a tool kit for local action called Changing the Scene (FNS, 2000). In 1996, the Team Nutrition Pilot project showed that Team Nutrition participation increased the skill-based knowledge and motivation to eat healthier among fourth grade students and provided positive impacts in the diversity of food items and food groups tasted (FNS, 1998).

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