

Institute of Medicine. 2009. *School Meals: Building Blocks for Healthy Children*. Washington, DC: The National Academies Press



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Background

Federally subsidized and regulated school lunches have been offered in U.S. schools since their inception in 1946 when they were authorized “as a measure of national security, to safeguard the health and well-being of the Nation’s children and to encourage the domestic consumption of nutritious agricultural commodities and other food” (National School Lunch Act, P.L. 79-396, Stat. 281; June 4, 1946). Recognizing the importance of school meals to the overall health and academic success of school children, Congress officially expanded the school meal program in 1975 to include breakfasts. Today, the USDA estimates that >10 and 30 million school children take advantage of school breakfast and lunch offerings, respectively. However, as nutrition challenges have shifted from deficiencies to caloric overconsumption and unbalanced nutrient intake patterns over the past century, the “ideal” nutrient composition of school meals has also changed.

Committee charge

In response to ever-evolving knowledge about optimal nutrition during childhood coupled with the nation’s burgeoning childhood obesity rates, Congress passed the Child Nutrition and WIC Reauthorization Act (2004), which required the USDA to issue new guidance and regulations for the nation’s school nutrition programs. The USDA, in turn, sought the assistance of the Institute of Medicine (IOM) to accomplish this important and rather broad task. In response, the committee on Nutrition Standards for National School Lunch and Breakfast Programs was assembled, with Dr. Virginia Stallings of the Children’s Hospital of Philadelphia as its chair. The overall goals of the committee were to develop a set of well-conceived, practical, and economical recommendations for standards that reflect current nutritional science, increase the availability of key food groups as appropriate, and allow the national school meal programs to better meet the nutritional needs of children.

The report

The final report of the committee, published in October, 2009, was heavily based on the scientific guidance provided in the 2005 Dietary Guidelines for Americans and the IOM’s Dietary Reference Intake books. In its report, the committee put forth 6 overarching recommendations, which are summarized here.

Recommendation 1. “Nutrient Targets” instead of the previously used “Nutrition Targets” should be adopted as the scientific basis for setting standards for overall menu planning. This would require

menus to provide set targets (both minimums and maximums) for 24 nutrients and other dietary components (such as energy) based on age-appropriate dietary intake goals. Despite concern about overconsumption of calories, the committee recommended that the upper limit for total fat be increased from 30 to 35% of calories to align more precisely with both IOM and Dietary Guidelines recommendations. Nutrient Targets for protein and selected vitamins and minerals were set using the IOM’s Estimated Average Requirements, Adequate Intake levels, and Estimated Energy Requirements. The committee concluded that this approach would meet the needs of more children than would past approaches while not exceeding the Tolerable Upper Intake Level of most nutrients.

Recommendation 2. New standards should be adopted that increase the amounts of fruits, vegetables, and whole grains while reducing saturated fats and sodium. For instance, and in contrast to current guidelines that treat fruits and vegetables interchangeably, the committee recommended separate and distinct amounts of fruits and vegetables to be served over the course of a week. Vegetable subclasses were also designated. As an example, they recommend that 2.5 cups of fruits and 3.75 cups of vegetables be served to grades K-5 in school lunches each week; of the vegetables, 0.5, 0.5, 0.5, 1, and 1.25 cups should be of the dark green, orange, legumes, starchy, and “other” varieties, respectively. Other specifications within this recommendation were related to simultaneously increasing whole grains while decreasing refined grains; limiting the percent of calories from saturated fats to 10%; gradually decreasing the sodium content of food over the next 10 y; and allowing only foods that claim “zero grams of *trans* fatty acids per serving” on their Nutrition Facts labels.

Recommendation 3. To help reduce waste while preserving the nutritional integrity of school meals, the committee urged federal, state, and local authorities to coordinately weigh the strengths and limitations of 2 options related to both the number of fruits and vegetables that may be declined and the number that must be taken. Both options require students to take at least 1 fruit (or juice) at breakfast and 1 fruit or vegetable at lunch. The options differ, however, in the number of items that may be declined. The committee’s preferred option would require children to take at least 1 fruit or juice selected from at least 2 choices at breakfast and select 1 fruit or vegetable from at least 3 items offered at lunch. The report reminds us that foods must be appealing to students to encourage their selection and consumption.

Recommendations 4–6. These recommendations are related to the implementation and continued monitoring of how well the new nutrient targets and meal requirements meet their goal of providing optimal nutrition to the nation’s youth. Emphasis is placed on engagement of the school community, active involvement of stakeholders such as students and their parents, training and mentoring of food service workers, and the provision of adequate technical and financial assistance.

Summary

The recommended changes in standards for menu planning put forth by the IOM, if effectively implemented, would substantially improve the alignment of school meals with current science-based

nutrition recommendations. Specifically, they would moderate energy intake, encourage greater fruit and vegetable consumption, provide additional whole grains and fewer refined grains, limit saturated and *trans* fats, and gradually reduce sodium intake levels to those recommended by leading nutrition authorities. Stallings concludes, “Since the school meal programs were last updated, we’ve gained greater understanding of children’s nutritional needs and the dietary factors that contribute to obesity, heart disease, and other chronic health problems. The changes recommended in this

report are needed to assure parents that schools are providing healthful, satisfying meals.”

Copies of the full report are available for purchase at http://www.nap.edu/catalogue.php?record_id=12751; a free full version, summary version, and podcast of this report are available at http://www.nap.edu/openbook.php?record_id=12751&page=1. The Child Nutrition and WIC Reauthorization Act of 2004 (Public Law 108–265) can be found at http://www.fns.usda.gov/cnd/governance/legislation/historical/pl_108-265.pdf.