

Nutrition Education in Schools

This paper is part of a series of nutrition policy profiles prepared by Prevention Institute for the Center for Health Improvement (CHI).

Background

The goal of nutrition education is to motivate participants to eat a healthy diet. Children are a very important audience for nutrition education because a healthy diet is essential for their normal growth and development, and because children are establishing food patterns that carry into adulthood. Good nutrition promotes not only better physical health and reduced susceptibility to disease, but has also been demonstrated to contribute to cognitive development and academic success.¹ Left to their own devices, children will not automatically select healthy foods. Their innate preference for sweet foods makes them particularly vulnerable to the highly sugared cereals, soda, and candy that are marketed to them virtually from birth.² In order to develop lifelong healthy eating patterns, children need to be introduced to a variety of nutritious foods in a positive manner.

Schools are potentially excellent settings for nutrition education. Virtually all children attend school every weekday and consume at least one or two meals daily on school grounds. The school environment can strongly influence children's eating behaviors, whether through the examples provided by teachers and other adults, the food served in the cafeteria and classroom, or through exposure to peer habits. Effective nutrition education helps shape these environmental factors and assists students in developing the skills needed to select healthy diets.

Policy

Include comprehensive nutrition education as a mandatory subject in the school curriculum.

Given that eating habits have a profound impact on health in childhood and adulthood, schools provide a logical venue for ensuring that nutrition education reaches all school-age children. There are many examples of nutrition education programs that have been successfully introduced in schools. The two programs presented here have been well evaluated and have demonstrated to have a positive impact on children's eating.

The Child and Adolescent Trial for Cardiovascular Health (CATCH) program introduced a three-year nutrition education and physical activity program in 56 elementary schools in California, Louisiana, Minnesota, and Texas.³ Teachers trained in the CATCH curriculum taught 5,100 ethnically diverse third graders the *Adventures of Hearty Heart and Friends* for five weeks. This was followed by the *Go for Health* curriculum, which was taught to fourth graders for twelve weeks and fifth graders for eight weeks, and was aimed at reducing fat and sodium consumption. The curricula "targeted specific psychosocial factors" and involved skill building related to eating behaviors and physical activity patterns.⁴ Classroom nutrition education was supported by Eat Smart training for school food service aimed at reducing fat and sodium content of school meals.

The St. Paul Public School District in Minnesota utilized the 5-a-Day Power Plus curriculum to promote at least five servings of fruits and vegetables a day among multi-ethnic fourth and fifth graders.⁵ The program was developed and tested in the school district by the State Health Department in collaboration with the University of Minnesota as part of a four-year research study funded by the National Cancer Institute (grant #R01 CA59805). The 16-lesson curriculum at each grade level is behaviorally oriented, with students setting goals for fruit and vegetable consumption throughout the 8-week program period. Students work in teams on fun group activities to build skills for eating fruits and vegetables and receive peer recognition for their team and individual achievements. The curriculum includes weekly classroom snack preparation and tasting activities to increase exposure to fruits and vegetables and build preparation skills. Students are also given activity and information packets to bring home to parents. The classroom curriculum is supported by a food service component that increases the choice, availability, and appeal of fruits and vegetables served in school lunches. The Minneapolis School District is currently offering the curriculum in 80 fourth grade classrooms according to Gretchen Taylor, MPH, RD (personal communication, February 2001). Teachers register to receive training in the 5-a-Day Power Plus curriculum, and the district provides funding for the curriculum materials and food (via food service) for classroom education.

Effectiveness

Both the CATCH and 5-a-Day Power Plus programs improved children's eating habits.^{6,7} After three years of nutrition education, CATCH students decreased their reported daily intake of fat calories from 33 percent to 30 percent. This difference was maintained in a three-year follow-up study. The proportion of calories from fat in school lunches also decreased significantly from 39 percent to 32 percent. Among students participating in the 5-a-Day Power Plus program, fruit and vegetable consumption increased by more than a half serving per day, on average. In addition, the amount and variety of fruits and vegetables in the school cafeteria increased.

These results demonstrate that nutrition education plays an important role in an overall strategy for improving children's eating habits. To be effective, classroom education needs to occur in conjunction with a school breakfast and lunch program that exemplifies the lessons being taught. A well-designed curriculum should focus on developing skills in food selection and preparation rather than just imparting information about the relationship between diet and health. Information must be suited to the developmental stage of the children and provide numerous, graduated educational lessons. Currently, most students receive nutrition education based on the particular interest of their teachers. The National Association of State Boards of Education has developed a model policy for integrating nutrition education into school health curricula and a coalition in California has produced a position paper on providing school-based nutrition education through the Health School Environment Policy and Community Action Summit.^{8,9}

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- ⁹ *Providing School-Based Nutrition Education*. Policy issue paper presented at: Healthy School Environment Policy and Community Action Summit; September 27-28, 2000; Sacramento, Calif.