

Title of Intervention: Changing School Food Service to Improve Cardiovascular Health

Intervention Strategies: Environments and Policies

Purpose of the Intervention: To decrease sodium and modify fat composition of foods

Population: High school students

Setting: Food service departments of boarding schools located in Exeter, New Hampshire and Andover, Massachusetts; school-based

Partners: School administrators, school physician, science faculty, and food service management

Intervention Description:

- Environments and Policies: The food service department purchased reduced-sodium products, such as: cheese, processed meats, salad dressing and snack foods. Production staff was instructed to use 50-100% less salt when preparing cooked foods, salad bar items, and baked products. High-sodium seasonings and flavorings used in recipes were also decreased in amount. Sodium-free spices and seasonings, as well as reduced-sodium condiments, were utilized to enhance flavor. Later in the intervention, foods were produced in a manner in which polyunsaturated fats replaced part of the saturated fat.

Theory: Not mentioned

Resources Required:

- Staff/Volunteers: Production staff
- Training: Not mentioned
- Technology: Food Finder nutrient analysis program
- Space: Food production area
- Budget: Not mentioned
- Intervention: Reduced-sodium and sodium-free food items, modified recipes
- Evaluation: Food diaries, surveys, materials to measure blood pressure, trained dietitian

Evaluation:

- Design: Concurrently controlled, longitudinal investigation
- Methods and Measures:
 - 24-hour food diaries
 - Analysis of food diaries and recipes
 - Palatability surveys to assess student acceptance of the modified foods
 - Each student measured his/her own blood pressure each week during the laboratory period

Outcomes:

- Short Term Impact: Not measured
- Long Term Impact: Changes in food production greatly reduced students' sodium and saturated fat intake as well as increased polyunsaturated fat intake. The change in sodium intake over a school year resulted in lower blood pressure among students receiving the intervention.

Maintenance: Not mentioned

Lessons Learned: School food service departments can learn methods to purchase and prepare foods that contain considerably less sodium and saturated fat. These practices can also result in significant changes in the nutrient intake and diet risk factors of students. It is also anticipated that education programs directed at students and parents to modify the diet outside of school could lead to even larger changes.

Citation(s):

Ellison, R. C., A. L. Capper, et al. (1989). "The environmental component: changing school food service to promote cardiovascular health." *Health Educ Q* 16(2): 285-97.