



# RESEARCH CAPSULE

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### WELLNESS POLICIES

#### AT A GLANCE

*The Child Nutrition and WIC Reauthorization Act of 2004 contains a provision that mandates the implementation of a wellness policy in every school district that participates in federal school meal programs by the first day of the 2006-07 school year. This Research Capsule identifies the components of quality wellness programs and provides guidelines for implementing these programs. A summary of research findings on the implementation and impact of wellness programs and a description of Miami-Dade County Public Schools' local wellness policy are included. Finally, a list of resources is provided to assist district and school staff with the design and implementation of wellness policies and programs.*

#### INTRODUCTION

On June 30, 2004, the Child Nutrition and WIC Reauthorization Act of 2004 (Section 204 of Public Law 108-264) was signed into law. The law contains a wellness policy provision that requires every school district participating in federal school meal programs to enact a wellness policy by the first day of the 2006-07 school year. The legislation states that schools must include nutrition guidelines for all available foods and set goals for nutrition education, physical activity, and other school-based activities designed to promote student wellness. The legislation requires that a broad group of local stakeholders be involved in designing the policy to ensure that the diverse needs of the community are met, including members of the school board, school administrators, food service staff, parents, and members of the community. Additionally, districts are required to develop a plan for measuring and evaluating policy implementation (Food Research and Action Center, 2006; United States Department of Agriculture, 2006).

Currently, 9 million children and adolescents between the ages of 6 and 19 are considered overweight (three times the number of overweight children in 1980), but poor eating habits are not limited to overweight children. Only 20 percent of school-age children consume the recommended daily number of servings from all five major food groups and the average 11 to 14 year old consumes almost twice as much soda as water (Connecticut State Department of Education, 2006; Food Research and Action Center, 2006; Kluger, 2006; Ogden et al., 2002; Gleason & Sutor, 2000; Munoz et al., 1997).

Poor nutrition, lack of physical activity, and being overweight often lead to serious health problems. Some chronic diseases that were traditionally considered "adult onset" are appearing in younger segments of the population, including high blood pressure, type 2 diabetes, and osteoarthritis. These health problems frequently continue into adulthood since between 70 and 80 percent of

overweight children and adolescents continue to be overweight or become obese as adults (Boyle et al., 2004; United States Department of Health and Human Services, 2001).

School districts bear the costs when students are not physically and emotionally healthy. Research shows that children's physical, cognitive, and emotional health is linked to their readiness to learn and ability to achieve academic success. Students who are physically inactive, poorly nourished, or hungry are more likely to miss school, visit the school nurse, exhibit disruptive classroom behavior, suffer from fatigue, or fall behind in school. These students typically require extra attention or more expensive remediation programs (Food Research and Action Center, 2006; Action for Healthy Kids, 2004; National Association of State Boards of Education, 2004; Taras et al., 2004).

## COMPONENTS OF WELLNESS POLICIES

In the classroom, students are taught to eat healthy and to be active, but they also need the opportunity to practice those behaviors. The goal of wellness policies is to combine education with practice to create healthful school environments and encourage healthy behavior (United States Department of Agriculture, 2006). Following are the components that research suggests should be included in school districts' wellness policies.

**Quality School Meals and Snacks.** School districts should provide students with access to a variety of affordable, nutritious, and appealing foods that meet students' health and nutrition needs and accommodate ethnic and cultural food preferences.

- **Offer Nutritious Meals.** Schools should offer nutritious breakfast and lunch meals that meet the United States Department of Agriculture's school meal nutrition standards and follow the recommendations provided in the United States Department of Health and Human Services' Dietary Guidelines for Americans. Meals that meet the nutritional requirements of students with special health care needs should also be available (United States Department of Agriculture, 2006; United States Department of Health and Human Services, 2005; Centers for Disease Control and Prevention, 2003).

Cafeterias should prepare healthier meals by replacing frying with baking and using substitutes for high fat ingredients. Food

selections that are lower in fat, sodium, and added sugars, such as fruits, vegetables, dairy products, and whole grains should be encouraged. If possible, more meals should be prepared on-site, as they are usually fresher and allow for greater flexibility in menu planning. Providing nutrition information for all foods offered at school is another way to promote healthy choices (Center for Science in the Public Interest, 2006; Food Research and Action Center, 2006; Boyle et al., 2004).

- **Increase Access to School Meal Programs.** School districts should make increased availability, accessibility, and participation in school meal programs a high priority in their wellness policies. Frequent outreach and coordination should be conducted with families, the local Food Stamp Program, Medicaid, and agencies serving migrant and homeless students to insure that all eligible families are aware of the federal school meals program and can access it. Electronic identification and payment systems can be implemented to eliminate the social stigma attached to, and prevent the identification of, students who are eligible for free or reduced price school meals. Special outreach is required for non-English speaking groups, including the translation of materials and applications into the various languages spoken in the community (Connecticut State Department of Education, 2006; Food Research and Action Center, 2006).

For every 100 low income students who eat school lunch every day, only 44 eat school breakfast. Wellness policies should contain guidelines for establishing or expanding healthy school breakfast programs. In addition to breakfast served in the cafeteria, schools can serve breakfast in the classroom, offer "grab and go" breakfasts, or distribute bagged breakfasts on the morning school bus (Food Research and Action Center, 2006; Boyle et al., 2004).

- **Offer Appealing Meals.** School meals should be appealing and attractive to students. Meals should be planned with input from students, parents, and school personnel. Schools can engage parents and students through surveys and taste-tests of entrees in order to identify new, healthy, and appealing food choices (Connecticut State Department of Education, 2006; Food Research and Action Center, 2006).

- Improve the Cafeteria Environment. Cafeterias should offer students safe and clean areas in which to eat. Schedules should allow enough time for students to eat at a relaxed pace (20 minutes for lunch and 10 minutes for breakfast, starting from the time students sit down to eat their meals). Relieving overcrowded conditions (for example, reducing the length of time students wait in line for food and providing sufficient space to eat comfortably) will encourage students to use the cafeteria. Water fountains should be in good repair and produce safe drinking water in cafeterias and on school premises (Food Research and Action Center, 2006; Centers for Disease Control and Prevention, 2003).
- Hire Qualified Food Service Managers. Schools should be encouraged to hire food service managers with nutrition-related degrees, as well as certification and credentialing in food service from either the state or the American School Food Service Association. Food service managers should be required to participate in professional development that addresses nutrition and the Dietary Guidelines for Americans at least once a year (Centers for Disease Control and Prevention, 2003).
- Offer Healthier Competitive Foods. Competitive foods and beverages are those items not sold as part of the school meal program, but as individual items at various campus locations such as vending machines, snack bars, and school stores. They also include items sold a la carte by school food service departments. Schools should ensure that students have healthy choices at all competitive food venues. The sale of foods that do not meet specified nutrition standards should be eliminated. Snack food and beverage companies should be asked to supply schools with healthier items, such as 100 percent juices and baked potato chips instead of soda and candy (Food Research and Action Center, 2006; Action for Healthy Kids, 2004; Boyle et al., 2004).

Many school districts rely on vending contracts and competitive foods to help fund school programs and activities. School districts across the country are recognizing that these financial decisions seriously compromise the health of their students. They are also realizing that it is possible to improve the nutritional quality of

competitive foods while minimizing economic loss. By introducing healthier snacks at reasonable prices and holding student taste-tests to help with purchasing decisions, most schools have not lost revenue and some have even seen increased revenues (Food Research and Action Center, 2006).

- Provide Healthy Foods and Beverages at School Functions and Fund Raisers. Foods and beverages offered or sold at school-sponsored events, such as performances, dances, and athletic events, should meet the district's nutrition standards. Many school organizations and programs raise money for materials and activities by selling food and beverages at school, after school, or in the community. Districts should require that foods and beverages sold for fund raising purposes meet specified nutrition standards and support healthy eating (Connecticut State Department of Education, 2006; Boyle et al., 2004; Centers for Disease Control and Prevention, 2003).

**Nutrition Education.** Educating students about healthy eating can change their attitudes about certain foods and teach them how to incorporate healthier foods into their diets. A primary goal of any wellness policy should be to ensure that developmentally and culturally appropriate nutrition education is incorporated into the curriculum at every grade level (Connecticut State Department of Education, 2006; Food Research and Action Center, 2006; Centers for Disease Control and Prevention, 2003).

- Provide Standards-Based Sequential Nutrition Education. Nutrition education should be designed to help students learn (Connecticut State Department of Education, 2006):
  - the benefits of healthy eating;
  - nutrition-related skills, including planning a healthy meal, understanding food labels, and critically evaluating nutrition information;
  - how to assess and manage one's personal eating habits; and
  - how to make healthy decisions and develop lifelong healthy habits.

The Centers for Disease Control and Prevention's *Guidelines for School Health Programs to Promote Lifelong Healthy Eating* (1996) stated that effective nutrition education programs focus on changing specific behaviors rather than on learning general facts. The guidelines state that students are more likely

to adopt healthy eating behaviors when lessons emphasize the positive aspects of healthy eating patterns instead of the negative consequences of unhealthy eating patterns; when they learn about healthy eating behaviors through fun, participatory activities; and when they are provided with repeated opportunities to taste healthy foods during their lessons.

Staff responsible for nutrition education should participate in regularly scheduled professional development activities that provide them with instructional techniques and strategies that will promote healthy eating behaviors (Connecticut State Department of Education, 2006; Centers for Disease Control and Prevention, 2003).

- Connect Nutrition Education to the Existing Curricula. Nutrition education should be included in other classroom content areas such as math, science, language arts, and social studies. Nutritional themes should be incorporated into daily lessons, when appropriate, to provide students with daily exposure to nutrition concepts and messages. Examples of how to link nutrition education with other content areas include calculating the nutritional value of foods and analyzing nutrients in math class; identifying foods' chemical compounds in science; researching other countries' food customs in social studies; and reading literature with health themes in language arts (Connecticut State Department of Education, 2006; Food Research and Action Center, 2006).
- Collaborate with Community Agencies. District and school staff should be encouraged to coordinate with agencies and groups that are conducting nutrition education in the community. By collaborating with community groups, districts can increase the effectiveness of nutrition education by providing families with consistent and reinforcing health messages. Districts can collaborate with organizations such as the local health department, nonprofit organizations, hospital community outreach programs, and local health care providers. School officials should disseminate information to parents, students, and staff members about community programs that offer nutrition assistance to families (Connecticut State Department of Education, 2006).

**Physical Education and Physical Activity.** The primary goals for schools' physical education and physical activity policies are to maintain students' physical fitness, ensure students' regular participation in physical activity, and to teach students the short- and long-term benefits of a physically active lifestyle (United States Department of Agriculture, 2006). Research suggests that academic performance improves when children are physically fit and active. The United States Department of Health and Human Services (2005) recommends that children engage in at least 60 minutes of age-appropriate physical activity all or most days of the week; however, almost half of young people ages 12 to 21 and more than a third of high school students don't participate in physical activity on a regular basis (Food Research and Action Center, 2006; Action for Healthy Kids, 2004).

- Daily Physical Education for Students in Grades K-12. Components of a quality physical education program include (Center for Science in the Public Interest, 2006; Connecticut State Department of Education, 2006; Food Research and Action Center, 2006; Centers for Disease Control and Prevention, 2003; Hayman et al., 2004):
  - instructional periods totaling 150 minutes per week for elementary students and 225 minutes per week for middle and senior high school students during the school day for the entire school year;
  - moderate to vigorous activity at least 50 percent of the time;
  - state-certified physical education teachers who participate in professional development and/or continuing education at least once a year;
  - a teacher to pupil ratio no greater than 1:25 for optimal instruction;
  - a sequential course of study consistent with state and/or national standards for physical education with a focus on students' development of motor skills, movement forms, and health-related fitness;
  - adequate, safe, and appropriate equipment and facilities; and
  - a physical and social environment that encourages safe and enjoyable physical activity for all students, including those who are not athletically gifted.
- Recess. Recess is unstructured playtime where children are active, creative, develop rules for play, and release energy and stress. All



elementary school students, Pre-K through grades 5 or 6, should be provided with supervised, daily recess periods of at least 20 minutes per day. If possible, the recess should not be scheduled immediately before or after physical education class. Scheduling recess before lunch is an effective strategy to increase meal consumption and promote better behavior. Studies have shown that holding recess before lunch increases nutrient intake and that students who play before they eat are better behaved on the playground, in the cafeteria, and in the classroom (Connecticut State Department of Education, 2006; Food Research and Action Center, 2006; Action for Healthy Kids, 2004; Centers for Disease Control and Prevention, 2003).

- Physical Activity and Punishment. Teachers and other school and community personnel should not use physical activity or withhold opportunities for physical activity as punishment. Appropriate alternate strategies should be developed as consequences for undesirable behaviors. One of the primary goals of physical education and activity programs is to provide students with positive experiences that will motivate them to pursue active lifestyles. The practice of using or withholding physical activity as punishment develops student attitudes that are contrary to this goal (Connecticut State Department of Education, 2006; Centers for Disease Control and Prevention, 2003).
- Safe Routes to School. Districts can work with community partners and police departments to make it safer and easier for students to walk and bike to school. Ideas for establishing safe routes to school include creating a walking club or organizing neighborhood watch groups to take turns walking children to the school or bus stop (Connecticut State Department of Education, 2006; Centers for Disease Control and Prevention, 2003).
- Incorporating Physical Activity into the Classroom. Research shows that even 10 minutes of physical activity can enhance learning. Ideas for incorporating physical activity into the classroom include giving answers to math problems in jumping jacks or other gross motor movements; taking nature walks; and asking students to spell out health-related words using their bodies to form letters.

Classroom teachers can also provide short physical activity breaks between lessons or classes (Connecticut State Department of Education, 2006; Centers for Disease Control and Prevention, 2003).

- Providing Additional Opportunities for Physical Activity. All schools should offer extracurricular physical activity programs before and after school. A range of activities should be offered to meet the needs, interests, and abilities of all students, including those who are not athletically gifted and those with special health care needs. Examples of extracurricular activities include intramural programs and classes in yoga, dance, gymnastics, and self-defense (Connecticut State Department of Education, 2006; Food Research and Action Center, 2006; Centers for Disease Control and Prevention, 2003).
- Use of School Facilities Outside of School Hours. School facilities should be available to students, staff members, and community members for physical activity before, during, and after the school day, on weekends, and during summer vacation. Community organizations should have access to schools' facilities outside of school hours so that more children can participate in physical activities (Connecticut State Department of Education, 2006; Food Research and Action Center, 2006; Action for Healthy Kids, 2004; Centers for Disease Control and Prevention, 2003).

**Additional Policy Components Designed to Promote Student Wellness**. Schools can implement a variety of programs and activities that will promote student wellness. Some examples include:

- Establish a Tobacco-Free Environment. Districts should prohibit the use of tobacco by students, staff, and visitors on all school properties and transportation vehicles and at school-sponsored events. Tobacco advertising and the display of tobacco brand names and logos on school property and on student and staff clothing and gear should also be prohibited. Districts should offer tobacco cessation services to students and staff who smoke or refer them to community-based tobacco cessation services (Centers for Disease Control and Prevention, 2003).

- Introduce Wellness Policies into After-School and Summer Programs. After-school and summer programs that offer nutrition education and physical activity should be part of districts' wellness policies. These programs can provide an informal, fun, and safe environment to improve nutrition and engage students in additional physical activities (Connecticut State Department of Education, 2006).
- Maintain a Safe and Healthy Environment. Some research suggests that the quality of the school environment may be related to students' academic achievement. Suggestions for maintaining a healthy school environment include (Leon County Schools, 2005; Taras et al., 2004; Association of State and Territorial Health Officials and the Society of State Directors of Health, Physical Education and Recreation, 2002; SHW Group, 1999; Berner, 1993):
  - Ensure that school buildings, grounds, transportation vehicles, and equipment meet health and safety standards, including air quality, and are kept clean, safe, and in good repair.
  - Communicate safety policies to staff, students, and families.
  - Provide and maintain first aid equipment in areas throughout the school building. Emergency supplies should also be available in buses and at all school-sponsored events.
  - Teach students safety practices and enforce the use of applicable safeguards and protection devices in classrooms.
  - Establish and enforce safe pedestrian and vehicle traffic areas in all parking lots, pedestrian and vehicle zones, bicycle lanes, and student drop-off/pick-up points. Policies should also be established for the safe use of all non-motorized vehicles, such as bicycles and skateboards, including the use of appropriate protective gear.
- Provide Counseling, Psychological, and Social Services. Programs and services that support the social and emotional well being of students should be available to help build a healthy school environment (Leon County Schools, 2005; Association of State and Territorial Health Officials and the Society of State Directors of Health, Physical Education and Recreation, 2002).
  - Counseling and psychological services should address the developmental, remedial, social, emotional, and behavioral needs of students.
  - Support services should assist students in adjusting to problems in their personal lives or living environment and increase their awareness of stressors that may interfere with healthy development.
  - Districts should conduct screenings for common health problems and provide information to parents and students on the prevention of illness, proper nutrition, and other aspects of good health.
  - School social workers should function as student advocates, bringing together families, teachers, and community agencies on students' behalf.

**Staff Wellness Programs.** Districts should implement health promotion programs for all staff that encourage participation in wellness program activities. Studies show that when staff members participate in programs designed to improve their own personal health, staff morale increases and staff become positive role models for students. Examples of health promotion activities for staff members include health screenings; physical activity and fitness programs; nutrition education; weight management; smoking cessation; influenza vaccinations; and stress management. Districts can encourage staff participation by including flyers and brochures with paychecks, providing information in newsletters and e-mail messages, and offering health insurance discounts to wellness program participants (Connecticut State Department of Education, 2006; Taras et al., 2004; Centers for Disease Control and Prevention, 2003).

## **GUIDELINES FOR DESIGNING AND IMPLEMENTING WELLNESS POLICIES**

Experts agree that the following steps should be followed in the design and implementation of wellness programs and policies.

**Identify a District Health Team.** The formation of a district health team is critical to successful wellness policy development. Health teams can serve many purposes, including developing policy language; providing guidance to clarify, support, and promote policy implementation; monitoring and evaluating policy implementation; and revising policy as necessary. Districts should ensure that the health team includes members of the School Board, administrators, teachers, representatives of all components of the district's wellness policy, students, parents, and community members.

Community members can include representatives from anti-hunger organizations, health care providers, law enforcement officers, and business owners. Districts should consider the professional diversity of the team and include ethnic, cultural, and demographic representation that reflects the local community (Connecticut State Department of Education, 2006; Food Research and Action Center, 2006; Centers for Disease Control and Prevention, 2005).

#### **Assess and Prioritize the District's Needs.**

Local wellness policies should be designed to match the district's specific needs, resources, and goals. Before developing wellness policies, the district's health team should assess current nutrition and physical activity programs, then identify areas that need improvement. Reviewing data on the health status of the district's students (such as fitness test results or body mass index data) can provide a strong rationale for change and assist in prioritizing areas of need (Connecticut State Department of Education, 2006).

The Centers for Disease Control and Prevention's *School Health Index* (2005) provides a comprehensive tool for assessing current nutrition and physical activity practices at the school level. The index is available in paper format or online at <http://apps.nccd.cdc.gov/shi/>. The *School Health Index* enables individual schools to identify strengths and weaknesses in their wellness programs; develop an action plan for improving student health; and engage teachers, parents, students, and the community in promoting better health.

**Draft a District Wellness Policy.** Policy statements should be based on the health team's needs assessment. Nutrition standards and the goals set for nutrition education, physical activity, and other school-based activities must be realistic and attainable. Implementation can occur all at once or may be phased in over time. Suggestions for drafting policies include (Connecticut State Department of Education, 2006; United States Department of Agriculture, 2006):

- follow established, research-based guidelines;
- be consistent with existing federal, state, and local requirements;
- use language that is simple, clear, and specific and that avoids jargon;
- include the rationale for the policy and the benefits of adopting the policy; and
- provide data regarding financial impact.

**Build Support for the Wellness Policy.** In order for wellness policies to be widely implemented, support must be obtained from students, staff, and the community (Connecticut State Department of Education, 2006; United States Department of Agriculture, 2006).

- **Engage Families.** Families have a significant influence on students' eating and physical activity habits and should be given a central role in the implementation of wellness policies. Parents' input should be sought prior to the development of wellness programs and activities by asking them to attend parent meetings or respond to surveys. Districts can share information with families through postings on the district's Web site, newsletters, and other take-home materials. Schools can involve families by asking them to serve on the district's health team and by providing opportunities for physical activity that involve the whole family, such as family sports nights or walk-a-thons (Connecticut State Department of Education, 2006; United States Department of Agriculture, 2006; Action for Healthy Kids, 2005).
- **Engage Students.** Students should be involved in the development of the wellness policy and educated on the reasons why the policy is important to their school district. Student involvement in the policy development process often leads to greater acceptance of the new programs and activities. Districts should engage students by asking them to taste-test new foods and provide input to food service personnel on menu development (Connecticut State Department of Education, 2006; United States Department of Agriculture, 2006; Boyle et al., 2004).
- **Engage Staff.** Districts must communicate the importance of new or improved policies to employees and encourage them to model healthy behaviors. The attitude of all district personnel, from the individuals serving food to teachers and administrators, can have a significant impact on the success of the policy. To foster positive attitudes, staff should be educated and informed about the new policies and provided with materials about nutrition and physical activity (United States Department of Agriculture, 2006; Boyle et al., 2004; Centers for Disease Control and Prevention, 2003).

- **Partner with Community Organizations.** Districts can partner with community organizations to provide consistent health messages and support school-based activities that promote healthy eating and physical activity. Agencies and organizations that districts can consider collaborating with include local businesses, health departments, colleges, health care providers, civic organizations, park and recreational programs, and law enforcement officials. Community leaders should be encouraged to speak out in favor of the district's wellness policies (Connecticut State Department of Education, 2006).
- **Use the Local Media.** The media can reinforce districts' efforts and increase public support for new wellness policies. Districts should work with a variety of media (local newspapers, radio, and television stations) to provide information to the community about healthy school environments, including healthy eating and the need for physical activity (Connecticut State Department of Education, 2006; United States Department of Agriculture, 2006).

**Evaluate Implementation and Impact of the Wellness Policy.** As required by law, each school district must establish a plan for measuring implementation of their local wellness policy. The district health team or other designated staff members must periodically assess how well the policies are being managed and enforced (United States Department of Agriculture, 2006; Boyle et al., 2004).

Evaluations help decision makers determine which programs and activities should be continued and if policy modifications are needed. They provide stakeholders with evidence that wellness policies helped to create a healthy school environment and had a positive impact on student behavior. Evaluation indicators can include (Connecticut State Department of Education, 2006; United States Department of Agriculture, 2006; Boyle et al., 2004):

- the number of students and staff impacted by the new policies;
- changes in the health and physical education curricula;
- changes in the amount of time students spend in physical education classes and recess;
- changes in school meal participation rates; the number and percent of foods meeting nutrition standards;
- the policy's effect on food and beverage consumption in and out of school;

- the policy's effect on student fitness levels (such as aerobic capacity, body composition, muscular strength, and flexibility) and health indicators (such as blood pressure, blood lipids, blood glucose, and body mass index);
- student, parent, and staff satisfaction with the new policy; and
- the policy's effect on students' knowledge about proper nutrition and physical activity habits.

A complete discussion of the evaluation of wellness policies can be found in Boyle, Purciel, Craypo, Stone-Francisco, and Samuels' (2004) report entitled *National Evaluation and Measurement Meeting on School Nutrition and Physical Activity Policies*. The report can be accessed at [http://www.calendow.org/reference/publications/pdf/disparities/TCE1217-2004\\_National\\_Evalu.pdf](http://www.calendow.org/reference/publications/pdf/disparities/TCE1217-2004_National_Evalu.pdf).

## RESEARCH FINDINGS

Wellness policies promote an environment that supports healthy behaviors and encourages learning. Research shows that well-planned and effectively administered school nutrition and fitness programs enhance students' overall health, as well as their academic achievement and social and emotional behaviors. A summary of research findings on the implementation and impact of wellness policies and programs follows.

**Implementation of Wellness Policies.** Studies of pilot programs implemented to improve nutrition at schools in California and Illinois found that most interventions succeeded in increasing students' awareness of new, more nutritious food offerings (Action for Healthy Kids, 2006; University of California, 2006). In Illinois, researchers found that persuading students to try new, healthier offerings was easier when new choices replaced less healthy foods, instead of when the two types of food were offered side by side. California researchers reported an increase in school meal participation and a decrease in the purchase of competitive foods following implementation of nutrition programs, indicating a switch from snack foods in favor of more balanced meals.

Some of the key conclusions researchers drew from the implementation of the pilot programs include:

- Factors that may limit a school district's ability to implement nutrition standards, such as open campuses or existing long-term vendor contracts, should be identified and addressed during policy development.



- Schools were more successful implementing new policies when they set realistic and achievable goals and stayed focused on established priorities. A streamlined process that kept committee sizes reasonable, avoided multiple committees with overlapping roles, and kept meetings focused on priority issues was critical for effective policy development. Researchers from both studies indicated that comprehensive efforts may have to be phased in gradually.
- Nutrition policies were more likely to be successfully implemented when stakeholders supported the new programs and activities. Illinois schools found it difficult to engage teachers and administrators. Their busy schedules made it difficult for them to devote time to projects or committees.
- Both studies concluded that schools should solicit student opinions about new food choices. Students tended to resist changes they felt were imposed on them; they wanted to feel as if they were part of the decision-making process. In Illinois, school staff found that students were highly receptive to some new foods but not to others. When students were not consulted beforehand, it was difficult to anticipate how they would react to specific foods and beverages.
- Practical, hands-on approaches to nutrition education, such as cooking classes and school gardens, were well received by students and staff and were considered to be worth the investment of time and resources.
- Schools' limited resources made it difficult to take on new projects or purchase the equipment needed to prepare healthier foods. Some healthier offerings, such as salad bars and cold vending machines, were more expensive because they took more time to prepare and maintain than traditional offerings.

**Impact of Wellness Policies.** Studies have found that wellness programs have a positive impact on students' eating habits, levels of physical activity, achievement, and social and emotional behaviors. Wellness programs have also been shown to have a positive effect on staff health behaviors, morale, and productivity.

- Eating Habits and Physical Activity Levels. Research supports the role of schools as key structures for changing students' eating habits

and levels of physical activity. The Food Research and Action Center (2006) reports that children from low income households who participate in school breakfast programs score higher on the Healthy Eating Index (a United States Department of Agriculture measure of overall diet quality) than those who do not eat breakfast at school. Children who eat breakfast at school are more likely to eat a wider variety of foods, drink more milk, and eat more fruit.

Researchers found that students in preschools that implemented a cardiovascular health program had greater improvement in nutrition and health knowledge scores than students in a comparison group of preschools. Researchers have concluded that preschool health programs enable young children to develop healthy behaviors in the first place, rather than learn bad habits that need to be modified later in their lives (Williams et al., 2004; Williams et al., 2002; D'Agostino et al., 1999a; D'Agostino et al., 1999b).

A study of a multi-component cardiovascular health program that included the introduction of nutrition standards, health education, and increased physical education randomly assigned 96 schools to intervention and comparison group conditions. Results indicated that intervention schools reduced the fat content of school lunches, increased students' levels of physical activity, and improved students' eating behaviors. Follow-up after three years found that students who participated in the intervention maintained higher self-reported levels of physical activity than comparison group students, but that group differences declined over time. The researchers concluded that this finding illustrates the need for follow-up programs and activities that reinforce interventions (Nader et al., 1999; Luepker et al., 1996).

- Achievement. Research clearly shows that healthy eating and regular physical activity are linked to increased levels of academic performance (Action for Healthy Kids, 2004; Association of State and Territorial Health Officials and the Society of State Directors of Health, Physical Education and Recreation, 2002). Studies have found that children who eat well and are physically active have higher achievement levels, while poorly nourished and sedentary children tend to have weaker academic performance and score lower on

standardized achievement tests (Alaimo et al, 2001; Murphy et al., 1998).

As noted above, poor nutrition and hunger interfere with cognitive function and are associated with lower academic performance. Alaimo et al. (2001) reported that undernourished students had significantly lower math (but not reading) test scores and were more likely to repeat a grade. Numerous studies have found that increased participation in breakfast programs is associated with increases in achievement test scores (Hanson & Austin, 2002; Kleinman et al., 2002; The Center for Health and Healthcare in Schools, 2000; Murphy et al., 1998).

Studies have demonstrated that physical activity supports learning. Regular physical activity has been linked to improved reading, writing, and math test scores, better attendance, more positive attitudes towards school, and less disruptive behavior, even when the added physical activity takes time away from academic classes (Action for Healthy Kids, 2004). A study conducted by the California Department of Education (2002) compared the physical fitness test scores and Stanford Achievement Test scores of 954,000 California students. Results of the study indicated that higher achievement was associated with higher levels of physical fitness at each of the three grade levels studied. Although these results are impressive, the reader is cautioned not to assume a direct cause and effect relationship from such correlational findings.

- **Social and Emotional Behaviors.** Physical activity among adolescents is consistently related to higher levels of self-esteem and lower levels of anxiety and stress (Calfas & Taylor, 1994). In addition, many of the behaviors that can lead to classroom disruptions, such as shortened attention span, irritability, fatigue, and difficulty concentrating can be linked to hunger and inadequate nutrition (Food Research and Action Center, 2006).

Alaimo et al. (2001) reported that undernourished students were more likely to visit a psychologist, be suspended from school, repeat a grade, and have difficulty getting along with other children. In a study conducted by

Murphy et al. (1998), teachers reported that hungry students displayed higher levels of hyperactivity, absenteeism, and tardiness. The Food Research and Action Center (2006) reports that undernourished children are more irritable, have difficulty concentrating, and have lower energy levels.

Numerous studies have documented the social and emotional benefits of school breakfast programs. Students who participate in school breakfast programs have been found to have lower rates of absenteeism and tardiness and exhibit fewer psychological and discipline problems (Hanson & Austin, 2002; Kleinman et al., 2002; The Center for Health and Healthcare in Schools, 2000; Murphy et al, 1998.)

- **Staff Wellness.** Research has shown that benefits of staff wellness programs include improved health behaviors and health status, reduced stress levels, lower absenteeism, and higher productivity and morale (Taras et al., 2004; Black, 2001; Allegrante, 1998; Symons et al., 1994). Blair et al. (1984) found that teachers who participated in a health promotion program focusing on exercise, stress management, and nutrition reported increased physical activity levels, lower weight, better ability to handle job stress, and higher levels of general well-being.

## ON A LOCAL NOTE

In May 2006, The School Board of Miami-Dade County, Florida authorized the implementation of a comprehensive school wellness policy in alignment with the District's Approved System of Health and Wellness and per the requirements of the Child Nutrition and WIC Reauthorization Act of 2004. Effective July 2006, Miami-Dade County Public Schools' wellness policy will include the following components designed to provide a healthy school environment that will enable students to succeed.

**Nutrition.** All students will have access to high-nutrient foods and to nutrition information about these foods. The Department of Food and Nutrition will serve food that is high in fiber, low in added fats, sugar, and sodium, respectful of cultural diversity and served in appropriate portion sizes, with adequate time allotted for meal consumption in an environment conducive to making nutritional choices.

**Physical Education and Physical Activity.** All students will engage in daily recommended levels of physical activity. At a minimum, elementary students will participate in 150 minutes of physical education per week and secondary students will participate in 225 minutes of physical education per week. Recess will be provided for students in grades PK through 5 either three times a week for 15 minutes or two times a week for 20 minutes.

Physical education will be taught by certified specialists and will encourage healthy lifestyles and stress the importance of physical fitness. Training in the skills needed to enhance health will be provided, including concepts related to health promotion, disease prevention, and reduction of health risk; ability to access valid health information; and ability to analyze the influences of culture and technology on health.

**Health Literacy.** In addition to the health and fitness taught in physical education classes, all students will be taught comprehensive principles of nutrition and related health implications; media literacy; an appreciation of healthy food; and other competencies essential to making healthy choices. Strategies for implementing this policy component include incorporating health literacy education into classroom instruction in all core curriculum areas; providing nutrition education at all grade levels, including lessons and experiential learning opportunities that enhance learning; training students to differentiate between marketing messages and substantive health information; and promoting healthy food choices by making nutrition information available as close as possible to the point of choice.

**School-Based Healthcare.** All students will have access to physical, mental, social, and emotional healthcare through a school health team. Each school will be provided with a health team to ensure that a coordinated level of healthcare is available at every school, including but not limited to mental

health counseling and primary care as appropriate, mandated screenings and assessments with appropriate follow-up, administration of medications, and a system for dealing with crisis medical situations. Each school health team will be associated with one or more community health providers. In addition, a staff wellness component will provide all school district employees with information on health literacy, nutrition, and physical activity.

Full implementation of all wellness policy components is anticipated by 2008. The Superintendent's Wellness Advisory Committee will be responsible for monitoring and evaluating the goals, objectives, and guidelines of the district's wellness policy on an annual basis.

## **SUMMARY**

The Child Nutrition and WIC Reauthorization Act of 2004 contains a provision that mandates the implementation of a wellness policy in every school district that participates in federal school meal programs by the first day of the 2006-07 school year. Wellness policies should include the following components: quality school meals and snacks, nutrition education, physical education and physical activity, and staff wellness programs. Other programs designed to promote student wellness, such as establishing a tobacco-free environment and providing counseling, psychological, and social services, are also encouraged. Guidelines for the design and implementation of wellness policies include assessing and prioritizing the district's needs and building stakeholder support for the policy. Research shows that effectively administered wellness programs enhance students' eating habits and physical activity levels, as well as their academic achievement and social and emotional behaviors. Wellness programs have also been shown to have a positive impact on staff health behaviors, morale, and productivity.

## RESOURCES

**Action for Healthy Kids** ([www.actionforhealthykids.org](http://www.actionforhealthykids.org)) is a clearinghouse of resources for improving school nutrition and physical activity. More than 200 programs and practices in the “What’s Working Database” are scored by experts using “best practice” criteria.

**Center for Science in the Public Interest** ([cspinet.org/nutritionpolicy](http://cspinet.org/nutritionpolicy)) provides tool kits, fact sheets, model policies, and reports on policy options such as nutrition labeling, improving school foods, increasing physical activity, and promoting fruit and vegetable intake.

**The Centers for Disease Control and Prevention (CDC)** ([www.cdc.gov/HealthyYouth](http://www.cdc.gov/HealthyYouth)) provides guidelines, strategies, and data on various health topics. The Web site also includes local wellness policy development tools, school nutrition success stories, and strategies for preventing obesity. The following tools are also available at the CDC’s Web site:

- *Self-Assessment and Planning Guide (SHI)*, a tool for schools to improve their health and safety policies and programs.
- *Physical Education Curriculum Analysis Tool (PECAT)*, a tool for school districts to conduct an analysis of written physical education curricula, based on national physical education standards and customizable to include local standards.

**Comprehensive Health Education Foundation** ([www.chef.org/programs/pals.php](http://www.chef.org/programs/pals.php)) offers *Physical Activity for Local Students (PALS)*, a no-cost, step-by-step program that guides middle-level schools and communities through the process of developing partnerships to increase physical activity opportunities for young adolescents (ages 9-13 years).

**Food Research and Action Center** ([www.frac.org](http://www.frac.org)) contains highlights of the *Child Nutrition and WIC Reauthorization Act of 2004*. The Web site also includes reports, data, and resources on after school nutrition programs, federal food programs, and school wellness policies and practices.

**National Alliance for Nutrition and Activity** ([www.schoolwellnesspolicies.org](http://www.schoolwellnesspolicies.org)) offers model school wellness policies. The site also provides a comprehensive listing of resources on nutrition and physical activity.

**National Association of State Boards of Education** ([www.nasbe.org/HealthySchools/Sample\\_Policies/Sample\\_Policies.html](http://www.nasbe.org/HealthySchools/Sample_Policies/Sample_Policies.html)) provides sample wellness policies on areas such as healthy eating, physical activity, discouraging tobacco use, and promoting sun safety.

**National Conference of State Legislatures** ([www.ncsl.org/programs/health/childhoodobesity-2005.htm](http://www.ncsl.org/programs/health/childhoodobesity-2005.htm)) offers a comprehensive listing of school obesity prevention policies. A brief description of bills being considered by state legislatures and state-by-state summaries of school nutrition legislation are also provided.

**National Evaluation and Measurement Meeting on School Nutrition and Physical Activity Policies** ([www.calendow.org/reference/publications/pdf/disparities/TCE1217-2004\\_National\\_Evalu.pdf](http://www.calendow.org/reference/publications/pdf/disparities/TCE1217-2004_National_Evalu.pdf)) provides a model for assessing the implementation and effectiveness of wellness policies and recommendations for an evaluation framework.

**National Middle School Association** ([www.nmsa.org/Advocacy/WellnessPolicy/Resources/tabid/779/Default.aspx](http://www.nmsa.org/Advocacy/WellnessPolicy/Resources/tabid/779/Default.aspx)) includes resources to assist schools in creating a healthy school environment.

**National School Boards Association** ([www.nsba.org/site/page\\_schoolhealth\\_search.asp?TRACKID=&CID=1116&DID=12022](http://www.nsba.org/site/page_schoolhealth_search.asp?TRACKID=&CID=1116&DID=12022)) contains a School Health Resources Database. The database contains abstracts of more than 3,000 items, including sample policies, publications, and training tools that address health issues affecting schools and students.



**School Foodservice** ([www.nutritionexplorations.org/sfs/wellnesspolicy.asp](http://www.nutritionexplorations.org/sfs/wellnesspolicy.asp)) provides resources on topics such as dairy foods, soft drinks in schools, and after school snack programs.

**School Health Resources** ([www.nationalguidelines.org](http://www.nationalguidelines.org)) offers *Health, Mental Health and Safety Guidelines for Schools*, developed by more than 300 health, education, and safety professionals from over 30 national organizations. The guidelines cover topics such as nutrition and food services, physical environment, health and safety education, and family and community involvement.

**School Nutrition Association** ([www.schoolnutrition.org/Index.aspx?id=1343](http://www.schoolnutrition.org/Index.aspx?id=1343)) provides a sample local wellness policy, wellness policy guidelines, and a list of helpful resources.

**United States Department of Agriculture** (Food and Nutrition Service) ([www.fns.usda.gov](http://www.fns.usda.gov)) provides local wellness policy requirements, sample policy language, examples of existing state and school district policies, reference materials, and links to governmental and nongovernmental resources and implementation tools.

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