



THE ROLE OF THE SCHOOL ENVIRONMENT IN CONTRIBUTING TO CHILDREN'S WELLNESS

SUMMARY

The need to improve children's nutrition and physical activity has never been greater and schools are an ideal setting to help make this happen. Childhood overweight is at an all-time high as a result of poor food choices and a sedentary lifestyle. Paradoxically, many children's diets are low in essential nutrients such as calcium, potassium, fiber, magnesium, and vitamin E. Children's unhealthy food choices, sedentary lifestyles, and resulting overweight can have adverse health, academic, and economic effects.

Schools are an ideal setting to help improve children's health by providing more healthful food options throughout the total school environment, more opportunities for children to be physically active, and more behavior-focused nutrition education. In recognition of the health crisis facing the nation's school-aged children and the important role that schools can play in improving children's health, the federal government has issued a new regulation to encourage healthy school environments.

As part of the government's Child Nutrition and WIC Reauthorization Act of 2004 (P.L. 108.265 Section 204), each school district offering federal meal programs (e.g., school lunch) must establish a local wellness policy by the beginning of the 2006-2007 school year. Each school wellness policy must include specific elements

such as appropriate goals for nutrition education, physical activity, and nutrition standards for all foods available in schools, and the involvement of a broad group of members of the community (e.g., parents, students, school board members, the public, etc).

When developing school wellness policies, it is important to base nutrition and physical activity standards on the 2005 *Dietary Guidelines* (e.g., encourage low-fat dairy, fruits and vegetables, and whole grains). Children's low intake of milk and other dairy foods and dairy food nutrients such as calcium, as well as dairy's health benefits, are among the reasons to make dairy foods a part of school wellness policies.

Many resources and tools are available to help schools develop and implement school wellness policies. National Dairy Council's "New Look of School Milk" program is one example. This program is based on findings from a School Milk Pilot Test that demonstrated that more children drink milk – a naturally nutrient-rich beverage – when it is offered in kid-appealing, plastic re-sealable containers in various sizes, served cold, and in a variety of flavors at more locations in schools (e.g., vending machines, school stores, etc).

Action for Healthy Kids (www.actionforhealthykids.org), a public-private partnership of more than 50 national organizations and government agencies and its 51 State Teams, is a valuable resource to help develop, implement, monitor, and evaluate school wellness policies.

Health and school professionals can move children toward more healthful diets and physically active lifestyles by getting involved in *Action for Healthy Kids* State Teams and school wellness. D



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INTRODUCTION

Awareness of the nation's epidemic of overweight, undernourished, and sedentary youth is leading to interventions in schools nationwide to provide environments supportive of healthy lifestyle behaviors. The 2004 Child Nutrition and WIC Reauthorization Act provides specific opportunities to combat childhood overweight, positively impact children's health, and create healthy school environments (1). By the beginning of the 2006-2007 school year, the Act requires that each school district participating in federally funded school meal programs (e.g., school breakfast and/or lunch) have a local wellness policy in place (1). School districts must address goals for nutrition education, physical activity, other school-based activities, and nutrition standards for all foods and beverages in school.

Wellness policies are an opportunity for schools to improve students' health through two important steps called for in the 2005 *Dietary Guidelines for Americans* (2): increasing consumption of fruits, vegetables, whole grains, and low-fat milk products, and increasing opportunities to participate in physical activity.

This *Digest* discusses the need to improve children's health; why schools are an ideal setting to positively change children's lifestyles; efforts to create a healthier environment in the nation's schools, specifically how dairy is part of the solution; and resources/programs available to help schools develop and implement local wellness policies.

THE NEED TO IMPROVE CHILDREN'S HEALTH

Childhood overweight is a growing epidemic, affecting more than twice as many children and almost three times as many adolescents as in 1980 (3,4). Among children aged 6 through 19 years, 16% are overweight and an additional 15% are at risk for overweight (4). Childhood overweight is more prevalent among minority populations (4). Poor eating habits (e.g., increased intake of total calories from non-nutritious snacks, sweetened

beverages, and fried and nutrient-poor foods) and lack of physical activity are underlying causes of childhood overweight (2,5-7).

The 2005 *Dietary Guidelines for Americans* identifies five nutrients of concern for children and adolescents – calcium, potassium, fiber, magnesium, and vitamin E (2). In particular, children's diets are low in calcium (8). Compared to the recommended dietary intake (Adequate Intake) of calcium of 1,300 mg/day for children ages 9 through 18 (9), median calcium intake (50th percentile) is 1,086 mg/day for males aged 9-13 and 837 mg/day for females of the same age. For males and females aged 14 through 18 years, median calcium intakes are 1,094 mg/day and 753 mg/day, respectively (8).

Recognizing that the vast majority of people need to consume more dairy products, the *Dietary Guidelines* increased the number of dairy servings (3 servings/day) recommended for many age groups and listed low-fat and non-fat dairy foods among three groups of "Foods to Encourage" – along with fruits and vegetables, and whole grains (2). Dairy foods contribute more than 60% of the dietary calcium intakes for persons under 19 years of age (10). Milk, cheese, and yogurt are naturally nutrient-dense foods providing calcium, potassium, other minerals, vitamins, and protein essential for children's growth and development (11).

According to the 2003 Youth Risk Behavior Surveillance study, 83% of high school students in grades 9-12 had not consumed 3 or more servings of milk/day and 78% had not eaten 5 or more servings of fruits and vegetables/day during the seven days preceding the survey (12). A study of more than 1,500 ten-year old children in Bogalusa, LA found that children who drank the most sugary drinks had lower intakes of milk compared to those with low, or no, sugary beverage intake (13). The trend of declining milk consumption and increasing intake of high energy, low nutrient beverages among children and adolescents can contribute to nutrient shortcomings as well as increase the risk for chronic diseases such as osteoporosis, hypertension and, as indicated by emerging science, failure to obtain a healthy body weight (5,14-16).



Schools are an ideal setting to improve children's nutrition and physical activity and help reverse the growing trend of childhood overweight.

The 2005 *Dietary Guidelines for Americans* recommend that children and adolescents engage in at least 60 minutes of moderate intensity physical activity on most, preferably all, days of the week (2). A substantial proportion of children and adolescents fail to meet this recommended level and physical activity tends to decline as children become adolescents (6,12).

Children's unhealthy food choices, sedentary lifestyles, and resulting overweight can have adverse consequences in terms of health, academic achievement, and economics. Overweight in children is associated with high blood pressure, hyperlipidemia, type 2 diabetes, low self-esteem, and social discrimination (5,17-19). Also, children and adolescents who are overweight are more likely to become overweight or obese adults than their healthy weight peers (5). In addition to overweight, nutrient deficiencies in children can contribute to chronic diseases (2,6,14,20). For example, children's failure to meet their calcium recommendations can increase their risk of bone fractures and lead to osteoporosis in later years (14). Overweight and undernutrition can also have adverse academic (21-23) and economic (24) consequences. In addition, physical inactivity may compromise children's readiness to learn. A meta-analysis of nearly 200 studies including children and adults found that physical activity supports learning (25). For more information about the link between nutrition, physical activity, and weight and academic performance, refer to the *Action for Healthy Kids'* report, "The Learning Connection" (26).

SCHOOLS: A KEY ENVIRONMENT TO IMPROVING CHILDREN'S LIFESTYLES

The U.S. Surgeon General's report, *Call to Action to Prevent and Decrease Overweight and Obesity*, identifies schools as a key site for taking action to improve nutrition and physical activity and thereby help prevent childhood overweight (5). Schools are an ideal setting for change because nearly all children are enrolled in school; schools have a unique ability to reach all children equally; promotion of healthy eating and physical activity has

A new federal law requires that every school district offering federal meal programs (e.g., school breakfast, school lunch) must establish a local school wellness policy by the beginning of the 2006-2007 school year.



traditionally been part of the education experience; and research indicates a positive link between nutrition and physical activity and academic performance (26,27). Health professionals, educators, and parents are calling for more healthful food options throughout the total school environment, increased opportunities for children to be physically active, and more behavior-focused nutrition education (7,20,27-29).

Federally funded school meal programs, such as the National School Lunch Program and the School Breakfast Program provide children with nutritional and academic benefits (6,30). However, many children do not participate in these programs, in part because of the increased availability and marketing of foods sold in competition with school meals (31,32). Competitive foods, many of which are high energy, low nutrient foods and beverages, are highly available in schools (e.g., a la carte, school vending machines, school stores, snack bars) (31-33). The nutritional value of competitive foods is only minimally regulated at the federal level and students often purchase these foods in addition to or instead of school meals (32).

Student participation in physical education classes is low and declines as children reach adolescence (12). Opportunities for physical activity at many schools are limited because of cutbacks in recess and physical education classes. Also, participation in school-sponsored after-school teams is often restricted to elite athletes. To counter trends of decreasing physical activity among school-aged children, schools are encouraged to expand opportunities for all children to engage in daily physical activity (7).

COMMITMENT TO SCHOOL WELLNESS

As part of the federal government's Child Nutrition and WIC Reauthorization Act of 2004 (CNRA), each school district participating in federal meal programs (e.g., school breakfast and/or lunch) must establish a local school wellness policy by the beginning of the 2006-2007 school year (1). The CNRA (P.L. 108.265 Section 204) places the responsibility for developing wellness policies that promote the health

of students and address the growing problem of childhood overweight at the local level so that the individual needs of each school district can be met.

By law, local school wellness policies will have the following elements, at a minimum:

- appropriate goals for nutrition education, physical activity, and other school-based activities designed to promote student wellness;
- nutrition standards for all foods and beverages available on school campuses during the school day with the objectives of promoting student health and reducing childhood overweight;
- assurances that local guidelines for reimbursable school meals at least meet program requirements and nutrition standards established by law;
- plans to measure how effectively the school wellness policy is being implemented, including designating one or more persons within the district or at each school to be responsible for ensuring that each school is meeting the policy;
- involvement of a broad group of members of the community (e.g., parents, students, representatives of the school food authority, the school board and school administrators, and the public) in developing the wellness policy.

As required, community members must be involved in the development of each local wellness policy. It therefore is important that stakeholders be knowledgeable about current wellness practices in their school district and the required school wellness policy. Interestingly, a recent national survey of parents of school-aged children in grades K-12 found a significant gap between what parents believe is happening and what is actually happening in terms of nutrition and physical activity in schools (34). The survey found that the vast majority of parents were unaware of the federally required school wellness policy (34). These findings highlight the need to better inform parents about current



The 2005 Dietary Guidelines for Americans identifies low-fat dairy foods, fruits and vegetables, and whole grains as foods to encourage. These foods deserve attention in school wellness policies.

wellness practices in their children's schools and how they can become involved in developing local school wellness policies.

When developing wellness policies, consider the following guiding principles to help reduce the risk of childhood overweight while ensuring that children obtain optimal nutrition and physical activity in school:

- Base nutrition and physical activity standards on the 2005 *Dietary Guidelines* (e.g., place emphasis on food groups to encourage: low-fat dairy, fruits/vegetables, and whole grains);
- Offer real fruit juices, water, and low-fat white and flavored milk instead of nutrient-void sweetened drinks in school vending machines;
- Evaluate foods based on their overall nutritional quality using parameters that are of importance to children's growth and development;
- Encourage adequate nutrient intakes and consumption of nutrient-dense foods, especially those containing nutrients deficient in children's diets (i.e., calcium, potassium, fiber, magnesium, and vitamin E);
- Visibly offer a variety of healthy foods that appeal to children;
- Ensure that children learn practical, life-long lessons about the balance of good nutrition and physical activity.

RESOURCES AVAILABLE

Many resources are available to help school districts develop local wellness policies. The Food and Nutrition Service of the U.S. Department of Agriculture has a website (www.fns.usda.gov/tn/healthy/wellnesspolicy.html) which provides information regarding the wellness policy requirements and steps for creating, implementing, and evaluating a wellness policy, as well as examples of local wellness policies. Likewise, the School Nutrition Association provides information and tools to help schools meet the wellness policy requirements (www.schoolnutrition.org).

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A publication by the CDC and USDA's Team Nutrition called "Making It Happen! School Nutrition Success Stories" describes how 32 schools and school districts across the U.S. have improved the nutritional quality of foods and beverages apart from the school meals program (35). The success stories relate to how schools have:

- established nutrition standards for competitive foods;
- influenced food and beverage contracts;
- made more healthful foods and beverages available (e.g., Massachusetts *Action for Healthy Kids* a la carte food and beverage standards to promote a healthier school environment);
- adopted marketing techniques to promote healthful choices (e.g., those featuring dairy vending machines in Iowa that provided milk, cheese and yogurt);
- limited student access to competitive foods;
- used fundraising activities and rewards that support student health (35).

As stated in the "Making It Happen!" publication, a key lesson learned from the school success stories is that "students will buy and consume healthful foods and beverages – and schools can make money from selling healthful options" (35).

National Dairy Council (www.nationaldairycouncil.org) offers many programs and materials to help implement school wellness policies under the guidelines of the law. For example, several key programs can specifically meet the nutrition education and physical activity elements of a school wellness policy. The nutrition education element can be implemented using the Nutrition Expedition classroom programs for grades 2 and 4 (www.NutritionExplorations.org/educators/lessons-main.asp). The physical activity and other school-based activity element can be implemented through the "ReCharge! Energizing After-School" program which integrates physical activity and nutrition through team-based activities for children in



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grades 3-6. Also, programs such as the "New Look of School Milk," "Expanding Breakfast," and dairy vending can help meet the implementation needs of the nutrition standards element. For more information, please contact your local Dairy Council or refer to www.NutritionExplorations.org/sfs/.

Children's low intake of milk and other dairy foods and dairy food nutrients such as calcium (8,20,36), as well as dairy's health benefits (e.g., in bone health) are among the reasons to make dairy foods a part of school wellness policies.

Hundreds of schools across the nation recognize that milk can play a more prominent role in meeting nutrition goals and as such are switching to the New Look of School Milk program. This program is based on results of the School Milk Pilot Test conducted in 2002 by National Dairy Council and the School Nutrition Association (formerly American School Food Service Association) (37). The School Milk Pilot Test demonstrated that a combination of milk enhancements (i.e., offering a variety of flavors of cold milk in kid-appealing plastic re-sealable containers in various sizes in more locations including lunch lines, a la carte and vending machines) increased students' selection of milk and their participation in the National School Lunch Program (37).

For more information about the rationale and strategies for developing a local wellness policy that includes dairy's role in child wellness, refer to the material, "Dairy Foods and Your School Wellness Policy" (www.NutritionExplorations.org/sfs/wellnesspolicy.asp)

ACTION FOR HEALTHY KIDS: WORKING TOWARD A SOLUTION

Action for Healthy Kids (www.actionforhealthykids.org) is a nonprofit organization working to improve the health and educational performance of children nationwide through better nutrition and physical activity in schools. It is a public-private partnership of more

than 50 national organizations and government agencies representing education, health, fitness, and nutrition, which support the efforts of 51 State Teams (including all states and the District of Columbia) made up of thousands of volunteers (school administrators, educators, health professionals, and others). Each of the 51 State Teams is working on an action plan to create health-promoting schools that support sound nutrition and physical activity.

Action for Healthy Kids State Teams can play an important role in helping states and schools develop, implement, monitor, and evaluate new school wellness policies. To get started in developing a school wellness policy, *Action for Healthy Kids* in conjunction with CDC and USDA has developed an online searchable resource database (www.actionforhealthykids.org).

CONCLUSION

Given the high prevalence of overweight, nutrient shortcomings, and physical inactivity among the nation's youth, the need to make changes supportive of their health has never been greater. Schools are an ideal setting to improve children's lifestyles. As a result of school wellness policies, children in the nation's schools can expect to have increased access to nutritious foods and beverages (e.g., low-fat milk and other dairy foods, fruits, vegetables, whole grains) throughout the total school environment and more opportunities for physical activity. Moving children toward more healthful lifestyles can have far-reaching health and other benefits. National Dairy Council is a resource for programs supporting implementation of school wellness policies. D

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