

Position of the American Dietetic Association: Local Support for Nutrition Integrity in Schools

ABSTRACT

It is the position of the American Dietetic Association (ADA) that schools and communities have a shared responsibility to provide students with access to high-quality, affordable, nutritious foods and beverages. School-based nutrition services, including the provision of meals through the National School Lunch Program and the School Breakfast Program, are an integral part of the total education program. Strong wellness policies promote environments that enhance nutrition integrity and help students to develop lifelong healthy behaviors. ADA actively supported the 2004 and proposed 2010 Child Nutrition reauthorization which determines school nutrition policy. ADA believes that the Dietary Guidelines for Americans should serve as the foundation for all food and nutrition assistance programs and should apply to all foods and beverages sold or served to students during the school day. Local wellness policies are mandated by federal legislation for all school districts participating in the National School Lunch Program. These policies support nutrition integrity, including a healthy school environment. Nutrition integrity also requires coordinating nutrition education and promotion and funding research on program outcomes. Registered dietitians and dietetic technicians, registered, and other credentialed staff, are essential for nutrition integrity in schools to perform in policy-making, management, education, and community-building roles. A healthy school environment can be achieved through adequate funding of school meals programs and through imple-

mentation and evaluation of strong local wellness policies.

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POSITION STATEMENT

It is the position of the American Dietetic Association that schools and communities have a shared responsibility to provide students with access to high-quality, affordable, nutritious foods and beverages. School-based nutrition services, including the provision of meals through the National School Lunch Program and the School Breakfast Program, are an integral part of the total education program. Strong wellness policies promote environments that enhance nutrition integrity and help students to develop lifelong healthy behaviors.

INTRODUCTION

Nutrition integrity has been defined as “a guaranteed level of performance that assures that all foods and beverages available in schools for children are consistent with the Dietary Guidelines for Americans, and when combined with nutrition education, physical activity, and a healthful school environment, contributes to enhanced learning and development of lifelong, healthful eating habits” (1). Nutrition integrity can be enhanced through strong local wellness policies that help create healthy school environments. These policies coupled with the National School Lunch Program (NSLP) and School Breakfast Program (SBP), which are the foundation of nutrition services offered by schools, can support the educational goals of all schools. In addition, the American Dietetic Association’s (ADA’s) position on Child and Adolescent Food and Nutrition Programs states that a safe and adequate food supply should be accessible to all children and adoles-

cents, regardless of age; sex; socioeconomic status; racial diversity, ethnic diversity, linguistic diversity; or health status. A safe and adequate food supply promotes optimal physical, cognitive, social, and emotional growth (2). Nationwide, the NSLP operated in over 96,000 schools in 2008, serving over 30 million children daily (3). In 2008, 81,517 schools participated in the SBP (4). Daily access to healthful foods through these two programs will help provide adequate nourishment and may positively influence the development of healthful eating habits (4,5). A summary of the components and indicators of Nutrition Integrity is available in Figure 1.

From its inception in 1946, the NSLP has been viewed as a bipartisan partnership of federal, state, and local governments (6). However, budget cuts of the early 1980s and higher nutritional standards in the 1990s altered local programs. When operational costs exceeded the revenue available from federal, state, and local funding and cash collections, schools took steps to make up the difference (7). School nutrition professionals struggle with a “trilemma” of problems to solve. These three problems involve meeting the nutritional requirements of the meal, minimizing program costs (including maintaining outdated facilities), and maximizing student acceptability and participation (8).

Schools have taken creative steps to control costs and try to meet higher nutritional standards and promote good nutrition. Many schools have switched from full-time to part-time labor, joined purchasing cooperatives, and used more convenience foods. Some schools emphasized increased student participation to boost revenues; others boosted revenue by making healthful foods more appealing when changing preparation methods

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and by engaging students in nutrition education (3). In many schools, nutrition integrity suffered as à la carte, school stores, and vending machines increased offerings of foods without nutrition guidelines or standards in an effort to increase revenues.

These changes in the availability of foods in schools were taking place while obesity was becoming an increasingly important issue. More than 16% of children and adolescents ages 2 to 19 years are obese and 31.9% are overweight (9). The epidemic of childhood obesity has raised awareness of school-related food issues and has provided a rallying point to make school nutrition a priority for schools. The National Association of State Boards of Education in 2009 published the guide "Preventing Childhood Obesity: A School Health Policy Guide," which outlines the components of a school-based approach to prevent obesity and promote good health for all students (10).

Coordinated nutrition education programs play an important role in improving the health status of students. They have been shown to have positive impacts on educational outcomes and health risk behaviors. The Centers for Disease Control and Prevention's Coordinated School Health Model describes various health components necessary across all aspects of the school environment (11). Nutrition services are an integral component of this coordinated model, designed to help prevent obesity and improve the health status of children in the United States. Collaboration of people from the community and the school responsible for each of these components is required for success. Lastly, the Society for Nutrition Education has developed recommendations for the proposed Child Nutrition Authorization Act of 2010 that would help insure students receive coordinated nutrition education throughout their K-12 education (12).

Safety Net for Children

The NSLP and SBP provide a safety net for children who are food insecure. In 2008, the NSLP provided lunch for over 30 million children and breakfast for over 10 million children each day. More than half of the lunches are served at free or reduced price, and over 80% of breakfasts are

consumed by children from households with incomes below 185% of the poverty level (4,5). The NSLP also offers reimbursement to help schools serve snacks to students who are participating in regularly scheduled afterschool activities (13).

Nutrition and Learning: Do School Meals Improve Academic Achievement and Health?

Children learn best when they are well-nourished. Children who report consistently eating breakfast tend to be better nourished than those who do not (14). In addition, the children who consume breakfast may have improved cognitive function related to memory, higher test grades, and better school attendance (14). In a comprehensive review of literature, Taras reported that children participating in the SBP showed improved attendance, decreased tardiness, improved academic performance, and improved cognitive functioning when compared to those children who didn't participate in the SBP (15).

Much of the supporting academic achievement research is focused on the effects of breakfast on learning and on severely malnourished children. More research is needed concerning the effects of other meals and snacks on learning.

The Cost of Improving Nutrition Integrity

The cost of improving nutrition integrity is difficult to estimate. There are no national studies tracking the total cost of planning or implementing local wellness policy expenditures. School menus are being modified by adding more nutritious foods that are likely to be eaten by students. Studies are needed to determine modification costs. In addition, funds are needed to support the inclusion of nutrition education to school curricula when required in order to meet local wellness policy goals (12).

Those who plan school menus must meet the US Department of Agriculture's (USDA's) nutrient standards that include serving menus over the course of a week that provide no more than 30% of calories from fat and less than 10% of calories from saturated fat. Menus are required to include one third of the Recommended Dietary Allowances for protein, vitamins A and C,

iron, and calcium at lunch and one fourth of the Recommended Dietary Allowances at breakfast (16). In October 2009, the Institute of Medicine (IOM) released recommendations that, if implemented by the USDA, would revise the meal requirements and nutrient targets for school meals. A comparison of the foods currently required and the IOM's recommendations is available in Figure 2 (17).

According to the USDA's School Lunch and Breakfast Cost Study-II, 16% of revenue for school meal programs comes from other food sales, including à la carte, adult meals, and other non-reimbursable food sales. However, the school cafeteria revenue collected for the non-reimbursable sales covered only 61% of their costs (3). This indicates that school meal reimbursement may be subsidizing the costs of à la carte offerings in schools and that à la carte offerings should be reduced or prices should be increased.

The School Lunch and Breakfast Cost Study-II reported the mean cost of providing a reimbursable lunch was less than the School Food Authority (SFA) receives in USDA reimbursement for a lunch in the "free" category. However, the reported cost of producing a reimbursable breakfast exceeded the rate of reimbursement. An SFA may be losing money on each breakfast served. While reported costs include only those charged to the school nutrition budget, the study also determined the full cost of producing reimbursable meals which exceeded the reimbursement rates (18). Adequate reimbursement from a combination of USDA, state, and local sources, such as school districts' contributions and parents' payments, for school meals is needed for the NSLP to be self-sustaining. Meal prices are normally controlled by locally elected members of school boards of education. Because of this, many decisions made concerning school meals are local decisions (18).

CURRENT INITIATIVES TO IMPROVE SCHOOL EATING ENVIRONMENTS

Child nutrition programs ensure that adequate nutrition is provided for learning, growth, and development, and strive to prevent child obesity (19). The following initiatives will help schools working to establish

Components of nutrition integrity	Indicators
Only high-quality, wholesome foods and beverages are available in: 1) School meals	<ul style="list-style-type: none"> ● School participates in National School Breakfast Program, National School Lunch Program, and the Fresh Fruit and Vegetable Program (if available) ● School offers an after-school snack through the National School Lunch Program for children involved in academic programs ● School participates in Farm to School Program (if available) ● School meals meet US Department of Agriculture meal pattern requirements and standards ● A variety of choices of menu items are available, including vegetarian entrees, whole grains, fresh fruit and vegetables, and low-fat and nonfat milks ● Foods offered help students to increase fiber consumption, and reduce simple sugars, cholesterol, <i>trans</i> fats, and sodium ● Water is available for students at no cost ● The cafeteria has two high sanitation scores yearly ● Meals are attractive and appealing to students ● Meals are served in a clean, pleasant, safe and well-supervised environment ● Foods available as part of school meals support what students learn in the classroom about nutrition and health ● Meals contain foods that accommodate religious, ethnic, and cultural diversity ● Accommodations are made for students with special dietary needs ● Foods and meals are not used as a disciplinary measure ● The availability of competitive foods complies with federal regulations and the local wellness policy ● Extra items offered for sale consider the students' needs for calories and nutrients and support what students learn about nutrition and health ● Standards are established for portion sizes and the nutritional content of food items sold individually
2) Competitive foods <ul style="list-style-type: none"> ● A la carte 	<ul style="list-style-type: none"> ● Same as for à la carte foods ● Fundraisers do not involve food items that exceed the portion sizes and nutritional content standards established for individual food items. ● Same as for à la carte foods and for fundraisers ● Celebrations are limited per classroom per month ● Food items that do not meet the school's established nutrient standards of the wellness policy are limited
<ul style="list-style-type: none"> ● Other sites <ul style="list-style-type: none"> ■ Vending machines ■ Fundraising ■ School stores ■ Parties and celebrations 	

(continued)

Figure 1. Components and indicators of nutrition integrity. All foods and beverages available in schools for children are consistent with the Dietary Guidelines for Americans, and when combined with nutrition education, physical activity, and a healthful school environment, contributes to enhanced learning and development of lifelong, healthful eating habits (1).

campus environments that promote healthy lifestyles.

Choices

Federal guidance and the School Nutrition Association (SNA) recommend providing students with a variety of food and beverage choices (16) to encourage consumption. According to the 2006 School Health Policies and Programs Study (SHPPS), few states and less than one third of districts require schools to offer choices. However, about two thirds of schools offered a daily choice between two or more entrées, between two or more vegetables, and between two or more types of fruit or 100% fruit juice. Most schools offered either skim or low-fat milk (20).

Culturally Relevant Programs

Schools are encouraged to serve culturally relevant foods so that meals are acceptable to students and their

families. The Food and Nutrition Information Center, a part of the National Agricultural Library, has compiled a list of resources to help educators work with students and their families (21). Student familiarity with food is an important aspect of developing food habits (22). Different cuisines help make school meals more interesting and appealing to students by providing variety.

Vegetarian Offerings

According to the SHPPS, 78.8% of schools had students who described themselves as following a vegetarian diet (20). ADA has stated that if appropriately planned, all types of vegetarians diets can provide adequate nutrition for children (23). Vegetarian offerings are provided in 66% of schools where vegetarian students were identified in order to meet the student's dietary needs and food preferences (20). To assist with the selection of alternate milk beverages, the

USDA published final regulations that establish nutrient standards for nondairy beverage alternatives to fluid milk, such as soy milk, in the NSLP. When these alternatives are available in the marketplace, the SFA has the discretion to make this substitution at the written request of the parent (24).

Special Dietary Needs of Students

The National Food Service Management Institute provides technical assistance to help school nutrition personnel meet the special dietary needs of students who require a special diet (25). Local school districts must make accommodations at no additional cost to the student when the student has a defined disability such as cerebral palsy, cystic fibrosis, diabetes, or spina bifida, to name a few. The Individuals with Disabilities Education Act requires an Individualized Education Program for each student with a disability. Individualized Education

Components of nutrition integrity	Indicators
Students have quick and easy access to available school meals and snacks	<ul style="list-style-type: none"> ● School meals are affordable ● Applications have been processed and approved for all students eligible for free and reduced-price meals ● Buses and classes are scheduled to ensure that students have adequate time to eat after they have been served their meal ● Lunch is scheduled between the hours of 10:00 AM and 2:00 PM ● An adequate number of serving lines and kiosks keep the waiting time to stand in line for meals minimal ● Promote the availability of school meals as the best option ● Eliminate any social stigma that might be associated with participating in the National School Lunch and Breakfast Programs ● Prevent overt identification of students eligible for free or reduced-price meals
The school environment supports the consumption of healthy, nutritious foods	<ul style="list-style-type: none"> ● Teachers refrain from using foods as a reward for performance or behavior ● Parents and the community are engaged in nutrition education and the school's wellness policy ● A wellness policy establishes goals for nutrition education, physical activity, and other activities that promote student health ● The wellness policy is being implemented and addresses evaluation and revisions ● A variety of delivery points and communication tools are used to deliver consistent nutrition messages
Nutrition education is incorporated into the curricula	<ul style="list-style-type: none"> ● Special events and promotions are routinely implemented in the school cafeteria ● School gardens and other local food production are integrated into the curricula ● Nutrition information about food items and menus is readily available ● School nutrition staff, administrators, and teachers participate in staff development to learn more about scientifically factual nutrition ● Nutrition is integrated into all subject areas, including language arts, science, and mathematics ● Nutrition curricula are sequential, comprehensive, and adequate to result in behavioral changes ● Nutrition education messages target specific behaviors, using multiple components, such as policy change and social marketing ● Nutrition education strategies are innovative and appeal to students' interests and motivations ● School cafeteria is used as a learning laboratory where students can apply nutrition content learned in the classroom ● School nutrition personnel are actively involved in nutrition education at the school level
Physical activity has been integrated into the school day	<ul style="list-style-type: none"> ● Recess is scheduled prior to the lunch period in elementary schools ● Physical education is a part of the required school curricula for K-12 ● All students K-12 have opportunities and encouragement to be physically active ● Physical activity is not withheld or used as part of the disciplinary process ● Faculty identifies strategies to incorporate physical movement into the curricula

Figure 1. Continued

Programs with nutrition goals and objectives may improve the learning capabilities of some students (26). School accommodations for food allergies and intolerances are necessary when there is a documented concern for severe, life-threatening reactions to foods or food components (26).

SCHOOL BREAKFAST PROGRAM

Much of the supporting academic achievement research is focused on the effects of breakfast in two areas: 1) learning, and 2) on children who are severely malnourished. More research is needed concerning the effects of lunch and snacks on learning.

Benefits of Breakfast

Research suggests that breakfast should be considered the most important meal of the day (14,27); however, many students come to school without breakfast, and compared to the NSLP, SBP is sorely underutilized.

Evaluations of school nutrition programs indicate that students who consume school breakfast have a better overall diet including a lower percentage of calories from fat. These students are also less likely to have low intakes of magnesium and low serum levels of vitamin C and folate, two nutrients important for adequate growth (28).

The presence of adequate amounts of protein, iron, and iodine in school meals, and the consumption of breakfast, all positively affect a child's learning capabilities (29). Eating breakfast may also lead to improved cognitive function, better memory and test grades, and higher school attendance rates (14).

The benefits of school breakfast include a greater likelihood that the breakfast participant will consume milk and fruit and be less likely to consume non-nutrient-dense beverages (30). Data from the Third National Health and Nutrition Examination

Survey agree that participation in the SBP leads to improved dietary habits and nutrient intake among school children (31). Those who eat breakfast also consume more daily calories than non-breakfast eaters, and are less likely to be overweight (14). Breakfast eaters are more likely to have a lower body mass index than their non-breakfast-eating peers, especially among non-Hispanic and white students (32).

Access to Breakfast

In 2008, 81,517 schools participated in the SBP, and these schools served 10.6 million breakfasts on average each day with 1.8 billion breakfasts served in that year. Seventy-one percent of the breakfasts were served to children whose households qualified for free meals, and 10% of the breakfasts were at reduced price (4). Eighteen percent of states and 74.1% of districts required all schools to offer breakfast. An additional 44% of

Type of specification	Current requirements	Recommendations
Fruits Vegetables	Considered together as a fruit and vegetable group. No specifications for the type of vegetable	Required daily amount increased Two servings required daily, recommended amount is increased from current requirements. Must include dark green, bright orange, legumes, starchy, and other vegetables each week
Grains/Breads Milk	No requirement for whole grains Whole, reduced-fat, low-fat, fat-free milks (plain or flavored)	At least half must be whole-grain-rich foods Fat-free (plain or flavored) and plain low-fat milk only
Calories Sodium	Must meet minimum level None (decreased level recommended)	Must be within minimum and maximum level Gradually but markedly decrease sodium to the specified level by 2020

Figure 2. Key recommended changes in school lunch requirements (17). Reprinted with permission from the National Academies Press, Copyright 2010, National Academy of Sciences.

states and 8.7% of districts require some schools, such as those with a high percentage of students eligible for free or reduced-price lunch, to offer breakfast to students (20).

Time constraints are a challenge for implementing school breakfast. Many parents are unaware of the academic and behavioral benefits of receiving an adequate breakfast. Late buses or tardy students result in inadequate time to eat before classes start. School officials are often unwilling to make breakfast available in the classroom. These barriers can limit participation in the SBP (33).

AREAS THAT NEED IMPROVEMENT

Foods available for sale in schools fall into three categories: reimbursable meals available through the NSLP and SBP, à la carte items in the cafeteria, and foods available in vending machines and other sites (20).

Nutrition Standards for All Foods

Foods sold outside of the reimbursable NSLP and the SBP are considered competitive foods, for they compete with traditional school meals as a source of nutrients. Competitive foods are not subject to federal nutrition standards and tend to be calorie-dense (34). According to the 2006 SHPPS, 32.7% of elementary schools, 71.3% of middle schools, and 89.4% of high schools had either vending machines, school stores, or a snack bar where students could purchase foods and beverages (20).

Federal regulations require that “foods of minimal nutritional value,” such as carbonated beverages,

chewing gum, water ices, and certain candies made predominately from sweeteners, cannot be sold in the foodservice areas during meal-times. However, this regulation covers a small number of foods in a small section of the school for a small part of the day. The availability of competitive foods reduces participation in the NSLP, decreases nutrient intake consumed from lunches, and increases the amount of food that is discarded (3).

Cafeteria à la carte sales are competitive foods that have no federal nutrition standards. In a 2005 Government Accountability Office study, the average annual competitive food revenues were \$8,500 per each elementary school, \$39,500 for middle schools, and \$80,000 for high schools, so the economic impact of competitive foods is substantial (34). Even though the revenue generated by competitive food sales is significant, the substitution of nutrient-dense, healthier options has not been found to decrease revenue (35).

Several voluntary standards for competitive foods have also been developed. The Alliance for a Healthier Generation, a partnership between the American Heart Association and the William J. Clinton Foundation, developed Nutrition Guidelines for Competitive Foods for elementary and secondary schools in collaboration with several food and beverage manufacturers (36). These guidelines are intended to help students make more healthful selections of snacks, side items, treats, and desserts (36).

The IOM has completed two studies regarding nutrition quality of foods in

schools. The first, *Nutrition Standards for Foods in Schools: Leading the Way toward Healthier Youth*, provides recommendations for appropriate nutrition standards regarding the availability, sale, and consumption of foods at school, including competitive foods (Figure 3) (34). The second study, *School Meals: Building Blocks for Healthy Children*, provides recommendations to revise standards and requirements so school meals are more healthful (Figure 2) (17).

School Nutrition and Dietary Assessment and NSLP Nutrient Standards

The Food and Nutrition Service of the USDA has sponsored three School Nutrition and Dietary Assessment (SNDA) studies since 1993 to analyze the nutritional quality of school meals. The latest, SNDA III, was conducted in 2004-2006 (37).

The findings of SNDA I, completed in 1993, resulted in the establishment of specific nutrition standards for school meals, monitored by the USDA, in an attempt to reduce the high percentage of total fat and saturated fat. SNDA II showed that some progress toward meeting total fat and saturated fat standards had been made, but that the levels of total fat, saturated fat, and sodium in school lunches still needed to be reduced (38).

Results from SNDA III showed that most schools meet the standards for protein, vitamins, and minerals. However, only 7% of schools meet all nutrient standards, as fewer than one third of schools meet the standards for energy from fat (no more than 30% of calories from fat) or saturated fat (less than 10% of calories from saturated fat) in the average lunch. Also, school meals were high in sodium and low in fiber, indicating the need to devote future attention on policy, practice, and research on reducing fat and sodium and increasing fiber in school meals (37). These concerns were addressed by the IOM in the October 2009 report *School Meals: Building Blocks for Healthy Children* (17).

IMPROVING QUALITY, VARIETY, AND ACCEPTABILITY OF SCHOOL MEALS

Improving the quality, variety, and acceptability of school meals is a multifaceted issue with many possible solutions.

The committee recognizes that:

1. The present and future health and well-being of school-age children are profoundly affected by dietary intake and the maintenance of a healthy weight.
2. Schools contribute to current and lifelong health and dietary patterns and are uniquely positioned to model and reinforce healthful eating behaviors in partnership with parents, teachers, and the broader community.
3. Because all foods and beverages available on the school campus represent significant caloric intake, they should be designed to meet nutrition standards.
4. Foods and beverages have health effects beyond those related to vitamins, minerals, and other known individual components.
5. Implementation of nutrition standards for foods and beverages offered in schools will likely require clear policies: technical and financial support; a monitoring, enforcement, and evaluation program; and new food and beverage products.

The committee intends that:

6. The federally reimbursable school nutrition program will be the primary source of foods and beverages offered at school.
7. All foods and beverages offered on the school campus will contribute to an overall healthful eating environment.
8. Nutrition standards will be established for foods and beverages offered outside the federally reimbursable school nutrition programs.
9. The recommended nutrition standards will be based on the Dietary Guidelines for Americans, with consideration given to other relevant science-based resolutions.
10. The nutrition standards will apply to foods and beverages offered to all school-age children (generally ages 4 through 18 years) with consideration given to the developmental differences between children in elementary, middle, and high schools.

Figure 3. Institute of Medicine's Guiding Principles for Development of Nutrition Standards for Foods in Schools (34). Reprinted with permission from the National Academies Press, Copyright 2007, National Academy of Sciences.

New Product Development by Industry

School nutrition directors working with industry could develop foods that meet the nutrient needs of students. Acceptable menu items that are high-nutrient-dense with limited sodium, fat, and saturated fat are needed to improve the nutrient intake of students.

Adding nutrient-dense foods to school meals can have a positive effect on overall student consumption. A study by Baylor College of Medicine with middle school students found that the consumption of sweetened beverages declined and milk consumption increased after more healthful food choice changes were implemented in the cafeteria, the school environment, and in school policies (39).

Healthier US School Challenge

Incentives for schools to make changes in their menus are also available and may lead to success. The USDA established the Healthier US School Challenge to recognize schools that create more healthful environments. Schools can receive bronze, sil-

ver, or gold award distinction for levels of performance for offering meals that emphasize fruits, vegetables, whole grains, and fat-free or low-fat milk and are low in saturated fat, *trans* fat, cholesterol, sodium, and added sugars (40).

Farm to School

Student, parent, and community interest in connecting children to the origin of their food and supporting local farmers has led to expansion of the Farm to School program. It is estimated that this movement is active in nearly 9,000 schools in 43 states. Farm-to-school programs help connect the schools to local food producers and at the same time address food-related health issues by promoting healthful food intake (41).

Farm to School may be an innovative solution to improving the school environment and the quality of foods served. A pilot project in California elementary schools used salad bars and garden laboratories with nutrition education to promote nutrition and improve food choices among the students. The integration of nutrition

and agriculture in the curriculum successfully increased nutrition awareness among students as well as faculty and staff (42).

Fresh Fruit and Vegetable Program

The USDA's Fresh Fruit and Vegetable Program, implemented in 2006-2007, is another innovation that increases fruit and vegetable availability to schools. Funding is now available in all 50 states for this program to supply fruits and vegetables in addition to those provided in the school's meals. This program has successfully introduced students to fresh produce that they may not otherwise experience (43). Further evaluations of innovative ways to promote the consumption of fruits and vegetables at all grade levels are needed.

School Wellness Policies

Prevention is the key to improving the health of the children. The need for improved nutrition has led the US Congress to pass legislation requiring local wellness plans in each school district participating in the NSLP. Several organizations, including the National Alliance for Nutrition and Activity, Action for Healthy Kids (44), and the USDA (45), have developed sample school wellness plans that can serve as guides for local school systems. ADA is a member of the National Alliance for Nutrition and Activity, which also developed prototype policies on school health councils, nutritional quality of foods and beverages sold and served on campus, nutrition and physical activity promotion and food marketing, physical activity opportunities and physical education, and monitoring and policy review (46). Action for Healthy Kids has a searchable database of existing nutrition and physical activity policies for states and local school districts available (44).

In 2007, Pennsylvania assessed local wellness policies in 499 public school districts. Most (85.6% to 100%) met each mandate that required nutrition education, physical activity, as well as the other components required in wellness policies. Most respondents identified the superintendent and school foodservice director as responsible for ensuring local wellness policy implementation (47).

Longley and Sneed found that significant changes have been made to school environments as a result of the implementation of the wellness policies (48). Changes in the foodservice operations included use of nutrition guidelines to select foods for à la carte food and beverage sales, classroom parties, and in vending machines. Less progress has been noted in the implementation and monitoring than in the development of wellness policies as reported by school nutrition directors. The largest barriers reported to implementing the wellness policies are the use of food for fundraising and the competition for time in the school day for school-related activities not related to the wellness policies (48).

Integration of Nutrition Education with School Environment that Models Healthful Food

The National Health and Nutrition Examination Survey 1999-2004 revealed that over two thirds of foods consumed by children were foods that are recommended for occasional consumption only (49). This study also found that as children mature, their dietary intake of important nutrients, such as iron and calcium, decreased. These factors highlight the need for school-based nutrition education and a healthful school environment for all children (20). Promoting children's health will continue to be a fundamental role of the US public schools. The school setting is where health education can be provided and where healthful behaviors and positive attitudes can be modeled and reinforced (34). Although food habits are affected by many factors, the school environment can have a significant influence on children's diets and also play an important role in teaching and modeling appropriate health behaviors (34).

The Action for Healthy Kids Progress or Promises report found that parents, school health professionals, and community health providers believe that schools do not provide adequate information to parents on the importance of sound nutrition (50).

Research shows that using different approaches and places to deliver messages about healthful lifestyles increases the probability of success

(51). This includes integrating nutrition in the classroom, using the cafeteria as a learning laboratory, creating effective media campaigns, and delivering consistent nutrition messages throughout the community through collaborative efforts (12).

According to the 2006 SHPPS, 84% of states and 44% of districts involved school nutrition services staff in the classroom to teach students about healthful eating; 82% of states and 51.4% of districts provided ideas on how to use the cafeteria as a place where students might learn about food safety, food preparation, or other topics related to nutrition; and 88% of states and 51.3% of districts provided ideas for nutrition-related special events to teach students about healthful eating or nutrition (20). However, the median number of instructional hours devoted to nutrition in 2006 was 3.4 hours in elementary schools (12).

Effective nutrition education and promotion must: 1) focus on specific behaviors; 2) address the interests and motivations of the intended audience; 3) allow enough time and intensity to achieve positive results; 4) deliver sequential curricula in an organized manner; 5) involve several aspects of the child's environment, both at home and at school; and 6) provide professional staff development. Multiple approaches including changes to both the environment and policies, planned initiatives and the curriculum, and social marketing are crucial for success. Fifty hours of nutrition education in the classroom that is based on sequential instruction and skill-building, and that incorporates family involvement, is needed to impact behavior change. The cafeteria should be a learning laboratory where students can practice nutrition-related skills (12).

It has been documented that innovative, hands-on, and behaviorally-focused teaching strategies enhance healthful eating (34). An evidence-based, collaborative approach requires a well-funded and comprehensive nutrition education and promotion platform (20).

COMPETITIVE FOODS

Competing Food and Beverage Sales

The sale of foods with low nutrient density in schools is counter-productive.

When these types of foods are sold at school, fewer students eat school lunches, and the healthful foods offered as part of lunches are displaced, which decreases nutrient intake from those lunches. In addition, more food is left uneaten and thrown away. The availability of low-nutrient-dense foods also sends a mixed message to students about the importance of choosing healthful foods as part of their overall diet (20).

In response to a Congressional directive, the IOM conducted a review of the influence of food marketing on the diets and health of children. The report concluded that food and beverage marketing practices are out of balance with healthful diets. The report encourages schools to educate and promote healthful diets for children in all aspects of the school environment (51).

Vending Sales and "Pouring Rights" Issues

According to the 2006 SHPPS, more than half of US high schools have contracts that prohibit selling soft drinks produced by more than one company. This is referred to as "pouring rights." Contracts with beverage companies provide a revenue stream to school districts since almost two thirds of the schools earn a specified percentage of the soft drink sales receipts (20). Encouraging soft drink sales is the most common type of marketing in schools (34). School districts need to approach pouring rights contracts with the best interest of their students since schools are an ideal location for marketing to students. Companies are eager to create brand awareness and loyalty in an effort to develop student purchasing patterns that will last into adulthood.

OTHER SCHOOL ENVIRONMENTAL ISSUES THAT AFFECT NUTRITION INTEGRITY

Meal Scheduling

The length of the school meal period is crucial in order to provide enough time to eat. The time allotted to eat affects the amount of food consumed. A plate waste study using length of the lunch period as the independent variable resulted in elementary students with a 20-minute lunch period wasting 43.5% of their meal vs 27.2% waste with a 30-minute period. Sev-

eral key nutrients including vitamin A and calcium were also consumed at higher rates during longer lunch periods (52). At least 30 minutes should be allocated in the elementary school setting to allow an adequate time to consume the lunch provided. ADA's Task Force on Competitive Foods (TFCF) recommended that the USDA issue guidance to states regarding the time students have to purchase and consume foods (7).

Scheduling recess before lunch in an elementary setting may help reduce plate waste and result in more balanced calories and nutrients consumed by students. One study found that the school with recess after lunch had 40.7% plate waste while the school with recess before lunch had less than 27.2% plate waste, indicating that students in schools that offer recess before lunch may be eating more of their balanced school lunch (53).

Disclosure of Nutritional Content of Meals

Disclosure of nutrition information at the point of sale has the potential to positively influence the foods selected by students. High school students were more likely to select the more healthful entrée when provided nutrition information about the food items on the menu in one study (54). The students who were informed also expressed a greater level of satisfaction with their school nutrition program (55).

Because of this improvement in selection and satisfaction, nutrient content of school menu items could be a marketing tool that enhances the development of good eating habits among high school students and promotes positive public relations. Investigations related to disclosure of nutrient content in middle level and elementary schools are needed to determine the effects on intake and satisfaction with students in those grade levels as well as any unintended consequences.

Marketing of Child Nutrition Programs Meet Child Nutrition Program Standards

According to the 2006 SHPPS, techniques most commonly used to promote the school nutrition program included sending menus and information about the program home with students and providing nutrient analysis for meals (20).

Professional Standards and Professional Development

The National Food Service Management Institute has identified competencies and skills that are necessary for school nutrition professionals to effectively manage district foodservice operations. District directors are responsible for training their managers and staff members as well as for providing staff development opportunities (56). According to the 2006 SHPPS, during the 2 years preceding the study, 100% of states and 96.3% of districts provided funding for staff development on a variety of topics such as food safety, menu planning, and implementing the Dietary Guidelines for Americans (20).

ADA's TFCF identified guiding principles on which to base ADA's work on competitive foods and nutrition education. The task force stated that school nutrition personnel should be appropriately certified and possess knowledge of food, nutrition, and food safety. Training and employee orientation are identified as a best practice in SNA's Keys to Excellence (16,57). The task force further recommended that local school district directors have a national certification. One of ADA's key recommendations for reauthorization of child nutrition programs is that directors of the school nutrition program at the district level should be certified as registered dietitians (RDs), dietetic technicians, registered (DTRs), or SNA school nutrition specialists, since SNA has developed a school nutrition specialist credentialing program (58). RDs should be involved in addressing the nutritional intake and needs of children with special dietary needs (7).

State Legislation and Other State Efforts Related to Schools

ADA's TFCF stated that the goals of the NSLP and SBP should be supported by state legislation that creates school environments where students can develop healthful eating habits (7). State legislatures are encouraged to pass stronger state requirements to support nutrition integrity (7). In addition, states could require certification, licensure, or endorsement for district school nutrition coordinators and/or managers. States could establish stronger competitive food policies and provide

funds to support their implementation (7).

The National Conference of State Legislatures is a bipartisan organization that serves legislators and their staff by providing research and technical assistance in an exchange of ideas on important issues. Their database tracks school health and wellness legislative activities. Information from the database shows that in 2008 at least 23 states considered some type of school nutrition legislation and six states actually enacted legislation (59).

THE ROLE OF RDs and DTRs

RDs and DTRs can be actively involved in providing local support for nutrition integrity in schools. The potential roles for RDs and DTRs include 1) forming community collaborations and coalitions, 2) working on environmental changes for obesity prevention, 3) providing professional development to educators and others in the community, 4) educating school board and local government decision makers, 5) assessing the school nutrition environment for developing plans with the school for improvement of specific areas, and 6) serving on school wellness committees or school health advisory councils. In any of these roles, it is important for the RD or DTR to work with the school nutrition professionals in the school district to bring about desired change.

Team Nutrition/Nutrition (TNN) Educators

RDs can provide leadership for TNN coordination nationally, in each state and at the local level in an effort to have thorough, systematic implementation. Statewide coordination of TNN activities helps to ensure that there is optimal delivery of training of state and local district personnel related to the Nutrition Network (45).

RDs and DTRs employed as district level nutrition coordinators could conduct nutrition promotions and education activities, such as health fairs for staff, students, and parents in the district and assist school nutrition managers with events at the school level. An RD or DTR could conduct the nutrition education training and provide teaching resources for public school educators. The training could include

development of an integrated nutrition curriculum that has appropriate scope and sequence throughout the K-12 curriculum. Nutrition is often integrated into other subject areas, such as social studies and science.

National level coordination and development of appropriate curricula materials along with oversight and evaluation is needed and might be carried out by a well-trained RD. In some communities, partnerships have been formed between hospitals and schools. RDs and DTRs could be employed to teach nutrition lessons to students or provide in-service sessions to educators or school nutrition staff. Many RDs and DTRs are actively involved in their children's school parent organizations. In addition, RDs and DTRs could conduct research related to the most effective nutrition curricula and programs and how best to use the expertise of the dietetics practitioner.

Qualified School Foodservice Practitioners

RDs and DTRs are well prepared to serve as school nutrition directors. RDs possess the skills to perform nutrient analysis, nutrition education promotion and implementation, and the overall knowledge of child nutrition required to manage a school food service operation. In addition, RDs and DTRs can advocate for improvement of the school environment by changing the types and qualities of competitive foods on school campuses.

RDs and DTRs are qualified to write menus and select menu items that meet nutrient targets or standards. According to SNDA III results, most schools currently are not meeting School Meals Initiative for Healthy Children lunch standards for total fat and saturated fat content. A high priority for school district foodservice practitioners should be to improve menu selections to meet these standards while addressing students' taste preferences (60).

Based on SNDA III results and IOM recommendations, school menu planners must increase fiber and reduce sodium in breakfast and lunch meals. More than 40% of lunch entrées or meat/meat alternates are commercially prepared, therefore contributing the majority of fat, saturated fat, and sodium. Offering entrées that have been modified to con-

trol nutrient content and working with commercial product manufacturers to reduce fat, saturated fat, and sodium levels in prepared entrées is in the best interest of the students (60). RDs and DTRs have the expertise to develop appropriate recipes and work with food manufacturers to develop food products that will meet the SBP and NSLP requirements.

RDs and DTRs could assess the availability of competitive foods and then collaborate with administrators and local school boards to prepare and implement effective competitive food policies for the school district. USDA's Healthier US School Challenge awards schools for meeting USDA standards, limiting competitive foods and providing nutrition education (40). RDs and DTRs can work with school districts to implement the program and motivate the district to achieve a more healthful environment.

Nutrition Policy Advocates

ADA's public policy agenda includes several items related to local support for nutrition integrity in schools and SNDA III findings and recommendations. These include providing funding for program implementation that meets the nutrient standards and recommendations of the current Dietary Guidelines for Americans, strengthening nutrition education and promotion, and increasing the number of RDs and DTRs in policy-making roles (60). School nutrition leaders need to know that they have grassroots support for the changes that are needed in the school district. Advocates in community-based agencies, school Parent Teacher Associations/Parent Teacher Organizations, and on local school district wellness policy committees are necessary to ensure that the schools are planning and implementing efforts to maintain nutrition integrity district wide. Volunteer opportunities also exist, which help shape the nutrition integrity of schools. For example, RDs and DTRs can serve on the district's health education committee to review and suggest appropriate nutrition education for K-12 curriculum.

Change only requires the leadership of one respected local person to serve as a champion. This champion can build on their interest and com-

mitment and establish a broad-based team. If RDs and DTRs accept these challenges and fill these potential roles, nutrition integrity will be achieved/realized and students will reap the benefits of healthier school environments and healthier futures.

References

1. Kettlewell KJ. Nutrition Integrity for Schools: Revised criteria and resources for Implementation. *Topics in Clinical Nutrition*. 2004; 19:2-8.
2. American Dietetic Association. Position of the American Dietetic Association: Child and adolescent food and nutrition programs. *J Am Diet Assoc*. 2006;106:1467-1475.
3. Newman C, Ralston K, Clauson A. Balancing Nutrition, Participation, and Cost in the National School Lunch Program. *Amber Waves*. September 2008. <http://www.ers.usda.gov/AmberWaves/September08/Features/BalancingNSLP.htm>. Accessed August 4, 2009.
4. US Department of Agriculture, Economic Research Service. Child nutrition programs: School Breakfast Program. Economic Research Service Web site. <http://151.121.68.30/Briefing/ChildNutrition/Breakfast.htm>. Accessed May 27, 2010.
5. US Department of Agriculture, Economic Research Service. Child nutrition programs: National School Lunch Program. Economic Research Service Web site. <http://151.121.68.30/Briefing/ChildNutrition/Lunch.htm>. Accessed May 27, 2010.
6. Martin J, Oakley C. *Managing Child Nutrition Program: Leadership For Excellence*. 2nd ed. Boston, MA: Jones and Bartlett; 2008:74.
7. American Dietetic Association. Summary of Competitive Foods Task Force Report. http://www.homefoodsafety.org/cps/rde/xchg/ada/hs.xsl/advocacy_2824_ENU_HTML.htm. Accessed May 27, 2010.
8. Ralston K, Newman C, Clauson A, Guthrie J, Buzby J. National School Lunch Program: Background, trends, and issues. *Economic Research Service Summary*. July 2008. http://www.ers.usda.gov/Publications/ERR61/ERR61_ReportSummary.pdf. Accessed August 3, 2009.
9. Ogden CL, Carroll MD, Flegal KM. High body mass index for age among US children and adolescents, 2003-2006. *JAMA*. 2008; 299:2401-2405.
10. Pekruhn C. Preventing childhood obesity: A school health policy guide. National Association of State Boards of Education. Robert Wood Johnson Foundation Web site. http://www.rwjf.org/files/research/20090506_nasbeguide.pdf. Published 2009. Accessed June 3, 2010.
11. Centers for Disease Control and Prevention. Healthy Youth!: Coordinated School Health Program. <http://www.cdc.gov/HealthyYouth/CSHP>. Last modified September 24, 2008. Accessed February 2, 2010.
12. Society for Nutrition Education. Society for Nutrition Education's recommendation for improving children's nutrition education 2009 Child Nutrition reauthorization. http://www.sne.org/documents/SNECNR_approved708.doc. Accessed July 23, 2009.
13. US Department of Agriculture, Food and Nu-

- trition Service. Afterschool Snacks. <http://www.fns.usda.gov/cnd/afterschool/default.htm>. Accessed January 23, 2010.
14. Rampersaud GC, Pereira MA, Girard BL, Adams J, Metz J. Breakfast habits, nutritional status, body weight, and academic performance in children and adolescents. *J Am Diet Assoc.* 2005;105:743-760.
 15. Taras H. Nutrition and student performance at school. *J School Health.* 2005;75:199-213.
 16. School Nutrition Association. 2007. Keys to Excellence. <http://www.schoolnutrition.org/Content.aspx?id=2406>. Accessed August 3, 2009.
 17. Institute of Medicine. *School Meals: Building Blocks for Healthy Children*. National Academies Press Web site. http://books.nap.edu/openbook.php?record_id=12751#. Accessed October 23, 2009.
 18. US Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis. School Lunch and Breakfast Cost Study-II, Executive Summary, April 2008. <http://www.fns.usda.gov/ORA/menu/Published/CNP/FILES/MealCostStudy.pdf>. Accessed October 26, 2009.
 19. Story M. The third school nutrition dietary assessment study: Findings and policy implications for improving the health of US children. *J Am Diet Assoc.* 2009;109(suppl 1):S7-S13.
 20. O'Toole T, Anderson S, Miller C, Gutherie J. Nutrition services and foods and beverages available at school: Results from the School Health Policies and Programs Study 2006. *J School Health.* 2007;77:500-521.
 21. Food and Nutrition Information Center, National Agricultural Library, US Department of Agriculture. Cultural and ethnic food and nutrition education materials: A resource list for educators. January 2008. <http://www.nal.usda.gov/fnic/pubs/bibs/gen/ethnic.pdf>. Accessed August 5, 2009.
 22. The European Food Information Council. Determinants of Food Choice. <http://www.eufic.org/article/en/page/RARCHIVE/expid/review-food-choice>. Accessed May 28, 2010.
 23. American Dietetic Association. Position of the American Dietetic Association: Vegetarian diets. *J Am Diet Assoc.* 2009;109:1266-1282.
 24. Federal Register. Food and Nutrition Service. 2008;(73)178. Fluid Milk substitutions in the school nutrition programs. 52903-52908.
 25. National Food Service Management Institute. *Handbook for Children with Special Food and Nutrition Needs*. University, MS: National Food Service Management Institute; 2006.
 26. McCary JM. Improving access to school-based nutrition services for children with special health care needs. *J Am Diet Assoc.* 2006;106:1333-1336.
 27. Affenito SG. Breakfast: a missed opportunity. *J Am Diet Assoc.* 2007;197:565-569.
 28. Bhattacharya J, Currie J, Haider SJ. Evaluating the impact of school nutrition programs. Economic Research Service Web site. <http://www.ers.usda.gov/publications/efan/efan04008f.pdf>. Accessed July 1, 2009.
 29. Dani J, Burrill C, Demmig-Adams B. The remarkable role of nutrition in learning and behavior. *Nutr Food Sci.* 2005;35:258-263.
 30. Condon EM, Crepinsek MK, Fox MK. School meals: Types of foods offered to and consumed by children at lunch and breakfast. *J Am Diet Assoc.* 2009;109(suppl 1):S67-S78.
 31. Bhattacharya J, Currie J, Haider SJ. Breakfast of champions? The school breakfast program and the nutrition of children and families. *J Human Resources.* 2006;3:446-466.
 32. Gleason PM, Dodd AH. School breakfast program but not school lunch program participation is associated with lower body mass index. *J Am Diet Assoc.* 2009;109(suppl 1):S118-S128.
 33. McDonnell E, Probart C, Weirich E, Hartman T, Birkenshaw P. School breakfast programs: Perceptions and barriers. *J Child Nutr Manage.* 2004;2. <http://docs.schoolnutrition.org/newsroom/jcnm/04fall/mcdonnell/index.asp>. Accessed July 23, 2009.
 34. Institute of Medicine. *Nutrition Standards for Foods in Schools: Leading the Way toward Healthier Youth*. Washington, DC: National Academies Press; 2007:16, 106.
 35. Centers for Disease Control and Prevention. Making It Happen!: Executive summary. <http://www.cdc.gov/HealthyYouth/nutrition/Making-It-Happen/pdf/exec.pdf>. Accessed February 4, 2010.
 36. Alliance for a Healthier Generation. <http://www.healthiergeneration.org/about.aspx>. Accessed February 12, 2010.
 37. Crepinsek MK, Gordon AR, McKinney PM, Condon EM, Wilson A. Meals offered and served in US public schools: Do they meet the standards? *J Am Diet Assoc.* 2009;109(suppl 1):S31-S43.
 38. Johnner NM. Evaluation's vital role in healthier school meals. *J Am Diet Assoc.* 2009;109(suppl 1):S18-S19.
 39. Cullen KW, Watson K, Zakeri I, Ralston K. Exploring changes in middle-school student lunch consumption after local school food service policy modifications. *Public Health Nutr.* 2006;9:814-820.
 40. US Department of Agriculture, Food and Nutrition Service, Child Nutrition Division. Healthier US School Challenge: Recognizing nutrition excellence in schools. Team Nutrition Web site. <http://www.teamnutrition.usda.gov/HealthierUS/index.html>. Accessed October 24, 2009.
 41. US Department of Agriculture. Farm to School Programs. <http://www.farmtoschool.org/index.php>. Accessed May 28, 2010.
 42. Heneman K, Junge SK, Schneider C, Zidenbert-Cherr S. Pilot implementation of the improving children's health through farming, food, and fitness, program in select California schools. *Journal of Child Nutrition and Management.* 2008; Spring 2008 Issue 1. <http://docs.schoolnutrition.org/newsroom/jcnm/08spring/heneman/index.asp>. Accessed June 3, 2010.
 43. US Department of Agriculture. Fresh Fruit and Vegetable Program. <http://www.fns.usda.gov/cnd/ffvp/ffvpdefault.htm>. Accessed February 2, 2010.
 44. Action for Healthy Kids. <http://www.actionforhealthykids.org/resources%20>. Accessed October 10, 2009.
 45. US Department of Agriculture, Food and Nutrition Service. USDA Local Wellness Policy. 2005. <http://www.fns.usda.gov/TN/Healthy/108-265.pdf>. Accessed May 28, 2010.
 46. National Alliance for Nutrition and Activity. Model school wellness policies. <http://www.schoolwellnesspolicies.org/WellnessPolicies.html>. Accessed August 6, 2009.
 47. Probart C, McDonnell E, Weirich JE, Schilling L, Fekete V. Statewide assessment of local wellness policies in Pennsylvania public school districts. *J Am Diet Assoc.* 2008;108:1497-1502.
 48. Longley CH, Sneed J. Effects of federal legislation on wellness policy. *J Am Diet Assoc.* 2009;109:95-101.
 49. US Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis. Diet quality of American school-age children by school lunch participation status: Data from the National Health And Nutrition Examination Survey (Summary), July 2008. <http://www.fns.usda.gov/ora/menu/Published/CNP/FILES/NHANES-NSLPSummary.pdf>. Accessed August 4, 2009.
 50. Action for Healthy Kids, Progress or Promises. 2008. Action for Healthy Kids. <http://actionforhealthykids.org/resources/files/progressorpromises.pdf>. Accessed May 28, 2010.
 51. Institute of Medicine. Overview of the IOM report on food marketing to children and youth: Threat or opportunity? December 2005. <http://www.iom.edu/CMS/3788/21939/31330/31337.aspx>. Accessed August 5, 2009.
 52. Bergman EA, Buergele NS, Englund TF, Femrite A. The relationship between the length of the lunch period and nutrient consumption in the elementary school lunch setting. *J Child Nutr Manage.* 2004;28(2). <http://docs.schoolnutrition.org/newsroom/jcnm/04fall/bergman/bergman2.asp>. Accessed May 28, 2010.
 53. Bergman EA, Buergele NS, Englund T, Femrite A. The relationship of meal and recess schedules to plate waste in elementary schools. *J Child Nutr Manage.* 2004;28(2). <http://docs.schoolnutrition.org/newsroom/jcnm/04fall/bergman/bergman1.asp>. Accessed May 28, 2010.
 54. Conklin MT, Cranage DA, Lambert CU. Nutrition information at point of selection affects food chosen by high school students. *J Child Nutr Manage.* 2005;29(1). <http://docs.schoolnutrition.org/newsroom/jcnm/05spring/conklin/index.asp>. Accessed May 5, 2010.
 55. Cranage DA, Conklin MT, Lambert CU. High school students are more satisfied customers when nutrition information is posted. *J Child Nutr Manage.* 2006;30(1). <http://docs.schoolnutrition.org/newsroom/jcnm/06spring/cranage/index.asp>. Accessed July 17, 2009.
 56. National Food Service Management Institute. Competencies, knowledge and skills for district-level school nutrition professionals in the 21st century. <http://nfsmi-web01.nfsmi.olemiss.edu/documentlibraryfiles/PDF/20090514085653.pdf>. Accessed August 7, 2009.
 57. School Nutrition Association. Professional standards: Your opportunity to speak out. <http://www.schoolnutrition.org/Blog.aspx?&blogid=81289>. Accessed October 23, 2009.
 58. American Dietetic Association. Support and Strengthen the Child Nutrition Programs. <http://www.eatright.org/WorkArea/DownloadAsset.aspx?id=6442451348>. Accessed May 28, 2010.
 59. The National Conference of State Legislatures. <http://www.ncsl.org>. Accessed February 15, 2010.
 60. Miller CH. A practice perspective on the third school nutrition dietary assessment study. *J Am Diet Assoc.* 2009;109(suppl 1): S14-S17.

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Authors: Ethan A. Bergman, PhD, RD, CD, FADA, Central Washington University, Ellensburg, WA; Ruth W. Gordon, MEd, RD, LD, SNS, Gordon Consulting, LLC, Atlanta, GA.

Reviewers: Sharon Denny, MS, RD (ADA Knowledge Center, Chicago, IL); Karen K. Ehrens, LRD (Ehrens Consulting, Bismarck, ND); School Nutrition Services dietetic practice group (DPG) (Elizabeth B. Foland, MS, RD, CD, Indiana Department of Education, Indianapolis, IN); Carolyn S. Holt, MS, RD, LDN, FADA (Morristown Hamblen Healthcare System, Morristown, TN); Public Health/Community Nutrition DPG (Alicia Moag-Stahlberg, MS, RD, LD, Ceres Connections Skokie, IL); Mary Kay Meyer, PhD, RD (Department of Education, Child Nutrition, Montgomery, AL); Kymm S. Mutch, MS, RD, CD (Milwaukee Public Schools, Milwaukee, WI); Esther Myers, PhD, RD, FADA (ADA Research & Strategic Business Development, Chicago, IL); Lisa Spence, PhD, RD (ADA Research & Strategic Business Development, Chicago, IL); Nutrition Education for the Public DPG (Katrjn Soltanmorad, RD, Mount San Antonio College, Walnut, CA); Jennifer A. Weber, MPH, RD (ADA Policy Initiative & Advocacy, Washington, DC).

Association Positions Committee Workgroup: Carol Berg Sloan, RD (chair); Linda Godfrey, MS, RD, LD, SNS; and Dorothy R. Caldwell, MS, RD (content advisor).

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