

# **Food Choices at School: Risks to Child Nutrition and Health Call for Action**

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Nutrition, and Forestry

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## Executive Summary

When at school, children have broad access to a wide variety of foods sold through school a la carte lines, snack bars, and vending machines. Called “competitive foods,” because they are sold in competition with lunches and breakfasts provided through the National School Lunch Program and School Breakfast Program, these foods tend to be lower in nutritional value than federally-reimbursed lunches and breakfasts. The availability of competitive foods is shown to correlate with reduced consumption of more nutritious foods, such as fruits and vegetables, as well as with increased consumption of sweetened beverages.

Federal requirements currently do little to limit the sale of competitive foods or to set school-wide nutrition standards. Current USDA regulations cover only a small group of foods and, following a key federal court decision, are limited to apply only to school food service areas during mealtime.

This paper surveys current data on the sale of so-called competitive foods at school, including the availability of such foods, their impact on children’s diets and health, and broader trends in child health and dietary intake. The paper concludes that providing additional authority to the Secretary of Agriculture to regulate the sale of competitive foods or taking alternative steps to improve the content of foods available to children at school would enhance children’s nutrition and health and would protect federal investments made in child nutrition through the National School Lunch Program and School Breakfast Program.

## Introduction

In recent years, the popular media and scientific researchers have increasingly focused their attention on the relationship between dietary intake, overweight and obesity, and health. Rarely a week passes without a newspaper article or a scholarly journal reporting new findings in these areas. As the Senate committee with jurisdiction over federal child nutrition programs, the Committee on Agriculture, Nutrition, and Forestry has both an interest in these programs and a responsibility to look for opportunities to enhance child nutrition and dietary intake through changes to federal child nutrition law.

One issue of particular relevance to the Committee is the widespread availability of “competitive foods,” so-called because the foods are offered in competition with federal school meals. Competitive foods include foods sold through school vending machines, canteens, and snack bars, foods sold through fundraisers and other irregular means, and a la carte foods offered in the school lunchroom, which may be offered alongside federally reimbursed meals, but are not required to meet the nutritional standards applicable to meals offered through the National School Lunch and School Breakfast Programs.<sup>1</sup> With billions of federal dollars annually going to schools for child nutrition assistance, the potential effects of foods with little nutritional value on child health and on federal investments in child nutrition warrant careful consideration.<sup>2</sup>

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<sup>1</sup> Social scientists working in the area of food and nutrition often use the term “nutrition environment” to denote the sum total of available food in a particular setting and the messages that a particular setting sends about eating, lifestyle, and wellness. A healthy school environment would be one that promotes healthy diets by making healthy foods widely available and by encouraging students to make sound choices about appropriate dietary intake and adequate physical activity. A negative nutritional environment is one in which healthy foods are not widely available or promoted, in which foods of poor nutritional value are widespread, and which lacks any positive messages about appropriate dietary intake and physical activity.

<sup>2</sup> Unless otherwise noted, the term “child” is used in this paper to mean children ages 0-18.

The backdrop for this increased attention is skyrocketing rates of childhood and adult overweight and obesity, as well as growing awareness of the health consequences of the generally poor quality of children's diets. In recent years, overweight and obesity in the United States and the contribution of poor diet to chronic diseases have increasingly come to be viewed as serious public health concerns. Policymakers are examining how various institutions, including schools, might address these concerns. Several legislative proposals have been introduced in Congress that would grant the Secretary of Agriculture broader authority to regulate the content and the availability of foods available to children at school, such as those offered through vending machines, school snack bars and canteens, and in cafeteria a la carte lines.

Though often framed by the media as a question of whether to ban vending machines in schools, the topic of competitive food at schools is a much broader one that raises a number of issues. This paper will seek to address these issues by answering the following questions about the food choices provided in American schools:

1. What is known about the state of children's nutrition in the United States and does poor dietary intake pose risks to child nutrition and health?
2. What is known about the availability and consumption of competitive foods in schools?
3. What is known about the impact of competitive foods on child nutrition and health?
4. Would changing the content and availability of competitive foods at school improve child health and nutrition?

*Child nutrition: obesity, chronic disease, and associated costs*

Poor diet and physical inactivity are estimated to contribute to 400,000 deaths annually in the United States and are likely to overtake smoking as the nation's leading cause of death in the next several years (Mokdad, Marks, Stroup, & Gerberding, 2004). Obesity itself is significantly associated with diabetes, high blood pressure, high cholesterol, asthma, arthritis (Mokdad et al., 2003), heart disease, cancer, and stroke, among other conditions (US Department of Health and Human Services, 2001).

Overweight and obesity in the United States have increased dramatically. According to the National Health Policy Forum, between 1991 and 2001, obesity in the United States increased from 12 percent to 21 percent of the adult population, an increase of 75 percent in just a decade (Salinsky & Scott, 2003). The National Health and Nutrition Examination Survey (NHANES), administered by the National Center for Health Statistics of the Centers for Disease Control and Prevention, has found much higher numbers. According to NHANES, in the year 2000, 30.5 percent of all American adults were obese and 34.5 percent were defined as overweight, leaving only 35 percent of the adult population of the United States in the normal weight range (Flegal, Carroll, Ogden, & Johnson, 2002).<sup>3</sup>

Among children, the statistics are similarly discouraging. NHANES data for children ages 6-11 indicate that the percentage of overweight children tripled between 1965 and 1999, from 4 percent to 13 percent. For older children ages 12-19 years of age, rates of overweight increased from 5 percent in 1970 to 14 percent in 1999 (Ogden, Flegal, Carroll, & Johnson, 2002).

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<sup>3</sup> The NHANES defines an obese person as one with a body mass index (BMI) of 30 or higher. The NHANES defines an overweight person as one with a body mass index of 25 or higher. The BMI is a calculation based on weight (in kilograms) and height (in meters).  $BMI = \text{weight} / \text{height}^2$ .

The adverse impact of overweight and obesity on children is clear as well. Compared to regular-weight children, overweight children are more likely to have high levels of cholesterol, high blood pressure, high levels of insulin, and exhibit generally higher numbers of risk factors for cardiovascular disease (Freedman, Dietz, Srinivasan, & Berenson, 1999; PDAY Research Group, 1993). Obesity also contributes to increased risk of low self-esteem, depression (Strauss, 2000), and adverse socialization (Dietz, 1998). Severely obese children and adolescents report impaired quality of life at six times the rate of normal weight children. These self-reported scores are similar to those reported by children diagnosed with cancer and undergoing chemotherapy (Schwimmer, Burwinkle, & Varni, 2003).<sup>4</sup>

Dramatically increased rates of overweight and obesity impose tremendous economic costs on individuals and the American public. Obese individuals expend personal income on health care costs at a rate significantly higher than other Americans, even higher than smokers and heavy drinkers (Sturm, 2002). Estimates of annual medical expenditures caused by overweight and obesity vary. Finkelstein, Fiebelkorn, and Wang (2003) estimate the total U.S. annual medical costs of overweight and obesity at \$93 billion annually. Another recent estimate of the aggregate medical costs of obesity alone (Finkelstein, Fiebelkorn, & Wang, 2004) placed them cumulatively at \$75 billion annually. The Surgeon General, in measuring both direct medical expenditures, including the costs of diagnosis, prevention, and treatment of obesity and related diseases, as well as indirect costs, including the costs of lost wages due to sickness or disability as well as the value of future wages lost due to premature death,

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<sup>4</sup> The Center for Weight and Health at the University of California, Berkeley maintains a comprehensive listing of the existing literature on obesity. It can be found at <http://nature.berkeley.edu/cwh/lit/>

estimated the annual cost of obesity in the United States at \$117 billion (US Department of Health and Human Services, 2001). Pediatric hospital costs due to obesity also tripled from 1979 to 1999 (Wang & Dietz, 2002).

Eighty percent of Americans believe that adult obesity is a major problem and three-quarters of Americans are similarly concerned about child obesity. Two-thirds of Americans believe that schools should play a major role in addressing the problem of obesity in the United States. Slightly less, six in ten, are supportive of prohibiting the sale of unhealthy foods in school vending machines (Harvard Health Policy Forum, 2003).

#### *Background – Federal School Food Policy*

The federal government has actively promoted child nutrition in American schools for nearly 60 years. The National School Lunch Act was enacted in 1946 because Congress and President Truman were dismayed about the many military recruits rejected for service in World War II due to malnutrition. The National School Lunch Act, in its declaration of policy, stated,

It is declared to be the policy of Congress, as a measure of national security, to safeguard the health and well-being of the Nation's children and to encourage the domestic consumption of nutritious agricultural commodities and other food, by assisting the states...in providing an adequate supply of foods and other facilities for the establishment, maintenance, operation, and expansion of nonprofit school lunch programs (Pub.L.No.79-396, § 2, 60 Stat. 230 (1946)).

The Child Nutrition Act of 1966 further expanded the involvement of the federal government in school nutrition by establishing the School Breakfast Program as a pilot program and then, in 1975, converting the pilot program into a fully-funded national program.

Over time, the National School Lunch Program and the School Breakfast Program have expanded into major sources of federal nutrition support. In fiscal year 2003, the federal government spent \$6.4 billion to serve school lunches to an average of 28.9 million children daily and the School Breakfast Program served 8.6 million children daily on average at an annual cost of \$1.64 billion.<sup>5</sup>

Meals provided through the School Lunch Program and the School Breakfast Program are required to meet nutritional standards based upon recommendations from the Dietary Guidelines for All Americans - issued jointly by the Department of Agriculture and the Department of Health and Human Services. School breakfast and school lunch guidelines require school meals to provide no more than 30% of calories from fat and 10% of calories from saturated fat, as well as to meet recommendations for Vitamin A, Vitamin C, iron, calcium, and calories. USDA analyses of school meal participation

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<sup>5</sup> The National School Lunch Program and the School Breakfast Program provide cash reimbursement for every child receiving a meal through the lunch or breakfast program. Federally reimbursement benefits are segmented into three categories of participants – free, reduced, and paid. For school year 2003, children eligible for free lunches were those from families with incomes up to 130% of the federal poverty level. Children eligible for reduced-price lunches were those from families with incomes up to 185% of the federal poverty level, and children eligible for reimbursement for paid lunches were those from families with income over 185% of the federal poverty line. The federal per meal reimbursement for each of these categories in school year 2003 was \$2.19, \$1.79, and \$.21 respectively. The eligibility and reimbursement structure for the School Breakfast Program is similar, albeit at slightly lower reimbursement rates (\$1.20, \$.90, and \$.22). Reimbursement rates for both the School Lunch Program and the School Breakfast Program are indexed for inflation. In addition, each reimbursable lunch entitles the school food authority to a set amount of commodities – 15.75 cents for school year 2003. Basic background information on the National School Lunch Program and the School Breakfast Program was taken primarily from Eisinger (1998, p. 63-68) and US Department of Agriculture facts sheets on the School Lunch Program (retrieved March 29, 2004 from <http://www.fns.usda.gov/cnd/lunch/AboutLunch/NSLPFactSheet.htm> and the School Breakfast Program (retrieved March 29, 2004 from <http://www.fns.usda.gov/cnd/breakfast/AboutBFast/bfastfacts.htm>).

show that National School Lunch Program participants consume less sugar, soda, and sweetened fruit drinks, consume more milk and vegetables, and have higher intake of many key vitamins and nutrients than do non-participants (USDA, 2001b).

However, while the nutritional content of meals provided through the School Lunch and School Breakfast programs are generally sound and improving (US General Accounting Office, 2003), much of the food offered in competition with these programs, so-called “competitive foods,” fails to provide the balanced nutrition that should be provided in a child’s diet.

#### *Competitive Foods in Schools: Availability and Impact on Child Health*

The widespread and ready availability of competitive foods in American schools is well documented. A recent study from the U.S. General Accounting Office found that 43 percent of elementary schools, 74 percent of middle schools, and 98 percent of high schools have vending machines, school snack bars, or other food sources outside of the school lunch and breakfast programs (U.S. General Accounting Office [GAO], 2003). Another survey of 55 high schools in Minneapolis/St. Paul determined that 53 schools had a la carte options, 48 had vending machines, and 17 had school stores (Story, Hayes, & Kalina, 1996). Approximately 65 percent of high school females and 54 percent of high school males do not consume lunches obtained through the National School Lunch Program (Story & Neumark-Sztainer, 1999). A California survey found that, among responding school districts, 70 percent of all food sales are a la carte items not covered by federal nutritional guidelines (Public Health Institute, 2000).

The nutritional quality of competitive foods has also been found lacking. A recent GAO survey concluded that competitive foods are often high in fat, sodium, and added

sugar (US General Accounting Office [GAO], 2003). Surveys of competitive foods at school corroborate this general conclusion. One inventory found that the largest category of foods offered through a la carte service was the “chips and crackers” category, in which only 10 percent of the items offered met the low-fat definition used in the study (French, Story, Fulkerson, & Gerlach, 2003). In the same study, fruits and vegetables represented only 4.5 percent of the total a la carte items available. Another study found that the items most widely available in school vending machines were, in descending order, imitation juice drinks, carbonated beverages, fruit juice, candy bars, cookies, candy, cheese puffs, and potato chips (Story, Hayes, & Kalina, 1996).

A la carte programs and vending machines displace student consumption of more nutritious foods. One statistical analysis found that school a la carte offerings are negatively associated with daily fruit and vegetable consumption (Kubik, Lytle, Hannan, Perry, & Story, 2003). Students from schools that did not offer a la carte foods consumed approximately half a serving more of fruit per day and a whole serving more of vegetables per day than children in schools that did have a la carte programs. This study also found that children attending schools without a la carte options met USDA recommended daily guidelines for fat consumption, while those from schools with a la carte programs did not (Kubik et al., 2003). Vending machines also decreased adolescent fruit consumption. For every vending machine present in a school, per-day servings of fruit consumed decreased by 11 percent (Kubik et al., 2003).

Another study (Cullen and Zakeri, 2004) tracked fourth grade students who did not have access to a la carte lines and snack bars into fifth grade, where such foods were available to them. From year one of the study to year two, when a la carte and

snack bar foods became available, servings of fruit consumed decreased 33 percent, servings of vegetables consumed (not fried) decreased 42 percent, and milk consumption declined by 35 percent. Conversely, consumption of high-fat (fried) vegetables and sweetened beverages increased 68 percent and 62 percent respectively.

In light of these studies, it is not surprising that USDA studies find that competitive foods at school undermine the nutritional benefits provided through the National School Lunch Program and School Breakfast Program – showing a negative relationship between revenue from competitive foods and National School Lunch Program participation (USDA, 2001c), and indicating that federal school lunch participation decreases on campuses that use vending machines (USDA, 2003).

A growing body of evidence specifically shows increasing consumption of soft drinks and other sweetened beverages and resulting detrimental impacts on child health. Research has documented increased soft drink consumption among children (USDA, 2001a) (Bowman, 2002) and a negative relationship between the consumption of sweetened drinks by children and their intake of protein, calcium, phosphorus, and Vitamin A (Mrdjenovic & Levitsky, 2003; Ballew, Kuester, & Gillespie, 2000).

Researchers have also found that soft drinks displace milk consumption (USDA, 2003; USDA, 2001a) and contribute to childhood obesity and excess energy and sugar intakes (Guthrie & Morton, 2000; Harnack, Stang, & Story, 1999; Ludwig, Peterson, & Gortmaker, 2001).

The accumulated evidence on the state of school nutrition environments led the Centers for Disease Control and Prevention, in its School Health Policy and Programs

Study (SHPPS) 2000, to conclude that, “The SHPPS provides a disturbing picture of the widespread availability of food and beverages high in fat, sodium, and added sugars as a la carte choices, in vending machines, and in school stores” (Wechsler, Brener, Kuester, & Miller, 2001, p. 322).

Increasing concern about competitive foods in schools are part of a broader set of concerns arising from information demonstrating shortcomings in children’s diets in general. Reports on child nutrition from USDA have found that:

- Among school-aged children, only 2 percent meet the dietary recommendations for all food groups (USDA, 2001a).
- For each of the food groups, the percentage of children meeting the recommended levels were only 14 percent for fruits, 17 percent for meat, 20 percent for vegetables, 23 percent for grains, and 30 percent for milk (USDA, 2001a).
- Added sugar constitutes a major part of children’s diets, accounting for 20 percent of total food energy (USDA, 2001a). The average intake of added sugars ranges from the equivalent of 19 teaspoons a day for girls 6-8 years old, to the equivalent of 36 teaspoons per day for males 14-18 years old (USDA, 2001b).
- Among females ages 14-18, over two-thirds exceed the recommended levels for fat and saturated fat. Among other age and gender groups, the percentages are even higher (USDA, 2001a).
- Teenage males are major consumers of soft drinks, among whom over one-third consume three or more servings a day. Among other children, 56 to 85 percent

of children (depending on age and gender) consume at least one serving per day (USDA, 2001a).

Data from the Centers for Disease Control and Prevention mirrors that of the Department of Agriculture, showing that children consume too much fat, saturated fat, and sodium, but not enough fruits, vegetables, or calcium. Among children ages 6-11, only 16 percent meet recommended limits for fat intake and 9 percent for saturated fat intake. And among adolescents (ages 12-19), only 15 percent meet guidelines for fat intake and only 7 percent for saturated fat intake (Centers for Disease Control and Prevention, 1996).

Excessive portion sizes are also a risk to children's diets. Studies show that young children are naturally good regulators of food intake. However, over time, this natural self-regulation is often unlearned. As a result, children, like adults, are susceptible to overeating when served excessive portion sizes (Hill & Peters, 1998). Though not specific to competitive foods offered at school, food portion surveys show that average portion sizes for many types of food items are well in excess of USDA recommendations. One survey sampled portion sizes based on portion weights from manufacturers, labels, and direct weighing of foods and found that cookies, pasta, muffins, steaks, and bagels exceed USDA recommendations by 700%, 480%, 333%, 224%, and 195%, respectively (Young & Nestle, 2002).

While the National School Lunch Program and School Breakfast Program set appropriate portion sizes, competitive foods are offered for sale without appropriate portion size guidelines. If anything, they are often far in excess of suitable portion sizes

for children as readily seen in the now-standard 20 ounce soft drink containers offered in many schools.

Unhealthy eating habits among children are shown to establish the preconditions for chronic disease later in life. For example, excess saturated fat intake raises cholesterol levels and, in so doing, increases risks for heart disease (USDA, 2000). Several recent studies show that risk factors that are predictive of cardiovascular disease later in life are evident even among relatively young children (Li et al., 2003) (Raitakari et al., 2003). One-quarter of children ages 5-10 show early warning signs for heart disease, such as elevated blood pressure or high cholesterol (Freedman et al., 1999).

In addition, excessive salt intake is clearly associated with high blood pressure, which is a risk factor for stroke (USDA, 2000). Only 15 percent of school-aged children meet the dietary recommendations to limit their sodium intake to less than 2,400 mg a day (USDA, 2001d).

Type 2 diabetes is also linked to poor diets; between 50 and 80 percent of diabetes cases are associated with unhealthy eating habits and sedentary lifestyles (McGinnis and Feoge, 1993) (Hu et al., 2001). Due to rapidly rising rates of diabetes in children, type 2 diabetes can no longer be called “adult onset” diabetes. In a study conducted in Cincinnati, the incidence of type 2 diabetes in adolescents increased ten-fold between 1982 and 1994 (Pinhas-Hamiel et al., 1996). Rates of diabetes are rising so rapidly that it is estimated that, for individuals born in 2000, barring major changes in diet and lifestyle, the lifetime risk of developing diabetes is 33 percent for males and 39 percent for females. Among Hispanics, the risks are even greater: 45 percent for males

and 53 percent for females (Narayan et al., 2003). These predictions are particularly alarming given that diabetes thus far has no known cure, impairs quality of life, and requires expensive care over many years to manage.

#### *Competitive Foods: Policy Considerations*

The alarming increases in rates of childhood overweight and obesity, the widespread and ready availability of competitive foods at school, the poor nutritional content of those foods, and their negative impacts on USDA-sponsored meal program participation, raise questions about the need to regulate competitive foods or otherwise implement comprehensive school nutrition guidelines. The Secretary of Agriculture currently has limited authority to regulate the sale of competitive foods in the place of meal service during mealtime and has chosen to restrict only a very narrow category of foods. Various bills have been introduced in Congress to strengthen the Secretary's authority to regulate the sale of competitive foods or to otherwise improve the nutrition environment in schools participating in federal meal programs. The following section of this paper examines relevant issues pertaining to the authority of Congress with respect to competitive foods in schools receiving federal child nutrition support.

#### *Federal Involvement in School Nutrition: Authority and Precedent*

The federal government has had a long and essentially unchallenged role in child nutrition programs as the primary provider of food assistance dollars as well as of nutritional guidelines. While state and local educational and school food authorities are integral components of delivering child nutrition benefits, child nutrition policy, for over 50 years and with few exceptions, has typically originated with Congress and the Department of Agriculture.

Nutrition standards in connection with federally-sponsored meals have a long political, legislative, and judicial history spanning several decades. Though the federal government has long set standards for meals served through the National School Lunch and School Breakfast Programs, Congress in 1970 specifically granted, with subsequent revisions, the Secretary of Agriculture broad authority to regulate competitive foods in participating schools as well. Over the years, however, the authority of the Secretary of Agriculture to regulate school foods has been severely curtailed due to amendments to the Child Nutrition Act of 1966, as well as through judicial challenges to federal regulations. As a result, current USDA regulations are limited to foods served in cafeterias during the time of meal service and contain only a ban on the sale of a small category of “foods of minimal nutritional value,” a category which includes only sodas, water ices, chewing gum, and candies composed predominantly of sugar. The Secretary of Agriculture cannot prevent the sale of foods outside of the cafeteria or anywhere at times during the day other than mealtime.

The current policy is largely a result of litigation in the early nineteen-eighties leading to an interpretation of a 1977 amendment to the Child Nutrition Act of 1966 that sought to give the Secretary of Agriculture regulatory authority over competitive foods. In 1980, several parties sued the Secretary of Agriculture in the U.S. District Court for the District of Columbia to block implementation of proposed regulations that would have restricted the sale of foods of minimal nutritional value throughout school buildings until the end of the last lunch period. The district court determined that the proposed regulations were within the authority of the Secretary of Agriculture and in accordance with the intent of Congress. In particular, the court determined that the Secretary of

Agriculture had the authority to regulate the sale of competitive foods *anywhere on school grounds until the end of the last lunch period*. The district court was not convinced that Congress, as suggested by the plaintiffs, had intended a narrower restriction that limited the authority of the Secretary to regulate competitive foods only in the areas of meal service and only during times of meal service.

This decision was appealed by the National Soft Drink Association, one of the original plaintiffs in the district court case, who argued that the regulations were arbitrary, capricious, an abuse of discretion, and in excess of the statutory authority granted to USDA by Congress (*National Soft Drink Ass'n v. Block*, 721 F.2d 1348 (1983)).

The U.S. Court of Appeals for the District of Columbia rejected the contention by the National Soft Drink Association that the regulations were arbitrary, capricious, and an abuse of discretion under the authority granted the Secretary of Agriculture by the 1977 amendment (Pub. L. No. 95-166, § 17, 91 Stat. 1345 (1977)). However, on the final objection raised by the National Soft Drink Association, the court ruled that, in promulgating regulations that barred the sale of competitive foods until the end of the final lunch period, the Secretary of Agriculture had acted in excess of the authority granted by Congress with respect to the “time and place” of regulation. In disagreeing with the district court, the appellate court concluded that the legislative history indicated Congress intended to give the Secretary of Agriculture regulatory authority, but only within the school food service areas and only during times of meal service. The court based this interpretation upon the statutory clause “in food service facilities or areas during time of service of food.” The court:

It follows that the Secretary exceeded his rule making authority when he promulgated the time and place regulations barring the sale of competitive foods throughout the school and until after the end of the last service of the day. The District court erred in upholding the regulation as to the time and place provision (*National Soft Drink Ass'n v. Block*, 721 F.2d 1348, 1353 (1983)).

Some parties have suggested that the federal government lacks the authority to set school nutrition standards. The National Soft Drink Association opinion clarifies this issue. In ruling only on the extent of the authority intended by Congress, and not on the validity of Congressional involvement in nutrition standards, the court did not question federal authority to regulate school food policy and the sale of unhealthy competitive foods in schools that participate in federal meal programs. The court decision did block the implementation of broad competitive foods regulations and limit the authority of the Secretary of Agriculture to the time and place of federal school meal service, but it never questioned the authority of the Department of Agriculture, to the extent granted by Congress, to set school food guidelines, including those pertaining to competitive foods. The majority did not disagree with the sole dissenting judge in the case who noted that the matter was left in the hands of Congress to decide.

As for the role of state and local school authorities in developing and implementing comprehensive nutrition standards and guidelines, their capacity does not match the established expertise of the United States Department of Agriculture, as evidenced by the wide variation in state efforts to respond to competitive foods. A 2002 Department of Agriculture survey of all 50 states, the District of Columbia and the Virgin

Islands found that only a small number had taken steps to address competitive foods at school and a much larger number had taken little or no action. The survey found that while 19 states and territories had independently established competitive food policies, 33 had not.

Among the states that have established competitive food policies, some states, such as Maryland, have taken minor steps that only minimally surpass USDA regulations – such as barring the sale of foods of minimal nutritional value until after the last lunch period. Other states have taken a much more comprehensive approach. West Virginia, for example, regulates the sale of all foods during the instructional day, establishes nutritional guidelines for sugar, and requires that foods sold a la carte may only include the sale of individual items otherwise offered through the National School Lunch or School Breakfast Program.

Surveys of local school food policies also show uneven efforts to improve nutrition. One survey of 463 high school principals found that 65 percent of them thought it was important to have school nutrition policies, but only 32 percent reported having one at their school (French, Story, & Fulkerson, 2002). Another study, which surveyed both high school principals and school food managers regarding their school food policies, found conflicting patterns of accountability - with principals placing responsibility for school food policy on food service managers and food service managers placing responsibility on principals (French, Story, Fulkerson, & Gerlach, 2003).

Not only does the federal government have clear authority to institute competitive food guidelines, it also has, due to the fact that the vast majority of schools already

receive federal child nutrition funds, a ready mechanism by which to encourage schools to adopt such guidelines. Nearly 100,000 schools in the United States already participate in federal child nutrition programs and receive federal reimbursement for their activities. The federal government has the prerogative to condition the continued receipt of those funds upon the willingness of schools not only to meet nutritional guidelines for federally supported meals, but also to meet guidelines for foods sold in schools in competition with federal child nutrition programs.

Such an approach is similar to established federal precedent in other areas where the federal government has required states and localities to comply with guidelines that further federal goals in order to receive federal funds. Federal health insurance coverage in the Medicare and Medicaid programs is one obvious example of this. Another is found in highway safety and federal transportation policy. The National Minimum Drinking Age Act of 1984 conditioned federal transportation dollars upon action by states to increase the minimum age for purchase and possession of alcohol to 21. Individual states were not required to comply, but with noncompliance they faced reductions in highway infrastructure funds. As a result, every state has increased its legal drinking age to 21 and numerous highway fatalities have been averted as a result.

*The scientific and medical community supports action on competitive foods*

In the late 1970's, the Department of Agriculture examined the scientific evidence regarding the effect of competitive foods on child nutrition and health and then issued regulations, as described above. Since these regulations were issued, numerous scientific studies have further detailed the effects of competitive foods in schools on child nutrition. During the same time period, the scientific understanding of the

relationship between poor diet and child health has grown, while child obesity and the health care costs of treating it have tripled. As a result, the scientific record on competitive foods and on children's diet and health is now considerably stronger than when Congress and the Secretary of Agriculture first deemed it sufficient to take action.

Experts in government and the scientific community recommend improving the nutritional quality of foods available to children at school. The Centers for Disease Control and Prevention recommends schools "adopt a coordinated school nutrition policy that promotes healthy eating through classroom lessons and a supportive school environment" (CDC, 1996, p. 12). The Surgeon General is even more explicit, recommending in *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity* that schools,

[e]nsure that healthy snacks and foods are provided in vending machines, school stores, and other venues within the school's control; prohibit student access to vending machines, school stores, and other venues that compete with healthy school meals in elementary schools and restrict access in middle, junior, and high schools (US Department of Health and Human Services, 2001, p. 20).

Non-governmental scientific bodies have assessed the available scientific evidence and concluded that further federal action regarding competitive foods is warranted. The National Alliance for Nutrition Activity, a 250-member coalition that includes the American Heart Association, the American Public Health Association, the American Dietetic Association, and the Society for Nutrition Education, among others, recommends that Congress grant to the Secretary of Agriculture the authority to

establish and enforce rules governing the sale of all foods on school grounds throughout the school day (National Alliance for Nutrition and Activity, 2003).

Some have suggested that nutrition education will sufficiently improve children's diets. However, most nutritionists and public health experts believe that actual changes to the school nutrition environment, limitations on access to less nutritious foods coupled with the active promotion of healthier foods, will be necessary to achieve significant change. Kelly Brownell, director of the Yale Center for Eating and Weight Disorders, summarizes the needed changes saying, "given the limited success of current efforts at psychoeducation, public information alone is unlikely to have an appreciable impact on behavior unless it is combined with some form of structural change to counteract poor diet and sedentary lifestyle" (Horgen & Brownell, 2002).

#### *Competitive foods, consumer choice, and the school nutrition environment*

Some opponents of further restricting the sale of competitive foods argue that limiting the foods available to children at school or setting guidelines for their content impinges upon the rights and choices of children. Proponents of stronger school food guidelines invoke rights and choices as well, arguing that children's rights and choices are currently limited because they have few nutritious options available to them. According to this view, ensuring that there are healthful foods available that improve children's diets and overall health means greater respect for the rights and choices of children – and of their parents as well.

Though consumer freedom and personal choice are relevant to discussions of school food and child nutrition, there are differences between the rights and choices of children versus those of adults. This principle is especially relevant because of the

known negative health impacts from poor nutrition and the negative effects of the availability of competitive foods on children's dietary intake.

Plainly, children are not afforded the same rights and choices as adults. Adults are assumed to be responsible, informed individuals who are aware of the effects of their choices. Society limits the choices and responsibilities of children until they are deemed capable of exercising them. Children have little responsibility over matters of curricula or instruction at school and are barred from using tobacco and alcohol. The suggestion that limiting certain foods available to children at school impinges on their consumer rights is inconsistent with established assumptions about children's consumer rights and fails to recognize differences between adults and children.

As for the right of children to make food choices, the practical reality is that the choices children can make are limited by the options available to them. Children tend to eat what is most readily available and marketed to them, regardless of nutritional content. Prevalent a la carte menus, vending machines, and snack bars in school, therefore, provide students with constant opportunities to consume foods low in nutritional quality and crowd out their consumption of foods of higher nutritional value. As already shown earlier in the paper, children who have ready access to these foods at school have diets that are not as healthy as those children who do not.

The extent to which the availability of foods influence food choices can also be seen on the positive side in studies showing that consumption of nutritious foods increases when they are readily available and affordable. Several studies have shown that lowering prices for more nutritious foods can have major and positive impacts on consumption (French, Jefferey, Story, Hannon & Snyder, 1997; Jeffery, French,

Raether, & Baxter, 1994; French, Story, Jefferey, Snyder, Eisenberg, Sidebottom, & Murray, 1997). One such study measured a la carte sales of fruit, carrots, and salads at two high schools. After measuring sales to students during both a baseline and a low-price period, the authors found that lowering prices increased fruit sales fourfold and doubled carrot sales (French, Story, Jefferey, Snyder, Eisenberg, Sidebottom, & Murray, 1997).

Taken as a whole, these studies of children's food choices show that the availability of competitive foods at school is not a neutral factor where, all other things being equal, students make a rational choice to consume one food item over another. Rather, the ready availability of competitive foods of little nutritional value actively influences these food choices.

*Can schools provide healthier products without losing sales revenue?*

Concerns have also been raised about the potential loss of revenue to schools if stronger guidelines are adopted. There is currently little definitive data to indicate the likely impact on revenue of limiting the sale of unhealthy foods or of offering healthier fare. One study (Lytle et al., 2004) found that school food service staff reported no loss of revenue when replacing their standard a la carte items with healthier items. The other available evidence is largely anecdotal. This evidence suggests that schools can improve their nutritional environments and offer nutritious foods to children without adverse revenue impacts. A number of individual schools and school districts have taken steps to improve the nutritional quality of competitive foods while maintaining, and in some cases increasing, revenue -- thus suggesting that the goals of providing sound

nutrition to children and of maintaining school revenue from the sales of these foods are not mutually exclusive.

For example, North Community High School in Minneapolis, Minnesota worked to provide healthier choices by increasing the number of vending machines from four to sixteen but expanding their offerings. Thirteen of the machines were stocked with water or 100% fruit/vegetable juice, two machines were stocked with sports drinks, and soda sales were limited to just one machine during certain parts of the day. North Community High School also put in place a competitive pricing system, with water selling for 75 cents, sports drinks and 100 percent fruit juices selling for a dollar, and soda and sweetened fruit drinks selling for \$1.25. According to North Community High School Assistant Principal Bryan Bass, as a result of these changes, sales of soda have decreased, but annual profits from vending have increased by \$4,000 and total beverage sales have doubled over the previous year (personal correspondence, May 12, 2004). Case studies such as this suggest that major revenue loss need not occur if, in concert with restrictions on unhealthy foods, students are given the options to purchase nutritious choices.

Regarding school revenue, it is also important to note that while it is possible that schools with new rules may lose competitive food revenue, sales of competitive foods reduce revenue that would otherwise accrue to schools from sales of lunches and breakfasts and thereby cut federal meal reimbursements to schools from the National School Lunch and School Breakfast programs. A major survey of vending contracts in the state of Texas undertaken by the Texas Department of Agriculture estimated the total annual revenue from vending contracts at approximately \$54 million. However, the

same survey estimated that school food service departments lose an even larger amount of revenue each year due to meal sales lost to vending sales, \$60 million, resulting in a net loss to schools (Texas Department of Agriculture, 2003). In addition, because federal meals offered through the National School Lunch Program and School Breakfast Program are reimbursed with federal dollars, but competitive foods are not, competitive food sales therefore inherently cut receipt of federal funds and replace them with money that comes directly from the pockets of students and their families. As a result, competitive foods can displace revenue on two levels, first by diverting revenue away from school food authorities, and second by replacing federal school breakfast and lunch reimbursements with family income.

### Conclusion

Research shows that the vast majority of children in the United States fail to consume diets that are consistent with scientific government recommendations and necessary to promote proper nutrition and health. As a result, they are at risk of overweight and obesity as well as a wide range of chronic conditions with serious health consequences, including diabetes, atherosclerosis, hypertension, and high cholesterol. Indeed, statistical data show dramatic increases in a range of health conditions that are strongly associated with unhealthy diets. The percentage of children and adolescents who are overweight has increased dramatically, as has the incidence of type 2 diabetes and other health indicators such as hypertension and high cholesterol.

Unhealthy diets not only burden families and individuals with impaired health and related costs but also impose substantial health-related costs on taxpayers, businesses and governments at all levels.

Schools are not the only place where children consume unhealthy diets, but given the amount of time that students spend at school and the quantity of foods and beverages they consume there, the nutritional quality of those foods and beverages is drawing increasing concern. So-called competitive foods – that is, food and beverages sold outside the school lunch and breakfast programs – have become a risk factor for impaired diets and health of U.S. students. Empirical surveys show that competitive foods are widespread and readily available in schools and that their nutritional content is heavily imbalanced toward high levels of fat, sodium and added sweeteners. Research also shows that by virtue of their pervasive presence in schools, competitive foods interfere with healthier diets and are associated with negative, unhealthy changes in students' diets, including increased consumption of sweetened beverages and high-fat foods and decreased consumption of fruits, vegetables, and milk.

Research, expert opinion and anecdotal evidence all support the conclusion that changing the nutritional content and the availability of competitive foods at school would improve the diets and health of students. To help protect the large taxpayer investment in USDA-sponsored school nutrition, Department of Agriculture regulations limit the sale of a relatively small class of competitive foods. However, because of a federal court's interpretation of USDA's statutory authority, the regulations are applicable only very narrowly to the time and place of meal service. Strengthening USDA's authority to set effective standards and limits on the availability and content of competitive foods throughout the school and for the entire day is one means by which to improve the diets and health of students. Available evidence from schools, thus far only anecdotal, also points to some successful local efforts to improve the nutritional content of foods sold in

school vending machines, a la carte lines and stores and indicates that schools making changes to offer healthier food and beverages can maintain or even improve their revenue from sales of competitive foods.

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