



Preventing Childhood Obesity

A School Health Policy Guide

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Center for Safe and Healthy Schools



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National Association of State Boards of Education





**Leadership for
Healthy Communities**
Advancing Policies to Support
Healthy Eating and Active Living

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1. An Overview of the Obesity Epidemic

This nation is facing a serious childhood obesity epidemic. Today 16.3 percent of children and adolescents ages 2 to 19 are obese, and 31.9 percent are obese or overweight.¹ This translates into 12 million children and adolescents who are obese and more than 23 million who are either obese or overweight.² During the past four decades, the obesity rate for children ages 6 to 11 has more than quadrupled (from 4.2 to 17 percent) and more than tripled for adolescents ages 12 to 19 (from 4.6 to 17.6 percent).³ Obese and overweight children are likely to suffer health consequences not only during childhood and adolescence, but also throughout their adult lives. They are at greater risk as children and as adults for bone and joint problems, sleep apnea, social and psychological problems (e.g., stigmatization and poor self-esteem), heart disease, type 2 diabetes, stroke, cancer, and osteoarthritis.⁴

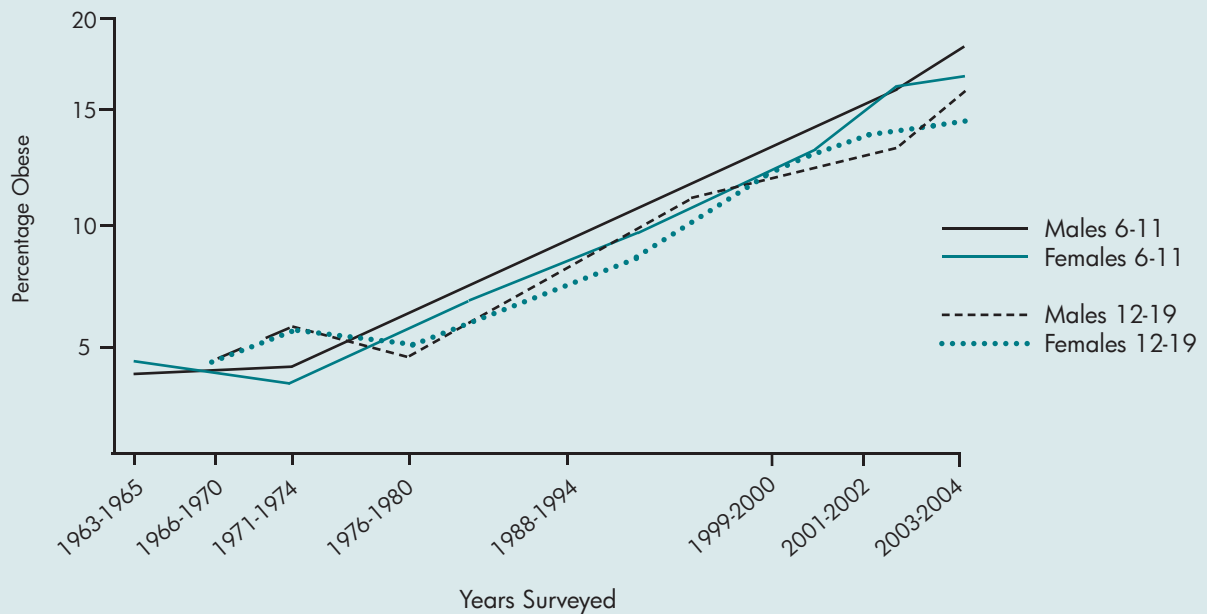
The childhood obesity epidemic cuts across all categories of race, ethnicity, family income and locale, but some populations are at higher risk than others. Low-income individuals, African Americans, Latinos, Native Americans and those living in the southern part of the United States are among those affected more than

their peers. For example, Mexican American children are more likely to be obese or overweight than white and African-American children. Thirty-eight percent of Mexican American children are obese or overweight, while 34.9 percent of African-American and 30.7 percent of white children are obese or overweight.⁵ Thus, in many cases those children who are most at-risk academically are also those who are facing the obesity crisis at a disproportionate rate.

Schools have many powerful tools at their disposal to serve as one of the primary agents to address the obesity crisis (e.g., access to children for significant amounts of time in their daily lives, mechanisms for education and reinforcement of healthy behaviors, and are portals to accessing the community at large).⁶ This policy guide is based on the National Association of State Boards of Education's *Fit, Healthy, and Ready to Learn: A School Health Policy Guide*, a comprehensive document developed in cooperation with the Division of Adolescent and School Health of the U.S. Centers for Disease and Control and Prevention (CDC) divided into several chapters addressing various student health needs and the school's role in addressing those needs.

Figure 1. A Large and Growing Epidemic of Childhood Obesity

Prevalence of obesity among children and adolescents ages 6-19 years, for selected years 1963-65 through 2003-04



Source: Ogden et al., "Prevalence of Overweight and Obesity in the United States," data from the National Center for Health Statistics⁷

The goal of this guide is to offer the latest policy updates and recommendations about how to promote physical education and activity and healthy eating policies in schools. To accomplish this goal, the guide refocuses the research and policy recommendations in these chapters to provide specific models for schools to address the

childhood obesity epidemic. It is important to note however, schools cannot and should not be expected to conquer this crisis alone. Instead, schools have a responsibility to work with parents, state and local government, and communities to take the necessary steps to truly address the epidemic.



2. Rationale for Obesity Prevention

Preventing childhood obesity is a pivotal issue for the United States that requires top-priority attention from policymakers at all levels of government. An ever-expanding base of credible evidence indicates the childhood obesity epidemic has far-reaching consequences for the nation's public health system, economy, and overall prosperity. The epidemic is even more pronounced for children, whose development is being adversely impacted not only physically and mentally but also academically. The following sections explore the key consequences of childhood obesity in more detail.

Public Health Impact

At its most basic level, preventing childhood obesity is a public health issue. Obesity and overweight are risk factors for myriad diseases, many of which are crippling or fatal and telling signs of these impending diseases are manifesting at earlier ages than ever before. People begin to acquire and establish health-related behaviors as children, and these patterns profoundly affect their chances of dying prematurely in adulthood.⁸ For example, early indicators of atherosclerosis, which

is associated with poor dietary habits and is the most common cause of heart disease, can already be found in many children and youth.⁹ In fact, a recent study conducted by the University of Missouri Kansas City's School of Medicine shows that obese children as young as 10 had thickened arteries more commonly seen in 45-year-old adults. The findings, one researcher said, suggest that cardiovascular disease could someday become a pediatric illness.¹⁰

Children and adolescents who are overweight are more likely to be overweight or obese adults.¹¹ In fact, research shows that children who become overweight by age 8 are more severely obese as adults.¹² Given that obesity in adults is associated with increased risks of premature death, heart disease, type 2 diabetes, stroke, several types of cancer, osteoarthritis, and many other health problems, it is critical to prevent obesity and overweight in childhood before these chronic health problems arise.^{13,14}

Of particular concern is the rapidly rising rate of diabetes. Overweight and obesity, especially at younger ages, substantially increase a person's lifetime risk of

“This [obesity epidemic] may be the end of the trend toward increased lifespan that we have seen in this country for the last century. And it may in fact actually shorten lifespan by two or three years, which is more than the effect of all cancers combined.”

Dr. David Ludwig, Boston Children’s Hospital¹⁷

diagnosed diabetes; the risk of diabetes among 18 year-olds who are obese is 70 percent for men and 74 percent for women.¹⁵ American Indians, Alaska Natives, Native Hawaiians, and other Pacific Islanders are at particularly high risk.¹⁶

The U.S. Centers for Disease Control and Prevention (CDC) has *conservatively* estimated that 1 in 3 American children born in 2000 are likely to develop diabetes in their lifetime, with the odds being especially high for minority children. The life expectancy of those who develop diabetes is projected to be 13 years less than the national average.¹⁸ Thus, 1 in 3 children born in the new millennium can be expected to live substantially shorter lives than those in the previous generation.

Economic Impact

Policymakers and education leaders need to be concerned about the impact of childhood obesity on government budgets at all levels over the long term. Obese children are two to three times more likely to be hospitalized and are about three times more costly to care for and treat than the average insured child.¹⁹ In 2004 alone, the United States spent an estimated \$98 to \$129 billion on direct and indirect health care costs associated with obesity.²⁰ With obese children likely to remain as such into adulthood, these costs will continue to persist if not increase over time.

Of particular note for governments are the health care costs for obese children. Childhood obesity alone is estimated to cost \$14 billion annually in direct health expenses. Children covered by Medicaid account for \$3 billion of those expenses. Annually, the average health expenses for a child treated for obesity under Medicaid is \$6,730, while the average expenditure for all children on Medicaid is \$2,446. Further, the average health expenses for a child treated for obesity under private insurance is \$3,743, while the average health cost of a child under private insurance is \$1,108.²¹ Direct state-level estimates of medical expenditures attributable to obesity in 2002 ranged from \$87 million in sparsely populated Wyoming to \$7.7 billion in densely populated California.²² Thus, childhood obesity places substantial strain on the cost of health care at every level.

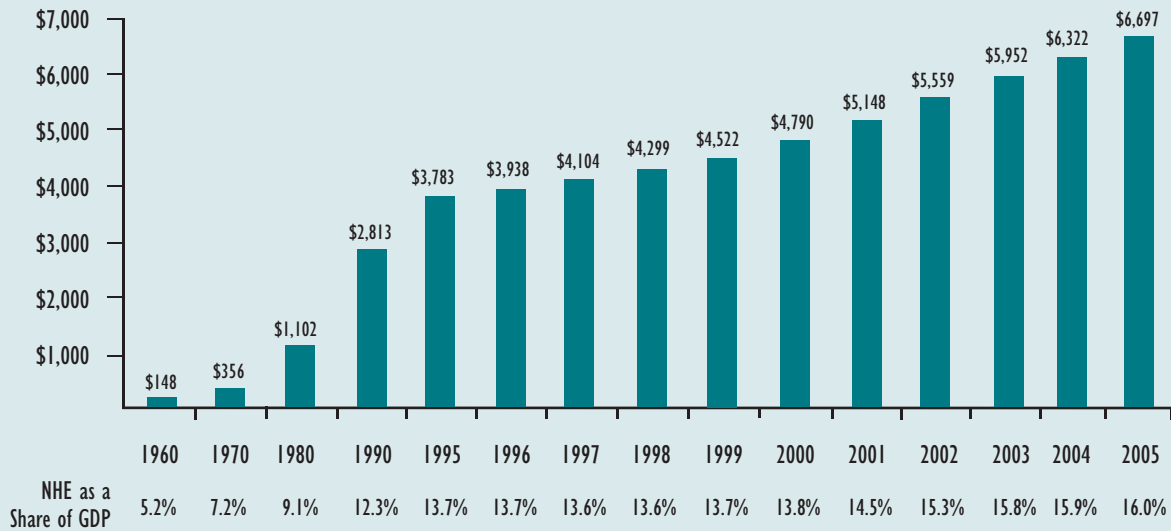
Since 1970, health care costs have grown on average 2.5 percentage points faster than the U.S. gross domestic product (GDP); by 2005, the health care portion of the GDP was 16 percent (fig. 2).²³ The U.S. Centers for Medicare and Medicaid Services (CMS) projects that health spending will be nearly 20 percent of GDP by the year 2016.²⁴ Although obesity is not the only reason for this steady increase, the Council of State Governments (CSG) warns that, “The economic burden of obesity and the associated chronic diseases will continue to rise if work is not done today to reduce the childhood obesity epidemic, even though the positive benefits of these efforts may not be fully realized until today’s children reach adulthood.”²⁵

Overall, the amount spent on health care will continue to rise dramatically as the current generation of children enters adulthood with higher rates of overweight and obesity, increasing the rates of and decreasing the age of onset for heart attacks, strokes, diabetes, hypertension, and cancer.

Health care costs are not the only cause for concern. With the rise in obesity and its related health issues, employers will be faced with an ever-growing problem related to the productivity of their workforce. Recent studies have found that obesity results in about

Figure 2. The Rising Share of Health Care Costs in the Gross Domestic Product

National health expenditures (NHE) per capita and their share of gross domestic product, 1960–2005



Source: Kaiser Family Foundation²⁶

\$117 billion in lost wages and other indirect costs to employers annually. These losses are even greater than those accrued as a result of smoking.²⁷

The consequences of obesity are significant for the government, employers, and families because the associated costs will force reductions in government budgets for other services and programs like education, may result in decreased productivity and profits for business and industry. Likewise, obesity may cause families to have less disposable income for savings, consumption, and investment due to increased spending on health care and lost wages due to obesity-related illnesses.

Academic Impact

A student's weight status can affect academic performance in a variety of ways, as described below.

Absenteeism

One well-documented impact is obesity's effect on student absenteeism. A recent study of 1,069 students in grades 4 through 6 in nine low-income Philadelphia elementary schools found that on average, obese schoolchildren were absent two school days more than their normal-weight classmates. Furthermore, obesity was a better predictor for absenteeism than any other factor.²⁸ This increase in absenteeism is directly tied to the myriad health issues associated with obesity and overweight that was discussed in the previous section. Thus, overweight and obese children are less likely to be in school regularly, impeding their ability to learn.

Emotional and Health Effects

Emotional effects resulting from obesity also exists, impeding students' academic performance. Studies have

documented that overweight students are more likely to be teased, be depressed, and have poor self-esteem, which keeps these students away from the classroom.²⁹ As one researcher said, overweight students are “missing school because they don’t want to be bullied and called names.”³⁰ The emotional health problems caused by this type of stigmatization and chronic bullying have been found to significantly affect student attendance rates and academic performance, especially in girls.^{31,32}

The emotional and health effects of obesity on student academic performance were quite evident in a study of Philadelphia area students. A Temple University research team found that the grade point averages of overweight middle school students in a Philadelphia suburb were half a grade point lower than those students whose weight was normal. Overweight students also scored lower in reading comprehension on national standardized tests, were five times more likely to have six or more detentions, were absent more often, scored lower in physical fitness, and were less likely to participate in athletics than their normal-weight peers.³³

Academic Achievement

On the other hand, several studies have found positive academic and other gains from implementing policies and practices that promote physical activity and nutrition. Researchers are continually finding that students who are healthy and physically active are more likely to be motivated, attentive, and successful academically.^{34, 35} For example, a national study conducted in 2008 of more than 5,300 elementary school students found a small but significant increase in both math and reading test scores among girls who spent the most amount of time in physical education (P.E.) compared to girls who spent the least amount of time in P.E.³⁶ Another study conducted in 2005 included a systematic evaluation of the evidence on the effects of physical activity. The study found that physical activity has a positive influence on concentration, memory, and classroom behavior and that the addition of P.E. to the curriculum can result in small positive gains in academic performance.³⁷

The CDC has reported that regular physical activity in childhood and adolescence helps to reduce anxiety and stress and to increase self-esteem, mood, and concentration—all factors that influence learning.³⁸ Some researchers suggest that physical activity enhances academic performance by increasing the flow of blood to the brain, which can in turn enhance mood and increase mental alertness; however, more evidence is needed to conclusively prove this hypothesis.³⁹

There is further evidence that school meals can play a critical role in improving academic performance as well. A recent Harvard study of more than 100 studies of the School Breakfast Program found that serving nutritious breakfasts to children who were not getting breakfast otherwise had significant impacts on cognitive abilities, including increased attention span, heightened alertness, and improved reading, math, and other standardized test scores. Thus, by ensuring students receive nutritious meals, especially those who would not otherwise have access, schools can potentially see profound impacts on achievement in student populations who are more likely to be at-risk for underperforming.⁴⁰

* * *

Although general awareness about obesity and its consequences have increased, in many cases long-term policies and practices have not been adjusted or fully implemented to help prevent childhood obesity. For example, the latest findings from the third School Nutrition Dietary Assessment Study (SNDA-III), which is sponsored by the USDA’s Food and Nutrition Service, shows that among schools participating in the National School Lunch Program, only 6 percent offered lunches that met all of the School Meal Initiative (SMI) standards for energy, fat, saturated fat, protein, Vitamin A, Vitamin C, calcium and iron. Other SNDA-III findings showed that 42 percent of schools did not offer any fresh fruits or raw vegetables in the reimbursable school lunch on a daily basis. In addition, the study indicated that one or more sources of competitive foods, typically characterize as low-nutrient, energy-dense foods and beverages, were available in 73 percent of elementary schools, 97 percent of middle schools and 100 percent of high schools.⁴¹ Additionally, a large number of

students still do not receive opportunities to be physically active, as 64 percent of high school students do not meet their quota for daily recommended physical activity.⁴²

To effectively fight and prevent obesity, policymakers face a daunting challenge that requires action in

schools, communities, and in homes. Because schools are singular entities where the interests of community, families, and government intersect, we can start to reverse the obesity epidemic by implementing and enforcing positive policies and practices in schools nationwide.

Principles of Obesity Prevention in the School Environment

Prevention, not treatment of obesity, is the goal of school interventions. In framing the childhood obesity problem, prevention needs to be clearly differentiated from medical treatment for children who are already obese.

Prevention requires small but consistent changes in schools. Normal-weight children need only small daily changes to achieve a balance between calories consumed and calories expended through physical activity.

Prevention requires environmental changes to achieve consistent effects. Most school-based programs that focus solely on individual change have relatively small effects or no effect on obesity-related behaviors, while programs that include environmental changes generally have larger effects.

A variety of environmental changes are needed in schools. No quick fixes or single policy solutions exist for the school environment.

Prevention will be best served when children's environments give them a variety of opportunities to consume healthy food and to be physically active. An abbreviated logic model might be as follows:

The physical activity connection:

- If time is made for physical education and supervised recess, then kids are more physically active; and
- If they are more physically active, then they expend more calories and are closer to achieving an energy balance.

The food environment connection:

- If schools limit competitive foods and provide appetizing school meals that meet dietary guidelines, in appealing circumstances with sufficient time to eat, then they will consume appropriate calories and come closer to achieving an energy balance.

The school environment:

- If schools have a healthy environment for eating and physical activity, and community and family environments are also healthy, then children will achieve an energy balance and maintain healthy weight.

Laura C. Leviton, Robert Wood Johnson Foundation⁴³



3. Policies to Promote Physical Education and Activity

Policymakers can have a significant impact on the level of quality and quantity of physical education and activity in schools. The following model policy is based on the best evidence and practices in the field. The goal is to create a culture or environment in schools that promotes physical activity that will instill students with an ethic that lends itself to being physically active into adulthood. At the heart of any comprehensive physical activity and education policy are three things:

1. Providing students with the knowledge and skills necessary to remain physically strong and healthy;
2. Providing opportunities for students to be active during the school day; and
3. Motivating students to be active on a daily basis every day.

To these ends, education policymakers and leaders can enact policies that promote multiple opportunities in

addition to physical education (P.E.) for students to be physically active. Daily recess periods, promoting student and staff walking or biking to school, and offering after-school intramural programs, interscholastic athletics, and other school-sponsored or community-based sports and recreation programs are all ways in which schools can contribute.

Physical Activity

A scientific consensus has emerged that every young person needs to participate in at least 60 minutes of moderate to vigorous physical activity daily.⁴⁴ Given that schools can provide multiple means by which students can be active and that students are in school for a large portion of the waking day, the Institute of Medicine recommends that schools at every level should aim to provide students with at least half of the total, or 30 minutes of physical activity every school day.⁴⁵

Several strategies are available to policymakers and school administrators to get students active. One of the

most common is recess, which has social and cognitive benefits for younger children in addition to the positive effects on physical health.⁴⁶ Supporting intramural and interscholastic sports, promoting physical activity breaks during and between classes, and establishing safe and accessible walk-to-school routes are other opportunities that schools have successfully implemented. Policymakers need to note that many of these strategies require teachers and staff to be provided with professional development if they are to be successful.

Physical Education

P.E. has also played a strong role in keeping students active and teaching them skills; however, the current state of inactivity of children requires that P.E. be more than what it has been in years past. High-quality standards-based P.E. now focuses on imparting the skills, knowledge, and motivation for children to remain active even outside of school and into adulthood. Key components of high-quality P.E. curriculum include:⁴⁷

- what being physically fit means and the importance of fitness;
- how to interpret fitness test results and use the information to develop scientifically based personal fitness goals;
- how to develop personal activity plans that include enjoyable activities and sports to help achieve and maintain personal fitness goals;
- lessons about the safety issues and protocols that exist within a variety of physical activities, fitness assessments, games, and sports; and
- principles of healthy weight management and reasons to avoid unhealthy weight loss practices.

Experts agree that P.E. should be offered on a daily basis for grades PK-12 by certified instructional staff that is provided with consistent, high-quality professional development opportunities. Additionally, many of the

concepts in a standards-based P.E. curriculum can and should be incorporated into the core curriculum (e.g., benefits of physical activity in science class).

Body-Mass Index Screening

One of the most controversial issues facing policymakers in regards to obesity prevention policy is body-mass index (BMI) screening. Arkansas' Act 1220 was the first state policy to mandate BMI screenings in school.⁴⁸ The results are kept confidential and sent to the parents in a Child Health Report that contains evidence-based guidance for parents to help improve their child's weight status, tailored to the individual students' BMI screening results. The goal is not only for schools to identify students who are or are at risk for becoming overweight or obese but also to raise family and community awareness of the epidemic. Recent studies have found that many families of overweight and obese children do not recognize that fact, with most families underestimating the severity of their child's weight situation.⁴⁹ Thus, BMI screening can prove to be a powerful tool for both schools and families.

However, concerns about using mandatory BMI screenings have arisen. Many parents worry that their child, if labeled as obese or overweight, will be subject to bullying and harassment. A University of Arkansas study of the Act 1220 policy has found that there has yet to be any increase in teasing since the state implemented mandatory BMI measurement.⁵⁰ Another issue to consider in addition to the cost and logistics of implementing mandatory measurements is the use of the information once it is collected. Some worry that this data could be used in the future—for example, by insurance companies to deny coverage, using overweight or obesity as a pre-existing condition. Therefore, states and districts must seriously consider the confidentiality of the results of such measurements, and some may wish to consider implementing a surveillance program instead of screenings where only a random sample of students are measured and identities are kept confidential. While such a surveillance approach fails to provide help for students who need it directly, the data collected can inform schools and policymakers as to which student populations are most in need of inter-

vention. Whichever BMI measuring approach a state or district chooses to take, the research is clear that follow-up with parent and student education is critical if there are to be lifestyle changes.⁵¹

The following model policy provides a framework for adopting an integrated policy that promotes physical activity and education in schools. It addresses the issues

raised above and others that lay the groundwork for creating a positive, health-promoting school environment. Policymakers are urged to use this model policy as a guide in a collaborative policymaking process that involves all stakeholders. Additional details and in-depth discussion can be found in *Fit, Healthy, and Ready to Learn, Chapter D: Policies to Promote Physical Education and Physical Activity*.

Integrated Policy for Physical Education and Physical Activity

Note: Users will need to adapt this model policy to fit their unique education governance structure and established policy format, particularly the phrases in italics.

GOALS. An active lifestyle at every age is essential to health, well-being and the enjoyment of life. Every student shall develop the knowledge and skills necessary to perform a variety of physical activities, maintain physical fitness, regularly participate in physical activity, understand the short- and long-term benefits of physical activity, and value and enjoy physical activity as an ongoing part of a healthy lifestyle.

RATIONALE. All schools need to promote physically active lifestyles among young people for the following reasons:

- through its positive effects on concentration, attention, mood, anxiety and stress, physical activity can help increase students' capacity for learning;
- the evidence is compelling that regular physical activity improves academic performance;
- physical activity has substantial health benefits for children and adolescents, including favorable effects on endurance capacity, muscular strength, body weight, and blood pressure;
- regular physical activity reduces the risk of premature death in general and of heart disease, high blood pressure, colon cancer, diabetes, and osteoporosis in particular; and
- positive experiences with physical activity at a young age help lay the basis for a person to become physically active throughout life.

INTEGRATED POLICY. With guidance from the *school health advisory council*, each *school/district/school* shall develop and implement a multifaceted, integrated policy to encourage physical activity that incorporates the following components:

- a sequential program of physical education for all students on a daily basis in grades PK–12 that teaches knowledge, motor skills, goal-setting, self-management skills, and positive attitudes; provides moderate to vigorous physical activity; promotes activities and sports that students enjoy and can pursue throughout their lives; is taught by qualified, well-prepared, and well-supported physical education specialists; and is coordinated with the health education curriculum;
- adapted physical education lessons for students with disabilities or chronic health conditions;
- a sequential program of PK–12 health education that reinforces the knowledge and self-management skills needed to maintain a physically active lifestyle, maintain a healthy weight, and reduce time spent being sedentary;
- collaboration with community planning and public safety agencies to establish safe routes for walking and biking to schools and promote active commuting by students and staff members;
- daily periods of supervised recess in elementary schools, which may not be denied for disciplinary reasons or to make up lessons;
- opportunities and encouragement for students to participate in before- and after-school physical activity programs, including activity clubs, intramural sports, and interscholastic athletics that equitably serve the needs and interests of all students;
- coordinated school and community recreation activities at times when school is not in session;
- opportunities and encouragement for staff members to be physically active;
- strategies to encourage students' families to support their children's participation in physical activity and to be involved in program development and implementation;
- designation of one or more persons charged with operational responsibility for policy implementation; and
- a plan to measure policy implementation fidelity and policy effectiveness.

EFFECTIVE DATE. Each district/school shall submit its integrated physical activity policy to whom by date. The policy shall be implemented by date.

REPORT TO THE COMMUNITY. At the end of each school year, the physical education coordinator/school health program coordinator/other shall submit an annual report to the school health advisory council/board of education on the implementation and effectiveness of the physical activity policy with recommendations for improvement. The report shall be posted on the Internet for easy public access.

POLICY DEFINITIONS. *Optional: Many state and local policies incorporate definitions of key terms.*

- **Active commuting:** Modes of transportation to and from school that involve physical activity, including walking, biking, skating, and rollerblading.
- **Adapted physical education:** Physical education programs that include guidance on how to appropriately modify physical activities, equipment, and assessments for students with a disability or chronic health condition in ways that provide them with the same instruction and opportunity to develop skills that other students receive.
- **Extracurricular activities:** School-sponsored voluntary programs that supplement regular education and contribute to the educational objectives of the school.
- **Interscholastic athletics:** Organized and coached individual and team sports that involve competition between schools according to rules established by _____.
- **Intramural sports:** Organized, supervised sports programs of within-school teams that provide opportunities for all students to participate.
- **Moderate physical activity:** Physical exertion that is equivalent in intensity to brisk walking.
- **Physical activity clubs:** Organized or informal groups of students or staff who wish to pursue shared interests in physical activities such as yoga, dance, aerobics, martial arts, weightlifting, or active "exergames."
- **Physical education:** A planned, sequential PK–12 program of curricula and instruction that helps students develop the knowledge, attitudes, motor skills, self-management skills, and confidence needed to adopt and maintain physically active lifestyles.
- **Recess:** Regularly scheduled periods within the school day for supervised physical activity and play.
- **Regular physical activity:** For youth ages 6-19, participation in moderate to vigorous physical activity for at least 60 minutes per day on most, preferably all, days of the week.
- **Vigorous physical activity:** Physical exertion that makes a person sweat and breathe hard, such as basketball, soccer, running, swimming laps, fast bicycling, fast dancing, and similar aerobic activities.



4. Policies to Promote Nutrition and Healthy Eating

As with physical activity and education, policy-makers can have a significant impact on the quality and nutrition of food available in schools and the habits students form in their food selection. The following model policy is based on the best evidence and practices in the field. The goal is to create a culture or environment in schools that encourages students to make healthy food choices now and into adulthood.

A comprehensive, integrated school nutrition policy should include the following:

- the purpose and goals of school nutrition programs and practices;
- guiding principles for school food service staff, nutrition educators and professional pupil service staff;

- standards for all food and beverages served or sold at school and the conditions under which they are served or sold; and
- responsibilities for implementation, accountability and ongoing policy evaluation.

Federal Meal Programs

The goal of any nutrition policy should be to help students and staff meet the *Dietary Guidelines for Americans* (DGA) developed by the U.S. Departments of Agriculture (USDA) and Health and Human Services (DHHS).^{*} One excellent way to do this is encouraging participation in federal school meals programs, which include the National School Lunch Program, the National School Breakfast Program, and other federal

^{*}The DGA are updated every five years by the Dietary Guidelines Advisory Committee, selected by both the USDA and DHHS, which is composed of medical and scientific experts in the fields of dietary intake, human metabolism, behavioral change, and physical activity. The Committee, which received public comment in addition to its own deliberations, reports its recommendations to both USDA and DHHS for updating the DGA, which both agencies then use to create the new DGA. The next iteration of the DGA will be released in 2010.

nutrition and meals programs. Participants are required to adhere to the DGA, and evidence points to these programs as being more effective in providing students with nutritious meals.^{52,53} Furthermore, these meals are reimbursable and the rate of reimbursement for school districts increases as the number of students participating increases, creating a win-win situation for students and schools. A major issue facing schools, however, is the fact many students, especially those eligible for free or reduced-price meals, are not enrolling or participating in these programs.⁵⁴ Thus, a key goal of any nutrition policy should be to increase participation in federal school meals programs, including efforts to assist families whose children are eligible for free- and reduced-price meals enroll in the program.

Competitive Foods

Addressing the problem of unhealthy competitive foods in schools is another major concern nutrition policies need to address. As much as one-fifth of the average increase in adolescent weight can be attributed to increased availability of junk food in schools.⁵⁵ In 2006, 33 percent of elementary schools, 71 percent of middle schools, and 89 percent of high schools either had a vending machine or a school store, canteen, or snack bar where students could purchase foods or beverages in competition with the school meals program.⁵⁶ Even more schools sell foods and beverages *à la carte* (i.e., extra entrées, side items, and beverages on a per-item basis) in the cafeteria outside of the school meals program. Although most schools have fruit available for sale, *à la carte* items do not have to meet USDA nutrition standards.⁵⁷ Therefore, if schools are to make a serious impact, provisions must be put into place that set nutritional standards for these competitive foods.

Nutrition Education

Policies should also include the provision of comprehensive, standards-based nutrition education that is integrated throughout the school curriculum. While providing students with healthy meals and limiting their access to unhealthy competitive options are important, none of

that will matter in the long run if students do not make healthy food choices outside of the school setting. As a recent study of 5th graders nationwide found, banning sugary, high-calorie soft drinks alone only led to a 4 percent reduction in student consumption of these drinks.⁵⁸ An American Dietetic Association (ADA) review of 12 rigorously evaluated school nutrition education programs found that nine had positive effects and five had a measurable impact on children's weight status. The researchers hypothesize that those programs that did not correlate with positive impacts on students eating habits had insufficient student exposure to the programs.⁵⁹ Therefore, simply implementing a policy for foods in schools is not enough to combat the obesity epidemic: education must be a critical component.

Policymakers must note that traditional, knowledge-based programs and curricula have been found to be less effective (e.g., learning and memorizing the food pyramid) than behavior-directed programs and curricula.⁶⁰ Such programs and curricula include components aimed at changing group views and norms about eating healthy foods, providing practical health information and strategies, changing personal values to support healthy lifestyles, and including families in the process.^{61,62} Policies that support this type of integrated, behavioral-directed education strategy are critical to the sustainability of obesity prevention efforts.

Health Education

Nutrition education should not be taught as a distinct program; rather, it should be one module within a greater comprehensive health education program. Student health behaviors tend to be interrelated, and combined messages can address multiple student health behaviors. For example, adolescent smoking is linked to poorer diet and unhealthy eating habits. Coupling tobacco prevention education with nutrition education can produce positive spill-over effects that benefit both efforts.⁶³ Additionally, nutrition education and physical education should be closely aligned to reinforce the importance of the "calories-in/calories-out" energy balance equation that is critical to maintaining healthy weight.

The following model policy provides a framework for adopting an integrated policy that promotes healthy eating in schools. It addresses the issues raised above and others that will lay the groundwork for creating a positive, health-promoting school environment.

Policymakers are urged to use this model policy as a guide in a collaborative policymaking process that involves all stakeholders. Additional details and in-depth discussion can be found in *Fit, Healthy, and Ready to Learn, Chapter E: Policies to Promote Healthy Eating*.

Integrated Policy to Promote Healthy Eating

Note: Users will need to adapt this model policy to fit their unique education governance structure and established policy format, particularly the phrases in italics.

GOAL. Schools share responsibility with families and the community to help students meet the Dietary Guidelines for Americans. All schools shall encourage and provide opportunities for students and staff members to practice making healthy eating choices on a daily basis, and shall educate every student on essential knowledge and skills for a lifetime of healthy eating. Nutritious school meals should be the main source of foods and beverages available at school; other foods and beverages that may be available shall also provide necessary nutrients.

RATIONALE. The link between nutrition and learning is well documented. Healthy eating is essential for students to achieve their academic potential, full physical and mental growth, and lifelong health and well-being. Well-planned and implemented school meals programs have been shown to positively influence students' health, academic performance, and eating habits. The overall school environment plays a significant role in teaching and modeling eating and health behaviors.

HEALTH-PROMOTING SCHOOL CULTURE. Each school, in consultation with *the school health advisory council/staff members/family representatives/student government*, shall foster and actively promote a safe, supportive, and health-promoting social environment for student growth and learning. School leaders shall emphasize respect, support, caring, academic achievement, and healthy lifestyles, and adopt a mission statement and code of conduct that includes expectations and standards of behavior for students and staff. Teasing or bullying based on weight, body size, or other personal attributes shall not be tolerated.

INTEGRATED POLICY. *The state department of education/All school districts* shall develop, adopt, and implement a multifaceted, integrated policy to help students and staff members meet the Dietary Guidelines for Americans and prepare students for a lifetime of healthy eating. The integrated policy shall include the following elements:

- school meals programs with well-prepared staff who efficiently serve a variety of healthy and nutritious meals that meet federal nutrition standards and appeal to students;

- active encouragement for students and staff members to participate in reimbursable school meals programs;
- pleasant dining areas with drinking water and hand-washing facilities;
- adequate time for unhurried eating;
- nutrition standards for all foods and beverages sold or offered at school that are not part of reimbursable school meals programs;
- a sequential program of behavior-focused nutrition instruction that aims to influence students' knowledge, attitudes, planning skills, and eating habits; is part of the comprehensive school health education curriculum; is taught by qualified staff; and is coordinated with school meals programs;
- encouragement and opportunities for school staff to model healthy eating habits;
- procedures to ensure that students with diabetes, special nutritional needs, eating disorders, and other nutrition-related health problems are provided with or referred to appropriate counseling or medical treatment services;
- collaboration with related agencies and programs in the community; and
- *[Optional] procedures to screen students for weight disorders every year, with results and recommendations for appropriate action provided confidentially to parents/guardians.*

ACCOUNTABILITY. The state/tribal/district board of education and local school administrators shall comply with the provisions of this policy and ensure proper accountability for all funds received from food and beverage sales.

The Child Nutrition Director/School Nutrition Manager/School Health Program Coordinator/Team Leader shall be held responsible for the following:

- ensuring the implementation of all elements of the integrated policy;
- providing information about best practices to staff implementing the policy;
- facilitating communication among child nutrition, physical education, school health program, and other school staff as well as collaborating agencies;
- conducting policy evaluation activities, such as student, family, and staff satisfaction surveys; and
- submitting an annual progress report that includes recommendations for policy improvement to the state board of education/district board of education/school health advisory council.



5. Next Steps for Policymakers

The model policies contained within this guide provide a solid foundation for states and school districts to address many of the issues around childhood obesity, but they are only a first step. The following are important next steps for policymakers to consider after these policies have been developed and approved.

Implementation of Local Wellness Policies

On the surface, implementation is an obvious next step for any policymaker to be concerned with, but given all that schools are held accountable for under the No Child Left Behind Act, it is easy for nutrition and physical activity and education policies to fall by the wayside. Therefore, it is imperative that policymakers find ways to hold state agencies, local school districts, and individual schools accountable for properly implementing these policies.

Local wellness policies, mandated for all schools under Section 204 of the Child Nutrition and Women, Infants,

and Children Reauthorization Act of 2004 (PL 108-265), are required to have provisions addressing nutrition and physical activity. Many states and districts have used Section 204 to push through school health and nutrition policies where there either was little or no policy guidance in place. However, as schools receive no incentive or penalty around local wellness policies, they often are ignored or implemented only to meet the minimum standard as required under the policy. Indeed, a nationwide survey of school and community health professionals found that at least 70 percent do not feel that schools are adequately implementing wellness policies.⁶⁴

One policy option is to integrate local wellness policies, school nutrition policies, and school physical activity and education policies into the overarching school improvement plan process. Arkansas, South Carolina, and Rhode Island are three states that currently require local wellness policies be addressed in this process. This strategy places nutrition and physical activity on equal standing with math, science, and reading in terms of state accreditation and/or funding.⁶⁵

Other states have implemented public reporting requirements around local wellness policies that compel districts to report on the progress of implementation not only to the state department of education, but in some cases to the general public as well.* In this way, districts not only have to ensure they are implementing their nutrition and physical education and activity policies but also collect data on the effects of such policies.⁶⁶ Even if the policies are not successful at the time, such data can prove useful to policymakers in adapting current policies to meet the challenges districts face.

Professional Development/Support for Teachers and Staff

While it is relatively easy for policymakers to develop and approve health-related policies and for those policies to be implemented and assessed, school staff and administrators are left with the challenge of actually finding a way to meet those expectations without compromising their core academic mission. Therefore, it is imperative for policymakers to provide ample opportunities via funding and/or directives to the department of education for teachers, school support staff, and administrators to receive professional development around the provision of quality physical education, physical activity, nutrition, and nutrition education. For many, these areas and the best practice strategies for providing these services and opportunities to students were not part of their training. Professional development, then, is not only needed to impart the skills necessary for school staff to properly and successfully implement policy, but to improve staff and administrator confidence in being able to do so without undue stress on their core responsibilities.

Engaging Families and Communities

While schools play a key role in combating the obesity epidemic, they cannot singlehandedly reverse it. Parents and the community at-large have a major responsibility for developing the habits of children, as any progress made in schools can easily be undone as soon as students step off campus. Education policymakers can encourage and provide guidance to schools as they offer parent education programs around nutrition and physical activity and partner with community organizations (especially those that work extensively with at-risk student populations) to provide before- and after-school opportunities for physical activity and nutrition.

One successful strategy for community and parental partnership has been the implementation of school health advisory councils. These councils are comprised of school administrators, teachers, school staff, parents, public health community members, and others from the community at-large. They offer a forum for open dialogue in addressing health and safety issues for schools, and provide recommendations to school boards to address the issues particular to each school and school district. They also can act as an oversight committee for the implementation and evaluation of school nutrition, physical activity, and other critical health policies.

These recommendations will provide the foundation for improved services and results for the nation's youth as we move further into the 21st century. It is vital not only to the health and success of our children but that of the entire nation that policymakers seriously undertake the challenge of reversing the obesity epidemic.

*Alabama, Florida, Kentucky, Indiana, New Mexico, Mississippi, and Tennessee have state requirements for local accountability for the implementation of local wellness policies; Colorado, Kansas, New Jersey, New Mexico, Pennsylvania, North Carolina, Hawaii, and Maryland require state-level review and evaluation of local wellness policies; and Kentucky, Nevada, North Carolina, Oklahoma, and Tennessee require school districts to regularly report to the state on the implementation of local wellness policies.

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