

February 2012

K-12 EDUCATION

School-Based Physical Education and Sports Programs



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Why GAO Did This Study

Physical activity is a crucial part of preventing or reducing childhood obesity, and may also yield important academic and social benefits. However, many children do not attain the level of daily physical activity recommended by the Centers for Disease Control and Prevention (CDC). Schools are uniquely positioned to provide students opportunities to increase physical activity through physical education (PE) classes and involvement in sports teams. In view of the federal government's role in promoting the health and welfare of children, the Congress is currently considering a number of proposals aimed in part at increasing the physical activity of youth. To assist the Congress as it considers options for increasing physical activity among students, GAO was asked to review (1) the status of opportunities for elementary and secondary school students to participate in school-based physical education or sports activities; and (2) what challenges schools face in providing physical education and sports opportunities. To conduct this study, GAO reviewed federal survey data; interviewed state, district, and school officials in selected states, as well as federal officials and others with relevant expertise; reviewed relevant federal laws and regulations; and reviewed studies on the benefits of physical education and sports for students.

GAO makes no recommendations in this report. The Departments of Education and Health and Human Services provided technical comments, which were incorporated as appropriate.

View [GAO-12-350](#). For more information, contact Linda Calbom at (206) 287-4809 or calboml@gao.gov.

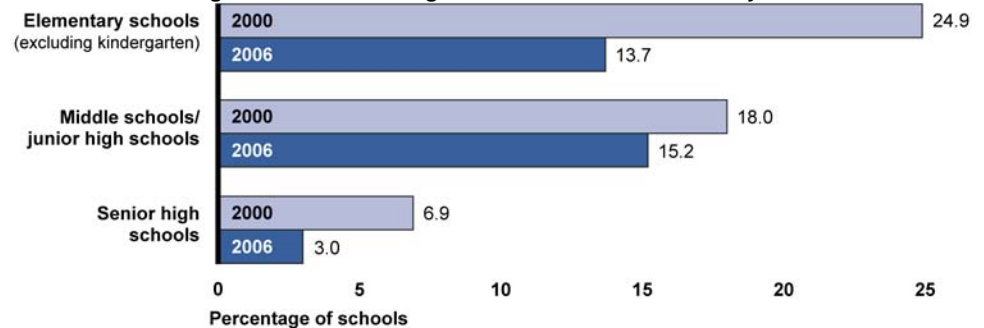
K-12 EDUCATION

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What GAO Found

While the most recent national data show instruction time for PE decreased from 2000 to 2006, officials GAO interviewed stated that school sports opportunities have generally increased in recent years. Specifically, the percentage of schools that offered PE at least 3 days a week decreased from 2000 to 2006, but the percentage of schools that required students in each grade to take some PE increased during the same period. For example, the estimated percentage of schools that required PE in ninth grade increased from 13 percent in 2000 to 55 percent in 2006. Moreover, states, districts, and schools appear to have increased emphasis on the quality of PE programs, such as helping students develop lifelong fitness skills, according to national data and GAO interviews. Data on high school students show that participation in PE varies by grade level but not by gender or across racial groups. In addition, most state, district, and school officials GAO interviewed said opportunities to participate in interscholastic sports have increased, particularly for girls, and that many schools have responded to increased demand by adding new sports teams over the last few years.

Estimated Percentage of Schools Offering PE in All Grades at Least 3 Days a Week



Source: School Health Policies and Programs Study 2006 data.

Schools GAO visited cited several challenges to providing PE and sports opportunities but have found ways to alleviate some of the challenges associated with sports. In particular, school officials said that budget cuts and inadequate facilities have affected their ability to provide PE opportunities. For example, officials from one school district GAO visited reported reducing PE instruction time because of limited funding for instructors. Other schools, such as one where the gym doubled as the cafeteria, lack dedicated space to use for PE. In addition, school officials reported challenges in providing sports opportunities, as issues related to transportation, facilities, and staffing have been compounded by budgetary constraints. For example, officials from some schools said funding to transport students to outside facilities for practices or games was limited. Other school officials cited difficulty in attracting quality coaches because of low pay and the large amount of time involved. Even so, some schools have mitigated some challenges related to sports by relying heavily on outside funding sources such as booster clubs and gate receipts and leveraging community facilities. Additionally, some schools charge student fees for sports activities, which may be a barrier for lower-income students. However, many schools waive such fees.

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Abbreviations

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| CDC | Centers for Disease Control and Prevention |
| HHS | Department of Health and Human Services |
| NASPE | National Association for Sports and Physical Education |
| PE | physical education |
| SHPPS | School Health Policies and Practices Survey |
| YRBS | Youth Risk Behavior Survey |

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United States Government Accountability Office
Washington, DC 20548

February 29, 2012

The Honorable Tom Harkin
Chairman
Committee on Health, Education, Labor,
and Pensions
United States Senate

The Honorable Mike McIntyre
House of Representatives

In the past 30 years, the rate of childhood obesity has increased considerably, almost tripling for children aged 6 to 11 years. Along with this increase, the rate of childhood health problems commonly associated with obesity, such as hypertension and type II diabetes, has also risen, leading some policy makers to rank childhood obesity as a critical health threat. In a 2005 report, we highlighted expert views that increasing physical activity is the most important strategy in any program aimed at preventing or reducing childhood obesity.¹ In addition to its positive health benefits, research on physical activity among children also suggests a strong correlation between children's fitness and their academic performance, as measured by grades in core subjects and scores on standardized tests. Moreover, some experts contend that physical activity provides both personal and social benefits, including the development of leadership skills and increased self-esteem. The Department of Health and Human Services' (HHS) Physical Activity Guidelines for Americans state that children aged 6 to 17 years should get at least 60 minutes of physical activity each day, but the agency acknowledges that most children do not attain this recommended level.

Schools are uniquely positioned to be an access point for students to engage in physical activity through physical education classes and sports teams. According to the Centers for Disease Control and Prevention (CDC), quality physical education can serve as the cornerstone of a comprehensive school-based physical activity program because it provides a unique opportunity for students to obtain the knowledge and

¹GAO, *Childhood Obesity: Most Experts Identified Physical Activity and the Use of Best Practices as Key to Successful Programs*, [GAO-06-127R](#) (Washington, D.C.: Oct. 7, 2005).

skills needed to establish and maintain physically active lifestyles throughout childhood and adolescence and into adulthood. Toward that end, CDC promotes the National Association for Sports and Physical Education's (NASPE) guidelines for physical education, which recommend that schools provide 150 minutes per week of physical education instruction to elementary school students and 225 minutes per week to middle and high school students. Other school-based physical activities, such as interscholastic and intramural sports, should complement rather than take the place of physical education by providing opportunities to practice and apply the skills taught during physical education, according to CDC.²

In view of the federal government's role in promoting the health and welfare of children, the Congress is currently considering a number of proposals aimed in part at increasing physical activity of youth.³ To assist the Congress as it considers options for increasing physical activity for students, we reviewed: (1) the status of opportunities for elementary and secondary school students to participate in school-based physical education or sports activities; and (2) what challenges schools face in providing physical education and sports opportunities.

In conducting this work, we reviewed data from two CDC national data sets, the 2000 and 2006 School Health Policies and Practices Survey (SHPPS) and the 2005 and 2009 Youth Risk Behavior Survey (YRBS), which address opportunities for students to participate in school-based physical education and sports activities.⁴ SHPPS collects survey information on school health programs and practices from state, district, and school officials, and YRBS surveys students in grades 9 through 12 on health-risk behaviors. We reviewed existing documentation related to SHPPS and YRBS data and determined that they are sufficiently reliable for the purposes of this report. All SHPPS estimates used in this report have margins of error at the 95 percent confidence level of plus or minus 7 percentage points or less, unless otherwise noted. All percentage

²In interscholastic sports, teams from different schools compete against one another. In intramural sports, students from a single school compete against each other.

³See, for example, H.R. 422, H.R. 1057, H.R. 1531, H.R. 2816, S. 174, S. 392, S. 576, and S. 919.

⁴ Because the most recent SHPPS data are from 2006, they do not reflect any changes that may have occurred as a result of the recession that began in December 2007.

estimates from YRBS used in this report have margins of error at the 95 percent confidence level of plus or minus 4.3 percentage points or less, unless otherwise noted. We also interviewed officials at the Department of Education, the Department of Health and Human Services, state educational agencies, state high school athletic associations, school districts, and schools about opportunities for and barriers to participation in physical education and sports. To obtain a more in-depth understanding of issues related to school-based sports and physical education, we conducted site visits to California, Illinois, New York, and North Carolina. We selected these states based on geographic dispersion, childhood obesity rate, and variation in state requirements for physical education programs. Within each state, we selected a nongeneralizable sample of districts and schools based on location (rural, urban, and suburban), school level (elementary, middle, and high), and the percentage of students eligible for free or reduced price lunch.⁵ We also considered any known innovative practices in selecting schools. Based on our sample selection, we interviewed officials from four state educational agencies, four state high school athletic associations, seven districts, and 13 schools. In addition, we interviewed others with relevant expertise, including researchers and representatives of professional trade associations to gain additional perspectives on these issues. We also reviewed relevant federal laws and regulations, as well as studies on the benefits of sports and physical education for students.

We conducted our work from March 2011 to February 2012 in accordance with all sections of GAO's Quality Assurance Framework that are relevant to our objectives. The framework requires that we plan and perform the engagement to meet our stated objectives and to discuss any limitations in our work. We believe that the information and data obtained, and the analysis conducted, provide a reasonable basis for any findings and conclusions in this product.

⁵Data on the percent of students eligible for free or reduced price lunch come from the U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Public Elementary/Secondary School Universe Survey", 2009-10.

Background

Prevalence and Consequences of Obesity among U.S. Children

According to CDC, approximately 12.5 million children aged 2 to 19 years are obese.⁶ The prevalence of obesity among children and adolescents has nearly tripled since 1980. Childhood obesity can cause a number of harmful effects on health, including high blood pressure and cholesterol, breathing problems and asthma, and increased risk of type II diabetes. This rise in obesity-related health conditions also introduces added economic costs. The annual direct costs of childhood obesity in the United States are estimated at about \$14.3 billion.⁷ Moreover, because studies suggest that obese children are likely to become overweight or obese adults—particularly if they are obese during adolescence—the increase in the number of obese children may also contribute to additional health care expenditures when they become adults. One study estimated the medical costs of obesity to be as high as \$147 billion per year in 2008.⁸ Nearly half of all medical spending related to adult obesity is financed by the public sector, through Medicaid and Medicare.

Benefits of Participating in Physical Education and Sports

Research indicates that increased physical activity in general, and physical education (PE) and sports participation in particular, yields a number of important benefits for elementary and secondary students, including:

- *Health benefits*—Research has shown that regular physical activity for youth can benefit them in a number of ways, including helping build and maintain healthy bones, muscles, and joints; helping control weight and reduce fat; and preventing or delaying the development of

⁶National Health and Nutrition Examination Survey (NHANES), CDC, National Center for Health Statistics. For children and adolescents aged 2 to 19 years, obesity is defined as a body mass index (BMI) at or above the 95th percentile for children of the same age and sex.

⁷R. Hammond and R. Levine, “The Economic Impact of Obesity in the United States,” *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy* (August 2010): 285-295. According to CDC, direct medical costs include preventive, diagnostic, and treatment services related to obesity. Indirect costs relate to morbidity and mortality costs, such as the value of income lost from decreased productivity or premature death.

⁸E.A. Finkelstein, J.G. Trogon, J.W. Cohen, and W. Dietz, “Annual Medical Spending Attributable to Obesity: Payer- and Service-Specific Estimates.” *Health Affairs* 2009; 28(5): w822-w831.

high blood pressure. One study concluded that expanding PE programs in schools may be an effective intervention for combating obesity in the early years, especially among girls.⁹

- *Academic benefits*—A growing body of evidence indicates a relationship between PE and sports and academic attainment and attendance. A 2010 CDC report that examined 50 existing studies found positive associations between academic performance and both PE and school-based sports.¹⁰ Specifically, it concluded there is substantial evidence that physical activity can help improve academic achievement, including grades and standardized test scores. Further, it suggested physical activity can affect cognitive skills, attitudes, and academic behavior, including enhanced concentration, attention, and improved classroom behavior, and concluded that increasing or maintaining time dedicated to physical education might help academic performance.
- *Personal and social benefits*—A number of studies provide some support for the premise that physical activity, and sports in particular, can positively affect aspects of personal development among young people, such as self-esteem, goal-setting, and leadership.¹¹ However, evidence indicates that the quality of coaching is a key factor in maximizing positive effects.

Federal, State, and Local Roles

The federal government supports efforts to increase the amount of time children spend being physically active, including within the school context. For example:

- CDC funds 22 states and 1 tribal government to help schools develop a systematic approach to school health, including physical education, through its promotion of a coordinated school health strategy. It also

⁹A. Datar, and R. Sturm, “Physical Education in Elementary School and Body Mass Index: Evidence from the Early Childhood Longitudinal Study,” *American Journal of Public Health*, vol. 94, no. 9 (September 2004): 1501-1506.

¹⁰Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, *The Association between School Based Physical Activity, Including Physical Education, and Academic Performance* (Atlanta, Ga.: 2010).

¹¹For example, see D. Gould and S. Carson, “Personal Development through Sport,” in Hebestreit, H., & Bar-Or, O. (eds.), *The Encyclopedia of Sports Medicine - The Young Athlete*, (p. 287-301) (Oxford: Blackwell Science, 2008).

publishes the Physical Education Curriculum Analysis Tool, which is designed to help school districts develop or enhance physical education curricula.

- The Department of Education administers the Carol M. White Physical Education Program, which awards grants to districts and community-based organizations to initiate or enhance physical education programs. In fiscal year 2011, the program had a budget of nearly \$79 million, and funded 76 new awards and 152 continuation awards.
- The President's Council on Fitness, Sports and Nutrition includes the President's Challenge program, which assists schools in assessing student fitness levels, motivating and awarding student physical activity participation, and awarding model school PE programs.
- In 2010, the President launched the White House Task Force on Childhood Obesity, in conjunction with the First Lady's *Let's Move!* initiative aimed at increasing physical activity.
- The Department of Agriculture runs the HealthierUS School Challenge, an initiative to recognize schools that have created healthier school environments through the promotion of nutrition and physical activity.

At the state and district levels, various parties may be involved in providing students with opportunities in PE or sports. For example, many states have requirements regarding schools' provision of PE, according to CDC. However, policies may vary by state or district, such as the required grades in which PE should be offered, the number of minutes students should be in class, or the specific content and curriculum areas that should be taught. For extracurricular athletics, the National Federation of State High School Associations provides leadership for the administration of most high school interscholastic sports—the main form of extracurricular athletic competition in schools, which includes varsity and junior varsity level teams. In turn, each state has its own state high school athletic association that is a voluntary member of the federation.

While PE Instruction Time Has Decreased, Officials Said School Sports Opportunities Have Generally Increased

PE Instruction Time Has Decreased, but Schools Increasingly Require Some PE in Each Grade

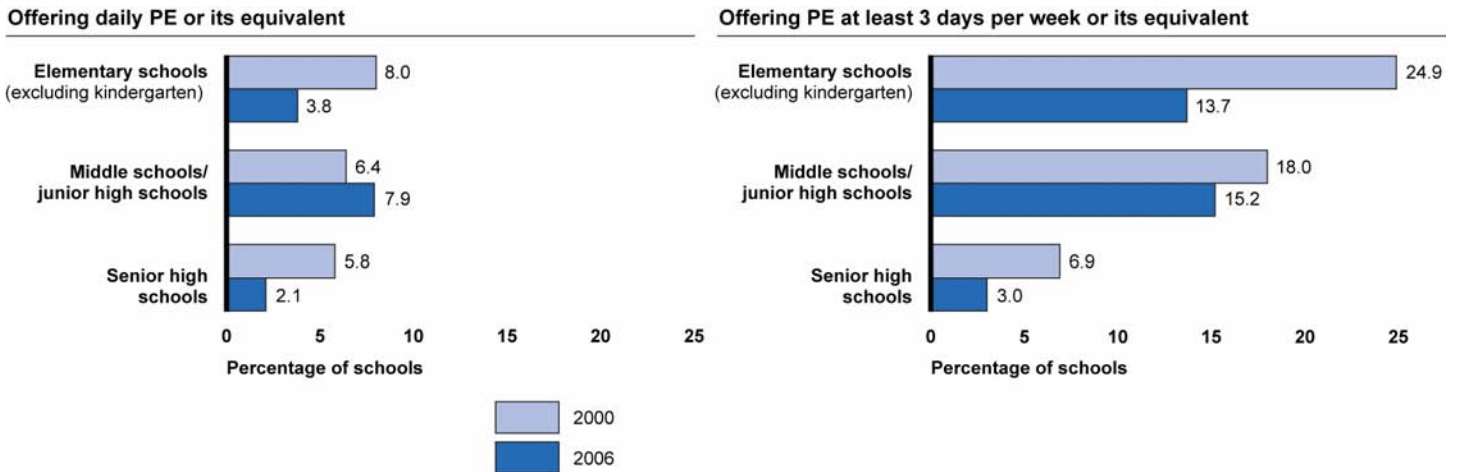
Opportunities

The amount of PE instruction time that schools offer to students generally decreased from 2000 to 2006, according to SHPPS data, and relatively few schools offered students the opportunity to participate in daily PE or its instructional equivalent, as recommended by NASPE (see fig. 1).¹² National data show that a higher percentage of middle schools offered daily PE than did elementary or high schools. Schools we visited differed widely in the amount of PE instruction time offered to their students. For example, only 3 out of 13 schools we visited offered daily PE or its instructional equivalent. These 3 schools had longer school days, which officials said made it easier to fit PE into the daily schedule. Among the 4 elementary schools we visited, 1 provided all students a daily 60-minute PE class, while another provided students just one 30-minute PE class per week.¹³

¹²Daily physical education was defined as physical education that occurred for 36 weeks (i.e., a typical school year) per school year for 150 minutes per week in elementary schools and for 225 minutes per week in middle and high schools.

¹³According to the 2006 SHPPS, most elementary schools provided regularly scheduled recess as another opportunity to offer physical activity to their students.

Figure 1: Estimated Percentage of Schools Offering PE Daily or at Least 3 Days per Week, in 2000 and 2006 ¹⁴

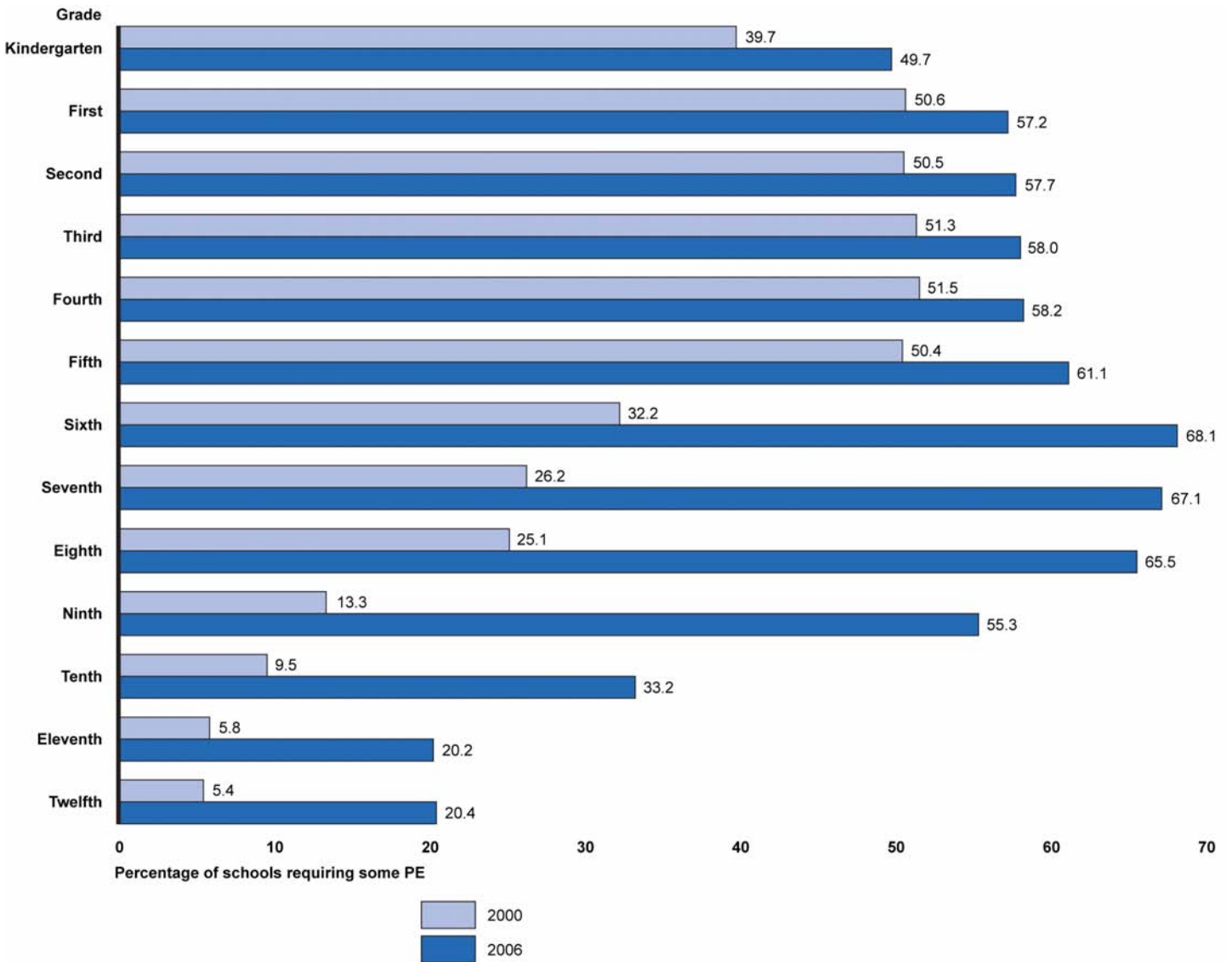


Source: GAO analysis of SHPPS data.

At the same time, the estimated percentage of schools that required students to take some PE increased at each grade level from 2000 to 2006, particularly for grades at the middle and high school levels, according to SHPPS data (see fig. 2). For example, the estimated percentage of schools that required ninth grade students to take PE increased from 13 percent in 2000 to 55 percent in 2006.

¹⁴SHPPS estimates used in this report have margins of error at the 95 percent confidence level of plus or minus 7 percentage points or less, unless otherwise noted.

Figure 2: Estimated Percentage of Schools That Required Some PE, by Grade and Year



Source: GAO analysis of SHPPS data.

Program Standards and Content

Although the amount of PE instruction time has decreased, emphasis on the quality of PE programs appears to have increased, according to SHPPS data and comments from officials we interviewed. The percentage of states that required or encouraged districts or schools to follow NASPE-based PE standards—such as competency in motor skills and promotion of responsible personal and social behavior—increased

from 59 percent in 2000 to 76 percent in 2006.¹⁵ In 2006, an estimated 65 percent of schools adopted such standards.¹⁶ District and school officials with whom we spoke said PE curricula now focus less on traditional sports in favor of helping students develop lifelong skills. For instance, three schools we visited offered outdoor adventure-based activities that helped students develop problem solving and teamwork skills. At one middle school we visited, PE staff members taught students how to measure their body mass index and other indicators of fitness. In addition, some school and district officials we interviewed said offering students options may increase student participation in PE. For example, officials at one high school we visited said that each semester students could select two to three different sports or fitness activities from a range of options—such as flag football, tennis, or soccer—to fulfill their PE requirement. School officials noted that students were more engaged in PE because the options were designed to motivate students across a range of athletic abilities and interests. Moreover, several school officials we interviewed said they design their PE curriculum to encourage students to move as much as possible during PE class.

Participation

National data on high school students show that participation in PE varied considerably by grade level but has not varied significantly across gender or racial groups. According to 2009 YRBS data, the estimated percentage of high school students who reported attending at least one PE class per week decreased with each successive grade level, from 72 percent in 9th grade to 44 percent in 12th grade (see fig. 3).¹⁷ Officials we interviewed in one state said most students do not participate in PE in 11th or 12th grade because they usually complete the state's 2-year high school PE requirement in 9th and 10th grades. High school boys and girls reported participating in PE at about the same rate, as did students in different racial groups, according to YRBS. Officials at all schools we visited said they do not generally have difficulty getting students to participate in the PE opportunities that are offered. At two middle schools we visited,

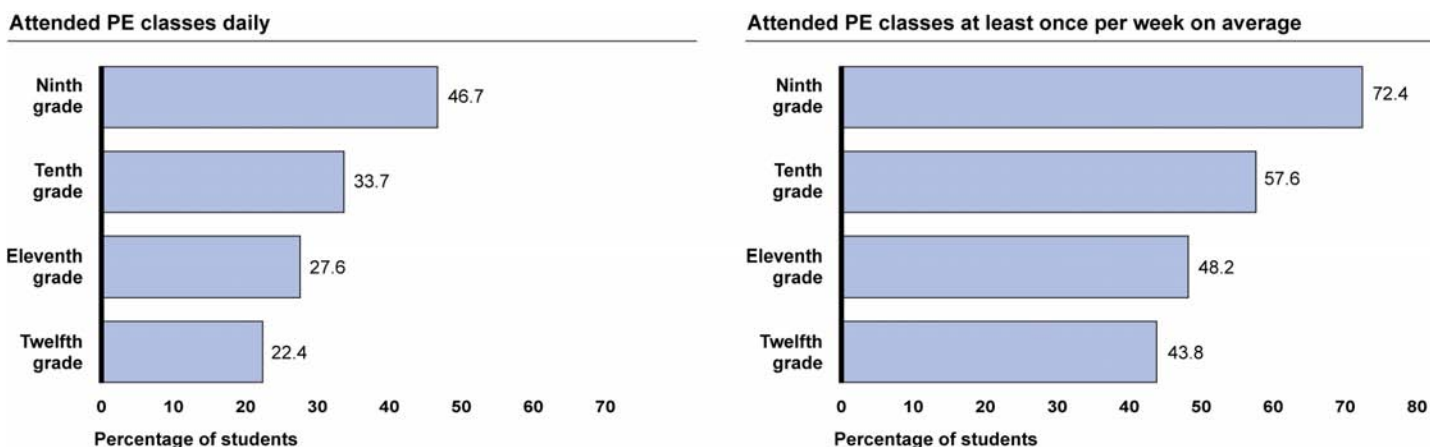
¹⁵State educational agencies in all 50 states and the District of Columbia were included in the 2006 SHPPS study.

¹⁶We did not include comparison data because data estimates from 2000 were reported differently than data estimates from 2006.

¹⁷These YRBS estimates have a margin of error at the 95 percent confidence level of plus or minus 9.6 percentage points or less.

officials told us the PE curriculum is designed to engage as many students as possible.

Figure 3: Estimated Percentage of High School Students Who Attend PE Daily or at Least Once Per Week, by Grade Level



Source: GAO analysis of YRBS, 2009.

As previously stated, national data show that many schools have PE requirements. However, some schools allow exemptions for a range of reasons. According to 2006 SHPPS data, state, district, and school policies most commonly allowed student exemptions due to long-term physical or medical disability. Our previous work has shown that students with disabilities generally attend PE class about the same amount of time as students without disabilities.¹⁸ In addition, according to 2006 SHPPS data, most states required schools to implement measures to meet the PE needs of students with long-term disabilities.¹⁹ Officials from most schools and districts we interviewed said that exemptions from PE requirements are rare, and schools generally offer students with long-

¹⁸GAO, *Students with Disabilities: More Information and Guidance Could Improve Opportunities in Physical Education and Athletics*, [GAO-10-519](#) (Washington, D.C.: June 23, 2010).

¹⁹Under the implementing regulations for both the Individuals with Disabilities Education Act and Section 504 of the Rehabilitation Act of 1973, schools are required to provide students with disabilities equal opportunity for participation in extracurricular activities, which often include athletics. See 34 C.F.R. § 300.107 and 34 C.F.R. § 104.37, respectively.

term disabilities the opportunity to participate in adapted PE or general PE classes.²⁰

Most Officials Reported Increased Opportunities to Participate in School Sports

Opportunities

School sports programs offer another opportunity for students to engage in school-based physical activity. According to 2006 SHPPS data, an estimated 77 percent of middle schools and 91 percent of high schools offered students opportunities to participate in interscholastic sports programs such as basketball, soccer, or softball (see app. I).²¹ Most national, state, district, and school officials we interviewed said that opportunities to participate in school sports have generally increased, in part because many schools have added new interscholastic sports teams over the last few years. For example, several schools we visited have added lacrosse and badminton programs as student interest in these sports has increased. Furthermore, officials from each of the four states we visited said they had added new sports programs to their statewide interscholastic competition schedules in response to increased demand. In particular, many officials we interviewed said opportunities for girls to participate in school sports have increased over time, due primarily to the addition of new interscholastic sports teams for girls. For example, one state official we interviewed noted that while only 49 high schools in the state offered girls' soccer in 1986, about 300 high schools offered it in 2010. In addition to interscholastic sports, SHPPS data show that an estimated 50 percent of elementary schools, 49 percent of middle schools, and 45 percent of high schools offered intramural or physical activity clubs in 2006. However, several officials said that such programs, which are relatively small compared to interscholastic programs, have decreased in middle and high schools. Moreover, only a few schools we visited offered intramural programs.

²⁰Some schools accommodate students with more severe motor development delays by providing specialized or "adapted" PE instruction, using various approaches.

²¹State and district officials we spoke with said that most elementary schools do not offer interscholastic sports programs. Only one district we interviewed offered interscholastic programs at its elementary schools.

Participation

No-cut policies—in which schools do not limit the number of students who can participate on a sports team—have also contributed to increased opportunities for students to participate in school sports programs, according to many officials we interviewed. For example, in one district we visited, the middle school interscholastic teams adopted no-cut policies, which officials said provided interested students ample opportunities to participate in sports programs and gain exposure to new sports. Similarly, an official at another high school we visited said the school offers at least one no-cut interscholastic team per season so that students who want to participate in school sports always have at least one option.

National data show that high school students' participation in at least one school or community sports team remained about the same from 2005 to 2009.²² Over one-half of high school students reported participating in at least one school or community sports team in 2009, according to YRBS data.²³ Several middle school and high school officials we interviewed reported similar student participation rates.²⁴ The overall number of students who participate in school sports programs has generally increased over the years, according to most officials we interviewed. High school boys reported a higher rate of participation in school or community sports teams than high school girls in both 2005 and 2009, according to YRBS data. However, according to the officials we interviewed, the number of female athletes has increased over the years, in part due to the addition of new sports programs for girls. While participation did not vary significantly overall by race for white, black, and Hispanic high school students, white high school girls were more likely to report that they participate in at least one sports team than their black or Hispanic counterparts.²⁵

²²The YRBS survey instructed students to include any teams run by their school or community groups in their response about participation on a sports team.

²³Percentage estimates from YRBS used in this report have margins of error at the 95 percent confidence level of plus or minus 4.3 percentage points or less, unless otherwise noted.

²⁴Elementary school students do not generally participate in school sports programs because most schools at that level do not offer such programs, according to state and district officials we interviewed.

²⁵Race/ethnicity data reporting by YRBS include estimates for white, black, and Hispanic students.

Schools Cited Resource Challenges to Providing PE and Sports Opportunities but Have Mitigated Some of Them

Officials Said PE Opportunities Have Been Affected by Budget Cuts and Inadequate Facilities

Most officials we spoke with cited budget cuts and inadequate facilities as major challenges for schools to provide physical education opportunities for students. Specifically, officials from several of the districts and schools we visited said budget cuts have affected their ability to hire PE teachers, maintain appropriate class sizes, and purchase sufficient equipment. In one district we visited, officials told us that many PE teachers have been laid off, and some schools in the district have been forced to share a part-time PE instructor. As a result, elementary school PE instruction in the district has been reduced to as little as 30 minutes every 2-3 weeks, and a district official told us most elementary and middle schools in the district are not meeting state requirements for PE instruction. At two elementary schools we visited, PE instructors expressed a desire to conduct PE instruction on a daily basis, but cited limited funding as a barrier. Some schools have also seen increased class sizes as a result of budget cuts. In some cases, budget cuts have affected the availability and quality of equipment as well. A PE teacher at one school has stopped including several sports, such as golf, in her PE classes because the supply of equipment no longer matches the class size. In the context of limited funding, some state, district, and school officials expressed the belief that the greater emphasis on assessments for reading and math, as required under the No Child Left Behind Act of 2001,²⁶ has shifted priorities away from PE. In one district we visited, an official said this focus on academic assessments had led his district to reduce the amount of PE it offers students.

²⁶The Elementary and Secondary Education Act of 1965, as amended by the No Child Left Behind Act of 2001. Pub. L. No. 107-110 (2002).

Officials at 9 of the 13 schools we visited told us that a lack of adequate facilities is also a major challenge in providing physical education. For example, because some schools do not have adequate indoor space, they may conduct several PE classes in the gymnasium simultaneously, or use alternative space for their activities. According to SHPPS data, an estimated 54.9 percent of elementary schools, 37.8 percent of middle schools, and 25.3 percent of high schools used a cafeteria, auditorium, or other multipurpose room for indoor physical education in 2006. During our site visits, we observed several PE classes sharing space and saw multipurpose facilities being used as gymnasiums. For example, at one school we visited, the gymnasium also served as the cafeteria. The time it takes to prepare for, serve, and clean up from lunch limits the school's ability to schedule PE classes.

Several school officials told us they have worked hard to stretch the limited funding they receive for PE instruction. Some schools partially rely on federal grant money to help maintain and augment PE opportunities. For example, two school districts we visited were able to purchase equipment, such as fitness center equipment and kick balls, for their PE programs as a result of Carol M. White grants from the Department of Education.

Schools Also Face Budget and Other Challenges in Providing Sports Opportunities but Have Partially Mitigated Them

Although sports opportunities have generally increased, most officials we spoke with cited budget constraints as a key challenge to providing opportunities. In particular, budget cuts have affected transportation and facilities. Some schools have also struggled to find coaches for their school sports teams.

Transportation

Because interscholastic sports games may involve travel and some teams practice off-site, schools often need to provide transportation for athletes. Many school and district officials we spoke with stated that, because of budget constraints, they had a difficult time providing transportation to facilitate student participation in after-school sports activities. According to SHPPS data, an estimated 29 percent of the schools that offered interscholastic sports in 2006 also provided transportation home for participating students, up from 21 percent in 2000. For schools that offered intramural activities, an estimated 31 percent of middle schools and 28 percent of high schools provided transportation home for students. Some school officials told us that transportation costs, including costs associated with maintenance and fuel, are a large part of their school's athletic budget. To help reduce

transportation costs, some schools charge students a fee for transportation, enlisting parents to provide carpools, or sharing buses with other athletic teams to transport students to and from athletic events.

Facilities and Equipment

Several school officials we spoke with stated that budget cuts and space constraints have affected their ability to provide adequate facilities and equipment for sports opportunities. Some smaller schools do not have access to baseball or football fields or other facilities for team sports. In addition, some schools use off-site locations for practices and events due to the lack of space or adequate facilities. Furthermore, some schools, particularly schools in densely populated communities, lack the necessary space to expand their facilities. Moreover, officials at one school we visited said they were prohibited from building new athletic fields or expanding because of land use restrictions. To mitigate some of these challenges, several schools we visited have developed partnerships with local businesses, colleges, nonprofits, or community recreational centers to use their facilities for various sports programs. For example, several schools have agreements to use community athletic fields and other facilities for baseball, football, soccer, and swimming programs. In addition to space constraints, some school officials cited aging or insufficient equipment as a challenge to providing sports opportunities. For example, an official from one school told us the school had to implement a selection policy for the football program, in which some students were cut from the team, because demand exceeded the number of uniforms and helmets available for players. School officials also cited the upkeep and maintenance of fields as a challenge given budget constraints.

Coaches

Some state, district, and other officials cited finding quality coaches as a challenge to providing sports opportunities. Specifically, some officials told us that fewer faculty members have been coaching sports teams in recent years. Officials attribute this decline to the low pay and increased time commitments that are often required to coach a sport. In one state we visited, an official said over 60 percent of the coaches in the state were considered “walk-on coaches” who were not otherwise a part of the school community. Some officials said that non-faculty coaches may be less accessible to students. In addition, some schools may have a difficult time finding coaches for specific sports. For example, one school official reported difficulty finding cheerleading coaches given the specialized training needed to coach a cheerleading squad.

Mitigating Funding Challenges

Schools have mitigated some of the budgetary challenges related to providing sports opportunities by relying heavily on outside funding

sources or charging fees for certain sports activities. Some school officials we interviewed said their athletics funding depended primarily on community support or the tax base of their district, both of which fluctuate with the economy. For example, one district we visited had strong community support and a high economic tax base. During our site visit, we observed that schools in this district had numerous and high-quality facilities and one official mentioned that even the district's middle schools had swimming pools. The official added that the tax base has remained steady, and the district has not experienced some of the challenges that other school districts face in providing PE and sports opportunities for its students. However, other schools we visited reported relying heavily on booster clubs, gate receipts, private donations, and fundraising to fund their local sports programs. For example, one school official told us that the school relies heavily on ticket sales from sporting events that may total as much as \$60,000 a year to maintain and fund its sports programs. Also, some schools with very strong community support benefit from community fundraising efforts.

In addition, some school districts have implemented "pay-to-play" arrangements, in which students are charged a fee to participate in school sports activities. Specifically, according to SHPPS data, the percentage of schools that require students to pay an activity fee to participate in interscholastic sports was an estimated 33 percent in 2006, which did not differ significantly from the 2000 estimate of 29 percent.²⁷ In addition, the percentage of schools with intramural activities or physical activity clubs that required students to pay a fee for these activities increased from an estimated 23 percent in 2000 to 35 percent in 2006. However, in two states we visited, officials told us that pay-to-play arrangements are prohibited in their states. Some officials expressed concern that pay-to-play arrangements may negatively impact student participation by serving as a barrier to lower-income students. However, according to 2006 SHPPS data, an estimated 86 percent of schools that charge a fee to participate in sports activities waived the fee for students who could not afford to pay.

²⁷ SHPPS asked schools whether students must pay an activity fee to participate in sports but did not define what such a fee might include.

Concluding Observations

The federal government has an interest in seeing that school-aged children benefit from the positive effects regular physical activity can have on health and overall well-being. As the primary social institution where children learn and spend their time, schools can play a pivotal role in increasing students' physical activity, in part through offering PE classes and opportunities to participate in sports programs. Although it appears schools increasingly acknowledge the benefits of PE by requiring students to take classes, they have reduced the amount of time spent on PE instruction. Opportunities to play school sports, however, appear to be on the rise. While such a trend is encouraging, school-based sports should augment, rather than replace, the experiences and skills acquired in PE, which reaches beyond student athletes to the general student population. A number of challenges inhibit further expansion of school-based PE and sports. At a time when states and districts are operating under severe fiscal constraints, acquiring resources to provide additional opportunities is difficult. Although some districts and schools have developed approaches to partially offset the challenges associated with providing sports opportunities, challenges associated with providing PE remain unresolved. Identifying practical ways to increase students' physical activity may be difficult, but the need to address childhood obesity—and the opportunity to shore up such efforts in the school context—serves as a compelling starting point for addressing obesity-related health issues and their associated costs.

Agency Comments and Our Evaluation

We provided a draft of the report to the Departments of Education and Health and Human Services for review and comment. Both agencies provided technical comments, which we incorporated as appropriate.

As arranged with your offices, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from its issue date. At that time, we will send copies of this report to relevant congressional committees, the Secretary of Education, the Secretary of Health and Human Services, and other interested parties. In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (206) 287-4809 or calboml@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix II.



Linda Calbom
Director, Education, Workforce, and
Income Security Issues

Appendix I: Estimated Percentage of All Middle and High Schools That Offered Interscholastic Sports in 2006, by School Level

| Interscholastic Sport | % of All Middle Schools | % of All High Schools |
|-------------------------------------|-------------------------|-----------------------|
| Badminton | 4.2 | 7.2 |
| Baseball | 35.7 | 79.6 |
| Basketball | 76.4 | 90.9 |
| Bowling | 3.0 | 17.2 |
| Cheerleading or competitive spirits | 50.9 | 77.3 |
| Cross-country | 38.9 | 68.4 |
| Downhill or cross-country skiing | 3.2 | 5.9 |
| Fast pitch or slow pitch softball | 45.2 | 77.9 |
| Field hockey | 7.1 | 10.2 |
| Football | 53.0 | 71.0 |
| Golf | 22.1 | 68.4 |
| Gymnastics | 5.2 | 10.1 |
| Ice hockey | 2.4 | 14.3 |
| Lacrosse | 3.7 | 12.8 |
| Riflery | 2.1 | 3.8 |
| Soccer | 32.3 | 60.3 |
| Swimming or diving | 6.9 | 37.8 |
| Tennis | 12.6 | 53.0 |
| Track and field | 52.1 | 73.2 |
| Volleyball | 57.3 | 71.4 |
| Water polo | 0.5 | 2.6 |
| Weight lifting | 9.9 | 23.8 |
| Wrestling | 28.7 | 49.6 |

Source: SHPPS, 2006.

Note: All SHPPS estimates used in this report have margins of error at the 95 percent confidence level of plus or minus 7 percentage points or less, unless otherwise noted.

Appendix II: GAO Contact and Staff Acknowledgments

GAO contact

Linda Calbom (206) 287-4809 or calboml@gao.gov

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Debra Prescott (Assistant Director) and Rebecca Woiwode (Analyst-in-Charge) managed this assignment. Vernetta Shaw and Michelle Wong made significant contributions in all facets of the work. In addition, Dana Hopings helped with site visits; Jean McSween and Dae Park provided methodological support; Alex Galuten provided legal assistance; David Chrisinger provided writing assistance; and James Bennett provided graphics for the report.

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