



## FACTS

### Learning For Life

## Physical Education in Public Schools

#### OVERVIEW

Childhood obesity has reached epidemic proportions in the United States. Nearly 10 million children and adolescents ages six to 19 are considered obese.<sup>1</sup> As these obese children grow older, they have a much greater risk than their normal weight peers of developing and dying from chronic diseases in adulthood.<sup>2</sup> Some experts claim that by 2015, 75% of adults will be overweight with 41% obese.<sup>3,4</sup> One important way to arrest this rise in obesity in our children is through strong physical education programs in our nation's schools.

Children must be physically active at school and learn about keeping healthy through exercise and eating a balanced diet. Regular physical activity is associated with a healthier, longer life and lower risk of CVD, high blood pressure, diabetes, obesity, and some cancers.<sup>5</sup> If the lessons of lifetime physical activity and healthy food and beverage choices are modeled at both school and home, children will have the optimal foundation for healthy living.<sup>6</sup> Research shows that healthy children learn more effectively and achieve more academically.<sup>7</sup> Unfortunately, many schools are cutting back on traditional physical education programs because of budgetary concerns and competing academic demands.<sup>8</sup>

Beyond the impact on chronic disease, physical inactivity and obesity place a significant burden on our society. The estimated annual cost of overweight and obesity is \$147 billion dollars.<sup>9</sup> Childhood obesity is also a major impediment for military recruiters, and impacts the numbers of young adults who are able to qualify to enroll at police academies or pass fitness tests given

to emergency responders or military personnel.<sup>10</sup> The American Heart Association strongly advocates for daily, quality physical education in our nation's schools to give children a healthy head start on life.

#### A GROWING SEDENTARY LIFESTYLE: SERIOUS HEALTH CONSEQUENCES

- A recent study showed that the plaque buildup in the neck arteries of obese children is similar to those levels seen in middle-aged adults.<sup>11</sup>
- Along with rising obesity rates, the rate of prescription drug use by children for diabetes, high blood pressure and high cholesterol is increasing.<sup>12</sup>
- Other research suggests that regular participation in physical education classes helps reduce obesity in low-income teenagers.<sup>13</sup>
- Of all U.S. deaths from major chronic diseases, 23% are linked to sedentary lifestyles.<sup>14</sup>
- Children's physical activity level drops dramatically between the ages of 9 and 15.<sup>15</sup>
- The US military reports that 27% of young Americans are too overweight to join, and around 15,000 potential recruits fail their physicals every year because they are too heavy.<sup>10</sup>

#### ACTIVE CHILDREN THRIVE ACADEMICALLY AND SOCIALLY

Physically active children are more likely to thrive academically and socially. Through effective physical education, children learn how to incorporate safe and healthy activities into their lives. Physical education is an integral part of developing the "whole" child for success in social settings and the learning environment.

- Evidence suggests that physical activity has a positive impact on cognitive ability, avoiding tobacco use, insomnia, depression, and anxiety.<sup>16</sup> Other studies have shown that normal weight children have higher

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scholastic achievement, less absenteeism, and higher physical fitness than their obese counterparts.<sup>17,18</sup>

- Recent studies have found a strong correlation between aerobic fitness and academic performance as measured by grades in core subjects and standardized test scores and several large-scale studies found improvements in students' academic performance with increased time spent in physical education.<sup>7</sup>
- Only 3.8% of elementary schools, 7.9% of middle schools and 2.1% of high schools provide daily physical education or its equivalent for the entire school year. Twenty-two percent of schools do not require students to take any physical education at all.<sup>19</sup>
- Yet, 95% of parents believe physical education should be part of a school curriculum for all students in grades K-12.<sup>20</sup>

## QUANTITY AND QUALITY

- It is recommended that children engage in at least 60 minutes of moderate to vigorous physical activity each day. It is reasonable for them to get at least 30 minutes of that time in school.<sup>18</sup>
- The national recommendation for physical education is 150 minutes per week in elementary and 225 minutes per week in middle and high schools.
- The quality of the physical education program is also paramount. A high-quality physical education program taught by a certified physical education teacher enhances the physical, mental, and social/emotional development of all children and helps them understand, improve, and maintain physical well-being.

## THE AHA ADVOCATES

The American Heart Association advocates for daily, quality physical education in our nation's schools, together with other healthy lifestyle choices. We support state policy that would:

- Require all school districts to develop and implement a planned K-12 physical education curriculum that adheres to national and state standards for health and physical education.
- Hire a physical education coordinator at the state level to provide resources and offer support to school districts across the state.
- Offer regular professional development opportunities to physical education teachers that are specific to their field.
- Require physical education teachers to be highly-qualified and certified.

- Add valid fitness, cognitive, and affective assessments in physical education that are based on student improvement and knowledge gain.
- Require that students be active in moderate-vigorous physical activity for at least 50% of physical education class time.
- Assure that physical education programs have appropriate equipment and adequate facilities.
- Not allow students to opt out of physical education to prepare for other classes or standardized tests.
- Not allow waivers or substitutions for physical education.
- Require physical education for graduation and count the physical education grade as part of a student's overall GPA.

## References:

- <sup>1</sup>Lloyd-Jones D, et al., Heart disease and stroke statistics—2010 update: a report from the American Heart Association. *Circulation* 2009; published online before print December 17, 2009. 10.1161/CIRCULATIONAHA.109.192667
- <sup>2</sup>Baker JL, Olsen LW, Sorensen T, Childhood body mass index and the risk of coronary heart disease in adulthood. *New Engl J Med*; 2007. 357(23):2329-2337.
- <sup>3</sup>Kaplan JP, et. al. *Progress in Preventing Childhood Obesity: How Do We Measure Up?* Institute of Med. Washington, DC: National Acad. Press, 2007.
- <sup>4</sup>Wang Y, Beydoun MA. The obesity epidemic in the U.S.-gender, age, socioeconomic, racial/ethnic, and geographic characteristics: a systematic review & meta-regression analysis. *Epidemiologic Reviews* 2007;29:6-28.
- <sup>5</sup>Eyre H, Kahn R, Robertson RM, et. al. Preventing cancer, cardiovascular disease, and diabetes: a common agenda for the American Cancer Society, the American Diabetes Association, and the American Heart Association. *Circulation* 2004 Jun 29;109(25):3244-55.
- <sup>6</sup>Pate, RR, et. al. Promoting physical activity in children and youth: a leadership role for schools. *Circulation* 2006; 114: 1214-1224.
- <sup>7</sup>Active Living Research. Active Education: Physical Education, Physical Activity and Academic Performance, *Research Brief* 2009; www.activelivingresearch.org.
- <sup>8</sup>McMurrer J. Instructional Time in Elementary Schools: A Closer Look at Changes for Specific Subjects. Washington, DC: Center on Education Policy, 2008.
- <sup>9</sup>Finkelstein EA, Trogon JG, Cohen JW, Dietz W. Annual medical spending attributable to obesity: payer- and service-specific estimates. *Health Affairs*. September/October 2009; 28(5): w822-w831.
- <sup>10</sup>Survey by the Lewin Group, 2005, for the U.S. Army Center for Accessions Research. Accessed online November 18, 2009 at <http://www.missionreadiness.org/index.html>.
- <sup>11</sup>Raghuvver G. et al. Obese kids' artery plaque similar to middle-aged adults. AHA Scientific Sessions 2008. Abstract 6077.
- <sup>12</sup>Cox ER, Halloran DR, Homan SM, et. al. Trends in the prevalence of chronic medication use in children: 2002-2005. *Pediatrics* 2008;122:e1053-e1061.
- <sup>13</sup>Madsen KA. et al., Physical activity opportunities associated with fitness and weight status among adolescents in low-income communities. *Arch Pediatr Adolesc Med*. 2009; 163(11):1014-1021.
- <sup>14</sup>Bulwer B. Sedentary lifestyles, physical activity & cardiovascular disease: from research to practice. *Crit Pathways in Cardiol*. 2004;3(4):184.
- <sup>15</sup>Nader PR, Bradley RH, Houts RM., et. al. Moderate to vigorous physical activity from 9 to 15 years. *JAMA*. 2008;300(3):295-305.
- <sup>16</sup>Suitor CW, Kraak VI. *Adequacy of Evidence for Physical Activity Guidelines Development: Workshop Summary*. Institute of Medicine. Washington, DC: National Academies Press, 2007.
- <sup>17</sup>Shore SM, Sachs ML, Lidicker JR, et. al. Decreased scholastic achievement in overweight middle school students. *Obesity* 2008;16:1535-1538.
- <sup>18</sup>Geier AB, et. al. The Relationship Between Relative Weight and School Attendance. *Obesity* 2007. 15:2157-2161.
- <sup>19</sup>CDC. School Health Policies and Programs Study (SHPPS) 2006. *Journal of School Health*. 2007; 27(8).
- <sup>20</sup>*Parents' Views of Children's Health and Fitness: A Summary of Results: A Survey Conducted by Opinion Research Corporation International of Princeton, NJ for the National Association for Sport and Physical Education*. 2003. available at [http://www.aahperd.org/naspe/pdf\\_files/survey\\_parents.pdf](http://www.aahperd.org/naspe/pdf_files/survey_parents.pdf).