

Increasing Physical Activity for Students in Delaware Schools

Policy Paper #4 • 2009

Planting the seeds for better health

SUMMARY

Childhood obesity is one of the most serious public health crises facing the nation.¹ Obesity puts children at risk for diabetes and other chronic illnesses and can lead to lifelong health problems, including reduced life expectancy.

Thirty-seven percent of Delaware children are overweight or obese.² Delaware has one of the highest prevalence rates of childhood obesity in the nation.³

Physical activity is important for achieving and maintaining a healthy weight.

The 2008 Physical Activity Guidelines for Americans indicate children should be physically active for 60 minutes or more each day.⁴ The Institute of Medicine (IOM) recommends that children accumulate a minimum of 60 minutes of moderate to vigorous physical activity daily and that schools ensure that all students participate in a minimum of 30 minutes of moderate to vigorous physical activity during the school day.⁵

Childhood Obesity in Delaware

The prevalence of childhood obesity is increasing at an alarming rate in the United States. Over the last 40 years childhood obesity has more than quadrupled among 6-11 year-olds and more than tripled among 12-19 year-olds.⁶ There are even higher rates among subpopulations of minority and economically disadvantaged children. All states are experiencing this epidemic. Delaware is among the hardest hit: 37 percent of Delaware's children are overweight or obese.²

Eighty percent of obese adolescents are projected to remain obese throughout adulthood, resulting in an increased risk for chronic disease.⁷ Obesity's rising prevalence is responsible for an almost 30 percent increase in medical expenditures nationally.⁸ At least \$207 million is spent each year to treat obesity-related medical problems in Delaware.⁹

Physical Activity in Schools

Regular physical activity is essential for children's health, quality of life, and achievement of a healthy weight. The 2008 Physical Activity Guidelines for Americans indicate children should be physically active for 60 minutes or more each day.⁴ The Institute of Medicine (IOM) recommends that children accumulate a minimum of 60 minutes of moderate to vigorous physical activity daily and that schools should ensure that all students participate in a minimum of 30 minutes of moderate to vigorous physical activity during the school day.⁵

These recommendations for physical activity in children cannot be met without schools taking a major role. More than 95 percent of American youth, ages 5-17, are enrolled in school and students spend an average of 33 hours per week in school.^{10,11} Schools present a variety of opportunities for students to participate in physical activity in the classroom, at recess, and during physical education. In some communities, schools are the primary venue for physical activity.

(continued on page 2)

About Nemours Health and Prevention Services

Nemours Health and Prevention Services (NHPS) is a division of Nemours, one of the nation's largest pediatric health systems, operating the Alfred I. duPont Hospital for Children and outpatient facilities throughout the Delaware Valley and northern and central Florida.

The goal of NHPS is to drive long-term improvements in policies and practices that promote child health, and to leverage community strengths and resources to help children grow up healthy. An initial area of emphasis is the prevention of childhood obesity through promotion of healthy lifestyles, the centerpiece of which is the *5-2-1-Almost None* campaign (visit www.GrowUpHealthy.org for details). NHPS is also launching an initiative to promote children's social and emotional health.





Increasing Physical Activity for Students in Delaware Schools

Other States Take Action

At least 21 other states have enacted legislation or regulation providing an increased amount of physical activity for students.²⁶ Most of these states have been able to implement their policies for minimal cost.²⁷ For example:

- Florida legislation requires that each school district provides 150 minutes per week of physical education for grades K-5.
- Texas legislation establishes mandatory participation for students in grades K-5 in 30 minutes of daily moderate to vigorous physical activity throughout the school year, which can include physical education classes or recess. Thirty minutes of daily moderate to vigorous physical activity is required for students in grades 6-8 for at least four semesters during those grade levels.
- North Carolina's state board of education encourages elementary schools to have students participate in 150 minutes per week of physical activity and middle schools to have students participate in 225 minutes per week of physical activity.

(continued from page 1)

Most children and youth, in Delaware and the nation, are not meeting the daily physical activity recommendations. Only four percent of elementary schools, eight percent of middle schools, and two percent of high schools in the nation are providing daily physical education.¹²

Delaware children and youth have generally poor fitness levels: in 2007-2008 only 26 percent of students participating in the state FITNESSGRAM® assessment scored in the “Healthy Fit Zone” for all five tests administered.¹³ Sixty-six percent of Delaware middle school students do not participate in the recommended amounts of physical activity and the average Delaware youth is physically active for less than 20 minutes a day.^{14, 15} Eighty-four percent of Delaware parents believe that insufficient exercise is a problem for children in Delaware.¹⁶ Ninety-five percent believe that schools have a role to play in addressing childhood obesity.¹⁶

Connection between Physical Activity and Academics

Recent research is beginning to demonstrate linkages between physical activity and academic achievement. According to a 2005 study from California, which focused on the importance of physical education in schools, students with higher fitness scores had better standardized test scores for reading and math.¹⁷ Preliminary findings from a 2009 study conducted in Texas have shown that students who are physically fit are more likely to do well on the state's standardized tests and have fewer attendance and disciplinary problems.¹⁸ In a 2005 study of Illinois children (third, fourth, and

fifth graders), researchers found that aerobic fitness, usually a result of being more physically active, was positively associated with cognitive function.¹⁹

Five controlled experimental studies have demonstrated that additional physical education time does not negatively impact academic performance.²⁰ For example, a 2006 study concluded an additional 55 minutes of physical education per day did not compromise grades or standardized test scores for sixth grade students.²¹

Recess has been shown to be beneficial to children as well, providing opportunities for students to engage in physical activity. A 2009 study concluded that at least one daily recess period of more than fifteen minutes in length for 8-9 year olds was associated with improved class behavior, according to teacher ratings.²²

Delaware Background and Needs

While physical education is required in Delaware schools, the current Delaware Department of Education (DOE) regulations for physical education do not specify the amount of time that schools should spend on physical activity and physical education. The regulations require local school districts and each charter school to provide instructional programs in physical education for each grade K to 12.²³

Physical activity, such as recess, is not addressed in the regulations; they focus only on instructional programming in physical education.

Increasing Physical Activity for Students in Delaware Schools



Delaware Progress and Opportunities

In 2006, Delaware took significant steps forward in this area. House Bill 471 amended Chapter 41, Title 14 of the Delaware Code by establishing a physical education/physical activity pilot program that required at least six schools in Delaware to provide at least 150 minutes per week of physical activity/physical education.

To date, 82 Delaware schools are either part of the HB 471 program or have partnered with Nemours Health and Prevention Services (NHPS) to make progress toward 150 minutes of physical activity weekly. It is therefore estimated that almost 50 percent of the 86,000 Delaware students in grades K-8 are in schools that are working toward 150 minutes per week of physical activity.

Students in the remaining half of Delaware elementary and middle schools need the same opportunities for physical activity during the school day.

How Schools Are Meeting the Need for Physical Activity

School districts and schools across Delaware are adopting creative methods to achieve 150 minutes per week of physical activity. The following examples demonstrate the progress the districts and schools are making:

- Lancashire Elementary School in the Brandywine School District matches students with senior citizens as part of the school's Mileage Club. The pairs walk around the track during recess, counting their laps and forming a relationship that they both enjoy.

RECOMMENDED ACTION STEPS

- 1 Policy makers should help Delaware join the 21 states that have made significant progress toward ensuring that students obtain the recommended amounts of physical activity.
- 2 Delaware stakeholders should build upon the successful efforts of the school districts in the state that are helping students in grades K-8 engage in 150 minutes per week of physical activity.
- 3 Delaware schools should continue assessing the physical fitness of students and provide the results to parents/caregivers.

- Appoquinimink School District incorporates daily movement for all elementary students. Programs such as Tai Chi classes for students, a recess walking program, and an after-school fitness club are among the schools' offerings.
- The Lord Baltimore Elementary School in Indian River School District schedules Fitness Friday and Wellness Wednesday. The school has purchased fourteen exercise bikes, now located in the fourth and fifth grade classrooms.
- Elementary schools in the Cape Henlopen School District are implementing a program termed Coordinated Approach To Child Health (CATCH). Their CATCH strategies include incorporating 10 minutes of exercises throughout the

Legislative Action Brings Physical Activity to Schools

The following legislation has paved the way for Delaware to take a leading role in promoting children's physical activity in schools:²⁴

House Bill 372 required each local school district and charter school to assess the physical fitness of each student at least once at the elementary, middle, and high school level and provide the results to the student's caregiver. FITNESSGRAM is the measurement tool being used in Delaware.

House Bill 471 mandated a physical education/physical activity (PE/PA) pilot program in at least six of Delaware's elementary, middle, or high schools. The DOE established the goal that each student in the PE/PA program shall achieve at least 150 minutes per week of physical activity.

Senate Bill 289 clarified the role of the Delaware Statewide Health Advisory Committee (SHAC) to provide advice and guidance to the DOE regarding physical education and physical activity programs in Delaware public schools. In 2007, the SHAC released the Annual Report to the Governor and General Assembly with several recommendations that included expanding the 150 minutes per week PE/PA Pilot Program to more schools.

(continued on page 4)

252 Chapman Road,
Christiana Building Suite 200
Newark, Delaware 19702
302.444.9100 • 888.494.5252
email: nhps_info@nemours.org
www.GrowUpHealthy.org

day, walking around classrooms while attendance is being taken, and requiring physical education homework. Tim Bamforth, physical education teacher at Shields Elementary School has stated, “The program is not about putting a burden on teachers but adding a little activity to each day with no disruption.”²⁵

Notes

- ¹ U.S. Department of Health and Human Services. (2001). *Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity*. Washington, DC.
- ² Nemours Health and Prevention Services. (2006). *Delaware Survey of Children's Health*. Newark, Delaware.
- ³ Trust for America's Health. (2008). *F as in Fat: How Obesity Policies Are Failing in America*. Washington, D.C. [Delaware ranks 19 out of 51 states (on a scale of 1=worst) for childhood obesity prevalence in 10-17 year olds]
- ⁴ US Department of Health and Human Services. (2008). *2008 Physical Activity Guidelines for Americans*. Washington, DC.
- ⁵ Institute of Medicine. (2005). *Preventing Childhood Obesity: Health in the Balance*. Washington, DC.
- ⁶ Ogden CL, Carroll MD, Curtin LR, McDowell MA, Tabak CJ, Flegal KM. (2006). Prevalence of Overweight and Obesity in the United States, 1999-2004. *JAMA*, 295, 1549-1555. At the time these data were published, the old classification for overweight was still used—individuals with a BMI equal to or greater than 85% and less than 95% were classified as “at risk for overweight” and individuals with a BMI equal to or greater than 95% were classified as “overweight.” Based on the 2007 Expert Committee Recommendations, NHPS describes the previous category of “at risk of overweight” as “overweight” and those previously referred to as “overweight” are described as “obese.”
- ⁷ Guo, S.S., Wu, W., Chumlea, W.C., Roche, A.F. (2002). Predicting overweight and obesity in adulthood from body mass index values in childhood and adolescence. *American Journal of Clinical Nutrition*, 76, 653-658.
- ⁸ Thorpe, K.E. Florence, C.S. Howard, D.H., Joski, P. (2004). The impact of obesity on rising medical spending. *Health Affairs*, 4, W480-W484.
- ⁹ Finkelstein, E.A., Fiebelkorn, I.A., Wang, G. (2004). State level estimates of annual medical expenditures attributable to obesity. *Obesity Research*, 12, 18-24.
- ¹⁰ Story, M., Kaphingst, K., & French, S.M. (2006). The Role of Schools in Obesity Prevention. *The Future of Children*, 16 (1), 109-142.
- ¹¹ Juster, T.F., Ono, H., & Stafford, F.P. (2004). Institute for Social Research- University of Michigan. *Changing Times of American Youth: 1981-2003*. Retrieved January 23, 2009, from ISR Web site: http://www.umich.edu/news/Releases/2004/Nov04/teen_time_report.pdf
- ¹² Lee S.M., Burgeson C.R., Fulton J.E., & Spain C.G. (2007). Physical education and physical activity: Results from the School Health Policies and Programs Study 2006. *Journal of School Health*, 77(8), 435-463.
- ¹³ Delaware Department of Education. (2008). FITNESSGRAM® 07-08 Standards of Excellence [Data File].
- ¹⁴ Nemours Health and Prevention Services. (2007). Middle School Youth Risk Behavioral Surveillance Survey (YRBSS) [Data File].
- ¹⁵ Nemours Health and Prevention Services. (2005). *Delaware Children's Health Chartbook*. Newark, Delaware.
- ¹⁶ Lake Research Partners. (2006). *Parents' Views on Fitness, Nutrition, and Overweight/Obesity among Delaware's Children and Teens*. Retrieved January 23, 2009, from Nemours Web site: <http://static.nemours.org/www-filebox/nhps/research.pdf>
- ¹⁷ Grissom, J. (2005). Physical Fitness and Academic Achievement. *Pediatric Exercise Physiology*, 8(1), 11-25
- ¹⁸ Texas Education Agency. (2009). Physically fit students more likely to do well in school, less likely to be disciplinary problems. Retrieved March 31, 2009, from Texas Education Agency Web site: <http://ritter.tea.state.tx.us/press/09fitnessresults.pdf>
- ¹⁹ Hillman, C.H., Castelli, D.M., & Buck, S.M. (2005). Aerobic fitness and neurocognitive function in health preadolescent children. *Medical Science on Sports Exercise*, 37(11), 1967-74.
- ²⁰ Active Living Research. (2007). *Physical Education, Physical Activity and Academic Performance*. Retrieved January 23, 2009, from the Robert Wood Johnson Web site: <http://www.rwjf.org/files/research/activeeducation.pdf>
- ²¹ Coe, D.P., Pivarnik J.M., Womack ,C.J., Reeves, M.J., & Malina R.M. (2006). E.ffect of physical education and activity levels on academic achievement in children. *Medicine and Science in Sports and Exercise*, 38(8), 1515-9.
- ²² Barros, R.M, Silver, E.J., Stein, R.E.K. (2009).School Recess and Group Classroom Behavior. *Pediatrics*, 12(2), 431-436.
- ²³ Delaware Department of Education. Physical Education Regulations. Retrieved January 23, 2009, from DE DOE Web site: http://www.doe.k12.de.us/infosuites/staff/ci/content_areas/files/Reg503PhysicalEducationDec2006.pdf
- ²⁴ Statewide Health Advisory Council. (2007). *First Annual Report to the Governor and members of the General Assembly*. Dover, Delaware.
- ²⁵ MacArthur, Ron. Cape Schools Attack Obesity. (2009). *Cape Gazette*. Retrieved February 17, 2009, from CapeGazette.com Web site: <http://capegazette.com/storiescurrent/200902/capeobesity17.html>. The Cape Gazette covers the Cape Region of Delaware.
- ²⁶ National Association of State Boards of Education. State School Health Policy Database. Retrieved February 18, 2009, from the National Association of State Boards of Education Web site: <http://www.nasbe.org/index.php/shs/health-policies-database>
- ²⁷ NHPS analysis of Florida and Texas legislative fiscal notes and North Carolina's public documents regarding physical activity regulations.

