

# Task Force on Student Physical Fitness in Maryland Public Schools

*Final Report of the Task Force to Study Student Fitness in Maryland Public Schools  
Submitted to the Maryland General Assembly and Governor  
November 20, 2008*



# Table of Contents

Note from the Chair.....	3
List of Charts and Tables.....	4
Acknowledgements .....	5
Task Force Membership.....	6
Committee Membership.....	7
Setting the Stage .....	8
Executive Summary .....	9
History and Charge.....	17
Subcommittee One .....	19
Subcommittee Two.....	38
Subcommittee Three.....	46
Advisability Recommendations.....	65
Resources.....	69
American Heart Association Perspective.....	72

## Note from the Chair

On behalf of the Task Force on Student Fitness in Maryland Public Schools, I am pleased to submit this report. This report reflects the hard work, experience and thoughtfulness of more than 20 people involved in our deliberations over the past five months.

The overall health of our youth is in crisis. Reading this report, you will see that the rate of obesity among our children has risen to epidemic proportions and action is required to stem this tide. While on the surface the cost for addressing this problem is considerable, the cost for not addressing this will have a long term financial strain on our health care system. Children matter and we believe that the recommendations outlined in this report are an integral ingredient in preserving our children's health.

While schools can and must play a critical role in shaping the lives of young people, they are not a panacea for the family, social, environmental, and other societal forces that can impact student's ability to remain healthy. There are myriad of social determinates this Task Force had neither the time nor specific mandate to address, but are germane in formulating the ways to curb the obesity epidemic. We urge the Maryland General Assembly and Governor to consider all relevant issues in determining how we can most effectively and efficiently empower Maryland's adult and youth population to promote healthy living. There is no greater investment than investing in our children.

It has been a pleasure to serve as Task Force Chair and I am deeply indebted to the Task Force members and Dr. Grasmick for her leadership and commitment to Maryland's youth. The Task Force also appreciates the input provided by staff from the Maryland State Department of Education, Department of Health and Mental Hygiene and the local school systems. I am most grateful for this opportunity to serve Maryland's youth.

Sincerely,

*David C. Harrington*

Senator David C. Harrington  
Senate of Maryland

# Charts and Tables

## Charts

Chart 1: BMI-for age-growth Chart .....	19
Chart 2: Childhood Obesity Statistics.....	20
Chart 3: Prevalence of Obesity in Maryland.....	21
Chart 4: Prevalence of Obesity among Maryland Children.....	21
Chart 5: Prevalence of Overweight and Obesity among Maryland Children.....	22
Chart 6: Obesity, Chronic Conditions and Complications.....	24
Chart 7: Obesity Trends among U.S. Adults.....	25
Chart 8: Adult Obesity in Maryland.....	25
Chart 9: Chronic Conditions and Risk Factors.....	26

## Tables

Table 1: Elementary School (K-5) Physical education Time by Local School System (LSS).....	39
Table 2: Estimated Staffing Costs to Implement 90 Minutes of Physical Education Reported to the Maryland State Department of Education (MSDE).....	47
Table 3: Data on Physical Education Facilities/Gymnasiums by Local School System (LSS).....	48
Table 4: Space Recommendations for Elementary Physical Education Programs From MSDE Physical Education Programs Facilities Planning and Design Guidelines (Draft).....	50
Table 5: Total Project Cost Estimate for 6,500 gsf Gymnasium Addition.....	50
Table 6: Estimated Design, Construction and Equipment Costs to Add Gymnasium and Support Spaces.....	52
Table 7: Separate Taxes and Fees on Soda and Soft Drinks by State.....	60
Table 8: Food Excluded from Sales Tax Exemptions for Food by State.....	62

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**Ms. Tracie Prevost**, Principal and **Ms. Aubrey Santuccio**, physical education teacher from Scotchtown Hills Elementary, who provided the Task Force the opportunity to visit their school and view the program and the facilities.

# Task Force Membership

## APPOINTED BY THE GOVERNOR

Senator David C. Harrington, Senate of Maryland, Chair

Delegate Jay Walker, Maryland House of Delegates

Ms. Laura Carr, Maryland PTA

Ms. Michaeline Fedder, American Heart Association

Ms. Betsy Gallun, American Cancer Society

Ms. Elaine Lindsay, Maryland Association of Health Physical Education Recreation and Dance

Mr. Jeff Martin, Maryland State Teachers Association

Mr. Michael Mason, Maryland State Department of Education

Ms. Shawn McIntosh, American Diabetes Association

Dr. Maria Prince, Department of Health and Mental Hygiene

Ms. Jen Terrasa, Maryland Association of Counties

Dr. Ronald L. Watson, Maryland Association of Boards of Education

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Ms. Nichole J. King-Campbell, Legislative Aide

Delegate Jay Walker

Ms. Dixie Stack, Director of Curriculum,

Maryland State Department of Education

Ms. Lynne Blume Rosen, Office of Policy Analysis

Department of Legislative Services

# Committee Membership

## **Effects on childhood obesity and related health issues**

Dr. Maria Prince, Sub Committee Chair

Ms. Laura Carr

Ms. Shawn McIntosh

## **Monetary costs of requiring public schools to provide a minimum amount of physical activity or physical education for students**

Mike Mason, Sub Committee Chair

Mr. Jeff Martin

Ms. Jen Terrasa

Dr. Ronald Watson

Delegate Jay Walker

## **Results obtained by any local school systems in the State and other states that have current physical activity or physical education requirements**

Ms. Betsy Gallun, Sub Committee Chair

Ms. Elaine Lindsay

Ms. Michaeline Fedder

## Setting the Stage

“To pass legislation that discourages participation in physical activity in the name of having more time for academics is shortsighted.” “Policymakers must create laws that will allow schools to emphasize physical and health education during the school day. . . . Not only will it enhance their academic success, it will also promote healthy lifestyles.”

- Vincent L. Ferrandino, Executive Director, NAESP, & Gerald N. Tirozzi, Executive Director, NASSP

“The physical well-being of students has a direct impact on their ability to achieve academically. We now have the proof we've been looking for: students achieve best when they are physically fit.”

- California State Superintendent of Public Instruction

“Academic achievement and good nutrition and exercise, in fact, are not mutually exclusive. Studies continue to confirm that when children's and adolescents' basic nutritional and fitness needs are met, they learn better. Physical activity is an integral part of this equation, because providing more time for increased physical activity (by reducing class time) leads to increased test scores. Good nutrition and proper exercise in schools can help to bolster academic achievement.”

- Former U.S. Surgeon General David Satcher

“Students who don't get enough exercise and have proper nutrition simply don't perform as well academically.”

- National Association of Elementary School Principals (NAESP) and National Association of Secondary School Principals (NASSP)

“Improving children's health and well-being contributes to their success in school.”

- National Association of Elementary School Principals (NAESP)

“Academic achievement begins with a student who is healthy and alert.”

- National Association of Secondary School Principals (NASSP)

“Physical education is an integral part of the total education of a child.”

- National Association of School Boards (NASBE)

# Executive Summary

In October 2008, the federal government published the first major review of the science on benefits of physical activity, *2008 Physical Activity Guidelines for Americans*. These guidelines stated that “Children and adolescents aged 6-17 years should accumulate 1 hour or more of physical activity every day. Most of the 1 hour or more a day should be either moderate- or vigorous-intensity aerobic physical activity. As part of their daily physical activity, children and adolescents should do vigorous-intensity activity at least 3 days per week. They also should do muscle-strengthening and bone-strengthening activity at least 3 days per week to improve strength and to enable the body to burn more calories during activity. It is important to encourage young people to participate in physical activities that are appropriate for their age, enjoyable, and offer variety.” The Guidelines list a number of examples of each type of activity for children and adolescents. Source: <http://www.health.gov/PAGuidelines/guidelines/default.aspx>

The Physical Activity Guidelines Advisory Committee concluded there was strong evidence for the following effects of 60 minutes of daily physical activity on children’s health:

- Improved cardio respiratory endurance and muscular fitness,
- Favorable body composition,
- Improved bone health, and
- Improved cardiovascular and metabolic health biomarkers.

Instructional time in physical education can provide *part* of the required amount of daily physical activity as recommended in the 2008 Guidelines for Americans. Physical education is an integral part of a child’s education and plays a critical role in educating the whole student. It has been suggested that academic theories or concepts have greater meaning for children when they are taught across the three realms of learning, including the cognitive, affective and psychomotor domains. The National Association of Sport and Physical Education states:

*“Physical education plays a critical role in educating the whole student. Research supports the importance of movement in educating both mind and body. The healthy, physically active student is more likely to be academically motivated, alert, and successful. Throughout the school years, quality physical education can promote social, cooperative, and problem-solving competencies.”*

Physical education, like other academic content areas, has national standards that define what students should know and be able to do as a result of participation. Enhanced physical education in schools is an evidence-based solution to increasing physical activity among children and contributing to the management and prevention of childhood overweight and obesity as well as many other serious health problems. The ultimate goal of physical education is participation in health-enhancing physical activity for a lifetime.

At the federal level, there has been an effort to introduce legislation with an emphasis on physical education and physical activity. It has been recommended that when the No Child Left Behind Act is reauthorized or a new education bill is drafted, language similar to legislation that has been proposed in the United States House of Representatives be included in the reauthorization or a new education bill. H.R. 3257, introduced on July 31, 2007, included the following language to improve standards for physical education.

*For purposes of section 1111(b)(2) of the Elementary and Secondary Education Act of 1965, each State accountability system shall not only be based on academic assessments, but shall also be based on additional indicators. Such indicators shall include:*

- (1) demonstrated progress toward meeting the national goal for required physical education that is--*
  - (A) 150 minutes per week for all students in elementary schools; and*
  - (B) 225 minutes per week for all students in middle and high schools; and*
- (2) attendance rates at required physical education classes*
- (3) the percentage of elementary and secondary school physical education teachers who are State certified as physical education teachers; and*
- (4) the amount of square feet of indoor and outdoor facilities that are primarily used for physical education and the amount of square feet of indoor and outdoor facilities that are primarily used for physical activity.*

The Action for Healthy Kids Report of 2008, entitled *Progress or Promises*, states that many organizations and agencies have elevated the awareness about the importance of healthy eating and increased physical activity as important steps in combating the childhood obesity crisis. However, the Action for Healthy Kids report points out that schools nationwide continue to scale back or eliminate physical education programs amid funding and staffing constraints. The report recommends that schools refocus their funding and purchasing patterns to emphasize physical education and food service programs and take steps to ensure that budgetary shortfalls do not result in cuts to those programs. In addition, the authors call on schools to engage parents in encouraging healthy student behaviors, particularly in underserved communities. “Real change has begun, and more is within reach...” but warns that, “Progress will be stunted without support from all levels of the education system and a wide range of stakeholders.” (UPI, 8/7/08; Action for Healthy Kids report, Fall 2008).

Schools in Maryland must and are playing an active role in addressing the problem of obesity. In 2004, the United States Congress enacted legislation requiring any school system receiving federal school-meal funds to have a wellness policy in place by the 2006–07 school year. Maryland school systems have developed model policies. Future plans include providing a Wellness Policy Implementation and Monitoring Guide to give school systems a framework to follow as they conduct self-assessments of their policies. The guide will provide sample key goals with associated implementation and monitoring strategies which address physical activity and physical education.

Child care centers in Maryland provide opportunities outside the daily structured school environment for additional physical activity. Maryland has more than 72,000 students or approximately 20% of school-aged children enrolled in child care programs. These programs, whether operating out of a home or a center, must adhere to state physical activity guidelines. The Code of Maryland Regulations (COMAR) defines child care centers and includes specific regulations concerning a schedule of daily activities for all children, including physical activity.

Schools are also being encouraged to provide physical activity breaks and to provide opportunities for physical activity across the content areas during daily instruction. While schools can and must play an integral role in shaping the lives of young people, they are not a panacea for the family, social, environmental, and other societal forces that can impact student’s ability to remain healthy. Other stakeholders must help to address the problem of inactivity and the increasing levels of obesity in our youth.

The health care professionals and the medical community must take a leadership role in the fight against inactivity and obesity in our youth. Parents and children must be educated by the medical community on the benefits of exercise and eating health and nutritious meals. Discussions about weight and ways to maintain a proper balance of weight to body type must be provided as part of the educational process for families.

Parks and Recreation programs have been a tremendously important asset in terms of facility usage and establishing partnerships in most local school systems. Some of these partnerships have helped defray the cost of school construction by providing funds for building, expanding, or renovating gyms and playgrounds. Parks and Recreation programs need to continue focusing their efforts on providing children opportunities for physical activity before and after school, and to work with schools on increasing these opportunities.

Parent/teacher organizations (PTA/PTO) are also an important partner in the fight against obesity. PTAs can take a more active role in encouraging parents and children to exercise together. PTAs across the country have held health fairs; encouraged students to walk or ride their bikes to school; introduced families to new, nutritious foods; and launched ongoing fitness programs to celebrate Healthy Lifestyles. The benefits reach far beyond fitness and promote the health and wellness of the entire family unit.

### **The Problem**

Obesity levels in America's elementary and secondary school age children have increased from 14 percent to more than 25 percent. Lack of physical activity at all ages increases risks of heart disease, high blood pressure, and diabetes. The 60 million school-age children and youth have the potential to acquire the knowledge, skills, and values that can lead to a life of physically active and healthy living.

The U.S. Surgeon General, the United States Department of Health and Human Services, the Centers for Disease Control and Prevention, and the National Association for Sport and Physical Education recommend a minimum of 30 minutes of physical education, by accredited professional instructors, every school day for every elementary and secondary school student.

In 2008, the National PTA developed a resolution statement based on the Surgeon General's comments from 2001. The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity (2001) states physical inactivity is a serious, nationwide epidemic, and physical education classes in American during the past 30 years, have declined in importance and availability. During the same period, technology and nutritional behaviors have provided the population with a less active and more sedentary lifestyle.

This less active and more sedentary lifestyle comes at a cost. Studying the fiscal impact of requiring a certain amount of physical education time was discussed repeatedly in meetings. However, the same phrase came up time and again. Instead of saying we cannot afford to increase the minutes for physical education, the counterpoint argument was raised that, "we cannot afford to not increase the time requirement."

## **The Net Benefits of Implementing Physical Education**

As the medical conditions related to obesity increase in prevalence, so do the related costs. *F as in Fat: How Obesity Policies are Failing in America, 2007* report from the Trust for America's Health (TFAH) stated that the total cost of obesity and physical inactivity in 2000 was estimated to be \$117 billion and obesity-related annual costs for children more than tripled between 1979 and 1999.

Advocates who call for increasing the physical activity levels and fitness levels of our children continue to point to the fact that we need to be more proactive in increasing the activity levels of all citizens, including our youth, not only for their health but because of the financial burden it puts on society in general. Without some type of intervention, the cost of obesity will have a significant impact on the health insurance industry and a long term impact on the health and wellness of this generation and future generations. ***If the current trend continues, this new generation may be the first in history to live a shorter life span than their parents.*** Source: New England Journal of Medicine, March 17, 2005.

In Maryland, though the cost for increasing the time for physical education and physical activity is considerable, it is significantly less than the cost for chronic diseases and conditions related to obesity, physical inactivity, and poor nutrition. Chronic diseases and conditions are the primary reason people receive health care, accounting for 75% of health care costs. People with a chronic condition average five times higher health care costs than for those without a chronic condition (Partnership to Fight Chronic Disease, 2008). Obesity costs an estimated \$1.5 billion in adult medical expenditures in Maryland (Finkelstein et al, 2004). Diabetes is one example of these costly conditions. For the state of Maryland, the American Diabetes Association estimates the 2007 cost of diabetes at \$3.8 billion, including \$2.5 billion in excess medical expenditures and \$1.3 billion in indirect costs.

This Task Force explored the complexities of increasing the minutes for physical education and physical activity. Fundamental to the issue is recognizing the concerns most often mentioned for not increasing time for physical education and physical activity, which is, the increased cost for staffing and facility improvements. The committee took into account each local school system's current physical education facilities and time allocation without regard for the fact that some geographical areas of a local school system might have more physical education time than others.

New construction costs for gymnasiums were based on current Public School Construction Program budget estimates, calculated at \$247 per square foot. The total additional costs for providing staffing and facilities exceed \$412 million. The figure for staffing varies in the projected impact on local jurisdictions, from a low of \$275,000 in Garrett County to a high of \$15 million in Montgomery County, excluding those eight local systems that have already implemented 90 minutes each week of physical education at all elementary schools. Ten school systems already have designated space at each elementary school for physical education instruction. At the remaining fourteen systems, the figure for facilities again varies from a low of \$1.9 million in smaller jurisdictions to a high of \$159 million in Prince George's County, which has the highest number of schools without designated gymnasiums (81). (For specific district information, see Subcommittee Three report: Estimated Costs to Implement 90 Minutes of Physical Education, pages 47-53 of this report.)

## Next Steps

The Task Force considered a number of options beyond increasing student physical activity and physical education time including: 1) the use of wellness policies to evaluate physical activity goals; 2) fitness assessments for collection of data and student goal setting; 3) structured activity during regularly scheduled periods for recess; 4) connecting physical activity to the study of other content during the school day; and 5) the important role of partnerships in providing structured activity in before and after school programs.

This Task Force urges consideration of this report in concert with the work of other groups. There have been a number of federal reports that include recommendations concerning the health and wellness of our students. They include the following:

*The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity 2001, HHS*

“Provide all children, from pre-kindergarten through grade 12, with quality daily physical education that helps develop the knowledge, attitudes, skills, behaviors and confidence needed to be physically active for life.”

*Shape of the Nation Report 2006*

National Association for Sport and Physical Education and the American Heart Association  
“All elementary school students should participate in at least 150 minutes per week of physical education, and all middle and high schools students should participate in at least 225 minutes of physical education for the entire year.”

*F as in Fat: How Obesity Policies are Failing in America 2007*

Trust for America's Health

“Schools should be encouraged to not only increase the amount of time students spend in physical education classes but ensure that enough time is actually being spent in moderate-to-vigorous physical activity before and after school and between classes.”

# Recommendations

Childhood obesity has become an urgent and expensive health problem in Maryland and the public schools have a significant role to play in its mitigation along with other partners in the community. The Task Force believes that adherence to the following recommendations, developed by the three subcommittees, will improve the health of Maryland's children and reduce the cost to the state for treating obesity-related illness.

## Physical Education

1. **Time:** Require a minimum 90 minutes of physical education per week, of which at least 50% of the time, students should be engaged in moderate to vigorous physical activity.

## Other Physical Activity

2. **Recess:** Recess should provide a minimum of 20 minutes of daily physical activity for all elementary students.
  - a. This policy should be mandated in each system's Wellness Policy.
  - b. The policy requirements should prohibit withholding recess as a punishment.
  - c. During inclement weather students should be provided opportunities for physical activity in the classroom.
  - d. Ideas for indoor and outdoor physical activities should be developed by a physical activity team, with the physical education teacher as one member of this team.
3. **Classroom:** Physical activity should be provided throughout the school day. Activity ideas should be developed and provided to classroom teachers so that physical activity opportunities can be included across the curriculum.

## Fitness and Wellness

4. **Fitness Measurement:** Require schools to perform fitness measurement on students with differentiated instruction provided for students not meeting standards for fitness.

Fitness measurement is directly referenced in Content Standard 5, Physical Activity, of the Physical Education Voluntary State Curriculum. The indicator designates a fitness measurement of students for the health related components of fitness each year in grade four through high school. These fitness measurements should be used to develop personal fitness goals and select activities for the improvement or maintenance of healthy levels of fitness.

5. **Body Mass Index (BMI):** Investigate BMI assessment in schools for the purpose of surveillance and to determine the efficacy of obesity prevention and intervention programs.

BMI is the ratio of weight to height squared. It is often used to assess weight status because it is relatively easy to measure and correlates with body fat. The American Academy of Pediatrics (AAP) recommends that BMI should be calculated and plotted

annually on all youth as part of normal health supervision within the child's medical home.

School-based BMI assessment programs used for individual health screening purposes are not recommended unless there is careful consideration of privacy issues, adequate training, measurement techniques, parental notification, adequate evaluation, and the importance of linking families/caregivers with resources in the community.

- 6. Local School Wellness Policies:** Wellness policies must be developed, implemented and monitored and must include physical education, physical activity, and recess requirements.

Wellness Policies are a vehicle for addressing the issue of increasing physical activity and physical education time in the schools through local decision-making. Local school systems shall work through wellness policies to gather base line student fitness data to determine the merit for increased physical education and physical activity. Wellness improvement plans will be a part of local school improvement planning and/or included in local school system master plans with progress and challenges reported out to the local boards of education. Local schools will address physical activity time and develop local school improvement plans.

MSDE has designed a Wellness Policy implementation and monitoring guide. The guide will provide school systems with a model framework to follow as they implement and monitor Wellness Policies. The guide will provide sample key goals for wellness policies with associated implementation and monitoring strategies. The guide is designed as a template for school systems to insert their specific policy language and support their policy implementation plan.

## **Support Systems**

- 7. Health and Physical Education Advisory Council:** Establish a Statewide Advisory Council for Health and Physical Education.

The State Superintendent of Schools should establish a health and physical education advisory council to assess on going progress on the recommendations of this report, provide direction for improving comprehensive health and physical education programs in the State, and revisit after three and five years the status of these programs. In particular the advisory council needs to examine and recommend policy on the monitoring of student fitness and wellness. This task force has recommended that the membership include parents, health organizations, including a member of the State Department of Health and Mental Hygiene, classroom and supervisory representatives from local school systems, and members of the medical profession who will broaden the perspective of this group and provide links to other legislative and government agencies.

- 8. Funding for a Permanent Physical Education Specialist Position:** Create a regular full-time State position and associated funding for a Maryland State Department of Education Physical Education Specialist Position.

The Maryland State Department of Education should be provided funding and a position identification number (PIN) for a permanent position of Specialist for Physical Education to guide the implementation of these recommendations.

- 9. Separate Gymnasium Facilities:** Future legislation on construction should include wording that requires a designated gymnasium for physical education rather than a designated space for physical education.

A designated space allows for continued construction of a multipurpose room or cafeteria that does not satisfy the spatial and safety needs of children in physical education. The Interagency Committee on School Construction should establish regulations requiring all new elementary schools to include a designated gymnasium for physical education instruction.

**Other Funding Sources:**

- 10. Snack Tax:** Propose legislation that would provide a sustainable revenue source to support increased physical activity and physical education initiatives through the imposition of a tax levy such as a tax on snack foods.

Seventeen states and D.C. currently have laws that tax foods of low nutritional value. “Some public health officials view the positive impact on taxing tobacco products in reducing smoking as a model for taxing snack foods and sodas to promote healthier behavior.” *F as in Fat 2007*

Slots legislation was passed by popular vote on November 4, 2008. This along with other funding opportunities might provide additional sustainable revenues for physical activity and physical education initiatives. See pages 57-62 in the report for information on additional funding sources and grants.

# History and Charge

In March of 1998, the Maryland State Department of Education established the Physical Education Study Group to 1) develop a mission statement for physical education; 2) develop a description of a Maryland physical education student's exit expectations; 3) recommend actions for aligning classroom practices with the latest research on physical activity and national recommendations for curriculum and instruction; 4) develop a prioritized list of recommendations to ensure that Maryland delivers a research proven physical education program; and 5) clarify the role of physical education in Maryland's school reform effort. The Physical Education Study Group developed recommendations and in April 2000, the State Board of Education accepted the Physical Education Study Group's Report.

Two of the recommendations from the Study Group report still have not been addressed. They are the establishment of a Physical Education Advisory Council and the establishment of funds for a permanent position of Specialist in Physical Education. The advisory council would have revisited and assessed, after three and five years, progress toward the implementation of the recommendations of the Study Group report. It also would have provided direction for improving comprehensive physical education programs. The Specialist in Physical Education would have guided the implementation of the Study Group's recommendations. The proposed Advisory Council or a work group would continue the work of this Task Force and study the physical education and physical activity requirements for middle and high school students.

Over time, the obesity levels of students and adults have continued to rise. The national prevalence of obese children, ages 6 to 11, has more than tripled in the past 25 years from 7% in 1980 to current levels of 25%. Among adolescents, ages 12 to 19, the obesity prevalence has also more than tripled.

In response to the heightened awareness of obesity in our students and the inconsistency in physical education instructional time, legislation has been introduced in the General Assembly in recent years with little success. During the 2002 Session, two bills were introduced concerning the issue of childhood obesity. Both bills would have utilized physical education to help address the health challenges caused by the obesity epidemic.

Senate Bill 611 of the 2006 legislative session included a recommendation for 150 minutes of physical education in the elementary grades and 225 minutes at the secondary level. This legislation passed in the Senate but was ultimately unsuccessful. Senate Bill 244 and House Bill 317 of the 2007 Session would have required at least 90 minutes per week of physical education for all students in grades kindergarten through fifth, in addition to at least 60 minutes per week of "moderate to vigorous" physical activity.

Although these bills were not successful, interest in the issues related to student health and obesity levels in our youth has not waned. Chapter 473 of the 2008 Laws of Maryland established the Task Force on Student Fitness in Maryland Public Schools. Chapter 473 directed the Task Force to study a broad range of issues surrounding student physical fitness in Maryland Public Schools. These issues included:

1. the advisability of requiring all public schools in the State to provide a minimum amount of physical activity or physical education to students in the public school system each week;
2. the effects on childhood obesity and related health issues of requiring students to participate in a minimum amount of physical activity or physical education each week;

3. the monetary costs of requiring public schools to provide a minimum amount of physical activity or physical education for students, how these costs might be minimized, and whether additional outside funding resources are available for these purposes; and
4. analyze the results obtained by any local school systems in the State and other States that have current physical activity or physical education requirements.”

The Task Force members decided to focus their research on elementary physical education and physical activity because of the wide scope of the problem and the short time frame to develop a report. Thus the Task Force examined the impact of increased time for physical education at the elementary level, grades K-5, and the related issues if this change were to occur. It was incumbent upon the members of this Task Force to brainstorm, research, evaluate, and reach consensus on a myriad of topics. Experts in each of the areas to be studied were invited to the Task Force meetings to share existing practices, facilities and staffing policies, and alternatives for providing additional time for elementary physical education and physical activity. The Task Force members crafted recommendations in response to the information it gathered.

The Task Force divided into three subcommittees, which were organized around the statutory provisions of Chapter 473: 1) effects on childhood obesity and related health issues; 2) results obtained by any local school systems in the State and other states that have current physical activity or physical education requirements; and 3) monetary costs of requiring public schools to provide a minimum amount of physical activity or physical education for students.

The total membership of the Task Force provided input on the advisability of requiring all public schools in the State to provide a minimum amount of physical activity or physical education to students in the public school system each week. Subcommittees met periodically throughout the process, and reported to the full Task Force at each of the nine Task Force meetings.

# Subcommittee One

## Charge

**“The effects on childhood obesity and related health issues of requiring students to participate in a minimum amount of physical activity or physical education each week;”**

## Findings

Maryland’s children are suffering from the effects of poor nutrition and lack of physical activity. Because of the increased risk of obesity, physical inactivity, and malnutrition for the poor and racial and ethnic minorities, health disparities will worsen. Physical activity is critical to childhood and adult obesity prevention. Enhanced physical education in schools is an evidence-based solution to increase children’s physical activity. Without early attention to promoting child wellness, the future burden of chronic disease will be even more overwhelming than the current burden on our economy. Promoting physical activity in the school environment is a key strategy for reducing future health care costs and maintaining our state’s fiscal fitness.

## Extent and Consequences of Childhood Obesity

Body Mass Index, or BMI, is a screening tool used for identifying possible weight problems. BMI is calculated from a child’s weight and height and provides a reliable indication of body fatness for most children and teens. For children and teens, after the BMI number is calculated, the BMI is plotted on a gender-specific BMI-for-age growth chart (Chart 1) that was developed by the Centers for Disease Control Prevention based on relative risk of health consequences. The resulting BMI-for-age “percentile” indicates the position of the child’s BMI number relative to children of the same sex and age. For children ages 2 and older, BMI-for-age weight status categories and the corresponding percentiles are as follows:

**Chart 1: BMI-for-age growth chart**

<b>Weight Status Category</b>	<b>Percentile Range</b>
Underweight	Less than the 5 <sup>th</sup> percentile
Healthy weight	5 <sup>th</sup> percentile to less than the 85 <sup>th</sup> percentile
Overweight	85 <sup>th</sup> to less than the 95 <sup>th</sup> percentile
Obese	Equal to or greater than the 95 <sup>th</sup> percentile

Overweight and obesity result from an energy imbalance. In simple terms, this means eating and drinking more calories than you burn through physical activity. Weight is influenced by genetics, metabolism, behavior, environment, culture, and socioeconomic status. Behavior and environment play a large role and are the greatest targets for prevention and treatment of obesity (US Dept of Health and Human Services, 2001). The American Academy of Pediatrics (AAP) recommends that BMI should be calculated and plotted annually on all youth as part of normal health supervision within the child’s medical home.

Obesity is often the result of an improper balance between energy/calories consumed (poor diet) and energy expended (physical inactivity). The increasing rate of obesity among the nation's youth demonstrates the necessity of engaging in a comprehensive approach focused on policy and environmental changes that help make the healthy choice the easy choice when it comes to nutrition and physical activity.

### **Extent of Obesity Epidemic in Children**

Maryland's children have not been spared from the global obesity epidemic, and Maryland's poorest children and certain racial and ethnic minorities are at even greater risk. (See Chart 2) In the United States, the rate of obesity in children and adolescents ages 6 to 19 has tripled in the last four decades. 18% of children aged 6-19 are obese, and 32% of children aged 6-19 are overweight or obese.

### **Chart 2: Childhood Obesity Statistics**

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In the 2006 Maryland Youth Tobacco Survey of public school youth aged 13 to 18, 11% were obese, and 15% were overweight. This survey determines weight status based on self-reported height and weight. Chart 3 provides data on the prevalence of obesity in this age range.

### **Chart 3: Prevalence of Obesity in Maryland**

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In the 2007 Maryland Pediatric Nutrition Surveillance Survey of 2-to-5 year old children participating in the WIC Supplemental Nutrition Program for Women, Infants, and Children (WIC), 15.4% were obese, and 16.5% overweight. (See Chart 4) Hispanic children in the WIC program have particularly high rates of obesity (23.6%) and overweight (20.3%). (See Chart 5)

### **Chart 4: Prevalence of Obesity among Maryland Children**

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### **Chart 5: Prevalence of Overweight and Obesity among Maryland Children**

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Maryland lacks statewide data on obesity and overweight prevalence for children between ages 5 to 12. A coordinated statewide BMI surveillance system would assess the weight status of children at the school, school district, and state level. This data would be useful for assessing population trends, monitoring the effectiveness of obesity prevention policies and programs, and supporting program planning. Surveillance data used for these purposes would be anonymous. (Nihiser et al, 2007). The programs should be adequately funded as there is a cost incurred by states and schools to conduct them.

No consensus currently exists on school-based BMI screening for the purpose of identifying overweight and obese children in the school setting. Thus, school-based BMI screening is not currently recommended by the Centers for Disease Control and Prevention. If a school or school district implements school-based BMI screening, precautions should be taken to address, training, measurement techniques, parental notification, adequate evaluation, privacy issues, and the importance of linking families and caregivers with resources in the community. (Nihiser et al, 2007) <sup>1</sup>

### **Physical and mental health effects of obesity in children - Immediate**

Obese children have an increased risk of serious health problems during childhood. They suffer from medical complications including high blood pressure, high cholesterol, diabetes, orthopedic problems, gall bladder disease, sleep apnea, and asthma. Most of these conditions were once relatively rare in childhood. For example, Type 2 Diabetes Mellitus, which is affecting more children at younger ages, was formerly known as “adult-onset diabetes” just in the prior decade. <http://jama.ama-assn.org/cgi/content/abstract/289/14/1813>

Obese children have an increased risk of serious health problems during childhood. Obese children suffer from medical complications including high blood pressure, high cholesterol, diabetes, orthopedic problems, gall bladder disease, sleep apnea, and asthma. (Dietz, 1998). In a population-based sample of 5- to 17-year old children, 39% of obese children already had 2 or more risk factors for cardiovascular disease (Freedman, 2007).

These medical complications were once relatively rare in childhood. For example, Type 2 diabetes was formerly known as “adult-onset diabetes” just in the previous decade. While diabetes and glucose intolerance, a precursor of diabetes, are common health effects of adult obesity, Type 2 diabetes and glucose intolerance are increasingly being reported among obese youth (Fagot-Campagna, 2001; Must and Anderson, 2003).

The mental health of overweight and obese children is also at risk. Overweight children and adolescents are targets of bullying, teasing, and other forms of social discrimination (Dietz, 1998). The stress of this social stigmatization can lead to low self-esteem and depression, which affect academic and social functioning and can persist into adulthood (Swartz and Puhl, 2003). Severely obese children report a similar health-related quality of life (QOL) as children who have been diagnosed with cancer (Schwimmer, 2003). Physicians, parents, and teachers need to be informed of the risk for impaired health-related QOL among obese children and adolescents to target interventions that could enhance health outcomes.

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<sup>1</sup> Nihiser AJ, Lee SM, Wechsler H, McKenna M, Odom E, Reinold C, Thompson D, Grummer-Strawn L. Body mass index measurement in schools. *Journal School Health* 2007; 77: 651-671.

## **Financial consequences of childhood obesity**

In addition to the negative effect of rising levels of overweight and obesity on our children's health and quality of life, obese children have increased health expenditures (Wang and Dietz, 2002). From 1979-1981 to 1997-1999, the percentage of hospital discharges with obesity-associated diseases increased. The hospital discharges of diabetes nearly doubled (from 1.43% to 2.36%), obesity and gallbladder diseases tripled (0.36% to 1.07% and 0.18% to 0.59%, respectively), and sleep apnea increased fivefold (0.14% to 0.75%). Asthma and some mental disorders were most common principal diagnoses when obesity was listed as a secondary diagnosis. <http://pediatrics.aappublications.org/cgi/content/full/109/5/e81>

## **Physical and mental health effects of obesity in children - Long-term**

In addition to the persistence of the other long-term health effects mentioned above, obese children are at great risk of remaining obese as adults (Serdula et al, 1993). Of obese 3 – 6 year olds, 50% remain obese as adults. Morbidly obese 9-year-olds have a 100% risk of adult obesity. Obese teens have over 80% risk of remaining obese as adults.

Obese adults are at increased risk of chronic conditions, such as hypertension, hypercholesterolemia, and diabetes, and the complications of these conditions, heart failure, heart attack, stroke, blindness, kidney failure, and amputations. In addition, obese adults have an increased risk of breast, endometrial, and colon cancer. (See chart 6)

## **Chart 6: Obesity, Chronic Conditions and Complications**

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Today's generation of children might be the first to live sicker and die earlier than their parents because of the increased risk of chronic diseases earlier in life (Narayan, 2003). For example, children born in 2000 will have a 33% chance of developing diabetes in the future. This risk is even greater for minority children.

Chronic conditions related to obesity, physical inactivity, and poor nutrition are deadly. In Maryland, heart disease causes 26% of deaths; stroke causes 5% of deaths, and diabetes causes 3% of deaths. Respectively, they are the 1<sup>st</sup>, 3<sup>rd</sup>, and 6<sup>th</sup> leading causes of death. Chronic conditions and their risk factors are prevalent. According to the 2007 Behavioral Risk Factor Surveillance Survey, 26% of Marylanders are obese, 29% suffer from high blood pressure, 37% have high cholesterol, and 7.5% have diabetes. Many Marylanders suffer from one or more of these chronic conditions which commonly occur together.

## **Extent of Obesity Epidemic in Adults**

Maryland has not been spared from rising rates of adult obesity either. Today, 65% of all Americans adults are overweight or obese, and 61% of all Maryland adults are overweight or

obese. In 1995-1997, eight of 24 Maryland jurisdictions had an obesity prevalence of 20% or more. By 2005-2006, 21 of 24 Maryland jurisdictions had proportions over 20%. No Maryland jurisdiction has reached the target obesity prevalence of 15% or less. (See charts 7 and 8) If these current trends continue, that percentage will rise even higher as this generation of children reach adulthood.

#### **Chart 7: Obesity Trends among U.S. Adults**

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#### **Chart 8 Adult Obesity in Maryland**

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#### **What are the long-term health effects of obesity?**

Obese adults are at increased risk of chronic conditions, such as hypertension, hypercholesterolemia, and diabetes, and the complications of these conditions, heart failure, heart attack, stroke, blindness, kidney failure, and amputations. In addition, obese adults have an increased risk of breast, endometrial, and colon cancer. Chart 9 provides the comparison of chronic conditions and risk factors for Maryland and the U.S.

#### **Chart 9: Chronic Conditions and Risk Factors**

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#### **Financial consequences of childhood obesity in the future**

Chronic conditions related to obesity, physical inactivity, and poor nutrition are costly. They are the primary reason people receive health care, accounting for 75% of health care costs (Partnership to Fight Chronic Disease, 2008). People with a chronic condition average five times higher health care costs than for those without a chronic condition (Partnership to Fight Chronic Disease, 2008). Obesity costs an estimated \$1.5 billion in adult medical expenditures in Maryland (Finkelstein et al, 2004).

Diabetes is one example of these costly conditions. For the state of Maryland, the American Diabetes Association estimates the 2007 cost of diabetes at \$3.8 billion, including \$2.5 billion in excess medical expenditures and \$1.3 billion in indirect costs. Medical expenditures include direct treatment of diabetes, treatment of diabetes-related chronic complications attributed to diabetes, and excess general medical costs. People with diagnosed diabetes incur medical expenditures that are 2.3 times higher than would be expected in the absence of diabetes. Indirect costs of diabetes include increased absenteeism, reduced productivity while at work for the employed population, reduced productivity from those not in the labor force, unemployment from disease-related disability, and lost productivity due to premature death. The actual burden is likely to be greater because this calculation does not include medical costs incurred by people with undiagnosed diabetes, care provided by nonpaid caregivers, the social cost of pain and

suffering, and reduced overall quality of life. This burden of diabetes is imposed on all sectors of society through higher insurance premiums, reduced earnings, and reduced quality of life for people with diabetes and their families.

As the medical conditions related to obesity increase in prevalence, so do the related costs. *F as in Fat: How Obesity Policies are Failing in America*, 2007 report from the Trust for America's Health (TFAH) stated that the total cost of obesity and physical inactivity in 2000 was estimated to be \$117 billion and obesity-related annual costs for children more than tripled between 1979 and 1999. The medical costs in Maryland related to obesity per person in 2003 were 278 million. The 2008 Health and Human Services' study entitled "Preventing Obesity and Chronic Diseases through Good Nutrition and Physical Activity" reported that obese employees cost private employers approximately \$45 billion a year as a result of medical expenses and excessive absenteeism. Obesity has been linked to a 36 percent increase in healthcare spending, which is currently more than smoking or drinking. Employers and businesses bear a sizable portion of the costs associated with treating obesity-related conditions. These costs are primarily for lost productivity, paid sick leave, and the increased costs of health, life, and disability insurance.

## **Addressing the Obesity Problem**

### **Body Mass Index Screening**

Chronic diseases are preventable. Much of heart disease, stroke, and diabetes can be prevented by proper nutrition, physical activity, and not smoking. Community policies and resources that enable individuals to make healthier choices are critical in transforming an "obesogenic" environment into a healthy environment. Because adult obesity is so challenging to reverse, prevention is critical. Action must be taken at the earliest "windows of opportunity" to promote child wellness and instill healthy behaviors.

One such intervention would be individual health screening, and, in particular, Body Mass Index (BMI) assessment as an early indicator of health risks associated with increased body weight. The National Health and Nutrition Examination Study (NHANES) and the Youth Risk Behavior Surveillance System (YRBSS) provide population-based, cross-sectional state and national samples; however the YRBS data are self-reported. Studies comparing the YRBS self-report data with measured heights and weights have demonstrated that the self-reported data typically underestimate the prevalence of child and adolescent overweight and obesity.<sup>1</sup> There is a real need to have comprehensive, longitudinal, cohort state-wide or national assessment of childhood and adolescent obesity to track progression of the epidemic and evaluate interventions. There should be coordination of a national database that tracks this aggregate data.<sup>2</sup> The use of BMI assessment for individual health screening is less consistent. The Institute of Medicine does recommend annual school-based screening.<sup>3</sup> The CDC, on the other hand, issued cautionary guidance in 2007 around BMI assessment used for health screening purposes since the efficacy of

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1 Kolbo JR, Penman AD, Meyer MK, Speed NM, Molaison EF, Zhang L. Prevalence of overweight among elementary and middle school students in Mississippi compared with prevalence data from the Youth Risk Behavior Surveillance System. *Prev. Chronic Disease*. 2006; 3(3):A84.

2 Overweight among students in grades k-12: Arkansas, 2003-04 and 2004-05 school years. *MMWR Morbidity and Mortality Weekly Report*. 2006; 55(1):5-8.

3 Institute of Medicine. Preventing childhood obesity: health in the balance. Washington, DC: The National Academies Press; 2005.

these programs is not yet well-established. There are concerns that these programs might stigmatize students, lead to harmful behaviors, or that they may be ineffective or waste health promotion resources. <sup>4</sup>The U.S. Preventive Services Task Force concludes that there is not enough evidence to recommend for or against BMI screening programs for children to prevent obesity and poor health outcomes. <sup>5</sup>The American Academy of Pediatrics does support annual screening within the child's medical home as a strategy for assessing and combating childhood obesity.<sup>6</sup>

The American Heart Association (AHA) has developed a position statement on BMI surveillance and assessment with a recommendation that it be done in schools.

### **American Heart Association Summary Policy Recommendations:**

1. The AHA supports legislation and regulation that addresses BMI assessment in schools for the purpose of surveillance and to determine the efficacy of obesity prevention and intervention programs.
2. The AHA Association does not recommend BMI assessment programs used for individual health screening purposes unless there is careful consideration of privacy issues, adequate training, measurement techniques, parental notification, adequate evaluation, and the importance of linking families/caregivers with resources in the community.
3. The AHA favors the development of a national database to compile, achieve and make available to researchers BMI surveillance data.
4. The AHA supports the development of adequate resources to diagnose and treat childhood obesity.
5. The AHA encourages research into the relative value of different measures of adiposity.
6. The AHA advocates for increased funding for more comprehensive and robust Youth Risk Behavior Survey and NHANES surveillance.

Regardless of who is responsible for BMI screening programs, it is important to link families and physicians to available community resources, so that obesity prevention and treatment activities can follow. BMI screening needs to be only part of more comprehensive interventions that include increased access to healthier foods in schools and communities and physical activity initiatives.

### **Importance of physical activity in children**

Because childhood obesity predicts adult obesity and behavior change in adults is so challenging, promoting child wellness and instilling healthy eating and physical activity behaviors at the earliest "windows of opportunity" is key. Community policies and resources that enable individuals to make healthier choices are critical in transforming an "obesogenic" environment into a healthy environment. Improving the physical activity environment for Maryland children is critical to reversing the trend.

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<sup>4</sup> Nihiser AJ, Lee SM, Wechsler J, McKenna M, Odom E, Reinold C, Thompson D, Grummer-Strawn L. Bodymass index measurement in schools. *Journal of School Health*. 2007; 77:651-671.

<sup>5</sup> US Preventive Services Task Force. Screening and interventions for overweight and children and adolescents: recommendations statement. *Pediatrics*. 2005; 116(1):205-209.

<sup>6</sup> American Academy of Pediatrics. Policy statement: prevention of pediatric overweight and obesity. *Pediatrics*. 2003; 112(2):424-430.

### **Current recommendations for physical activity**

In October 2008, the federal government published the first major review of the science on benefits of physical activity, *2008 Physical Activity Guidelines for Americans*. Children and adolescents aged 6-17 years should accumulate 1 hour (60 minutes) or more of physical activity every day. Most of the 1 hour or more a day should be either moderate- or vigorous-intensity aerobic physical activity. As part of their daily physical activity, children and adolescents should do vigorous-intensity activity on at least 3 days per week. They also should do muscle-strengthening and bone-strengthening activity on at least 3 days per week. The more activity you do, the more benefits you gain. It is important to encourage young people to participate in physical activities that are appropriate for their age, enjoyable, and offer variety. The Guidelines list a number of examples of each type of activity for children and adolescents.

<http://www.health.gov/PAGuidelines/guidelines/default.aspx>

The Physical Activity Guidelines Advisory Committee concluded that there was strong evidence for the following effects of 60 minutes of daily physical activity on children's health:

- Improved cardio respiratory endurance and muscular fitness,
- Favorable body composition,
- Improved bone health, and
- Improved cardiovascular and metabolic health biomarkers.

Data provided by the Youth Risk Behavior Surveillance Survey 2007 indicates that 69% of Maryland high school students did not meet recommended levels of physical activity compared to 65% of United States students. Additionally, 84% of Maryland high school students did not attend physical education classes daily compared to 70% of United States students. Source: Self-reported data from the Youth Risk Behavior Survey, 2007

Based on strong evidence of effectiveness, the Task Force on Community Preventive Services recommends enhanced physical education classes in schools to increase physical activity. The Task Force reviewed programs that modify physical education classes by increasing the amount of time students spend in physical education class, the amount of time they are active during physical education classes or the amount of moderate-to-vigorous physical activity they engage in during physical education classes. Most studies reviewed increased the amount of physical activity during already scheduled physical education classes by changing the activities taught. Source: Guide to Community Health Services, [www.thecommunityguide.org/pa/](http://www.thecommunityguide.org/pa/)

### **Fitness Measurement in Schools**

In 2003, the Maryland was one of 28 states awarded a nutrition and physical activity grant from the Centers for Disease Control and Prevention (CDC). As a result, a strategic plan was developed that addressed the state's obesity problem by focusing on healthy eating and physical activity called the Maryland Nutrition and Physical Activity Plan. The intent of the Maryland Nutrition and Physical Activity Plan was to present a framework that would help Marylanders contribute to the effort to make healthy food choices and physical activity opportunities available throughout the State.

The Maryland Nutrition and Physical Activity Plan includes an objective that states, "**By June 2010:** Maryland schools will develop, adopt and implement policies to ensure that all pre-K to grade-12 students receive quality, daily physical education that helps to develop the knowledge, attitudes, skills, behaviors and confidence to be physically active for life and meet the Program

Standards accepted by the Maryland State Board of Education listed in the Physical Education Study Group Report of 2000.”

One of those Program Standards addresses Physical Education Student Assessment. It specifically states, “Students will use fitness self-assessment to evaluate and monitor progress toward achievement of personal goals. Fitness measurements will not be used to as a part of an academic grade, or to compare one student to another.”

In Maryland, the Physical Education Voluntary State Curriculum (VSC) defines what students should know and be able to do in physical education. The VSC has written goals, objectives, or outcomes for physical education along with fitness measurement as a component of one of the standards. If physical fitness measurement is used, it should be integrated into the curriculum and should emphasize the health-related components of physical fitness (e.g., cardio respiratory endurance, muscular strength and endurance, flexibility, and body composition).

Fitness measurement should be a tool for teaching students how to apply behavioral skills (e.g., self-assessment, goal setting, and self-monitoring) to physical fitness development and for providing feedback to students and parents about a student’s physical fitness levels. The results of physical fitness measurement should not be used to assign report card grades. In addition, fitness measurement results should not be used to assess program effectiveness. The validity of these measurements may be unreliable, and physical fitness and improvements in physical fitness are influenced by factors beyond the control of teachers and students.<sup>1</sup>

Clearly, we need data to determine whether efforts to combat childhood obesity are working and whether interventions help students become healthier are making a difference in the fitness of our youth. Human Kinetics, national distributor for Fitnessgram, has released information on states that have mandated statewide fitness assessments. These states include Delaware, West Virginia, South Carolina, California, NYC, Connecticut, Wisconsin, and Texas.

A report submitted to the Task Force by the Department of Health and Mental Hygiene and reported earlier in this report, indicates a lack of fitness data on Maryland students ages 5-12. There is a need to begin to collect data on student fitness in Maryland public schools. Currently, all 24 local school systems use one of two fitness measurements to gather that data, to set fitness goals, and to make instructional and programmatic decisions based on these measurements. Both of these measurements have age-specific expectations for what students should be able to do.

Currently there are eleven school systems using the Fitnessgram program with others interested in using it. Many obtained the program through a Carol M. White Physical Education Program (PEP) Grant, which is a federally funded project. Less than ten school systems have received this grant. Many of the smaller school systems do not have the resources to fund the program.

There are several types of standards commonly used with fitness measurement. Fitnessgram uses criterion-referenced health standards or standards associated with good health. Scientific information is used to determine the amount of fitness needed to meet minimum health levels. Fitnessgram uses a “Healthy Fitness Zone” to designate the range of fitness scores associated with good health. Scores falling below the “Healthy Fitness Zone” are categorized as “Needs Improvement” to indicate that efforts are needed to bring the score into the Healthy Fitness Zone.

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<sup>1</sup> Guidelines for School and Community Programs to Promote Lifelong Physical Activity Among Young People *Morbidity and Mortality Weekly Report* March 07, 1997/46(RR-6);1-36.

The Healthy Fitness Zone is criterion-referenced health standards because they are based on how much fitness a child needs for good health.

Nine school systems use the President's Challenge, which is a norm-referenced assessment. Normative standards (e.g., percentiles) provide comparisons relative to other youth in a group, but do not provide information concerning how the values relate to the health, meaning students are compared one to another. However, criterion-referenced standards are now available for this test. Awards are given to students based on their performance level. The President's Challenge does not allow school systems to capture fitness data by school or school system, but does provide a report on the fitness level of the student.

### **Use of Fitness Data**

Fitness data has been used to make comparisons to existing student information. Most often compared is academic achievement to fitness levels. However, school systems are expanding their comparisons into the following areas:

- Student discipline
- Income levels
- Student absenteeism
- Ethnicity
- Obesity
- School lunch programs
- Student health profiles

Fitness measurement is done to help teachers and other educators determine the fitness level of groups of students and may provide direction for curriculum planning. Reports to parents may also be prepared using fitness measurement data. This type of testing takes teams of people trained to correctly administer the test and takes a considerable amount of class time. It could be suggested that this type of measurement need only be done once or twice a year or periodically, for example every third year. If periodical institutional measurement is to be done, it is recommended that it always be done at the same time of the year (beginning or end).

Care should be taken when interpreting data obtained from this type of measurement. Most fitness experts agree that fitness data should not be used for determining student grades, long-term student achievement, and/or teacher success. There are too many factors other than physical activity that influence fitness to use fitness data as good indicators of student achievement.

### **Examples of Best Practices regarding Fitness Measurement**

**Cecil County Schools** Cecil County has been using the Fitnessgram program for over 7 years. They invested in a system-wide server and trained teachers in recording data electronically since 2005. Teachers are asked to develop student goals and various departmental goals for fitness improvement which have been changed throughout time as the data has been analyzed. Future steps include having students spend more time on the understanding of the components of fitness, setting personal goals, using heart rate monitors and pedometers in lessons to chart progress, and changing activities in lessons to incorporate fitness with skills. It was reported that focusing on data generated through Fitnessgram testing has renewed teacher enthusiasm in teaching and the belief that fitness is important. If teachers focus instruction on the components of fitness along with skill development, then students will begin to believe that fitness is important.

**Howard County** implemented a program called, Bodies and Minds on the Move which was due in part to a grant award of \$470,057 from the U.S. Department of Education's Carol M. White Physical Education Program. All physical education teachers participated in at least one or more professional development sessions on topics such as *Getting to Know Your Laptop I and II*, *Heart Rate Monitor Training I and II*, *Exemplary Program Framework*, and *Increasing Physical Activity using Pedometers*. Howard County is using the fitness data to develop a new curriculum using short and long range fitness plans. Based on discussions regarding the Howard County Public School System Wellness Policy, a goal is to increase student participation in the intramural program at the middle school level as a strategy to increase physical activity opportunities. Other considerations include developing a high school lifetime activities program as a strategy to increase physical activity levels for high school students in addition to an elementary school classroom teacher tool kit to increase physical activity throughout the school day.

**Frederick County** uses a reporting program that is similar to Fitnessgram. Frederick County has been collecting fitness data since 1991 with reports shared with the board of education. The school system publishes data by teacher, school and county for all fitness tests. Fitness data is organized with the student ID number, and testing is done by grade level, unlike the fitness gram which is age level. Frederick has been able to demonstrate some correlation between fitness and test scores and "although there is not a tremendous change", it is slight which compels them to look more closely at the correlation between the two. Frederick County recently started an online fitness database for parents to be able to go online to see the fitness and health of their child.

### **Connecting Fitness Measurement and Student Achievement**

Several studies conducted around the country have looked at academic achievement and fitness. California has completed several studies in this area.

*"A Study of the Relationship Between Physical Fitness and Academic Achievement in California Using 2004 Test Results"* <http://www.cde.ca.gov/ta/tg/pf/>

There was a strong positive relationship between physical fitness and academic achievement. The relationship between fitness and achievement was stronger for females than for males and stronger for higher socioeconomic status (SES) students than for lower SES students. However, neither ANOVA nor regression results indicate causality. That is, it cannot be inferred from these data that improved physical fitness caused an increase or improvement in academic achievement or vice versa.

*"Physical Education Matters" A Full Report California 2008*  
<http://www.cityprojectca.org/blog/archives/601>

The report stated a common reason for reducing time, leadership and resources for physical education is the claim that time spent in physical education detracts from academic performance. To the contrary, several studies show that students who spend more time in physical education do not have lower grades or achievement test scores, and sometimes, more physical education leads to higher scores.

Studies in California and elsewhere show that:

- More physically active and fit students have better grades and achievement test scores.
- Physical education and physical activity can improve academic achievement by enhancing concentration and by helping students be more attentive

- In general, aerobic activity not only increases blood flow to the brain, but also speeds recall and reasoning skills.
- Most, but far from all, California school administrators are convinced of the value of physical education, believing high-quality PE can enhance concentration (69%), decrease discipline problems (63%), and improve academic performance (63%).

A more recent study was published in the *American Journal of Public Health* in April 2008. Entitled "Physical Education and Academic Achievement in Elementary School: data from a longitudinal study," the study showed the following: "A small but significant benefit for academic achievement in mathematics and reading was observed for girls enrolled in higher amounts (70-300 minutes per week) of physical education (referent: 0-35 minutes per week). Higher amounts of physical education were not positively or negatively associated with academic achievement among boys. This finding led the researchers to conclude: Among girls, higher amounts of physical education may be associated with an academic benefit. Physical education did not appear to negatively affect academic achievement in elementary school students. Concerns about adverse effects on achievement may not be legitimate reasons to limit physical education programs."

<http://www.ajph.org/cgi/content/abstract/AJPH.2007.117176v1>

*Journal of Obesity July 2008*

A study in Philadelphia found that overweight children have lower scores in certain tests and are less inclined to participate in sports. The study that was published in the *Journal of Obesity* found that "overweight kids are at risk for a host of health complications, including elevated cholesterol, diabetes and high blood pressure. They also may do more poorly in school. When grade point averages were compared among 566 middle school students in a suburb of Philadelphia, overweight students came in at about half a grade point lower than normal-weight kids." The study, published in the July issue of the *Journal of Obesity*, also found that "overweight students had lower reading comprehension scores on a nationally standardized test, ranking in the 66th percentile; normal-weight kids ranked in the 75th percentile. Heavier kids were also five times more likely to have six or more detentions than their normal-weight peers, had more school absences and lower physical fitness test scores, and were less inclined to participate on athletic teams – 37% compared with 75% of normal-weight students." Stuart Shore, a doctoral candidate in kinesiology at Temple University in Philadelphia, and lead author of the study, speculates that "overweight kids who have low self-esteem might be less inclined to attend school and may not relate well with their teachers."

### **Wellness Policies**

In the Child Nutrition and WIC Reauthorization Act of 2004, the United States Congress established a new requirement that all school districts with a federally-funded school meals program develop and implement wellness policies that address nutrition and physical activity by the start of the 2006-2007 school year. (§204, Local Wellness Policy). Each local educational agency participating in a program authorized by the Richard B. Russell National School Lunch Act (42 U.S.C. 1751 et seq) or the Child Nutrition Act of 1966 (42 U.S.C. 1771 et seq) must establish a local school wellness policy by School Year 2006.

In response to requests for guidance on developing these policies, the National Alliance for Nutrition and Activity (NANA) convened a work group of more than 50 health, physical activity,

nutrition, and education professionals from a variety of national and state organizations to develop a set of model policies for local school districts.

This comprehensive set of model nutrition and physical activity policies is based on nutrition science, public health research, and existing practices from exemplary states and local school districts around the country. The NANA work group's first priority was to promote children's health and well-being. However, feasibility of policy implementation also was considered. The model school policies included physical activity opportunities and physical education. The following guidance has been taken directly from NANA work group's suggested model wellness policy requirements.

- Daily Physical Education (PE) K-12
- Daily Recess
- Physical Activity Opportunities Before and After School
- Physical Activity and Punishment
- Safe Routes to School
- Use of School Facilities Outside of School Hours

### **Monitoring and Review of Wellness Policies**

One of the major concerns with the process of developing wellness policies concerns gaps in policy monitoring and evaluation. Tracking of local wellness policy implementation is as important as development of the policy itself. However, monitoring and evaluation are not given the attention necessary, and in many districts are virtually nonexistent. Clearly, effective systems for monitoring and evaluating policy implementation would enable stakeholders to more accurately assess progress, and, importantly, develop and improve ongoing, targeted intervention strategies.

In light of this fact, *Monitoring and Review Guidelines* were also addressed in the model policies developed by National Alliance for Nutrition and Activity (NANA). The language provided in the NANA guidance for monitoring and review contains the following:

- **Monitoring** The superintendent or designee will ensure compliance with established district-wide nutrition and physical activity wellness policies. In each school, the principal or designee will ensure compliance with those policies in his/her school and will report on the school's compliance to the school district superintendent or designee.

School food service staff, at the school or district level, will ensure compliance with nutrition policies within school food service areas and will report on this matter to the superintendent (or if done at the school level, to the school principal).

- **Policy Review** To help with the initial development of the district's wellness policies, each school in the district will conduct a baseline assessment of the school's existing nutrition and physical activity environments and policies. The results of those school-by-school assessments will be compiled at the district level to identify and prioritize needs.
- **Integrating Physical Activity into the Classroom Setting** Also included in the model school wellness policies were ideas for integrating physical activity into the classroom setting during the school day. For students to receive the nationally-recommended amount of daily physical activity (*i.e.*, at least 60 minutes per day) and for students to fully embrace regular

## **Maryland's Wellness Policies**

Maryland has followed the federal guidance established for wellness policies as set forth by Child Nutrition and WIC Reauthorization Act of 2004: §204, Local Wellness Policy. In a thoughtful and deliberate manner, staff from the Maryland State Department of Education's School and Community Nutrition Program branch in collaboration with local system personnel, have developed State guidelines for local school systems.

The work began in 2006 with the development of system wellness plans. In 2007, the School and Community Nutrition Programs Branch presented to local superintendents a plan for the Maryland State Department of Education (MSDE) to survey current wellness policy activities.

In January 2007, a multidisciplinary team from MSDE and local school systems met with all local school systems' Wellness Policy teams to review their local wellness policies using the review guide. On April 24, 2007, the results of the policy reviews were presented to the State Board of Education. In June 2007, each local superintendent received a letter from Dr. Grasmick with feedback on the Wellness Policy review.

In November 2007, a multidisciplinary team from MSDE and local school systems started meeting to design a Wellness Policy implementation and monitoring guide. In April 2008, in collaboration with the Department of Health and Mental Hygiene, MSDE co-sponsored training to introduce the draft wellness monitoring guide to six local wellness policy teams. These school systems are piloting the guide, and will provide feedback on their activities at the January 2009 conference. MSDE will co-sponsor this conference in collaboration with the State School Health Council to introduce the wellness monitoring guide to all Maryland school systems.

Many of the suggested task force recommendations as well as wellness policy activities found in the Wellness Policy implementation and monitoring guide are consistent with the coordinated school health model. Coordinated school health is an eight-component model that addresses health education, physical education, nutrition, school environment, mental health, community/family involvement, health services and staff wellness. Coordinated school health should be organized at the school and local school system level to address the health and fitness of students, teachers and staff.<sup>1</sup> Wellness Policies would be one way to address the issue of increasing physical activity and physical education time in the schools rather than through unfunded legislation.

## **Fitness Measurement and Wellness Policies**

The federal mandate requires local school systems to include goals for nutrition education, physical activity, and other school based activities that promote student wellness. Local school systems are required to include a policy statement on any and all activities that promote student wellness including, but not limited to, physical activity, physical education, health-related fitness and any other activities that promote student physical health and wellness.

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<sup>1</sup> National Center for Chronic Disease Prevention and Health Promotion. Coordinated school health programs. Available at: <http://www.cdc.gov/HealthyYouth/CSHP/index>. Accessed June 2, 2005.

The National State School Boards of Education (2000) recommend that policy statements for physical activity, physical education, and health-related fitness be part of local education agency (LEA) policy.

Health-related fitness testing shall be integrated into the curriculum as an instructional tool, except in the early elementary grades. Tests shall be appropriate to students' developmental levels and physical abilities. Such testing shall be used to teach students how to assess their fitness levels, set goals for improvement, and monitor progress in reaching their goals. Staff will maintain the confidentiality of fitness test results, which will be made available only to students and their parents or guardians.

As health related physical fitness is influenced by factors beyond the control of students and teachers (such as genetics, physical maturation, disabling conditions, and body composition), test results shall not be used to determine course grades or to assess the performance of individual teachers (*Fit, Healthy and Ready to Learn* 2000, p. D-10).

Sharing the local school system's health-related fitness reports with the entire school community will help everyone understand the components of fitness, how fitness can be improved by physical activity and good nutrition, and the benefits of fitness for academic achievement and active healthy lifestyles.

It would also provide baseline data on the fitness levels of students and provide a means for school systems to develop and include in master plans local goals and indicators that address the health and wellness of their students. Individual schools could implement school improvement plans based on the fitness levels of their students. School improvement teams could also develop strategies that address ways to improve the health and wellness of their students inside and outside the school day. An outgrowth of this sharing might be suggested community events such as family fitness nights, staff wellness programs and other activities and incentives to increase fitness and physical activity in the school community. Annual yearly progress goals and objectives could be developed for local school systems.

# Recommendations

## Fitness and Wellness

- 1. Fitness Measurement:** Require schools to perform fitness measurement on students with differentiated instruction provided for students not meeting standards for fitness.

Fitness measurement is directly referenced in Content Standard 5, Physical Activity, of the Physical Education Voluntary State Curriculum. The indicator designates a fitness measurement of students for the health related components of fitness each year in grade four through high school. These fitness measurements should be used to develop personal fitness goals and select activities for the improvement or maintenance of healthy levels of fitness.

- 2. Body Mass Index (BMI):** Investigate BMI assessment in schools for the purpose of surveillance and to determine the efficacy of obesity prevention and intervention programs.

BMI is the ratio of weight to height squared. It is often used to assess weight status because it is relatively easy to measure and correlates with body fat. The American Academy of Pediatrics (AAP) recommends that BMI should be calculated and plotted annually on all youth as part of normal health supervision within the child's medical home.

School-based BMI assessment programs used for individual health screening purposes are not recommended unless there is careful consideration of privacy issues, adequate training, measurement techniques, parental notification, adequate evaluation, and the importance of linking families/caregivers with resources in the community.

- 3. Local School Wellness Policies:** Wellness policies must be developed, implemented and monitored and must include physical education, physical activity, and recess requirements.

Wellness Policies are a vehicle for addressing the issue of increasing physical activity and physical education time in the schools through local decision-making. Local school systems shall work through wellness policies to gather base line student fitness data to determine the merit for increased physical education and physical activity. Wellness improvement plans will be a part of local school improvement planning and/or included in local school system master plans with progress and challenges reported out to the local boards of education. Local schools will address physical activity time and develop local school improvement plans.

MSDE has designed a Wellness Policy implementation and monitoring guide. The guide will provide school systems with a model framework to follow as they implement and monitor Wellness Policies. The guide will provide sample key goals for wellness policies with associated implementation and monitoring strategies. The guide is designed as a template for school systems to insert their specific policy language and support their policy implementation plan.

# Subcommittee Two

## Charge

**“Analyze the results obtained by any local school systems in the State and other states that have current physical activity or physical education requirements.”**

Physical activity and physical education are terms that are often used interchangeably. In fact there is a critical distinction between the two terms. **Physical education** is an instructional discipline which offers the best opportunity to provide physical activity to all children and to teach skills and knowledge needed to establish and sustain an active lifestyle. Physical education teachers assess students knowledge, motor and social skills, and provide instruction in a safe, supportive environment. Physical education should not be confused with other physical activity experiences such as recess, intramurals, or recreational endeavors. A quality physical education program provides learning opportunities, appropriate instruction, and meaningful and challenging content for all children. **Physical activity** is bodily movement of any type and may include recreational, fitness and sport activities such as jumping rope, playing soccer, lifting weights, as well as daily activities such as walking to the store, taking the stairs, or raking the leaves. To summarize, physical education is a curriculum and physical activity is a behavior.

## Findings

### Physical Education Time in Schools

National Association for Sport and Physical Education (NASPE) reports that the percentage of students who attend a daily physical education class in school dropped to 28 percent in 2003, from 42 percent in 1991. The American Heart Association, American Cancer Society, American Diabetes Association, National Association for Sport and Physical education, National Association of State Boards of Education, Centers for Disease Control and Prevention (CDC), and the Institute of Medicine recommend 150 minutes of instructional physical education per week for the entire school year. NASPE also recommends 225 minutes per week for middle and high school students. In reality, very few schools provide daily physical education for all grades throughout the entire school year. The Centers for Disease Control and Prevention’s 2006 School Health Policy and Programs Study (SHPPS 2006) reported findings of a national survey on school health that the CDC conducts every six years (SHPPS) indicates that only 4 percent of elementary schools, 8 percent of middle schools, and 2 percent of high schools provide the recommended daily physical education. “Just as alarming, studies show that participation in physical education actually declines as students go through school.” (Johnston, et al.) Action for Healthy Kids Report: *Progress or Promises: What’s Working for or Against Healthy Schools*, Fall 2008

Recently several states have legislated time requirements for physical education. These include but are not limited to:

- Arkansas requires 60 minutes of physical education plus 90 minutes of physical activity per week;
- Florida requires 150 minutes of physical education a week for grades K-5;
- Mississippi requires 150 minutes of physical activity-based instruction as well as 45 minutes of health education;
- Oregon requires 150 minutes per week

- Texas requires 30 minutes daily of moderate to vigorous physical activity and a fitness assessment.
- Oklahoma requires 90 minutes of physical education per week plus 60 minutes of Health Education
- New Jersey requires 150 minutes per week of health, safety, and physical education.
- South Carolina requires 150 minutes of physical education and physical activity, with physical education requiring 90 minutes.
- New York's law requires 120 minutes of physical education for K-6.
- Delaware has a law that requires a fitness assessment at least once in elementary, once in middle and once in high school.

None of these states have time requirements for other content areas.

Research has shown that daily physical education enhances academic performance and fitness. Daily physical education does not detract from academic performance, even when time for physical education is increased and time for other content is reduced. (Source “Active Education: Physical education, Physical Activity and Academic Performance,” a fall 2007 Active Living Research Brief, [www.activelivingresearch.org](http://www.activelivingresearch.org).) Despite this research, no school in Maryland provides daily physical education for the entire school year for all students. In Maryland, physical education is required each year for all children K-8, with one half of a credit required for graduation. There are no designated time requirements. Table 1 provides the time allocation for physical education in each of Maryland’s 24 school systems.

**Table 1: Elementary School (K-5) Physical education Time by Local School System (LSS)  
Data collected 9/08**

<b>LSS</b>	<b>Minimum and Maximum by Week</b>
Allegany	40-45
Anne Arundel	60-60
Baltimore City	30-90 Varies by School
Baltimore County	50-120 Most have 50
Calvert	90
Caroline	45-90 Most have 90
Carroll	90
Cecil	90
Charles	80-120
Dorchester	30-45 Some have 120
Frederick	80-100 Most 80 some have 100
Garrett	45-60 Varies by school
Harford	45-90 Average of 69 minutes a week 275 minutes per month
Howard	90

Kent	90
Montgomery	35-50 Varies by school
Prince George's	50-75 Average 150 every 10 days
Queen Anne's	90-120 Average 55 2x a week
Saint Mary's	67
Somerset	60
Talbot	90
Washington	55-110 Average 82 minutes per week
Wicomico	120 Every 6 days
Worcester	60-90 Average 75 per week

### Other Physical Activity Time

Physical activity time in the elementary schools can be viewed as recess during the school day, in addition to any physical activity that is included in daily schedules, including before and after school child care that is provided in the local schools.

#### Recess

Recess periods, which are regularly scheduled periods within the elementary school day for unstructured physical activity and play, provide another opportunity for daily physical activity, along with social and cognitive benefits. Some large school systems have, in recent years, eliminated recess altogether, reportedly due to safety concerns and a desire to increase time for academic instruction. However, studies have found that students who do not participate in recess become fidgety and less able to concentrate on tasks. In addition, the longer children sit in classrooms without a recess break, the less attentive they become. Recess also offers students one of their few opportunities during the school day to interact and develop social skills, such as negotiating and cooperating, with minimal adult interference. The National Association of Elementary School Principals has endorsed recess as “an important component in a child’s physical and social development.”

To make recess periods effective, schools should:

- Have enough trained adults on hand to enforce safety rules and prevent aggressive, bullying behavior
- Work with police departments and community agencies to address safety concerns about children playing in school playgrounds in high-crime areas
- Provide space, facilities, equipment, and supplies that can make active participation in physical activity during recess appealing to children
- Have staff encourage students to be active during recess,
- Schedule recess before, rather than after, lunch; studies have found that students eat more of their lunches when recess comes before lunch.<sup>1</sup>

<sup>1</sup> Wechsler H, Devereaux AB, Davis M, Collins J. Using the school environment to promote physical activity and healthy eating. *Preventive Medicine* 2000;31:S121-S137.

## The Importance of Recess

In a Newsweek article, entitled, *Reading, Writing, Recess*, dated November 3, 2003 it was reported, “In the last five years, as pressure to show early academic achievement has mounted, nearly 20 percent of the nation’s elementary schools have dropped recess in favor of extra classroom time. But as concerns about childhood obesity grow, activists are demanding that schools bring recess back—providing kids with a minimum of 15 minutes of free play each day. Two years ago Michigan followed Virginia’s lead and mandated daily recess. Similar measures are now pending in Georgia and Connecticut. Activists in Florida, Texas, Mississippi, California and Pennsylvania are lobbying hard to get their kids one small physical break.” “For years, public-health officials have warned that youngsters are becoming too sedentary. At home, television and computer games are fast replacing sports and active play. At school, kids are just as inactive. Principals know kids need exercise, but they also feel the sting of federal and state legislation aimed at improving test scores and bolstering basic skills.” Olga Jarrett, a child-development specialist at Georgia State University, says a 20-minute break makes kids more focused, less fidgety and less disruptive.” “A teacher who conducts an entire day with-out one short recess misunderstands how children learn,” says Jarrett.

The National Association for Sport and Physical Education (NASPE), concerned that 7 percent of elementary schools are not offering daily recess (*Calories In, Calories Out: Food and Exercise in Public Elementary Schools, 2005*, U.S. Department of Education, National Center for Education Statistics), urged parents and principals to provide at least one daily 20-minute period of recess. Recess is an integral component of a child’s physical, social and academic development.

In a formal position statement on recess, NASPE states that recess provides children with discretionary time to engage in physical activity that helps them develop healthy bodies and enjoyment of movement. It also allows children the opportunity to practice life skills such as cooperation, taking turns, following rules, sharing, communications, negotiation, problem solving, and conflict resolution. Furthermore, participation in physical activity may improve attention, focus, behavior, and learning in the classroom.

Included in the NASPE recommendations are the following:

- All children in elementary schools should engage in at least one daily period of recess for at least 20 minutes per period.
- Recess should not replace physical education classes. Physical education provides sequential instruction to enhance the development of motor skills, movement concepts, and physical fitness. Recess provides unstructured play opportunities that allow children to engage in physical activity.
- Recess is not viewed as a reward but as a necessary educational support component for all children. Thus, students should not be denied recess as a means of punishment or to complete class work.
- Adequate and safe spaces and facilities are provided for all students to be physically active at the same time. Outdoor spaces are used whenever the weather allows.
- Adequate, safe, and developmentally appropriate equipment is provided for students to engage in enjoyable physical activity.
- Physical education and classroom teachers teach children positive personal and social skills (e.g., cooperation, conflict resolution) for use during recess.
- Recess is properly supervised by qualified adults.

An increasing number of children are developing cardiovascular risk factors (e.g., high blood pressure) and type 2 diabetes (Kaufman, 2002). Daily physical activity is an important part of the solution to these health issues. National recommendations state that school aged children and youth should participate in at least 60 minutes per day of moderate to vigorous physical activity (Strong, et.al, 2005; NASPE, 2004; USDHHS & USDA, 2005). Participation in a regularly scheduled recess period can make an important contribution toward meeting this recommendation. In addition, extended periods of inactivity (2 hours or more) are discouraged for elementary-age children. (NASPE, 2004) The percentage of states that required elementary schools to provide students with regularly scheduled recess increased from 4.1% to 11.8% and the percentage of districts with this requirement increased from 46.3 to 57.1 The Centers for Disease Control and Prevention's 2006 School Health Policy and Programs Study (SHPPS 2006)

### **The Impact of No Child Left Behind on Recess**

A September 23, 2008 report by the Center for Public Education (CPE) states "elementary schools, particularly those in urban areas and those that serve predominantly low-income populations, are cutting back on recess time. Analysis of federal data shows that 90 percent of elementary schools devote between 24 minutes and 30 minutes per day to recess. However, 20 percent of school districts included in the report said they had decreased the amount of time dedicated to recess since the federal No Child Left Behind (NCLB) law was enacted in 2001. Recess at schools reporting reductions fell from an average of 184 minutes per week in 2001 to 144 minutes per week in 2007. In examining the link between recess cuts and NCLB, which requires schools to ensure that every child performs at his or her grade level for reading and math by 2014, the report found that districts with at least one school designated for improvement under NCLB standards were more likely to drastically reduce recess time". Source: Robert Woods Johnson Foundation, <http://www.rwjf.org/childhoodobesity/digest.jsp?id=8621&monthdiff=-1>

### **Rescuing Recess Campaign**

A National Association of Elementary School Principal's survey indicated that 9 out of 10 schools enjoyed daily recess prior to 1989. In 1998, only 40% of elementary schools offered a daily recess according to the American Association for A Child's Right to Play. Today, recess is on the upswing, where 68% of schools now offer a daily recess for elementary school students. (SHPPS 2006).

Due to budget cuts and increased academic pressures, only 8 state school boards of education have a written policy to protect recess in elementary schools. In response to this situation, in 2006, Cartoon Network launched Rescuing Recess and to date has committed more than \$4 million in media resources and cash to raise awareness about the importance of daily recess in promoting overall child wellness and academic performance. In 2007, a "National Recess Week" was added to continue to raise awareness.

If Maryland were to consider a policy on mandatory recess, it would join the ranks of states currently enacting or considering such action. At the present time, only California, Indiana, Iowa, Michigan, New Hampshire, North Carolina, Virginia and Wisconsin have enacted such a measure. New Jersey's legislature is currently considering a similar proposal.

## **Policies and Procedures for Recess in Maryland Public Schools**

The Maryland Association of Boards of Education (MABE) surveyed all 24 local school systems to determine the policies, regulations or requirements regarding structured or unstructured recess in schools. MABE asked each local school systems “Do you have a policy that mandates daily recess?” Fifteen systems reported no policy on mandated recess. Each of these local school system reported individual school autonomy in scheduling recess in the building. Nine systems reported a policy mandating recess (Caroline, Harford, Howard, Frederick, Montgomery, Prince George’s, Queen Anne’s, Washington and Worcester). Of those that mandated recess, the following systems mandate recess through their Wellness Policies: Frederick, Howard, Montgomery, Prince George’s and Queen Anne’s.

Recess is scheduled in a variety of ways around the state. In most cases the amount of recess and the time it is scheduled, whether it is structured or unstructured, is a scheduling decision made by the local school systems and individual schools. In some school districts recess is scheduled either before or after lunch with paraprofessionals or professional school personnel monitoring the recess period. Recess in other school systems is built into the daily schedule of activities and provided at various times during the school day. The cost for providing these paraprofessionals and professionals is absorbed by the local school system.

One problem with large numbers of children being provided an unstructured physical activity opportunity is the increased risk for injury to students. Additionally, recess can turn into a period where conflict from the play area can carry over into the regular school day. To that end, some school systems have been considering the idea of a structured recess period as part of the daily schedule. One example is in Howard County where recess or activity carts have been provided in some schools for all grade levels. Teachers are provided the necessary equipment along with rules and directions for activity and are responsible for organizing the children into the various activities.

Recess is also being outsourced. One example is in Baltimore City where some schools have hired an organization called Sports4Kids. Sports4Kids is an Oakland, California based nonprofit organization that introduces students to a regimen of traditional playground games, along with a more closely supervised version of some team sports. The cost of this program is \$56,000.00 a year per school. The school is responsible for \$23,500.00 and Sport4Kids fundraises to cover the remainder of the cost. Future funding for this program nationwide is being provided by the Robert Wood Johnson Foundation through a five year, 18.7 million dollar grant that will bring the program to as many as 650 schools in 27 cities. It is a major investment to bring safe and healthy playtime and recess to a million low-income children a day. A 2007 Robert Woods Johnson Foundation study found that for children in first through sixth grade, recess represents more than 40 percent of the available time in a given school week for physical activity.

### ***Recess Before Lunch in Maryland***

*Recess Before Lunch* (RBL) is simply a change in the traditional scheduling order of lunchtime and recess. RBL allows students to go to recess first, and then eat lunch. While it sounds simple in theory, schools often find that this policy change requires careful planning and efficient communication, as well as a strong commitment from school administrators, educators, and food service staff to make the change successful. The concept of recess before lunch has been implemented in one school in the Howard County School System. In April 2007, Howard County launched the Healthy Howard Initiative, a six phase initiative that encourages institutions

including restaurants, schools, workplaces, and recreation programs to incorporate healthy activities and healthy products into the lives of County residents. Healthy Howard is strengthened by participation and collaboration with the public and private sectors.

Recognizing that schools are an integral part of our children's development as well as an invaluable asset to parents and the community, Healthy Schools was developed to recognize schools that have displayed extraordinary commitment in the areas of Nutrition, Physical Activity/Health, Mental Health, and Safety/Environmental Health. Twelve Howard County schools were recognized at the 1st Annual Healthy Schools Ceremony in 2008. At Hollifield Station Elementary, the *Recess Before Lunch* concept was acknowledged as the Innovation Award for 2008 in physical activity, nutrition, mental health, and/or safety/environmental health.

### **Physical Activity and In-school Child Care Programs**

Through child care centers there are opportunities outside the daily structured school environment to provide additional opportunities for physical activity. There are 1,724 child care centers in the state. This number also includes school based programs operating before and after school. The number of children enrolled in school-age child care center programs totals 59,087. Family child care homes add an additional 13,082 for a total of 72,169 school-age children enrolled in child care programs state-wide. The Code of Maryland Regulations (COMAR) defines "child care centers" under § 13A.14.02.35, which provide specific regulations concerning a schedule of daily activities for all children.

#### **Child Care Guidelines on Physical Activity**

The child care centers have the following guidelines concerning physical activity:

- Maryland child care facilities, both family child care homes and child care centers, must develop a schedule of activities that meet the needs and activity levels of all children.
- The schedule must include time each day for outdoor play.
- In school child care centers do not require morning physical activity during the school year, but do require at least 30-45 minutes of physical activity in the afternoon. Some centers provide this physical activity session two times a day in the afternoon.
- Home child care center regulations specify that time for outdoor play be afforded in the morning and afternoon.
- All child care facilities must post the daily schedule for parents to view.
- Child care facilities are inspected at least three times during a two year cycle. At the time of the inspection the outdoor play area is monitored for safety and the presence of hazards and the daily schedule posting is observed and verified.

Additionally, the Division of Early Childhood Development at MSDE has recently created a document entitled *Playground and Water Safety Guidelines*. This document provides guidelines that emphasize the importance of supervising children and provide ideas for developmentally appropriate play activities.

# Recommendations

## Physical Education

**Time:** Require a minimum 90 minutes of physical education per week, of which at least 50% of the time, students should be engaged in moderate to vigorous physical activity.

## Physical Activity

**Recess:** Recess should provide a minimum of 20 minutes of physical activity daily for all elementary students.

- a. This policy should be mandated in each system's Wellness Policy.
- b. The policy requirements should prohibit withholding recess as a punishment.
- c. During inclement weather provide opportunities for physical activity in the classroom.
- d. The ideas for indoor and outdoor physical activities should be developed by a physical activity team, with the physical education teacher as one member of this team.

**Classroom:** Physical activity should be provided throughout the school day. Activity ideas should be developed and provided to classroom teachers so that physical activity opportunities can be provided across the curriculum.

# Subcommittee Three

## Charge

**“Monetary costs of requiring public schools to provide a minimum amount of physical activity or physical education for students, how these costs may be minimized, and whether additional outside funding resources are available for these purposes;”**

## Findings

### **Current Status of Physical Education**

In Maryland, the State has specific regulations governing physical education in local school systems. The Code of Maryland Regulations (COMAR) Title 13A.04.13 requires all schools to provide a comprehensive physical education instructional program, for all students, each year in grades kindergarten through eight. The regulations governing physical education in Maryland does not specify number of minutes per week that physical education needs to be taught in each school district. The amount of time allocated for physical education is determined by each local school system. Additionally, Maryland requires all students to earn a minimum of a half-credit in physical education in high school; however, many of the districts are requiring students to earn a full credit for graduation. It is a local school systems decision to increase the number of physical education credits for graduation beyond the minimum State requirements.

The information concerning the amount of physical education time currently offered in Maryland public schools was provided in an earlier table. (Table 1 pg. 39) It shows a wide variance in the amount of time allocated to physical education in the local school systems.

The Maryland Association of Boards of Education (MABE), with the assistance of the Director of Government Relations, distributed a survey to local school systems requesting information on the budget and policy impact of expanding physical education time in Maryland’s public elementary schools. The survey resulted in similar information regarding the amount of elementary physical education time required by local school systems. It indicated that of the 24 school systems, 7 reported 90 minutes, 2 reported between 80 and 100 minutes, 1 reports 120 minutes every six school days, 7 report 90 minutes in some but not all schools, and 7 report no schools at 90 minutes.

Although the overall health benefits for increasing time for physical education are important, substantial financial resources are necessary to successfully implement this increase in time. Assessing the fiscal impact on the State and local governments is imperative as school systems consider increasing the amount of physical education time for students.

### **Getting to 90 minutes**

#### **Staffing Implications**

A common concern of all local school systems is the cost to implement the time requirement of 90 minutes per week of physical education. The following information in Table 2 was provided by supervisors of physical education from local school systems on the cost for staffing. It

contains information for the fifteen school systems that do not currently have 90 minutes of physical education.

**Table 2: Estimated Staffing Costs to Implement 90 Minutes of Physical Education Reported to the Maryland State Department of Education (MSDE)**

<b>LEA</b>	<b>Staffing Costs (Data collected 9/08)</b>
Allegany	\$305,227
Anne Arundel	\$2,512,152
Baltimore City	\$ 4,875,389
Baltimore County	\$3,187,800
Caroline	\$258,996
Charles	\$914,832
Dorchester	\$500,000
Garrett	\$282,000
Harford	\$3,431,400
Montgomery	Reported a need to hire 160 more teachers, did not provide specific cost figures
Prince Georges	\$3,010,000
St. Mary's	\$344,565
Somerset	\$190,000
Washington County	\$1,170,000
Worcester	\$260,000
Total Estimated Cost for Staffing	35,932,361

The data indicates that it would cost those local school systems that have not implemented 90 minutes of physical education a minimum of \$190,000 and could cost up to \$4,875,389 in larger school systems to provide the additional staffing. The figures provided were based on the cost for a base salary for starting teachers and the related benefits package. These data were coupled with the projected number of teachers needed to implement physical education for 90 minutes in all schools to arrive at a total cost for implementation of the 90 minutes of physical education.

A survey that was disseminated to local school systems by the Maryland Association of Boards of Education (MABE) to school system superintendents found similar figures. The following school systems reported the cost of 90 minutes of physical education per week as follows: Allegany: \$464,000; Baltimore City: \$8.9 million; Caroline County: \$260,000; Charles County: \$50,000; Garrett: \$275,000; Harford: \$602,000; Montgomery: \$15 million; Prince George's: \$3.2 million; Somerset: \$90,000; and Worcester: \$260,000. The total cost, as reported to MABE, is more than \$29 million.

Discrepancies between the figures may have resulted from the inclusion or exclusion of benefits packages, the need for additional equipment for new physical education teachers, and the recognition of staffing for students with disabilities. The challenge of including 90 minutes per week of physical education instruction caused some of the superintendents to consider an extended day as a solution. The MABE survey also indicated that one of the major obstacles was the concern of teacher associations about working an extended day, and the cost associated with additional compensation for teachers and other staff.

**Facilities Implications**

Similar to the differences in time for physical education in local school systems are the differences in facilities for the instruction of physical education. Facilities also vary in each local school system. In many local school systems, a designated space for physical education instruction has been built as evidenced by individual gymnasiums in schools. Other school systems have built multi-purpose rooms which serve a variety of roles such as providing space for students to eat meals, a space for special programs and assemblies, and also provide space for physical education instruction. However, as schools continue to provide more opportunities to feed students during breakfast and lunch in these multi-purpose rooms, and also provide a variety of educational experiences by outside groups, physical education programs are negatively impacted. These rooms become increasingly unavailable for physical education instruction. In order for school systems to implement 90 minutes of physical education, there may be a need for the construction of designated gymnasiums for physical education instruction.

Information in Table 3, concerning the number of schools without a designated space for physical education, has been provided to the Maryland State Department of Education. It indicates the number of schools without gymnasiums. In some school systems, physical education instruction takes place without even multi-purpose rooms. Physical education in these schools is often taught in classrooms, hall ways, or outside when weather permits.

**Table 3: Data on Physical Education Facilities/Gymnasiums by Local School System (LSS)**

<b>Data on Physical Education Facilities / Gymnasiums by Local School System (LSS)</b>	
<b>LSS</b>	<b># Elementary Schools w/o gyms as of 2/6/08</b>
Allegany	2
Anne Arundel	26
Baltimore City	28

<b>Data on Physical Education Facilities / Gymnasiums by Local School System (LSS)</b>	
Baltimore County	0
Calvert	0
Caroline	1
Carroll	0
Cecil	1
Charles	4
Dorchester	0
Frederick	3
Garrett	6
Harford	3
Howard	0
Kent	3
Montgomery	18
Prince George's	81
Queen Anne's	0
St. Mary's	0
Somerset	0
Talbot	0
Washington	12
Wicomico	3
Worcester	0
<b>Total</b>	<b>191</b>

### **Facilities Guidelines for Physical Education Programs**

Under the authority of the State Board of Education, the Maryland State Department of Education (MSDE) develops facilities guidelines and standards for schools. Recent guidelines have addressed classroom acoustics, general classroom design, fine arts program spaces, and school health services areas. Guidelines for physical education programs are currently in development. These guidelines shown in Table 4, will address national and state physical education program content standards and general design guidelines for indoor and outdoor physical education program spaces at the elementary and secondary level. They will include square footage recommendations and equipment lists. The guidelines are intended for school planners, principals, teachers, parents, architects, board members, and other members of school planning committees.

**Table 4: Space Recommendations for Elementary Physical Education Programs From MSDE Physical Education Programs Facilities Planning and Design Guidelines (Draft)**

<b>Space Recommendations for Elementary Physical Education Programs from MSDE Physical Educations Facilities Planning and Design Guidelines (Draft)</b>	
<b>Spaces</b>	<b>Recommended Area</b>
Gymnasium for one class	1 @ 3,500
Teacher office	1 @ 120
Restrooms & Custodial	400 approx.
Indoor equipment storage room	1 @ 400
	4820 net square foot (nsf)
Assume net: gross=75% (n/g=0.75)	6,427 gross square foot (gsf) round to 6,500 gsf
Note additional outdoor facilities are recommended:  One (1) hard surface play area, approximately 4,000 square foot (sf) One (1) turf playing field, approximately 300' x150' = 45,000 sf, (1.03 acres)	

Table 5 provides the projected cost for the construction of a 6,500 gross square foot (gsf) gymnasium addition that would allow instruction in physical education that would not be impacted by lunch schedules or special programs.

**Table 5: Total Project Cost Estimate for 6,500 gsf Gymnasium Addition**

<b>Total Project Cost Estimate for 6,500 gsf Gymnasium Addition</b>		
Construction and Site:	6,500 gsf @ \$250.88 *per gsf	\$1,630,720
Construction Contingency @ 5%		\$81,536
Construction Cost Subtotal		\$1,712,256

A/E Services @ 7.5%		\$128,419
Equipment Services @ 7.5%		\$128,419
<b>TOTAL:</b>		<b>\$1,969,094</b>
<b>Round to:</b>		<b>\$1,970,000</b>

### Public School Construction Funding

School construction projects in Maryland are funded by the State and local governments through capital bond and operations funds. The Public School Construction Program (PSCP) was established in 1971 as an independent agency to ensure that all public school buildings in Maryland meet minimum design and performance standards in support of the educational programs they house. The mission of the PSCP is to achieve equity among school facilities across the State. Since the founding of the program the State has provided over \$4.8 billion in Capital Improvement Program (CIP) funding to assist local school systems with the construction of public school facilities as well as approximately \$1 billion through other construction funding programs.

To administer the PSCP the Board of Public Works (BPW) created the Interagency Committee on School Construction (IAC.) The IAC is composed of the State Superintendent of Schools (chairperson,) the Secretary of the Department of General Services, the Secretary of the Maryland Department of Planning, and two members of the public, one appointed by the Speaker of the Maryland House of Delegates and one appointed by the President of the Maryland Senate.

When the PSCP started, the State paid for architectural and engineering (A/E) fees and for moveable furniture and equipment in addition to the construction costs of the project. The State contribution was about 95-99% of the total project cost. Land acquisition was never eligible for State funding. In the mid-1970s the responsibility for A/E fees was shifted to the localities. In the mid-1980s the cost of moveable furniture and equipment was similarly shifted. Starting in the mid-1980s a shared State-local cost formula was implemented to determine the State's participation in eligible school construction costs. The formula took into consideration the relative wealth of a jurisdiction. The current formula takes into account local wealth, the number of children in the Free and Reduced Price Meal Program, status of the jurisdiction as a distressed county, enrollment growth above the State average, and local debt. It was most recently revised in 2007. The State share of eligible construction costs will range from 50% to 94% in FY10 through FY12. The formula will next be revised 2010 for projects submitted in the FY13 CIP.

Generally the amount of State funding is based on gross square foot (GSF) area per student formulas for the various types of schools – elementary, middle, high, and special centers and on the estimated construction cost per square foot for schools in a given year. The area per student ranges from 104 GSF per student for the largest elementary schools to 170 GSF for the smallest high school. These space allowances are sufficient for basic school facilities, but may not be large enough to cover some of the special subject classrooms and laboratories and support spaces for itinerant staff and small, unique programs. In FY10 the estimated budget cost for new school construction and site development is \$240.80 per GSF.

Local school boards and local county/city government are responsible for the remainder of the construction project costs. The school board may build a larger building than funded by the State at local expense. The construction contract is between the local Board of Education and the contractor. Costs borne by the local board and county/city government include site acquisition, design, testing, permits, furniture, equipment, off site work, and the cost of area in excess of the State approved limit.

For example, a new elementary school approved for 600 students will be eligible for State funding for 64,800 GSF (600 students x 108 GSF per student). It is up to the school board to determine how many classrooms, offices, and support spaces will be constructed and how large they will be. It is not unusual for a school board to determine the need to build a 70,000 GSF building to meet educational and programmatic needs. In this case, the additional 5,200 GSF of construction to bring it up to the Board's area requirement is 100% locally funded. On the other hand, an existing elementary school approved for 600 students that is only 60,000 GSF would be eligible for a State funded addition of 4,800 GSF to bring it up to the State gross area allowance of 64,800 GSF.

**Cost of Providing Adequate Facilities**

Table 6, provides a breakdown on the cost for building gymnasiums in school systems that have reported they do not have a designated gymnasium for physical education instruction.

**Table 6: Estimated Design, Construction and Equipment Costs to Add Gymnasium and Support Spaces**

<b>Estimated Design, Construction and Equipment Costs to Add Gymnasium and Support Spaces</b>			
<b><u>LEA</u></b>	<b><u># Elementary Schools w/o gyms as of 2/6/08</u></b>	<b><u>Construction Costs Only</u></b>	<b><u>Total Project Estimated Cost</u></b>
Allegany	2	\$3,420,000	\$3,940,000
Anne Arundel	26	\$44,460,000	\$51,220,000
Baltimore City	28	\$47,880,000	\$55,160,000
Baltimore County	0	\$0	\$0
Calvert	0	\$0	\$0
Caroline	1	\$1,710,000	\$1,970,000
Carroll	0	\$0	\$0
Cecil	1	\$1,710,000	\$1,970,000
Charles	4	\$6,840,000	\$7,880,000
Dorchester	0	\$0	\$0
Frederick	3	\$5,130,000	\$5,910,000
Garrett	6	\$10,260,000	\$11,820,000

<b>Estimated Design, Construction and Equipment Costs to Add Gymnasium and Support Spaces</b>			
<b><u>LEA</u></b>	<b><u># Elementary Schools w/o gyms as of 2/6/08</u></b>	<b><u>Construction Costs Only</u></b>	<b><u>Total Project Estimated Cost</u></b>
Harford	3	\$5,130,000	\$5,910,000
Howard	0	\$0	\$0
Kent	3	\$5,130,000	\$5,910,000
Montgomery	18	\$30,780,000	\$35,460,000
Prince George's	81	\$138,510,000	\$159,570,000
Queen Anne's	0	\$0	\$0
St. Mary's	0	\$0	\$0
Somerset	0	\$0	\$0
Talbot	0	\$0	\$0
Washington	12	\$20,520,000	\$23,640,000
Wicomico	3	\$5,130,000	\$5,910,000
Worcester	0	\$0	\$0
<b>Total</b>	<b>191</b>	<b>\$326,610,000</b>	<b>\$376,270,000</b>

The total cost to add 191 elementary gymnasiums is roughly \$376 million. That includes design services, construction, and equipment. To put that into perspective, the entire School Construction budget for calendar year 2007 was \$340 million. The governor has announced a proposed capital budget of \$260 million for school construction for fiscal year 2010.

### **Meeting the Challenge**

The available facilities were central to the discussion on increased physical education instructional time. The Task Force was able to visit several schools that provide physical education in a facility without a gymnasium. Of the schools visited, one school provides physical education in a cafetorium. Another school provides physical education without the use of a gymnasium or a space designated for physical education. The task force members were able to see physical education instruction provided through creative use of outdoor space, indoor space and available space in the classroom. However, providing instruction in this environment is not optimal to meet the state curriculum for physical education in which teachers strive to have students be physically active for at least half of the physical education period. It can be done, and is being done in many schools around the state, but school systems that provide a separate gymnasium specifically designed for physical education instruction best provide for the safety of all students and maximize the health and wellness of students.

To address the need for new construction or the improvement of existing physical education facilities, additional funding sources will be needed. The search by the task force for outstanding revenue sources to help defray the cost for facilities resulted in a limited number of sustainable funding sources. Most of the funding that is available is through grants and foundation monies.

Sustainable monies most often used is in the area of facilities construction are in partnerships associated with Smart Growth.

## **Defraying Facility Costs**

### **Smart Growth**

The State of Maryland adopted a Planning Act in 1992 that directs growth into existing population centers and away from rural resource areas. The Smart Growth and Neighborhood Conservation Act adopted in 1997 furthered the process by locating most State spending for capital projects in population centers. In August 2008, the Maryland Department of Planning published “Smart Growth, Community Planning and Public School Construction,” the 27<sup>th</sup> in their series of Models and Guidelines concerned with managing Maryland’s growth. These guidelines promote a community centered approach to school planning, location, and construction with an emphasis on the close integration of local government and school system master plans.

Smart Growth promotes the development of sustainable schools within planned growth and priority funding areas across the State. Under Smart Growth principles, schools are to be located in developed neighborhoods where existing or planned infrastructure, such as water, sewer, and transportation facilities, is available. Public schools support public health initiatives and active community environments by providing centralized facilities for social and recreational services. Walk-able schools contribute to fitness goals and reduce school bus transportation costs.

Shared use of school facilities is a key principle of Smart Growth. The Maryland State Department of Education surveyed local schools systems with respect to partnerships with local Recreation and Parks programs. All school systems report having agreements with local Recreation and Parks programs. Physical education facilities are frequently planned and built to be used by formal and informal local recreation programs as well as by the Board of Education. Outdoor playing fields are scheduled for youth sports leagues. Basketball courts are used by neighborhood teens on evenings and weekends. Tennis courts are filled with adult players after school hours. Many school systems have formal arrangements on the selection of sites to serve both school and park system needs. Several city and county government agencies contribute funds to the school system’s capital budget to pay for larger gymnasiums, additional storage, offices, or community activity rooms in new school buildings.

### **Interagency Partnerships – Some Model Examples:**

#### **Harford County**

Harford County School System has a partnership with the Department of Recreation & Parks to provide and maintain playgrounds, athletic and recreational facilities in the schools. There is a long-standing relationship, including both a daily working relationship and an official relationship covered by a memorandum of understanding. Their agreement covers capital purchases, design consultation, maintenance of facilities, landscaping and budget planning.

The Harford County School System has a five-year plan for athletic equipment and facilities. This plan includes budgeting (capital and operating, and the various funding sources), grant research and identification of alternative funding sources (grants from the county, grants from federal and state government, grants from private foundations). For example, the five-year plan has specifications on how to identify the need for new playground equipment, how to request a proposal from the three approved vendors, seeking community input on the needed equipment,

and landscaping by seeking grants from the Harford County Executive's beautification grant programs.

Harford County's Adapted Physical Education staff has developed safety guidelines for supervision where teachers are taught how to: 1) supervise students during recess; 2) supervise students on the playground in before and after care program; 3) select developmentally appropriate equipment for each age group; 4) conduct education programs on fitness; and 5) identify and resolve bullying and other inappropriate behaviors.

Part of the agreement between recreation and parks and the school system includes consultation on the size and scope of gymnasiums in schools. For example, in new schools or for major renovations, gymnasiums in elementary schools are built to the size of middle school gyms so that the school site can accommodate multiple physical education classes, larger area for bleachers, storage for athletic equipment and other fitness/recreational programs such as adult fitness classes, the performing arts, etc. With that objective in mind, Aberdeen Elementary School was renovated and the athletic facility includes a wellness center, walking track, and the facility is completely ADA compliant. They now hold fitness classes for seniors as well as students.

### **Prince George's County**

Prince George's County has a partnership with Maryland National Capital Park and Planning. Twelve of the centers in Prince George's County are directly connected to elementary or middle schools. Through the cooperative efforts of the County government, the Board of Education, and the Maryland-National Capital Park and Planning Commission, these recreation facilities are part of a unique community park/school center. Monies were provided for building these community centers by the Maryland-National Capital Park and Planning Commission. The community centers share gymnasiums and fitness rooms with some of the schools. Classrooms are sometimes shared with the schools, when they are available. Prince Georges County has twelve shared recreation facilities. The following are illustrative examples and descriptions of unique community park/school centers.

#### **Kettering/Largo Community Center**

431 Watkins Park Drive  
Upper Marlboro, MD 20774

Opened in 1998, Kettering/Largo Community Center is located next to Watkins Regional Park. Through the cooperative efforts of the County government, the Board of Education, and The Maryland-National Capital Park and Planning Commission, this recreation facility will be part of a unique community park/school center. The community center currently includes a gymnasium, multi-purpose room, exercise/fitness room, pre-school area, dance room, arts and crafts room, game room, offices, storage areas, and restrooms with showers. Perrywood Elementary School, currently under construction, will adjoin the community center. The building will include school use areas, community center use areas, and joint-use areas, and will operate uniquely as a facility that provides a variety of community services. In conjunction with construction of the school, outdoor recreation amenities will also be built at this site. Recreation programs and classes in the areas of sports, arts, fitness, dance, crafts, cooking, self-improvement, drama, games, hobbies, martial arts, music, and do-it-yourself instruction are among the activities offered at the center. The facility also hosts tournaments, clubs, camps, special events, workshops, drop-in programs, after-school programs, and cultural activities at different times. Pre-schoolers, children, teens, adults, and senior citizens will find a variety of recreation opportunities available at the center.

### **Deerfield Run Elementary School Community Center**

13000 Laurel-Bowie Road  
Laurel, MD 20708

This recreation facility is located within Deerfield Run Elementary School. The center shares the gymnasium with the school. In addition to the gym, the interior components of the center include a pre-school room, fitness room, conference room, game room, multi-purpose room, and two classrooms. Ball fields, a basketball court and play equipment are located outside on the school's property. Recreation programs and classes in the areas of sports, arts, fitness, dance, crafts, cooking, self-improvement, computers, drama, games, hobbies, martial arts, music, and do-it-yourself instruction are among the activities offered here. The center also hosts tournaments, clubs, camps, special events, workshops, drop-in programs, after-school programs, and cultural activities at different times. Pre-schoolers, children, teens, adults, and senior citizens will find a variety of recreation opportunities available at the center.

### **Baden Community Center**

13601 Baden-Westwood Road  
Brandywine, MD 20613

The newly renovated Baden Community Center is located within Baden Elementary School. The center has a new fitness room, new hardwood gym floor, storage area, and office space. Additionally, the center shares a pre-school classroom and multi-purpose room with the school. Playing fields are located on-site, adjacent to the school/center. Recreation programs and classes in the areas of sports, arts, fitness, dance, crafts, cooking, drama, games, hobbies, martial arts, music, and do-it-yourself instruction are among the activities offered here. The center also hosts tournaments, clubs, camps, special events, workshops, drop-in programs, and after-school programs. Children, teens, adults, and senior citizens will find a variety of recreation opportunities available at the community center. The center participates in the Xtreme Teens program every Friday and Saturday night from 7-10 pm.

### **Oakcrest Community Center**

1300 Capitol Heights Boulevard  
Capitol Heights, MD 20743

In the Fall of 2005, the Oakcrest Community Center opened as a unique community Park School/Center adjacent to the William Hall Elementary School. The facility includes a gymnasium, multi purpose room, state of the art fitness/exercise room, dance room, community room, offices and classrooms. Outdoor facilities will include tennis courts, playground, soccer and softball fields, and a basketball court. A wide variety of recreation programs and classes in the areas of arts, fitness, dance, computers, martial arts, creative dramatics, and sports are offered. After school programming, Xtreme Teens activities, summer and holiday camps are highlights of the programs offered for young citizens. Workshops, senior trips and fitness classes are among the offerings for adults. Year round Black History programs are offered along with other seasonal celebrations.

### **Potomac Landing Elementary School Community Center**

12500 Fort Washington Road  
Fort Washington, MD 20744

Located in Potomac Landing Elementary School, this community center includes a gymnasium (shared with the school), staff office space, a storage area, shared restrooms, and some use of classrooms within the school. Outdoor amenities at the site, which are shared with the school, include a football field, a basketball court, and play equipment. Recreation programs and classes in the areas of sports, arts, fitness, dance, crafts, computers, games, hobbies, martial arts, music,

and do-it-yourself instruction are among the activities offered here. The center also hosts camps, special events, workshops, drop-in programs, and cultural activities at different times. People of all ages will find a variety of recreation opportunities available at the center. The center participates in the Xtreme Teens program every Friday and Saturday Night from 7-10 pm.

### **Suitland Community Center**

5600 Regency Lane  
Forestville, MD 20747

Suitland Community Center, located on 5600 Regency Lane is connected to Samuel P. Massey Elementary School. Suitland offers special events, workshops, drop-in programs, and before and after childcare. This facility is complete with a state-of-the-art fitness room, gymnasium, outdoor basketball and tennis courts, and a large playground area. In addition, the center is equipped with game, computer, science and art rooms. The center participates in the Xtreme Teens program every Friday and Saturday night from 7-10 pm. Other amenities include a kitchen, multi-purpose room, and a conference room. A unique partnership with the Board of Education allows Suitland Community Center to better serve the entire community.

## **Alternative Funding Sources**

The following sources of revenue for school systems are competitive in nature and not sustainable. They do, however, offer opportunities for school systems to help defray the cost of providing additional resources to increase physical activity opportunities in schools.

### **Carol M. White Physical Education Program**

The purpose of the Carol M. White Physical Education Program is to provide funds to local educational agencies and community-based organizations including faith-based organizations. These funds are used to initiate, expand, and improve physical education programs both during and after school for students in one or more grades from kindergarten through 12 in order to make progress toward meeting State standards for physical education. These funds provide equipment, support, and the training and education of teachers and staff. In order to receive funding, each applicant must design and implement a program that clearly aligns to state standards for physical education and provides for one or more of the following elements:

- Fitness education and assessment to help students understand, improve or maintain physical well-being  
Instruction in motor skills and physical activities designed to enhance the physical, mental, or social or emotional development
- Development of, and instruction in, cognitive concepts about motor skills and physical fitness that support healthy lifestyles
- Opportunities to develop positive social and cooperative skills through physical activity participation  
Instruction in healthy eating habits and good nutrition
- Opportunities for professional development for physical education teachers to stay abreast of current research, issues, and trends in physical education.

The grants can be used for children K-12 to buy equipment or train new physical education teachers.

The Carol M. White Physical Education Program is sponsored by the United States Department of Education. The average first time award is about \$300,000. Districts which win continuation awards receive about \$200,000.

### **Baltimore Ravens All Community Team Foundation**

The Baltimore Ravens All Community Team Foundation (RACTF) is committed to improving, encouraging and enabling the healthy development of youth in the Baltimore area, as well as other parts of the state of Maryland. The RACTF continues the Ravens Plan in Motion project in 2008, providing grants of up to \$5,000 to qualifying nonprofit organizations that create and/or continue programs or projects that promote physical fitness and nutrition education.

The grant program continues the RACTF's commitment to increasing physical activity among area youth and seeks to encourage healthy youth activities. The RACTF will consider funding requests that meet the criteria listed below. Programs or projects must be directed at youth (5-18) and must promote physical fitness and/or nutrition education. Organizations that submit requests must be a 501 (c) 3 organization. The request must be for a program or project. The RACTF will not consider funding for the construction of buildings or fields. Programs or projects must take place in Maryland. Example programs and projects include after-school curriculum that features physical activity as its main component, initiating a walking club in a school or neighborhood, or purchasing fitness equipment (medicine balls, jump ropes, pedometers) for an existing program. Creative ideas, including enhancements to existing programs, are encouraged. In 2007, close to \$100,000 was disbursed to area nonprofits. Funds were used to support dance classes at two Baltimore City Police Athletic League centers, a wellness program for children with autism, and martial arts and yoga classes at an area YMCA. This award provides \$100,000 to non-profit organizations in the Baltimore metropolitan area with grants up to \$5,000 for each individual organization.

### **General Mills Foundation, Inc.**

The General Mills Foundation, in partnership with the American Dietetic Association Foundation and the President's Council on Physical Fitness, developed the Champions for Healthy Kids grant program in 2002. Each year since inception, the General Mills Foundation awards 50 grants of \$10,000 each to 501(c)(3) and 509(a) status not-for-profit organizations and agencies that develop creative ways to help youth adopt a balanced diet and physically active lifestyle. Applications for the 2009 Champions for Healthy Kids grant program are traditionally due January. In addition, the General Mills Foundation sponsors up to 50,000 young people each year to participate in the President's Challenge and earn the Presidential Active Lifestyle Award for their commitment to a physically active and fit lifestyle. The Presidential Active Lifestyle Awards recognize youth ages 6 to 17 for establishing and maintaining a physically active lifestyle. General Mills has invested nearly \$14 million dollars and reached more than 3 million youth across the country to improve their nutrition and fitness behaviors. This award provides \$500,000 to non-profit organizations in the United States with grants up to \$10,000 for each individual organization.

### **Keep Gym in School and the NFL Network**

The NFL Network believes that every student should have the opportunity to participate in quality physical education. The NFL has created a campaign to increase access to in-school physical activity and to teach skills needed to establish and sustain healthy lifestyles. Through Keep Gym in School, the NFL Network is providing grants directly to schools across the country to invest in children's physical education. The grants are being used to build new tracks and

playing fields, refurbish gyms and indoor PE facilities, purchase new equipment and supplement teacher salaries. Schools are nominated and can receive a \$10,000 Keep Gym in School Grant.

### **Bill and Melinda Gates Foundation**

At present, the Foundation provides funding for the following areas: Global Development Funding (Agricultural, Water, Sanitation, Libraries, Emergency Relief); Global Health Funding (HIV/AIDS, Malaria, Maternal, Newborn & Child Health [care], etc.), and United States Funding (Community Grants [Pacific Northwest only], Early Learning, High School and Postsecondary Education, Emergency Relief and Libraries). Source: Bill and Melinda Gates Foundation, Inc.

### **Michael & Susan Dell Foundation**

The primary goal Michael & Susan Dell Foundation is to support and initiate programs that directly serve the needs of children living in urban poverty. Priority is given to initiatives addressing children's health, education, and microfinance, as well as initiatives in India and Central Texas that specifically address the needs of children. Michael and Susan Dell established the foundation in 1999 with an endowment that has grown to more than \$1 billion. Based in Austin, Texas, the foundation initially focused on improving education and children's health in Central Texas; but the mission soon expanded to reach children globally. To date, the Michael & Susan Dell Foundation has committed almost \$450 million to assist nonprofit organizations working in major urban communities in the United States and India. Their vision is to focus on opportunities with the greatest potential to directly and measurably transform the lives of children living in urban poverty. The Foundation has concentrated its funding of projects that focus on improving academic achievement in urban areas, such as central Texas, Los Angeles California and Prince George's County Maryland. Source: Michael and Susan Dell Foundation, Inc.

### **Robert Wood Johnson Foundation Grants**

The Robert Wood Johnson Foundation focuses on the pressing health and health care issues facing our country. As the nation's largest philanthropy devoted exclusively to improving the health and health care of all Americans, the Foundation works with a diverse group of organizations and individuals to identify solutions and achieve comprehensive, meaningful and timely change. For more than 35 years, the Foundation has brought experience, commitment, and a rigorous, balanced approach to the problems that affect the health and health care of those it serves. They are guided by a fundamental premise: they are stewards of private funds that must be used in the public's interest.

## **Legislative Solutions**

### **Junk Food Tax**

One way many states have tried to impact the obesity epidemic is by taxing junk foods in an attempt to reduce people's consumption of these products. The National Governors Association's Center for Best Practices and the World Health Organization (WHO) have noted that taxes on junk foods are possible tools governments can use to influence consumer choices. According to the *F as in Fat* 2007 report seventeen states and D.C. currently have laws that tax foods of low nutritional value. They include: Arkansas, California, D.C., Illinois, Indiana, Kentucky, Maine, Minnesota, Missouri, New Jersey, New York, North Dakota, Rhode Island, Tennessee, Texas, Virginia, Washington, and West Virginia.

The report also found that these taxes are very controversial. “Proponents of the taxes argue that a tax on junk food could be used to fund a healthy eating and nutritional information campaign. Opponents argue that junk food taxes are regressive and unlikely to encourage people to substitute healthier foods for junk food. Some public health officials view the positive impact on taxing tobacco products in reducing smoking as a model for taxing snack foods and sodas to promote healthier behavior.”

According to the National Conference of State Legislatures (NCSL), no state imposes a “fat tax” (that is, a tax tied to fat content) on food. Seven states impose special taxes or fees on soda and soft drinks and ten states exclude certain high-fat and high-sugar edibles (‘junk food’), soda or other soft drink from their sales tax exemption.

**Taxes on soda or soft drinks:**

**Soda Tax**

Table 7 below identifies the seven states that have special states taxes or fees on soft drinks and soda.

**Table7: Separate Taxes and Fees on Soda and Soft Drinks by State**

<b>STATE</b>	<b>TAX OR FEE</b>	<b>PAID BY</b>
Arkansas	· \$ 2 per gallon of soft drink syrup or simple syrup sold in the state · \$ 0. 21 per gallon of bottled soft drinks or soda sold in the state or, if sold in powdered form, a per-package tax equal to \$ 0. 21 for each gallon of soft drink that may be produced from the package	Distributors, manufacturers, wholesale dealers
Missouri	Inspection fee of \$ 0. 003 per gallon of soft drinks manufactured or sold in the state, up to a maximum of \$ 0. 04 per month per case of 24 bottles or cans of a manufacturer's bottling capacity	Wholesale manufacturers and distributors
Rhode Island	\$ 0. 04 on each case (12 24 oz. cans) of beverage containers (soda, soft drinks, beer)	Retailer or consumer (collected by wholesaler)
Tennessee	1. 9% of gross receipts derived from soft drink business	Manufacturers, producers, and sellers of bottled soft drinks in the state and those importing soda into Tennessee for sale

<b>STATE</b>	<b>TAX OR FEE</b>	<b>PAID BY</b>
Virginia	Excise tax on gross receipts from soda sales as follows: <ul style="list-style-type: none"> <li>· \$ 50 if gross receipts are \$ 100,000 or less</li> <li>· \$ 100 if gross receipts are between \$ 100,000 and \$ 250,000</li> <li>· \$ 250 if gross receipts are between \$ 250,000 and \$ 500,000</li> <li>· \$ 750 if gross receipts are between \$ 500,000 and \$ 1 million</li> <li>· \$ 1,500 if gross receipts are between \$ 1 million and \$ 3 million</li> <li>· \$ 3,000 if gross receipts are between \$ 3 million and \$ 5 million</li> <li>· \$ 4,500 if gross receipts are between \$ 5 million and \$ 10 million</li> <li>· \$ 6,000 if gross receipts exceed \$ 10 million</li> </ul>	Wholesalers and distributors of carbonated soft drinks
Washington	\$ 1 per gallon (proportionate for fractional amounts) on each wholesale sale of syrup (concentrate added to water to produce carbonated soda)	Wholesalers
West Virginia	Excise tax on sales, handling, use, or distribution of bottled soft drinks and soft drink syrup in the state as follows: <ul style="list-style-type: none"> <li>· \$ 0. 01 on each bottle of 16 9/10ths fluid ounces or half a liter or fraction of bottled soft drink</li> <li>· \$ 0. 80 on each gallon of bottled soft drink</li> <li>· \$ 0. 84 on each four liters of soft drink syrup</li> <li>· \$ 0. 01 on each ounce or 28. 35 grams of dry mix used to make soft drinks</li> </ul> Tax cannot be collected more than once with respect to any bottled soft drink or soft drink syrup made, sold, used, or distributed in the state. Revenues earmarked for fund to build four-year school of medicine, dentistry, and nursing	Manufacturers, wholesalers, and retail dealers or any other original consignee of soft drinks or soft drink syrup

Source: National Conference of State Legislatures

In 2002, a California state senator proposed a soda tax identical to the Arkansas tax. The revenue would have been dedicated to a new California Child Health and Achievement Fund. The money in the fund would have been distributed as follows:

- 50% to school districts that stop selling soft drinks on school campuses
- 25% to the state health department for programs to promote nutrition and physical activity
- 25% to hospitals, emergency and trauma care, and clinics (California Senate Bill 1520 (2002 session))

The bill was enacted without the tax provision.

## Sales Tax Exemption Exclusions

Table 8 identifies the states that exclude certain "junk food" or soda from their overall sales tax exemption for food, thus making such foods taxable.

**Table 8: Food Excluded from Sales Tax Exemptions for Food by State**

STATE	SALES TAX RATE	NONEXEMPT FOOD AND BEVERAGES
Connecticut	6%	Soft drinks, soda, candy, and confectionery unless sold in school cafeterias, college dining halls, sororities and fraternities, hospitals, residential care homes, assisted living facilities, senior centers, day care centers, convalescent homes, nursing homes, or rest homes, or unless sold from a vending machine for less than 50 cents
Illinois	6.25%	Soft drinks
Indiana	5%	Candy, confectionery, chewing gum, soft drinks, soda, mineral water, carbonated water, and ice
Kentucky	6%	Candy, confectionery, chewing gum, soft drinks, soda, mineral water, carbonated water, and ice
Maine	5%	Soft drinks, iced tea, soda, water (includes mineral, bottled, and carbonated water), ice, candy, and confectionery
Minnesota	6.5%	Soft drinks, candy, and all food sold through vending machines
New Jersey	6%	Candy, confectionery, and carbonated soft drinks
New York	4%	Candy, confectionery, fruit drinks containing less than 70% natural fruit juice, soft drinks, and soda unless sold from a vending machine for less than 75 cents
North Dakota	5%	Candy, gum, carbonated beverages, soft drinks containing less than 70% fruit juice, powdered drink mixes, coffee, coffee substitutes, tea, cocoa, and cocoa products
Texas	6.25%	Carbonated and noncarbonated packaged soft drinks, diluted juices, ice, and candy
Washington	6.5%	Carbonated beverages, ice, bottled water

Sources: NCSL, Federation of Tax Administrators

# Recommendations

## Support Systems

- 1. Separate Gymnasium Facilities:** Future legislation on construction should include wording that describes a designated gymnasium for physical education and not a designated space for physical education.
  - Future legislation on construction should include wording that describes a **designated gymnasium for physical education** and not a **designated space for physical education**. A designated space allows for continued construction of a multipurpose room or cafeterium that does not satisfy the spatial needs of children in physical education to allow for an increase in time for physical education.
  - The Interagency Committee for School Construction (IAC) should establish regulations requiring all new elementary schools to include a designated gymnasium for physical education instruction. Such spaces would be required to have high ceilings and flooring and wall surfaces suitable for fitness sports and games.
  - From time to time the Board of Public Works (BPW) and the IAC have given priority to funding certain capital projects such as additions for full day kindergarten programs and renovations to high school science classrooms and laboratories. Typically funding for these initiatives comes from the larger total pool of capital funds and no additional capital funds for school construction have been provided. The BPW and IAC could establish a limited program to support the construction of gymnasium additions at elementary schools. The program could be limited by dollar amount, square footage, and/or fiscal year.
  - The BPW and the IAC establish maximum gross area allowances for school construction funding. The current allowances for elementary schools appear adequate to construct “multipurpose” rooms for physical education, school assemblies, performances, and food services. These allocations are not large enough to accommodate the construction of a separate gymnasium, a separate cafeteria, and a separate performance/assembly room at an elementary school. The BPW and the IAC could undertake a study and increase the elementary school area allowances.
  - School systems should be encouraged to enter into partnerships with local government and social service agencies to construct and operate joint use physical education and recreation facilities.
  - MSDE should complete and distribute the facilities guidelines for physical education programs currently in development and offer staff development activities to support their implementation.
- 2. Snack Tax:** Propose legislation that would provide sustainable revenue source to support increased physical activity and physical education initiatives through the imposition a tax levy such as a tax on snack foods.

Seventeen states and D.C. currently have laws that tax foods of low nutritional value. “Some public health officials view the positive impact on taxing tobacco products in reducing smoking as a model for taxing snack foods and sodas to promote healthier behavior.” *F as in Fat 2007*

Slots legislation was passed by popular vote on November 4, 2008. This along with other funding opportunities might provide additional sustainable revenues for physical activity and physical education initiatives.

# Task Force Advisability Recommendations

## Charge

**“The advisability of requiring all public schools in the State to provide a minimum amount of physical activity or physical education to students in the public school system each week;”**

## Findings

There is an urgent need for change. A healthy future for America’s schoolchildren largely hinges on bridging gaps in the amount of physical activity and physical education children are receiving in and outside the school day. The findings and recommendations that have been enumerated in this document represent an urgent “to do” list for the foreseeable future, not only for the school systems but for others who share in this commitment. Addressing the needs of our youth is part of the necessary process that leads to progress.

Real change has begun in some of our school systems, but it needs to be more uniform across the state. Short and long range realities alike demand policy, environmental, and behavioral change, as well as expanded communication and outreach. But longer term issues involve effecting systemic change, creating incentive structures for school leaders, health professionals, re-thinking the funding and purchasing patterns of school meals, solving of complex issues of school-day scheduling and, of course, working diligently to uncover further funding to support critical school wellness efforts. The bottom line is that, to fulfill the mandate of improving the health and wellness of our youth, change is still needed at all levels of the education system, and among a wide range of stakeholders such as school administrators, educators, school staff, parents, students, community, and other decision-makers. Schools cannot do it alone, and, to tackle wellness, they need broad, specific, and continuing support from all sides and all constituencies.

Although the work of the Task Force has come to an end, there is a realization that this issue is a societal issue with numerous partnerships necessary to address the prevention of obesity in our youth, rather than simply a school based issue. It is the responsibility of many organizations and agencies along with parents and health care providers to continue to work toward combating this epidemic. It is our sincere hope that everyone will continue to work collaboratively with State legislators and agencies to promote the health and well being of our youth.

The recommendation from a variety of health care advocates is that our youth have moderate to vigorous physical activity a minimum of 60 minutes each day. The Task Force proposes that half of this physical activity should occur when our children are in school.

The task force has developed the following list of recommendations based on the findings of the group. The recommendations have been divided into four categories, physical education, physical activity, fitness and wellness and support systems.

# Recommendations

Childhood obesity has become an urgent and expensive health problem in Maryland and the public schools have a significant role to play in its mitigation along with other partners in the community. The Task Force believes that adherence to the following recommendations, developed by the three subcommittees, will improve the health of Maryland's children and reduce the cost to the state for treating obesity-related illness.

## Physical Education

1. **Time:** Recommend a minimum 90 minutes of physical education per week, of which at least 50% of the time students should be engaged in moderate to vigorous activity.

## Other Physical Activity

2. **Recess:** Recess should provide a minimum of 20 minutes of physical activity daily for all elementary students.
  - a. This policy should be mandated in each system's Wellness Policy.
  - b. The policy requirements should prohibit withholding recess as a punishment.
  - c. During inclement weather provide opportunities for physical activity in the classroom.
  - d. The ideas for indoor and outdoor physical activities should be developed by a physical activity team, with the physical education teacher as one member of this team.
3. **Classroom:** Physical activity should be provided throughout the school day. Activity ideas should be developed and provided to classroom teachers so that physical activity opportunities can be provided across the curriculum.

## Fitness and Wellness

4. **Fitness Measurement:** Require schools to perform fitness measurement on students with differentiated instruction provided for students not meeting standards for fitness.

Fitness measurement is directly referenced in content standard 5, physical activity of the Physical Education Voluntary State Curriculum. The indicator states that students will have a fitness measurement of the health related components of fitness each year in grade four through high school. These fitness measurements should be used to develop personal fitness goals and select activities for the improvement or maintenance of healthy levels of fitness.

5. **Body Mass Index (BMI):** Investigate BMI assessment in schools for the purpose of surveillance and to determine the efficacy of obesity prevention and intervention programs.

BMI is the ratio of weight to height squared. It is often used to assess weight status because it is relatively easy to measure and correlates with body fat. The American Academy of Pediatrics (AAP) recommends that BMI should be

calculated and plotted annually on all youth as part of normal health supervision within the child's medical home.

School-based BMI assessment programs used for individual health screening purposes are not recommended unless there is careful consideration of privacy issues, adequate training, measurement techniques, parental notification, adequate evaluation, and the importance of linking families/caregivers with resources in the community.

- 6. Local School Wellness Policies:** Wellness policies must be developed, implemented and monitored and to include physical education, physical activity, and recess requirements.

Wellness Policies are a vehicle for addressing the issue of increasing physical activity and physical education time in the schools through local decision-making. Local school systems shall work through wellness policies to gather base line student fitness data to determine the merit for increased physical education and physical activity. Wellness improvement plans will be a part of local school improvement planning and/or included in local school system master plans with progress and challenges reported out to the local school boards of education. Local schools will address physical activity time and develop local school improvement plans.

MSDE has designed a Wellness Policy implementation and monitoring guide. The guide will provide school systems with a model framework to follow as they implement and monitor Wellness Policies. The guide will provide sample key goals for wellness policies with associated implementation and monitoring strategies. The guide is designed as a template for school systems to insert their specific policy language and support their policy implementation plan.

## Support Systems

- 7. Physical Education and Health Advisory Council:** Establish a Statewide Advisory Council for Maryland's Public Schools Health and Physical Education.

The State Superintendent of Schools should establish a health and physical education advisory council to assess on going progress on the recommendations of this report, provide direction for improving comprehensive health and physical education programs in the State, and revisit after three and five years the status of these programs. In particular the advisory council needs to examine and recommend policy on the monitoring of student fitness and wellness. This task force has recommended that the membership include parents, health organizations, including a member of the State Department of Health and Mental Hygiene, classroom and supervisory representatives from local school systems, and members of the medical profession who will broaden the perspective of this group and provide links to other legislative and government agencies.

- 8. Funding for a Permanent Physical Education Specialist Position:** Create a regular full-time State position and associated funding for a Maryland State Department of Education Physical Education Specialist Position.

The Maryland State Department of Education should be provided funding and a position identification number (PIN) for a permanent position of Specialist for Physical Education to guide the implementation of these recommendations.

9. **Separate Gymnasium Facilities:** Future legislation on construction should include wording that requires a **designated gymnasium** for physical education and not a **designated space** for physical education.

A designated space allows for continued construction of a multipurpose room or cafeteria that does not satisfy the spatial needs of children in physical education. The Interagency Committee on School Construction should establish regulations requiring all new elementary schools to include a designated gymnasium for physical education instruction. Such spaces would be required to have high ceilings and flooring and wall surfaces suitable for physical education instruction.

School systems should be encouraged to enter into partnerships with local government and social service agencies to construct and operate joint use physical education and recreation facilities.

MSDE should complete and distribute the facilities guidelines for physical education programs currently in development and offer staff development activities to support their implementation.

#### **Other Funding Sources:**

10. **Snack Tax:** Propose legislation that would provide sustainable revenue source to support increased physical activity and physical education initiatives through the imposition a tax levy such as a tax on snack foods.

Seventeen states and D.C. currently have laws that tax foods of low nutritional value. “Some public health officials view the positive impact on taxing tobacco products in reducing smoking as a model for taxing snack foods and sodas to promote healthier behavior.” *F as in Fat 2007*

Slots legislation was passed by popular vote on November 4, 2008. This along with other funding opportunities might provide additional sustainable revenues for physical activity and physical education initiatives. See pages 57-62 in the report for information on additional funding sources and grants.

# Resources

American Academy of Pediatrics, Policy Statement: Active Healthy Living: Prevention of Childhood Obesity Through Increased Physical Activity, Pediatrics 117:5 May 2006 pp 1834-1842

American Cancer Society, American Diabetes Association and American Heart Association Position Statement: FACTS : Learning for Life – Physical Education in Public Schools

American Cancer Society, American Diabetes Association and American Heart Association Position Statement: Physical Education in Schools- Both Quality and Quantity are Important

American Diabetes Association. Economic Costs of Diabetes in the U.S. in 2007. Diabetes Care, 2008, 31 (3):1–20.

Barr- Anderson, Daheia; van den Berg, Patricia; Neumark-Sztainer, Dianne; Story, Mary. Characteristics Associated with Older Adolescents Who Have a Television in their Rooms; Pediatrics 121; 4, April 2008 pp 718- 724

Child Nutrition and WIC Reauthorization Act of 2004, SEC.204. Local Wellness Policy. Public Law 108–265 118 STAT. pp 729-790

Code of Maryland Regulations 13A.04.13.01; Program in Physical Education Aug 6, 2001 p 120-18-1

Coe DP, Pivarnik JM, Womack CJ, Reeves MJ, Malina RM. Effect Of Physical Education And Activity Level On Academic Achievement In Children. Medicine & Science in Sports and Exercise. 2006; 38: 1515-1519

Dietz W. Health consequences of obesity in youth: Childhood predictors of adult disease. Pediatrics 1998;101:518–525.

Etnier J, Johnston R, Dagenbach D, Pollard RJ, Rejeski WJ, Berry M. The Relationships among Pulmonary Function, Aerobic Fitness, And Cognitive Functioning In Older COPD Patients. Chest, Official publication of the American College of Chest Physicians. 1999; 116: 953-960. Available at <http://chestjournals.org/cgi/content/abstract/116/4/953>.

F as in Fat, How Obesity Policies are Failing in America, 2008, Trust for America’s Health Available at <http://healthyamericans.org/reports/obesity2008/>

Fagot-Campagna A, Narayan KMV, Imperatore G. Type 2 diabetes in children: exemplifies the growing problem of chronic diseases [Editorial]. BMJ 2001;322:377–378.

Field T, Diego M, Sanders CE. Exercise In Positively Related To Adolescents’ Relationships And Academics. Adolescence. 2001; 36: 106-110.

Finkelstein E, Fiebelkorn I, Wang G. State-level estimates of annual medical expenditures attributable to obesity. Obesity Research 2004, 12(1); 18-24.

Freedman DS, Mei Z, Srinivasan SR, Berenson GS, Dietz WH. Cardiovascular risk factors and excess adiposity among overweight children and adolescents: the Bogalusa Heart Study. *J Pediatr*. 2007 Jan;150(1):12–17.e2.

Grissom JB. Physical Fitness And Academic Achievement. *Journal of Exercise Physiology online*. 8: 11-25.

Hanson T, Austin G, Lee-Bayha J. Student Health Risks, Resilience And Academic Performance In California. WestEd. Available at [http://www.wested.org/chks/pdf/ensuring\\_nclb.ppt](http://www.wested.org/chks/pdf/ensuring_nclb.ppt). Accessed on 1/8/07.

Johnston, et al., Action for Healthy Kids Report: Progress or Promises: What's Working for or Against Healthy School Fall 2008  
[www.actionforhealthykids.org/pdf/progress%20or%20Promises.pdf](http://www.actionforhealthykids.org/pdf/progress%20or%20Promises.pdf)

Metzler, M. A Classroom-Based Physical Activity And Academic Content Program: More Than A Pause That Refreshes? A Report to International Life Sciences Institute. Atlanta, GA. [www.ils.org](http://www.ils.org)

Must A, Anderson SE. Effects of obesity on morbidity in children and adolescents. *Nutr Clin Care* 2003;6:1;4–11.

Narayan KMV, Boyle JP, Thompson TJ, Sorensen SW, Williamson DF. Lifetime risk for diabetes mellitus in the United States. *JAMA*, 2003; 290:1884-1890.

National Association of Early Childhood Specialists in State Departments of Education. A position statement on young children and recess. 2002.

National Association for Sport and Physical Education (NASPE). 2001. *Shape of the Nation Report*.

National Association for Sport and Physical Education (NASPE). 2002. New study supports physically fit kids perform better academically.

National Association of Sport and Physical Education/Council of Physical Education for Children. 2001. Physical education is critical to a complete education.

Ogden, Cynthia; Carroll, Margaret; Flegal, Katherine; High Body Mass Index for Age Among US Children and Adolescents 2003-2006 *Journal of American Medical Association* Volume 299 :20, pgs 2401 -2443

Olshansky, S.J. Ph.D., Douglas J. Passaro, M.D., Ronald C. Hershov, M.D., Jennifer Layden, M.P.H., Bruce A. Carnes, Ph.D., Jacob Brody, M.D., Leonard Hayflick, Ph.D., Robert N. Butler, M.D., David B. Allison, Ph.D., and David S. Ludwig, M.D., Ph.D., A Potential Decline in Life Expectancy in the United States in the 21st Century *New England Journal of Medicine*, March 17, 2005, 352:1138-1145

Partnership to Fight Chronic Disease. *Almanac of Chronic Disease*, 2008. Accessed at [http://www.fightchronicdisease.org/pdfs/PFCD\\_FINAL\\_PRINT.pdf](http://www.fightchronicdisease.org/pdfs/PFCD_FINAL_PRINT.pdf) on November 5, 2008.

Pate, Russell R.; Davis, Michael; Robinson, Thomas; Stone, Elaine; McKenzie, Thomas; Young, Judith; Promoting Physical Activity in Children and Youth: A Leadership Role for Schools AHA Scientific Statement, September 12, 2006

Physical Activity Guidelines for Americans 2008  
<http://www.health.gov/PAGuidelines/guidelines/default.aspx>

Raviv S, Low M. Influence Of Physical Activity On Concentration Among Junior High-School Students. Perceptual and Motor Skills. 1990; 70: 67-74.

Sallis JF, McKenzie TL, Kolody B, Lewis M, Marshall S, Rosengard P. Effects Of Health-Related Physical Education On Academic Achievement: Project SPARK. Research Quarterly for Exercise & Sport. 1999; 70: 127-134.

Schwimmer JB, Burwinkle TM, Varni JW. Health-related quality of life of severely obese children and adolescents. JAMA, 2003, 289 (14): 1813-1819.

Serdula MK, Ivery D, Coates RJ, Freedman DS, Williamson DF, Byers T. Do obese children become obese adults? A review of the literature. Prev Med 1993;22:167-177.

Shephard R. Curricular Physical Activity And Academic Performance. Pediatric Exercise Science. 1997; 9: 113-126.

Swartz MB and Puhl R. Childhood obesity: a societal problem to solve. Obesity Reviews 2003; 4(1):57-71.

Task Force on Community Preventive Services. The guide to community preventive services: what works to promote health? New York, NY: Oxford University Press, 2005.

U.S. Department of Health and Human Services. The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity. Rockville, MD: Public Health Service, Office of the Surgeon General, 2001.

U.S. Department of Health and Human Services. Physical Activity Guidelines for Americans. Rockville, MD: Public Health Service, Office of Disease Prevention and Health Promotion, 2008.

Van Boxtel MP, Langerak K, Houx PJ, Jolles J. Self-Reported Physical Activity, Subjective Health And Cognitive Performance In Older Adults. Experimental Aging Research. 1996; 22: 363-379. Available at  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=8968708&dopt=Citation](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=8968708&dopt=Citation)

Wang G, Dietz WH. Economic burden of obesity in youths aged 6 to 17 years: 1979-1999. Pediatrics, 2002, 109(5):E81-1.

Wechsler H, Devereaux AB, Davis M, Collins J. Using The School Environment To Promote Physical Activity And Healthy Eating. Preventive Medicine 2000;31:S121-S137.

## American Heart Association Perspective

Michaeline R. Fedder, Director of Government Relations in Maryland  
American Heart Association

- ♥ **The Task Force was asked to study the advisability of requiring all public schools in Maryland to provide a minimum amount of PE or PA to students each week.**

The American Heart Association believes that it is definitely advisable because Childhood Obesity has become an urgent and expensive health problem in Maryland and the public schools have a large role to play in its mitigation.

- ♥ **The Health Reasons**

1. **Heart disease and stroke are the #1 and #3 causes of death and disability in Maryland. Obesity is a major controllable CVD risk factor. Physical inactivity and unhealthy diet are risk factors for obesity.**
2. **Childhood obesity has reached epidemic proportions and adversely affects low SES children and certain ethnic and racial minorities.**
3. **Obese children are at high risk of becoming obese adults.**
4. **Although genetic factors play a role in 20-30% of obesity, the major determinant is behavior, behavior that is learned early in life and practiced throughout life; one's "lifestyle." Children who, early in life, learn poor habits related to diet and physical activity and, early in life become overweight or obese, are very likely to become overweight or obese adults.**
5. **For those of us who live in the REAL WORLD, schools are the most logical venues for addressing the prevention of obesity, particularly in light of the disparities issues. All children have access to public schools starting at an early age, at an age when habits are forming. Schools are places in which to learn...and learning healthy behaviors is as important as learning reading and math.**
6. **For those who live in an IDEAL WORLD, the home is where healthy behaviors should be learned; "parents should be role models." But 25% of Maryland adults are overweight or obese rather than role models and some children just don't have conducive home-learning situations at all. And besides, we don't expect parents to teach children math or reading, so why should it be any different with health behaviors?**
7. **Enhanced Physical Education in schools is an evidence-based solution to increasing physical activity among children and contributing to the management and prevention of childhood overweight and obesity (as well as many other serious health problems.)**

### ♥ The Economic Reasons

Obesity is "an economic drain." In Maryland, adult obesity costs an estimated **\$1.5 billion per year**, with \$368 million paid for by Medicare and \$391 million paid for by Medicaid.

The cost of doing nothing about childhood obesity far exceeds the cost of implementing the "Perfect Physical Education Program."

1. As noted above, the annual medical costs related to obesity-related conditions among Maryland adults is now **\$1.5 billion**.
2. To implement the "Perfect Physical Education Program," the combined costs of staff; gym renovations; and design, construction and equipment for new gyms is **\$415 million**, of which a considerable amount is "one-time."

### Political Will Costs Nothing

One of the most wonderful experiences I had during the life of our Task Force was the site visit to two elementary schools in Prince George's County. One of the schools has no...(zero)...gym, is in session 6 hours and 10 minutes per day, (20 minutes less than in most other counties) and yet every child has recess for 30 minutes a day, every single day. Additionally, each child has 30 minutes of Physical Education (PE) 3 times a week every other week and on the alternate week, has PE for 30 minutes a day on 2 days. We observed a creative PE teacher conduct a wonderful session with a Pre-K class and then, when we met and spoke with the school's principal we understood why it all works. **THE PRINCIPAL BELIEVES THAT PE IS IMPORTANT AND HAS THE POLITICAL WILL TO MAKE IT WORK!!!** And by the way, the school ranks 6th highest in the county in its cognitive test scores. He finds the time for PE by requiring that there be no wasted minutes in the day. And space is found, as needed, in a variety of alcoves, hallways etc.

### The Moral/Ethical Reasons

According to Sir Michael Marmott of the Royal Society for Public Health in England, "IF WE KNOW WHAT TO DO AND DON'T DO IT, IT'S SINFUL."

**We know what to do and we must do it.**

Again, Childhood obesity has become an urgent and expensive health problem in Maryland and the public schools have a large role to play in its mitigation.

There is a connection between PE and the health of children. It is advisable for the public schools to provide a minimum amount of physical activity and physical education to students each week because it will make them healthier and reduce the cost to the state for treating obesity-related illness.