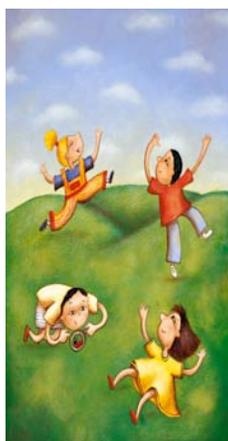


Ad Hoc Committee on Physical Education

State Board of Education Recommendations and Timeline on Quality Physical Education

December 2005



SBE Ad Hoc Committee on Physical Education

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SBE Ad Hoc Committee on Physical Education

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This document will continue to be revised and improved to meet the needs of the children of North Carolina.

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KEY

Throughout the document, you will find facts or points that directly relate to the document. In order to best understand, this simple key was established for your guidance.



Food For Thought:
Brain based research related to activity.

THINK ABOUT IT....

Real life examples establishing the need for quality physical education.

Executive Summary

In April 2005, in a motion by Lieutenant Governor Beverly Perdue, the North Carolina State Board of Education passed a revision of HSP-S-00 entitled the Healthy Active Children Policy, which mandated a minimum of 30 minutes of physical activity daily for students in grades K-8. The Healthy Active Children Policy requires that the physical activity be scheduled in at least ten-minute intervals three times a day or in a 30 minute time frame once a day. The policy further stipulates that the physical activity must be at a moderate to vigorous level so that students could gain appropriate health benefits and finally that physical activity cannot be taken away as punishment.

Additionally, in June 2005, Chairman Howard Lee established an Ad Hoc Committee on Physical Education to study the feasibility of implementing 150 minutes for physical education in elementary schools and 225 minutes of *Healthful Living Standard Course of Study* (health education along with physical education) into the middle school. The Ad Hoc Committee consisted of representatives of local and district level agencies, state organizations, businesses, and health organizations. The Committee was charged to review the challenges, barriers, and resources surrounding implementation of this policy option and to furnish the State Board of Education with recommendations and a timeline in which schools could create a school environment that supports physical education.

Various research data confirm that childhood obesity has more than tripled nationally from 1975 to 2004. Overall, the indicators that are used to measure childhood well-being annually reveal that the well-being of youth today is only slightly better than it was 30 years ago. Education on the benefits of a healthy diet, exercise, and a healthy lifestyle is identified as an area for improvement in American schools.

Meanwhile, the 2005 General Assembly passed a session law that requires the State Board of Education to pass statewide nutrition standards for school meals, foods, beverages, and snacks; to increase fruits and vegetables in school meals; and to decrease the total fats in foods served in schools to promote gradual changes in school nutrition. Likewise, the 2005 General Assembly ratified a bill that requires that the State Board of Education set statewide standards for products sold in vending machines during the school day. This legislation, sponsored by Senator Bill Purcell and Representative Verla Insko, came as a recommendation from the North Carolina Health and Wellness Trust Fund's Study Committee for Childhood Obesity. It addresses some of the nutritional components of a plan needed for schools to become more proactive in reversing this trend in childhood obesity.

Providing more physical education and healthful living is an intervention for controlling childhood overweight. Quality physical education can assist in academic performance, assist our students in global competitiveness (national security and economy), play a major role in the health care costs for NC as well as provide students with a global perspective through movement and social enrichment. Implementing interventions on childhood overweight does not come for free. It is loosely estimated that it would take approximately 100 million dollars to hire teachers and coordinators needed to implement a physical education/ healthful living intervention.

However, the costs **NOT** to implement interventions are far more striking. The Committee found evidence that total costs of physical inactivity, excess weight, diabetes, and low fruit/vegetable consumption in North Carolina adults was estimated to be **\$24.1 billion in 2003**.¹ However, if the percentage of adults who are physically inactive, overweight, obese, diabetic and eat less than five daily servings of fruits and vegetables could be reduced by a mere five percent, the statewide financial toll could be reduced significantly. **In fact, a five percent improvement could produce cost-saving benefits of about \$1.54 billion per year.**²⁰ Clearly, North Carolina has a lot to gain (or lose) by addressing this critical issue. This does not include the number of people who do get into the military and do not pass the physical tests.

The Committee identified five requirements necessary to implement the physical education policy statewide. These five requirements must be in place to mandate time allotments needed to address the physical needs of the intervention. These requirements are a “safeguard” to assure the intervention will have a chance at success. The five requirements are: *adequate indoor/outdoor facilities, communication, personnel, staff development and appropriate resources, and adequate time*. The Committee also delineated recommendations and constructed a timeline that would guide the State Board and LEAs to full implementation of the physical education/ healthful living policy by 2016.

Some of the Committee’s recommendations are that the State Board of Education should:

- identify appropriate and safe standards for physical activity per capita for facilities and ensure these standards are incorporated in specifications for new school construction;
- mandate that strategies to implement physical education appear in a School Improvement Plan (once funded and adequate space is recommended);
- expand physical activity opportunities for all schools;
- encourage LEAs to develop partnerships for cooperative facilities construction with schools, parks and recreation agencies;
- direct the Department of Public Instruction to develop and implement a communication plan and support system to ensure LEAs and other state organizations fully understand the State Board of Education’s Healthy Active Children (HSP-S-000) policy and current legislation related to physical education, activity and nutrition;
- encourage local partnerships with institutions of higher education and local agencies such as Department of Public Health, Cooperative Extension, Parks and Recreation and encourage more cooperation between Boards of Education and Boards of health at local level;
- develop “Best Practices” and/or “Successful Stories” brochures (and website information) regarding physical education, physical activity, and healthy nutrition to demonstrate how physical education requirements can be implemented;

SBE Ad Hoc Committee on Physical Education

- reaffirm the health of children as a priority of the State Board of Education;
- engage families as partners in their children's education and collaborate with community agencies and organizations to provide ample opportunities for students to participate in physical education and activity beyond the school day;
- hire highly qualified teachers for Healthful Living;
- provide an “ambassador” to work in the field and support physical education, physical activity, and nutrition for children;
- identify and develop methodologies to evaluate health and physical education programs, quality teaching, and student growth and include the assessment for Physical Education and Health Education on the School Report Card;
- direct DPI to work with institutions of higher education to encourage certification in healthful living;
- collaborate with North Carolina’s Congressional delegation to secure federal funding for physical education and physical activity programs;
- coordinate renewal credits with needs of the teacher and prioritize on physical education and physical activity;
- Support: 150 min. / week of elementary physical education with a certified specialist; 225 min./ week of middle school healthful living with a certified specialist; and 2 units of high school healthful living required to graduate and offer additional PE electives throughout high school.
- secure additional funds for LEA Healthful Living coordinators; and
- establish a standing Ad Hoc committee to revisit these recommendations yearly to monitor progress.

It was acknowledged consistently in committee discussions that in order for schools to have a more proactive role in addressing the national and state obesity epidemic, school cultures will have to change. Moreover, the school will have to collaborate with parents and community groups to heighten awareness of the health benefits of physical education, physical activity, and lifelong health habits.

The Committee affirms the importance of physical education, physical activity, and a healthy lifestyle from kindergarten through 12th grade.

Introduction

In April 2005, in a motion by Lieutenant Governor Beverly Perdue, the North Carolina State Board of Education passed a revision of HSP-S-00 entitled the Healthy Active Children Policy, which mandated a minimum of 30 minutes of physical activity daily for students in grades K-8. This activity should be in at least ten (10) minute intervals three times per day or in a 30-minute time frame. The policy stipulates that the physical activity must be at a moderate to vigorous level so that students can gain appropriate health benefits. Furthermore, the physical activity cannot be taken away as punishment.

Additionally, in June 2005, Chairman Howard Lee established an Ad Hoc Committee on Physical Education to study the feasibility of implementing 150 minutes for physical education in elementary schools and 225 minutes of Healthful Living Standard Course of Study (health education along with physical education) into the middle school. The Ad Hoc Committee consisted of representatives of local and district level school personnel, state organizations, businesses, and health organizations. The Committee was charged to review the challenges, barriers, and resources surrounding this policy option and to furnish the State Board of Education with recommendations and a timeline in which schools could create a school environment that supports physical education.

Various research data confirm that childhood obesity has more than tripled nationally from 1975 to 2004. Overall, the indicators that are used to measure childhood well-being annually reveal that the well-being of youth today is only slightly better than it was 30 years ago. Childhood obesity and childhood poverty appear to have worsened, and some researchers believe obesity is at an epidemic level in the United States. Childhood obesity is also linked to the rise in childhood diabetes, other childhood health issues, and later cardiovascular diseases. Education on the benefits of a healthy diet, exercise, and a healthy lifestyle is identified as an area for improvement in American schools.

The 2005 General Assembly passed a bill that was signed into law by Governor Easley that requires the State Board of Education to pass statewide nutrition standards for school meals, foods, beverages, and snacks; to increase fruits and vegetables in school meals; and to decrease the total fats in foods served in schools to promote gradual changes in school nutrition. Likewise, the 2005 General Assembly ratified a bill that requires that the State Board of Education set statewide standards for products sold in vending machines during the school day. This legislation addresses some of the nutritional components of a plan for schools to become more proactive in reversing this trend in childhood obesity.

Food For Thought:



Crossing the midline of your body can help organize brain function. Teaching students skills such as throwing and juggling can help.²

It was acknowledged consistently in committee discussions that in order for schools to have a more proactive role in addressing the national and state obesity epidemic, school cultures will

have to change. Recess, classroom physical activity, and intramural programs provide opportunities for physical activity, which help students stay alert and attentive in class and provides other educational, health, economic, and social benefits. However, it is only through a quality health and physical education class that children and youth will learn and master health related skills. It is extremely important to focus on the health of children and to hold schools accountable for progress.

As stated, in addition to changing to healthy nutritional options in schools in North Carolina, the school culture must also change to embrace and value physical activity, physical education, and health. Hiring highly qualified physical educators is recommended as one means to establish and foster the impact of physical activity for the school. The Committee also believes that institutions of higher education can help with efforts to increase child well-being in North Carolina. Healthier, physically active, and more emotionally balanced students will be assets for institutions of higher education.

THINK ABOUT IT....

If a child does not value health and fitness as child, what will change for them as they become adults?

Physical education and physical activity are integral to academic achievement and the emotional and physical health of our children. Research supports that healthy, active, fit children perform better academically in educational settings. When students are active, drinking plenty of water and eating healthily, they are balancing brain chemicals, hormones, and other system functions. When the brain is out of balance because of poor nutrition, dehydration, and lack of physical activity, the student is not in an optimal learning state. Movement, physical activity, and exercise improve readiness for learning appropriate for retention and retrieval of memory; these effects last as long as 30-60 minutes depending on the student³.

Physical activity can also help balance many chemicals in the brain and body. One specific chemical is serotonin. Students with too much serotonin are often very withdrawn and shut down. Students with not enough serotonin are often very active and disturb the learning environment for other students.³ Some students take medicine to control serotonin, while others may simply need physical activity. When the serotonin is balanced, students are more ready to learn. Physical activity and good nutrition are ways to balance serotonin and to help student maintain emotional well-being.

Food For Thought:



Physical balance, such as standing on one foot for short periods of time, can be an indicator of reading readiness. Systems of the brain, which interact to keep our balance, turn thinking into action, and coordinate moves. Physical education curriculum games and activities that stimulate inner ear motion like rolling, jumping and spinning are necessary to lay the foundation for learning!²

Changing the culture of our schools regarding the benefits of physical education and physical activity should include the entire school community; parents and staff should be encouraged to model an active, healthy lifestyle. Health and physical education curricula must be recognized as

essential to academic performance and to attainment of lifelong wellness and vitality. In order to accomplish this goal, the State Board of Education needs to establish expectations and set standards for physical education teachers to be highly qualified in their field. Timing and commitment by the Board are important to insure the well-being of youth in North Carolina.

The Basic Education Plan (BEP) and funding of the Healthful Living Coordinators (HLC) in every school district are examples of past efforts to address a balanced and equitable curriculum and create a focus on student health. These programs are still in place; however, their impact has been limited and healthful living remains an area of the curriculum considered to be nonessential and subject to displacement by concerns related to academic testing. This report acknowledges the difficulty in balancing numerous State and school priorities. However, health, physical education, and physical activity are basic requirements for students to learn other subjects. Keeping children safe, healthy, and ready to learn is a primary responsibility of the public schools of North Carolina.

There are current policies and practices in place that are influencing decisions in LEAs that do not support healthy lifestyles for students and staff. There are also variations across the state in facilities, curricula and time to teach the whole child. The ABC's has produced a major focus on academic accountability for some academic subjects while diminishing the attention to the non-core academic subjects. Without new SBE policy or attention, we doubt that many areas of the curriculum will receive adequate amounts of time in the school day.

Healthful living specifically addresses overweight issues that stress our economy. The health and wellness of children and youth, and the well being of our future citizens relate to our ability to attract businesses and grow our economy, the health and wellness of children and youth, and the well-being of our future citizens. In reality, when properly implemented, the *Healthful Living Standard Course of Study* is a n intervention program for addressing obesity in North Carolina.

This report seeks to provide a means for the State Board of Education and other policy makers to address the issue of physical education and healthful living for youth in North Carolina schools. The recommendations and information are based on the best practices, research, and wisdom of numerous national and statewide organizations that support the benefits of daily quality physical education. The goals for this report are derived from the results from a survey of Local Superintendents and the recommendations reflect the Committee's consensus on the best approach to aggressively address the overweight issue in schools.

Food for Thought



A lack of oxygen to the brain results in disorientation, confusion, fatigue, sluggishness, concentration, and memory problems. Vigorous activity in a physical education class gives the brain its needed nutrients.²

Chapter 1: Background Information

Fifty years ago in North Carolina every child participated in daily physical education; however, over time physical education in schools has been minimized substantially, and the price we bear today is jeopardizing health of our citizenry and the future of our economy.

Our nation's young people are increasingly becoming overweight. Lack of adequate physical activity and poor eating habits are noted as major contributors to the obesity epidemic. In part, **physical inactivity and poor eating habits threaten to reverse the progress Americans have made in reducing death from cardiovascular diseases, and they are on track to devastate our national health care budget.** As a nation and a state, we have known that there was an increase in youth obesity, and we have recommended more physical education and activity time in school. Yet consistently over the years, time for physical education and activity has been decreasing continually.

Between 1995 and 2004, the prevalence of North Carolina children who are overweight has increased 19.8 percent in 12 to 18 year olds; 62.2 percent in 5 to 11 year olds; and 65.3 percent in 2 to 4 year olds. Currently, approximately one in four 12 to 18 year old are overweight; approximately one in five 5 to 11 year olds are overweight; and approximately one in seven 2 to 4 year olds are overweight⁴

Fact Sheets on selected states and cities from the National Center for Chronic Disease Prevention and Health Promotion of the Center for Disease Control (CDC) indicate for high school students in the State of North Carolina that 13 % are overweight and 15% are in danger of becoming overweight⁵. Additionally, regarding physical activity:

- 39% had not participated in vigorous physical activity in the last 7 days
- 78% had not participated in moderate physical activity in the last 7 days
- 10% had not participated in any vigorous or moderate physical activity in the last 7 days
- 53 % had not enrolled in a physical education class
- 70 % did not attend a physical education class daily⁵

Furthermore, the National Center for Chronic Disease Prevention and Health Promotion report also states that the 2004 School Health Profiles reveal that among middle, junior and senior high schools in North Carolina, 48 percent require students to take two or more health education classes. Seventy-eight (73%) percent of schools teach 15 critical nutrition and dietary topics in a required health education course. Sixty percent (60%) of North Carolina schools teach 12 physical activity topics in a required health education course. Among schools that require physical education, 56 percent require students to take two or more physical education classes⁵.

The data for physical education and healthy nutrition revealed in the CDC report are similar for most states. In South Carolina, for example, 82 percent of their students did not attend a physical education class daily, and 13 percent had not participated in any vigorous or moderate physical activity in the last seven days. In Georgia, 78 percent of their students did not attend a physical education class daily, and 13 percent had not participated in any vigorous or moderate physical activity in the last seven days. The survey's results are very similar for Tennessee,

Kentucky, and Arkansas. North Dakota appears to have fewer students categorized as overweight (9 percent) or at risk at becoming overweight (11 percent), and 63 percent did not participate in daily physical education⁵.

Currently there are approximately 26 states with legislation enacted this past year on physical activity while 23 states have legislation on physical education.⁶ Prior to this legislative year, approximately 38 percent of the states had laws related to physical education and activity.

Healthy People 2010, the national health objectives for the decade, identified physical activity as one of our nation's leading health indicators. Across the country, national and state organizations are enhancing efforts to promote participation in quality physical education, physical activity and sports among young people. This is a critical national priority and can be seen in the language of legislative bills across the United States, in the National Association for Sport and Physical Education (NASPE) document, "Shape of the Nation" and in the formation of national organizations as partners to promote more physical education in schools. The conclusion that can be drawn from all the studies and legislative trends is that it is critical that children and youth are exposed to quality physical activity, quality physical education and quality health education on a regular basis for the future of our country. This exposure will hopefully influence the economic impact of health care costs that are beginning to soar and the quality of life and future of our citizens.

Section 1: Background Information on the SBE Committee on Physical Education

Survey of Local Superintendents

At the request of the Ad Hoc Committee on Physical Education, the North Carolina Association of School Administrators (NCASA) took a lead role in administering an online survey to North Carolina school superintendents. The Committee felt it was important that the superintendents have an opportunity to furnish recommendations and feedback on the physical education requirement. The survey questions were generated by the Committee to guide them in their task to provide a report and timeline to the State Board of Education.



There was a 38 percent response rate on the survey. However, every geographic region was represented. There was also a good representation from large, small, urban and rural schools. Because of this representative distribution, numbers were generalized to estimate the number of teachers that need to be hired and the number of facilities that need to be provided. Comments from the survey indicate that the superintendents believe that the physical education requirement is an unfunded mandate. The categories for the requirements and recommendations in the report are based on the concerns of superintendents regarding time, personnel, facilities, equipment, supplies, and staff development. Overall, it appears that most school administrators support more health, physical education, and physical activity during the school day; however, they

perceive that the State Board of Education has a clear mandate focused on academic performance as an exclusive core priority.

Section 2: Physical Education and Three R's

Nearly a year ago, Chairman Howard Lee appointed Board Member Kathy Taft as chair of the Academic Rigor, Relevance, and Relationships Ad Hoc Committee. This Committee has been extremely active in meeting with diverse stakeholders to define academic rigor and to delineate roles for teachers, administrators, and students to insure that academic rigor is the goal for all schools in North Carolina. Because of the work of the Rigor Committee, the Board adopted the statement: "All students will graduate from a rigorous, relevant academic program that equips them with the knowledge, skills, and dispositions necessary to succeed in both post-secondary education and 21st Century careers and to be participating, engaged citizens."

Academic rigor is based on expectations and standards established for students and staff that ensure that students demonstrate a thorough, in-depth understanding and mastery of challenging and complex curricular concepts across all content areas.

Academic rigor and relevance are based on expectations that ensure that all students develop the capacity to master content that is complex and challenging. In every subject, at every grade level, instruction and learning must include commitment to a knowledge core and the application of that knowledge core to solve complex real-world problems."²⁵

Using the guidelines established by the SBE regarding the 3R's, the Committee observed that:

Relevant – This committee and current research acknowledges that one's health is relevant to the success of both academic performance and the economy. Additionally, it is necessary to succeed in both post-secondary education and 21st century careers and to be participating, engaged and productive citizens.

Rigor - Not all physical education is quality physical education but when properly implemented, it is more than sport, physical activity or fitness. The obesity epidemic has illustrated the need for a more rigorous Healthful Living Standard Course of Study. With evidence provided by the Youth Risk Behavior Survey (YRBS) and other surveys, a revised Healthful Living Standard Course of Study can provide this rigor. A revised curriculum, which will be proposed later, will examine individuals and the society in which they live. Healthful Living is the only course that addresses all components of wellness.

Yet, rigor for Healthful Living must be very personally oriented. In the revised curriculum, students will investigate their health and how to improve their quality of life. Such an examination is purposeful and life changing when implemented correctly. Typically students will research information and develop plans for a healthy lifestyle based on society, genetics, family history, physical skill, evidence-based concepts and guiding principles of health education and exercise science. Through active participation students can reap the benefits of this rigorous examination later in life when health maintenance is of key concern.

Healthful Living can incorporate Honors level courses through the correlates of the sciences of biology, biomechanics, physiological, and sociological aspects of activity and sport, anatomy

and medical science curriculums. These courses could also be helpful to higher education study and careers in personal training, medicine, athletic training, sport and event management as well as teaching and coaching.

Relationships - Affective and psychomotor domains are an integral part of a quality physical education class. Students who participate in physical activity experience social development, goal setting, problem- solving, self-efficacy, and real world relationships. Relationships are built between teachers and students as well as between students in physical activities. Communities are often involved in physical education classes, events, and after school activity through providing shared resources.

The three R's will be evident throughout this report.

***WE NEED TO ASSURE THAT PHYSICAL EDUCATION
MEETS THE STANDARDS OF ACADEMIC RIGOR.***

Section 3: Clarification of Terms

There are specific terms that are critical in order to gain perspective of the importance of the obesity issue as it relates to schools. The following are a few of these terms and their definitions.

What are the Differences in Physical Education and Physical Activity?

There is a distinction between physical education and physical activity, yet many people use them interchangeably.

Physical Education is defined as a planned, sequential program of curricula and instruction that helps students develop the knowledge, attitudes, motor skills, self-management skills and confidence needed to adopt and maintain physically active lifestyles.

The physical education setting, whether the gym, field, or multipurpose room, is the classroom in which the curriculum of physical education is conducted and is taught by a certified physical education specialist. This class should be treated with the same level of professional concern as other learning environments.

DID YOU KNOW?

North Carolina law permits schools to apply for a waiver to allow for large class sizes in the physical education setting; however,

North Carolina building regulations are based on 25 students/class with 2 teachers in the physical education class setting of a full size gym area.

Physical Activity is defined by the Centers of Disease Control and Prevention (CDC) as any bodily movement produced by skeletal muscles that result in energy expenditure.⁷

Regular physical activity in childhood and adolescence improves strength and endurance, helps build healthy bones and muscles, helps control weight, reduces anxiety and stress, increases self-esteem and may improve blood pressure and cholesterol levels. *Exercise* is a subset of physical activity that is planned, structured and

repetitive and is done to improve or maintain physical fitness.⁷ Physical activity and exercise is the application of what is learned in physical education class and can have larger class size with proper supervision.

Children need **time** to learn and **practice** to master basic locomotor skills to become active adults. In order to master skills and knowledge, students benefit from time and practice with a specialist in the area of physical education.⁸

THINK ABOUT IT....

How many children go home after school and go outside to play rather than sit in front of a video game or TV?

Not all physical education is quality physical education. As we move forward to assure access to PE and PA, we need to assure the program offerings meet the rigor of quality in all respects. A quality physical education program would include an environment in which:

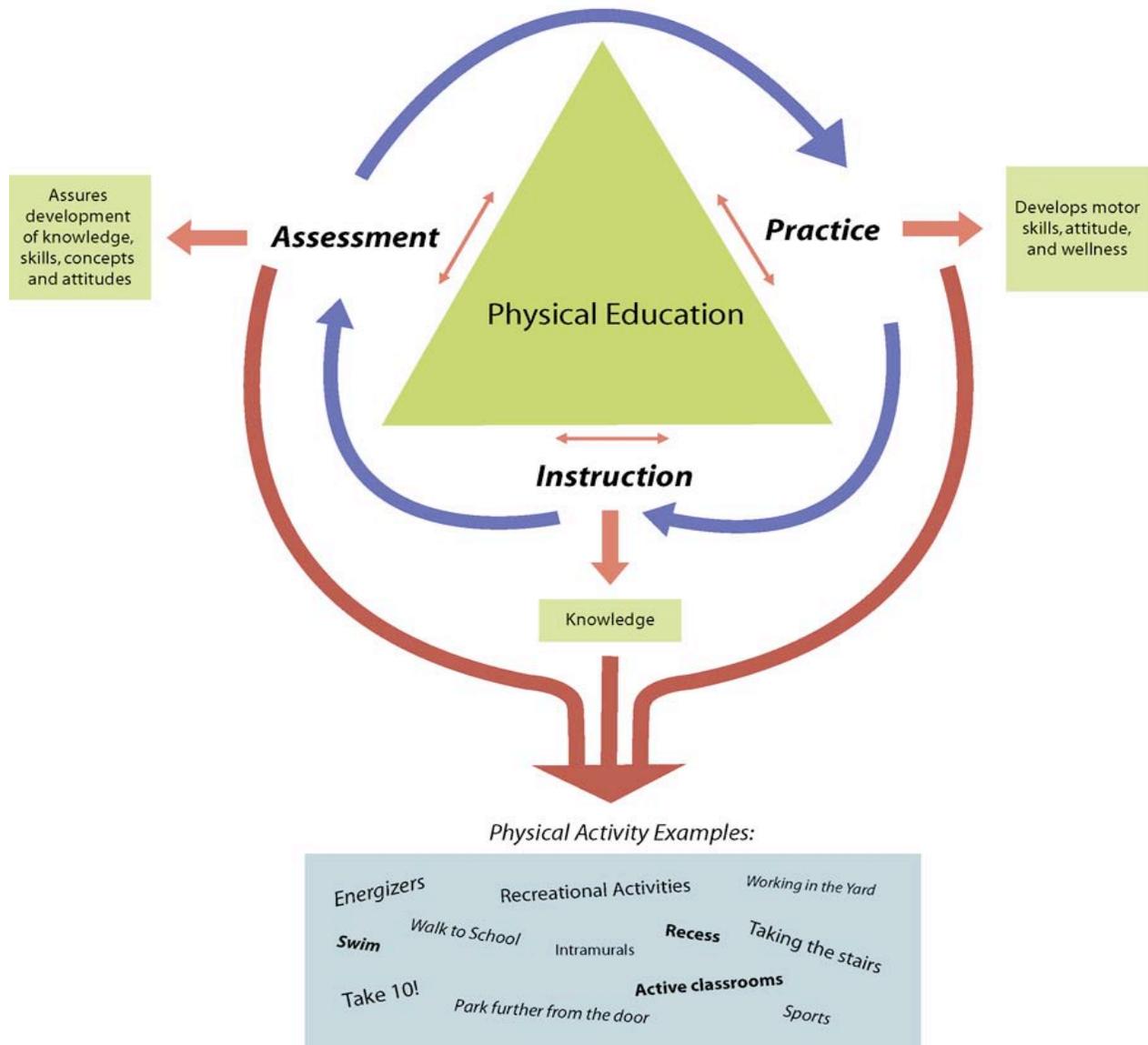
- Curriculum aligns with national standards for physical education;
- Children are given the opportunity to learn with appropriate time and space for practice and with appropriate supplies;
- Children are taught by a certified specialist;
- Children are instructed and assessed in the cognitive, affective and psychomotor domains.

The *Move More: Physical Activity Standards in School's* document was designed to assist schools in changing their environments and policies to increase both physical activity and physical education opportunities for students.⁴ The tools in the document can assist schools and local leaders to develop quality physical education and physical activity programs.

Physical Activity IS A BEHAVIOR.

Physical Education IS A CURRICULUM that helps create and support physical activity.

Quality physical education leads to a lifetime of physical activity.



Physical Education is instruction, practice and assessment all together while physical activity is any type of movement.

What is the relationship between physical education and athletics?

While athletics are a valuable aspect of school life, athletics are extracurricular activities and do not promote participation by all students. Physical education can enhance interest in athletics. Athletics are not a substitute for physical education but contribute valuable additional physical activity time for those involved students. Physical education will teach many skills and a variety of knowledge while athletics typically focuses on one sport.

What is Healthful Living?

Healthful Living is a combination of health education and physical education. The two courses should complement each other.

The *North Carolina Healthful Living Standard Course of Study* is a curriculum that addresses social development, character education, self-esteem, decision-making and the importance of physical activity throughout a lifetime. Effective delivery in the classroom addresses diversity, sharing, and personal development as well as many other issues. Health education emphasizes the value of physical activity and lifetime fitness. Students will learn how to balance proper nutrition with physical activity for ideal weight management. Physical education delivered in a quality environment emphasizes student learning and the mastering of skills which enable individuals to be physically active for a lifetime. Physical education extends beyond physical activity. This is an important distinction.

Self-esteem is an essential piece of the healthful living curriculum. Students will develop and practice skills that enhance a positive self-esteem through the *Healthful Living Standard Course of Study*. Research also demonstrates that increasing skill levels in the physical education classroom yields higher self-esteem. When the concepts of these areas are integrated and well taught, the health and well being of students can be enhanced significantly.

Coordinated School Health Programs (North Carolina Healthy Schools)

The goal of North Carolina Healthy Schools is to create a working infrastructure between education and health to enable schools and communities to create a Coordinated School Health Program. A model school health program includes all eight components:

- Comprehensive School Health Education
- School Health Services
- A Safe Physical Environment
- School Counseling, Psychological and Social Services
- Physical Education
- Nutrition Services
- School-Site Health Promotion for Staff
- Family and Community Involvement in Schools

North Carolina Healthy Schools focuses on improving the health of students and staff by providing coordination and resources in eight component areas of school health. With all of these components in place and working together, students will be healthier in school, in class, and ready to learn. In healthy schools, children are more alert, more focused on learning, and miss less school. They not only learn better, but also learn lifelong healthy behaviors to prevent the leading causes of death in North Carolina: heart disease, stroke, and cancer.

Chapter 2: The Case is Evident

Public schools are environments in which peers, staff, and rules bring to bear astonishing influence on student behavior. Schools face many challenges in trying to implement additional physical activity into an already crowded school day. With No Child Left Behind, schools are understandably pressured to value performance of academic core areas. The addition of physical education can add more pressure to an already crowded day. There are concerns among superintendents and other educators that the focus on specific disciplines has come at the expense of a well-rounded and balanced curriculum. It is because of these challenges that the North Carolina State Board of Education chose to study these issues and develop a plan to assist schools in supporting physical education. This chapter will make the case for more quality physical education in today's NC schools.

Section 1: Addressing the Achievement Gap and the Health Disparities Gap

The Health Disparities Gap: Cardiovascular disease (CVD), primarily heart disease and stroke, causes more deaths in Americans of both genders and all racial and ethnic groups than any other disease.⁹ It is also one of the leading causes of disability in the United States. CVD costs an estimated \$300 billion annually as measured in health care expenditures, medications, and lost productivity due to disability and death.⁹

Overall, minority and low-income populations have a disproportionate burden of death and disability from CVD. African Americans have the highest rate of high blood pressure of all groups and tend to develop it younger than others.⁹ Studies have shown that socioeconomic status, reflected in income and education, underlie a substantial portion, but not all, of the higher rate of heart disease in minority populations.⁹

The target date for eliminating CVD disparities is 2010. The Centers for Disease Control and Prevention (CDC) and other public health agencies will continue efforts to reduce the overall death rates from heart disease and stroke and disparities among all racial and ethnic groups.

Two goals have been set:

- Reduce deaths from heart disease among African Americans by 30 percent
- Reduce deaths from strokes among African Americans by 47 percent.⁹

Public health agencies also aim to reduce heart disease deaths among certain American Indian tribes, selected Asian American ethnic populations, and Hispanic or Latino subgroups that have death rates higher than the national average.⁹

The prevalence of overweight among children aged 6-11 has more than doubled in the past 20 years, increasing from 7% in 1980 to 16% in 2002.^{10, 11} Children and adolescents who are overweight are more likely to be overweight or obese as adults.^{12,13,14} Furthermore, overweight adults are at increased risk for heart disease, high blood pressure, stroke,³ diabetes, some types of cancer, and gallbladder disease.³

Physical education teaches that the benefits of physical activity will help reduce CVD disparities. Physical activity reduces the risk of premature mortality in general and of coronary heart disease, hypertension, colon cancer, and diabetes mellitus in particular.¹⁴ Regular physical activity in

childhood and adolescence improves strength and endurance, helps build healthy bones and muscles, helps control weight, reduces anxiety and stress, increases self-esteem, and may improve blood pressure and cholesterol levels. Positive experiences with physical activity at a young age help lay the basis for being regularly active throughout life.¹⁵

The Academic Achievement Gap: In 2003, more than one-third of high school students did not regularly engage in vigorous physical activity and only 28% of high school students attended physical education class daily. Participation in physical activity declines strikingly as children age.¹⁶

In North Carolina elementary and middle grades in 2003-04, 89.2 percent of white students scored at grade level or better while 67.7 percent of black students did the same. Percentages at or above proficiency for other racial groups are as follows: Asian, 88.6 percent; American Indian, 73.6; Hispanic, 71.7; and multi-racial, 84.8.¹⁷

Table 1 shows the same student groups with health needs are the same student groups performing lower on academic performance tests.

Table 1: Observation of Academic Performance Data and Health Disparities Data.

2003 – 04 High School Comprehensive Multiple-Choice Test Results Percent of Students At or Above Achievement Level III in ¹⁸			North Carolina 2003 Youth Risk Behavior Survey* High School ¹⁹	
Student Subgroup	Reading	Math	Percentage of Students Who Participated in NO Vigorous or Moderate Physical Activity During the past Seven Days	Percentage of Students Who Are At Risk For Becoming Overweight
Black	45.95	51.4	13.2	15.0
Hispanic	46.4	57.05	12.7	25.6
White	76.15	81.5	7.7	14.1
All Students	65.8	71.2	9.7	14.7

*CDC only collects YRBS ethnicity data for White, Black, Hispanic and other.

A review of the data on academic performance and physical activity reveals that it is the same student groups that are scoring lower that are most at risk for heart disease and diabetes. With the link between academic performance and physical activity, a strong case is made to protect more time for quality physical education? Furthermore, the activities through a quality physical education class can ensure students learn skills and knowledge while conditioning the brain to learn other academic courses.

Section 2: Dollars and Sense

Healthful living is a health intervention for students and our health care system. According to a study commissioned by Be Active North Carolina, the total costs of physical inactivity, excess weight, diabetes, and low fruit/vegetable consumption in North Carolina adults was estimated to be **\$24.1 billion in 2003**.²⁰ However, if the percentage of adults who are physically inactive, overweight, obese, diabetic and eat less than five daily servings of fruits and vegetables could be reduced by a mere five percent, the statewide financial toll could be reduced significantly. **In fact, a five percent improvement could produce cost-saving benefits of about \$1.54 billion per year.**²⁰ Clearly, North Carolina has a lot to gain (or lose) by addressing this critical issue.

What about our youth?

There is evidence suggesting that physical inactivity, excess weight, and type II diabetes are major risk factors in school-age children for cardiovascular disease,^{21,22,23} depression²⁴ and anxiety, and musculo-skeletal strains and sprains.^{25,26,27}

According to a second study by Be Active North Carolina, the combined direct and indirect costs of physical inactivity, type II diabetes, and excess weight among North Carolina youngsters was estimated to be over **\$38 million** in 2003. Direct and indirect medical costs accounted for \$9.53 million and \$28.63 million, respectively, in 2003.²⁸

Direct medical costs are those inpatient and outpatient claims associated with medical conditions in the following areas:

1. Musculo-skeletal (i.e. arthritis, low back pain)
2. Circulatory (i.e. cardiovascular disease, hypertension)
3. Metabolic/endocrine/nutrition (i.e. diabetes, impaired immune response)
4. Mental (i.e. depression, anxiety)
5. Others (i.e. sleep apnea, impaired respiratory function)

Indirect costs – *which can be several times greater than direct costs* - reflect absences related to conditions tied to specific risk factors, lost work productivity and wages for parents attending to sick youngsters, stress-related illnesses incurred by parents due to such care-giving, and other costs that are eventually borne by one or more stakeholder groups.^{29,30}

The Cost of Doing Nothing

If we do nothing, the cost for the risk factors addressed above could easily increase by nearly 50% over the next five years. This is based on the fact that direct and indirect costs will inevitably increase due to North Carolina's population growth, high risk factor prevalence and, of course, medical care inflation. For example, if medical care costs continue to rise at least 8.38% per year,¹⁴ then selected risk factor-related costs will increase from **\$39 million in 2003** to more than **\$ 57 million in 2008** or a cumulative [5-year] increase of nearly 50%.²⁰ *Note that the preceding medical inflation rate (8.38%) is quite conservative and reflects less than one-half the medical inflation rate used in the adult cost analysis (18.28%).*

Can Achieve a Modest Improvement?

According to public health experts, the incidence of overweight, inactivity and type II diabetes can conceivably be reduced by at least five percent. *Consequently, the statewide financial toll from these potentially modifiable risk factors in school-age children could be reduced an average of nearly \$2.5 million per year.*²²

What Will This Mean for North Carolina Employers and Workers?

To put this into proper perspective, consider overweight and obesity alone. An overweight young adult in North Carolina will incur more than \$22,000 in direct medical care expenses due to excess weight. If today's generation of school-age children exhibit overweight and obesity patterns similar to their parents – perhaps even at a higher rate if the current trend continues - we can expect that **each overweight or obese child in North Carolina will consume well over \$200,000 in direct medical care expenses due to excess weight in their lifetime.**²⁰

It is important to note that incidence and prevalence rates used in this cost analysis were generally conservative. Consequently, cost estimates assigned to each of the selected risk factors (a) are conservative, (b) do not reflect the full financial cost of each risk factor and, perhaps, most significantly, (c) do not reflect the full potential cost-savings projected with a reduction in any of the targeted risk factors. Nonetheless, this cost analysis shows that each of the targeted risk factors – individually and collectively – have profound health and financial consequences on North Carolina's citizens and economy.

Obviously, North Carolina's schools and communities, individually and collectively, have a huge stake in promoting healthier lifestyles among our children and adolescents in order for them to achieve at higher academic standards and prepare for an increasingly competitive world. One of the most effective ways to boost physical activity levels in our youngsters and reduce their risk for overweight, obesity, and type II diabetes is through **daily physical activity and sufficient physical education.** Overall, these efforts can lead to a brighter future for North Carolina's children and adolescents who can, reap significant *health and economic* dividends by living a healthy and physically active lifestyle.

THINK ABOUT IT....

Do adults without activity skills and fitness knowledge value adult activity?

The Value of Physical Education in Dollars

The State Board of Education Ad Hoc Committee on Physical Education developed five (5) recommendations for the State Board of Education to consider and implement. With these five recommendations a cost factor must be considered in order to have this physical education policy function as intended. There are many components that need to be in place to support and sustain efforts to reach maximum capacity.

Recommendation three is to provide personnel to implement the quality physical education and healthful living programs that would be mandated. This would include approximately 115 Healthful Living Coordinators and approximately 1750 teachers.

There is obviously a connection to addressing the health of our North Carolina population and our economy as it relates to health care costs. The North Carolina economy can save nearly **1.54 billion dollars** per year in health care costs and loss productivity, which more than pays for the implementation of quality health and physical education programs.

Section 3: Global Competitiveness

Our North Carolina students need to be provided with the 21st Century Learning Skills to compete in a global economy and job market. Will North Carolina's citizens be able to compete in the global economy? The staggering human and financial cost to employers and citizens due to inactivity, overweight/obesity, and poor diet is clear. Legislators and policymakers are paying more attention to the effects of poor health on economic development and North Carolina's ability to attract and keep viable business and industry in our state. What companies will want to locate in our state if profits will be 'eaten up' by higher health care costs due to poor health?

The SAS Institute highlights the benefits of staff wellness in communication on its website which states:

"With health care costs soaring, many employers are being forced to cut programs and benefits or relocate their companies. These are factors of the new economy. pass the financial burden onto their employees. SAS believes that having onsite health care, and even expanding it, is an alternative that benefits the company's bottom line.

Established in 1981, the SAS Health Care Center logged nearly 36,000 patient visits in 2002, and with the additional resources and capacity, SAS expects that number to increase significantly. The cost of construction, staffing and equipment ran to seven figures, but the company sees it as a smart business investment.

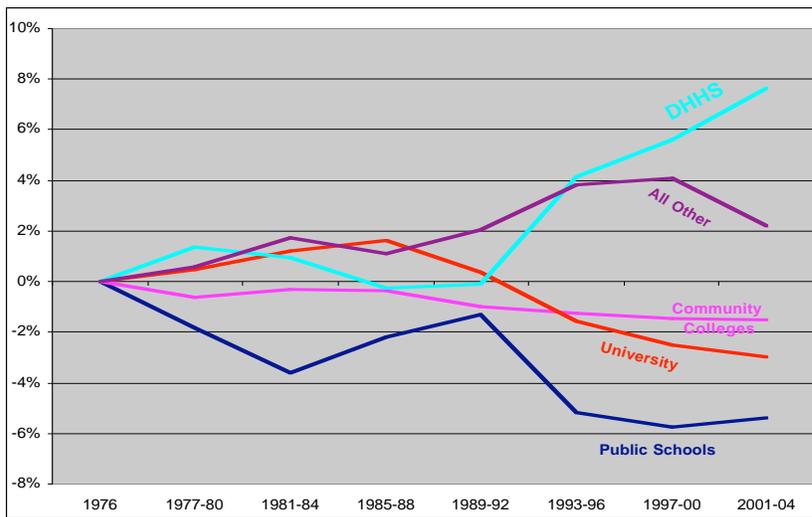
"Because the value of services provided exceeds the overhead costs, the center is actually a profit generator," said Jeff Chambers, director of human resources for SAS. "We anticipate recouping our investment within two years."

The company realizes additional savings through increased employee productivity. The onsite center allows patients to receive services and return to work in a short time. Also, as the SAS employee population ages, the company anticipates fewer incidences of chronic illness because of the extensive resources committed to employees' long-term health and wellness. In addition to the health care center, the company offers a recreation and fitness center and numerous programs dedicated to wellness and work/life balance."³¹

The State Board of Education and the Department of Public Instruction are closely investigating the global competitiveness of our students. Many other countries place a greater emphasis on physical exercise throughout the day to keep children engaged - as illustrated in both Korea and China. Here, students are taken out once per day for a 30-minute exercise period. Additionally, there seems to be an enormous emphasis in most countries to provide nutritious meals in the schools since nutrition and physical activity are seen as critical to student learning.

A recent report to the State Board of Education entitled, “Global Education for Students/Study” and presented by Dr. Elsie Leak and Ms. Millie Ravenel, Executive Director, Center for International Understanding, presented information about the effects of physical activity, education, and health disparities on economy, national security, and shared global challenges.

1. **Economy** – In 1970, the general assembly appropriated 53 percent of the general fund for public schools, today it is 38.5 percent. According to Linda Suggs, North Carolina Department of PI Legislative Director, there is a trend in which education budget is decreasing and the Department of Health and Human Services budget is increasing. Additionally, the costs of health care continue to rise and the effects on the economy are fierce. The economical data related to health care costs have been addressed in this chapter.



The business community recognizes the healthcare costs of unhealthy employees. Business communities first became concerned with reading and writing of new employees and began to assist public schools to better prepare our students to read and write. Now a large concern is focused on the rise of health care costs. An example of this

is reflected in not allowing employees to smoke and the SAS Institute example mentioned in this chapter.

2. **National Security** – The aforementioned report acknowledged “Our national security depends on our ability to act intelligently on the world stage, whether in establishing new partnerships, providing assistance to others or defending the nation.”³² What was missing was a link to the data to show our nation is growing more overweight and the impact this creates for our military personnel who are recruiting our graduates to defend our country. If our students are not fit or understand fitness concepts, nor have the skills to perform and possess problem-solving strategies, how can we expect them to defend our country?

In the 1949's, the Child Nutrition Act was created due to the malnutrition and physical inactivity of those entering the army. Additionally, they created the Presidents’ Physical Fitness Challenge in which schools participate even today. Today, the military reports that 20% of women and 40% of men are too heavy to be accepted into the military.³³ This does not include those that get in and fail the physical achievement tests.

3. **Shared Global Challenges** – The report to the State Board of Education also made a direct link to the healthful living curriculum by stating, “Solving global problems

requires the ability to communicate and cooperate with people of other regions and cultures around the world. Working together, there is vast opportunity to wipe out disease, lessen environmental degradation and slow the health and social casualties of drug trafficking (i.e., dreaded diseases like SARS and HIV/AIDS know no national borders.)”³² Additionally, obesity is a growing international issue and unfortunately, the United States leads the world in a growing number of overweight citizens, and it could be recognized as one of the “fattest” countries in the world.

Section 4: Unintended Consequences- NCLB

No Child Left Behind (NCLB) defines for the United States “core academic areas” and these core areas must have highly qualified teachers. Very few realize that health education, physical education, English as a Second Language (ESL) and Career and Technical Education (CTE) are left out of “core” subjects. According to data from the superintendent’s survey, the consequences include loss of positions for health and physical education as well as a practice that allows non-qualified person (such as an athletic trainer) to teach physical education. North Carolina has lost several physical education positions in order retain or hire highly qualified teachers in core areas who want to coach. One North Carolina district has reported that the Arts teachers are now also teaching physical education. Another district reports they are trying to obtain more athletic trainers and thus feel compelled to use the physical education positions to meet that requirement. Until health and physical education is included in the core area and teachers are also required to be “highly qualified” this problem will only continue to be a barrier to efforts to address the overweight and obesity epidemic.

From any perspective, North Carolina is losing positions in physical education. Furthermore, because of not being designated as a NCLB core subject area, Physical Education is often slighted in allocation and use of federal dollars for staff development. While ESL and Career and Technical Education (CTE) receive other funds from NCLB titles, health education and physical education are the only areas that do not receive-federal dollars for staff development. Where there are appropriate amounts of physical education being provided, subjects such as art, music, and foreign language have been cut. As we provide for more physical education, we have to consider funding these programs in order to continue an equitable and balanced curriculum. This can no longer be ignored and must be addressed by the State Board of Education.

Summary: There are four major reasons for providing a quality physical education program discussed within the committee and included in this report as part of the feasibility study.

1. There is a connection between academic performance and physical activity.
2. The obesity trends are not reversing, but getting worse.
3. National security is at stake.
4. The economic cost to our state and country.

A quality health and physical education program is certainly visible in the global perspective.

Chapter 3: Supportive Organizations

Section 1: State and National Organization Support

The North Carolina Alliance for Athletics, Health, Physical Education, Recreation and Dance (NCAAHPERD) is a statewide organization composed of approximately 2000 members, mostly teachers, physical education teacher education (PETE) faculty, coaches, and community members. The North Carolina Physical Education Association (PEA) supports and recommends 150 minutes of quality daily physical education at the elementary level and 225 minutes of quality daily physical education at the secondary level.

The National Association for Sport and Physical Education (NASPE) is a nonprofit professional organization comprised of individuals engaged in the study of human movement and the delivery of sport and physical activity programs. NASPE develops and supports quality sport and physical activity programs that promote healthy behaviors and individual well-being. NASPE's 20,000 members include K-12 physical educators, college and university faculty, researchers, coaches, athletic directors and trainers.

Moreover, there are policy recommendations included from the National Association of State Boards of Education (NASBE) document, *Fit, Healthy, and Ready to Learn*. Specifically, these policy recommendations focus on time requirements for physical education and additional opportunities for physical activity integrated into the school day.

The National Parent Teachers Association (PTA) also see the value in having minutes set aside for healthful living. A resolution was passed in the 2002 national convention, which was held in Charlotte, NC.

Other national voluntary health organizations including the American Cancer Society (ACS), American Diabetes Association (ADA) and the American Heart Association (AHA) also support quality physical education. These organizations have rallied support in several states across the country to raise awareness about the overweight and obesity epidemic and the preventative measures we must take. Recently, these three organizations partnered together to draft model physical education legislation to provide guidance across the country and in North Carolina.

NCAAHPERD, NASPE, NASBE, PTA, ACS, ADA, and AHA all recommend or support 150 minutes of quality daily physical education for the elementary level and 225 minutes of daily quality physical education for the middle school level. They are also invested in protecting recess time for physical activity at the elementary level so that this time is not used for other curricular areas or for punishment. Another common concern that the three professional organizations have is in regulating the class size for a physical education class so that learning, assessment and class monitoring can be a part of the learning environment in a more efficient way.

Approximately 40 percent of the states have policies or legislation around the issue of physical education or physical activity. According to the Government Relations staff for NASPE, there were 26 states with legislation this year on physical activity and 23 states had legislation on physical education in 2004-5 alone! There are several national and North Carolina plans for

addressing physical activity in schools that have been developed over the years, sending the message that something needs to be done. These organizations also provide strategies and recommendations for action. The following organizations and/or documents historically have recommended 150 minutes of daily quality physical education or physical activity during the school week at the elementary level and 225 minutes at the middle or secondary level for the duration of the school year.

Other supportive health initiatives include the National Education Association (NEA) and its Health Information Network (HIN). The NEA Health Information Network, the non-profit health affiliation of NEA, provides programs including: SmartBODY Fitness Information Center, which is a new fitness and nutrition resource featuring model programs and policies, lesson plans, discussion forums, additional links, and resources. NEA's Asthma and Schools program consolidates information about asthma-related resources for K-12 personnel. Furthermore, NEA has programs or information regarding air quality, men's and women's health, tobacco prevention, teen pregnancy prevention, and school and community safety.

National Support

- Centers for Disease Control and Prevention Physical Activity Guidelines
- National Association for Sport and Physical Education (NASPE)
- National Association for State Boards of Education (NASBE) *"Fit, Healthy, Ready to Learn"*
- National Coalition on Promoting Physical Activity (NCPA) *"Physical Activity for Youth"*
- Promoting Physical Activity Among Youth: A Report to the President of the United States, 2000
- National PTA, Physical Education Resolution, 2001

North Carolina Support

- Be Active North Carolina Strategic Plan
- NC Institute of Medicine Task Force Addressing Obesity
- Eat Smart Move More Physical Activity Blueprints
- Healthy Carolinians 2010 Objectives (Middle School)
- Last Best Chance, A Report of the NC Middle School Grades Task Force
- Move More: Physical Activity Standards in School
- Moving Children to a Healthy Weight
- North Carolina Institute of Medicine, Task Force on Child Health

Section 2: Partnerships

Since 1999, the State Board of Education has chosen not to implement a time requirement on physical education in schools. As a result, organizations in NC have partnered to provide legislative language in order to ensure students receive physical education. Partnerships were created around this issue and consensus reached that North Carolina students deserve quality physical education. Local school districts have had the opportunity and encouragement to implement more physical education, yet many felt compelled to move away from allowing students time for physical education or physical activity. These partnerships have vowed to respectively advocate for the inclusion of physical education as the responsible thing to do to

address the need for physical activity for the state's children and youth. Moreover, many of these partners conclude that eventually lawsuits will be filed against public schools on the issue of withholding the information, time, skills and knowledge to enhance their life and productivity as an adult.

THINK ABOUT IT....

If a child does not value health and fitness as child, what will change for them as they become adults?

On the national level, many partnerships have been formed around healthy children. Friends of School Health is just one coalition that brings together over 50 national organizations such as the National Association for State Boards of Education, National School Health Association, National Association for Sport and Physical Education, national Pediatrics Association, American Heart Association, American Diabetes Association and many others. Their sole mission is to collaboratively provide support to capital hill on issues around school health.

Currently, this coalition is working on issues around health and physical education not being listed as "core subject areas." Legislation was recently introduced by Senator Cornyn, S. 1276, that would amend NCLB to require that states develop content and performance standards for physical education by 2006-2007 school year and begin assessments in the 2008-2009 school year. Advocates anticipate that a companion bill will be introduced in the House possibly as early as September.

Furthermore, this year there was a Congressional Resolution (H.CON RES 204.IH) introduced to acknowledge the problems of obesity and overweight in overall health and chronic disease. The legislation recognizes the efforts of the groups working on this program; identifies areas where the federal government should take responsibility; encourages the National Heart, Lung and Blood Institute to continue a leadership role in research in this area and call for a Presidential Proclamation.

Partnerships at the national and state level are being formed and urging schools to take a leadership role in addressing overweight with our children.



Eye tracking exercises and peripheral vision development helps reading. One of the reasons students have trouble with reading is because of the lack of eye fitness.²

Chapter 4: North Carolina State Board of Education Ad Hoc Committee on Physical Education Review

The following information in this document refers to the work of the North Carolina State Board of Education Ad Hoc Committee on Physical Education.

Section 1: Review of Rationale for Physical Education

There are many reasons for having required minutes for physical education and/or physical activity. The following were selected as the most important:

- There is an overweight and obesity health epidemic among our youth in North Carolina. It is critical to address this epidemic in a timely and appropriate manner to prevent future occurrences and to help treat current occurrences.
- Research shows that 30 minutes of physical activity produces a gain in health benefits. Quality physical education instruction leads to appropriate physical activity and knowledge for a healthy lifestyle. While classroom teachers may provide physical activity, physical education teachers have the expertise to provide adequate and appropriate activity along with the development of skills and knowledge. This gives us two methods at once for addressing obesity. Classroom teachers have not been trained or educated on appropriate physical activity and safety techniques. Ironically, only providing physical activity by someone untrained, may in fact do more harm than good.
- Requiring daily physical education with at least 50 percent of the time active will result in 45 hours of physical activity throughout the school year. Children who are offered physical education only one day per week, and are active at least 50 percent the class time, will only receive 9 total hours of activity in the entire school year.
 - Research shows that schools that offered physical education programs did not experience a harmful effect on standardized test scores, though less time was available for other academic subjects.⁸
 - Research indicates that physical activity is positively associated with academic performance.³⁴
 - Knowledge alone will not change behavior. Research shows that behaviors are developed through the interaction of a person and the current environment. Policies for quality physical education and activity can help to develop these environments, which can result in healthy behavior change among students.
 - Research indicates physical exercise and social environments can affect self-esteem of students. Self-esteem is credited with helping to build resistance in children, thus sharpening their decision-making and academic skills.
- Physical education, intramurals, and recess have been diminished due to lack of support at the local levels and the pressure for academic performance.
- Heart rate monitors, health risk appraisals, pedometers, or computerized equipment can enhance a physical education program and student technology skills and knowledge.

THINK ABOUT IT....

How many adults with no prior background in activities participate in a recreational softball league?

- American children spend more time watching TV than they do in school.³⁵ North Carolina fourth graders watch an average of four hours of TV per day, and 25% of the children watch six hours or more.³⁵

Time is critical for planning a quality statewide physical education program. In a 10-15 year plan, some children in kindergarten today will be left behind on this health initiative. A child being born today may only benefit by the time they are between middle and high school years after many of their habits have been formed. Therefore, the Committee has suggested that most recommendations be completed within a 10-year period.

Section 2: How Do Schools Do It?

Many schools and school districts have been successfully moving in a positive direction to provide more physical activity and quality physical education. The following are just a few of the success stories.

Person County’s Physical Education Program: Maggie Whitt and Sandy Davis, Curriculum Specialist

In 1970, Person County Schools began offering physical education classes with a certified teacher in grades K-5. This practice continues today in the seven elementary schools. Students receive 30 minutes daily of physical education based on the K-5 SCS.



In the two 6-8 middle schools, students receive 50 minutes (250 minutes weekly) of healthful living instruction daily for an entire year, delivered by five certified teachers at each school. Students participate on a twelve-day cycle of health units and physical education units.

Local high school graduation requirements for healthful living are two units: one unit each for physical education and health. Students take one of the courses during the freshmen year and the other during the sophomore year. Six teachers deliver both courses during a four block term. One elective course includes advanced physical education.

South Brunswick Middle School: Patricia Underwood, Principal

At South Brunswick Middle School, in Southport (Brunswick County), physical education has been a priority for more than a decade. There is a PE/Health staff of 5 teachers who have joined together to develop a plan to meet the expectations of the new Healthy Active Children Policy by dividing the PE and Health curriculum standards so that students rotate between the teachers for instruction in both areas. They have 75-minute classes that are yearlong. In addition, all classroom teachers are working to include “Energizer” activities to allow movement throughout the day. South Brunswick also includes a recess time immediately before or after lunch. Each team has received a “recess pack” that includes equipment to insure that during recess physical activity is occurring; too often with free play, students sit idly; these packs have a variety of equipment from balls and Frisbees to jump ropes.

With regard to vending, all unhealthy snacks have been removed; they were replaced with items that have fewer than 200 calories and 0 trans fats. All soft drinks have been replaced with

water, sports drinks, and juices. There has been no decrease in items purchased; machines are emptying as rapidly as ever.

Last January, our staff began a staff wellness program, which included the full certified staff and teacher assistants. Mrs. Patricia Underwood, the principal, had been trying to start a program for 2 years, but with the help of a staff wellness committee, the plan finally came to fruition. Seventy-five of 77 staff members participated. In addition to the health benefits, colleagues began to work with teachers they had never talked with before; students viewed us a role models and got excited about the program; and the program served as a team-building event to unify our school.

Even with all of these wonderful things occurring, the school is still fighting the battle of class size [averaging 31-32 per teacher], facility issues [not enough space for all teachers to be indoors and conduct class as it should be when inclement weather occurs], and deficiency in other curriculum areas in order to have 5 PE teachers [no foreign language is offered]. The school believes strongly in the premise behind the Healthy Active Children Policy, but sacrifices have occurred in other areas to make this happen.

Morehead City Primary, Rene Newman, Principal

Morehead City Primary School serves 700 children, grades PreKindergarten through third grade. One significant component of the school is the Physical Education program and physical activity focus. Three PE specialists meet with each Kindergarten-third grade class four days a week for thirty-minute sessions. They have available to them a large gymnasium/multipurpose room which can be divided with curtains to accommodate up to four classes with various equipment and apparatuses. One favorite feature is the climbing wall, paint to look like a rocky hill complete with playful goats. In addition, the physical education department has a walking / running track, hard surface area, and a putt-putt course for outdoor activities. Each specialist works as a member of the team to deliver instruction focused on development of basic skill and movement goals.



On the day each week when the class does not meet with the PE specialists, classroom teachers provide physical activity, using a variety of school resources. They have access to various play structures, the track, and other hard surfaces. Each teacher has access to various equipment to engage the children in active play. This collegiality has been supported by staff development such as Brain Gym and developmentally appropriate PE for young children for classroom teachers and PE specialists.

This design was developed over a fifteen-year period and was achieved through collaborative decision-making and resource allotment. A visual art teacher was not provided so that the PE staff would be adequate to meet the needs of this school. Visual arts are well incorporated into the regular classroom activities. The strength of the whole school's commitment to quality PE and appropriate physical activity is reflected in its sustainability. This commitment has been

maintained over the years through changes in the PE staff, relocation to a new facility, and administrative changes including three principals and six assistant principal changes!

Morehead City Primary Schools is also committed to high academic performance, ranking as a School of Distinction with High Growth for the last five years. Quality PE and quality academics go hand-in-hand.

In addition to the focus on PE and PA, MCPS also strives to educate children and their families on the importance of good nutrition. The Winner's Circle, which highlights quality foods and nutrients, is used to inform children and their families of the contents of school lunches. The school offers a free breakfast for all kindergarten children. The Child Nutrition Program provides educational demonstrations and presentations at PTO events, highlighting the fat and sugar contents of school lunches. There are no vending machines available to children at the school.

There are so many other examples of how the school strives to enhance the health of their children: a recent cooperative effort among the PTO, local businesses and Builders Association to construct a shaded area on campus to protect children engaging in outdoor activity from over exposure to the sun; the PTO newsletters which include nutrition and activity advise for parents; the Health Advisory Committee as part of the school's leadership team to ensure the health and safety of the children, and many others.

MCPS is one example of how a school can achieve a quality program of PE and support healthy, active children.

Section 3: Minutes required for Physical Education

Physical educators teach all students including Limited English Proficient (LEP), special needs students and those that perform at all levels of reading, writing and math. The following are advantages and disadvantages for a policy regulating minutes for physical education and /or physical activity as reported in the statewide survey of Superintendents.

Advantages

- Enhances academic performance and attendance while decreases discipline, thus creating a safer learning environment for all students.
- Physical educators teach all students including Limited English Proficient (LEP), special needs students and those that perform at all levels of reading, writing and math, thus creating opportunities to enhance academic performance
- Requiring a specific amount of time for physical education takes a positive step toward addressing obesity for our children of the future and will provide a positive impact on the health of children over time.
- Requiring a range of minutes for physical education rather than specific days or amounts per day provides maximum local flexibility.
- Specific minutes for physical education can have an impact on the health care costs and economy.
- Assuring that time is devoted to physical education can help the development of skills and confidence in our students for a lifetime of activity.

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- A specific minute of activity contributes to the essential activity needs of students during the school day.
- Mandating minutes for physical education supports implementation of the K-12 *Healthful Living Standard Course of Study* and the Coordinated School Health Program (CSHP).

Disadvantages

- Without additional funding and a plan in place schools will have to increase class size to meet only a minute requirement for physical education which would not fully implement a quality physical education program and could work against the purpose of more activity.
- Most schools will need additional physical education teachers.
- Some schools systems will need to enhance or provide more facilities.
- Physical education teachers fear losing a planning period or double classes if not carefully and properly implemented.
- Lack of accountability to assure the policy is being met could result in a policy that goes ignored by schools.
- Requiring physical activity with no physical education may lack the rigor and relevance needed to provide the health benefit we seek. Implementing part of a solution may result in poor impact on student health.
- Schools who now offer physical education as an “elective” or for half a semester or less may require significant reorganization of curriculum offerings.

Food for Thought

Exercise triggers the release of BDNF a brain-derived neurotropic factor that enables one neuron to communicate with another. Students who sit for longer than twenty minutes experience decrease in the flow of BDNF.²



Chapter 5: SBE Ad Hoc Committee Report Goals and Recommendations

After evaluating all of the previous information and in light of the overweight epidemic in North Carolina, the State Board of Education Ad Hoc Committee developed the following goals and recommendations to address this issue in schools through quality physical education. While it is acknowledged that both physical inactivity and poor nutritional habits are major contributors to the obesity epidemic, the Committee's focus was to make recommendations on physical education in schools. In order to provide quality physical education addressing obesity in our state, the five Goals must be in place. Each goal is supplied with recommendations designed to support and enhance its purpose.

The committee discussed and reached consensus on the following recommendation based on the Superintendents' survey. The recommendations reflect the committee's consensus on the best approach to aggressively address the overweight issue. Every committee member submitted valued input and feedback to this report.

The following goals are listed alphabetically and the recommendations are listed in order of timeframe from shortest to longest time to implement. These recommendations are meant to provide guidance as the State Board of Education examines options for implementing quality physical education.

ADEQUATE INDOOR/OUTDOOR FACILITIES Goal: Every school will be able to provide adequate indoor and outdoor facilities to play including recess, intramurals, classroom activity, staff wellness and quality physical education (fields, trails, multipurpose, gymnasium.)

#	Recommendation	Timeline
1.1	Consider adding all physical education and activity facilities to be included as a mandate for recognition in the safe school evaluation Triple S (SSS) program.	2006-2007
1.2	Encourage school authorities to minimize the use of physical education facilities for non-instructional purposes, such as using the gymnasium for school assemblies and pictures during times scheduled for physical education classes.	2006-2007
1.3	Identify appropriate and safe standards for physical activity per capita for facilities and ensure these are incorporated in initiatives for new school construction. Base school physical activity facilities on what the needs of all students are and not just athletics (sometimes students are not allowed to touch these fields or areas.) Develop a source of	2006-2007

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	<p>ideas on utilizing space such as dance room, gym, outside front lawn, trails, cafeteria, and multipurpose rooms.</p> <ul style="list-style-type: none"> a. Consider a facility/construction needs survey for schools to support consideration of physical activity and education area needs. b. For a quality experience, research should be conducted to require appropriate space per child in physical education. <p>Note: <i>Move More: North Carolina's Recommended Standards for Physical Activity in Schools</i> recommend 110 square foot per child for elementary students. More research needs to be done to recommend middle and high school facilities.</p>	
1.4	Require that LEAs provide appropriate locations and facilities for all physical education classes and access to other areas which would enhance physical education such as multi-purpose room, swimming pool, fitness trail, computerized fitness lab, outdoor facilities.	2010- 2011
1.5	Mandate that once funded, adequate space as recommended above is being provided in LEAs through the School Improvement Plans.	2010-2011
1.6	Expanded physical activity opportunities for all schools.	2010-2011

COMMUNICATION Goal: The State Board of Education should communicate to LEAs the difference between physical education and physical activity. Additionally, DPI should provide guidance to local superintendents on expectations for the 2006-2007 school year for physical activity and the reporting process of the Healthy Active Children policy (HSP-S-000).

#	Recommendation	Timeline
2.1	Develop letters of clarification to Superintendents, Local Boards of Education, Curriculum Specialist, School Health Advisory Councils, and Principals on HSP-S-000.	2006-2007
2.2	Provide brochures on the requirements of HSP-S-000.	2006-2007
2.3	Provide easily accessible website information on the Healthy Active Children policy.	2006-2007
2.4	Direct the Department of Public Instruction to develop and implement a communication plan and support system to ensure LEAs and other state organizations fully understand State Board of Education policy and current legislation related to physical education, activity and nutrition.	2006-2007
2.5	Encourage local partnerships with organizations such as the Department of Public Health, YMCA, YWCA, Cooperative Extension, Parks and Recreation and non-profit youth serving agencies to encourage more cooperation between Boards of Education.	2006-2007
2.6	Support and promote events to the entire school community and parents such as Walk to School Day.	2006-2007
2.7	Develop “Best Practices” and/or “Successful Stories” brochures regarding physical education, physical activity, and healthy nutrition.	2006-2007
2.8	Reaffirm the health of children as a priority of the State Board of Education.	2006-2007
2.9	Evaluate and review physical education and physical activity policies (i.e., How are schools successfully meeting the Healthy Active Children policy?).	2006-2007
2.10	Support LEA participation in Youth Risk Behavior Survey (YRBS) if selected to gather data on physical education and physical activity in NC.	2006-2007

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2.11	Seek to engage families as partners in their children's education and collaborate with community agencies and organizations to provide ample opportunities for students to participate in physical activity beyond the school day.	2006-2007
2.12	Establish the State Board of Education Advisory committee to revisit these recommendations yearly to monitor progress.	2006 and Ongoing yearly

PERSONNEL Goal: Certified physical education specialists should be hired by LEAs to provide quality physical education to assure motor, affective, and psychomotor domain skill development leading to an active and lifelong learner.

* Note: We used the term physical educator in the current environment.

#	Recommendation	Timeline
3.1	Highly qualified teachers for Healthful Living. a. While NCLB does not include health and physical education as a core subject requiring “highly qualified” status, the NC State Board of Education should recognize and support Health and Physical Education as a core subject impacting student achievement.	2007
3.2	Provide an “ambassador” to work in the field and support PA and nutrition for children and establish a direct link with the impact on children and children’s needs. a. This person would work with the physical education consultant at DPI with ongoing and new projects.	2007
3.3	Identify and develop methodologies to evaluate physical education programs, quality teaching, and student growth. Include the assessment for Physical Education and Health Education on the School Report Card.	2007
3.4	Address legislation for class waivers to stop waivers for class size in physical education and be consistent with other core courses in order to properly teach and assess student progress (k-5 = 25 and 6-12 = 30).	2007
3.5	State Board of Education to direct DPI to work with institutions of higher education to address certification in Healthful Living (both health and physical education.)	2008-2009
3.6	The State Board of Education will work with NC’s Congressional delegation to secure funding for physical education and physical activity programs.	2006 and ongoing yearly
3.7	Provide funds for LEA Healthful Living Coordinators. a. While there are a few Healthful Living Coordinators in the districts, the committee suggested for implementing this recommendation, there would need to be funding for 115 coordinators recurring over the next 5 years.	2010
3.8	Provide funds to support required personnel (such as Art and Foreign Language) to meet recommendations for 150 minutes of elementary physical education and 225 minutes of healthful living at the middle school level recurring over the next 10 years.	Phase in over next 10 years 2006-2016

STAFF DEVELOPMENT, SUPPLIES, AND EQUIPMENT Goal: In order for schools to adequately implement a quality program, LEAs will need to supply curriculum based staff development, have equipment and supplies.

#	Recommendation	Timeline
4.1	Ensure physical education / activity programs are funded appropriately as are other core curricular areas.	2007
4.2	Integrate the benefits of being physically active within other curricular areas, such as “physical activity across the curriculum.”	2007
4.3	Recognize staff wellness as an integral part of a school environment and the need for this area to be supported by the Board.	2007
4.5	Coordinate renewal credits with needs of the teacher and prioritize on physical education and physical activity. <ul style="list-style-type: none"> a. Physical education teachers acquire 50% or more of professional development (CEUs) in Physical Education over a 5-year period. b. Encourage classroom teachers to receive professional development in appropriate physical activity where classroom teachers are implementing the physical activity. 	Phase in by 2006-2009

TIME Goal: All students should receive quality physical education. Students in the elementary grades shall participate in physical education for at least 150 minutes during each school week, and students in middle schools shall participate in healthful living for at least 225 minutes per week.

#	Recommendation	Timeline
5.1.	Support and require <ul style="list-style-type: none"> a. 150 min. / week of elementary physical education with a certified specialist; b. 225 min./ week of middle school healthful living with a certified specialist; and c. 2 units of high school healthful living required to graduate and offer additional PE electives throughout high school. 	Phase in over next 10 years 2006-2016
5.2	Investigate and support a policy regarding a duty free period for health and physical educators to allow for planning equal to other teachers in the school.	2006-2007
5.3	Continue to support daily physical activity for at least 30 minutes daily and encourage additional integration of physical activity throughout the curriculum. <ul style="list-style-type: none"> a. When requiring minutes for physical education, investigate the 30-minute physical activity policy and any implications of having both policies. 	2005-2006 and ongoing yearly
5.4	The State Board of Education will appoint a task force investigate the advantages and disadvantages of extending the school day as it relates to creating a learning to promote a comprehensive school curriculum.	2006-2007
5.5	Identify and communicate an array of “Best Practices” models for physical education opportunities for LEAs to utilize.	2006-2007

APPENDIX 1

Superintendents' Survey Questions

Please list 3-5 barriers in order of impact on your system in meeting the intent of the policy of 150 minutes of elementary physical education and 225 minutes of healthful living.

- Please indicate our level of compliance in relation to implementing 30 minutes daily of physical activity for grades K-8. (Compliant, Non-Compliant)
- When do you anticipate being compliant?
- Please indicate your level of compliance in relation to implementing 150 minutes of elementary physical education per week with a certified physical education specialist. Compliant, Non-Compliant
- If mandated, when do you anticipate being compliant?
- Please indicate your level of compliance in relation to implementing 225 minutes of healthful living with a certified physical education specialist. (Compliant, Non-Compliant)
- If mandated, when do you anticipate being compliant?
- How many additional people would you need to implement and be compliant with the 150-minute elementary and 225-minute middle school requirements?
- If you have been compliant and have cut other programs, how many additional people would you need to add back those programs that have been sacrificed to have daily PE?
- What would be the cost in facilities be in order to provide physical education and health education with the same class size as other classes?
- Please describe if you are land locked and cannot add facilities.

We have taken the survey information for questions 9 and 10 and attempted to estimate a total number of teachers needed for all 115 school systems.

Question 9 is an attempt to get at the number of additional teachers that would be needed to implement 150 minutes per week of physical activity in elementary schools and 225 minutes in middle schools with certified physical education specialists. The 44 responding school systems identified a total need of 597 teachers. If you divide 597 by the 44 systems to get an "estimated" per system need you get 13.57 per system. If you then multiply this by 115 systems it gives a total statewide need of 1,561 certified physical education specialist.

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Question 10 is an attempt to identify how many additional teachers would be needed in systems that have cut such programs as music, art and second language in order to be compliant with the physical activity requirement.

The 44 systems that responded to our survey identified the need for 66 additional teachers for this purpose. If you divide this 66 additional teachers needed by the 44 systems you get a per system need of 1.5 additional teachers. If you then multiply the 1.5 by 115 systems you get a total need for 173 additional teachers.

Estimated cost of Recommendations for Quality Physical Education/ Healthful Living

Positions Needed	Salary Including Benefits	Year 1		Years 2-5		Years 6-10		Full Implementation	
		No. of Positions	Cost per Year	No. of Positions added per Year	Cost per Year	No. of Positions added per Year	Cost per Year	Total No. of Positions	Total Cost
Healthful Living Coordinator	62,124	23	1,428,852	23	1,428,852	0	0	115	7,144,260
Teachers	47,830	175	8,370,250	175	8,370,250	175	8,370,250	1,750	83,702,500
Ambassador	53,408	1	53,408	0	0	0	0	1	53,408
Total		199	9,852,510	198	9,799,102	175	8,370,250	1,866	90,900,168

Notes:

- The Coordinator salary is the same as a coordinator for Learn and Earn.
- The FY 2005-06 Initial Allotment average salary for teachers was used for the Physical Ed. and Health Teachers.
- The FY 2005-06 Initial Allotment Instructional Support Average Salary is used for the Ambassador.
- The number of teachers needed is based on a survey conducted by the Healthful Living Section.
The data from the survey estimates 15.07 additional teachers needed per LEA and one Healthful Living Coordinator per LEA.
- Cumulative Cost Summary:

Year	Cumulative Amount
Year 1	9,852,510
Year 2	19,651,612
Year 3	29,450,714
Year 4	39,249,816
Year 5	49,048,918
Year 6	57,419,168
Year 7	65,789,418
Year 8	74,159,668
Year 9	82,529,918
Year 10	90,900,168

APPENDIX 2

	PHYSICAL ACTIVITY		PHYSICAL EDUCATION
	School Recess	Community Based	Certified Physical Education Specialist
Curriculum	Random, Classroom teacher based and not necessarily based on national standards.	Emphasis on youth sport or neighborhood activities where facilities and equipment are provided.	Fitness activities; outdoor education; individual lifetime activities; dance; integrated; interactive; Based on national standards with a scope and sequence to develop skills and habits. Includes physical activity.
Grouping	Often students are left up to do this on their own.	Skill based teams, pick up teams.	Grouped randomly.
Fitness Emphasis	Random. Often free time, some kids sit.	Individual activities sites or facilities (walking, weights), recreational activities.	Students engaged in self- testing; studying the parts and principles of fitness; designing an individual program. Understand concepts and purpose for personal fitness.
Instruction	None	Varies	Teachers using instructional strategies that allow them to be the “guide” on the side.
Social Skills	Potential to develop some social skills.	Emphasis on Sportsmanship.	Curriculum designed so that students are developing conflict resolution, social, diversity and leadership skills.
Grading and Assessment	None	None	Self-evaluation; peer assessment; skill rubrics; demonstration of conflict resolution skills; self-improvement.
Games	Often large group games where kids stand or left to free play	Coaches giving feedback on performing skills and knowledge of rules; creative and innovation of games.	Students creating a new game and seeing the relationship a rule change might have on strategies of the game; small sided games with emphasis on fitness; everyone active.

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Technology	None	Varies	Computers; pedometers; heart rate monitors
Academic Connection	Critical to learning.	Critical to learning.	Critical to learning.

Adapted from American Heart Association, 2004.

APPENDIX 3

NC State Board of Education Committee Guidelines

Recognizing that North Carolina is experiencing an epidemic of obesity, the State Board of Education is committed to assisting schools with providing more physical activity and physical education to students. Physical activity and education both have links to improving the health of children in our State and creating healthy active learners. Additionally, research shows that youth who are active are more likely to become active adults. To strengthen this link, skills and knowledge can influence and create activity behaviors that are necessary for lifelong active and productive adults.

Staff recommend that the Study Committee on Physical Education in Schools be formed to investigate the following issues as they relate to implementation:

- NC socioeconomic issues associated with childhood obesity;
- What other states are doing about this issue;
- The impact of time on the school day for mandate of 150 minutes per week of elementary physical education and 225 minutes per week of middle school physical education including but not limited to: health education, elective courses, increased class size, equipment, safety, and effectiveness;
- The fiscal impact to implement a time mandate, which may include but not be limited to facilities, teachers, and equipment;
- Steps that should be taken to implement more physical education and/healthful living;
- Parental involvement and educating parents in developing healthy eating and strong physical activity habits for their children; and
- Any other matter the Ad Hoc Study Committee on Physical Education in Schools considers necessary to carry out its duties.

The Study Committee on Physical Education in Schools membership should consist of no more than 20 individuals who shall, at a minimum, represent the following backgrounds and interests:

- State Board of Education members;
- Local school representatives (such as principals, superintendents, teachers)
- State associations which represent the interest of schools (such as NCAAHPERD, NCAE, PENC, NCASA);
- Youth and child advocacy organization (AHA, Be Active NC, HWTF, AFHK);
- Business and industry;
- Health and Human Services (PAN); and
- Physical Education/Healthful Living DPI Consultants.

In addition, the Study Committee on Physical Education may choose to

- Review the status of obesity among the State's children,

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- Evaluate and recommend policy initiatives for quality physical education and healthful living,
- Evaluate and recommend policy initiatives for future initiatives which address obesity and the role that schools can take,
- Develop suggested recommendations for the NC Department of Health and Human Services (as appropriate), the Department of Public Instruction and local boards of education and
- Develop legislative proposals that could be presented to the General Assembly as needed.

The Department of Public Instruction and the State Board of Education staff shall provide necessary support the work of the Study Committee.

The Study Committee on Physical Education in Schools will submit a report of its findings and recommendations to the State Board of Education by October 1, 2005. The Board should include a timeline for implementation of recommendations with this report.

It is recommended that the design of the State Board of Education Study Committee on Physical Education in Schools follow guidance contained from the following 6 basic documents:

1. *North Carolina Healthy Weight Initiative*, a core goal, policy changes relating to nutrition and physical activity at the state and local levels;
2. *Fit, Healthy, and Ready to Learn: A School Health Policy Guide*, produced by the National State Boards of Education (NASBE), to provide direction to states, school districts, and individual schools on establishing an overall policy framework for school health programs and specific policies on promoting physical activity among young people;
3. *Moving into the Future: National Standards for Physical Education* as a reference to establish content standards for the physical education school program, clearly identify what a student should know and be able to do as a result of a quality physical education program and establishes teacher-friendly guidelines for assessment of the content standards;
4. *Morbidity and Mortality Weekly Report* to provide guidelines for school and community programs to promote lifelong physical activity among young people, March 07, 1997/46(RR-6);1-36;
5. *Promoting Better Health for Young People Through Physical Activity and Sports*, a 2000 report written by the Secretary of Health and Human Services and the Secretary of Education and released by the White House, that outlines 10 strategies to promote health through lifelong participation in enjoyable and safe physical activity and sports; and
6. *Physical Education*, an issue brief published by the National Conference of State Legislatures, examines state statutes and policies concerning school-sponsored physical activity and physical education programs in kindergarten through grade 12. It includes a table that details current statutes in all 50 states and variations in state mandates of physical education.

Purpose and Goals As Provided by National Association of State Boards of Education (NASBE), 2005

INTENT. Every student shall be physically educated - that is, shall develop the knowledge and skills necessary to perform a variety of physical activities, maintain physical fitness, regularly participate in physical activity, understand the short- and long-term benefits of physical activity, and value and enjoy physical activity as an ongoing part of a healthful lifestyle. In addition, staff is encouraged to participate in and model physical activity as a valuable part of daily life.

School leaders shall develop and implement a comprehensive plan to encourage physical activity that includes the following:

- A sequential program of physical education that involves moderate to vigorous physical activity on a daily basis; teaches knowledge, motor skills, self-management skills, and positive attitudes; promotes activities and sports that students enjoy and can pursue throughout their lives; is taught by well-prepared and well-supported staff; and is coordinated with the health education curriculum;
- Time in the elementary school day for supervised recess;
- Opportunities and encouragement for students to voluntarily participate in before- and after-school physical activity programs, such as intramurals, clubs, and, at the high school level, interscholastic athletics;
- Joint school and community recreation activities;
- Opportunities and encouragement for staff to be physically active; and
- Strategies to involve family members in program development and implementation.

The program shall make effective use of school and community resources and equitably serve the needs and interests of all students and staff, taking into consideration differences of gender, cultural norms, physical and cognitive abilities, and fitness levels.

RATIONALE. Schools have a responsibility to help students and staff establish and maintain lifelong habits of being physically active. According to the U.S. Surgeon General, regular physical activity is one of the most important things people can do to maintain and improve their physical health, mental health, and overall well-being. Regular physical activity reduces the risk of premature death in general and of heart disease, high blood pressure, colon cancer, and diabetes in particular. Promoting a physically active lifestyle among young people is important because

- It effects on mental health, physical activity can help increase students' capacity for learning;
- Physical activity has substantial health benefits for children and adolescents, including favorable effects on endurance capacity, muscular strength, body weight, and blood pressure; and
- Positive experiences with physical activity at a young age help lay the basis for being regularly active throughout life.

Based on information from NASBE, the following issues and concerns should be implemented which include, physical education, extracurricular activities and other activity time in school, and safety guidelines.

PHYSICAL EDUCATION

ALL STUDENTS ENROLLED. Every student in each grade, pre-kindergarten through twelfth, shall participate in daily physical education for the entire school year, including students with disabling conditions and those in alternative education programs. Students in the elementary grades shall participate in physical education for at least 150 minutes during each school week, and students in middle schools and high schools shall participate for at least 225 minutes per week.

INSTRUCTIONAL PROGRAM DESIGN. Schools shall establish specific learning goals and objectives for physical education. A sequential, developmentally appropriate curriculum shall be designed, implemented, and evaluated to help students develop the knowledge, motor skills, self-management skills, attitudes, and confidence needed to adopt and maintain physical activity throughout their lives. The physical education program shall:

- Emphasize knowledge and skills for a lifetime of regular physical activity;
- Be consistent with state/district's standards/guidelines/framework for physical education and with national standards that define what students should know and be able to do;
- Devote at least 50 percent of class time to actual physical activity in each week, with as much time as possible spent in moderate to vigorous physical activity;
- Provide many different physical activity choices;
- Feature cooperative as well as competitive games;
- Meet the needs of all students, especially those who are not athletically gifted;
- Take into account gender and cultural differences in students' interests;
- Teach self-management skills as well as movement skills;
- Actively teach cooperation, fair play, and responsible participation in physical activity;
- Have student/teacher ratios comparable to those in other curricular areas;
- Promote participation in physical activity outside of school;
- Focus, at the high school level, on helping adolescents make the transition to an active adult lifestyle; and
- Be an enjoyable experience for students.

Teachers shall aim to develop students' self-confidence and maintain a safe psychological environment free of embarrassment, humiliation, shaming, taunting, or harassment of any kind. Physical education staff shall not order performance of physical activity as a form of discipline or punishment

Suitably adapted physical education shall be included as part of individual education plans for students with chronic health problems, other disabling conditions, or other special needs that preclude such students' participation in regular physical education instruction or activities.

ASSESSMENT. All students shall be regularly assessed for attainment of the physical education

learning objectives. Course grades shall be awarded in the same way grades are awarded in other subject areas and shall be included in calculations of grade point average, class rank, and academic recognition programs such as honor roll.

HEALTH-RELATED FITNESS TESTING. Health-related physical 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/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.

EXEMPTIONS. Physical education teaches students essential knowledge and skills; for this reason, exemptions from physical education courses shall not be permitted on the basis of participation on an athletic team, community recreation program, ROTC, marching band, or other school or community activity. A student may be excused from participation in physical education only if: 1) a physician states in writing that specific physical activities will jeopardize the student's health and well-being or 2) a parent/guardian requests exemption from specific physical activities on religious grounds.

TEACHING STAFF. Well-prepared specialists who are certified by the state to teach physical education shall teach physical education. All physical education teachers shall be adequately prepared and regularly participate in professional development activities to effectively deliver the physical education program. Preparation and professional development activities shall provide basic knowledge of the physical development of children and adolescents combined with skill practice in program-specific activities and other appropriate instructional techniques and strategies designed to promote lifelong habits of physical activity.

ADEQUATE FACILITIES. School leaders shall endeavor to ensure the cost-efficient provision of adequate spaces, facilities, equipment, supplies, and operational budgets that are necessary to achieve the objectives of the physical education program.

School authorities shall minimize the use of physical education facilities for non-instructional purposes, such as using the gymnasium for school assemblies during times scheduled for physical education classes.

EDUCATIONAL REINFORCEMENT. The physical education program shall be closely coordinated with the other components of the overall school health program. Physical education topics shall be integrated within other curricular areas. In particular, the benefits of being physically active shall be linked with instruction about human growth, development, and physiology in science classes and with instruction about personal health behaviors in health education class.

The physical education program shall actively engage families as partners in their children's education and collaborate with community agencies and organizations to provide ample opportunities for students to participate in physical activity beyond the school day.

EXTRACURRICULAR PHYSICAL ACTIVITY PROGRAMS

EXTRACURRICULAR PHYSICAL ACTIVITIES. Intramural programs, physical activity clubs, and interscholastic athletics are valuable supplements to a student's education. Schools shall endeavor to provide every student with opportunities to voluntarily participate in extracurricular physical activities that meet his or her needs, interests, and abilities. A diverse selection of competitive and noncompetitive, structured and unstructured activities shall be offered to the extent that staffing permits. The primary focus of extracurricular physical activity programs will be on facilitating participation by all interested students, regardless of their athletic ability. Equal opportunity on the basis of gender shall permeate all aspects of program design and implementation. School leaders shall endeavor to accommodate home-schooled children in extracurricular activities on a budget-neutral basis.

Each extracurricular physical activity program sponsored by in-school and non-school organizations shall be approved by whom and be supervised by a faculty advisor. The integrity and purpose of the physical education program shall not be compromised by such extracurricular activities, nor shall they interfere with the regular school schedule.

EXTRACURRICULAR PROGRAM ELIGIBILITY. School authorities should encourage and support the participation of all students in extracurricular activities, yet such participation is a privilege and not a right. Schools/districts may establish and equitably enforce reasonable eligibility requirements and probationary periods for participation in extracurricular activities. Such requirements may be based on

- Appropriate age;
- Enrollment status or residency;
- Satisfactory academic performance;
- Acceptable attendance record;
- Good conduct, including abstinence from the use of tobacco, alcohol, and other harmful drugs;
- Agreement to testing for substance abuse;
- Suitable health status or physical condition;
- Other criteria essential to safety and fairness; or
- The specific requirements of particular activities or sports.

Eligibility requirements and appeal procedures shall be published in a regularly updated student activities handbook that is distributed to students and families annually. Students denied permission to participate in an extracurricular activity shall receive a prompt explanation of the reasons, have an opportunity to respond, and be provided with opportunities to reestablish their eligibility.

A student with a chronic health problem or other disabling condition shall be permitted to participate in any extracurricular activity, including interscholastic athletics, if the student's skills and physical condition meet the same qualifications that all other students must satisfy. The school shall make reasonable accommodations to allow the student to participate.

INTRAMURAL PROGRAMS. Elementary, middle, and high schools shall offer intramural physical activity programs that feature a broad range of competitive and cooperative activities and meet the following criteria:

- Students have a choice of activities in which they can participate;
- Every student has an opportunity to participate regardless of physical ability; and
- Students have the opportunity to be involved in the planning, organization and administration of the program.

OTHER OPPORTUNITIES FOR PHYSICAL ACTIVITY

RECESS IN ELEMENTARY SCHOOLS. Recess provides opportunities for physical activity, which helps students stay alert and attentive in class and provides other educational and social benefits. School authorities shall encourage and develop schedules that provide time within every school day for preschool, kindergarten, and elementary school students to enjoy supervised recess. Every school shall have playgrounds, other facilities, and equipment available for free play. Recess shall complement, not substitute for, physical education classes. Staff shall not deny a student's participation in recess or other physical activity as a form of discipline or punishment, nor should they cancel it for instructional makeup time.

SCHOOL/COMMUNITY COLLABORATION. Schools shall work with recreation agencies and other community organizations to coordinate and enhance opportunities available to students and staff for physical activity during their out-of-school time.

Schools are encouraged to negotiate mutually acceptable, fiscally responsible arrangements with community agencies and organizations to keep school- or district-owned facilities open for use by students, staff, and community members during non-school hours and vacations. School policies concerning safety shall apply at all times.

STAFF PHYSICAL ACTIVITY. The school/district shall plan, establish, and implement activities to promote physical activity among staff and provide opportunities for staff to conveniently engage in regular physical activity.

SAFETY GUIDELINES

RESPONSIBILITY FOR SAFETY. Minimizing injuries and illnesses related to physical activity is the joint responsibility of everyone: district and school leaders, school staff, students, and their families.

HEALTH AND SAFETY RULES. Schools shall establish rules and procedures concerning safety, infection control, provision of first aid, and the reporting of injuries and illnesses to

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students' families and appropriate school and community authorities. School administrators shall strictly and consistently enforce compliance with these rules and procedures by all students, school personnel, volunteers, and community members who use school facilities. Students and their families shall be informed of their school's health and safety rules at least annually.

Schools shall require students to use protective clothing and equipment appropriate to the activity and the environment, which will be maintained in good condition. Physical education teachers, coaches, and other athletic personnel and volunteers shall protect students from the effects of extreme weather conditions and endeavor to minimize the amount of exposure to the sun students receive during physical activities.

SAFE FACILITIES. Play areas, facilities, and equipment used for physical activity on school grounds shall meet accepted safety standards for design, installation, and maintenance. Spaces and facilities shall be kept free from violence and exposure to environmental hazards. All spaces, facilities, and equipment used by students and spectators to athletic events shall be thoroughly inspected for health and safety hazards on a regularly scheduled basis, at least twice per year. Written inspection reports shall be kept on file for 10 years. Schools shall correct any hazards before the facilities or students, staff, or community members may use equipment.

References

- ¹ Be Active North Carolina. *A Financial Cost Appraisal of Physical Inactivity, Obesity, Diabetes Mellitus, and Low Fruit/Vegetable Intake Among North Carolina Adults*. 2004.
- ² Retrieved from www.actionbasedlearning.com, September 2, 2005.
- ³ Public Health Service. *The Surgeon General's Report on Nutrition and Health*. Washington, DC: U.S. Department of Health and Human Services, Public Health Service, 1988. DHHS publication no. (PHS) 88-50210.
- ⁴ Ballard, K, Caldwell D, Dunn C, Hardison A, Newkirk J, Sanderson M, Schneider L, Thaxton Vodicka S, Thomas C *Move More, NC's Recommended Standards For Physical Activity In School*. North Carolina DHHS, NC Division of Public Health, Raleigh, NC; 2005. www.ncpe4me.com.
- ⁵ Retrieved from <http://www.cdc.gov/HealthyYouth/shpps/factsheets/pdf/pe.pdf> on September 20, 2005.
- ⁶ Ochs, Michael, Director of government Relations, National Association for Sport and Physical Education (NASPE). Retrieved by email on September 30, 2005.
- ⁷ CDC. *Guidelines for School and Community Programs to Promote Lifelong Physical Activity Among Young People*, MMWR, March 07, 1997 / 46(RR-6);1-36.
- ⁸ Sallis, J., McKenzie, T., Kolody, B., Lewis, M., Marshall, S., and Rosengard, P. (1999). *Effects of health-related physical education on academic achievement: Project SPARK*. Research Quarterly for Exercise and Sport, 70 (2), 127-134.
- ⁹ Retrieved from <http://www.cdc.gov/omh/AMH/factsheets/cardio.htm> on September 3, 2005.
- ¹⁰ Hedley AA, Ogden CL, Johnson CL, Carroll MD, Curtin LR, Flegal KM. *Prevalence of overweight and obesity among US children, adolescents, and adults, 1999-2002*. Journal of the American Medical Association 2004;291(23):2847-2850.
- ¹¹ Ogden CL, Flegal KM, Carroll MD, Johnson CL. *Prevalence and trends in overweight among U.S. children and adolescents, 1999-2000*. Journal of the American Medical Association 2002;288:1728-1732.
- ¹² Casey VA, Dwyer JT, Coleman KA, Valadian I. *Body mass index from childhood to middle age: a 50-year follow-up*. American Journal of Clinical Nutrition 1992;56:14-18.
- ¹³ Guo SS, Roche AF, Chumlea WC, Gardner JD, Siervogel RM. *The predictive value of childhood body mass index values for overweight at age 35 years*. American Journal of Clinical Nutrition 1994;59:810-819.

- ¹⁴ Goldberg, R. et al. (1995). *Lifestyle and biological factors associated with atherosclerotic disease in middle-aged men*. Archives of Internal Medicine, 155: 686-693.
- ¹⁵ CDC. [Physical Activity and Health: A Report of the Surgeon General](#). Atlanta, GA: U.S. Department of Health and Human Services, 1996.
- ¹⁶ Grunbaum JA, Kann L, Kinchen S, Ross J, Hawkins J, Lowry R, et al. *Youth Risk Behavior Surveillance—United States, 2003*. Morbidity and Mortality Weekly Report 2004;53(SS-2):1–95.
- ¹⁷ Retrieved from <http://www.ncpublicschools.org/quickfacts/closegap/> on September 3, 2005.
- ¹⁸ Retrieved from <http://report.ncsu.edu/ncpublicschools/AutoForward.do?forward=hscompfig4.pagedef> on October 21, 2005.
- ¹⁹ Retrieved from <http://apps.nccd.cdc.gov/yrbss/> on October 21, 2005.
- ²⁰ Be Active North Carolina. *A Financial Cost Appraisal of Physical Inactivity, Obesity, Diabetes Mellitus, and Low Fruit/Vegetable Intake Among North Carolina Adults*. 2004.
- ²¹ American Obesity Association. Comments of the American Obesity Association on Healthy People 2010. [www.aoa.org].
- ²² Lee, I. et al. (1993). *Body weight and mortality: a 27-year follow-up of middle-aged men*. Journal of the American Medical Association, 270:2823-2828.
- ²³ National Heart, Lung, and Blood Institute. *Clinical Guidelines on the Identification, Evaluation, and Treatment of Obesity in Adults*. U. S. Department of Health and Human Services, Washington, D.C., 1998.
- ²⁴ Pi-Sunyer, F (1993). *Short-term medical benefits and adverse effects of weight loss*. Annals of Internal Medicine, 119 (7.2): 722-726.
- ²⁵ Van Itallie, T. et al. (1985). *Health implications of overweight and obesity in the United States*. Annals of Internal Medicine, 103:983-988.
- ²⁶ Rubin, R. et al. (1994) *Health care expenses for people with diabetes mellitus*. Journal of Clinical Endocrinology and Metabolism. 78:809a-809f.
- ²⁷ Testa, M. and Simonson, D. (1998). *Health Economic Benefits and Quality of Life During Improved Glycemic Control in Patients with Type 2 Diabetes Mellitus*. Journal of the American Medical Association, 280:17:1490-1496.

- ²⁸ Be Active North Carolina. *A Financial Cost Appraisal of Physical Inactivity, Obesity, and Type II Diabetes in School-Age Children*. 2005.
- ²⁹ Lippman, H. *Healthier Communities on the Horizon. The State of Health Care in America, 2002*. The Business & Health Institute. Special Report. Medical Economics Publishing, Paramus, NJ.
- ³⁰ Wolf, A. and Colditz, G. (1998) *Current estimates of the economic cost of obesity in the United States*. Obesity Research. 6:97-106.
- ³¹ Retrieved from <http://www.sas.com/news/preleases/012303/news1.htm> on October 7, 2005.
- ³² Retrieved from www.ncpublicschools.org/sbe_meetings/0505/0505_HSP02.pdf on September 9, 2005.
- ³³ Retrieved from <http://www.military.com> on September 22, 2005.
- ³⁴ Rubin, R. et al. (1994) *Health care expenses for people with diabetes mellitus*. Journal of Clinical Endocrinology and Metabolism. 78:809a-809f.
- ³⁵ Retrieved from <http://www.limitv.org/stats.htm> on September 9, 2005 from 1999 Study.