Mind-Body Connection Important to School Success

By Ashley Mayer and Elizabeth Tate

In 2002, 61 percent of Tennesseans were either overweight or obese. Currently, the state is ranked fifth worst in the nation for obesity, and the state spent an estimated $1,840 million dollars caring for health conditions attributed to this obesity.

In addition to being the second most common contributor to mortality, obesity has an emotional component: the health-related quality of life of obese children is similar to that of cancer patients, and they suffer depression at higher levels than do children receiving chemotherapy.

Obesity is the most obvious outcome of poor health habits, but it is not the only one. In the short term, outcomes include depression and susceptibility to disease. In the long term, inadequate calcium intake in childhood and adolescence, coupled with a lack of exercise, will result in insufficient bone mass, leaving the bones especially vulnerable to the effects of aging. Toned abdomen and lower back muscles prevent back pain, which is a significant cause of loss of productivity in the western world. According to the Institute of Medicine, 30 percent of boys and 40 percent of girls are at risk of being diagnosed with Type 2 diabetes, which is affected by activity and diet.

In no area of health care is prevention more important. Despite the expense of $50 billion annually on weight loss (including costs of low calorie foods) 95 percent of overweight Americans regain weight as rapidly as they lost it.

Two key behavioral factors are related to obesity onset: (1) poor dietary practices and (2) inadequate regular physical activity. Americans’ food practices have dramatically shifted, with reduced frequency of family meals, fewer home-cooked meals, increased food consumption, increased portion size, restrained eating by skipping meals and increased consumption of soft drinks. Physical education time in the schools has been reduced to increase instructional time. Decreasing physical activity means children become more restless in the classroom and may feel...
stressed when learning. This solution is not improving test scores but increasing the likelihood of obesity and poor exercise habits in the future.

During a late August meeting of the Tennessee Select Committee on Children and Youth focused on health and nutrition, schools were pinpointed as the most direct and immediate way to intervene in this health crisis. School meal programs and mandated physical education classes were discussed as beneficial ways to curb childhood obesity. But just as we teach children basic arithmetic, it logically follows that they need to be taught how to cultivate and maintain healthy lifestyles, and, equally important, healthy living must be modeled for them.

The state of Tennessee is making headway with the passage of recent legislation. Confidential body mass index reporting to parents is one way that legislators are trying to promote awareness. In May 2005, the Tennessee Legislature mandated that the food we serve children in grades kindergarten through eight must adhere to standards of minimal nutritional value, establishing a benchmark of quality for our youth. Programs such as the Health in Progress 30-week exercise and education program being initiated in five Nashville middle schools this school year, the implementation of Tennessee on the Move, yet another healthy living program (more information at www.tnhealthyweight.org) and the Tennessee Action for Healthy Kids State, which is currently working on promoting healthy snacks and foods in vending machines, school stores and other venues in schools, all demonstrate signs of promise for a state in which the CDC reports fewer than 40 percent of its citizens get the recommended amount of exercise.

The key to this crusade is the assurance that obesity is preventable and the effects that are taking a toll on communities and economies can be eradicated. The U.S. costs associated with obesity in the year 2000 were estimated at $117 billion just for children: $61 billion in direct medical costs and $56 billion for indirect costs, tripling in the last 20 years. According to the Active Living program, poor diet and physical inactivity caused 400,000 preventable deaths in the United States in 2000, second only to tobacco use.

Lobbyist Nan Allison, who works for the Tennessee Dietetic Association (TDA), spoke to the select committee informing them of the importance of passing and implementing the Child Nutrition and Wellness Act, HB2055. This bill would require the state of Tennessee to develop a comprehensive plan for addressing obesity and position it to compete for funds to implement it.

The Coordinated School Health Model (CSH), upon which the Coordinated School Health Improvement Act of 1999 was based, outlines the many facets of health. This comprehensive system focuses not just on healthy food and regular physical education, but also encompasses how health interplays with the environment, community, family, teachers and social services.

The question that may arise is, “So how do we overcome these problems, linked as they are to the lifestyle of Americans, with its high calorie food and low level of activity?” One simple solution all schools could start with is eliminating soft drinks in schools. The risk of obesity increases by 60 percent per can of soda per day. A few recommendations given by CSH are to replace...
Eating Disorders

Although obesity is a growing problem among American youth, eating disorders also continue to be a problem. According to the American Dietetic Association, between 5 million and 10 million females and 1 million males (5 percent of females and 1 percent of males) in the United States struggle with eating disorders. Eighty-five percent of these begin in adolescence. Eating disorders are characterized by a disturbed body image, (perceiving oneself as fat despite having normal weight), a fear of being fat and an obsession with becoming thinner.

Fifty-six percent of Tennessee youth responding to the 2005 Youth Risk Behavior Survey reported they were “about the right weight.” However, 65 percent of females responded to the question, “Which of the following are you trying to do about your weight?” with the choice “lose weight.” Seventy percent of females and 58 percent of males said they exercised to lose or maintain weight.

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sweetened drinks with water, low-fat white or flavored milk and smaller portions of real fruit and vegetable juices. (Recent state regulations have begun to address this issue.) Another identified problem is that students may spend a disproportionate amount of time in the cafeteria line versus eating, increasing the probability that they will choose fast food options. To promote continuing physical education in the classroom, curriculum studies have proven physical activity increases concentration; improves mathematics, reading and writing scores; and reduces disruptive behaviors. Even more benefits include heightened weight control, maintenance of bone mass, reduced risk of depression and improvement of the health-related quality of life. Addressing concerns of some school administrators that taking time away from purely academic subjects and allocating it to physical education will be a negative outcome, it has been shown that academic achievement improves even when this happens.

Counseling is also thought to be an integral component of comprehensive school health. Schools are finding it difficult to meet the 1 to 300 counselor to student ratio recommended by the CSH model, with some ratios being as high as 1 to 524. Lastly, there is no replacement for the promotion and support of good health and regular activity from communities and families, as they have some of the most direct effects on children.

Dr. Pat Cooper, a superintendent who has successfully implemented Coordinated School Health in his McComb, Mississippi, school district, said that there is no time to wait for the societal conditions within which our schools operate to change, there needs to be change implemented to the delivery parameters to kids while they are in school. Exercise programs, nutritional curriculum and strategic planning are all components of the campaign against obesity in an effort to save our children from such an avoidable fate.

Health In Progress, a middle school walk/run program, is available in five Nashville area public schools. The schools have been chosen, the program is currently being designed, and it will be implemented over the entire 2005-06 school year.

Children with Special Health Needs Have Weight Issues

Thirty percent of Mid-South children with special health needs were obese, a University of Tennessee study showed. Obesity is a secondary condition in a number of chronic diseases of children. Children with special health needs that include mobility disabilities face challenges to maintaining an optimum weight. However, the health problems associated with obesity affect these children as much, if not more, than others. The Tennessee Dietetic Association points out that school individualized education plans do not include wellness and nutrition considerations.
Physical Activity:

- Reduces the risk for overweight, diabetes and other chronic diseases;
- Assists in improved academic performance;
- Helps children feel better about themselves;
- Reduces the risk for depression and the effects of stress;
- Helps children prepare to be productive, healthy members of society;
- Improves overall quality of life.

Coordinated School Health
Putting It All Together to Help Students Grow Strong and Healthy

A pilot program has been designed for to allow 10 counties in the state of Tennessee to conduct a program on Coordinated School Health (CSH). The pilot sites are located in Loudon County, Warren County, Tipton County, Gibson County, Henry County, Macon County, Stewart County, Putnam County, Monroe County and Washington County.

In order for these 10 counties and their officials, educators, administrators and families to understand childhood obesity and the need for better health, there are eight components for promoting positive education for healthier outcomes through collaboration. The eight components are:

- health education;
- physical education;
- health services;
- nutrition services;
- healthy school environment;
- health promotion for staff;
- family and community involvement; and
- counseling, psychological and social services.

Schools cannot be the only model to help overcome the obesity epidemic for our children in the state of Tennessee. Family and community involvement is needed. The idea for CSH is to reduce barriers in learning and to strengthen academic achievement is through health. By reducing these barriers is to improve student’s health and their ability to learn through the support of families, communities and schools working together.

Please contact Connie Givens, director of Coordinated School Health for the Tennessee Department of Education at connie.givens@state.tn.us for more information.
The Head Bone is Connected to the Neck Bone, and the...
One School System’s Experience with a Coordinated School Health Program

By Ashley Mayer

Where a school district saw a 77 percent graduation rate and 1,774 in-school suspensions, one man saw a challenge. Dr. Pat Cooper has been the superintendent of the McComb, Mississippi, school district since 1997, when he asked the district for a 13-year contract, an unheard of amount of time in a school district where superintendents changed with the seasons. Cooper had a vision, though, and throughout his time in McComb he has held fast to his vision of a school system that would focus not just on education, but on the comprehensive well-being of the children entrusted to his care.

Coordinated School Health was implemented in McComb in the 1997-98 school year, and the results are nothing short of remarkable. After redistributing previously allocated funds and negotiating with governmental and private agencies, as Cooper says, for “people over stuff,” he brought in nurses, counselors and police officers to serve the children. Basing this new system on Maslow’s Hierarchy of Needs, a tool that concludes that physical and safety needs, as well as a sense of belonging, must be met in order for esteem, cognitive abilities and self-actualization to develop, Dr. Cooper began well checkups in his schools, emphasized physical education, provided services for mental and emotional issues and asked that every staff member in his school district “do for every child what we do for our own children.”

Consequently, not only are obesity and drug usage declining sharply, dropout rates have been cut by 57 percent and in-school suspensions have fallen by 65 percent. After implementing a random drug testing policy, the system found only 1.6 percent of the kids to be positive for drugs. Not to leave his staff behind, Cooper installed fitness equipment on-site in for teachers to use on their breaks so they would be able to model healthy living for their students. Now 86 percent of staff use the fitness equipment regularly. Additionally, vending machines that sold anything but real juice, water and Powerade were removed; students were allowed to drink water anytime they wished. Dr. Cooper now jokes about how the water bottle has become a trendy accessory to bring into class. On the whole:

- Juvenile arrest rates have fallen;
- Children report feeling safer at school;
- Test scores have gone up (even though some class time has been sacrificed for health and physical education classes);

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Policies Support Healthy Communities

Public policy planning is an often overlooked but crucial factor in health promotion. At the Select Committee on Children and Youth’s August hearing, the committee heard from experts on what towns and cities can do to enhance nutrition and physical activity.

Organizations such as the Governor’s Council on Physical Fitness and Health, the Robert Wood Johnson Foundation’s Focus on Active Living Leadership and the National Conference of State Legislatures all stress healthy community design concepts. Planners are asked to create roads and streets that have higher degrees of connectivity and proximity to main points in any town or city, such as schools, neighborhoods, supermarkets and churches.

Citizens are called upon to help clean up their streets and make every effort to ensure that communities are safe places for children to walk and bike. The education system is challenged to find ways to have schools on sites that are close to homes and are easily accessible on foot, rather than sprawling suburban schools that are only reachable by car.

As stated by the Tennessee Dietetic Association, the key step to meet each child’s needs is an “organized approach and professionals who understand how to apply the materials appropriately to have an effective program.” Ideas such as these consider all the factors that account for good health, from the macro to the micro levels: society, community, organization, families and friends, and lastly, individual accountability (Promoting Physical Activity: A Guide for Community Action, 1999, CDC).

A recently released Rand Corp. study did not find a relationship between the location of fast food restaurants and obesity, but did find that higher cost of fruits and vegetables was associated with more obesity.

What States Can Do

State governments can expand and promote opportunities for physical activity in the community through changes to ordinances, capital improvement programs and other planning practices. They can also work with communities to support partnerships and networks that expand the availability of and access to healthful foods, according to the National Conference of State Legislatures (NCSL).

The NCSL identified the following policies that might be effective in encouraging more activity to achieve public health benefits:
♦ Incorporate sidewalks and bike lanes into community design.
♦ Location-efficient mortgages that allow homebuyers to borrow a higher amount to purchase homes in areas with access to lower-cost transportation compared with automobile-dependent areas.
♦ Greenways and greenspace (land trusts, etc.). These initiatives offer developers incentives to design projects that:
  • Provide for mixed uses to encourage more walkable communities;
  • Locate development adjacent to existing infrastructure to cut down cut building costs and limit sprawl;
  • Emphasize compact building design;
  • Include public transit in the transportation mix;
  • Preserve open space.

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The students’ rates of intercourse are less than that of other similar students in the state; More children are getting medical checkups because of the availability of the staff nurse in the health and wellness clinic; Physical activity is up while obesity is down; and Students and their families are benefiting from school-based and neighborhood learning centers that provide tutoring services, homework assistance, enrichment and recreation activities, character development and teen empowerment activities.

Dr. Cooper does not take his success for granted though and will admit that there are stiff obstacles. “These kids are dealing with 16 hours of hell out there, and then we have to try to reverse that in 8 hours of school,” he said, referring to the large number of children in his district who come from broken homes, parents with drug and alcohol addictions, and abuse situations. By recognizing that these children are unable to perform in school without a certain foundation of care, per Maslow, Coordinated School Health has allowed McComb, Mississippi, to address and implement comprehensive care of their students.
The mind-body connection cannot be ignored. Schools trip over their own shoestrings with efforts to improve children’s educational performance when they seek increased academic time at the expense of health and physical activities. A wealth of research links good health behaviors with higher and improved performances on mental skills tests.

**Nutrition.** Children from households with food insecurity, which would logically create nutritional deficiencies, have an increased likelihood of poor health; more frequent headaches, stomachaches and colds; more frequent ear infections; and more hospitalizations, according to a review of research by the Center on Hunger and Poverty.

Even more disturbing for schools hoping to meet state and federal education requirements, three studies found that elementary children from households with food scarcity scored lower on test scores. On the positive side, decades of research on the school breakfast program show improvements in behavior and academic performance when children get a healthy breakfast.

Behavior and school success are also linked. All students’ abilities to learn are damaged when students are disruptive. Inadequate nutrition is associated with greater irritability, hyperactivity and aggression and lowered concentration, a recipe for greater disruption. According to the Action for Healthy Kids, even moderate or slight under-nutrition can affect performance.

**Activity.** Physical activity is associated with improved lung function and increased blood flow, both of which are associated with mental functioning. Research with adults found that exercise improved the higher mental processes of memory and executive functions: planning, organization and the ability to mentally juggle different intellectual tasks at the same time.

Yet daily enrollment in physical education declined from 42 percent in 1992 to 25 percent of students in 1995, according to the Surgeon General’s report on Physical Activity (1996). In order to meet higher performance standards, schools have reduced the time allotted to physical education to free time for more classes. A study of school children found that the group whose class time was reduced by 4 hours a week for physical activity scored higher on math tests than those who did not.

No one believes that students in school in 2005-06 can learn everything they will need to know to function in 2025 or 2035. The job of primary and secondary schools is to arm children with the tools they need to be able to adjust to the changing technologies and new knowledge of the future. By modeling healthy behaviors and teaching children good personal maintenance, schools and communities are making an investment that will pay them back in lowered health care costs, longer productive work lives and improved quality of life.