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CHILDHOOD OBESITY

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According to the Centers for Disease Control and Prevention (CDC), America is facing an epidemic of overweight and obesity. Far from being superficial or cosmetic concerns, overweight and obesity contribute to serious health problems, including increased rate of mortality. The CDC reports that nearly 65% of the population is overweight and that obesity rates have more than doubled in the last 20 years, from 15% in 1980 to 31% in 2000. Wisconsin residents make a sizeable contribution to the national weight problem. A recent study by Trust for America's Health concludes that Wisconsin ranks 34th among the states based on a 20.9% adult obesity rate.

This brief examines the issue of overweight and obesity, with a special focus on children, and efforts to address the problem of childhood obesity. It discusses the nature of the problem and the role of government in treating the causes of obesity, and includes a case study of the solutions employed by one Wisconsin school district.

DIMENSIONS OF THE PROBLEM

Nationally, overweight among children aged 6-11 has more than doubled in the last 20 years from 7% in 1980 to 15% in 2000. Wisconsin's high school students are ranked 21st in the nation with 10.4% considered overweight. Weight is becoming an issue for even younger children according to a

December 2004 study conducted by the American Heart Association. That study concluded that 10% of American children aged 2-5 are overweight, a 7% increase since 1994.

The categories of overweight and obese are based on BMI, or body mass index. BMI is a number that uses a mathematical formula to express weight adjusted for height. The National Institutes of Health (NIH) categorize adult BMI as "underweight", "normal", "overweight", "obese", or "extremely obese". Body mass index categories for children are slightly different than those for adults. The NIH categories for children are "underweight", "normal", "potential for overweight", and "overweight", which exclude obese as a category. However, many children would be considered obese if adult standards were applied. Consider a 10 year-old boy who stands four feet tall and weighs 70 pounds. This child has a BMI of 21.4, which puts him in the 93rd percentile of children's BMI, just short of the 95th percentile cut-off point for overweight. If he were an adult, however, his high BMI percentile would place him in the category of obese. This is of particular concern because studies by the National Center for Chronic Disease Prevention and Health Promotion show that overweight children are likely to become overweight adults. The probability that overweight preschool-aged children will become obese adults is over 30%. For overweight adolescents, the likelihood is

closer to 80%. Many feel that childhood is the best time to slow or reverse the increasing rates of obesity in this country among children and adults by teaching kids to adopt healthy habits for life.

PHYSICAL AND MENTAL HEALTH PROBLEMS

The Surgeon General reports that even moderate overweight can lead to, among other things, cardiovascular diseases, diabetes, and certain cancers. Doctors are starting to see overweight children as young as age six showing signs of heart disease including stiffening arteries and high blood pressure. Type 2 diabetes was once known as “adult-onset” diabetes because it was developed by adults whose lifestyle or environment triggered the disease. But the term “adult-onset” has become misleading, as doctors have now diagnosed type 2 diabetes in overweight children as young as four. A follow-up study by the International Union Against Cancer using data from a pre-World War II study in Europe shows an increased risk for all cancers in those who had higher than normal BMI as children. Overweight also causes aches and pains that can force a more sedentary lifestyle, which can then contribute to further weight problems. This effect can be even more pronounced in children, who are increasingly complaining of arthritis-like symptoms and exercising less.

Researchers at Harvard Medical School have examined the relationship between mental health and obesity and found the link to be very complex. Depression, anxiety, anger, and other problems can be the cause of, or the result of, weight problems. The overweight are less likely to enjoy the psychologically therapeutic benefits of physical exercise and more likely to resort to “comfort foods” high in sugar and fat to console themselves. They are more likely to have low self-esteem due to social

discrimination and poor body image. The illness and disease that can result from obesity can exacerbate mental health problems. Problems like anger, anxiety, depression, and low self-esteem can be even more pronounced in children, and can follow children for the rest of their adult lives. A study in the Journal of the American Medical Association found that some overweight children rated their quality of life with scores as low as those of young cancer patients on chemotherapy.

ECONOMIC COSTS

The most obvious and serious social consequence of the overweight epidemic is its impact on our health care system. With more than half of the U.S. adult population overweight and that number rising each year, our health care system could be severely strained in the future by illness and disease related to weight problems. According to the CDC, the amount spent on obesity already rivals the \$75 million spent on treatments related to cigarette smoking in 2003. Children who have developed diabetes as a result of their weight will live with the disease, and incur health care costs, for decades to come. The same can be said of many cardiovascular diseases and less aggressive cancers. Many of these costs will be borne by Medicaid and other forms of public assistance because overweight disproportionately affects the poor. According to a University of Houston study, problems with the availability and cost of healthy foods like fresh produce contribute to the impact of obesity in lower income neighborhoods.

ROLE OF GOVERNMENT

The government can do little to influence many personal decisions of adults, and some argue that any attempt to regulate diet or exercise with respect to the overweight problem is inappropriate. But government does regulate certain personal decisions such as smoking tobacco and drinking alcohol

because these activities also impact the wider community in some ways. Some proposals that would affect all Americans include a “fat tax” on unhealthy food, a new model for FDA food labeling that would include clearer nutrition information, and federal funding for healthy lifestyle initiatives. More can be done to influence the behavior of children than adults, both because the government is charged with some duty to protect minors and because it has considerable influence over how students spend six to eight hours every day in the classroom. Given that the incidence of overweight is so high in children, and is increasing at such a rapid rate, some future government intervention is likely.

REGULATING FOOD IN SCHOOLS

Limiting Food Sold

Under the Child Nutrition Act of 1966, the United States Department of Agriculture (USDA) can limit how and when foods that compete with the school lunch program are sold. States and local authorities are empowered to enact stronger regulations, and some states have done so. California passed the California Childhood Obesity Prevention Act of 2003, which prohibits or strictly regulates the sale of certain beverages, like soda, on school grounds. Wisconsin proposed, but did not enact, similar legislation in 2001. 2001 Assembly Bill 678, and identical Senate Bill 339, would have required that milk be made available in schools that have an exclusive contract with a vending company to sell soda. However, some school administrators claim that banning snacks and soda sales cuts into their badly needed revenue.

Selling Healthy Foods

Another approach that is gaining popularity is encouraging the sale of

nutritious, fresh foods in lunches, sometimes promoting organic or locally grown foods. The Wisconsin Homegrown Lunch Program is one example of this trend. This program brings locally grown, healthy food into Wisconsin schools to not only provide a nutritious meal to students, but to also reinforce where their food comes from, educate them about agriculture in Wisconsin, and teach them how to make healthy, informed decisions about the foods they eat. Locally grown, healthy foods may be more expensive than less nutritious commodities provided by the federal government, but some Wisconsin schools have demonstrated that costs can be comparable to traditional school lunches. Such foods can be priced competitively and discounts may be given by producers to bring these foods into line with standard school lunch costs.

Prohibit Outside Food and Off-Campus Lunch

Some schools influence students’ eating habits by restricting off-campus privileges during lunch or breaks. Students may be required to take lunch on campus or be prohibited from bringing outside food back to school. This restrictive policy is not always popular with students, but it prevents them from eating fast food five days a week instead of a more balanced in-school lunch. It also encourages students to purchase food from the school’s food services, ensuring at least some revenue for the school at lunch. Under such a program, however, school authorities also face pressure from businesses that benefit from student’s lunch purchases and parents who want children to return home for lunch. The influence of students, their parents, and local businesses make closing the school to outside food and keeping kids on campus a difficult approach.

REGULATING ADVERTISING IN SCHOOLS

Direct Advertising

Advertisers are increasingly using traditional direct advertising in schools, such as posters in hallways, bathrooms, and even classrooms. Children are an important group for advertisers because they not only have money of their own to spend, but they also influence the spending of parents. According to a report by the Kaiser Family Foundation, the majority of advertisements directed at children are for unhealthy foods and beverages. 1997 Assembly Bill 685 would have prohibited any advertising in Wisconsin schools, but the measure was not adopted. Local school boards are still able to decide whether to allow advertising or not, but direct advertising in schools continues to be popular as schools seek out new revenue sources.

Sponsorship, Promotions, and Tie-Ins

Sponsorship has long been a way for advertisers to get their message out in venues in which advertising has traditionally been limited. Even schools that do not allow advertising in the halls will likely have a scoreboard that is sponsored by a business, often a soft drink company. Sponsors' logos can also be found on sports equipment, uniforms, tournament advertising, and facilities. Advertisers also sponsor nonathletic activities such as school plays, clubs, and festivals.

Advertisers take a slightly different approach from traditional sponsorship by using promotions or "tie-ins" to advertise their products. Students' collecting the labels from particular food brands to redeem for school equipment is an example of a promotion. A "tie-in", by contrast, commonly involves providing free instructional materials, such as book covers or lesson plans,

that mention certain products or contain their logos, to schools that need help financing education. It has been noted that this kind of advertising disproportionately impacts children who attend poorer schools that are more reliant on outside revenue. Of course, children are exposed to advertising in almost every other facet of their lives, so many claim it does no harm and it would be irresponsible to ignore this potential income.

PROMOTING EXERCISE IN SCHOOLS

Physical Education Class and Recess

The CDC reports that one in three children does not get the recommended amount of daily vigorous activity. According to the National Association of State Boards of Education, only 8% of elementary schools, 6.4% of middle schools, and 5.8% of high schools offer daily physical education. Wisconsin schools use national standards for physical education, which require grades K-6 to meet three times a week, grades 7 and 8 to meet a minimum of once a week, and grades 9-12 to complete 1.5 credits to graduate. Wisconsin does not expressly require that recess take place or that it last any specified length of time. However, the school district standards found in Section 121.02, Wisconsin Statutes, do assume that recess is included in the required hours of instruction.

Experts say that too little time is allotted to physical education and recess, and it is not well spent. They recommend, in addition to more time, more vigorous activity during physical education classes, and a prohibition on recess activities such as video or card games that do not involve exercise.

Organized Sports

Organized sports are an opportunity for young people to get exercise while still under the supervision and guidance of a school. As is in the case of physical education and recess,

however, financial and time constraints are forcing some schools to cut certain sports and limit others. This means less opportunity for participation in general and more competition for the few available spots on existing teams. A number of schools in Wisconsin have also implemented “pay-to-play” programs in which students must pay a fee to play sports or participate in other extracurricular activities. Students whose families cannot afford these participation fees or whose schools simply cannot afford to offer sports programs may miss out completely. These children lose what many doctors call a great option for near-daily vigorous physical activity in practices and competitions.

Walking Bus Route

Health professionals have long said that walking is an effective low-impact exercise. A walking bus route is essentially a supervised walk before and after school in which students wait at select places like traditional bus stops until the group arrives. Once the group arrives, the student walks the rest of the route with classmates, picking up kids as the group follows the predetermined route. Walking to school is not an option on some Wisconsin winter days, though experts say a little cold or snow should not necessarily preclude such a walk if it is relatively short and safe. Of course, this is not an option at all in many of Wisconsin’s rural school districts, but it can work in more residential communities with a little planning. Some city planners are encouraged by city councils to create pedestrian-friendly streets that facilitate walking. City leaders hope this will impact weight problems community-wide.

APPLETON CENTRAL HIGH SCHOOL: A CASE STUDY

Appleton Central Alternative High School, a district-operated charter school in

Appleton, Wisconsin, implemented a healthy culture program in 1996. Appleton Central is an alternative high school serving troubled students from all over the district. In considering how to best serve the needs of its alternative students, Appleton Central decided to try a healthy culture program that addressed all aspects of good health, including nutrition, exercise, and psychology. Doctor Thomas Scullen, the superintendent of the Appleton Area School District, spoke at a Joint Legislative Council symposium on healthy lifestyles in November 2004, and described the successes that Appleton Central has had in implementing its healthy culture initiative schoolwide.

Healthy Menu

Appleton Central partnered with Natural Ovens Bakery of Manitowoc, Wisconsin, to provide healthy meals for students at breakfast and lunch. The school eliminated soda and snack vending machines and banned any outside food or drink. Bottled water was provided free to students as an alternative to soda. The new school breakfast and lunch menu, provided largely by Natural Ovens, included only healthy, natural foods like fresh fruits and vegetables, lean meats, and whole-grain baked goods. Students and faculty learned to accept a school without soda and candy and grew to appreciate the healthy menu and its effects. The new menu went over so well that the rest of the Appleton Area School District has adopted similar but slightly less restrictive nutrition standards for meals and vending.

Promoting Exercise

Appleton Central Alternative High School also encourages more physical activity in school to implement its healthy culture plan. The school has begun an effort to offer more options in physical activity for students and

has encouraged the use of pedometers to measure steps taken per day. Even small increases in physical activity can help the very sedentary burn more calories than usual, so students are encouraged to move around even in some classroom activities and settings. The school has used a walking bus route as part of its healthy culture program. In addition to the physical health benefits of exercise, the school's students show benefit from the stress-relieving and psychological benefits of exercise. Faculty and staff are encouraged to increase their physical activity to provide role models for students and improve their own health in the process.

Evaluation

Since 1997, the first full year of the program, teachers and administrators claim that the students are learning better, behaving better and enjoying school more. The serious problems facing not just alternative schools, but Wisconsin schools in general, such as dropouts, expulsions, drug use, weapons, and suicide have dropped to levels at or near zero

since the program began. According to Superintendent Scullen, many of the faculty and staff have benefitted from following the program themselves, and all of them have enjoyed its effects on the students. And most importantly, according to the school's Web site, the students are healthier and have gained knowledge about nutrition and exercise that should stick with them for life. Overall the plan has been an overwhelming success, according to Superintendent Scullen, and he recommends that other schools explore similar options to impact the health of an entire generation of children.

FOR FURTHER INFORMATION

Centers for Disease Control – “Overweight and Obesity” <http://www.cdc.gov/nccdphp/dnpa/obesity/>

Trust for America's Health – “F as in Fat: How Obesity Policies are Failing America” <http://healthyamericans.org/reports/obesity/>

Appleton Central Alternative High School <http://www.aasd.k12.wi.us/aca/default.htm>