



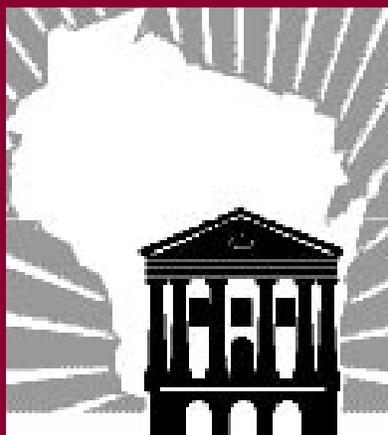
**Wisconsin Public Health & Health Policy Institute**

# **An Ounce of Prevention: What Can Policymakers Do About the Obesity Epidemic?**

*Better Health Through Informed Policy*

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## Wisconsin Health Policy Forums

Wisconsin Health Policy Forums is a project of the Wisconsin Public Health and Health Policy Institute. Our goal is to inform state health policy debates with the best evidence and thinking available. We strive to be comprehensive, practical, relevant and fair in our selection and treatment of topics, avoiding academic jargon and partisan politics. University based, and closely linked to public and private policymakers throughout the state, we are a resource for bridging research and practice and we provide a safe forum for all voices to be heard.

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# An Ounce of Prevention: What Can Policymakers Do About the Obesity Epidemic?

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# An Ounce of Prevention: What Can Policymakers Do About the Obesity Epidemic?

## Executive Summary

**O**verweight and obesity is a major problem. The percentage of the population that is overweight or obese continues to increase. Overweight and obesity are key factors in many diseases. The financial and social cost is huge. Yet, to date the response from public and private policymakers has been relatively small and uncoordinated. The good news is that should policymakers want to take action, a number of policy options are available.

The federal Centers for Disease Control and Prevention reports that in 2001:

- 37% of Wisconsin adults were overweight.
- An *additional 22%* were obese.
- The percentage of obese adults in Wisconsin *doubled* between 1990 and 2001.
- 15% of children aged 6 to 19 were overweight.

Wisconsin's numbers are similar to the national prevalence of overweight and obesity. Because the number and percentage of people who are overweight or obese nationwide is so large, experts on these conditions now say there is an obesity epidemic.

Being overweight or obese increases a person's risk of developing many medical conditions including hypertension, high cholesterol, diabetes, heart disease, heart failure, and stroke.<sup>1</sup>

Researchers estimate that the cost of treating obesity is between 5.5% and 7.0% of all national healthcare expenditures.<sup>2</sup> The federal Centers for Medicare and Medicaid Services reports that healthcare costs totaled \$1.4 trillion in 2001.<sup>3</sup> If 5.5% of this cost is attributable to obesity, the national cost of obesity is \$77 billion per year. Wisconsin's per capita share is \$1.4 billion.

Reducing the number of people who are overweight and obese will greatly reduce medical costs. In spite of the potential savings to public and private payers, obesity is often overlooked in the policy arena. Consequently, comprehensive policy and program efforts to reduce overweight and obesity are lacking.

Both governmental and private sector actors have begun efforts to combat the obesity epidemic. However, many of these efforts lack urgency because obesity is a low priority. In addition, these efforts are not linked together or part of a systematic public/private partnership to tackle the problem of excess weight.

The challenge facing policymakers, public and private, is not only to increase efforts to combat the obesity epidemic, but to do so in a way that sends a consistent message to kids and adults in school, the workplace and the community. Some pieces of this puzzle are already in place. Others will need to be built from the ground up.

Possible areas of action include:

- **Implement the state health plan.** The Department of Health and Family Services has written a state health plan and a companion piece with implementation strategies. One of the health priorities identified by the plan is to reduce the incidence of overweight and obesity. Implementation will require leadership and fiscal resources from both public and private policymakers.
- **Restrict or eliminate junk foods in schools.** States have wide latitude to control the sale of food in schools. Wisconsin has not done so at the state level. Appleton Central Alternative High School eliminated junk food; teachers and administrators swear that students act and learn better after the change.
- **Improve access to healthy foods in schools.** Only 51% of Wisconsin middle and high schools offer healthy foods for sale.
- **Improve health education curricula to provide information on nutrition.** Wisconsin does not require classroom instruction in nutrition. Only 71% of middle and 76% of high schools do offer such instruction.
- **Link school food policies with nutrition curricula.** Only 35% of Wisconsin middle schools and 44% of high schools meet the dual standard of teaching about and making available healthy foods.
- **Increase physical education instruction in schools.** Wisconsin's physical education requirements fall short of those recommended by the National Association of State Boards of Education. The NASBE recommends daily physical activity – 150 minutes per week for elementary grades and 225 minutes per week for middle and high school grades.
- **Improve health education classes.** Only 47% of Wisconsin middle schools and 59% of high schools require both physical education and classroom instruction in physical activity. The National Association of State Boards of Education recommends that health classes provide the knowledge and skills necessary for a lifetime of physical activity, including how to assess fitness levels, set activity goals and monitor progress to those goals.
- **Eliminate sales tax exemptions on unhealthy foods and dedicate the money to health programs.** Seventeen states and the District of Columbia have enacted laws taxing soft drinks and/or snack foods.
- **Promote policies that encourage walking and bicycling in everyday life.** Examples include community designs that provide sidewalks and bike lanes, transportation funding for biking and walking in highway projects, and safe routes for walking to school.
- **Maximize state receipt of federal money.** Numerous federal programs provide money to states for efforts to increase physical activity.
- **Improve workplace wellness programs.** Public and private sector employers can reduce healthcare costs by helping individuals become aware of the need for physical activity and by establishing financial and other incentives to make individuals responsible for their own health.

- **Improve counseling by medical professionals on diet and physical activity.** A surprisingly large number of people, including those who are overweight and obese, do not receive counseling on diet and the need for regular physical activity. HMOs can implement clinical practices to increase the number of people who receive such counseling.

Without concerted, coordinated, and immediate action on the part of state and local governments, educators, insurers and medical providers, and private companies, the number of people who are overweight and obese will continue to grow. It is an epidemic with enormous financial costs that has been too long neglected and the potential savings of prevention can no longer be deferred. These costs are avoidable, but only if we act.



# An Ounce of Prevention: What Can Policymakers Do About the Obesity Epidemic?

The intent of this paper is to provide public and private policymakers with background information on the extent, medical consequences, financial cost and causes of overweight and obesity. It then explores different policy arenas in which policymakers may want to consider taking action.

## Definition of Terms

*Body Mass Index.* The scientific community defines overweight and obese in terms of body mass index (BMI). BMI measures the relationship between a person's weight and height and it is calculated by dividing weight in kilograms by height in meters squared. A person with a BMI between 25 and 29.9 is overweight. A person with a BMI greater than or equal to 30 is obese.

A body mass index table is attached (Appendix A) to give readers a sense of how weight and height result in a given BMI. For example, a person who is 5'8" and weighs 164 pounds would have a BMI of 25 and be considered overweight. That same person would have a BMI of 30 and be obese if the person weighed 197 pounds.

*Diabetes.* There are two kinds of diabetes. In Type I diabetes, the body does not produce any insulin, the hormone that helps transfer sugar from the blood to other parts of the body. In Type II diabetes, the body either does not produce enough insulin or body cells ignore the presence of insulin. Type II diabetes is much more common. When this paper refers to diabetes, we mean Type II diabetes.

### What is Body Mass Index (BMI)?

BMI measures the relationship between a person's weight and height. A person with a BMI between 25 and 29.9 is overweight. A person with a BMI greater than or equal to 30 is obese. You can calculate your BMI using the chart in Appendix A or at the website of the National Institutes of Health:

<http://nhlbisupport.com/bmi/bmicalc.htm>

# Prevalence of Overweight and Obesity

## Percentage of Adult Population That is Overweight or Obese

Both the number and proportion of people in the United States who are overweight or obese continues to increase every year. Table 1 shows the increasing percentage of overweight and obese adults in Wisconsin and the United States.

In 2001, 37% of adult Wisconsin residents were overweight and an additional 22% were obese. In comparison, in 1990, 36% were overweight and only 11% were obese. Chart 1 tracks the increase in obesity among Wisconsin adults from 1990-2001.

Wisconsin's percentages of overweight and obese adults are almost identical to nationwide percentages. Nationwide, in 2001, 37% of adults were overweight and 21% were obese.

Table 1

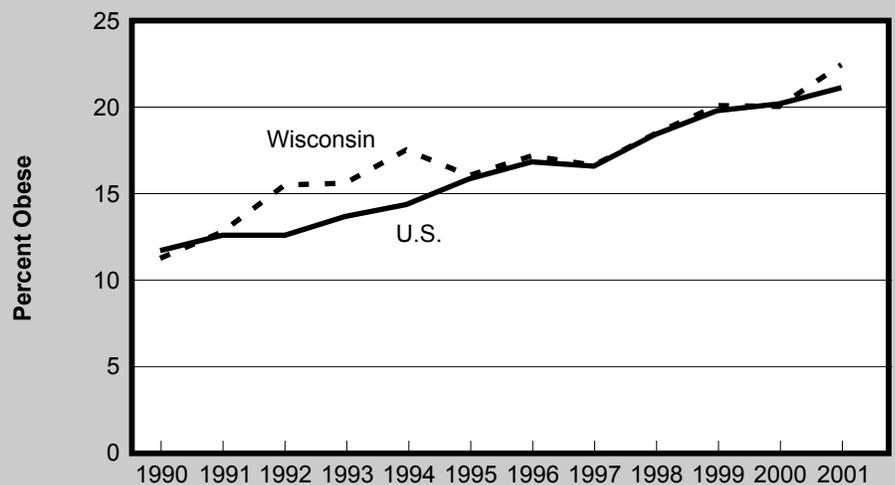
### Percentage of Wisconsin and U.S. Adults Who Are Overweight or Obese

	1990	1995	2001
Percent of Adults Overweight			
Wisconsin	35.8	37.9	36.7
United States	33.1	35.5	37.2
Percent of Adults Obese			
Wisconsin	11.3	16.0	22.4
United States	11.6	15.8	21.0
Total Percent of Adults Overweight and Obese			
Wisconsin	47.1	53.9	59.1
United States	44.7	51.3	58.2

**Source:** Authors' table based on data from U.S. Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System.

Figure 1

### Obesity on the Rise: Percent Obese by BMI, U.S. and Wisconsin, 1990-2001



**Source:** Authors' graph based on data from U.S. Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System.

## Increasing Problems Among Young People

A significant number of young people are also overweight.<sup>4</sup> A Centers for Disease Control & Prevention survey in 1999-2000 found that 15% of children aged 6 to 19 were overweight, nearly four times the percentage that were overweight in the 1960s.<sup>5</sup>

Overweight children have a higher risk of suffering from several medical conditions. These include elevated cholesterol, glucose intolerance (i.e., an inability to process sugar, one of the characteristics of diabetes), high concentrations of liver enzymes (impairing liver function), and inflammation of the gallbladder.<sup>6</sup> Equally important, overweight children and adolescents may experience psychological and social problems, including stigmatization and discrimination, isolation, and lower self-esteem.

Because of the increasing number of overweight children, the incidence of diabetes among children is also increasing and there was a 10-fold increase in diabetes among children between 1982 and 1994.<sup>7</sup>

In addition to medical problems, overweight children are more likely to be overweight as adults. In one long-term study, 77% of overweight children were obese as adults and another 16% were overweight. In contrast, 7% of normal weight children became obese adults and 21% became overweight.<sup>8</sup>

Policymakers have unique opportunities to influence the behavior of children through educational and community policies affecting youth. Classroom instruction in nutrition and physical activity, physical education classes, the kind of food served in school cafeterias, and the availability of junk food can all be determined by policymakers. In addition, eating and physical activity habits learned in youth continue into adulthood. For these reasons, policymakers may want to pay special attention to opportunities to reduce the prevalence of overweight/obesity among youth.

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## Medical Consequences of Overweight and Obesity

People who are overweight or obese have higher risk of numerous medical problems.<sup>9,10</sup> The problems are summarized in Table 2.

Table 2

### Medical Conditions Associated with Overweight and Obesity

Death	As many as 300,000 Americans now die each year from obesity-related illnesses.
High Blood Pressure	Obese women are 1.9 times more likely, and men are 2.1 times more likely, to have high blood pressure than their normal weight counterparts.
High Cholesterol	Elevated cholesterol increases the risk of coronary heart disease.
Diabetes	The relative risk of diabetes increases by approximately 25 percent for each additional unit of BMI over 22.
Coronary Heart Disease	Above a BMI of 22, every increase of 1 BMI unit is associated with a 10 percent increase in the rate of coronary events.
Congestive Heart Failure	Overweight and obesity are independent risk factors for congestive heart failure. In addition, since high blood pressure and diabetes are also associated with increasing weight, the coexistence of these conditions facilitates the development of congestive heart failure.
Stroke	Several studies suggest that excess weight is associated with strokes; these studies show a graded increase in the risk of stroke as BMI rises.
Gallstones	The risk of gallstones increases with weight.
Osteoarthritis	Individuals who are overweight or obese increase their risk for the development of osteoarthritis. One study found that for every increase of weight of 2.2 pounds, the risk of developing osteoarthritis increases by 9 to 13 percent.
Colon Cancer	Many studies have found a relation between obesity and colon cancer in men. Some studies have found a weaker relationship with colon cancer in woman, while others have found that the relationship may be similar in both men and women.
Breast Cancer	A gain of more than 20 pounds from age 18 to midlife doubles a woman's risk of breast cancer. Even modest weight gains are positively linked to risk of postmenopausal cancer.
Endometrial Cancer	The risk of getting endometrial cancer is three times higher for obese women compared to women of normal weight. Smaller gains of weight during adulthood also increase risk. (However, the absolute risk of getting endometrial cancer is low compared to breast cancer, heart disease, and diabetes.)
Women's Reproductive Health	Obesity during pregnancy (as opposed to the normal weight gain that is necessary for the development of a healthy baby) is associated with higher incidences of high blood pressure and diabetes, difficulties in managing labor and delivery, and increased risk of congenital malformations.
Psychosocial Effects	There are a number of adverse psychological and social effects of obesity. Several studies, albeit with methodological limitations, have found that negative attitudes towards obesity lead to discrimination in employment opportunities, college acceptance, job earnings, and opportunities for marriage. In addition, some obese people may suffer from psychological disorders such as binge eating and may have a poor image of their own body.

## Financial Cost of Overweight and Obesity

The financial and social costs of overweight and obesity are enormous. We begin with the obvious: it costs more to provide medical care to overweight and obese people than to people without weight problems.

One study estimated the health and economic burden of obesity for a hypothetical health plan with 1 million members based on projections of the number of cases of eight diseases for which obesity is an established risk factor. This study estimated that obesity would account for approximately 18% of high cholesterol cases, 35% of coronary heart disease cases, 45% of all cases of hypertension and 85% of all cases of diabetes. Health care costs were estimated at 41% of the total cost for the eight diseases of interest. The study concluded that “the clinical and economic burden of obesity in a managed care setting is substantial.”<sup>11</sup>

Another study of the relationship between overweight/obesity and costs examined 1286 people in a large HMO in Oregon. Subjects were divided according to their BMI in 1990 and the cost of providing care for the 1990-1998 period was calculated. Costs for providing medical care to the overweight were 10% higher and costs for providing care to the obese were 36% higher.<sup>12</sup>

Similarly, a 1998 study looked at the cost of providing services to 17,118 members of a large HMO. This study concluded that “there was an association between BMI and annual rates of inpatient days, number and costs of outpatient visits, costs of outpatient pharmacy and laboratory services, and total costs.” Compared to a BMI of 20 to 24.9, total costs for those with a BMI of 30 to 34.9 were 25% higher and 44% higher among those with a BMI of 35 or more. This study concluded, “Given the high prevalence of obesity and the associated elevated rates of health services use and costs, there is a significant potential for a reduction in health care expenditures through obesity prevention efforts.”<sup>13</sup>

What then, is the real dollar cost of treating overweight and obesity? A 1999 survey of literature on the subject of cost looked at a number of studies and used their results to assess the economic costs of inactivity and obesity. Cost components included direct costs resulting from treatment of illness and indirect costs of lost productivity and lost earnings from early death. This survey concluded that:

- The direct costs of lack of physical activity, defined as an absence of leisure-time physical activity, are approximately \$24 billion (in 1995 dollars) or 2.4% of U.S. health care expenditures.
- In addition, independent of costs from inactivity, direct costs for obesity total \$70 billion (also in 1995 dollars).
- Overall, the direct costs of inactivity and obesity account for 9.4% of the national health care expenditures of the U.S.<sup>14</sup>

Similarly, a 2001 review of literature from 1990 to 2001 on the cost burden of obesity alone (without accounting for lack of physical activity) found that studies uniformly attributed 5.5% –7.0% of national health expenditures in the United States to obesity.<sup>15</sup>

The federal Centers for Medicare and Medicaid Services reports that healthcare costs totaled \$1.4 trillion in 2001.<sup>16</sup> If 5.5% of this cost is attributable to obesity, the national cost of obesity is \$77 billion per year and Wisconsin's per capita share is \$1.4 billion.

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Attributing exact costs to a broad "causal" condition like obesity is an inexact science. However, we do know that obesity is intimately linked with two of the most expensive chronic diseases: heart disease and diabetes. The cost of treating these and other diseases will be reduced in direct relationship to our ability to reduce the incidence of obesity.

## **Causes of Overweight and Obesity**

An individual gains weight when that person takes in more calories than the person uses. But what causes an entire population to become overweight and obese?

In answering these questions, our point is not to blame overweight individuals for their size. Rather, the point is to better understand what public and private policymakers can do both encourage individual responsibility and to take systematic action to reduce the prevalence of overweight and obesity.

A number of factors contribute to weight gain at the individual level. The lack of incentive for personal responsibility can be an important contributor; if the medical costs of overweight and obesity are carried by employers, there is no financial incentive to reward healthy behavior or punish unhealthy behavior. Additionally, the social role of food, cultural identity, self-esteem, and stress management can all contribute to negative eating and exercise habits.

Finally, genetics may play a role in overweight and obesity, but is not determinative. Many people who eat a nutritious diet and exercise regularly are able to maintain a healthy weight, even with a genetic susceptibility to gain weight. However, genetic makeup may alter the effectiveness of these lifestyle interventions, especially if obesity is already present.

In addition to personal factors, a number of societal trends are contributing to the obesity epidemic. These include: increased access to fast and junk food, more marketing by food sellers, and increased portion sizes both in restaurants and at home.<sup>17,18,19</sup> These trends are also occurring in schools.<sup>20</sup>

One other societal factor is the ongoing debate on what kind of diet is most effective in preventing inappropriate weight gain and helping overweight and obese people lose weight. This debate focuses on the question of whether fats or carbohydrates are more likely to lead to overweight and obesity and includes discussion on the accuracy of the federal food pyramid. To date, little research has been done on the efficacy of different diets. Research now underway will provide additional information on what kind of diets are most appropriate for different individuals.

Underscoring the need for both systemic and individual action are factors like physical activity. The Surgeon General reported in 1996 that more than 60% of U.S. adults were not regularly active and 25% of the adult population was not active at all. In the same report, the Surgeon General said that almost half of young people aged 12–21 were not vigorously active on a regular basis and that physical activity levels decline during adolescence.<sup>21</sup>

The Surgeon General's national data are virtually identical to Wisconsin data. According to the U.S. Centers for Disease Control and Prevention, from 1990 to 2001 between 20 and 25 percent of Wisconsin adults consistently reported no leisure time physical activity during the past month.<sup>22</sup>

Whether a person engages in physical activity is obviously determined at the individual level. But public and private policymakers can also make systematic changes that will encourage healthy behaviors like physical activity.

## What Wisconsin is Doing About Overweight and Obesity

### State Health Plan

State law requires the Department of Health and Family Services (DHFS) to produce a state health plan. The department has fulfilled this obligation through the publication of *Healthiest Wisconsin 2010: A Partnership Plan to Improve the Health of the Public*. The department has also published a companion piece titled *Healthiest Wisconsin 2010: An Implementation Plan to Improve the Health of the Public*.

One of the health priorities identified by the state health plan is Overweight, Obesity and Lack of Physical Activity.

The Implementation Plan identifies four objectives relating to this priority. These objectives are:

- Leadership – Establish an infrastructure to develop, support and sustain healthy lifestyles among Wisconsin residents through opportunities to be physically active and to make food choices for optimal health.
- Physical Activity for Children and Adolescents – By 2010, increase the proportion of children and adolescents who engage in at least 30 minutes of moderate physical activity, on 5 or more of the previous 7 days, from 27% to 37% for adolescents.
- Physical Activity for Adults – By 2010, increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for 30 minutes or more per day from 23% to 38%.
- Overweight and Obesity – By 2010, reduce the proportion of children who are overweight from 11.4% to 9.4%, the proportion of adolescents who are overweight from 10% to 8%, and the proportion of adults who are obese from 20% to 15%.

The Implementation Plan also contains detailed ideas for achieving these objectives which are too lengthy for inclusion in this paper.

The state health plan is one place for public and private policymakers to begin efforts to combat the obesity epidemic. Familiarity with the plan, including its objectives and implementation ideas, is an important first step. However, the plan will only be effective if policymakers provide the leadership and fiscal resources necessary for implementation.

### CDC's State-based Nutrition and Physical Activity Program

In October 2000, the Division of Nutrition and Physical Activity in the federal Centers for Disease Control and Prevention (CDC) initiated a program to support state health departments and their partners in developing and implementing nutrition and physical activity interventions. The CDC funded six states in 2000 and an additional six states in 2001. Wisconsin's Department of Health and Family Services submitted an application for a nutrition and physical activity grant in March 2003 and will learn in June 2003 whether the application was approved.

### Wisconsin's State Health Plan

State law requires the Department of Health and Family Services to develop a state health plan at least once every 10 years. The current plan and a separate document on how to achieve its goals are available from the department and on the web. The web address is:

<http://www.dhfs.state.wi.us/Health/StateHealthPlan/index.htm>

## The National Governors Association's Report on Obesity

The NGA's report on the obesity epidemic and policy responses can be found on the association's website:

[www.nga.org](http://www.nga.org)

## Policy Options for Reducing Overweight and Obesity

In implementing the goals of the state health plan, and in possibly developing new goals, policymakers may want to consider policies being pursued by other states, the federal government, and private organizations. The full scope of policy options is suggested by the very general suggestions made by the National Governors Association.

### National Governors Association Recommendations

The National Governors Association has published an issue brief on how to fight overweight and obesity. This brief urges states to use the following tools in this effort:

- Implementing food and physical activity policies/standards in schools and public worksites.
- Implementing healthy community design and smart growth strategies.
- Raising public and policymaker awareness.
- Increasing access and availability of obesity treatment.
- Targeting high-risk population groups.
- Taxing junk foods and soda.

In addition, the brief outlines ten actions that states can take immediately. These are:

- 1) Educate people on the health benefits of healthy eating and being physically active.
- 2) Strengthen school physical education requirements to meet national recommendations for physical activity for children and encourage shared community use of PE facilities outside school hours.
- 3) Convene stakeholders, including trade groups from the food and fitness industries, and engage the state health department to develop a comprehensive statewide nutrition and physical activity plan to address obesity and chronic diseases.
- 4) Consider regulating access to junk foods and soft drinks in schools and other government facilities; and increase availability of healthier foods, such as non-fat/low-fat milk, fruits and vegetables, and 100% fruit juice.
- 5) Evaluate options to provide health insurance coverage for obesity prevention and therapies for state employees, retirees, Medicaid recipients, and SCHIP beneficiaries.
- 6) Assess the economic impact of obesity on current state resources, Medicaid, employee and retiree systems, and SCHIP; and use the utilization data and behavioral data from the Behavioral Risk Factor Surveillance System to make strategic prevention and treatment purchasing decisions.
- 7) Collaborate with community-based organizations, voluntary organizations, state medical associations, and public health groups to implement services targeting lower income, racial minorities, and other groups at high risk for obesity.
- 8) Partner with state and local growth management agencies and with the private sector to encourage smart growth and healthy community design.

- 9) Use executive authority to issue executive orders and proclamations that promote good nutrition and physical activity, such as making stairwells in public buildings available.
- 10) Challenge policymakers, cabinet members, healthcare providers, voluntary organizations and the food and fitness industries to mobilize efforts in response to the obesity epidemic.

## Data Gathering

Data on overweight and obesity in Wisconsin is relatively limited. Data on rates and trends of overweight and obesity are lacking for young people. Data on physical activity among young people is available only for high school students. In addition, data for adults cannot be broken down on a geographical or racial/ethnic basis.

Wisconsin policymakers may want to consider whether more detailed data collection would be helpful in choosing and designing policy responses to the obesity epidemic.

## Restrictions on Junk Food in Schools and Teaching About Nutrition

State governments have wide latitude in regulating food sales in schools. Federal regulations govern the National School Lunch and Breakfast Program, but do not address other foods sold in schools, either through food vendors or through vending machines ("competing foods"). States have the authority to regulate the sale of competing foods.

According to the National Conference of State Legislatures, nineteen states, three territories and the District of Columbia have passed laws regulating competing foods. Wisconsin is not one of these states.

Some states limit the times during which food other than government program food can be sold, while others ban the sale of competing foods entirely. Some states regulate only junk foods, while others regulate all food. Some states have stricter regulations for elementary and secondary schools; some have blanket policies for all age levels. Finally, regulations in some states permit the sale of other foods, but require income from these sales to accrue to school food programs.

According to the Wisconsin Department of Public Instruction, only 51% of Wisconsin middle and high schools have a comprehensive nutrition policy.<sup>23</sup> In this context, a "comprehensive nutrition policy" is present if schools meet five of the following six criteria: kids have at least 20 minutes to eat lunch and they can purchase low-fat salty snacks, low-fat desserts, fruits or vegetables, 100% fruit juice, or bottled water.

Wisconsin policymakers may want to consider whether regulation of food in schools would make children healthier and if so, what kind of regulations would help achieve this goal. State policymakers could limit or eliminate sales on some or all foods and beverages in some or all schools. For example, policymakers could limit the kinds of food that are available or the times they are available. Policymakers could also promote healthy foods. For example, California specifies that 50% of all food items sold during certain hours must be from a list of approved nutritious foods.

Wisconsin policymakers may want to consider whether changes in access to foods should be accompanied by nutrition education.

Wisconsin does not require classroom instruction in nutrition. Only 71% of middle schools and 76% of high schools do offer such a curriculum.



*Nineteen states, three territories and the District of Columbia regulate the food sold in schools. Wisconsin is not one of these states.*



### State Regulation of Foods Sold in Schools

Some states regulate the sale of food items that are sold in competition with federally subsidized school breakfasts and lunches. A summary of all state regulations on this topic is available on the website of the U.S. Department of Agriculture:

[www.fns.usda.gov/cnd/Lunch/CompetitiveFoods/state\\_policies\\_2002.htm](http://www.fns.usda.gov/cnd/Lunch/CompetitiveFoods/state_policies_2002.htm)

## Sample Policies to Encourage Healthy Eating in Schools

The National Association of State Boards of Education offers model policies to encourage healthy eating in schools. The policies focus on the interaction between three different school areas: 1) nutrition education, 2) school foods, and 3) other foods available in school.

The model policies are available at the NASBE website:

[http://www.nasbe.org/healthyschools/healthy\\_eating.html](http://www.nasbe.org/healthyschools/healthy_eating.html)



*Only 35% of Wisconsin middle schools and 44% of high schools meet the dual standard of teaching about and making available healthy foods.*



The number of schools that offer such a curriculum, combined with access to healthy foods (either in vending machines or sold by the school) is even lower. Only 35% of middle schools and 44% of high schools meet the dual standard of teaching about and making available healthy foods.

To improve school nutrition policies, the Department of Public Instruction provides many resources on nutrition and healthy foods to schools. The Department is also in the process of preparing a report on "Best Practices for Improving the School Nutrition Environment." This report will focus on the components of a healthy school nutrition environment, including the availability of healthy foods, linking nutrition education with the foods offered for sale, and a commitment to physical activity. The Department anticipates that its best practices report will be ready for distribution to all schools by September 2003.

Wisconsin policymakers may want to consider whether nutrition education, regulation of junk food, and promotion of healthy food should continue to be suggested and optional or whether they should be mandatory.

Restricting or eliminating access to less healthy foods is desirable from a public health standpoint, but health is not the only consideration. Many schools receive income from cafeteria and vending machine sales and changes in the availability of food might adversely impact this funding stream.

Policymakers must strike a balance between physical health and fiscal needs. In making this difficult calculation, the fiscal side of the equation should include not just school revenue, but also the high cost of treating the medical complications of overweight and obesity.

Because the financial equation on food in schools extends beyond school boundaries, debate on the kind of food available in schools should not be limited to state policymakers and education professionals. Employers are paying healthcare premiums for the dependants of their employees and HMOs are providing care to overweight and obese kids. The health of school-age children is the responsibility of both the public and private sectors.

## Getting Rid of Junk Food: The Appleton Experience

When considering the question of what kind of food is available in schools, Wisconsin policymakers may want to consider the Appleton Central Alternative High School experience with this issue.

Five years ago, the school eliminated soda and junk food vending machines and contracted with a natural foods company to provide nutritious food for students. The program features fresh fruits and vegetables and non-processed foods that are low in saturated fats and sugar. Most entrees include fish, chicken, turkey or lean pork, but no beef.

Together with other changes implemented at the school, “grades and attendance are up, while the dropout rate has plummeted. Teachers claim students’ attention spans have expanded. More astounding yet, there have been no serious discipline problems – no weapons confiscated, no drugs or alcohol found in lockers, no expulsions.”<sup>24</sup>

School principal LuAnn Coenen says, “I know some people are skeptical about all this. I really don’t care. All I know is my life’s 100 percent better since we did this. In fact, I wouldn’t work in a school again that had vending machines. I absolutely would not.”<sup>25</sup>

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*Five years ago, Appleton Central Alternative High School eliminated soda and junk food vending machines and contracted with a natural foods company to provide nutritious food for students. School principal LuAnn Coenen says, ‘I wouldn’t work in a school again that had vending machines. I absolutely would not.’*  
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## Physical Education and Instruction in Physical Activity in Schools

Wisconsin state law requires regular instruction in physical education for children in grades K-8 and access to physical education for children in high school.<sup>26</sup> “Regular instruction” and “access to” are not defined by statute in terms of days or hours.

A different section of the statutes requires at least 1.5 credits in physical education in high school as a condition of graduation.<sup>27</sup>

The Department of Public Instruction has promulgated administrative rules which require school districts to provide physical education.<sup>28</sup> In grades K through 6, physical education must be provided at least three times a week. In middle school, there must be an instructional program, but the details of that program are not specified in the rules and are left to local school boards. In high school, there must also be an instructional program, but one year may be optional for students.

Wisconsin schools are not required to compliment physical education classes with classroom instruction in physical activity and fitness. Therefore it is not surprising that 98% of high schools and 99% of middle schools require physical education but only 52% of middle schools and 68% of high schools have comprehensive curriculum and instruction related to physical activity.<sup>29</sup>

Worse, even among these schools, gaps in the curriculum are apparent. For example, only 61% of schools provide instruction in developing an individualized physical activity plan and only 52% in monitoring progress towards the goals in an individualized plan.

The number of schools that require both physical education and instruction in physical activity is even lower. Only 47% of middle schools and 59% of high schools meet this standard. This means that in many Wisconsin schools, the link between health education classes on physical activity and physical education classes is tenuous or non-existent.

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“  
*Only 47% of Wisconsin middle schools and 59% of high schools require both physical education and classroom instruction in physical activity.*  
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## Sample Policies to Encourage Physical Activity in Schools

The National Association of State Boards of Education offers model policies to encourage physical activity in schools.

The policies recommend daily physical education for grades K-12 – 150 minutes per week for elementary grades and 225 minutes per week for middle and high school grades.

The policies also emphasize the need to teach knowledge and skills of a lifetime of physical activity and coordination of physical education and other health education courses.

The model policies are available at the NASBE website:

[http://www.nasbe.org/healthyschools/physical\\_activity.html](http://www.nasbe.org/healthyschools/physical_activity.html)

## Action for Healthy Kids

Action for Healthy Kids is a non-profit coalition of public and private organizations working to improve the health and educational performance of children through better nutrition and physical activity in schools.

More information on the organization, including its work in Wisconsin, is available on its website:

<http://www.actionforhealthykids.org/>

The efforts of Wisconsin schools in regard to physical education can be compared with the model policies recommended by the National Association of State Boards of Education (NASBE). The NASBE recommends daily physical education for grades K-12 – 150 minutes per week for elementary grades and 225 minutes per week for middle and high school grades.

In addition, the policies emphasize the need to teach knowledge and skills for a lifetime of physical activity, including how to assess fitness levels, set goals, and monitor progress in reaching those goals.

Finally, the model policies recommend the coordination and integration of physical education and other health education courses.

Policymakers may want to consider whether the amount of time devoted to physical education should be expanded. In addition, policymakers may want to consider whether these requirements should include or be linked to curriculum focused on teaching kids how to be healthy (through exercise and good diet) for the rest of their lives, not just on physical activity.

Like the debate on what kind of food is sold in schools, the debate on physical education and related instruction should not be limited to public sector policymakers. This question has an impact on private sector actors as well.

## Action for Healthy Kids

When considering changes to school food and curriculum policies, policymakers may want to consider the work of Action for Healthy Kids (AFHK).

AFHK is a nationwide initiative dedicated to improving the health and educational performance of children through better nutrition and physical activity in schools. The initiative is based on the idea that healthy schools produce healthy students and healthy students are better able to learn and achieve their true potential.

AFHK is composed of 51 state teams and a national coordinating and resource group. This initiative fosters sharing and collaboration among diverse stakeholders to encourage and facilitate meaningful change in schools. Guidance and direction is provided by more than 30 national organizations and government agencies representing education, health, physical activity and nutrition.

An Action for Healthy Kids team exists in Wisconsin and is working on school reform efforts. The basis of these efforts is an assessment of Wisconsin schools, including a survey of the health and physical education priorities of school health, physical education and nutrition teachers and coordinators.

## Sin Taxes

According to the National Conference of State Legislatures, seventeen states and the District of Columbia have enacted laws taxing soft drinks and/or snack foods. Some states tax the gross receipts of soft drink manufacturers and wholesalers; others impose taxes based on volume. Some states no longer exempt certain foods from the sales tax, including soft drinks and candy and foods sold through vending machines.

Wisconsin policymakers may want to consider whether a tax on certain foods and beverages would have an impact on weight gain by Wisconsin residents. Moreover, if enacted, a sin tax on certain foods could be directed to specific purposes, such as replacing revenue lost to schools due to restrictions on the sale of junk food, implementation of the state health plan, or some other health program.

## Policies to Encourage Walking and Biking in Everyday Life

Creating a physical infrastructure that makes it easier to engage in physical activity is an important component of preventing inappropriate weight gain and helping those who are overweight and obese to lose weight.

The National Conference of State Legislatures (NCSL) conducted an extensive review of policy options that would enable people to incorporate walking or bicycling in their daily routines and published the results in a report titled *Promoting Walking and Biking: The Legislative Role*. Staff from diverse policy perspectives, including health, environment, transportation and education collected information on state policies that might impact walking and biking and attempted to determine which policies were most likely to succeed.

NCSL concluded that five policies are most likely to encourage walking and biking. These five policies are:

- 1) Incorporate sidewalks and bike lanes into community design.
- 2) Provide funding for biking and walking in highway projects.
- 3) Designate safe routes for walking to school.
- 4) Implement traffic-calming measures.
- 5) Promote incentives for mixed-use development.

The NCSL report emphasizes the need for coordination between different legislative committees (e.g., health and transportation) and between state and local governments to effectively implement these policies.

Wisconsin policymakers may want to consider to what extent the specific objectives listed above are being implemented in Wisconsin. In addition, policymakers may want to assess to what extent different agencies within state government are working together to combat overweight and obesity and to increase physical activity. Equally important, to what extent is there cooperation across different levels of government? And to what extent is there a public/private approach?

Evidence from other public health campaigns, like those to reduce smoking, shows that a consistent approach across departmental, governmental and public/private boundaries will be necessary for successful promotion of healthy lifestyles.

### State Taxes on Unhealthy Foods

A comprehensive list of state laws that tax certain foods and beverages is available on the website of the National Conference of State Legislatures:

<http://www.ncsl.org/programs/health/snacktax.htm>

The National Conference of State Legislatures' *Promoting Walking and Biking: The Legislative Role* is available online only for NCSL members (legislators and staff).

The NCSL website address is:

[www.ncsl.org](http://www.ncsl.org)

Others may obtain the report by contacting NCSL by phone at 202-624-5400.

## **Active Living by Design**

Active Living by Design is working to establish and evaluate innovative approaches to increase physical activity through community design, public policies and communications strategies. The program's website address is:

[www.activelivingbydesign.org](http://www.activelivingbydesign.org)

## **Active Living by Design**

Active Living by Design is a national program of The Robert Wood Johnson Foundation and is a part of the University of North Carolina School of Public Health. The program is working to establish and evaluate innovative approaches to increase physical activity through community design, public policies and communications strategies. The program seeks to understand the impact that community design and options for transportation may have on routine physical activity. The initiative will concentrate on promoting physical activity by making neighborhoods more activity-friendly.

Communities throughout Wisconsin are currently going through the planning process mandated by the state's Smart Growth law. Active Living by Design speakers have made presentations in some Wisconsin communities and could do so in others as an aid to the planning process.

## **Preventive Health and Health Services Block Grant**

The federal Department of Health and Human Services administers the preventive health and health services (PHHS) block grants. These grants are primarily used to advance the objectives of the federal health improvement plan (Healthy People 2010). The block grants go to states, which can fund any of the plan's 265 objectives, including those related to physical activity, overweight and obesity. The department emphasizes that these grants support programs and education for underserved populations with an emphasis on adolescents.

Wisconsin state policymakers may want to consider whether a PHHS block grant could help the state implement the state health plan objectives relating to obesity and physical activity.

## **Physical Education for Progress Program**

The Department of Education administers the Physical Education for Progress program. This program awards grants to local education agencies and community-based organizations to initiate, expand, and improve physical education programs. Initiated in FFY 2001, the PEP program awarded \$5 million to 18 local education agencies. Funding increased to \$50 million in FFY 2002.

In Wisconsin, the Hortonville Area School District received a PEP grant in 2001-02.

## Workplace Wellness Programs

A growing number of companies are trying to reduce high healthcare costs by improving the health of their employees. Because working adults spend a significant amount of time at the workplace, it is a natural place to provide information, opportunities and support to employees looking for ways to improve their health through lifestyle changes.

Although a large number of companies have some kind of wellness program, the quality of these programs varies greatly. Some companies offer brochures on healthy lifestyles, while others have aggressive company-wide programs with verifiable results of improved health.

Public and private policymakers may want to consider ways to make workplace wellness programs more widespread and of higher quality and how to coordinate such programs with public sector initiatives. State and local governments should also consider their roles as employers.

Policymakers may want to consider the following questions:

- What policies would make busy corporate executives take seriously the factors that drive up healthcare costs, including lifestyle choices that lead to expensive chronic diseases?
- How can a consistent message on the need to be physical activity be implemented by employers, HMOs, and physicians, as well as state and local governments?
- What role can HMOs and medical providers play in implementing and improving workplace wellness programs? Can HMOs provide discounted premiums or deductibles to companies that promote wellness programs with measurable results and employees that participate in such programs?
- What role can the state play in providing information or financial incentives to employers who promote wellness programs with tangible results in improving employee and dependent health?

Some companies and their employees are looking beyond the worksite to improve employee health. One example is the Community Health Initiative, jointly sponsored by the United Auto Workers (UAW) and the major automobile companies. This project is intended to ensure high quality health care, promote healthy lifestyles and control healthcare costs in communities where automotive manufacturing facilities are located.

As part of the project, the UAW and DaimlerChrysler recently undertook a comprehensive study of healthcare in Kenosha County. The union and the company are now working with community organizations and health providers to develop strategies to improve the delivery of healthcare and to promote healthy lifestyles.

The Community Health Initiative has the potential to improve the health of an entire community, not just workers in UAW organized auto plants. It provides links between employers, community organizations and healthcare providers. Wisconsin policymakers may want to consider whether all or part of this model should be replicated in other settings.

## Workplace Wellness Programs

Resources for employers wanting to implement or improve workplace wellness programs are available from a number of sources. One leading source is the Wellness Council of America and its local affiliate, the Wellness Council of Wisconsin.

More information on the Council and the resources available to Wisconsin employers can be found on the Council's website:

<http://www.wellnesscouncilwi.org>



*Studies done in the late 1990s reported that only 34% of adults who saw a physician in the previous year were counseled about exercise and only 42% of obese individuals received advice from a health care professional to lose weight.*



## **Counseling by Medical Professionals and Services Offered by HMOs**

HMOs and health professionals, especially primary care practitioners, must play an active role in preventing inappropriate weight gain and counseling on weight loss. In other public health campaigns, like those to reduce smoking, clinical intervention has played a key role in successful efforts. Indeed, the federal health plan (Healthy People 2010) recommends that physicians counsel all patients about the need for regular physical activity.

HMOs and physicians are falling short of this standard. Studies done in the late 1990s reported that only 34% of adults who saw a physician in the previous year were counseled about exercise and only 42% of obese individuals received advice from a health care professional to lose weight.<sup>29, 30</sup>

At least one more recent study showed an improvement in physician counseling. This study reported that 69% of obese patients received counseling on diet change and exercise and 80% received weight loss recommendations such as referral to a dietician or exercise program.<sup>31</sup> This change may be due to the National Institutes of Health clinical guidelines on identifying, evaluating and treating overweight and obesity, published in 1998.

In spite of this improvement, HMOs and health care professionals can do more, especially in providing advice regarding physical activity to individuals with healthy weights. Meeting the federal recommendation of counseling all patients would strongly reinforce messages on physical activity and diet received in other settings like school and work.

HMOs may want to gauge the extent to which they systematically assess members' health risks, including the risk for overweight or obesity. In addition, the development of guidelines on physical activity and weight loss and incorporation of those guidelines into clinical practice would improve the rates at which individuals are counseled.

Finally, private employers and state and local governments that buy insurance for their employees and dependents may want to think about ways to work with HMOs to ensure that health plans provide help in the areas of physical activity, diet and weight loss.

Clinical intervention will be a key part of reducing overweight and obesity. HMOs, healthcare providers, insurance buyers and individuals going to the doctor's office must all work together to improve patient counseling on diet and physical activity.

## **Conclusion**

The prevalence of overweight and obesity continues to increase. Fifty-nine percent of Wisconsin adults are overweight or obese and 15% of young people are overweight. The medical complications from being overweight are well known and widespread. It costs us, individually and collectively, billions of dollars every year to treat those medical conditions.

Our knowledge of what causes overweight and obesity is incomplete. However, we do know that consuming less and engaging in more physical activity would go a long way towards curbing the obesity epidemic.

Individual responsibility must be a part of any effort to reduce overweight and obesity. However, public and private policymakers can also play

a substantial role. Policymakers interested in combating the obesity epidemic should look for ways to implement a comprehensive campaign crossing departmental, governmental and public/private boundaries.

Because children are a captive audience in school and because the behaviors they learn will carry into adulthood, policymakers may want to pay special attention to policies on physical education, classroom instruction in physical activity and nutrition, and the limitation of junk food and promotion of healthy foods in schools.

Without concerted, coordinated, and immediate action on the part of state and local governments, educators, insurers and medical providers, and private companies, the number of people who are overweight and obese will continue to grow. It is an epidemic with enormous financial costs that has been too long neglected and the potential savings of prevention can no longer be deferred. These costs are avoidable, but only if we act.



## Notes

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## Appendix A Body Mass Index Tables

Body Mass Index	19	20	21	22	23	24	25	26	27	28
Height (inches)	Body Weight (pounds)									
58	91	96	100	105	110	115	119	124	129	134
59	94	99	104	109	114	119	124	128	133	138
60	97	102	107	112	118	123	128	133	138	143
61	100	106	111	116	122	127	132	137	143	148
62	104	109	115	120	126	131	136	142	147	153
63	107	113	118	124	130	135	141	146	152	158
64	110	116	122	128	134	140	145	151	157	163
65	114	120	126	132	138	144	150	156	162	168
66	118	124	130	136	142	148	155	161	167	173
67	121	127	134	140	146	153	159	166	172	178
68	125	131	138	144	151	158	164	171	177	184
69	128	135	142	149	155	162	169	176	182	189
70	132	139	146	153	160	167	174	181	188	195
71	136	143	150	157	165	172	179	186	193	200
72	140	147	154	162	169	177	184	191	199	206
73	144	151	159	166	174	182	189	197	204	212
74	148	155	163	171	179	186	194	202	210	218
75	152	160	168	176	184	192	200	208	216	224
76	156	164	172	180	189	197	205	213	221	230

Body Mass Index	29	30	31	32	33	34	35	36	37	38
Height (inches)	Body Weight (pounds)									
58	138	143	148	153	158	162	167	172	177	181
59	143	148	153	158	163	168	173	178	183	188
60	148	153	158	163	168	174	179	184	189	194
61	153	158	164	169	174	180	185	190	195	201
62	158	164	169	175	180	186	191	196	202	207
63	163	169	175	180	186	191	197	203	208	214
64	169	174	180	186	192	197	204	209	215	221
65	174	180	186	192	198	204	210	216	222	228
66	179	186	192	198	204	210	216	223	229	235
67	185	191	198	204	211	217	223	230	236	242
68	190	197	203	210	216	223	230	236	243	249
69	196	203	209	216	223	230	236	243	250	257
70	202	209	216	222	229	236	243	250	257	264
71	208	215	222	229	236	243	250	257	265	272
72	213	221	228	235	242	250	258	265	272	279
73	219	227	235	242	250	257	265	272	280	288
74	225	233	241	249	256	264	272	280	287	295
75	232	240	248	256	264	272	279	287	295	303
76	238	246	254	263	271	279	287	295	304	312

Body Mass Index	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
Height (inches)	Body Weight (pounds)															
58	186	191	196	201	205	210	215	220	224	229	234	239	244	248	253	258
59	193	198	203	208	212	217	222	227	232	237	242	247	252	257	262	267
60	199	204	209	215	220	225	230	235	240	245	250	255	261	266	271	276
61	206	211	217	222	227	232	238	243	248	254	259	264	269	275	280	285
62	213	218	224	229	235	240	246	251	256	262	267	273	278	284	289	295
63	220	225	231	237	242	248	254	259	265	270	278	282	287	293	299	304
64	227	232	238	244	250	256	262	267	273	279	285	291	296	302	308	314
65	234	240	246	252	258	264	270	276	282	288	294	300	306	312	318	324
66	241	247	253	260	266	272	278	284	291	297	303	309	315	322	328	334
67	249	255	261	268	274	280	287	293	299	306	312	319	325	331	338	344
68	256	262	269	276	282	289	295	302	308	315	322	328	335	341	348	354
69	263	270	277	284	291	297	304	311	318	324	331	338	345	351	358	365
70	271	278	285	292	299	306	313	320	327	334	341	348	355	362	369	376
71	279	286	293	301	308	315	322	329	338	343	351	358	365	372	379	386
72	287	294	302	309	316	324	331	338	346	353	361	368	375	383	390	397
73	295	302	310	318	325	333	340	348	355	363	371	378	386	393	401	408
74	303	311	319	326	334	342	350	358	365	373	381	389	396	404	412	420
75	311	319	327	335	343	351	359	367	375	383	391	399	407	415	423	431
76	320	328	336	344	353	361	369	377	385	394	402	410	418	426	435	443