



# National Conference of State Legislatures

## STATE HEALTH LAWMAKERS' DIGEST

POLICY, RESEARCH AND PRACTICES TO INFORM THE DECISION-MAKING PROCESS

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During the past 20 years, obesity rates in the United States have risen at an alarming rate. One in three adults were considered obese in 2000, and the trend shows no signs of reversing. In 1990, no state had an obesity rate of more than 14 percent, in 2003 30 states had rates of 20-24 percent and five states had a rate of 25 percent or higher. Far from simply an issue of personal health habits, obesity stands to cost states huge sums of money in their Medicaid and state insurance programs, and a decision to fight it will impact future state planning not only in health programs but in workforce, education, transportation and urban development.

Obesity is defined as a high amount of body fat in relation to lean body mass, or a body mass index (BMI) of 30 or higher. BMI is a weight to height ratio which is used to assess a person's risk of developing chronic disease. The higher the BMI, the higher the risk. BMI is figured by this equation:  $[\text{Weight in pounds}/(\text{height in inches})^2] \times 703$ .

There has been much speculation about what is fueling this dramatic increase. Although no simple answer exists, researchers are focusing on many community and personal factors. The increased availability of prepackaged, high-calorie convenience foods with minimal nutritional value, and larger portions have, no doubt, contributed. At the same time, as people have begun to eat more, they move less. Lifestyle changes have slowly but surely decreased peoples' physical activity. People use cars to drive even short distances, stairs are inaccessible in buildings, communities lack sidewalks, and much leisure time is spent sitting in front of computers and televisions instead of bike riding, participating in sports, or other active pursuits. Fears that some neighborhoods and streets are unsafe prevent many people from walking or letting children play outside. Genetics also can play a role, but a genetic predisposition to gain weight requires environmental support before it will kick in.

Obese people are at an increased risk for many life-threatening chronic conditions—such as diabetes, hypertension, heart disease and stroke—as well as for asthma and arthritis.

The higher a person's BMI, the greater the risk of developing these conditions. The Centers for Disease Control and Prevention estimates that poor nutrition and physical inactivity cause 300,000 premature deaths each year in the United States. Obesity is second only to tobacco use in causing preventable deaths.

The economic impact of the costs of obesity and the chronic diseases it causes—such as type 2 diabetes (often called adult onset), coronary heart disease, and hypertension—are staggering. In 2000 alone, overall costs of adult obesity were estimated to be \$117 billion. That includes \$61 billion for direct medical costs, prevention, diagnostic and treatment services and \$56 billion for indirect costs such as loss of income from decreased productivity, absenteeism and the loss of future income from premature death. States pay a huge tab as well. Estimates for direct medical costs alone range from \$87 million in Wyoming to \$7.7 billion for California. Costs to state Medicaid programs range from \$23 million in Wyoming to \$3.5 billion in New York.

To battle rising costs, governments are beginning to act. In July 2004, the federal Medicare program opened the door to covering obesity-related treatments by removing language from its manual that said obesity is not a disease. At present, the Centers for Medicare and Medicaid Services contend there is not enough data on the long-term benefits of gastric bypass surgery to cover it unless it is medically necessary for people with both obesity and another disease. States have moved ahead, however. As of 2004, 44 states cover gastric bypass surgery and many cover prescription weight-loss drugs in the hope they will prevent further health complications. ✦

### Adult Obesity - Total Annual Costs (2003 Dollars in Millions)

Alabama	\$1,373	Illinois	\$3,439	Montana	\$175	Rhode Island	\$305
Alaska	\$195	Indiana	\$1,637	Nebraska	\$454	South Carolina	\$1,060
Arizona	\$752	Iowa	\$783	Nevada	\$337	South Dakota	\$195
Arkansas	\$663	Kansas	\$657	New Hampshire	\$302	Tennessee	\$1,840
California	\$7,675	Kentucky	\$1,163	New Jersey	\$2,342	Texas	\$5,340
Colorado	\$874	Louisiana	\$1,373	New Mexico	\$324	Utah	\$393
Connecticut	\$856	Maine	\$357	New York	\$6,080	Vermont	\$141
Delaware	\$207	Maryland	\$1,533	North Carolina	\$2,138	Virginia	\$1,641
D.C.	\$372	Massachusetts	\$1,822	North Dakota	\$209	Washington	\$1,130
Florida	\$3,987	Michigan	\$2,931	Ohio	\$3,304	West Virginia	\$588
Georgia	\$2,133	Minnesota	\$1,307	Oklahoma	\$854	Wisconsin	\$1,487
Hawaii	\$290	Mississippi	\$757	Oregon	\$781	Wyoming	\$87
Idaho	\$227	Missouri	\$1,636	Pennsylvania	\$4,138		

Source: Finkelstein et al., *Obesity Research* 12, 2004. Pages 18-24.

# In The Abstract

## PHYSICAL ACTIVITY

Television Watching Increases the Risk of Obesity and Type 2 Diabetes in Women

**STUDY AND RESULTS:** In a longitudinal study, 3,757 (7.5 percent of a 50,277 sample of U.S. women) who were not considered obese in 1992 became so by 1998. Overall, the researchers documented 1,515 new cases of type 2 diabetes. Time spent watching television was significantly associated with the risk of obesity and type 2 diabetes. Long hours sitting or standing at work also affected the chances of becoming obese or developing type 2 diabetes. In contrast, light activities such as standing or walking around at home (which probably reflects household work) and brisk walking were associated with a significantly lower risk of obesity and type 2 diabetes. Analysis suggests that 30 percent of obesity cases and 43 percent of type 2 cases potentially diabetes could be prevented by adopting a relatively active lifestyle—meaning less than 10 hours per week of TV watching and at least 30 minutes per day of brisk walking.

**WHAT'S IMPORTANT:** Current public health campaigns to reduce obesity and type 2 diabetes have largely focused on increasing exercise but have paid little attention to the reduction of sedentary behaviors, such as watching television or sitting at work for hours. To address the growing epidemic of obesity in our country, people will need to change their lifestyles, not only by eating a healthier diet and exercising more, but also by reducing sedentary behaviors.

**FIND THIS STUDY:** Hu, et al. “Television watching and other sedentary behaviors in relation to risk of obesity and type 2 mellitus in women.” *Journal of the American Medical Association* 289, no. 14 (April 9, 2003).

The Effectiveness of Interventions to Increase Physical Activity: A Systematic Review

**STUDY AND RESULTS:** This study evaluated various methods used to encourage the public to increase physical activity (informational, behavioral and social, and environmental and policy). Authors used the Guide to Community Preventive Services developed by the independent Task Force on Community Preventive Services as the model for their analysis and relied on data drawn from existing studies. Informational methods reviewed were point-of-decision prompts, such as signs placed near elevators and escalators urging use of stairs, community-wide campaigns, mass media campaigns and classroom-based health education. The authors concluded that point-of-decision and community-wide campaigns proved effective at increasing physical activity, while results were inconclusive for the remaining methods. The study also reviewed six behavioral and social methods, of which half proved conclusively to be effective: school-based physical education, social support interventions in community settings, and individually adapted health behavior change programs. The only environmental and policy approach—creating

or enhancing access to places for physical activity combined with informational outreach—proved effective under analysis.

**WHAT'S IMPORTANT:** This study reviews a large body of published research on combating obesity. Using the rubric established in the Community Guide, the authors provide concise analyses of the efficacy of various methods to increase physical activity. In addition, the authors provide a summary of key questions to pose in reviewing those methods found effective in the study.

**FIND THIS STUDY:** Kahn, et al. “The Effectiveness of Interventions to Increase Physical Activity: A Systematic Review.” *American Journal of Preventive Medicine* 22, no. 4S, (2002): 73-106.

## QUALITY OF LIFE

Lose Weight, Live Longer

**STUDY AND RESULTS:** Using national data, researchers estimated the expected number of years of life lost to adults due to overweight and obesity. Marked race and sex differences were observed. The optimal body mass index (BMI) is approximately 23 to 25 for whites and 23 to 30 for blacks. The study found that for any given degree of overweight, young adults generally exhibited greater years of life lost than did older adults. Those who lose the most years of life are white men and women aged 20 to 30 with a severe level of obesity (BMI > 45), who lose 13 and eight years, respectively. Among black men and women older than age 60, overweight and moderate obesity generally were not associated with more years of life lost, but severe obesity was. However, among severely obese younger blacks, men lost 20 years of life, and women five.

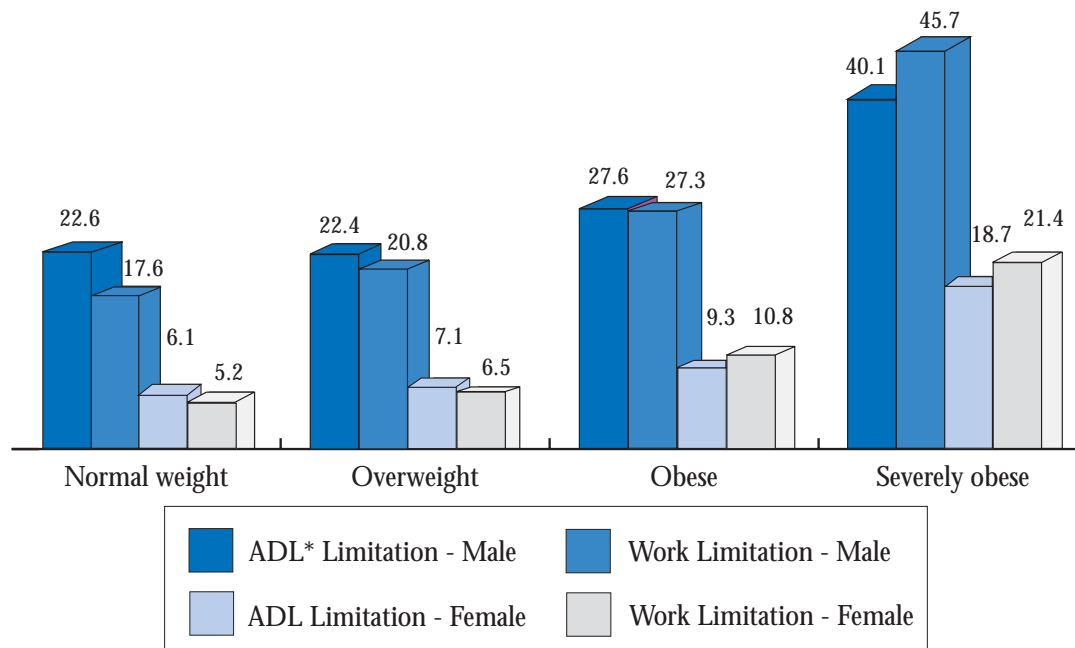
**WHAT'S IMPORTANT:** Obesity is a major public health problem that can significantly lessen life expectancy. If obesity is not addressed, people with moderate to severe obesity are at a higher risk of living shorter lives.

**FIND THIS STUDY:** Fontaine, et al. “Years of life lost due to obesity.” *Journal of the American Medical Association* 289, no. 2 (January 8, 2003).

Increasing Obesity Rates and Disability Trends

**STUDY AND RESULTS:** This study examines the past and potential future effects of obesity on disability rates among older Americans. Data from the Health and Retirement Study and 1985-2002 Behavioral Risk Factor Surveillance Study—both of which allowed respondents to self-report weight—were the basis of the study. The authors employed several measures of dependent variables to gauge respondents' functional limitations, health and health care use. Two measures were used to determine functional limitations: limitation on activities of daily living (ADLs) and health impairments that limit paid work. For health measures, the authors used the measures of respondents reporting fair or poor health and their quantity of chronic health problems. Health care use was defined as total costs, number of doctor visits and probability of an inpatient stay in the preceding two years. The study's findings were similar to many other recent studies citing the increase in obesity rates. However, this piece found that, among men,

## Percent of Men and Women Ages 50-59 with Functional Limitations, by Level of Obesity



\*ADL = Activities of daily living

**Source:** Sturm, Roland, Jeanne S. Ringel, Tatiana Andreyeva, "Increasing Obesity Rates and Disability Trends," *Health Affairs* 23, no. 2 (March/April 2004): 199-205.

the probability of ADL limitations increases by 50 percent among those with moderate obesity and by 300 percent among those with severe obesity. For women, the probability of such limitations doubles at moderate obesity and quadruples at severe obesity. The authors estimate that, if the current trend in obesity rates continues without changes in behavior or medical technology, the number of men and women reporting fair or poor health (as opposed to excellent, very good or good) would increase by 11.7 percent and 14.1 percent, respectively.

**WHAT'S IMPORTANT:** Although the authors note that their analysis essentially is a simplified study, it contains many useful indicators of the current trend's potential effect on future health care costs. They indicate that, while current literature and research show a decline in disability rates among older Americans, that decline could end and the disability rate would rise considerably if obesity trends among younger Americans are not halted. They acknowledge that if interventions successfully reverse the trend toward increasing obesity, their projections will not hold. However, this model does not take into account the long-term negative effects of obesity on

overall health and functional limitations.

**FIND THIS STUDY:** Sturm, Roland; Jeanne S. Ringel; and Tatiana Andreyeva. "Increasing Obesity Rates and Disability Trends." *Health Affairs* 23, no. 2, (March/April 2004): 199-205.

## ECONOMIC EFFECTS OF OBESITY

How Much Does the Country Pay for Obesity?

**STUDY AND RESULTS:** Using nationally representative aggregate data, researchers found that medical spending caused by overweight and obesity accounted for 9.1 percent of total annual U.S. medical expenditures in 1998. The total may have been as high as \$78.5 billion (\$92.6 billion in 2002 dollars). Medicare and Medicaid finance approximately half of these costs.

**WHAT'S IMPORTANT:** Unless programs aimed at reducing obesity are successfully implemented, medical expenditures caused by overweight and obesity will continue to increase. Given that this public health problem now rivals the medical costs associated with smoking, it is important to focus as much attention on preventing obesity as on reducing smoking.

**FIND THIS STUDY:** Finkelstein, et al. "National medical spending attributable to overweight and obesity: How much and who's paying?" *Health Affairs Web Exclusive*. May 14, 2003. <http://content.healthaffairs.org/cgi/content/full/hlthaff.w3.219v1/DC1>. ✦

*State Health Lawmakers' Digest is a product of the Forum for State Health Policy Leadership at the National Conference of State Legislatures. State Health Lawmakers' Digest was produced with the generous support of the Robert Wood Johnson Foundation. For more information, please call Rachel Balick at (202) 624-5400.*

# Who Knows

**Dr. Risa Lavizzo-Mourey** is president and chief executive officer of The Robert Wood Johnson Foundation. Dr. Lavizzo-Mourey was previously the deputy administrator of the Agency for Health Care Policy and Research (now the Agency for Health Care Research and Quality within the U.S. Department of Health and Human Services) under both Democratic and Republican administrations.

**Childhood obesity is both a national health problem and a major focus for The Robert Wood Johnson Foundation. What are the reasons for your concern, both professional and personal?**

First of all, it's important to note that the Robert Wood Johnson Foundation has long been committed to improving health and health care for all Americans. Addressing the issue of childhood obesity is very much consistent with our values and principles. Our goal is to halt the rise in childhood obesity by promoting healthy eating and physical activity in schools and communities nationwide. If we don't, we will raise the first generation of American children who will live sicker and die younger than the previous generation. The number of overweight children has doubled since 1980, and the number of overweight adolescents has tripled. These kids go on to develop adult illnesses such as high blood pressure, diabetes, in addition to social and behavioral burdens.

As a young mother working in an inner city neighborhood, every day I saw how difficult it is to live in a poor community and to provide healthy choices for your children. As I picked my children up from day care, I drove by fast food restaurants and corner grocery stores, but no supermarkets, no fresh fruit stands—no place that offered healthy choices. That was compounded by the lack of playgrounds or areas for kids to be physically active.

**What are the potential costs to the states from childhood obesity?**

The costs to the states are catastrophic. In January 2004, the *Journal of Obesity Research* published a study that found that we spent about \$75.1 billion last year on obesity-related costs: medications, doctor visits, hospitalizations, and the like. Medicare and Medicaid paid about half of that, approximately \$37 billion. When you think about what this means for states where 10-11 percent of their expenditures come from Medicaid, state policymakers, governors, and administrators should understand that this huge bill is only going to increase as kids begin to accumulate the chronic illnesses associated with obesity.

**Much of the current response to childhood obesity has focused on promoting physical activity and good nutrition. What other factors do you think contribute to the childhood obesity epidemic?**

Obesity rates are highest in communities afflicted by poverty. Part of the reason, the studies seem to indicate, is that families in these communities simply don't have the same opportunities to make healthy choices as families in other neighborhoods. They don't have grocery stores that stock affordable fresh fruits and vegetables. There aren't enough safe places for kids to play or programs that

teach kids how to involve physical activity in daily life and continue through their lifetime. We must remove these barriers so that families can choose a healthy lifestyle and healthy foods.

**Children are more likely to be obese if their parents are obese. What are the best strategies to fight obesity in families?**

Parents teach behaviors and lifelong—healthy or unhealthy—habits to their kids. We want to promote healthy habits because we believe that most parents want to raise healthy kids. We're working with schools, health care providers, community-based organizations, and faith-based organizations—the places that kids and families get information and recreation—to try to provide resources and tools that will allow them not only to understand what healthy behaviors are, but to also include these behaviors in their regular activities.

**What are the most promising state-level strategies for preventing childhood obesity? Are there key strategies that state legislators should consider to encourage healthy eating and regular physical activity for children and families?**

A good example is Arkansas, which last year passed an Act that not only removed vending machines from elementary schools, but also enacted policies to improve nutrition in schools, reintroduce physical activity in schools, and require that kids' body mass index be measured regularly and reported to parents. The Robert Wood Johnson Foundation is attempting to learn from Arkansas and other states that are taking on comprehensive activities that include measurement and preventive approaches. At the district level, a school in Wisconsin has implemented a very promising program to redesign physical education to include lifelong sports such as roller-blading, rock climbing and dance and to remove the kinds of activities that can alienate those who aren't as athletically talented as some of their peers.

**How do you reach out to legislators who represent communities that are heavily affected by the obesity epidemic?**

One of our core principles is that we view ourselves as stewards of private resources that must be used for the public good, particularly to help the most vulnerable in our society. When we look at this devastating epidemic of obesity, we're struck by alarming disparity; it's disproportionate in African-Americans, Hispanics and Native Americans. Many of the families that are affected by this don't have access to the preventive resources we've talked about. We want to encourage legislators to be visible, vocal champions of policies that promote nutrition and physical activity among kids. We're aiming to develop evidence-based strategies for promoting best policies and disseminate those to legislators. I was thrilled to read recently about Pennsylvania's statewide effort to encourage grocers to locate in disadvantaged communities. These communities need grocery stores for health reasons, and also for the economic benefits realized when a major employer comes into the neighborhood. We hope that the kind of information we provide to state policymakers will lead to more efforts that are both good for the economy and for health. ✦

# What Works

## School-based Programs

Preventing and treating obesity is a challenge that has no magic bullet or quick cure. It is widely accepted that the best way to prevent and treat obesity is to reduce the risky behaviors that cause the condition, including poor nutrition and lack of regular physical exercise. As states begin to realize that prevention is the key to saving money and reducing their financial burden, they are looking first at schools.

California's Project LEAN, a two-part effort, is at the forefront of school-based programs. The first component, Food on the Run, aims to increase healthy eating and physical activity among adolescents. The second, Successful Students Through Healthy Food Policies, is a social marketing program that teaches students lifelong healthy eating and physical activity behaviors. The programs work at both the individual level—to increase skills and knowledge—and at the school level, where they attempt to influence high school policies to increase access to healthy foods and physical activity.

West Virginia has taken a bold, statewide approach by simply prohibiting the sale or serving of candy, soft drinks, chewing gum or flavored ice bars during the school day. The sale of soft drinks in high schools is an exception that may be made by county school boards, but even then they may not be sold during breakfast and lunch periods. In addition, the state requires all school superintendents to designate a school nutrition program director for each county.

Because these programs are new, there is very little data on their long-term effects. Some evidence, however, indicates that a program in El Paso, Texas, has garnered some positive results. In 1997, 20 elementary schools started a program called Coordinated Approach to Child Health, which brought healthier school meals and more physical education to students. Researchers found that the program resulted in healthier school breakfasts with less fat and sodium than regular products, although school lunch improvements were less consistent. Just as important, physical activity among students also increased.

## Healthy Lifestyle Initiatives and Lowered Medicaid Costs

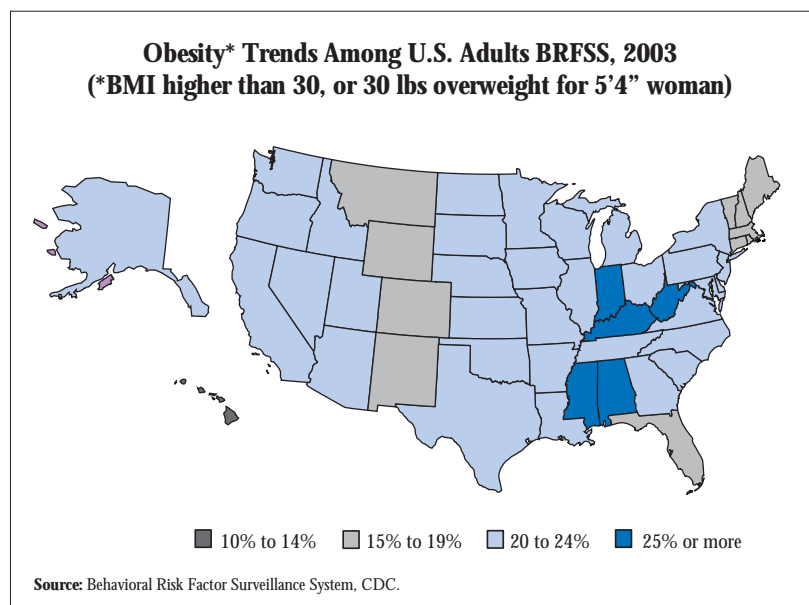
State policymakers have been focused for years on reining in Medicaid costs spurred higher by economic downturn and increased enrollment, rising costs of pharmaceuticals, and care for the disabled and nursing home residents. The costs of obesity are presenting a stiff new challenge for both Medicaid and employee health insurance programs. In Arkansas, which has one of the highest rates of obesity, 50 percent of the Medicaid budget is being spent on 5 percent of cases. Governor Mike Huckabee recently launched the Healthy Arkansas Initiative to try

to prevent obesity and the serious, costly conditions it causes. Aiming for behavioral change, the initiative is initially targeting state employees and Medicaid recipients but will extend to the entire Arkansas population over a 32-month period.

Healthy Arkansas aims not only to create a healthier and more active state, but also to save the state money. It provides incentives to promote a healthier workforce by offering a \$20 break on monthly premiums for people who participate in a lifestyle risk assessment inventory, awarding vacation days in place of sick days for healthy employees, and offering business assistance to create healthy food and beverage options for employees. The governor's office staff also started to take walking breaks—similar to the concept of smoking breaks—and approximately one-fifth of the staff participated. This activity will be extended to all state government employees in 2005.

The Department of Human Services is also developing a pilot project that will focus on changing the behavior of the nearly 600,000 Medicaid recipients. The goal of the project is to reduce obesity and smoking among children, adolescents and adults and to increase the number of children and adults who exercise. To help fund Medicaid, Arkansas enacted a 2 cent per can soda tax that will raise more than \$40 million annually.

Other states are following Arkansas' lead. Oklahoma Governor Brad Henry has begun allowing exercise breaks for governor's office employees. Colorado Governor Bill Owens and the Colorado General Assembly Launched "Colorado on the Move" in 2002. The program reached more than 200,000 people in workplaces, communities and schools to encourage participants to walk an extra 2,000 steps and eat 100 fewer calories every day. South Carolina Governor Mark Sanford started the "Family Fitness Challenge," a cross-state bike race, to help combat obesity. +



## On The Horizon

### Built Environment: Junk Food Out, Local Produce In

Although pharmaceutical and diet-based approaches to reducing the prevalence of overweight and obesity are widespread, the success rates of these programs vary widely by individual. The reoccurrence of overweight and obesity is common among people who initially lose weight. A new way of looking at this issue, known as “built environment” analysis, suggests that shifting the focus of policymaking from the individual to the environment in which they live would be a more effective strategy for obesity prevention.

Broadly speaking, the built environment analysis suggests that, in addition to crafting large scale smart-growth initiatives that promote walkable neighborhoods and reduce urban sprawl, policymakers need to look at micro-level issues such as the placement of vending machines in schools and in stairways in office buildings. One implication of this research is that policy interventions that target relatively mundane aspects of our environments can be very effective in reducing the prevalence of overweight and obesity.

One branch of built environment research focuses on the impor-

tance of access to healthy food in schools. In recent years, many school districts have allowed high-calorie foods with low nutritional value to be placed in vending machines and cafeterias. This trend has received much negative attention from the popular press and film industry, notably through books such as Erik Schlosser’s *Fast Food Nation*, and movies like Morgan Spurlock’s *Super Size Me*. In response to this pressure, legislatures and school districts across the nation are beginning to look for programs that address some of these issues. Built environment analysis begins to fill the gap between problem and policy, suggesting that the school environment itself needs to be changed to help children learn good eating habits and reduce the prevalence of high-calorie foods in their diets. One model that has emerged for implementing these suggestions is Farm-to-School programs, which tackle the issue of access to nutritional foods by helping schools and local farmers form partnerships to increase the supply of fresh produce in cafeterias. Proponents believe that, by helping schools spend less on processed foods and more on locally grown fresh foods, the programs not only will improve children’s diets and eating habits but also will promote economic growth in local communities. +

### States with Farm to School Programs

California	New Mexico
Connecticut	New York
Florida	North Carolina
Iowa	Oklahoma
Kentucky	Pennsylvania
Massachusetts	Vermont
Michigan	Washington
New Jersey	

**Source:** National Farm to School Program, [www.farmtoschool.org](http://www.farmtoschool.org)

## Digging Deeper

**Action for Healthy Kids** is a collaboration between health and education leaders that focuses on improving the health of children through better nutrition and physical activity in schools. Its Web site includes information about what states are doing as a part of this initiative. <http://www.actionforhealthykids.org>.

**Center for Disease Control and Prevention (CDC)** has many resources on obesity, including a comprehensive FAQ, an on-line BMI calculator and information about funding state programs on nutrition and physical activity to prevent obesity and other chronic diseases. <http://www.cdc.gov/nccdphp/dnpa/obesity/>.

**Healthy Arkansas Initiative** has information about physical activity, nutrition and stopping smoking, including wellness resources and brochures to download on worksite wellness, diabetes and obesity. <http://www.arkansas.gov/ha/home.html>.

**Nutrition.gov** provides information collected from across all federal government Web sites and educational institutions, including information for consumers on food preparation, healthy eating and exercise. [Nutrition.gov](http://www.nutrition.gov).

The **Office of the Surgeon General** has resources on many public health priorities, including obesity. To access “The Surgeon General’s Call to Action to Prevent and Decrease Overweight and Obesity,” go to <http://www.surgeongeneral.gov/topics/obesity/>.

**The Robert Wood Johnson Foundation** has information about childhood obesity, including an overview of the topic and information on funding opportunities. <http://www.rwjf.org/index.jsp>.

**Verb** is a CDC media campaign aimed at kids and helping to get them to be more active. The Web site, designed for kids, provides information about physical activity and sports. <http://www.verbnw.com/>.

Reports:

**National Conference of State Legislatures**, “Vending Machines in Schools,” <http://www.ncsl.org/programs/health/vending.htm>.

**National Conference of State Legislatures**, “Food Vendor Lawsuit Immunity,” <http://www.ncsl.org/programs/health/fvmemo.htm>. +