

F as in Fat:

HOW OBESITY THREATENS AMERICA'S FUTURE

2010



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ACKNOWLEDGEMENTS

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Introduction

In 2001, then-Surgeon General David Satcher issued a landmark statement that obesity had reached epidemic proportions in America.¹ The country began to react, but slowly. As the *F as in Fat* report has documented over the previous six years, efforts to address the skyrocketing rise of obesity rates and obesity-related diseases have slowly been growing across the country, ranging from school districts trying to improve the nutritional quality of school lunches to communities building new sidewalks to make walking safer and more accessible to millions of Americans.

In the past two years, however, programs and policies to prevent obesity have increased exponentially in number, strength and breadth. A new poll shows that 80 percent of Americans now recognize that obesity is a significant and growing challenge for the country.² Furthermore, 50 percent of Americans believe that childhood obesity is such an important issue that we need to invest more to prevent it immediately.

Obesity-prevention programs have received an unprecedented level of support in the new health reform law, the Patient Protection and Affordable Care Act of 2010, and the American Recovery and Reinvestment Act of 2009 (ARRA). President Barack Obama created a White House Task Force on Childhood Obesity, which issued a groundbreaking new national obesity strategy in May 2010 that included the bold goal of reducing child obesity rates from 17 percent to 5 percent by 2030 and contained concrete measures and roles for every agency in the federal government. In addition, First Lady Michelle Obama launched the “Let’s Move” initiative to solve childhood obesity within a generation. And less than a decade after Dr. Satcher’s pronouncement, current Surgeon General Regina Benjamin declared that combating obesity is a top national health priority. She elaborated: “The real goal is not just a number on a scale, but optimal health for all Americans at every stage of life.”³

Despite these important advances, obesity remains one of the biggest public health challenges the country has ever faced, wide disparities remain among different racial and ethnic groups, and our response as a nation has yet to fully match the magnitude of the problem.

Most Americans continue to believe that weight is an issue linked almost exclusively to personal responsibility, and this view is a serious obstacle in the fight against obesity.⁴ *“Isn’t what people eat and how active they are up to them? Isn’t this just a matter of willpower or personal choice?”*

While it is clear that, in order to prevent obesity and reverse the epidemic, people need to make healthy choices, it is also clear that people do not make choices in a vacuum. The high rates of obesity in the United States are evidence that making healthy choices and managing one’s weight are difficult for many people because there are many barriers to healthy living in America. Healthy foods are often more expensive and scarce in many neighborhoods, while cheap processed foods are widely available. In addition, finding safe, accessible places to be physically active can be a challenge for many. While all Americans face barriers to healthy choices, these obstacles are often higher for people with lower incomes and less education, and for racial and ethnic minorities, who often have more limited access to affordable foods and safe, accessible places to be active. Where you live, learn, work and play all have a major impact on the choices you are able to make.

Reversing the obesity epidemic will require individuals, families, schools, communities, businesses, government, and every other sector of American society to reduce the barriers to healthy eating and active living. Every American must have the chance to lead a healthy lifestyle.

In the decade just begun, the nation has the opportunity to build on the growing momentum and set policy goals that will make healthy choices the easy choices in every neighborhood in the United States.

One immediate next step should be to ensure that the disease-prevention measures in the new health reform law are implemented in smart, strategic ways to help prevent and reduce obesity. By effectively investing in proven community-based programs and policies and increasing access to preventive care, the law has the potential to greatly improve the health of millions of Americans. The recommendations in this report focus on a number of important considerations for implementation.

Obesity in the States and the Nation

In this *F as in Fat* report, Trust for America's Health (TFAH) finds that in the past year adult obesity rates increased in 28 states, while only the District of Columbia (D.C.) saw a decline.

Nationally, two-thirds of adults and nearly one-third of children and teens are currently obese or overweight. Since 1980, the number of obese adults has doubled. Since 1970, the number of obese children ages 6-11 has quadrupled, and the number of obese adolescents ages 12-19 has tripled.^{5, 6} The alarming increases in obesity rates over the past several decades indicate that much has changed in American society that makes it harder for children and families to eat healthy foods and be physically active.

Higher obesity rates are often linked to regional, economic and social factors. Obesity rates tend to be highest in areas where poverty rates are highest and incomes are lowest. Except for Michigan, the 10 states with the highest adult obesity rates are in the South, and nine of the 10 states with the highest childhood obesity rates are in the South. Nine of the 10 states with the highest rates of poverty are also in that region.

Adult obesity rates among Blacks are at 30 percent and above in 43 states and D.C., compared

with 19 states for Latinos and only one state for Whites, which reflects long-standing disparities in income, education and access to health care.

Higher rates of obesity translate into higher rates of obesity-related diseases, such as diabetes and heart disease. As documented in this year's report, 10 of the 11 states with the highest rates of diabetes are in the South, as are the 10 states with the highest rates of hypertension. Previous studies have shown Blacks and Latinos have higher rates of diabetes, hypertension and heart disease than other groups. For instance, 32 percent of Blacks have hypertension compared with 22.5 percent of Whites, and 10.8 percent of Blacks have diabetes compared with 10.6 percent of Latinos, 9.0 percent of American Indians and 6.2 percent of Whites.⁷

Recent studies have shown that the number of obese children and adolescents may have leveled off since 1999, except among the very heaviest boys ages 6-19, but the rates remain startlingly high.⁸ If we do not reverse the childhood obesity epidemic, today's youth may be the first generation in American history to live shorter, less healthy lives than their parents.

Toll on the Nation's Health and Pocketbook

- Obesity is related to more than 20 major chronic diseases. Currently, one in three adults has some form of heart disease, more than 80 million Americans have type 2 diabetes or are pre-diabetic, and obese children are more than twice as likely to die prematurely before the age of 55 compared with healthy-weight children.^{9, 10, 11, 12, 13, 14, 15, 16}
- Obesity-related medical costs are nearly 10 percent of all annual medical spending.¹⁷ Rising health care costs and a workforce in poor health are driving down our ability to compete in the global economy.¹⁸

The obesity epidemic affects every state in the country, but those states and communities with the highest rates of obesity are paying a very steep price. Businesses are reluctant to locate in areas where the population, particularly the future workforce, is unhealthy. High health care costs and lower productivity are unattractive to employers and investors. By creating policies and programs to help communities lower health care costs and improve worker productivity, government can play an important role in making communities more attractive to businesses.

This is the seventh edition of *F as in Fat*. The 2010 report examines current obesity trends in America and promising policy approaches, particularly actions taken by the states and federal government. This report includes:

1. Obesity Rates and Related Trends.
2. State Responsibilities and Policies.
3. Federal Policies and Programs.
4. Removing Barriers to Healthy Choices.
5. Public Opinion Survey.
6. Conclusion and Recommendations.

In addition, for the first time, the report features commentaries from guest authors on a variety of relevant subjects including reauthorization of the Child Nutrition Act; expanding communities' access to affordable healthy foods; and steps food manufacturers are taking to improve the nutritional quality of their products and their own employees' wellness. TFAH asked the following policy-makers and experts in the field of obesity to offer their perspectives on what needs to be done to address the obesity crisis in the United States.

- **Arnold Schwarzenegger**, Governor of California, talks about his goal to make California a national model for healthy living on p. 31.
- **Joe Thompson**, Co-director of the RWJF Center on Childhood Obesity, addresses the need to create a culture of health and wellness for our kids where they live, play and learn on p. 36.
- **Jamie Chriqui**, Senior Research Scientist with the Bridging the Gap Program at the University of Illinois at Chicago, writes about the need for more robust local school wellness policies on p. 39.
- **Indra Nooyi**, CEO of PepsiCo, addresses the role of companies in providing consumers and employees with the information and choices to make healthier decisions on p. 44.
- **Tom Harkin**, Chair of the Senate Health, Education, Labor and Pensions Committee (D-IA), writes about changing the default status of our society to one that favors health and the role federal child nutrition policies can play in this beginning on p. 63.
- **Kelly Brownell**, Director of the Rudd Center for Food Policy & Obesity at Yale University, highlights some of the major breakthroughs in obesity prevention and control on p. 71.

- **Yael Lehmann**, Director of the Philadelphia Food Trust, addresses access to healthy, affordable foods on p. 82.

- **Angela Glover Blackwell**, Director of PolicyLink and Co-director of the RWJF Center on Childhood Obesity, writes about creating healthy communities for all Americans on p. 84.



F AS IN FAT 2010: MAJOR FINDINGS

Adult Obesity Rates and Trends (2007-2009)

- Adult obesity rates rose in 28 states over the past year. Only D.C. experienced a decline in adult obesity rates. More than two-thirds of states (38) now have adult obesity rates above 25 percent. Eight states have rates above 30 percent – Alabama, Arkansas, Kentucky, Louisiana, Mississippi, Oklahoma, Tennessee and West Virginia. In 1991, no state had an obesity rate above 20 percent. In 1980, the national average of obese adults was 15 percent.
- Adult obesity rates rose for a second year in a row in 15 states, and rose for a third year in a row in 11 states. Mississippi had the highest rate of obese adults at 33.8 percent. Colorado had the lowest rate at 19.1 percent and is the only state with a rate below 20 percent.
- Obesity and obesity-related diseases such as diabetes and hypertension continue to remain the highest in the South. Except for Michigan, the top 10 most obese states in the country are all in the South. In addition, 10 of the 11 states with the highest rates of diabetes are in the South, as are the 10 states with the highest rates of hypertension and physical inactivity. Northeastern and Western states continue to have the lowest obesity rates.
- Adult diabetes rates increased in 19 states in the past year. In eight states, more than 10 percent of adults now have type 2 diabetes.
- The number of adults who report that they do not engage in any physical activity rose in 12 states in the past year. Two states and D.C. saw a decline in adult physical inactivity levels.
- Adult obesity rates for Blacks and Latinos are higher than those for Whites in nearly every state. Adult obesity rates for Blacks are greater than or equal to 30 percent in 43 states and D.C. In nine states, the rates exceed 40 percent. Adult obesity rates for Latinos are greater than or equal to 30 percent in 19 states.
- There is a very strong correlation between adult obesity rates and socioeconomic status. Among individuals earning less than \$15,000 per year, 35.3 percent were obese compared to 24.5 percent of adults earning \$50,000 or more per year.
- Among adults who did not graduate from high school, 33.6 percent were obese compared to only 22 percent of adults with a college degree.

Child and Adolescent Obesity Rates and Trends (2007)*

- More than one-third of children ages 10–17 are obese (16.4%) or overweight (18.2%). State-specific rates ranged from a low of 9.6 percent in Oregon to a high of 21.9 percent in Mississippi.
- Eight states, plus D.C., have childhood obesity rates greater than 20 percent: Arkansas, Georgia, Illinois, Kentucky, Louisiana, Mississippi, Tennessee and Texas.
- Nine of the 10 states with the highest rates of obese children are in the South, as are nine out of the 10 states with the highest rates of poverty.
- Recent studies have shown that the number of obese children and adolescents may have leveled off since 1999, except among the very heaviest boys ages 6–19, but the rates remain startlingly high.¹⁹
- Nationwide, less than one-third of all children ages 6–17 engage in vigorous activity, defined as at least 20 minutes of physical activity that makes the child sweat and breathe hard.
- The percentage of children engaging in daily, vigorous physical activity ranged from a low of 17.6 percent in Utah to a high of 38.5 percent in North Carolina.

Obesity Rates among High School Students (2009)

- Nationally, 12 percent of high school students are obese and 15.8 percent of high school students are overweight.
- Obesity rates among high school students ranged from a high of 18.3 percent in Mississippi to a low of 6.4 percent in Utah.
- Overweight rates among high school students ranged from a high of 18 percent in Louisiana to a low of 10.5 percent in Utah, with a median overweight rate of 14.6 percent.
- Obesity rates among Black and Latino high school students were higher compared with White students (15.1 percent and 10.3 percent, respectively).

State Legislation Trends

- Twenty states and D.C. set nutritional standards for school lunches, breakfasts and snacks that are stricter than current United States Department of Agriculture (USDA) requirements. Five years ago, only four states had legislation requiring stricter standards.
- Twenty-eight states and D.C. have nutritional standards for competitive foods sold in schools on à la carte lines, in vending machines, in school stores or through school bake sales. Five years ago, only six states had nutritional standards for competitive foods.
- Every state has some form of physical education requirement for schools, but these requirements are often limited, not enforced or do not meet adequate quality standards.
- Twenty states have passed requirements for body mass index (BMI) screenings of children and adolescents or have passed legislation requiring other forms of weight-related assessments in schools. Five years ago, only four states had passed screening requirements.
- Twenty-three states and D.C. have laws that establish programs linking local farms to schools. Five years ago, only New York State had such a program.
- Thirty-three states impose a sales tax on soda.
- Five states have enacted statewide menu labeling legislation.
- Twenty-four states have passed legislation that limit obesity liability by preventing individuals from suing restaurants, food manufacturers and marketing firms for contributing to unhealthy eating, weight gain and related health problems.
- Thirteen states have passed Complete Streets legislation, which aims to ensure that all users -- pedestrians, bicyclists, motorists and transit riders of all ages and abilities -- have safe access to a community's streets.

Main Recommendations

- Support obesity- and disease-prevention programs through the new health reform law's Prevention and Public Health Fund, which provides \$15 billion in mandatory appropriations for public health and prevention programs over the next 10 years.
- Adopt a "Health-in-All-Policies" approach -- which recognizes that many factors outside of health care have a huge impact on health and therefore every policy decision should take into consideration its impact on health -- through the National Prevention, Health Promotion and Public Health Council, which includes departmental secretaries across the federal government.
- Expand the commitment to community-based prevention programs initiated under ARRA through new provisions in the health reform law, such as Community Transformation grants and the National Diabetes Prevention Program.
- Align health care coverage and access provisions in the health reform law with obesity prevention and control to ensure that every American has access to the most effective practices for preventing, controlling and treating obesity and obesity-related conditions. Policies also should be put in place to encourage the development and incorporation of emerging and innovative practices.
- Align federal policies and legislation with the goals of the National Prevention and Health Promotion Strategy. Opportunities to do this can be found through key pieces of federal legislation that are up for reauthorization in the next few years, including the Child Nutrition and WIC Reauthorization Act (CNR); the Elementary and Secondary Education Act (ESEA), also known as the No Child Left Behind Act; and the Surface Transportation Authorization Act.
- Continue to invest in research and evaluation on nutrition, physical activity, obesity, and obesity-related health outcomes and associated interventions.

*Note: TFAH first reported on the 2007 National Survey of Children's Health results in *F as in Fat 2009*. Data collection for the next NSCH will begin in 2011 and will likely be available in 2013.



Obesity Rates and Related Trends

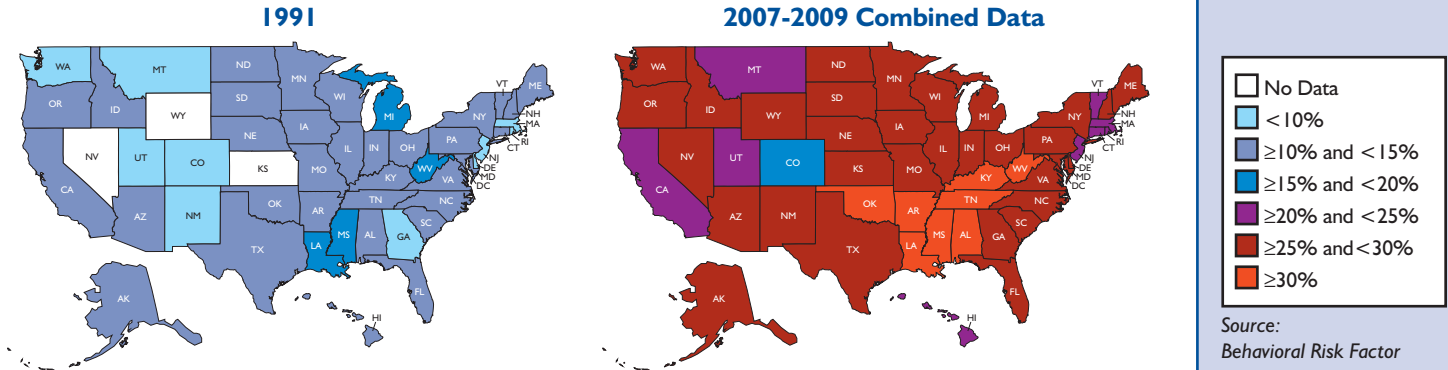
More than two-thirds (68%) of American adults are either overweight or obese.²⁰ Adult obesity rates have grown from 15 percent in 1980²¹ to 34 percent in 2008, based on a national survey.²²

Meanwhile, the rates of obesity among children ages 2–19 have more than tripled since 1980.^{23,24} According to the most recent National Health and Nutrition Examination Survey (NHANES), 16.9 percent of children ages 2–19 are obese and 31.7 percent are overweight or obese.²⁵ Researchers at the Centers for Disease Control and Prevention (CDC) report there was no statistically significant change in the number of children and adolescents with high BMI-for-age

during 1999–2008, except among the very heaviest boys ages 6–19.²⁶

While some scientists and public health officials speculate that the data reflect the effectiveness of recent public health campaigns to raise awareness about obesity and the importance of increased physical activity and healthy eating among children and adolescents, others note that the prevalence of high BMI in children remains high and has not declined.

OBESITY TRENDS* AMONG U.S. ADULTS BRFSS, 1991 and 2007-2009 Combined Data (*BMI >30, or about 30 lbs overweight for 5' 4" person)



A. ADULT OBESITY AND OVERWEIGHT RATES

Rates of obesity continued to rise across the nation during the past year. Twenty-eight states saw a significant increase in obesity, and 15 of these states experienced an increase for the second year in a row. Eleven states experienced an increase for the third straight year. Only in D.C. did obesity rates significantly decrease over the past year.

Last year, only four states – Alabama, Mississippi, Tennessee and West Virginia – had obesity rates over 30 percent. This year eight states now have adult obesity rates above 30 percent: Mississippi (33.8%); Alabama (31.6%); Tennessee (31.6%); West Virginia (31.3%); Louisiana (31.2%); Oklahoma (30.6%); Kentucky (30.5%); and Arkansas (30.1%). Mississippi also continues to have the highest rate of

physical inactivity and hypertension and has the second highest rate of diabetes. Alabama, Kentucky, Louisiana, Oklahoma, Tennessee and West Virginia also rank in the top 10 for the highest rates of diabetes, physical inactivity and hypertension.

Currently, only 10 states and D.C. have obesity rates below 25 percent, compared with 19 last year. In Colorado, the only state under 20 percent, rates of obesity increased from 18.9 percent to 19.1 percent.

The U.S. Department of Health and Human Services (HHS) set a national goal to reduce adult obesity rates to 15 percent in every state by the year 2010. Clearly that goal has not been met as all states and D.C. currently exceed 15 percent.

OBESITY AND OVERWEIGHT RATES AND

ADULTS

States	Obesity			Overweight & Obesity	Diabetes		Physical Inactivity		Hypertension	
	2007-2009 3 Yr. Ave. Percentage (95% Conf Interval)	Ranking	Percentage Point Change 2006-2008 to 2007-2009	2007-2009 3 Yr. Ave. Percentage (95% Conf Interval)	2007-2009 3 Yr. Ave. Percentage (95% Conf Interval)	Ranking	2007-2009 3 Yr. Ave. Percentage (95% Conf Interval)	Ranking	2005-2009 3 Yr. Ave. Percentage (95% Conf Interval)	Ranking
Alabama	31.6% (+/- 1.0)	2	0.4	67.6% (+/- 1.1)	11.3% (+/- 0.6)	3	30.1% (+/- 1.0)	5	33.9% (+/- 1.0)	3
Alaska	26.9% (+/- 1.5)	24	-0.3	64.6% (+/- 1.8)	6.2% (+/- 0.8)	48	22.2% (+/- 1.5)	35	24.3% (+/- 1.4)	48
Arizona	25.8% (+/- 1.5)	29	1.0	62.7% (+/- 1.7)	8.2% (+/- 0.7)	25	21.5% (+/- 1.3)	37	24.7% (+/- 1.2)	47
Arkansas	30.1% (+/- 1.1)*	8	1.5	66.0% (+/- 1.2)	9.6% (+/- 0.6)	12	29.2% (+/- 1.0)	8	31.6% (+/- 1.0)	7
California	24.4% (+/- 0.7)*	41	0.7	60.6% (+/- 0.9)	8.4% (+/- 0.4)	21	22.8% (+/- 0.7)	30	25.5% (+/- 0.7)	41
Colorado	19.1% (+/- 0.6)	51	0.2	55.6% (+/- 0.8)	5.7% (+/- 0.3)	51	18.0% (+/- 0.6)	49	21.2% (+/- 0.6)	50
Connecticut	21.4% (+/- 0.8)	50	0.2	59.3% (+/- 1.1)	6.9% (+/- 0.4)	44	21.2% (+/- 0.8)	40	25.7% (+/- 0.8)	38
Delaware	27.9% (+/- 1.2)	20	0.5	64.2% (+/- 1.4)	8.4% (+/- 0.6)	21	22.7% (+/- 1.1)	32	29.4% (+/- 1.1)	12
D.C.	21.5% (+/- 1.0)^	49	-0.8	54.0% (+/- 1.3)	7.9% (+/- 0.6)	32	20.7% (+/- 1.0)	42	27.3% (+/- 1.1)	24
Florida	25.1% (+/- 0.9)**	36	0.9	61.6% (+/- 1.0)	9.4% (+/- 0.5)	13	25.0% (+/- 0.8)	18	29.0% (+/- 0.8)	15
Georgia	28.1% (+/- 1.0)	17	0.2	65.0% (+/- 1.1)	9.8% (+/- 0.6)	9	24.0% (+/- 0.9)	24	29.5% (+/- 1.0)	11
Hawaii	22.6% (+/- 0.9)**	47	0.8	57.3% (+/- 1.0)	8.1% (+/- 0.5)	27	19.1% (+/- 0.8)	46	27.8% (+/- 0.9)	22
Idaho	25.1% (+/- 1.0)	36	0.3	62.2% (+/- 1.1)	7.6% (+/- 0.5)	33	20.6% (+/- 0.9)	43	25.2% (+/- 0.9)	43
Illinois	26.6% (+/- 1.0)*	26	0.8	63.6% (+/- 1.0)	8.4% (+/- 0.5)	21	24.9% (+/- 0.9)	19	27.5% (+/- 0.9)	23
Indiana	28.1% (+/- 1.0)*	17	0.8	64.0% (+/- 1.1)	9.1% (+/- 0.5)	15	26.4% (+/- 0.9)	11	28.5% (+/- 0.8)	18
Iowa	27.6% (+/- 0.9)*	22	0.9	65.4% (+/- 1.0)	7.1% (+/- 0.4)	41	23.8% (+/- 0.8)	26	26.5% (+/- 0.8)	31
Kansas	28.2% (+/- 0.7)**	16	1.0	64.7% (+/- 0.8)	8.0% (+/- 0.3)	30	23.9% (+/- 0.6)	25	26.6% (+/- 0.6)	30
Kentucky	30.5% (+/- 1.0)*	7	1.4	67.6% (+/- 1.1)	10.4% (+/- 0.6)	6	30.1% (+/- 1.0)	5	31.6% (+/- 1.0)	7
Louisiana	31.2% (+/- 0.9)*	5	2.3	65.5% (+/- 1.0)	10.6% (+/- 0.5)	5	29.5% (+/- 0.9)	7	32.5% (+/- 0.9)	4
Maine	25.8% (+/- 0.8)**	29	1.1	63.0% (+/- 0.9)	8.1% (+/- 0.5)	27	21.4% (+/- 0.7)	38	28.1% (+/- 0.8)	21
Maryland	26.6% (+/- 0.8)	26	0.6	63.0% (+/- 0.9)	8.8% (+/- 0.4)	18	23.6% (+/- 0.8)	28	28.2% (+/- 0.8)	20
Massachusetts	21.7% (+/- 0.6)*	48	0.5	58.2% (+/- 0.8)	7.5% (+/- 0.3)	34	21.3% (+/- 0.6)	39	25.6% (+/- 0.6)	40
Michigan	29.4% (+/- 0.8)	10	0.5	64.9% (+/- 0.9)	9.1% (+/- 0.4)	15	23.2% (+/- 0.7)	29	28.7% (+/- 0.7)	17
Minnesota	25.5% (+/- 1.0)	32	0.2	62.7% (+/- 1.1)	6.0% (+/- 0.4)	49	16.9% (+/- 0.9)	51	21.6% (+/- 0.8)	49
Mississippi	33.8% (+/- 0.9)**	1	1.3	68.6% (+/- 0.9)	11.4% (+/- 0.5)	2	32.2% (+/- 0.9)	1	34.8% (+/- 0.8)	1
Missouri	29.3% (+/- 1.1)*	12	1.1	64.8% (+/- 1.2)	8.4% (+/- 0.6)	21	26.6% (+/- 1.0)	10	29.1% (+/- 1.1)	13
Montana	23.5% (+/- 0.9)**	43	0.8	61.9% (+/- 1.1)	6.6% (+/- 0.4)	46	21.6% (+/- 0.8)	36	25.7% (+/- 0.8)	38
Nebraska	27.3% (+/- 0.9)	23	0.4	64.6% (+/- 1.1)	7.4% (+/- 0.5)	35	23.7% (+/- 0.8)	27	26.1% (+/- 0.8)	34
Nevada	25.6% (+/- 1.3)	31	0.5	62.9% (+/- 1.4)	8.2% (+/- 0.7)	25	25.5% (+/- 1.3)	16	26.3% (+/- 1.3)	33
New Hampshire	25.4% (+/- 0.9)*	35	1.3	62.6% (+/- 1.0)	7.2% (+/- 0.4)	38	20.6% (+/- 0.8)	43	26.1% (+/- 0.8)	34
New Jersey	23.9% (+/- 0.8)	42	0.4	62.1% (+/- 0.9)	8.8% (+/- 0.4)	18	26.4% (+/- 0.8)	11	27.2% (+/- 0.7)	25
New Mexico	25.5% (+/- 0.9)**	32	0.9	60.9% (+/- 1.1)	8.1% (+/- 0.5)	27	22.7% (+/- 0.9)	32	25.0% (+/- 0.8)	45
New York	25.1% (+/- 0.9)	36	0.5	60.8% (+/- 1.0)	8.5% (+/- 0.5)	20	25.7% (+/- 0.8)	14	27.1% (+/- 0.8)	28
North Carolina	29.4% (+/- 0.8)**	10	1.1	65.2% (+/- 0.8)	9.3% (+/- 0.4)	14	25.1% (+/- 0.7)	17	29.9% (+/- 0.6)	10
North Dakota	27.7% (+/- 1.0)**	21	1.0	66.2% (+/- 1.2)	7.1% (+/- 0.5)	41	24.9% (+/- 1.0)	19	25.4% (+/- 0.9)	42
Ohio	29.0% (+/- 0.8)	13	0.5	64.5% (+/- 0.8)	9.8% (+/- 0.4)	9	25.6% (+/- 0.7)	15	29.1% (+/- 0.8)	13
Oklahoma	30.6% (+/- 0.8)**	6	1.1	66.4% (+/- 0.9)	10.4% (+/- 0.5)	6	30.8% (+/- 0.8)	2	31.9% (+/- 0.8)	6
Oregon	25.0% (+/- 1.0)	39	-0.4	61.4% (+/- 1.2)	7.4% (+/- 0.5)	35	18.0% (+/- 0.8)	49	25.8% (+/- 0.8)	37
Pennsylvania	28.1% (+/- 0.8)**	17	1.3	63.7% (+/- 0.9)	8.9% (+/- 0.5)	17	24.9% (+/- 0.8)	19	28.9% (+/- 0.7)	16
Rhode Island	22.9% (+/- 0.9)*	45	1.2	60.8% (+/- 1.2)	7.2% (+/- 0.5)	38	24.2% (+/- 1.0)	23	28.3% (+/- 0.9)	19
South Carolina	29.9% (+/- 0.9)	9	0.2	65.7% (+/- 1.0)	10.0% (+/- 0.5)	8	26.1% (+/- 0.8)	13	31.5% (+/- 0.8)	9
South Dakota	28.5% (+/- 1.0)**	15	1.6	65.9% (+/- 1.1)	6.9% (+/- 0.4)	44	24.7% (+/- 0.9)	22	26.9% (+/- 0.8)	29
Tennessee	31.6% (+/- 1.2)**	2	1.4	68.2% (+/- 1.2)	10.8% (+/- 0.7)	4	30.5% (+/- 1.2)	4	32.2% (+/- 1.1)	5
Texas	29.0% (+/- 0.8)*	13	1.1	66.2% (+/- 0.9)	9.8% (+/- 0.5)	9	28.0% (+/- 0.8)	9	27.2% (+/- 0.7)	25
Utah	23.2% (+/- 0.8)*	44	0.7	58.0% (+/- 1.1)	6.0% (+/- 0.4)	49	19.0% (+/- 0.8)	47	20.5% (+/- 0.7)	51
Vermont	22.8% (+/- 0.8)**	46	0.7	58.5% (+/- 0.9)	6.5% (+/- 0.4)	47	19.3% (+/- 0.7)	45	25.2% (+/- 0.7)	43
Virginia	25.5% (+/- 1.2)	32	0.1	61.3% (+/- 1.5)	8.0% (+/- 0.5)	30	22.4% (+/- 1.1)	34	27.2% (+/- 1.0)	25
Washington	26.3% (+/- 0.5)**	28	0.9	62.1% (+/- 0.6)	7.2% (+/- 0.3)	38	18.8% (+/- 0.7)	48	25.9% (+/- 0.5)	36
West Virginia	31.3% (+/- 1.0)	4	0.2	68.1% (+/- 1.1)	11.7% (+/- 0.6)	1	30.8% (+/- 1.0)	2	34.1% (+/- 1.0)	2
Wisconsin	26.9% (+/- 1.1)	24	0.9	63.8% (+/- 1.3)	7.3% (+/- 0.5)	37	21.2% (+/- 1.0)	40	26.4% (+/- 1.0)	32
Wyoming	25.0% (+/- 0.8)	39	0.7	62.2% (+/- 1.0)	7.1% (+/- 0.4)	41	22.8% (+/- 0.8)	30	24.9% (+/- 0.8)	46

Source: Behavior Risk Factor Surveillance System (BRFSS), CDC. To stabilize BRFSS data in order to rank states, TFAH combined three years of data (See Appendix A for more information on the methodology used for the rankings.). Red and* indicates a statistically significant change (P < 0.05) from 2006-2008 to 2007-2009 (for Hypertension figures - only collected every two years - from 2003-2005-2007 to 2005—2007-2009). Red and ** state increased significantly in the past two years. Green and ^ indicates a statistically significant decrease. Note: In the 2008 and 2009 F as in Fat reports, the analysis and comparison of hypertension rates for 2001-2007 included pregnant women diagnosed with gestational hypertension (GH). Beginning in 2003, the BRFSS questionnaire included this option in the answers. This year's analysis only looks at data from 2003 to 2009 and because GH is different from regular hypertension we now able to exclude this category from the overall hypertension rate. Therefore, the rates from this year's calculations are lower than the rates calculated in 2008 for the same 2003/2005/2007 time period. When we compare the hypertension rates that exclude GH from 2003-2007 to 2005-2009 we see a statistically significant change in 47 states.

RELATED HEALTH INDICATORS BY STATE

CHILDREN AND ADOLESCENTS

	Poverty	2009 YRBS			2008 PedNSS	2007 National Survey of Children's Health		
		Percentage of Obese High School Students (95% Conf Interval)	Percentage of Overweight High School Students (95% Conf Interval)	Percentage of High School Students Who Were Physically Active at Least 60 Minutes on All 7 Days		Percentage of Obese Children Ages 10-17	Ranking	Percentage Participating in Vigorous Physical Activity Every Day Ages 6-17
States	2006-2008 3 Yr. Ave. Percentage (90% Conf Interval)							
Alabama	14.4% (+/- 1.5)	13.5% (+/- 2.4)	17.5% (+/- 2.4)	19.4% (+/- 2.6)	13.8%	17.9% (+/- 3.6)	14	36.5%
Alaska	8.2% (+/- 1.2)	11.8% (+/- 2.0)	14.4% (+/- 2.2)	20.2% (+/- 3.0)	N/A	14.1% (+/- 3.1)	30	30.4%
Arizona	15.6% (+/- 1.4)	13.1% (+/- 1.9)	14.6% (+/- 1.6)	25.7% (+/- 2.8)	14.6%	17.8% (+/- 4.3)	15	28.5%
Arkansas	15.6% (+/- 1.6)	14.4% (+/- 2.6)	15.7% (+/- 2.7)	24.3% (+/- 2.4)	13.9%	20.4% (+/- 3.7)	7	30.7%
California	13.2% (+/- 0.5)	N/A	N/A	N/A	17.3%	15.0% (+/- 5.1)	25	30.0%
Colorado	10.2% (+/- 1.3)	7.1% (+/- 2.2)	11.1% (+/- 1.6)	26.9% (+/- 3.2)	9.4%	14.2% (+/- 4.5)	29	27.6%
Connecticut	8.3% (+/- 1.2)	10.4% (+/- 2.2)	14.5% (+/- 1.6)	24.6% (+/- 2.4)	15.5%	12.5% (+/- 2.9)	40	22.1%
Delaware	9.4% (+/- 1.3)	13.7% (+/- 1.5)	15.8% (+/- 1.7)	23.8% (+/- 2.0)	N/A	13.3% (+/- 3.1)	33	31.1%
D.C.	17.6% (+/- 1.9)	N/A	N/A	N/A	13.3%	20.1% (+/- 4.0)	9	26.3%
Florida	12.4% (+/- 0.7)	10.3% (+/- 1.1)	14.7% (+/- 1.0)	24.7% (+/- 1.3)	14.1%	18.3% (+/- 5.1)	13	34.1%
Georgia	13.9% (+/- 1.0)	12.4% (+/- 2.2)	14.8% (+/- 2.7)	23.7% (+/- 2.8)	14.8%	21.3% (+/- 5.1)	2	29.4%
Hawaii	8.9% (+/- 1.2)	14.5% (+/- 3.5)	14.0% (+/- 2.7)	18.1% (+/- 4.4)	9.3%	11.2% (+/- 2.8)	46	28.0%
Idaho	10.6% (+/- 1.3)	8.8% (+/- 1.5)	12.0% (+/- 1.7)	27.6% (+/- 2.4)	12.3%	11.8% (+/- 2.7)	42	25.0%
Illinois	11.0% (+/- 0.8)	11.9% (+/- 2.2)	15.5% (+/- 2.0)	24.1% (+/- 3.2)	14.7%	20.7% (+/- 3.7)	4	26.1%
Indiana	12.3% (+/- 1.2)	12.8% (+/- 2.5)	15.9% (+/- 1.8)	23.4% (+/- 2.5)	14.5%	14.6% (+/- 3.2)	27	31.3%
Iowa	9.6% (+/- 1.3)	N/A	N/A	N/A	15.1%	11.2% (+/- 2.8)	46	27.8%
Kansas	12.4% (+/- 1.5)	12.4% (+/- 2.2)	13.1% (+/- 2.0)	27.8% (+/- 2.4)	13.3%	16.2% (+/- 3.8)	18	25.2%
Kentucky	16.5% (+/- 1.6)	17.6% (+/- 2.7)	15.6% (+/- 2.0)	21.4% (+/- 2.3)	15.7%	21.0% (+/- 3.6)	3	25.9%
Louisiana	17.1% (+/- 1.6)	14.7% (+/- 2.8)	18.0% (+/- 2.3)	23.0% (+/- 3.9)	N/A	20.7% (+/- 4.0)	4	34.0%
Maine	11.0% (+/- 1.5)	12.5% (+/- 0.8)	15.1% (+/- 0.9)	17.9% (+/- 0.9)	N/A	12.9% (+/- 2.8)	37	32.7%
Maryland	8.6% (+/- 1.1)	12.2% (+/- 2.5)	15.6% (+/- 2.2)	20.8% (+/- 3.1)	15.7%	13.6% (+/- 3.3)	31	30.7%
Massachusetts	11.5% (+/- 1.1)	10.9% (+/- 1.8)	14.3% (+/- 1.9)	17.0% (+/- 1.6)	16.7%	13.3% (+/- 3.6)	33	26.6%
Michigan	12.4% (+/- 0.9)	11.9% (+/- 1.5)	14.2% (+/- 1.7)	25.3% (+/- 2.2)	13.9%	12.4% (+/- 3.1)	41	33.1%
Minnesota	9.1% (+/- 1.1)	N/A	N/A	N/A	13.4%	11.1% (+/- 3.1)	48	34.8%
Mississippi	20.5% (+/- 1.7)	18.3% (+/- 2.6)	16.5% (+/- 2.4)	23.0% (+/- 2.1)	14.6%	21.9% (+/- 3.5)	1	29.0%
Missouri	12.5% (+/- 1.3)	14.4% (+/- 2.2)	14.4% (+/- 2.0)	26.7% (+/- 2.5)	13.9%	13.6% (+/- 3.1)	31	29.6%
Montana	13.1% (+/- 1.5)	10.4% (+/- 2.2)	11.9% (+/- 1.8)	21.1% (+/- 2.9)	12.4%	11.8% (+/- 2.8)	42	31.5%
Nebraska	10.2% (+/- 1.4)	N/A	N/A	N/A	13.9%	15.8% (+/- 3.7)	20	26.2%
Nevada	10.0% (+/- 1.3)	11.0% (+/- 1.9)	13.4% (+/- 1.7)	24.9% (+/- 2.4)	12.9%	15.2% (+/- 4.5)	23	24.4%
New Hampshire	6.1% (+/- 1.1)	12.4% (+/- 2.7)	13.3% (+/- 2.2)	23.3% (+/- 2.8)	15.5%	12.8% (+/- 2.9)	39	29.0%
New Jersey	8.9% (+/- 0.9)	10.3% (+/- 2.0)	14.2% (+/- 2.3)	21.3% (+/- 2.5)	17.9%	15.4% (+/- 3.6)	21	29.1%
New Mexico	16.7% (+/- 1.8)	13.5% (+/- 2.6)	14.6% (+/- 1.5)	23.4% (+/- 2.6)	12.0%	16.0% (+/- 4.2)	19	27.0%
New York	14.2% (+/- 0.8)	11.0% (+/- 1.7)	15.6% (+/- 1.8)	23.1% (+/- 2.3)	14.6%	17.1% (+/- 3.7)	16	27.6%
North Carolina	14.4% (+/- 1.1)	13.4% (+/- 2.5)	14.6% (+/- 2.3)	24.1% (+/- 1.9)	15.7%	18.6% (+/- 3.9)	11	38.5%
North Dakota	10.8% (+/- 1.4)	11.0% (+/- 1.6)	13.5% (+/- 2.0)	22.3% (+/- 2.2)	13.8%	11.4% (+/- 2.5)	44	27.1%
Ohio	12.9% (+/- 0.9)	N/A	N/A	N/A	12.2%	18.5% (+/- 4.1)	12	32.1%
Oklahoma	14.1% (+/- 1.5)	14.1% (+/- 2.9)	16.4% (+/- 2.8)	27.5% (+/- 3.3)	N/A	16.4% (+/- 3.5)	17	29.6%
Oregon	11.7% (+/- 1.5)	N/A	N/A	N/A	14.7%	9.6% (+/- 2.7)	51	27.9%
Pennsylvania	10.9% (+/- 0.8)	11.8% (+/- 1.5)	15.9% (+/- 1.8)	27.7% (+/- 2.6)	11.5%	15.0% (+/- 4.0)	25	35.4%
Rhode Island	10.9% (+/- 1.4)	10.4% (+/- 2.1)	16.7% (+/- 1.5)	23.8% (+/- 2.8)	16.2%	14.4% (+/- 3.2)	28	27.6%
South Carolina	13.1% (+/- 1.5)	16.7% (+/- 4.5)	15.0% (+/- 2.7)	17.1% (+/- 2.6)	13.3%	15.3% (+/- 3.1)	22	31.2%
South Dakota	11.1% (+/- 1.3)	9.6% (+/- 2.1)	12.6% (+/- 1.4)	26.4% (+/- 2.6)	16.2%	13.2% (+/- 3.2)	35	25.3%
Tennessee	14.9% (+/- 1.3)	15.8% (+/- 2.1)	16.1% (+/- 1.7)	24.2% (+/- 2.2)	13.8%	20.6% (+/- 3.7)	6	29.8%
Texas	16.3% (+/- 0.7)	13.6% (+/- 1.8)	15.6% (+/- 2.5)	27.2% (+/- 2.8)	16.2%	20.4% (+/- 5.1)	7	28.9%
Utah	8.8% (+/- 1.1)	6.4% (+/- 1.9)	10.5% (+/- 1.8)	17.3% (+/- 2.3)	N/A	11.4% (+/- 3.6)	44	17.6%
Vermont	8.9% (+/- 1.4)	12.2% (+/- 1.5)	13.6% (+/- 0.9)	23.7% (+/- 2.5)	13.3%	12.9% (+/- 3.4)	37	36.6%
Virginia	9.2% (+/- 0.9)	N/A	N/A	N/A	19.0%	15.2% (+/- 3.2)	23	26.2%
Washington	9.5% (+/- 1.1)	N/A	N/A	N/A	14.4%	11.1% (+/- 3.5)	48	27.6%
West Virginia	14.9% (+/- 1.4)	14.2% (+/- 2.4)	14.4% (+/- 1.7)	22.6% (+/- 2.4)	13.5%	18.9% (+/- 3.2)	10	33.2%
Wisconsin	10.3% (+/- 1.2)	9.3% (+/- 1.4)	14.0% (+/- 2.2)	23.8% (+/- 2.4)	13.6%	13.1% (+/- 2.5)	36	28.5%
Wyoming	10.3% (+/- 1.4)	9.8% (+/- 1.3)	12.6% (+/- 1.4)	25.6% (+/- 2.0)	N/A	10.2% (+/- 2.7)	50	29.8%

Source: U.S. Census Bureau, Percentage of People in Poverty by State Using 2- and 3-Year Averages: 2005-2006 and 2007-2008. www.census.gov/hhes/www/poverty/poverty08/state.pdf

Source: Youth Risk Behavior Survey (YRBS) 2009, CDC. YRBS data are collected every 2 years. Percentages are as reported on the CDC website and can be found at www.cdc.gov/HealthyYouth/yrbbs/index.htm. Note that previous YRBS reports used the term overweight to describe youth with a BMI at or above the 95th percentile for age and sex and at risk for overweight for those with a BMI at or above the 85th percentile, but below the 95th percentile. However, this report uses the terms obese and overweight based on the 2007 recommendations from the Expert Committee on the Assessment, Prevention, and Treatment of Child and Adolescent Overweight and Obesity convened by the American Medical Association. Physically active at least 60 minutes on all 7 days means that the student did any kind of physical activity that increased their heart rate and made them breathe hard some of the time for a total of at least 60 minutes per day on each of the 7 days before the survey.

Source: Pediatric Nutrition Surveillance 2008 Report, Table 2. Available at www.cdc.gov/pednss/pdfs/PedNSS_2008.pdf

Source: National Survey of Children's Health, 2007. Overweight and Physical Activity Among Children: A Portrait of States and the Nation 2009, Health Resources and Services Administration, Maternal and Child Health Bureau. Red indicates a statistically significant increase (p < 0.05) from 2003 to 2007. Green indicates a statistically significant decrease.

Except for Michigan, the top 10 most obese states in the country are all in the South.

States with the Highest Obesity Rates		
Rank	State	Percentage of Adult Obesity (Based on 2007-2009 Combined Data, Including Confidence Intervals)
1	Mississippi	33.8% (+/- 0.9)
2 (tie)	Alabama	31.6% (+/- 1.0)
2 (tie)	Tennessee	31.6% (+/- 1.2)
4	West Virginia	31.3% (+/- 1.0)
5	Louisiana	31.2% (+/- 0.9)
6	Oklahoma	30.6% (+/- 0.8)
7	Kentucky	30.5% (+/- 1.0)
8	Arkansas	30.1% (+/- 1.1)
9	South Carolina	29.9% (+/- 0.9)
10 (tie)	North Carolina	29.4% (+/- 0.8)
10 (tie)	Michigan	29.4% (+/- 0.8)

*Note: For rankings, 1 = Highest rate of obesity.

Northeastern and western states continue to dominate the states with the lowest rates of obesity.

States with the Lowest Obesity Rates		
Rank	State	Percentage of Adult Obesity (Based on 2007-2009 Combined Data, Including Confidence Intervals)
51	Colorado	19.1% (+/- 0.6)
50	Connecticut	21.4% (+/- 0.8)
49	D.C.	21.5% (+/- 1.0)
48	Massachusetts	21.7% (+/- 0.6)
47	Hawaii	22.6% (+/- 0.9)
46	Vermont	22.8% (+/- 0.8)
45	Rhode Island	22.9% (+/- 0.9)
44	Utah	23.2% (+/- 0.8)
43	Montana	23.5% (+/- 0.9)
42	New Jersey	23.9% (+/- 0.8)

Note: For rankings, 51 = Lowest rate of obesity.

RATES AND RANKINGS METHODOLOGY

This study compares data from the Behavioral Risk Factor Surveillance System (BRFSS), the largest phone survey in the world. Data from three-year periods 2006 to 2008 and 2007 to 2009 are compared to stabilize the data by using large enough sample sizes for comparisons among states over time, as advised by officials from the CDC. In order for a state rate to be considered as having an increase, the change must reach a level of what experts consider to be statistically significant ($p < 0.05$) for the particular sample size of that state.

The District of Columbia (D.C.) is included in the rankings because the CDC provides funds to D.C. to conduct a survey in an equivalent way to the states.

The data are based on telephone surveys conducted by state health departments with assistance from the CDC, and involve individuals self-reporting their weight and height. Researchers then use these statistics to calculate BMI to determine whether a person is obese or overweight. Experts feel the rates are likely to be slightly underreported because individuals tend to under-report their weight and over-report their height.²⁷

More information on the rankings methodology is available in Appendix A.

B. ADULT OBESITY RATES BY SEX, RACE AND ETHNICITY

Adult obesity rates for Blacks and Latinos are higher than those for Whites in nearly every state. Adult obesity rates for Blacks are at or above 30 percent in 43 states and D.C. In nine states, the rates exceed 40 percent. Meanwhile, adult obesity rates for Latinos are at or above 30 percent in 19 states. Only one state – West Virginia – has an adult obesity rate for Whites greater than 30 percent.

State-specific obesity rates varied substantially, ranging from 25.8 percent in Nevada to 44 percent in Wisconsin for Blacks, from 20.6 percent in D.C. to 39.5 percent in Tennessee for Hispanics, and from 9 percent in D.C. to 31.2 percent in West Virginia for Whites.

Obesity rates by sex, race and ethnicity also varied greatly. State-specific rates ranged from 22.8 percent in New Hampshire to 49.2 percent in Mississippi for Black women, from 17.9 percent in South Carolina to 38.7 percent in North Dakota for Hispanic women, and from 8.1 percent in D.C. to 30.9 percent in West Virginia for White women. State-specific rates for men ranged from 18.8 percent in Vermont to 42.2 percent in Kentucky for Black men, from 19.3 percent in Wisconsin to 51.5 percent in Tennessee for Hispanic men, and from 9.7 percent in D.C. to 32 percent in Arkansas for White men.



STATE-BY-STATE CHART OF ADULT OBESITY RATES BY SEX,

STATES	Adult Obesity	Obesity Rates by Sex		Obesity Rates by Race/Ethnicity		
	TOTAL	MEN	WOMEN	White	Black	Hispanic
Alabama	31.6% (+/- 1.0)	31.8% (+/- 1.7)	31.4% (+/- 1.2)	28.3% (+/- 1.1)	41.7% (+/- 2.4)	33.2% (+/- 8.7)
Alaska	26.9% (+/- 1.5)	25.8% (+/- 2.2)	28.1% (+/- 2.1)	25.4% (+/- 1.8)	35.7% (+/- 13.5)	32.5% (+/- 10.4)
Arizona	25.8% (+/- 1.5)	27.5% (+/- 2.4)	24.0% (+/- 1.8)	23.3% (+/- 1.7)	32.5% (+/- 10.0)	33.4% (+/- 4.4)
Arkansas	30.1% (+/- 1.1)	31.8% (+/- 1.8)	28.4% (+/- 1.3)	29.3% (+/- 1.2)	39.8% (+/- 4.0)	29.6% (+/- 6.7)
California	24.4% (+/- 0.7)	24.9% (+/- 1.1)	23.8% (+/- 0.9)	21.7% (+/- 0.8)	37.1% (+/- 4.1)	30.2% (+/- 1.5)
Colorado	19.1% (+/- 0.6)	19.5% (+/- 0.9)	18.7% (+/- 0.7)	17.5% (+/- 0.6)	28.1% (+/- 4.3)	24.5% (+/- 1.8)
Connecticut	21.4% (+/- 0.8)	23.1% (+/- 1.4)	19.7% (+/- 1.0)	20.7% (+/- 0.9)	35.4% (+/- 4.4)	26.4% (+/- 3.7)
Delaware	27.9% (+/- 1.2)	29.8% (+/- 1.9)	26.0% (+/- 1.5)	26.4% (+/- 1.3)	40.6% (+/- 4.0)	26.8% (+/- 7.7)
D.C.	21.5% (+/- 1.0)	17.2% (+/- 1.5)	25.4% (+/- 1.3)	9.0% (+/- 1.0)	34.4% (+/- 1.8)	20.6% (+/- 4.3)
Florida	25.1% (+/- 0.9)	27.6% (+/- 1.4)	22.6% (+/- 1.0)	23.1% (+/- 0.8)	36.3% (+/- 3.2)	27.8% (+/- 3.0)
Georgia	28.1% (+/- 1.0)	28.3% (+/- 1.7)	27.8% (+/- 1.1)	25.0% (+/- 1.0)	36.5% (+/- 2.4)	30.2% (+/- 6.4)
Hawaii	22.6% (+/- 0.9)	25.0% (+/- 1.4)	20.2% (+/- 1.1)	19.0% (+/- 1.4)	30.4% (+/- 10.3)	27.7% (+/- 3.5)
Idaho	25.1% (+/- 1.0)	25.2% (+/- 1.5)	25.1% (+/- 1.2)	24.6% (+/- 1.0)	37.3% (+/- 21.4)	29.1% (+/- 4.4)
Illinois	26.6% (+/- 1.0)	27.8% (+/- 1.5)	25.5% (+/- 1.1)	25.3% (+/- 1.0)	35.5% (+/- 3.2)	30.6% (+/- 3.9)
Indiana	28.1% (+/- 1.0)	27.7% (+/- 1.5)	28.6% (+/- 1.2)	27.9% (+/- 1.0)	35.9% (+/- 3.8)	26.8% (+/- 5.1)
Iowa	27.6% (+/- 0.9)	29.6% (+/- 1.4)	25.6% (+/- 1.1)	27.5% (+/- 0.9)	34.1% (+/- 8.6)	29.4% (+/- 7.1)
Kansas	28.2% (+/- 0.7)	29.6% (+/- 1.1)	26.8% (+/- 0.8)	27.6% (+/- 0.7)	41.9% (+/- 4.3)	32.8% (+/- 3.6)
Kentucky	30.5% (+/- 1.0)	31.4% (+/- 1.7)	29.6% (+/- 1.1)	29.9% (+/- 1.0)	42.6% (+/- 5.8)	27.9% (+/- 8.4)
Louisiana	31.2% (+/- 0.9)	32.5% (+/- 1.5)	30.0% (+/- 1.0)	28.4% (+/- 1.0)	38.7% (+/- 2.1)	30.8% (+/- 6.0)
Maine	25.8% (+/- 0.8)	26.7% (+/- 1.2)	25.0% (+/- 1.0)	25.9% (+/- 0.8)	37.2% (+/- 15.9)	21.0% (+/- 6.5)
Maryland	26.6% (+/- 0.8)	25.5% (+/- 1.2)	27.6% (+/- 1.0)	23.9% (+/- 0.9)	36.3% (+/- 1.9)	24.4% (+/- 4.2)
Massachusetts	21.7% (+/- 0.6)	23.8% (+/- 0.9)	19.6% (+/- 0.7)	21.4% (+/- 0.6)	29.0% (+/- 3.0)	27.1% (+/- 2.5)
Michigan	29.4% (+/- 0.8)	29.8% (+/- 1.2)	28.9% (+/- 1.0)	28.1% (+/- 0.8)	38.2% (+/- 2.5)	33.4% (+/- 6.3)
Minnesota	25.5% (+/- 1.0)	27.0% (+/- 1.5)	24.0% (+/- 1.2)	25.6% (+/- 1.0)	28.6% (+/- 6.4)	26.4% (+/- 9.2)
Mississippi	33.8% (+/- 0.9)	32.6% (+/- 1.4)	34.9% (+/- 1.0)	29.3% (+/- 1.0)	42.9% (+/- 1.8)	25.6% (+/- 6.7)
Missouri	29.3% (+/- 1.1)	29.9% (+/- 1.7)	28.7% (+/- 1.4)	28.4% (+/- 1.2)	38.4% (+/- 4.2)	34.0% (+/- 8.8)
Montana	23.5% (+/- 0.9)	24.1% (+/- 1.3)	22.9% (+/- 1.1)	22.5% (+/- 0.9)	26.2% (+/- 20.7)	23.2% (+/- 6.3)
Nebraska	27.3% (+/- 0.9)	29.0% (+/- 1.4)	25.5% (+/- 1.1)	26.8% (+/- 0.9)	37.0% (+/- 8.0)	30.3% (+/- 5.1)
Nevada	25.6% (+/- 1.3)	27.7% (+/- 2.0)	23.3% (+/- 1.6)	24.8% (+/- 1.5)	25.8% (+/- 6.2)	28.4% (+/- 3.6)
New Hampshire	25.4% (+/- 0.9)	27.5% (+/- 1.4)	23.4% (+/- 1.1)	25.5% (+/- 0.9)	27.2% (+/- 12.4)	26.4% (+/- 8.0)
New Jersey	23.9% (+/- 0.8)	25.1% (+/- 1.3)	22.6% (+/- 0.9)	23.1% (+/- 0.9)	36.1% (+/- 2.4)	25.4% (+/- 2.5)
New Mexico	25.5% (+/- 0.9)	25.0% (+/- 1.4)	25.9% (+/- 1.2)	20.7% (+/- 1.1)	36.4% (+/- 11.4)	30.7% (+/- 1.7)
New York	25.1% (+/- 0.9)	25.5% (+/- 1.3)	24.7% (+/- 1.1)	24.3% (+/- 0.9)	30.6% (+/- 2.7)	28.0% (+/- 2.8)
North Carolina	29.4% (+/- 0.8)	29.2% (+/- 1.2)	29.7% (+/- 1.0)	27.0% (+/- 0.8)	41.1% (+/- 2.0)	25.7% (+/- 4.1)
North Dakota	27.7% (+/- 1.0)	31.0% (+/- 1.6)	24.2% (+/- 1.2)	26.8% (+/- 1.0)	31.3% (+/- 18.6)	37.4% (+/- 11.3)
Ohio	29.0% (+/- 0.8)	30.2% (+/- 1.2)	27.9% (+/- 0.9)	28.3% (+/- 0.8)	40.9% (+/- 3.0)	32.5% (+/- 6.5)
Oklahoma	30.6% (+/- 0.8)	31.3% (+/- 1.3)	29.9% (+/- 1.0)	29.1% (+/- 0.9)	37.1% (+/- 3.5)	30.4% (+/- 4.0)
Oregon	25.0% (+/- 1.0)	25.8% (+/- 1.6)	24.1% (+/- 1.2)	24.9% (+/- 1.1)	38.4% (+/- 13.9)	23.7% (+/- 5.1)
Pennsylvania	28.1% (+/- 0.8)	29.3% (+/- 1.3)	26.8% (+/- 1.0)	27.2% (+/- 0.8)	38.4% (+/- 3.6)	33.3% (+/- 6.1)
Rhode Island	22.9% (+/- 0.9)	23.6% (+/- 1.5)	22.3% (+/- 1.2)	22.1% (+/- 1.0)	30.8% (+/- 5.7)	27.0% (+/- 3.8)
South Carolina	29.9% (+/- 0.9)	29.3% (+/- 1.4)	30.5% (+/- 1.1)	26.7% (+/- 1.0)	39.4% (+/- 2.0)	28.4% (+/- 6.8)
South Dakota	28.5% (+/- 1.0)	30.6% (+/- 1.5)	26.4% (+/- 1.3)	28.1% (+/- 1.0)	27.5% (+/- 16.3)	26.2% (+/- 8.0)
Tennessee	31.6% (+/- 1.2)	32.2% (+/- 2.1)	31.1% (+/- 1.4)	29.8% (+/- 1.2)	41.1% (+/- 3.9)	39.5% (+/- 16.4)
Texas	29.0% (+/- 0.8)	29.1% (+/- 1.3)	28.9% (+/- 1.0)	25.8% (+/- 1.0)	37.6% (+/- 3.0)	34.0% (+/- 1.8)
Utah	23.2% (+/- 0.8)	24.8% (+/- 1.3)	21.5% (+/- 1.1)	23.0% (+/- 0.9)	34.5% (+/- 15.0)	23.6% (+/- 3.5)
Vermont	22.8% (+/- 0.8)	24.0% (+/- 1.2)	21.7% (+/- 1.0)	22.8% (+/- 0.8)	30.1% (+/- 13.5)	20.8% (+/- 6.1)
Virginia	25.5% (+/- 1.2)	25.6% (+/- 1.9)	25.5% (+/- 1.4)	24.7% (+/- 1.3)	35.4% (+/- 3.7)	29.2% (+/- 7.5)
Washington	26.3% (+/- 0.5)	27.0% (+/- 0.8)	25.5% (+/- 0.6)	26.2% (+/- 0.5)	32.2% (+/- 4.5)	29.9% (+/- 2.4)
West Virginia	31.3% (+/- 1.0)	31.5% (+/- 1.5)	31.2% (+/- 1.3)	31.2% (+/- 1.0)	37.2% (+/- 7.7)	28.5% (+/- 8.5)
Wisconsin	26.9% (+/- 1.1)	28.6% (+/- 1.7)	25.1% (+/- 1.3)	26.0% (+/- 1.1)	44.0% (+/- 5.9)	24.9% (+/- 7.9)
Wyoming	25.0% (+/- 0.8)	25.5% (+/- 1.3)	24.5% (+/- 1.1)	24.2% (+/- 0.8)	37.9% (+/- 14.6)	30.0% (+/- 4.5)

Notes: To ensure a sufficient sample size for valid obesity estimates, researchers analyzed three years of data (2007-2009) and limited the analysis to three racial and ethnic groups: Whites, Blacks, and Hispanics. However, in some states the sample size remained very small. Those states with a sample size < 50 were excluded from the analysis.

RACE, AND ETHNICITY 2007-2009 3 Yr. Ave. Percentage (95% Conf Interval)

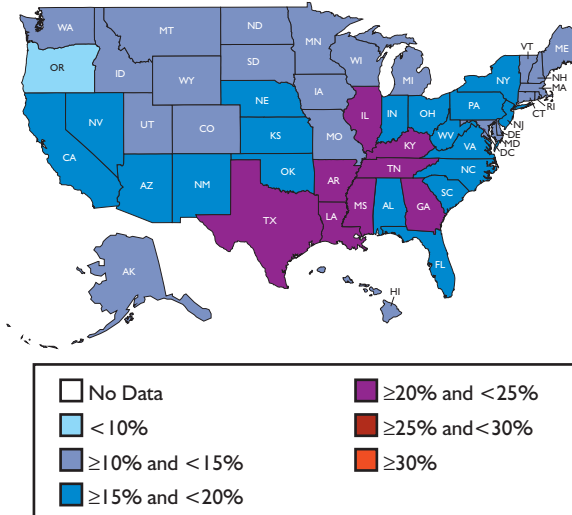
Obesity Rates by Sex and Race/Ethnicity

STATES	MEN			WOMEN		
	White	Black	Hispanic	White	Black	Hispanic
Alabama	30.4% (+/- 1.9)	36.7% (+/- 4.2)	30.7% (+/- 12.9)	26.4% (+/- 1.4)	46.4% (+/- 2.4)	35.6% (+/- 11.7)
Alaska	25.5% (+/- 2.6)	24.8% (+/- 16.1)	26.2% (+/- 12.5)	25.4% (+/- 2.3)	50.3% (+/- 20.0)	37.4% (+/- 15.1)
Arizona	25.3% (+/- 2.6)	23.5% (+/- 12.8)	37.5% (+/- 6.8)	21.4% (+/- 2.0)	44.1% (+/- 14.0)	29.1% (+/- 5.2)
Arkansas	32.0% (+/- 1.9)	36.1% (+/- 7.7)	29.2% (+/- 9.6)	26.6% (+/- 1.4)	42.4% (+/- 4.3)	30.0% (+/- 8.5)
California	22.9% (+/- 1.3)	36.1% (+/- 7.0)	29.8% (+/- 2.3)	20.6% (+/- 1.0)	38.1% (+/- 4.6)	30.7% (+/- 1.8)
Colorado	18.4% (+/- 0.9)	26.3% (+/- 6.0)	22.6% (+/- 2.6)	16.5% (+/- 0.7)	30.2% (+/- 5.9)	26.8% (+/- 2.4)
Connecticut	23.2% (+/- 1.5)	32.3% (+/- 7.2)	25.1% (+/- 5.9)	18.2% (+/- 1.0)	38.0% (+/- 5.6)	27.5% (+/- 4.6)
Delaware	29.3% (+/- 2.0)	40.1% (+/- 6.8)	25.2% (+/- 10.7)	23.4% (+/- 1.5)	40.9% (+/- 4.8)	28.7% (+/- 11.0)
D.C.	9.7% (+/- 1.4)	26.5% (+/- 3.0)	19.3% (+/- 6.3)	8.1% (+/- 1.2)	40.1% (+/- 2.2)	22.3% (+/- 5.6)
Florida	26.6% (+/- 1.4)	32.8% (+/- 5.6)	30.1% (+/- 4.8)	19.7% (+/- 1.0)	38.8% (+/- 3.8)	25.2% (+/- 3.0)
Georgia	27.3% (+/- 1.7)	32.6% (+/- 4.1)	32.0% (+/- 9.8)	22.8% (+/- 1.2)	39.9% (+/- 2.5)	27.9% (+/- 7.4)
Hawaii	21.1% (+/- 2.1)	30.9% (+/- 13.5)	30.9% (+/- 5.7)	16.6% (+/- 1.6)	29.3% (+/- 15.2)	24.9% (+/- 4.2)
Idaho	24.9% (+/- 1.5)	—	26.5% (+/- 6.4)	24.4% (+/- 1.2)	—	32.6% (+/- 5.7)
Illinois	27.6% (+/- 1.5)	32.6% (+/- 5.5)	31.1% (+/- 5.9)	23.1% (+/- 1.1)	37.8% (+/- 3.7)	29.9% (+/- 4.8)
Indiana	28.4% (+/- 1.5)	28.3% (+/- 5.7)	23.2% (+/- 7.1)	27.5% (+/- 1.3)	44.1% (+/- 4.8)	32.0% (+/- 6.8)
Iowa	29.5% (+/- 1.4)	32.4% (+/- 12.1)	30.8% (+/- 9.9)	25.5% (+/- 1.1)	36.5% (+/- 12.0)	27.5% (+/- 10.0)
Kansas	29.2% (+/- 1.1)	40.7% (+/- 7.2)	35.1% (+/- 5.6)	26.1% (+/- 0.9)	42.8% (+/- 5.1)	30.3% (+/- 4.3)
Kentucky	30.8% (+/- 1.7)	42.2% (+/- 9.5)	35.9% (+/- 14.5)	28.9% (+/- 1.2)	43.0% (+/- 6.7)	20.8% (+/- 8.4)
Louisiana	32.0% (+/- 1.7)	34.0% (+/- 3.4)	33.8% (+/- 9.5)	24.9% (+/- 1.1)	42.9% (+/- 2.4)	27.1% (+/- 6.2)
Maine	26.7% (+/- 1.3)	41.0% (+/- 19.5)	20.8% (+/- 10.1)	25.0% (+/- 1.0)	—	21.1% (+/- 8.5)
Maryland	25.6% (+/- 1.3)	30.1% (+/- 3.2)	21.0% (+/- 5.5)	22.4% (+/- 1.1)	41.4% (+/- 2.4)	29.1% (+/- 6.2)
Massachusetts	24.8% (+/- 1.1)	24.9% (+/- 4.5)	25.2% (+/- 4.2)	18.2% (+/- 0.8)	33.7% (+/- 3.7)	28.9% (+/- 2.8)
Michigan	29.5% (+/- 1.3)	33.0% (+/- 4.0)	34.9% (+/- 9.8)	26.7% (+/- 1.0)	43.4% (+/- 3.0)	31.5% (+/- 6.9)
Minnesota	27.5% (+/- 1.6)	19.3% (+/- 8.7)	27.9% (+/- 12.7)	23.7% (+/- 1.2)	34.7% (+/- 8.5)	24.0% (+/- 12.9)
Mississippi	31.6% (+/- 1.7)	35.6% (+/- 2.9)	23.3% (+/- 9.9)	27.1% (+/- 1.2)	49.2% (+/- 2.0)	28.6% (+/- 8.4)
Missouri	29.5% (+/- 1.9)	31.8% (+/- 6.6)	39.2% (+/- 14.7)	27.4% (+/- 1.5)	43.4% (+/- 5.2)	29.5% (+/- 9.9)
Montana	23.3% (+/- 1.4)	—	22.7% (+/- 10.9)	21.7% (+/- 1.1)	—	23.6% (+/- 7.3)
Nebraska	28.5% (+/- 1.5)	34.0% (+/- 11.9)	31.5% (+/- 7.9)	25.1% (+/- 1.1)	40.3% (+/- 5.3)	29.1% (+/- 6.6)
Nevada	27.7% (+/- 2.4)	21.8% (+/- 8.5)	28.6% (+/- 5.4)	21.8% (+/- 1.9)	30.2% (+/- 8.9)	28.1% (+/- 4.7)
New Hampshire	27.6% (+/- 1.5)	29.0% (+/- 16.5)	29.1% (+/- 14.8)	23.3% (+/- 1.1)	22.8% (+/- 15.0)	24.4% (+/- 8.9)
New Jersey	26.7% (+/- 1.5)	35.2% (+/- 4.2)	23.0% (+/- 4.1)	19.7% (+/- 1.0)	36.8% (+/- 2.9)	28.0% (+/- 2.8)
New Mexico	21.1% (+/- 1.8)	30.4% (+/- 15.6)	29.5% (+/- 2.6)	20.3% (+/- 1.3)	42.6% (+/- 15.5)	31.9% (+/- 2.1)
New York	26.7% (+/- 1.4)	23.1% (+/- 4.1)	28.8% (+/- 4.6)	22.1% (+/- 1.1)	36.8% (+/- 3.5)	27.2% (+/- 3.4)
North Carolina	28.3% (+/- 1.3)	35.0% (+/- 3.3)	26.7% (+/- 6.1)	25.8% (+/- 1.0)	46.5% (+/- 2.5)	23.9% (+/- 3.9)
North Dakota	30.5% (+/- 1.6)	—	35.7% (+/- 14.4)	22.8% (+/- 1.2)	—	38.7% (+/- 16.9)
Ohio	30.0% (+/- 1.3)	35.8% (+/- 5.2)	36.9% (+/- 10.7)	26.6% (+/- 1.0)	44.8% (+/- 3.4)	27.9% (+/- 7.1)
Oklahoma	30.5% (+/- 1.5)	34.1% (+/- 5.6)	30.0% (+/- 5.9)	27.8% (+/- 1.1)	40.7% (+/- 3.9)	30.9% (+/- 4.8)
Oregon	25.8% (+/- 1.7)	38.9% (+/- 20.7)	27.4% (+/- 8.4)	24.0% (+/- 1.3)	37.8% (+/- 18.6)	20.0% (+/- 5.6)
Pennsylvania	29.0% (+/- 1.3)	33.4% (+/- 5.9)	40.6% (+/- 10.1)	25.5% (+/- 1.0)	42.9% (+/- 4.2)	25.5% (+/- 5.9)
Rhode Island	23.6% (+/- 1.6)	20.6% (+/- 7.4)	22.9% (+/- 5.9)	20.7% (+/- 1.3)	38.5% (+/- 7.9)	30.6% (+/- 4.9)
South Carolina	28.2% (+/- 1.6)	32.6% (+/- 3.2)	39.4% (+/- 11.7)	25.4% (+/- 1.3)	45.6% (+/- 2.4)	17.9% (+/- 5.2)
South Dakota	30.4% (+/- 1.5)	31.9% (+/- 19.7)	24.3% (+/- 11.6)	25.7% (+/- 1.3)	—	28.4% (+/- 10.8)
Tennessee	30.6% (+/- 2.0)	37.0% (+/- 6.7)	51.5% (+/- 22.0)	29.1% (+/- 1.4)	45.0% (+/- 4.2)	19.8% (+/- 9.0)
Texas	28.5% (+/- 1.5)	34.9% (+/- 4.9)	31.5% (+/- 2.8)	23.3% (+/- 1.1)	40.2% (+/- 3.4)	36.8% (+/- 2.1)
Utah	24.8% (+/- 1.3)	26.7% (+/- 16.0)	22.4% (+/- 5.2)	21.2% (+/- 1.1)	48.4% (+/- 25.2)	24.9% (+/- 4.6)
Vermont	24.1% (+/- 1.2)	—	20.4% (+/- 9.5)	21.6% (+/- 1.0)	—	21.2% (+/- 7.5)
Virginia	26.8% (+/- 2.1)	23.8% (+/- 4.6)	31.1% (+/- 11.4)	22.5% (+/- 1.4)	44.7% (+/- 4.9)	27.1% (+/- 9.5)
Washington	27.3% (+/- 0.8)	30.0% (+/- 5.9)	29.5% (+/- 3.7)	25.1% (+/- 0.7)	35.4% (+/- 6.6)	30.4% (+/- 3.0)
West Virginia	31.4% (+/- 1.6)	39.0% (+/- 12.7)	23.9% (+/- 12.1)	30.9% (+/- 1.3)	35.8% (+/- 9.5)	33.6% (+/- 11.7)
Wisconsin	28.4% (+/- 1.7)	38.0% (+/- 10.5)	19.3% (+/- 10.4)	23.6% (+/- 1.3)	48.8% (+/- 6.6)	30.3% (+/- 11.7)
Wyoming	24.9% (+/- 1.3)	37.1% (+/- 18.7)	29.3% (+/- 6.7)	23.6% (+/- 1.1)	39.7% (+/- 21.8)	30.8% (+/- 6.0)

C. CHILDHOOD AND YOUTH OBESITY AND OVERWEIGHT RATES

I. Study of Children Ages 10 to 17 (2007)

PROPORTION OF CHILDREN AGES 10-17 CLASSIFIED AS OBESE, BY STATE



Source: National Survey on Children's Health, 2007.

According to the 2007 National Survey of Children's Health (NSCH), obesity rates for children ages 10–17, defined as BMI greater than the 95th percentile for age group, ranged from a low of 9.6 percent in Oregon to a high of 21.9 percent in Mississippi. The NSCH study is based on a survey of parents in each state.

Nine of the 10 states with the highest rates of obese children are in the South. In 2003, when the last NSCH was conducted, only three states plus D.C. had childhood obesity rates higher than 20 percent: Kentucky, Tennessee and West Virginia. Four years later, in 2007, the NSCH found that eight states and D.C. had childhood obesity rates over 20 percent: Arkansas, Georgia, Illinois, Kentucky, Louisiana, Mississippi, Texas and Tennessee.

States with the Highest Rates of Obese 10- to 17-year-olds

Rank	States	Percentage of Obese 10- to 17-year-olds (95 percent Confidence Intervals)
1	Mississippi	21.9% (+/- 3.5)
2	Georgia	21.3% (+/- 5.1)
3	Kentucky	21.0% (+/- 3.5)
4 (tie)	Illinois	20.7% (+/- 3.6)
4 (tie)	Louisiana	20.7% (+/- 4.0)
6	Tennessee	20.6% (+/- 3.7)
7 (tie)	Arkansas	20.4% (+/- 3.6)
7 (tie)	Texas	20.4% (+/- 5.0)
9	D.C.	20.1% (+/- 3.9)
10	West Virginia	18.9% (+/- 3.2)

*Note: For rankings, 1 = Highest rate of childhood obesity.

Eight of the states with the lowest rates of obese 10- to 17-year-olds are in the West.

States with the Lowest Rates of Obese 10- to 17-year-olds

Rank	States	Percentage of Obese 10- to 17-year-olds (95 percent Confidence Intervals)
51	Oregon	9.6% (+/- 2.7)
50	Wyoming	10.2% (+/- 2.7)
48 (tie)	Washington	11.1% (+/- 3.4)
48 (tie)	Minnesota	11.1% (+/- 3.0)
46 (tie)	Iowa	11.2% (+/- 2.7)
46 (tie)	Hawaii	11.2% (+/- 2.8)
44 (tie)	Utah	11.4% (+/- 3.5)
44 (tie)	North Dakota	11.4% (+/- 2.5)
42 (tie)	Montana	11.8% (+/- 2.8)
42 (tie)	Idaho	11.8% (+/- 2.7)

*Note: For rankings, 51 = Lowest rate of childhood obesity.

2. Study of High School Students

According to the 2009 national Youth Risk Behavior Survey (YRBS), a survey of U.S. high school students, 12 percent of students are obese and 15.8 percent of students are overweight.²⁸ Although these numbers were virtually unchanged since the 2007 national YRBS, the latest biennial survey did reveal an upward trend from 1999 to 2009 in the prevalence of students nationwide who were obese (10.7% to 12.0%) and who were overweight (14.4% to 15.8%).

In 2009, YRBS data from 42 states indicated that obesity rates among high school students ranged from a low of 6.4 percent in Utah to a high of 18.3 percent in Mississippi, with a median obesity rate of 12.3 percent. Overweight rates among high school students ranged from a low of 10.5 percent in Utah to a high of 18.0 percent in Louisiana, with a median overweight rate of 14.6 percent.

Percentage of Obese and Overweight U.S. High School Students by Sex		
	Obese	Overweight
Female	8.3%	15.9%
Male	15.3%	15.7%
Total	12.0%	15.8%

Percentage of Obese and Overweight U.S. High School Students by Race/Ethnicity		
	Obese	Overweight
White*	10.3%	13.6%
Black*	15.1%	21.0%
Latino	15.1%	19.6%
Total**	12.0%	15.8%

Notes: *Non-Latino. **Other race/ethnicities are included in the total but are not presented separately.

Percentage of Obese and Overweight U.S. High School Students by Sex and Race/Ethnicity				
	Obese		Overweight	
	Female	Male	Female	Male
White*	6.2%	13.8%	13.2%	13.9%
Black*	12.6%	17.5%	23.3%	18.7%
Latino	11.1%	18.9%	19.5%	19.7%
Total**	8.3%	15.3%	15.9%	15.7%

Notes: *Non-Latino. **Other race/ethnicities are included in the total but are not presented separately.

3. Study of Children from Lower-Income Families (2008)

The Pediatric Nutrition Surveillance Survey (PedNSS), a survey of children ages 2–5 from lower-income families, found that 14.8 percent of these children are obese compared with 12.4 percent for all U.S. children of a similar age.²⁹ The prevalence of obesity among children from

lower-income families increased from 12.7 percent in 1999 to 14.8 percent in 2008, although rates have remained stable since 2003. The highest obesity rates were seen among American Indian and Alaska Native children (20.2%) and Latino children (18.3%).

D. PHYSICAL INACTIVITY AMONG ADULTS

Twelve states reported an increase in physical inactivity between 2007-2009; only nine reported an increase between 2006-2008. Physical inactivity in adults reflects the number of survey respondents who reported not engaging in physical activity or exercise during the previous 30 days other than doing their regular jobs. Two

states (Arizona and Louisiana) and D.C. showed a significant decrease in physical inactivity.

Mississippi, the state with the highest rate of obesity, also had the highest reported percentage of physical inactivity at 32.2 percent. Southern states dominate the highest rates of physical inactivity.

States with the Highest Rates of Physical Inactivity in Adults			
Ranking	State	Percentage of Adult Physical Inactivity (Based on 2007-2009 Combined Data, Including Confidence Intervals)	Obesity Ranking
1	Mississippi	32.2% (+/- 0.9)	1
2 (tie)	Oklahoma	30.8% (+/- 0.8)	6
2 (tie)	West Virginia	30.8% (+/- 1.0)	4
4	Tennessee	30.5% (+/- 1.2)	2 (tie)
5 (tie)	Kentucky	30.1% (+/- 1.0)	7
5 (tie)	Alabama	30.1% (+/- 1.0)	2 (tie)
7	Louisiana	29.5% (+/- 0.9)	5
8	Arkansas	29.2% (+/- 1.0)	8
9	Texas	28.0% (+/- 0.8)	13
10	Missouri	26.6% (+/- 1.0)	12

*Note: For rankings, 1 = Highest rate of physical inactivity.

Minnesota had the lowest rate of inactive adults, with 16.9 percent of adults reporting they do not engage in physical activity.

States with the Lowest Rates of Physical Inactivity in Adults			
Ranking	State	Percentage of Adult Physical Inactivity (Based on 2007-2009 Combined Data, Including Confidence Intervals)	Obesity Ranking
51	Minnesota	16.9% (+/- 0.9)	32
49 (tie)	Colorado	18.0% (+/- 0.6)	51
49 (tie)	Oregon	18.0% (+/- 0.8)	39
48	Washington	18.8% (+/- 0.7)	28
47	Utah	19.0% (+/- 0.8)	44
46	Hawaii	19.1% (+/- 0.8)	47
45	Vermont	19.3% (+/- 0.7)	46
43 (tie)	Idaho	20.6% (+/- 0.9)	36
43 (tie)	New Hampshire	20.6% (+/- 0.8)	35
42	D.C.	20.7% (+/- 1.0)	49

*Note: For rankings, 51 = Lowest rate of physical inactivity.

E. DIABETES AND HYPERTENSION

Obesity and physical inactivity have been shown to be related to a range of chronic diseases, including diabetes and hypertension. Eight of the 10 states with the highest rates of diabetes are also in the top 10 states with the highest obesity rates, and nine of the 10 states with the highest rates of hypertension

are also in the top 10 states with the highest rates of obesity. Diabetes rates rose in 19 states, and nine states experienced an increase in diabetes rates for the second straight year. Hypertension rates rose in 47 states, and 36 states showed an increase in hypertension rates two years in a row.

I. Diabetes

Nineteen states showed a significant increase in the rates of adult diabetes; of these, nine states showed an increase for the second year in a row. West Virginia had the highest rate of adult dia-

betes at 11.7 percent, while Colorado had the lowest rate at 5.7 percent. Except for Ohio, the states with the highest rates of adult diabetes are all in the South.

States with the Highest Rates of Adult Diabetes			
Rank	State	Percentage of Adult Diabetes (Based on 2007-2009 Combined Data, Including Confidence Intervals)	Obesity Ranking
1	West Virginia	11.7% (+/- 0.6)	4
2	Mississippi	11.4% (+/- 0.5)	1
3	Alabama	11.3% (+/- 0.6)	2 (tie)
4	Tennessee	10.8% (+/- 0.7)	2 (tie)
5	Louisiana	10.6% (+/- 0.5)	5
6 (tie)	Kentucky	10.4% (+/- 0.6)	7
6 (tie)	Oklahoma	10.4% (+/- 0.5)	6
8	South Carolina	10.0% (+/- 0.5)	9
9 (tie)	Georgia	9.8% (+/- 0.6)	17
9 (tie)	Ohio	9.8% (+/- 0.4)	13 (tie)
9 (tie)	Texas	9.8% (+/- 0.5)	13 (tie)

*Note: For rankings, 1 = Highest rate of diabetes.

2. Hypertension

Hypertension rates increased in 47 states between 2003-2007 and 2005-2009. Mississippi had the highest rate of hypertension at 34.8 percent,

while Utah, at 20.5 percent, had the lowest rate. All 10 states with the highest rates of hypertension are in the South.

States with the Highest Rates of Adult Hypertension			
Rank	State	Percentage of Adult Hypertension (Based on 2005-2009 Combined Data, Including Confidence Intervals, from a Survey Conducted Every Other Year)	Obesity Ranking
1	Mississippi	34.8% (+/- 0.8)	1
2	West Virginia	34.1% (+/- 1.0)	4
3	Alabama	33.9% (+/- 1.0)	2 (tie)
4	Louisiana	32.5% (+/- 0.9)	5
5	Tennessee	32.2% (+/- 1.1)	2 (tie)
6	Oklahoma	31.9% (+/- 0.8)	6
7 (tie)	Arkansas	31.6% (+/- 1.0)	8
7 (tie)	Kentucky	31.6% (+/- 1.0)	7
9	South Carolina	31.5% (+/- 0.8)	9
10	North Carolina	29.9% (+/- 0.6)	10

*Note: For rankings, 1 = Highest rate of hypertension.

F. OBESITY AND POVERTY

Obesity rates also appear to have some relationship with poverty rates in many states, although there are notable exceptions. Six of the states with the highest poverty rates are also in the top 10 states with the highest obesity rates. Eight out of the 10 states with the highest rates of poverty

are in the South, where obesity rates are also higher, while many of the states with the lowest poverty rates are among the states with the lowest rates of obesity. (The U.S. Census Bureau provided information on the three-year average poverty rates in the charts.³⁰)

States with the Highest Poverty Rates			
Rank	State	Percentage of Poverty (Based on 2006-2008 Combined Data with a 90 percent Confidence Interval)	Obesity Ranking
1	Mississippi	20.5% (+/- 1.7)	1
2	D.C.	17.6% (+/- 1.9)	49
3	Louisiana	17.1% (+/- 1.6)	5
4	New Mexico	16.7% (+/- 1.8)	32
5	Kentucky	16.5% (+/- 1.6)	7
6	Texas	16.3% (+/- 0.7)	13
7 (tie)	Arkansas	15.6% (+/- 1.6)	8
7 (tie)	Arizona	15.6% (+/- 1.4)	29
9 (tie)	West Virginia	14.9% (+/- 1.4)	4
9 (tie)	Tennessee	14.9% (+/- 1.3)	2

*Note: For rankings, 1 = Highest rate of poverty.

States with the Lowest Poverty Rates			
Rank	State	Percentage of Poverty (Based on 2006-2008 Combined Data with a 90 percent Confidence Interval)	Obesity Ranking
51	New Hampshire	6.1% (+/- 1.1)	35
50	Alaska	8.2% (+/- 1.2)	24
49	Connecticut	8.3% (+/- 1.2)	50
48	Maryland	8.6% (+/- 1.1)	26
47	Utah	8.8% (+/- 1.1)	44
44 (tie)	Hawaii	8.9% (+/- 1.2)	47
44 (tie)	New Jersey	8.9% (+/- 0.9)	42
44 (tie)	Vermont	8.9% (+/- 1.4)	46
43	Minnesota	9.1% (+/- 1.1)	32 (tie)
42	Virginia	9.2% (+/- 0.9)	32 (tie)

*Note: For rankings, 51 = Lowest rate of poverty.

SOCIOECONOMIC STATUS AND OBESITY

An analysis of the 2007-2009 BRFSS data looking at income, level of schooling completed, and obe-

sity finds there is a strong correlation between obesity and income and obesity and schooling.

Household Income and Obesity ³¹		
Household Income	Obesity	
	Percent of Non-Obese Adults (BMI < 30) (Based on 2007-2009 Combined Data)	Percent of Obese Adults (BMI ≥ 30) (Based on 2007-2009 Combined Data)
Less than \$15,000	64.7%	35.3%
\$15,000 to less than \$25,000	68.6%	31.4%
\$25,000 to less than \$35,000	70.4%	29.6%
\$35,000 to less than \$50,000	70.9%	29.1%
\$50,000 or more	75.5%	24.5%

Education and Obesity³²

Level of Schooling	Obesity	
	Percent of Non-Obese Adults (BMI < 30) (Based on 2007-2009 Combined Data)	Percent of Obese Adults (BMI ≥ 30) (Based on 2007-2009 Combined Data)
Did not graduate High School	66.4%	33.6%
Graduated High School	69.7%	30.3%
Attended College or Technical School	70.4%	29.6%
Graduated from College or Technical School	78.0%	22.0%

These findings reflect the well-known association between socioeconomic status and obesity.

G. FRUIT AND VEGETABLE CONSUMPTION

Fruit and vegetable consumption – as part of a healthy diet – are important for weight management, optimal child growth, and chronic disease prevention. “Healthy People 2010,” the U.S. national health-promotion and disease-prevention initiative that identifies the most significant preventable threats to health and establishes national goals to reduce these threats, includes two national objectives to encourage fruit and vegetable consumption:

- 75 percent of Americans consuming ≥ two servings of fruit each day; and
- 50 percent of Americans consuming ≥ three servings of vegetables each day.

To assess how well Americans are meeting these objectives, researchers from the CDC examined data from the 2007 BRFSS and 2007 YRBS.³³

Eight of the states with the lowest rates of fruit and vegetable consumption are also in the top 10 states with the highest obesity rates. Ten out of the 10 states with the lowest rates of fruit and vegetable consumption are in the South, where obesity rates are also higher, while many of the states with the highest rates of fruit and vegetable consumption are among the states with the lowest rates of obesity. However, even the states with the highest rates of consumption are still far below the “Healthy People 2010” fruit and vegetable consumption goals.

States with the Highest Fruit & Vegetable Consumption Among Adults

Rank	State	Percentage of Adults Eating the Recommended 2+ and 3+ Servings of Fruits and Vegetables a Day (2007)	Obesity Ranking
1	D.C.	20.1% (+/- 1.7)	49
2	Vermont	17.9% (+/- 1.2)	46
3	Maine	17.7% (+/- 1.2)	29
4	Hawaii	17.5% (+/- 1.3)	47
5	New York	16.5% (+/- 1.3)	36
6	Massachusetts	16.4% (+/- 0.8)	48
7 (tie)	Connecticut	16.2% (+/- 1.3)	50
7 (tie)	New Hampshire	16.2% (+/- 1.2)	35
9 (tie)	Arizona	16.1% (+/- 2.0)	29
9 (tie)	California	16.1% (+/- 1.3)	41

*Note: For rankings, 1 = Highest rate of fruit and vegetable consumption.

States with the Lowest Fruit & Vegetable Consumption Among Adults

Rank	State	Percentage of Adults Eating the Recommended 2+ and 3+ Servings of Fruits and Vegetables a Day (2007)	Obesity Ranking
51	Mississippi	8.8% (+/- 1.0)	1
49 (tie)	Oklahoma	9.3% (+/- 0.9)	6
49 (tie)	South Carolina	9.3% (+/- 0.8)	9
48	Alabama	9.8% (+/- 1.1)	2
47	South Dakota	10.1% (+/- 1.0)	15
46	West Virginia	10.3% (+/- 1.1)	4
45	Kansas	10.6% (+/- 0.9)	16
43 (tie)	Kentucky	10.8% (+/- 1.4)	7
43 (tie)	North Carolina	10.8% (+/- 0.8)	10
41 (tie)	Arkansas	11.2% (+/- 1.1)	8
41 (tie)	Missouri	11.2% (+/- 1.2)	12

*Note: For rankings, 51 = Lowest rate of fruit and vegetable consumption.

Youth Fruit & Vegetable Consumption

An analysis of the 2007 YRBS, a survey of U.S. high school students, found that only 9.5 percent of students eat the recommended amount of fruits and vegetables. Among the 39 states

that participated in the 2007 YRBS, rates of fruit and vegetable consumption ranged from a low of 5.2 percent in Arkansas to a high of 11.4 percent in Vermont.



H. BREAST-FEEDING

Breast-feeding is associated with lower rates of obesity among children, while exclusive breast-feeding – versus breast-feeding supplemented by formula feeding – is associated even more strongly with this protective effect.³⁴ Breast-feeding also is associated with a whole range of other protective effects, which have led the American Academy of Pediatrics (AAP), the American Academy of Family Physicians, the Academy of Breastfeeding Medicine, the World Health Organization, the United Nations Children’s Fund and many other health organizations to recommend exclusive breast-feeding for the first six months of life.

However, according to the CDC’s 2009 Breast-feeding Report Card, only 13.6 percent of mothers in the United States are breast-feeding exclusively at six months, below the “Healthy People 2010” goal of 17 percent.³⁵ In fact, only 13 states met or exceeded this goal in 2006 (the last year data were available.)

Six of the states with the lowest rates of exclusive breast-feeding at six months are also in the top 10 states with the highest obesity rates. Seven out of the 10 states with the lowest rates of exclusive breast-feeding at six months are in the South, where obesity rates are also higher.

States with the Highest Rates of Exclusive Breast-feeding at 6 Months			
Rank	State	Percentage Breast-feeding Exclusively at 6 Months (2006)	Obesity Ranking
1	Washington	25.3%	28
2	Utah	24.0%	44
3	Vermont	23.5%	46
4	Colorado	22.6%	51
5	Hawaii	22.4%	47
6	Oregon	20.8%	39
7	New Hampshire	20.6%	35
8	Montana	20.5%	43
9	Virginia	18.8%	32
10	California	18.6%	41

*Note: For rankings, 1 = Highest rate of breast-feeding.

States with the Lowest Rates of Exclusive Breast-feeding at 6 Months			
Rank	State	Percentage Breast-feeding Exclusively at 6 Months (2006)	Obesity Ranking
51	Mississippi	4.6%	1
50	Louisiana	5.0%	5
48	Alabama	6.3%	2
48	Arkansas	6.3%	8
47	Delaware	7.5%	20
45	Oklahoma	8.4%	6
45	West Virginia	8.4%	4
44	Missouri	8.5%	12
43	Rhode Island	8.7%	45
42	Ohio	9.1%	13

*Note: For rankings, 51 = Lowest rate of breast-feeding.



State Responsibilities and Policies

In this section, TFAH examines trends in state legislative actions and policies concerning obesity to help evaluate the impact of these efforts.

States are undertaking a wide range of efforts to address the obesity crisis. Since 2003, TFAH has been reviewing these state policies. For *F as in Fat 2010*, TFAH produced a supplement entitled, “Obesity-Related Legislative Action in States,” which provides greater detail about specific legislation. The supplement is available on TFAH’s Web site, www.healthyamericans.org.

This section provides an update to previous years’ analyses and includes:

- A. State Obesity-Related Legislation.
- B. CDC Grants to States.
- C. State and Community Success Stories.

A. STATE OBESITY-RELATED LEGISLATION

Since 2003, TFAH has tracked state obesity-related legislation regarding a number of school-based programs, including nutrition, physical education, physical activity and height and weight measurements. The report also has tracked legislation

related to tax policy, menu labeling, obesity liability, and Complete Streets initiatives. This section provides an updated summary of legislation enacted between June 1, 2009, and May 31, 2010.

I) Obesity-Related Legislation for Healthy Schools

School-based programs have been shown to yield positive results in preventing and reducing obesity.³⁶ Children spend large amounts of time at school and in before- and after-school programs, often consuming as many as two meals and snacks in these settings.

The more than 14,000 school districts in the United States have primary jurisdiction for setting local school policies. States can establish policies or pass legislation that affect schools, but school districts typically have discretion in deciding if they will follow them, a principle known as local control. States often try to create incentives for following their policies, such as attaching compliance rules to state funding.

School-based efforts have focused on improving the quality of food sold in schools, limiting sales of less nutritious foods, improving physical education and health education, and encouraging increased physical activity – either during the school day or through extracurricular activities. A new trend has been the development of farm-to-school programs that bring fresh, local produce into schools, encouraging both healthy eating and sustainable farming.



OBESITY RELATED STANDARDS IN SCHOOLS -- 2010

	Nutritional Standards for School Meals	Nutritional Standards for Competitive Foods	Limited Access to Competitive Foods	Physical Education Requirements	BMI or Health Information Collected	Non-Invasive Screening for Diabetes	Health Education Requirements	Farm-to-School Program
Alabama	✓	✓	✓	✓			✓	
Alaska				✓			✓	✓
Arizona	✓	✓	✓	✓			✓	
Arkansas	✓	✓	✓	✓	✓		✓	
California	✓	✓	✓	✓	✓	✓	✓	✓
Colorado	✓	✓	✓	✓				✓
Connecticut	✓	✓	✓	✓			✓	✓
Delaware				✓	✓		✓	
DC	✓	✓	✓	✓			✓	✓
Florida			✓	✓	✓		✓	
Georgia			✓	✓			✓	
Hawaii		✓	✓	✓			✓	
Idaho				✓			✓	
Illinois		✓	✓	✓	✓	✓	✓	✓
Indiana		✓	✓	✓			✓	
Iowa				✓	✓		✓	✓
Kansas				✓			✓	
Kentucky	✓	✓	✓	✓			✓	✓
Louisiana	✓	✓	✓	✓	✓		✓	
Maine		✓	✓	✓	✓		✓	✓
Maryland		✓	✓	✓			✓	✓
Massachusetts	✓			✓	✓		✓	✓
Michigan				✓			✓	✓
Minnesota				✓			✓	
Mississippi	✓	✓	✓	✓			✓	
Missouri				✓	✓		✓	
Montana				✓			✓	✓
Nebraska			✓	✓			✓	
Nevada	✓	✓	✓	✓	✓		✓	
New Hampshire				✓			✓	
New Jersey	✓	✓	✓	✓			✓	
New Mexico		✓	✓	✓			✓	✓
New York			✓	✓	✓		✓	✓
North Carolina	✓	✓	✓	✓	✓		✓	
North Dakota				✓			✓	
Ohio				✓			✓	
Oklahoma	✓	✓	✓	✓	✓			✓
Oregon		✓	✓	✓	✓		✓	✓
Pennsylvania		✓	✓	✓	✓		✓	✓
Rhode Island	✓	✓		✓			✓	
South Carolina	✓	✓	✓	✓	✓		✓	
South Dakota	✓			✓			✓	
Tennessee	✓	✓		✓	✓		✓	✓
Texas	✓	✓	✓	✓	✓		✓	✓
Utah				✓			✓	
Vermont	✓	✓	✓	✓	✓		✓	✓
Virginia		✓		✓			✓	✓
Washington				✓			✓	✓
West Virginia		✓	✓	✓	✓		✓	
Wisconsin				✓			✓	✓
Wyoming				✓			✓	
# of States	20 + D.C.	28 + D.C.	29 + D.C.	50 + D.C.	20	2	48 + D.C.	23 + D.C.

Please note: Checkmarks in the chart above that are in red type represent new laws passed in 2009 or 2010.

SCHOOL MEALS AND SNACKS

Young people spend more time at school than any other place except their homes. While children are in school, more than 90 percent of them eat lunch, approximately 40 percent have a snack, and close to 20 percent eat breakfast on campus.³⁷ The food students consume in school can make up as much as 40 percent of their daily energy intake.³⁸

- Six years ago, only four states had legislation that set nutritional standards for school lunches, breakfasts, and snacks that were stricter than existing USDA requirements: Arkansas, South Dakota, Tennessee and Texas.
- Today, 20 states and D.C. have set nutritional standards for school lunches, breakfasts, and snacks that are stricter than existing USDA requirements: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, D.C., Kentucky, Louisiana, Massachusetts, Mississippi, Nevada, New Jersey, North Carolina, Oklahoma, Rhode Island, South Carolina, South Dakota, Tennessee, Texas and Vermont.

States that implemented new regulations between June 1, 2009, and May 31, 2010:

- **D.C.** passed legislation requiring that all meals served at public and charter schools meet or exceed the federal nutrition standards. The legislation requires that foods have no trans fat and saturated fat must be less than 10 percent of total calories. By 2020 meals will also have sodium restrictions. Foods served as part of the school meal program must also meet or exceed the requirements of the USDA's HealthierUS School Challenge program at the Gold Award Level (A18-0428, 2010).
- **Louisiana** set standards for nutritious meals, and included performance indicators for the School Food and Nutrition Program to ensure that children are being served nutritious meals (HB 1, 2009).
- **Mississippi** directed the Office of Healthy Schools of the State Department of Education to provide comprehensive training for superintendents, business managers, food service directors and food service managers in local school districts on marketing healthy foods, creating a healthy cafeteria environment, effective and efficient food service operations, the standards and expectations of food service staff, and other topics as identified by the department (HB 1079, 2009).



COMPETITIVE FOODS AND BEVERAGES

The USDA defines competitive foods as any foods and beverages – regardless of their nutritional value – that are sold at school, but outside of the USDA school meals program.³⁹ These foods are sold on à la carte lines, in school vending machines, in school stores, or through school bake sales. The nutritional value of these foods is largely unregulated by the federal government.⁴⁰

■ **Six years ago only six states had nutritional standards for competitive foods:** Arkansas, California, Hawaii, Tennessee, Texas and West Virginia.

■ **Today, 28 states and D.C. have nutritional standards for competitive foods:** Alabama, Arizona, Arkansas, California, Colorado, Connecticut, D.C., Hawaii, Illinois, Indiana, Kentucky, Louisiana, Maine, Maryland, Mississippi, Nevada, New Jersey, New Mexico, North Carolina, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia and West Virginia.

States that implemented new regulations between June 1, 2009, and May 31, 2010:

■ **D.C.** passed legislation requiring that all beverages and snack foods served in public schools and charter schools, or provided by organizations participating in after-school meal programs, whether through vending machines, fundraisers, snacks, after-school meals, or other means, including foods and beverages sold in school stores, must meet the requirements USDA's HealthierUS School Challenge program at the Gold Award Level for competitive foods (A18-0428, 2010).

■ **Louisiana** revised nutrition standards for beverages sold in high schools. Beverages available for sale to high school students now include: bottled water, no-calorie or low-calorie beverages that contain up to 10 calories per eight ounces, up to 12-ounce servings of beverages that contain 100% fruit juice with no added sweeteners and up to 120 calories per eight ounces, up to 12-ounce servings of any other beverage that contains no more than 66 calories per eight ounces, and low-fat milk, skim milk and nondairy milk. At least 50 percent of non-milk beverages must be water

and no-calorie or low-calorie options that contain up to 10 calories per eight ounces (HB 767, 2009).

■ **Virginia** requires the Board of Education, in cooperation with the Department of Health, to promulgate and periodically update regulations setting nutritional guidelines for all competitive foods sold to students during regular school hours (SB 414, 2010).

USDA further defines two categories of competitive foods: foods of minimal nutritional value (FMNV) and all other foods offered for individual sale. FMNV are identified as carbonated beverages, water ices, chewing gum, hard candy, jellies and gums, marshmallow candies, fondant, licorice, spun candy, and candy-coated popcorn.⁴¹ Current federal regulations only restrict FMNV from being sold during mealtimes in food-service areas.

■ **Six years ago, only 17 states had legislation to limit when and where competitive foods may be sold beyond federal requirements:** Arkansas, California, Colorado, Connecticut, Florida, Georgia, Hawaii, Illinois, Kentucky, Louisiana, Maine, Mississippi, Nebraska, New York, North Carolina, Texas and West Virginia.

■ **Today, 29 states and D.C. limit when and where competitive foods may be sold beyond federal requirements:** Alabama, Arizona, Arkansas, California, Colorado, Connecticut, D.C., Florida, Georgia, Hawaii, Illinois, Indiana, Kentucky, Louisiana, Maine, Maryland, Mississippi, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, South Carolina, Texas, Vermont and West Virginia.

States that implemented new regulations between June 1, 2009, and May 31, 2010:

■ **D.C.** law prohibits public schools and charter schools from permitting third parties, other than school-related organizations and school meal service providers, to sell foods or beverages of any type to students on school property from 90 minutes before the school days begins until 90 minutes after the school day ends (A18-0428, 2010).

SECONDARY SCHOOLS IMPROVE AVAILABILITY OF HEALTHY SNACKS AND BEVERAGES

Results from the CDC's School Health Profiles Survey show that the number of secondary schools selling unhealthy foods and beverages has declined significantly since 2006.⁴² States that have strong nutrition policies in place have made the most progress in eliminating unhealthy foods from schools.

Thirty-four states collected data in 2006 and 2008, and the percentage of secondary schools that did not sell soda pop or fruit drinks that were not 100% juice increased from 38 percent to 63 percent over that time, and the percentage of schools in those states no longer selling candy or salty snacks high in fat increased from 46 percent to 64 percent.⁴³

Mississippi and Tennessee saw the greatest improvements from 2006 to 2008. In Mississippi, only 22 percent of schools did not sell soda pop or fruit drinks that were not 100% juice in 2006, but by 2008 three-fourths of the schools in the state no longer sold these beverages. Schools in Tennessee improved from 27 percent to 74 percent.⁴⁴

Although the report showed progress, there is still room for improvement. In Utah, Kansas, Idaho and Nebraska, fewer than 30 percent of secondary schools do not sell candy, salty snacks not low in fat, soda, or fruit drinks not 100% juice.⁴⁵

PHYSICAL EDUCATION AND HEALTH EDUCATION IN SCHOOLS

Physical Education

- **Every state has some form of requirements for physical education for students. However, these requirements are often limited or not enforced and many of the programs are inadequate with respect to quality.**

States that implemented new regulations between June 1, 2009, and May 31, 2010:

- **Arizona** passed legislation requiring that each school district governing board conduct a public meeting to consider adopting a policy to provide at least 30 minutes of recess each day for pupils in kindergarten programs and grades 1-5 (HB 2725, 2010).
- **D.C.** law requires public schools and charter schools to provide minimum amounts of physical education. All students in grades K-5 must receive a minimum of 150 minutes per week of physical education by school year 2014-2015. Students in grades 6-8 must receive an average of at least 225 minutes per week by school year 2014-2015. At least 50 percent of physical education class time must be devoted to actual physical activity, with as much class time as possible spent in moderate-to-vigorous physical activity (A18-0428, 2010).
- **Louisiana** law requires public schools to provide at least 30 minutes of moderate-to-vigorous physical activity each school day for grades K-8. In addition, the law requires each school board to establish a school health advisory council to advise the board on physical activity for students, physical and health education, nutrition, and overall student health. The board shall also advise on issues related to compliance with school vending machine restrictions, use of physical fitness assessment results, and school recess policies (HB 400, 2009).
- **Maine** law requires the Commissioner of Education to conduct a statewide assessment, using a survey or sampling methodology, of the current physical education capacities of elementary schools in the State. The commissioner shall work with the elementary schools selected for the assessment to obtain the data required for this assessment in a manner that allows the assessment to be reported by grade, school, school administrative unit and region. The commissioner shall submit a report on the findings of the assessment to the Joint Standing Committee on Education and Cultural Affairs by February 1, 2010. The report must include a description of the physical education programs in existence for the 2009-2010 school year for elementary schools in the State (LD 1407, 2009).
- **Oregon** expanded physical education opportunities for students to include outdoor and environmental learning by creating an environmental literacy task force to develop environmental education curricula. The basis of the program is to make outdoor recreation and good nutrition a regular part of the school curriculum (HB 2544, 2009).

- **Texas** law now provides grants for in-school physical education and fitness programs for students in grades 6-8. Criteria for receiving the grant include reducing childhood obesity and type 2 diabetes in school districts with disproportionately high rates of low-income students (SB 1, 2009). Texas also included new requirements to the public school physical education curriculum, such as including physical activity that meets the needs of students of all physical ability levels, including those with disabilities and chronic conditions, as well as requiring that at least 50 percent of physical education class be used for actual student physical activity and that the activity be at a moderate-to-vigorous level (SB 891, 2009).

The 2008 Physical Activity Guidelines for Americans issued by HHS provide science-based guidance to help everyone age 6 and older to engage in appropriate physical activity. According to the guidelines, children and adolescents should do one hour or more of physical activity every day. No period of activity is too short to count toward the guidelines.

The 2005 Institute of Medicine (IOM) report, "Preventing Childhood Obesity: Health in the Balance," recommended that state and local education authorities and schools should ensure that all children and youth participate in a minimum of 30 minutes of moderate-to-vigorous physical activity during the school day.⁴⁶ However, according to the CDC's 2006 School Health Policies and Programs Study (SHPPS), a national survey conducted in even years to assess school health policies and programs at the state, district, school, and classroom levels, the number of schools that provide students with the opportunity to engage in 30 minutes of such activity is minuscule.

The 2006 SHPPS found that:⁴⁷

- Only 3.8 percent of elementary schools, 7.9 percent of middle schools and 2.1 percent of high schools provided daily physical education or its equivalent (150 minutes per week in elementary schools, 225 minutes per week in middle schools and high schools) for the entire school year (36 weeks) for students in all grades in the school.
- 79.1 percent of elementary schools provided daily recess for students in all grades in the school.
- 48.4 percent of schools offered intramural activities or physical activity clubs to students, and 77.0 percent of middle schools and 91.3 percent of high schools offered students opportunities to participate in at least one interscholastic sport.

Health Education

■ Only two states – Colorado and Oklahoma – do not require schools to provide health education.

States that implemented new regulations between June 1, 2009, and May 31, 2010:

- **D.C.** now requires a minimum amount of health education. Beginning in the 2010-2011 school year, students must receive an average of at least 15 minutes per week of health education. Beginning in the 2014-2015 school year, students must receive an average of at least 45 minutes per week of health education (A18-0428, 2010).

According to the 2006 SHPPS, health education standards and curricula vary greatly from school to school.⁴⁸

- The percentage of states that required districts or schools to follow national or state health education standards or guidelines increased from 60.8 percent in 2000 to 74.5 percent in 2006; the percentage of districts that required this of their schools increased from 68.8 percent to 79.3 percent.
- 13.7 percent of states and 42.6 percent of districts required each school to have someone oversee or coordinate school health education (e.g., a lead health education teacher).
- 67.5 percent of schools used school assemblies and 28.8 percent used health fairs to provide information about health topics to students.

PHYSICAL ACTIVITY AND ACADEMIC ACHIEVEMENT

The benefits of physical activity on children's health are well known. However, most children do not meet the recommended levels of physical activity. According to 2009 Youth Risk Behavior Surveillance System data, the percentage of high school students who were physically active at least 60 minutes on all seven days in the previous week ranged from a high of 27.8 percent in Kansas to a low of 17 percent in Massachusetts.⁴⁹

In recent years, many school systems have eliminated physical education (PE) or severely curtailed its offering to focus on core academic subjects that students are tested on as part of the No Child Left Behind Act. Schools are cutting PE classes based on the assumption that sacrificing PE will give students and teachers more time to prepare for standardized tests and thereby boost the schools' scores on those tests.

However, in fact, a number of studies show that students who spend time in PE or other school-based physical activi-

ties increased or maintained their grades and scores on standardized tests even though they received less classroom time. A 2010 review of more than 50 studies by scientists at CDC has found "substantial evidence that physical activity can help improve academic achievement (including grades and standardized test scores)."⁵⁰ The review found that physical activity can have an impact on cognitive skills and attitudes and academic behavior, all of which can positively influence academic performance. The review also found that schools that increase or maintain time dedicated to PE do not experience any declines in students' academic performance.

According to CDC, the results suggest that schools should: 1) maintain or increase students' participation in PE classes; 2) provide recess to students on a regular basis; 3) incorporate physical activity breaks into classroom settings; and 4) maintain and develop school-based sports programs.

JOINT-USE AGREEMENTS

Many communities lack the appropriate space for their residents to be physically active, indoors and out. Schools often have gymnasiums, playgrounds, tracks and fields, but they are not accessible to the community. Schools keep their facilities closed after school hours for fear of vandalism and liability in the event of an injury and because of the cost of maintenance and security.

According to Public Health Law & Policy's (PHLP) National Policy & Legal Analysis Network to Prevent Childhood Obesity (NPLAN) program, most states have laws encouraging schools to open their doors to the community, and a few states even require it, but school officials are often hesitant to take on the risk.⁵¹ One way to alleviate the concerns of school officials is through joint-use agreements. A joint-use agreement is "a formal agreement between two separate government entities – often a school district and a city or county – setting forth the terms and conditions for the shared use of public property or facilities."⁵²

Many communities and cities already have implemented joint-use policies. In San Francisco, the school and city put

together a joint-use agreement to keep school playgrounds open to the community on weekends. In Seattle, a joint-use agreement is in place to centralize the scheduling of all school and city recreation centers to make them more accessible to everyone and easier to reserve.⁵³

Joint-use agreements require a lot of thought and planning on the part of both the school and the community but can be a great benefit to both parties. In an effort to increase community use of school grounds and facilities, PHLP has developed four model joint-use agreements as templates to assist communities and schools in developing their own specific agreements.⁵⁴ The four models include guidance on opening indoor and outdoor school facilities during non-school hours; authorizing third parties to operate programs; and providing for the joint-use of district and city recreation facilities.⁵⁵

More information and tools to assist communities in developing joint-use agreements can be found at www.phlpnet.org.

A PERSONAL PERSPECTIVE

Building the Foundation for a Healthier California

-- By Arnold Schwarzenegger

I HAVE ALWAYS BEEN A FITNESS FANATIC, AND IT'S NOT JUST BECAUSE OF MY INTEREST IN WEIGHT-TRAINING OR BODYBUILDING OR FOOD SUPPLEMENTS. IT'S ALSO BECAUSE OF THE WAY I WAS RAISED.

My childhood in Austria laid the foundation for a lifetime of healthy eating and healthy living. I can still recall my mom waking me up at 6 a.m. to milk the cow, or asking me to go outside and pick some fresh carrots, potatoes or strawberries for dinner.

Right near our house there were big fields where I would run around and play soccer with other kids from my neighborhood. In the summer I would go swimming in the lake, and when winter came I would ski or sled. There were so many recreational opportunities right at my doorstep.

I may have grown up poor when it comes to money, but I was blessed to be surrounded by so many natural treasures. And now, looking back at my childhood, I see the incredible value of the way my parents raised me.

Sadly, many kids today don't have the upbringing or opportunities that I had.

They wake up and eat cereal loaded with sugar. They go to school and drink soda and eat doughnuts. They come home to pizza or fast food for dinner, without any fresh fruits and vegetables. And when it comes to exercise, many children prefer playing games on their computer to playing sports outside.

As former President Clinton says, in the end it is a simple equation – calories in and calories out. And today's kids are simply consuming too much and exerting too little.

The results are frightening. Over the past 20 years, Californians have packed on an extra 480 million pounds. One-third of our kids are obese or overweight. Three in five adults are obese or overweight. And all this weight gain costs our state more than \$40 billion every year.

Because of the obesity epidemic, we now run the risk that kids, for the first time, will have shorter lifespans than their parents. This is a public health disaster, and we have to act.

That's why I have worked very hard throughout my life to promote health and fitness. I wrote fitness books and held fitness seminars all around the world. In 1990, I was honored when President George H.W. Bush appointed me chairman of the President's Council on Physical Fitness and Sports, and I traveled around the country talking to kids about getting in shape.

Then when I became governor, I pledged to make California a national model for healthy living.

We hosted an obesity summit in 2005, and just recently hosted a second summit with President Clinton to bring experts together and hear new ideas.

And working together, with Republicans and Democrats, we have made great progress.

California was the first state to take sodas and junk food off school campuses. We put more fruits and vegetables into school meals and banned trans fats. We increased funding for physical education classes.

I'm also very proud that we were the first state in the nation to require chain restaurants to post calories and other nutritional information.

We have made great progress, but there is still much more work to do. That is why this year I am proposing three additional pieces of legislation.

First, we want to require school districts to make fresh, free drinking water available to students. This is so important, because 40 percent of schools don't have fresh drinking water available where kids eat their lunches.

Second, we want to eliminate sports drinks in public schools because they are filled with sugar and linked to weight gain.

Finally, to boost physical activity, I am sponsoring legislation that requires students to spend at least 50 percent of their PE class in moderate-to-vigorous physical activity. It also requires after-school programs to provide at least 30 minutes of moderate-to-vigorous physical activity every day.

In these challenging fiscal times, we also want to work with schools to help preserve health and fitness programs. In a budget crunch, those programs are often the first ones cut, and that is wrong.

Yet, we must recognize that government alone cannot cure the obesity epidemic. The only way to succeed is through shared responsibility. The government, the schools, the children – everyone must work together.

However, by far the most important piece of the puzzle is the parents. In fact, surveys show that the vast majority of people believe that parents are most responsible for their child's health. They cannot wait for government to do their job. It is the parents' responsibility to raise their children, to cook them healthy meals, and to turn off the TV and get them outside.

I understand the incredible demands placed on parents. In many households there is only one parent, or both parents work. They are constantly stressed. But in the end, it is the parents' job to set priorities, and their first priority must be their child's well-being.

Before parents decide to spend money on a fancy new cell phone or flat-screen TV, they must first make sure their children are taken care of, and that means making sure they have fresh and healthy food. Parents must sacrifice and prioritize their child's health above all those luxuries.

I am proud of the work we have done in California to build a foundation for a healthier future.

And I'm pleased to say I'm not alone. Governors across the country are actively engaged in creating healthier environments, and now with First Lady Michelle Obama's Let's Move campaign, we have a federal partner who can engage with us. Our long-term vision of a healthier America won't be realized overnight, but working together we can create a country where healthy living is easy and affordable for all.

Arnold Schwarzenegger is the governor of California.

CHILD-CARE CENTER REGULATIONS

In 2001, approximately 8.6 million preschool-aged children attended some form of child care,⁵⁶ accounting for almost three-quarters of children ages 3 to 6.⁵⁷ With the growing number of overweight preschool-aged children, child care is an important area to both regulate and utilize to combat childhood obesity. Child-care policies that promote physical activity and good nutrition can help shape dietary and physical activity behaviors from a young age.

All child-care facilities are regulated by state law, but regulations vary greatly from state to state, and also for the type of facility – centers and homes.⁵⁸

A group of experts in nutrition, physical activity, early care and education, and policy and regulation evaluated a variety of child-care standards across the country, and developed a list of 10 physical activity and 10 healthy eating model state regulations for child-care facilities.⁵⁹ Each state was then measured against the 20 regulations, and the results showed that very few states had adequate regulations related to obesity in both child-care centers and family child-care homes.⁶⁰ Child-care centers had an average of 3.7 healthy eating regulations and 3.5 physical activity regulations; family child-care homes had an average of 2.9 and 2.6, respectively.⁶¹ Georgia and Nevada ranked the highest for both healthy eating and physical activity regulations while South Dakota and Idaho ranked the lowest, with neither having any regulations for physical activity, and South Dakota having only two of the 10 healthy eating regulations.⁶²

PHYSICAL ACTIVITY REGULATIONS FOR CHILD CARE

State	Children are provided with physical activity daily	Television, video, and computer time are limited	Child care providers do not withhold active play time as punishment	Children with special needs are provided opportunities for active play while other children are physically active	Children are provided outdoor active play time	Physical activity education is offered to child care providers	At least one provider joins children in active play	Shaded areas are provided during outdoor play	Children are not seated for long periods of time	Physical activity education is offered to children
Alabama	X	X			X			✓*		
Alaska	X	X		X	X				X	
Arizona	X			X					X	
Arkansas	✓*				X			X	✓*	
California	✓*			✓*	✓*			✓*	✓*	
Colorado	X	X			X			X	X	
Connecticut	✓*				✓*				✓*	
Delaware	X	X		✓*	X			✓*	X	
DC	X			X	X					
Florida	X				X				✓*	
Georgia	X	X	X	X	X			X	X	
Hawaii	X			✓*						X
Idaho										
Illinois	X	✓*		✓+	X			✓*	X	
Indiana	✓*	✓*			X			✓*	✓*	
Iowa	X			✓*				✓*	✓*	
Kansas	✓*	X			X			✓*	✓*	
Kentucky	✓*	X			X			✓*		
Louisiana	✓*				✓*				✓*	
Maine	X	X		X	X			X	X	
Maryland	✓*	X			✓*	X				
Massachusetts	X			✓+	X			✓*		
Michigan	X	X			X			✓*		
Minnesota					X			✓*	✓*	
Mississippi	✓*	X			X			X		
Missouri	X				X				X	
Montana	X	✓+			X			X	X	
Nebraska	✓*				✓*					
Nevada	X				X			X	X	X
New Hampshire	X				X				X	
New Jersey	X	✓+			X	✓*			X	
New Mexico		X							X	
New York	X				X				X	
North Carolina	X				X	✓*		✓*	✓*	
North Dakota	X				X					
Ohio	X			X	X			X	X	
Oklahoma	✓*	X		✓*	X			✓*	X	
Oregon	X	✓+			X					
Pennsylvania				X						
Rhode Island	X	✓+			X				✓*	
South Carolina	X	X		X	X				X	
South Dakota										
Tennessee	✓*	X		X	X				X	
Texas	X	✓+		X	X				X	
Utah					✓*			X	✓+	
Vermont	X	X			X			✓*	X	
Virginia	X	✓+			X				X	
Washington	X	✓+			X				✓*	
West Virginia	X	X			X			✓*	X	
Wisconsin	X	X			X				X	
Wyoming	✓*							X	X	

✓*--Child Care Centers
 ✓+--Family Child Care Homes
 X --Both

Source: Benjamin SE, Gillman MW, Traub AE, Finkelstein J. *Preventing Childhood Obesity in the Child Care Setting: Enhancing State Regulations*. Boston, MA: Harvard Medical School and Harvard Pilgrim Health Care, 2009. http://cfm.mc.duke.edu/wysiwyg/downloads/State_Reports_Flnal.pdf (accessed, March 1, 2010).

HEALTHY EATING REGULATIONS FOR CHILD CARE

State	Foods of low nutritional value are served infrequently	Sugar sweetened beverages are not served	Children older than two years are served reduced fat milk	Clean, sanitary drinking water is available to children to serve themselves throughout the day	Nutrition education is offered to child care providers	Juice is limited to a total of 4-6 ounces per day for children over one year of age	Child care providers do not use food as a reward or punishment	Nutrition education is offered to children	At least one child care provider sits with children at the table and eats the same meals and snacks	Providers encourage, but do not force, children to eat
Alabama				✓*	✓*		X			✓*
Alaska							X			X
Arizona				✓*	X		X	✓*		✓+
Arkansas				X	✓*		X			✓+
California				✓*	X		X			
Colorado	✓*			X	X		X		X	✓+
Connecticut				X	✓*			✓*		
Delaware			✓*	✓*	X		X	✓*		
DC					✓+		X			X
Florida				✓*	X		X			
Georgia	X	X		X	X		X			X
Hawaii				X	X		X	X		X
Idaho										
Illinois	✓*		✓*	X	X		X		✓*	X
Indiana		✓*		X	✓*		X		✓*	
Iowa	✓*		✓*	✓*	X		X			
Kansas					✓*		X		✓*	
Kentucky				✓*	✓*		✓*			
Louisiana	✓*			✓*			✓*			
Maine										
Maryland			✓*		X		X			X
Massachusetts				X			X	✓+		X
Michigan				✓+	✓*		X		✓*	✓+
Minnesota				X	X		X		✓*	
Mississippi	X		✓*		X		X		X	X
Missouri				X	X		X	✓*		X
Montana				X	X					
Nebraska				✓*	✓*		X			
Nevada	X	X		X			X	X	X	X
New Hampshire					X		X	X		
New Jersey	✓*			X	X		X			X
New Mexico		✓+	X	✓*	X		X		X	
New York				X	X	✓*	X			
North Carolina	✓*			X			✓+			
North Dakota				✓*			X			X
Ohio			X	X	X		X			
Oklahoma				X	✓*		X			X
Oregon	X			✓*			X			✓*
Pennsylvania				X	X		X			X
Rhode Island		✓+	✓+	X	X		X	✓*	✓+	
South Carolina				X	X		X			X
South Dakota					X		X			
Tennessee	X	✓+		X	✓+		X		✓*	X
Texas				X			X			X
Utah				X	X		X			
Vermont	✓+			X		✓*	X	✓*	✓*	✓*
Virginia				X	✓+		X		✓*	✓+
Washington	✓*		X	✓+			X	✓*	✓+	
West Virginia				X			X	✓+	✓*	X
Wisconsin				✓*	✓*		✓*		✓*	
Wyoming					X		X			X

✓* -- Child Care Centers
 ✓+ -- Family Child Care Homes
 X -- Both

Source: Benjamin SE, Gillman MW, Traub AE, Finkelstein J. *Preventing Childhood Obesity in the Child Care Setting: Enhancing State Regulations*. Boston, MA: Harvard Medical School and Harvard Pilgrim Health Care, 2009. http://cfm.mc.duke.edu/wysiwyg/downloads/State_Reports_Final.pdf (accessed, March 1, 2010).

STUDENT BMI SCREENING AND SURVEILLANCE

- **Six years ago, only four states required BMI screening or other weight-related assessments for children and adolescents:** Arkansas, Kansas, Louisiana, and Massachusetts.
- **Today, 21 states have passed requirements for BMI screening of children and adolescents, or legislation requiring weight-related assessments other than BMI.**
 - ▲ **States with BMI screening requirements:** Arkansas, California*, Florida, Illinois, Maine, Missouri, New York, North Carolina, Oklahoma, Pennsylvania, Tennessee, Vermont and West Virginia.
 - ▲ **States with other weight-related screening requirements:** Delaware, Iowa, Louisiana, Massachusetts, Nevada, Rhode Island, South Carolina and Texas.

States that implemented new programs between June 1, 2009, and May 31, 2010:

- **Louisiana** law provides for health-related fitness assessments to determine physical fitness levels of students in school, including BMI. The bill expands a pilot program to provide for statewide implementation with a special focus on school systems with high poverty levels (SB 309, 2009).
- **Nevada** school districts shall conduct examinations of the height and weight of a representative sample of pupils enrolled in grades 4, 7 and 10 in the schools within the school district. In addition to those grade levels, a school district may conduct examinations of the height and weight of a representative sample of pupils enrolled in other grade levels within the school district (AB 191, 2009).
- **New York** appropriated funds for the Department of Health and Mental Hygiene for services and expenses, including grants, related to the reporting of BMI on school physical forms (AB 154, 2009).
- **North Carolina** appropriated funds to public health programs based on a formula that takes into account the BMI of public school students along with other health indicators (SB 202, 2009).
- **Two states have enacted legislation that requires screening students for risk of type 2 diabetes:** California* and Illinois.

* Commencing July 1, 2010, statewide distribution of diabetes risk information to schoolchildren, California Education Code § 49452.7, will replace individual BMI reporting, California Education Code § 49452.6.



A PERSONAL PERSPECTIVE

Raising a Healthier Generation by Transforming the School Environment

-- By Joseph W. Thompson, M.D., M.P.H.

CHILDHOOD OBESITY IS A CONSEQUENCE OF DRAMATIC SOCIETAL AND ENVIRONMENTAL CHANGES THAT HAVE MADE IT DIFFICULT -- AND IN SOME CASES ALMOST IMPOSSIBLE -- FOR FAMILIES TO PROVIDE CHILDREN WITH NUTRITIOUS FOODS AND OPPORTUNITIES FOR PHYSICAL ACTIVITY. AS A SOCIETY, WE DID NOT INTENTIONALLY ALLOW OUR SURROUNDINGS TO BECOME SO CONDUCTIVE OF OBESITY IN OUR CHILDREN. HOWEVER, WE MUST INTENTIONALLY IMPROVE ENVIRONMENTS WHERE CHILDREN LIVE, LEARN, AND PLAY TO MAKE CERTAIN THEY HAVE AMPLE OPPORTUNITY TO CONSUME HEALTHY, NUTRITIOUS FOODS AND BE ACTIVE.

Nearly 50 million U.S. children ages 5-19 spend the majority of their day in elementary or secondary school.⁶³ School settings offer opportunities for unparalleled access to, and influence on, children. Policies that guide school meal programs and guarantee regular physical activity for all children -- especially those in low-income communities and communities of color, in southern states, and those with the greatest racial and ethnic disparities -- offer unique opportunities to reverse the epidemic of childhood obesity and instill healthy eating and physical activity as lifelong habits.

In addition to serious health consequences, growing evidence shows that childhood obesity affects children's academic performance.⁶⁴ Ultimately, obesity takes a toll on economic productivity, health care costs and, even, national security.^{65,66,67}

However, supportive policies at the federal, state, and local levels can help schools reinvent themselves to become healthy environments for students and catalyze healthy changes throughout the community.

Federal policy opportunities can lead to significant strides in reversing the epidemic. For example, Congress has the opportunity to reauthorize and improve two key laws in the coming months that have a real impact on where our children spend the majority of their time -- schools.

Policy-makers are working to reauthorize child nutrition programs before they expire on September 30, 2010. Some key policy opportunities include establishing national nutrition standards for all foods sold on school campuses including school meals as well as "competitive foods and beverages" -- those available through vending machines, a la carte lines and in-school stores and snack bars; expanding participation in the federal meals programs; strengthening local school wellness policies; and, increasing reimbursement rates for meals. If action is not taken before this Congress adjourns in September, continuation of the existing lax standards is likely.

The upcoming reauthorization of the Elementary and Secondary (K-12) Education Act is another major opportunity for improving the school environment. Research shows that physically active and fit kids do better in school.⁶⁸ Therefore increasing opportunities for students to be active in school, through activity breaks, physical education, and recess, is a key way to improve academic performance. Healthy children are more focused, miss less school, and experience fewer behavioral problems.⁶⁹

Another Congressional opportunity that can improve the community environment surrounding schools is the reauthorization of the federal Transportation Act. This bill could be improved by prioritizing projects that increase the availability of safe places to walk, bike, and play through programs such as Safe Routes to School, Complete Streets, and Rails to Trails.

However, Congress cannot act in a silo -- state and local governments have a variety of policy levers in this arena, as do schools themselves. Some key strategies include:

- Implementing and enforcing local school wellness policies that include updating standards for school meals and competitive foods and beverages, provisions for physical education goals and benchmarks and elimination of on-campus food marketing.
- Ensuring all students have access to high-quality physical education, including a minimum of 150 minutes per week of moderate-to-vigorous activity to support learning lifelong health habits.
- Incorporating calorie counts on food items sold throughout the school, in coordination with national menu labeling next year, to create awareness, offer learning opportunities, and reinforce the importance of health and nutrition.
- Conducting body mass index (BMI) screening as part of school health screenings and confidentially reporting this information to parents to help educate them and secure support for childhood obesity prevention programs.

Because all schools, as well as state and local governments, are facing tough economic times, innovative and determined educators, food service directors, and coaches, have found creative ways to support healthier school environments. Planting school gardens provides schools with fresh vegetables while also teaching children about nutrition. Walking school bus programs enable students to safely walk to school. Joint-use agreements make school recreational facilities available for use after school, on weekends, and during the summer.

Perhaps the most valuable local strategy is advocacy—by school leaders, healthy food and physical activity organizations, parents, and students. Advocacy is critical to make sure needs are known and solutions advanced to policymakers who can make change happen. As educators become more aware of the severity of the epidemic, they are joining the fight to reverse it.

Without action on the part of us all, this generation of children is threatened with a future of chronic disease, economic burden, and an eroding quality of life. Indeed, they may become the first generation in our nation's history to live shorter, less healthy lives than their parents.⁷⁰ Parents don't want their children to be educated but unhealthy, or healthy but uneducated. They want and deserve both. Together, policy-makers, educators and parents can become powerful allies in taking action to make sure children are healthy and well educated.

Joseph W. Thompson is the director of the Robert Wood Johnson Foundation Center to Prevent Childhood Obesity.

FARM-TO-SCHOOL PROGRAMS

Over the last decade, many states have enacted legislation in support of farm-to-school programs, which improves nutrition at schools and increases sales for farmers. Although several states have taken action on this issue, many farm-to-school programs are implemented at the local level without state legislation.

Because children continually fall short of reaching the daily recommended servings of fruits and vegetables, increasing the amount of fresh produce available at schools is a logical way to improve child nutrition. Studies show that farm-to-school programs increase fruit and vegetable consumption among students at participating schools.⁷¹ A study conducted by the University of California at Davis found that farm-to-school programs not only increase the consumption of fruits and vegetables among participating students, but actually change eating habits, causing students to choose more healthy options when fresh produce is available at lunch.⁷²

Farm-to-school programs not only promote the use of locally grown foods, but they also educate children about local food and farming issues through such activities as farm visits, cooking demonstrations, and school gardening and composting programs.

■ **Twenty-three states and D.C. currently have established farm-to-school programs:** Alaska, California, Colorado, Connecticut, D.C., Illinois, Iowa, Kentucky, Maine, Maryland, Massachusetts, Michigan, Montana, New Mexico, New York, Oklahoma, Oregon, Pennsylvania, Tennessee, Texas, Vermont, Virginia, Washington, and Wisconsin. **Five years ago only New York had a law that established a farm-to-school program.**

States that passed legislation between June 1, 2009, and May 31, 2010:

- **Alaska** mandated that the Department of Agriculture work in conjunction with the Department of Health and Social Services, the Department of Education and Early Development, the Department of Administration, and the University of Alaska Cooperative Extension Service to establish a farm-to-school program to increase the procurement and use by schools of food grown in the state (HB 70, 2010).
- **Colorado** passed a law to further develop a state farm-to-school program via the Farm-to-School Healthy Kids Act, which establishes an interagency farm-to-school coordination task force (SB 81, 2010).
- **D.C.** public schools and charter schools are now directed to serve locally grown, locally processed, and unprocessed foods from growers engaged in sustainable agriculture practices whenever possible. Preference will be given to fresh unprocessed agricultural products grown and processed in the District of Columbia, Maryland, and Virginia (A18-0428, 2010).
- **Illinois** law directs the Department of Agriculture, together with the State Board of Education and the Department of Public Health, to create the Farm Fresh Schools Program to reduce obesity and improve nutrition and public health, as well as strengthen the local agricultural economy by increasing access to and promoting the consumption of locally grown fruits and vegetables in schools (HB 78, 2009). Illinois also expanded the local farm and food economies by supporting and encouraging public schools, child care facilities, and after-school programs to have 10 percent of all food and food products purchased from local farms by 2020 (HB 3990, 2009).
- **Maine** law requires the Department of Education, Department of Health and Human Services and Department of Agriculture, Food and Rural Resources to convene a work group to study farm-to-school initiatives and programs in the State and develop recommendations for strengthening them (LD 1140, 2009).
- **Texas** established an interagency farm to school coordination task force to develop and implement a plan to facilitate the availability of locally grown food products in public schools (SB 1027, 2009).
- **Wisconsin** law mandates that the Department of Agriculture promote farm-to-school programs in the state. The department shall encourage schools, as part of farm-to-school programs, to purchase food produced in the state and to provide nutritional and agricultural education, including farm visits, cooking demonstrations, and composting and gardening at schools (AB 746, 2010).

Local School District Wellness Policies: A Missed Opportunity?

-- By Jamie F. Chriqui, Ph.D., M.H.S.

IT HAS BEEN OVER FOUR YEARS SINCE ALL SCHOOL DISTRICTS PARTICIPATING IN FEDERAL CHILD NUTRITION PROGRAMS, INCLUDING THE NATIONAL SCHOOL LUNCH AND SCHOOL BREAKFAST PROGRAMS, HAVE BEEN REQUIRED TO ADOPT AND IMPLEMENT A WELLNESS POLICY AS A RESULT OF LANGUAGE INCLUDED IN THE CHILD NUTRITION AND WIC REAUTHORIZATION ACT OF 2004 (P.L. 108 – 265, SECTION 204). THE WELLNESS POLICY REQUIREMENT WAS BROAD-BASED, AIMED AT ADDRESSING BOTH SIDES OF THE ENERGY-BALANCE EQUATION – NUTRITION AND PHYSICAL ACTIVITY – BUT ALSO GAVE DISTRICTS THE LATITUDE TO TAILOR THEIR POLICIES TO THEIR PARTICULAR CIRCUMSTANCES. THE WELLNESS POLICIES WERE TO INCLUDE:

- Goals for nutrition education, physical activity, and other school-based activities.
- An assurance that school meal nutrition guidelines meet the minimum federal school meal standards.
- Guidelines for foods and beverages sold or served outside of the school meal programs.
- Implementation plans.
- The inclusion of a variety of stakeholders in the development of the policy.

The reality is that these wellness policies have the ability to impact millions of students nationwide as the vast majority of school districts in the United States participate in the National School Lunch Program and Breakfast Programs and other federal Child Nutrition Programs. Therefore, it is critical that these policies are strong and are implemented, evaluated and updated regularly.

In 2009, my colleagues and I released the largest nationwide evaluation of district wellness policies to date as part of the Robert Wood Johnson Foundation-supported Bridging the Gap program.⁷³ The results of this systematic evaluation of wellness policies from a nationally representative sample of school districts for school years 2006–2007 and 2007–2008 shed light on a few key points:

- The good news is that nearly all districts nationwide have wellness policies in place. In fact, preliminary information that we are compiling from more recent school years indicates that a number of districts are in the process of or have recently revised their policies after the first three years of implementation efforts.
- However, while districts have responded to the congressional requirement for a wellness policy, most of these policies are weak and lack teeth. In fact, in a number of instances, the policy content does little to expand on the language included in the congressional requirement (e.g., goals for nutrition education and physical activity). Or, the policies may be strong in one area (e.g., nutrition guidelines) but weak in other areas (e.g., physical activity).

- Finally, implementation is definitely a challenge for the districts. Without the resources (including financial, staff and time) to implement the wellness policies, they may be little more than an unfunded mandate that districts are simply unable to address. Our analyses revealed that only a few districts nationwide have even attempted to identify a source for funding wellness policy implementation efforts. And if schools cannot implement the policies, surely they cannot be evaluated to assess which school practices and student behaviors/outcomes improved. Without adequate resources and without plans to evaluate implementation, the likelihood of successful and meaningful implementation has to be questioned.

Policy Opportunities

So where do we go from here? In 2010, Congress is revisiting the wellness policy requirement as part of the Child Nutrition Reauthorization process. Given the broad reach of the wellness policies and that nearly all districts have a wellness policy in place, opportunities exist to build on this framework. The goal should be to create meaningful policies that are part of a broader approach to school health and that are actually implemented and revised, as necessary, with the ultimate goal of improving school practices and student behaviors/outcomes. To this end, here are a few points that strike me as a researcher examining these policies on a daily basis:

- Give equal attention to both sides of the energy-balance equation. A lot of the focus in the existing wellness policies is on the nutrition side of things. Many districts simply did not know what to do with “goals for physical activity” when crafting their policies. Likewise, noticeably missing from the wellness policy requirement were provisions addressing physical education, particularly given that physical education is a primary source of physical activity at school. Physical education classes provide a perfect opportunity on a somewhat regular basis to “get kids active” in addition to teaching them about the importance of being active. However, schools must continue to press forward in updating the nutrition standards for all foods and beverages sold throughout the school day.
- Recognize that “one size does not fit all” when it comes to local wellness policies. Policies that may make sense at the elementary school level may not make the most sense at the secondary school level. Districts should consider this as they revisit their policies moving forward.
- Figure out how best to support implementation. Clearly, districts need the resources to support implementation. However, given the budget constraints facing governments at all levels, we must examine how educators, parents and community members can support districts in their implementation efforts. Without some type of concerted effort focused on implementation, we may have missed a wonderful opportunity to improve the health of our children.

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2) OBESITY-RELATED LEGISLATION FOR HEALTHY COMMUNITIES

States also have enacted obesity-related legislation aimed at the general population. These actions include tax policies, menu labeling, restrictions on litigation, and planning and transportation policies.

OBESITY-RELATED STATE INITIATIVES — 2010				
State	Has Menu Labeling Laws	Has Soda (Sugar-Sweetened Beverage) Taxes	Has Complete the Streets Policy	Has Limited Liability Laws
Alabama		✓		
Alaska				
Arizona				✓
Arkansas		✓		
California	✓	✓	✓	
Colorado				✓
Connecticut		✓	✓	
Delaware			✓	
DC				
Florida		✓	✓	✓
Georgia				✓
Hawaii		✓	✓	
Idaho		✓		✓
Illinois		✓	✓	✓
Indiana		✓		✓
Iowa		✓		
Kansas		✓		✓
Kentucky		✓		✓
Louisiana				✓
Maine	✓	✓		✓
Maryland		✓	✓	
Massachusetts	✓		✓	
Michigan			✓	✓
Minnesota		✓	✓	
Mississippi		✓		
Missouri		✓		✓
Montana				
Nebraska				
Nevada				
New Hampshire				✓
New Jersey	✓	✓		
New Mexico				
New York		✓		
North Carolina		✓		
North Dakota		✓		✓
Ohio		✓		✓
Oklahoma		✓		
Oregon	✓		✓	✓
Pennsylvania		✓		
Rhode Island		✓	✓	
South Carolina				
South Dakota		✓		✓
Tennessee		✓		✓
Texas		✓		✓
Utah		✓		✓
Vermont				
Virginia		✓		
Washington		✓		✓
West Virginia		✓		
Wisconsin		✓	✓	✓
Wyoming				✓
# of States	5	33	13	24

Please Note: Checkmarks in chart above that are in red type represent new laws passed in 2009 or 2010.

SODA TAXES

One way many states have tried to impact the obesity epidemic is by taxing soda to reduce consumption. Proponents of soda taxes liken them to raising taxes on tobacco products. Twenty years ago, cigarettes, which have been proved to cause lung and other types of cancer, were taxed at a low rate, but cigarette taxes have tripled since the 1980s.⁷⁴ This huge tax increase, which pushed the cost of cigarettes higher by an average of 160 percent, is credited for the declines in the prevalence of adult smokers and tobacco-related diseases.⁷⁵

■ **Data from researchers at Bridging the Gap show that 33 states currently impose sales taxes on soda:** Alabama, Arkansas, California, Connecticut, Florida, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Minnesota, Mississippi, Missouri, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia and Wisconsin.⁷⁶

Researchers at Yale University report that a national soda tax of one cent per 12 ounces would generate \$1.5 billion per year.⁷⁷ More recently, a December 2008 Congressional Budget Office (CBO) report detailing budget options to pay for health reform included a proposal to impose a federal excise tax of three cents per 12-ounces of sugar-sweetened beverage (SSB). If implemented, such a tax would generate an estimated \$24 billion in revenue over the 2009–2013 period, and about \$50 billion over the 2009–2018 period.⁷⁸

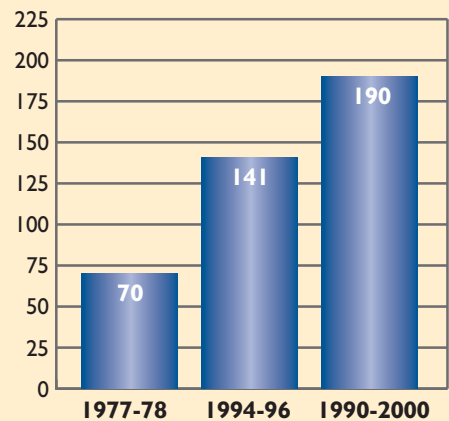
However, the proposed SSB tax failed to gain widespread support during the 2009–2010 health care reform debate on Capitol Hill. Supporters of such a tax attribute the defeat to the \$24-million lobbying and advertising campaign mounted by the beverage industry in 2009, funneled partly through an industry-funded group called Americans Against Food Taxes.⁷⁹

THE PUSH FOR SUGAR-SWEETENED BEVERAGE TAXES

The intake of sugar-sweetened beverages (SSBs) – which include soda sweetened with sugar, corn syrup, or other caloric sweeteners, as well as other carbonated and noncarbonated drinks like sport and energy drinks – is associated with higher body weight, poor nutrition, displacement of more healthful beverages, obesity and diabetes. It is estimated that daily SSB intake increases an individual's risk of diabetes by 32 percent.⁸⁰ Also, 75,000 new cases of diabetes, 14,000 new cases of coronary heart disease, and \$1.4 billion in health care costs can be attributed to the consumption of sugar-sweetened beverages.⁸¹ SSBs account for between 10 percent to 15 percent of daily caloric intake among children and adolescents, and the percentage of caloric intake from SSBs has been steadily increasing over the past few decades.⁸²

The majority of states already have minor taxes on sodas, typically not much higher than 4 percent, but new studies on the effectiveness of current taxes reveal that they do not affect overall consumption or obesity rates.⁸³ The studies show that in order to have a greater impact, the taxes must be higher and the revenues generated should go to obesity-prevention programs.⁸⁴

Daily Caloric Intake from Sugar-Sweetened Drinks in the U.S.



Source: Nielsen SJ and Popkin BM. "Changes in Beverage Intake between 1977 and 2001." *American Journal of Preventive Medicine*, 27(3):205-10, 2004.

Recently, many states have been introducing legislation to raise taxes on SSBs. In the 2009–2010 legislative session, SSB tax legislation was filed in at least 16 states, including Arizona, California, Colorado, Connecticut, Hawaii, Kansas, Massachusetts, Michigan, Mississippi, New Hampshire, New Mexico, New York, Rhode Island, Vermont, Virginia and Washington. The cities of Philadelphia and Washington, D.C. also introduced legislation to raise taxes on SSBs.

These taxes are highly controversial. Proponents of the taxes argue that they could be used to fund obesity prevention programs, such as a healthy eating and nutrition information campaign or to pay for park and recreation facilities, while opponents cite several problems.⁸⁵ First, as health economist Eric A. Finkelstein notes, these taxes disproportionately impact the poor. “Because people on lower incomes spend a higher proportion of their income on food,” Finkelstein says, “this type of tax is largely regressive in nature.”⁸⁶ In addition, the existing taxes levied on SSBs are so small that it is unlikely to serve as a deterrent to consumption. Finally, many states that have passed soda taxes do not use the revenues to combat obesity. Instead, the revenues are used to fund a wide variety of non-health-related state activities.

Despite these problems, a growing number of Americans support the idea of taxing SSBs as a means of combating obesity and promoting better nutrition. According to researchers at Yale University’s Rudd Center for Food Policy and Obesity, support for a tax on SSBs ranges from 37 percent to 72 percent. SSB taxes tend to garner more support when respondents are told that the revenue generated would be used to prevent obesity.⁸⁷ Proponents of SSB taxes also suggest imposing the tax as an excise rather than a sales tax.⁸⁸ Sales taxes are the most common form of food tax, but they often do not serve as a deterrent because they encourage consumers to seek out less expensive brands or larger containers, and the sales tax is not seen until the consumer gets to the register. Excise taxes can be more effective as a deterrent because they work as a fixed cost per ounce, and most manufacturers adjust the price so the consumers see the price difference when they are making their selection, rather than at the register. Advocates claim that a penny-per-ounce excise tax could reduce SSB consumption by more than 10 percent.⁸⁹

Advocates of taxing SSBs also argue that taxes can have an immediate impact on the problem of obesity, and that implementing a tax program involves minimal costs.

Public Health Law & Policy has developed model SSB legislation to help states interested in implementing a tax program.⁹⁰ The model policy includes imposing an excise tax on SSBs and earmarking the revenue for public health programs to treat obesity and related health conditions, education and prevention programs to increase access to healthy foods and physical activity.

The model legislation is designed for states that do not already have an excise tax imposed on SSBs and can be tailored to accommodate the state’s needs. The language in the model legislation can also be used by states that would like to amend their existing soda taxes to make them more effective as a public health strategy. The model suggests creating a Children’s Health Promotion Fund with earmarked funds, but the language can be customized to accommodate whatever a state plans to do with the tax revenue.⁹¹

Save the Children is also working with states on policies and legislation to help control childhood obesity. Its Campaign for Healthy Kids is working in the 16 states with the highest rates of childhood obesity to advocate for obesity-related legislation.

A PERSONAL PERSPECTIVE

Balancing “Calories In” with “Calories Out”: How Companies Can Help Customers and Employees Fight Obesity

-- By Indra Nooyi

AT THE HEART OF AMERICA'S OBESITY EPIDEMIC IS ACHIEVING A BALANCE BETWEEN THE CALORIES WE PUT INTO OUR BODIES AND THE CALORIES WE BURN. IT'S A SIMPLE EQUATION BUT A COMPLEX CHALLENGE THAT COMPANIES MUST HELP THEIR EMPLOYEES AND CONSUMERS TO OVERCOME.

To face this challenge, PepsiCo is committed to “Performance with Purpose,” which means delivering sustainable growth by investing in a healthier future for people and our planet. We realize that a healthier future for all people means a more successful future for PepsiCo.

We firmly believe companies have a responsibility to provide consumers with more information and more choices so they can make better decisions. But companies must also help their employees and their families reduce the calories they take in and increase the calories they burn through initiatives to promote balanced, active lifestyles. I believe the food industry can play a leading role in this area.

In fact, we must play a leading role.

That's why I am so proud that PepsiCo and many of our colleagues in the food and beverage industry have partnered to address a public health challenge greater than any one company or industry. Through the Healthy Weight Commitment Foundation, we have entered a principled partnership to encourage healthier choices in the marketplace, educate students in schools, and promote healthier lifestyles among associates.

Helping consumers by building on our portfolio of wholesome and enjoyable foods is not just good business for PepsiCo – it's the right thing to do for people everywhere. To demonstrate our commitment, we have announced major new goals for key brands in key markets: Reducing the average sodium per serving by 25 percent by 2015, reducing the average saturated fat per serving by 15 percent by 2020, and reducing the average added sugar per serving by 25 percent by 2020.

Because healthier lifestyles require making every calorie count, we're increasing the amount of whole grains, fruits and vegetables, nuts, seeds and low-fat dairy in our product portfolio.

Because consumers deserve more options and more control, we've introduced a wide range of portion sizes, such as 100-calorie packs, singles and multi-packs of many products.

Because consumers need more information to make the best decisions for their families, PepsiCo will display calorie counts and key nutrients on all food and beverage packaging by 2012.

Because children deserve a healthy, responsible learning environment, we are ensuring kids have access to better choices at school by eliminating full-calorie soft drinks and restricting the calories, fat, sugar and sodium in our snack products available in schools across America.

And because foods and beverages that are healthier should be both accessible and taste just as great as the original, we're introducing new products that deliver an optimal balance of flavor, nutrition and value. Tropicana's Trop50 delivers the health benefits of orange juice with 50 percent less sugar and half the calories. Last year, we launched SoBe Life Water, the first zero-calorie, naturally sweetened, vitamin-enhanced water. And Gatorade's G2 sports drink contains the same amount of electrolytes as the original Gatorade, but with 50 percent less calories.

Even with all of these efforts, we recognize there is no silver bullet that will eliminate obesity – no one food we can eliminate, no one pill we can take, no one law or regulation we can pass. And no one company can solve this challenge alone. That is why we are so delighted that Michelle Obama has challenged a wide range of stakeholders to do their part to eliminate childhood obesity in a generation. Together with the First Lady, we can build and strengthen a wide range of global and local partnerships and programs that emphasize balanced diets and nutrition, weight management and regular physical activity.

That's why PepsiCo works with the YMCA, the largest provider of fitness programs in the United States, to support "Activate America," which helps make healthy living a reality for millions of Americans. We work with many stakeholders, including the World Health Organization and the National Institutes of Health.

Building on a history of responsible advertising, PepsiCo helped found the Children's Food & Beverage Initiative in 2007, an industry self-regulatory organization operated by an affiliate of the Better Business Bureau. Recognizing that children are a potentially vulnerable group of consumers who deserve greater attention, PepsiCo pledged to advertise only products that meet certain nutrition criteria to children under 12. The criteria are among the strictest within the industry and are based on international and national guidelines.

We also focus on our own backyard because our associates' well-being is paramount. After all, their success is our success. Our wellness program, HealthRoads, gives associates and their families the tools they need to build healthier lives, including incentives, personalized coaching and health assessments, on-line support, and discounts on fitness club memberships and equipment. Several of our corporate sites feature state-of-the-art fitness centers. I'm glad to say that PepsiCo associates make good use of them.

Why does HealthRoads work? Because our people make it work. They show commitment and innovation. Many of our worksites have adopted their own version of the popular TV series, "Biggest Loser." At one site, more than 25 percent of associates signed up. A competition that included eight worksites prompted a total weight loss of 2,660 pounds – more than a ton of progress! These inspiring stories only confirm my view that if you give people an opportunity, they will make the most of it.

But we must also accept that you can never take the "diet" out of "diet and exercise." Companies like PepsiCo can and must continue to provide more information, healthier products, and encourage people everywhere to embrace more active lifestyles.

It's a challenge, but increasingly PepsiCo and other companies recognize and accept our responsibility to help our associates and consumers succeed.

Indra Nooyi is chairman and chief executive officer of PepsiCo and vice-chair of the Healthy Weight Commitment Foundation.

MENU LABELING

Menu labeling -- the posting of nutrition information on menus and menu boards -- is based on the idea that informed consumers can make healthier choices. Leading health organizations, including the American Medical Association, want labeling that is easy to understand and that includes the total calories, fat, saturated fat, trans fat and sodium content of menu items.⁹² According to the Yale Rudd Center for Food Policy and Obesity, 80 percent of consumers want this information.⁹³

Several states and localities led the way by enacting menu labeling laws in recent years,

■ **Five states – California, Massachusetts, Maine, New Jersey and Oregon – currently have laws that require the posting of nutrition information on menus and menu boards in restaurant chains with 20 or more in-state locations.** At the local level, Seattle, Philadelphia, New York City, Montgomery County, Md., Nashville and San Francisco have menu-labeling provisions in place.

States that passed legislation between June 1, 2009, and May 31, 2010, are:

■ **New Jersey** became the fifth state to enact statewide menu labeling legislation in 2010. The law requires chains with 20 or more locations nationally to display the number of calories for all items sold on all drive-thru and indoor menu boards. Menus must also include average calorie content for alcoholic beverages. Restaurants will be fined by state or local health departments between \$50 and \$100 for first offense, and \$250 and \$500 for second and subsequent offenses (SB 2905, Chapter 2009-306, 2010).

The 2010 Patient Protection and Affordable Care Act requires chain restaurants with 20 or more locations nationwide to post the number of calories for each regular menu item on menus, menu boards and drive-through displays. In addition, these restaurants must make available upon request information on the total number of calories, calories derived from fat, the amount of fat, saturated fat, cholesterol, sodium, carbohydrates, complex carbohydrates, sugars, dietary fiber, and protein contained in each serving size. The federal menu labeling law also imposes nutrition disclosure requirements on certain vending machine operators. The Food and Drug Administration (FDA) is charged with making rules detailing how the law will be carried out.

The federal law preempts state and local menu labeling laws that are not identical to the federal requirements. (An identical state or local law may make it possible for state or local personnel – who generally do not enforce federal law -- to effectively monitor compliance with menu labeling standards.) Thus, states and localities can enact menu labeling laws (whether similar to or different from the federal law) that apply to smaller chains, single restaurants, and other establishments offering prepared foods but not covered by the federal law. Anyone not subject to the federal law who voluntarily complies with the federal law, however, would not have to follow state or local menu labeling requirements. In the period while the FDA is conducting rulemaking, it remains unclear how federal preemption will be applied to state and local laws that predated the federal law.

Sixteen states and D.C., as well as numerous other local governments, have introduced legislation in 2010 to require restaurants to post nutrition information alongside their menu items.^{94,95} The locations are: Connecticut, Delaware, D.C., Florida, Hawaii, Indiana, Kentucky, Maryland, Missouri, New York, Oklahoma, Pennsylvania, Rhode Island, Tennessee, Texas, Vermont and West Virginia.⁹⁶

MENU LABELING: THE RESULTS ARE MIXED

There is conflicting evidence about the impact of menu labeling legislation.

In one study, researchers examined consumers' behavior at the Starbucks coffee chain over 14 months. When calories were posted prominently at Starbucks, the average number of calories per transaction fell by 6 percent.⁹⁷ Researchers also found that in areas where menu labeling is mandatory, restaurants were 58 percent more likely to offer low-calorie options than restaurants that were not in such areas.⁹⁸

There was concern that posting calories would hurt sales. But the Starbucks study found that including calories and offering more healthy options did not affect overall sales. Instead, while there was a decline in sales of higher-calorie food and beverages, there was an increase in sales of lower-calorie products which more than made up for any decline in higher-calorie options.⁹⁹

However, in a separate study, researchers examined the influence of menu labeling on fast-food choices in New York City. The research team collected receipts and survey responses from nearly 1,200 adults at fast-food restaurants in lower-income, minority neighborhoods in the city and compared them to a sample in Newark, N.J., where there was no menu labeling law. Although more than a quarter of the New York City respondents who saw caloric information reported that it influenced their choices, researchers did not detect any change in the total number of calories purchased.¹⁰⁰ The researchers speculate more outreach and education might be necessary to change behavior in lower-income communities.

Despite the mixed results, there is anecdotal evidence that restaurants across the country are re-thinking their menus to offer more healthy options. A variety of restaurants, including Austin Grill, California Pizza Kitchen, the Cheesecake Factory, Fuddruckers, Silver Diner and Sizzler are working with the consulting company Nutrition Information Services to work on menu makeovers where necessary.¹⁰¹ Starbucks has four new sandwiches under 400 calories and plans to begin a campaign in 2010 promoting beverages under 90 calories.¹⁰²

Many restaurants, however, have decided to keep some of their traditional and best-selling dishes on the menu, regardless of the calorie count next to them. But giving customers the knowledge, as well as the choice, to pick healthier options is a step in the right direction.

LEGISLATION TO LIMIT OBESITY LIABILITY

Many states have responded to the obesity epidemic by passing laws that prevent individuals from suing restaurants, manufacturers and marketers for contributing to unhealthy weight and related health problems. Laws that limit liability are fairly controversial and have been prompted by fears of obesity lawsuits similar to tobacco lawsuits. However, the limited liability laws are among the most visible obesity-related policies to emerge in recent years.

■ **Twenty-four states have passed obesity liability laws:** Arizona, Colorado, Florida, Georgia, Idaho, Illinois, Indiana, Louisiana, Kansas, Kentucky, Maine, Michigan, Missouri, New Hampshire, North Dakota, Ohio, Oregon, South Dakota, Texas, Tennessee, Utah, Washington, Wisconsin and Wyoming.

Proponents of these bills argue that the central issue is "common sense and personal responsibility."¹⁰³ Passage of the bills indicates a level of support for the view that obesity is a health issue for individuals. Supporters also endorse a 2004 Bush administration statement that "food manufacturers and sellers should not be held liable for injury because of a person's consumption of legal, unadulterated food and a person's weight gain or obesity."¹⁰⁴

Opponents of limited liability laws support the position that it is "impossible for consumers to exercise personal responsibility when businesses are concealing important information about their products," such as the number of calories in restaurant food or lack of consistency in food labeling.¹⁰⁵

COMPLETE STREETS INITIATIVES

Complete Streets are roadways that are designed and operated so users of all ages and abilities -- including bicyclists, pedestrians, public transit riders, and motorists -- can safely travel along and across them. There is a growing trend at both the state and local levels of government to adopt Complete Street policies in order to foster physical activity and promote healthy living and more environmentally friendly transportation use. Complete Streets policies require all new and renovated streets to be designed and built in a manner safe for all users.

One major obstacle to physical activity is concern about traffic safety. According to the 2009 National Household Travel Survey (NHTS), only 13 percent of children ages 5–14 usually walked or biked to school, compared with 48 percent of students in 1969.¹⁰⁶ Conversely, 12 percent of children arrived at school by private automobile in 1969, compared with 44 percent by 2009.¹⁰⁷ Rates of school-bus ridership over this same 40-year span showed the least change, increasing from 38 to 40 percent.¹⁰⁸ Previous studies have found parents frequently list traffic safety concerns as a top reason for why their children do not walk or bike to school.¹⁰⁹

Governments and communities that address traffic safety concerns can promote healthier living. For instance, a 2003 study found that 43 percent of people with safe places to walk within 10 minutes of home met recommended activity levels; just 27 percent of those without safe places to walk met the recommendation.¹¹⁰ An Australian study found that residents are 65 percent more likely to walk in a neighborhood with sidewalks.¹¹¹

A review by the National Conference of State Legislatures identified five state policy options that are most effective at encouraging biking and walking:¹¹²

1. Incorporating sidewalks and bike lanes into community design.
2. Providing funding for biking and walking in highway projects.
3. Establishing safe routes to school.
4. Fostering traffic-calming measures (e.g., any transportation design to slow traffic).
5. Creating incentives for mixed-use development.

According to the National Complete Streets Coalition, more than 120 Complete Streets policies have been passed in states, counties, regional governments and cities across the nation.

PHLP has developed model Complete Streets policies that communities can review, tailor, and adopt. The policies include model state and local laws and resolutions on Complete Streets, as well as model comprehensive plan language. Most

states have some version of a comprehensive plan, sometimes called a community plan, master plan or general plan. Including Complete Streets language in a state's comprehensive plan will encourage development of streets that are safe and attractive for physical activity to implement the vision of citizens, stakeholders, and government for future physical developments in their community. The model Complete Streets policies and additional information about Complete Streets can be found at www.phlpnet.org.

■ **Thirteen states have passed Complete Streets laws:** California, Connecticut, Delaware, Florida, Hawaii, Illinois, Maryland, Massachusetts, Michigan, Minnesota, Oregon, Rhode Island, and Wisconsin.

States that passed legislation between June 1, 2009, and May 31, 2010, are:

- **Connecticut** established the Connecticut Bicycle and Pedestrian Advisory Board within the Department of Transportation. The board will examine the need for bicycle and pedestrian transportation, promote programs and facilities for bicycles and pedestrians in the state, and advise appropriate agencies of the state on policies, programs and facilities for bicycles and pedestrians (SB 735, 2009).
- **Michigan** law requires that the Department of Transportation and local road agencies work to develop and adopt complete street policies. In planning, design, construction, maintenance, and operation of streets and highways, the department and local road agencies shall adhere to the adopted complete street policy. The department shall provide assistance to and coordinate with local road agencies and metropolitan planning organizations in developing complete street policies, including the development of model complete street policies (SB 254, 2009).
- **Minnesota** mandates that the commissioner of transportation implement a Complete Streets policy after consultation with stakeholders, state and regional agencies, local governments, and road authorities. Beginning in 2011, the commissioner must report on the implementation of the Complete Streets policy in the agency's biennial budget submission. Local road authorities are encouraged, but not required, to create and adopt Complete Streets policies for their roads that reflect local context and goals (S.F. 2540, 2010).
- **Wisconsin** law directs the Department of Transportation to include bicycle and pedestrian accommodations in all new construction and reconstruction projects funded in whole or in part from state or federal funds (1918gr. 84.01 (35), 2009).

THE EFFECT OF THE BUILT ENVIRONMENT ON ACTIVE TRAVEL

Many studies show that walking and biking trips have declined significantly over time for both children and adults. For example, between 1977 and 1995, walking trips by adults decreased by 32 percent.¹¹³ Residents who live in traditional neighborhoods – those that include sidewalks, street signs, safe intersections and streets with access to nearby destinations – walk more than those who live in a typical suburban neighborhood.¹¹⁴ Critics argue that self-selection – choosing where you live because you are already physically active – is the reason behind the higher amounts of physical activity in traditional neighborhoods, but studies show that both self-selection and the built environment have an effect on rates of active travel. Multiple studies found that people living in traditionally designed communities walked more for transportation than those living in suburban communities, regardless of their walking preferences.^{115,116}

Some transportation investments that have a positive effect on active travel in neighborhoods include:

- Linking neighborhoods to public transit.¹¹⁷
- Improving and increasing the number of sidewalks and bicycle lanes.^{118,119}
- Building multi-use trails.¹²⁰
- Instituting traffic calming and safety measures.¹²¹

Research on community design and active living has grown exponentially over the past decade. Active Living Research, a national program of the Robert Wood Johnson Foundation (RWJF), conducts and supports research to identify environmental factors and policies that influence physical activity for children and families in order to inform effective childhood obesity-prevention strategies, particularly in low-income and racial and ethnic communities at highest risk. Active Living Research maintains a Web site with resources for policy-makers, elected officials and advocacy organizations. More information on designing and building healthy communities is available at <http://activelivingresearch.org/>.

BREAST-FEEDING AND THE LAW

The benefits of breast-feeding for infants and mothers are well documented. According to the AAP, a breast-fed infant is 21 percent less likely to die in the first year than one who is not breast-fed, and breast milk helps protect babies against a long list of infectious diseases and chronic problems, including diabetes, obesity and asthma.¹²² For mothers, the benefits include a lower risk of breast and ovarian cancer as well as protection against weight gain.¹²³

This strong evidence base led the U.S. government to include breast-feeding goals in Healthy People 2010. (The White House Task Force on Childhood Obesity also included two recommendations around promoting and supporting breast-feeding in its May 2010 action plan.) Healthy People 2010 set out two main breast-feeding-related goals: To increase the proportion of mothers who breastfeed their babies in the immediate postpartum period from 64 percent to 75 percent, and increase the proportion of mothers who breastfeed their babies at six months from 29 percent to 50 percent.¹²⁴

However, women returning to work after giving birth who wish to continue breast-feeding often face challenges. In fact, a 2006 study found that working full-time had a negative effect on breast-feeding duration.¹²⁵ While 44 states and the D.C. have laws that allow women to breastfeed in any public or private location, only 24 states and the D.C. have laws specifically related to breast-feeding in the workplace.¹²⁶

The health reform law signed by President Obama requires employers to provide “reasonable” unpaid breaks to nursing mothers to express milk for their infants under an amendment to the Fair Labor Standards Act.¹²⁷ The law also requires employers to provide a private location, other than a bathroom, where such employees may express milk. Employees must be allowed such breaks for up to one year after their child’s birth. Employers of fewer than 50 employees are exempt if the breast-feeding requirements would “impose an undue hardship by causing the employer significant difficulty or expense.”

These measures are sorely needed. Mothers who wish to express, or “pump”, breast milk often lack a clean, private space where they can do so. According to a Cochrane Review article on breast-feeding in the workplace, “unless these mothers get support from their employers and fellow employees, they might give up breast-feeding when they return to work. As a result, the duration and exclusivity of breast-feeding to the recommended age of the babies would be affected.”¹²⁸ The article goes on to note that by promoting and supporting programs to support breast-feeding, employers could influence the duration of breast-feeding and also benefit from less work absenteeism, higher productivity, and increased employee morale and retention.¹²⁹

NATIONAL CONFERENCE OF STATE LEGISLATURES LEGISLATIVE TRACKING

In February 2010, the National Conference of State Legislatures (NCSL) released a report entitled, “Promoting Healthy Communities and Preventing Childhood Obesity: Trends in Recent Legislation,” which tracks enacted and introduced legislation in the states from 2009.¹³⁰ The following is a summary of items included in the report:

- **Bicycling and walking/Complete Streets:** In 2009, 10 states enacted legislation encouraging bicycling and walking, and currently more than 20 states have some form of complete street policy. In 2009, both Wisconsin and Washington dedicated or appropriated money to bicycle and pedestrian programs.
- **Transit-oriented development:** Many states have started to note the importance of using public transit services to connect neighborhoods with shopping and other nearby resources. The number of states introducing transit-oriented development significantly increased in 2009, with 10 states enacting various mechanisms to help plan, build and finance transit programs.
- **Safe routes to school/school siting:** States have been making efforts to help the federal Safe Routes to School program through legislation drawing attention to the importance of creating safe environments for children to bike and walk to school. Also, policy-makers have spent more time looking into improving school sites so that more children are within realistic walking and bicycling distance. In 2009, Hawaii, Minnesota and Washington enacted legislation requiring schools to consider the needs of students who plan to walk or bike to school.
- **Farm-to-school:** More than half the states and numerous localities have some form of a farm-to-school program. Legislation generally focuses on building relationships between agencies, increasing communication between schools and local farmers and reducing barriers to buying locally grown food.
- **Farmers’ markets:** From 1994 to 2008, the number of farmers’ markets nationwide almost tripled. Legislators across the nation are trying to increase access to farmers’ markets for lower-income individuals and those using food assistance programs like the Supplemental Nutrition Assistance Program (SNAP), formerly known as food stamps. In 2009, 10 states introduced bills, four of which were enacted, to improve access to farmers’ markets by individuals using public assistance programs.
- **Food deserts/access to healthy food:** Ever since the introduction of the Pennsylvania Fresh Food Financing Initiative, a model for bringing grocery retail to communities lacking healthy food options, many other states have started introducing legislation that incentivizes communities to invest in grocery stores in underserved areas. Four states – Illinois, Louisiana, New York and Texas – enacted such legislation in 2009.
- **Local food/direct marketing:** Policy-makers continue to encourage and assist local food systems to make sure they have the necessary infrastructure in place to continue providing healthy food to the public. Legislation to improve local food system production and consumption has grown tremendously in recent years; 11 states passed laws or appropriated funds for local food systems in 2009.

B. CDC GRANTS TO STATES FOR OBESITY PREVENTION AND CONTROL

The CDC funds many state and local jurisdictions' efforts to prevent and control obesity and obesity-related diseases. In 2010, CDC, through the Communities Putting Prevention to Work (CPPW) program, awarded \$373 million to large cities, urban areas, rural areas, and Tribes to fund evidence-based prevention and wellness strate-

gies. Of that \$373 million, \$230 million will be targeted toward obesity prevention efforts. Through CPPW, CDC also awarded an additional \$120 million to States and Territories for obesity prevention and tobacco prevention/cessation.

A summary of these grants is presented in the table below.

OBESITY-RELATED CDC GRANTS TO STATES — FY 2010					
State	ARRA Community Obesity Grants*	Nutrition, Physical Activity & Obesity Grant	Coordinated School Health Grants	Healthy Communities**	REACH US
Alabama	✓			✓	
Alaska				✓	
Arizona	✓		✓	✓	
Arkansas		✓	✓	✓	
California	✓	✓	✓	✓	✓
Colorado	✓	✓	✓	✓	✓
Connecticut			✓	✓	✓
Delaware				✓	
DC					
Florida	✓			✓	
Georgia		✓		✓	
Hawaii	✓	✓		✓	✓
Idaho			✓	✓	
Illinois	✓			✓	✓
Indiana	✓	✓		✓	
Iowa		✓		✓	
Kansas				✓	
Kentucky	✓		✓	✓	
Louisiana				✓	
Maine	✓		✓	✓	
Maryland				✓	
Massachusetts	✓	✓	✓	✓	✓
Michigan		✓	✓	✓	✓
Minnesota	✓	✓	✓	✓	
Mississippi			✓	✓	
Missouri				✓	
Montana		✓		✓	
Nebraska	✓	✓		✓	
Nevada				✓	
New Hampshire		✓			
New Jersey		✓	✓	✓	
New Mexico	✓	✓		✓	✓
New York	✓	✓	✓	✓	✓
North Carolina		✓	✓	✓	✓
North Dakota			✓	✓	
Ohio	✓		✓	✓	✓
Oklahoma	✓			✓	✓
Oregon	✓			✓	
Pennsylvania	✓			✓	✓
Rhode Island		✓		✓	
South Carolina		✓	✓	✓	✓
South Dakota			✓	✓	
Tennessee	✓	✓		✓	
Texas	✓	✓		✓	
Utah		✓		✓	
Vermont				✓	
Virginia				✓	✓
Washington	✓	✓	✓	✓	✓
West Virginia	✓	✓	✓	✓	✓
Wisconsin	✓	✓	✓	✓	
Wyoming				✓	
# of States	24	25	22	49	17***

Notes: *30 communities in 24 states received funding for obesity prevention efforts via ARRA's Communities Putting Prevention to Work grant program. ** All states were eligible to apply for funding in the range of \$40,000-\$75,000, depending on the award program. DC and New Hampshire did not apply for funding. ***Five other states receive REACH grants but the grantees' work in these states doesn't relate to obesity (AL, AZ, GA, IN, WY).

C. STATE AND COMMUNITY SUCCESS STORIES

Until recently, very few evidence-based, successful childhood obesity-prevention strategies existed. However, over the past decade, federal agencies, private foundations, and research institutions have devoted significant resources to

developing evidence-based and practice-based interventions in schools, communities and family home settings. As a result, there is a small, but growing body of evidence on what works and what does not.

THE GROWING EVIDENCE-BASE FOR CHILDHOOD OBESITY PREVENTION

Travis County, Tex. – CATCH Trial

An intensive school-based program that also involved local community groups changed obesity-related behaviors, such as physical inactivity, television viewing, low fruit and vegetable consumption, and intake of sugar-sweetened beverages among elementary school students. As a result of the program, evaluations showed a decline in the percentage of students classified as overweight or obese.¹³¹ Students enrolled in schools participating in the Coordinated Approach to Child Health trial that promoted community partnerships (CATCH BPC), saw an 8.3 percent decline in obesity and overweight rates. Students enrolled in the trial without community participation (CATCH BP) saw a decline of only 1.3 percent in obesity and overweight rates.

Cambridge, Mass. – Healthy Living Cambridge Kids

Healthy Living Cambridge Kids (HLCK) reduced the number of obese elementary schoolchildren from 20.2 percent in 2004 to 18 percent in 2007.¹³² The program worked in the racially, ethnically and socioeconomically diverse Cambridge Public School System, targeting community and school policies as well as families' and individuals' behaviors. Children in all gender, race/ethnicity and income groups experienced an increase in healthy weight; 40.1 percent who were overweight in 2004 became healthy weight in 2007, and 24 percent who were obese became overweight. The percentage of children shifting up in weight category was much lower; 9.4 percent who were healthy weight in 2004 became overweight in 2007, and 18.6 percent who were overweight became obese.

Arkansas – Statewide Legislation to Address Childhood Obesity

A five-year evaluation of Arkansas Act 1220 of 2003 revealed that a significant number of school districts in the state have developed and implemented policies to foster healthy eating and increased physical activity.¹³³ The Act mandated the annual measurement of BMI for all public school students and restricted elementary school students' access to vending machines. In addition, schools have made other policy changes that were not mandated by the legislation. For instance, in 2008 more than a third of schools required that healthy options be provided for student parties, a significant increase from the 4.5 percent that had this policy in 2004. In another policy shift, only 37.2 percent of schools reported having vending machines available during the lunch period in 2008, compared with 72.3 percent in 2004.

Minneapolis, Minn. – The HOME Pilot Program

According to the results from this small pilot program, interventions aimed at increasing the quality of foods served at home during family meals can help children develop greater food preparation skills and may increase their consumption of fruits and vegetables.¹³⁴ Forty-four family groups (a child age 8–10 and a parent) participated in the randomized controlled trial. Families attended five 90-minute sessions featuring nutrition education, taste testing, cooking lessons and parent discussion groups. The sessions were highly rated by both parents and children. Children who participated in the intervention were more likely to report greater food preparation skills and had higher intakes of key nutrients. Participants were predominantly White and highly educated; it remains to be seen how effective this program would be in more racially and economically diverse communities.

St. Louis, Mo. – The PARADE Mentoring Program

Children who received one-on-one mentoring from trained adults – which include guidance on healthy eating and active living – were more knowledgeable regarding diet and physical activity guidelines than children in the control group.¹³⁵ The Partners of All Ages Reading about Diet and Exercise (PARADE) study recruited children ages 5-12 who were already receiving tutoring through programs like Big Brothers, Big Sisters. The PARADE children received special lessons from their mentors to enhance their knowledge of diet and physical activity and to find low-cost fruits and vegetables in their communities. Their parents received newsletters that provided shopping tips, healthy recipes that are easy to prepare, and advice on making healthy choices when eating fast food. After the intervention, PARADE children were more likely to eat more than five servings of fruits and vegetables and engage in at least an hour of physical activity daily than the kids in the control group. Health outcomes, such as BMI, were the same between intervention and control groups.

Hawaii – Healthy Foods Hawaii Intervention

Parents who participated in this intervention showed gains in healthy food knowledge compared with parents in the control group.¹³⁶ Studies have shown that Native Hawaiians and Pacific Islanders are at high risk for obesity and obesity-related diseases.^{137,138} To reach this group, researchers at the University of Hawaii designed an intervention for areas where multi-ethnic parents of children ages 8-12 shop. Developed with input from community members and food distributors and producers, Healthy Foods Hawaii worked with five local food stores in two low-income communities to increase the stocking of nutritious foods and feature point-of-purchase promotions. Parents who participated in the intervention had higher perceptions that healthy foods are convenient, while their children increased their healthy eating score and their consumption of water.

Houston, Tex. – The Fun Families Study

Children who enrolled in the Fun Families Study initially reported an average of six hours of screen time (TV, computer, and video games) a day.¹³⁹ Screen time is a contributing factor to childhood obesity for several reasons: It promotes sedentary behavior, children tend to eat while sitting in front of the TV or computer, and children are exposed to food advertising. To reduce screen time, researchers recruited about 200 families with children ages 6-9 to participate in a randomized controlled trial. Families in the intervention group participated in a two-hour workshop promoting five healthy behaviors: Reducing time spent watching TV; turning off the TV when no one was watching; turning off the TV during meals; removing TV from children's bedrooms; and engaging in fun, non-media-related activities. Parents also received information about alternative activities. Six months after the intervention, the racially and ethnically diverse families in the intervention group were less likely to have the TV on when nobody was watching, eat snacks while watching TV, and have a TV in the child's bedroom.

Houston, Tex. – The BOUNCE Study

Latina girls who participated in a community-based exercise and nutrition program along with their mothers showed higher levels of physical fitness at the end of the 12-week intervention compared with daughters in the control group.¹⁴⁰ The Behavior Opportunities Uniting Nutrition, Counseling and Exercise (BOUNCE) study recruited low-income Latina mothers and their daughters ages 7-13 who received three weekly group exercise classes, including salsa lessons and sports; two weekly nutrition sessions; and one weekly behavioral counseling session. Mother-daughter pairs in the control group met with an instructor once a week for 45 minutes and received educational materials on various nutrition topics, and engaged in exercise or sports. At the end of the study, daughters enrolled in the intervention group had higher levels of physical fitness compared with control group daughters, but neither group of mothers reported any significant changes in their physical fitness or activity levels.

HEALTHY KIDS, HEALTHY AMERICA: STATE SUCCESS STORIES

The National Governors Association Center for Best Practices, with funding from RWJF and the CDC, awarded grants to 15 states to help develop policies and practices to prevent childhood obesity. Below is a selection of states and the progress they have made through the Healthy Kids, Healthy America program.¹⁴¹

Healthy Kids, Healthy Michigan – Program leaders found policy change to be the missing piece in obesity prevention. So the governor asked the state surgeon general to head the Obesity-Prevention Workgroup, which brought together more than 230 leaders from public, private and nonprofit groups and agencies. After conducting a statewide obesity scan, the working group recommended the following approaches: BMI surveillance; Medicaid coverage to ensure payment for screening and treatment of childhood obesity; improved fresh food access in underserved areas by attracting new food retailers through property tax and other financial incentives; and Complete Streets and Safe Routes to Schools programs. The initiative achieved a great deal, including a new law that uses property tax incentives to increase healthy food access in underserved communities. It also revived momentum around a previously stalled physical education bill. In one school district, every school cafeteria's à la carte lines were changed to stock fresh fruits and vegetables, and in another district, dairy carts with milk, yogurt and cheese sticks became very popular among the students.

Healthy Kids, Healthy Kentucky – In Kentucky, program leaders used their funding to improve childhood obesity policies in child-care settings. Four day-care centers in high-risk communities were selected as pilot sites. Teachers received training in a curriculum that uses color, music, and taste to teach children how to make healthy food choices. For example, one pilot center used a gardening curriculum to teach nutrition. Staff members were paid to attend training sessions. Each child-care center developed schedules for physical activity, including at least 30 minutes per day of activities like musical chairs, dancing or walking to the park.

Healthy Kids, Healthy Utah – The Utah initiative focused on increasing physical activity in schools, and stopping the practice of rewarding children with candy for good behavior. The local government paired up with the Utah PTA to develop training modules and a policy on non-food incentives for children. A booklet offering a variety of alternative incentives to candy and sweets has been sent to all Utah elementary schools, and a PTA resolution encouraging non-food rewards for students passed. The program increased Utah's number of Gold Medal Schools, which are schools that help students be more physically active. After the initiative, 43 out of 57 schools in Davis County, up from 23 schools, were part of the Gold Medal Schools program.

MISSISSIPPI LAWMAKERS: ROLE MODELS FOR THE STATE

At a small college gym in Jackson, Miss., more than 70 lawmakers and 19 members of the governor's staff meet several times a week to work out.¹⁴² Since January 2010, they have lost more than 1,300 pounds, and weight-loss winners receive cash prizes that they donate to local schools. Many of the lawmakers involved in the program say that they have also cut out eating red meats, fried food and desserts, and replaced them with grilled chicken and more vegetables. Lawmakers in other states are participating in similar campaigns, but none as organized and dedicated as Mississippi's.

DC SCORES

DC SCORES includes 700 students at 23 elementary and middle schools in D.C..¹⁴³ Program leaders combine two after-school activities, writing workshops and soccer.¹⁴⁴ The program also includes poetry competitions. The goals are to improve four areas: school engagement, physical fitness, self-worth, and sense of belonging.¹⁴⁵ Evaluation results in 2009 showed that students made positive gains in all four categories, with marked improvements in cardiovascular fitness and decreases in BMI. At the end of the program, participants also were running an average of 10 more laps than when they started, and obesity rates decreased for both boys and girls.¹⁴⁶

THE IMPORTANCE OF PLAY: KaBOOM! COMMUNITY SUCCESS STORIES

KaBOOM!, an organization dedicated to working with communities to build safe places for children to play, put together a study that evaluates local initiatives to improve opportunities for recreation. Communities included in the study ranged from small towns to large cities, with variation in cost and complexity of the program.¹⁴⁷

Ankeny, Iowa: Parks and Recreation – More than one-quarter of Ankeny’s population is under the age of 18, and after a failed attempt to build a sports complex to fill the needs of the community, city officials shifted the political process to include resident input into all phases of planning. Since then, a large new sports complex has been constructed, as well as two new playgrounds and a skate park. The city currently builds up to three new playgrounds per year.

St. Petersburg, Fla.: Play ‘n’ Close to Home – The mayor noticed that less than half of the children under 18 were within a half-mile of a playground, and he developed a policy, “Play ‘n’ Close to Home,” to increase the number of playgrounds. Over seven years, he increased the percentage of children who live within half-mile of a playground from 49 percent to 75 percent. Twenty-five new playgrounds have been constructed, many of them in lower-income neighborhoods, and 11 of the new playgrounds are open to the community through joint-use agreements.

The engagement of key community stakeholders was one of the strategies that made the KaBOOM! projects successful. In Ankeny, the public was involved through surveys, focus groups, community meetings and playground votes, and in St. Petersburg the mayor built relationships with school officials and political leaders.

MINNESOTA STATEWIDE HEALTH IMPROVEMENT PLAN

In August 2009, Minnesota announced \$47 million in Statewide Health Improvement Program (SHIP) grants to 40 communities to fight obesity and smoking.¹⁴⁸ The grants are used to replace unhealthy beverages with healthier ones in park vending machines, to create joint-use agreements to allow the public to use school gyms during after-school hours, and to help businesses promote physical fitness among employees.¹⁴⁹ Each community that receives a grant is required to make a 10 percent match. Officials hope the grants will help the state to decrease health care spending by \$1.9 billion by 2015.¹⁵⁰

ARRA OBESITY GRANTEES PRACTICING PREVENTION

The CDC has awarded \$373 million in ARRA prevention grants to 44 communities to focus on obesity and tobacco prevention. The communities will use the obesity funds for a variety of efforts such as decreasing the consumption of sugar-sweetened beverages, supporting urban design that promotes physical activity, improving active transport and public transportation infrastructure, improving access to affordable healthy foods in underserved areas, and initiating farm-to-school programs.¹⁵¹

The **county of San Diego** will receive \$16.1 million and plans to focus on improving the built environment and regional food systems. The county also will promote nutrition and physical activity through before- and after-school programs.¹⁵²

The **Tri-County Health Department in Colorado** will receive \$10.5 million and plans to partner with school districts to improve school wellness and Safe Routes to School activities. It also plans to develop community gardens and work with municipalities in zoning, planning and transportation to increase residents’ opportunities for physical activity and access to nutritious foods.¹⁵³

Louisville, Kentucky will receive \$7.9 million and plans to implement a “Food Fight” social marketing campaign to support healthy food choices, make fresh fruits and vegetables more available in neighborhoods without access to grocery stores, and improve bike and walking trails.¹⁵⁴ The city also plans to increase lower-income families’ access to farmers’ markets, and make city parks safer.

A list of all 44 grantees and a description of their prevention programs can be found at www.hhs.gov/recovery/programs/cppw/granteesbystate.html.

INTERNATIONAL EFFORTS TO PREVENT CHILDHOOD OBESITY

United Kingdom – The MEND Program

According to a randomized control trial of 116 obese children in the United Kingdom, those enrolled in the Mind, Exercise, Nutrition, Do it (MEND) program saw their waistlines shrink by 4.1 centimeters (1 5/8 inches) and had significant reductions in BMI compared with children in the control group.¹⁵⁵ MEND targets overweight and obese children ages 7-13 and their parents through 20 group sessions over 10 weeks that focus on behavior change, nutrition education and physical activity. The MEND Foundation currently provides programs in partnership with YMCAs in Austin, Houston, Dallas, the D.C., and Los Angeles. The program reaches out to low-income families in underserved communities, and by the end of this year over 1,000 U.S. kids will be served.

France – EPODE or Together Let's Prevent Childhood Obesity

A school- and community-based program to prevent and reverse childhood obesity in France through interventions targeting lifestyle and environment changes has shown measurable results in lowering the number of children with BMIs in the overweight and obese range.¹⁵⁶ Children from the towns where the community-based program has been implemented were 50 percent less likely to be overweight than children in two control towns -- 8.8 percent compared with 17.8 percent.

The 12-year Fleurbaix-Laventie Ville Santé (FLVS) Study began in 1992 with the implementation of a school-based nutrition education program in two small towns in northern France. The school-based program drew the broad support of the local communities and the interventions expanded to address both children and adults. The town councils built new recreational facilities and hired trainers to promote physical activity in schools. Dietitians employed by the towns were available to work with school and community groups. Community groups organized walking-to-school days as well as various family activities. The town-wide focus on healthy living prompted numerous media stories.

Meanwhile, researchers collected body weight and height for the entire population of 5- to 12-year-old children attending school in the two small towns (2002 = 515 children; 2003 = 592 children; 2004 = 633 children.) Researchers also collected data from 349 children in two comparison towns.

Initially there was a rise in the prevalence of childhood overweight between the start of the intervention in 1992 and 2000. However, in 2000 the trend in childhood overweight began to reverse itself. In 2002, 13.2 percent of children ages 5-12 were overweight, which declined to 10.5 percent in 2003 and 8.8 percent in 2004. The downward trend in overweight rates was seen across both genders and all socio-economic groups.

Researchers have emphasized the importance of a total community-prevention program to reduce childhood overweight and argue that interventions targeting schools alone are not enough.

The initial results from the FLSV study influenced the development of France's nationwide campaign: Together Let's Prevent Childhood Obesity, or EPODE, which rolled out in 10 towns across France in 2004. EPODE aims to reduce childhood overweight and obesity by creating local environments, childhood settings, and family norms that support healthy eating, active play and recreation.¹⁵⁷

Today, EPODE is being implemented in 226 towns in France, 15 in Belgium, 38 in Spain, and 5 in Greece. The EPODE European Network (EEN) is expanding the use of community-based intervention programs using the EPODE methodology in other European countries, regions and towns.

Federal Policies and Programs

In 2010, there were three major developments at the federal level regarding obesity prevention. First, Congress passed and the President signed historic health care legislation into law. Second, First Lady Michelle Obama launched her major domestic policy initiative, Let's Move, a campaign to solve the childhood obesity problem within a generation. Third, President Obama created the White House Task Force on Childhood Obesity, which issued a national action plan with the bold goal of reducing child obesity rates from 17 percent to 5 percent by 2030. The action plan contains clear interim measures and was developed with all agencies of the federal government participating. All three of these developments will influence the way federal, state, and local governments work to fight obesity.

Many federal departments and agencies work on issues that impact our ability to eat healthy foods, and have safe opportunities to be physically active and maintain a healthy weight. Yet, until recently there had been no coordinated federal plan to prevent and reduce obesity and little collaboration among departments and agencies. The new health reform law, Let's Move, and the Task Force on Childhood Obesity have helped change this. The law mandates the creation of a National Prevention and Health Promotion Strategy, and includes numerous other prevention and wellness components. Let's Move is galvanizing public, private, and nonprofit sectors to solve the problem of childhood obesity within a generation. Meanwhile, the national Task Force is implementing an interagency strategy to tackle the issue.

The landmark health reform law – the Patient Protection and Affordable Care Act of 2010 (P.L. 111–148) – is the most visible piece of federal legislation impacting obesity and the health of Americans. But there are numerous other pieces of major legislation before Congress that also have the potential to improve Americans' eating and physical activity habits.

This section features a discussion of key federal legislation, policies and programs impacting obesity, including the health reform law, the 2009 stimulus, CDC-funded programs, Let's Move, the White House Task Force on Childhood Obesity, and a summary of all federal departments and agencies with a role to play.

A. THE PATIENT PROTECTION AND AFFORDABLE CARE ACT OF 2010

The Patient Protection and Affordable Care Act of 2010 was the result of the more than year-long, highly contentious process to reform the U.S. health system. The act is expected to add 32 million Americans to the ranks of the insured, the majority of whom will purchase health insurance plans from private insurers. In addition, insurers can no longer deny coverage based on a pre-existing medical condition, nor can insurance be revoked except in the case of fraud. Among those not covered by the new law are the estimated 12 million undocumented immigrants who live and work in the United States, and who make up 4 percent of the population and 5.4 percent of the workforce.¹⁵⁸

As others have noted,¹⁵⁹ the Affordable Care Act has the potential to address the obesity epidemic through a number of prevention and wellness provisions, including:

■ **The National Prevention, Health Promotion & Public Health Council.** This council, housed within HHS, will provide leadership at the federal level and coordinate programs among federal departments and agencies that are involved in prevention, wellness and health promotion practices, the public health system and integrative health care. The council also will develop the National Prevention and Health Promotion Strategy. The council will comprise

departmental secretaries from across the federal government, with the surgeon general serving as chair. The goal of the council is to encourage federal departments and agencies to focus on health in all policies. The interagency council must submit first report on its activities and progress by July 1, 2010.

- **National Prevention and Health Promotion Strategy.** A national strategy will be developed to set goals and objectives for federally supported prevention, health promotion, public health and integrative health care practices. It also will establish measurable actions and timelines to carry out the strategy. The interagency council must release the national strategy by March 23, 2011.
- **The Prevention and Public Health Fund.** This will provide for an expanded and sustained national investment in prevention and public health programs. The fund will support programs authorized by the Public Health Service Act for prevention, wellness and public health activities, including prevention research and health screenings and initiatives, such as the Community Transformation grant program, the Education and Outreach Campaign for Preventive Benefits, and immunization programs. The funding is mandatory and funding levels will be: FY 2010 – \$500 million; FY 2011 – \$750 million; FY 2012 – \$1 billion; FY 2013 – \$1.25 billion; FY 2014 – \$1.5 billion; FY 2015 and each fiscal year thereafter – \$2 billion. Funding appropriations begin in Fiscal Year 2010.
- **Community Transformation Grants.** The CDC is authorized to award competitive grants to state and local governments and community-based organizations for the implementation, evaluation, and dissemination of evidence-based community preventive health activities in order to reduce chronic disease rates, prevent the development of secondary conditions, address health disparities, and develop a stronger evidence-base of effective prevention programming. Potential grantees are required to develop a detailed plan that includes the policy, environmental, programmatic and infrastructure changes needed to promote healthy living and reduce disparities. Beginning in FY2010, the HHS Secretary, through the CDC director, will award these grants to state and local government agencies and community-based organizations.
- **Funding for Childhood Obesity Demonstration Project.** The Children’s Health Insurance Program Reauthorization Act of 2009 (CHIPRA) (P.L. 111–3) established a Childhood Obesity Demonstration Project and authorized \$25 million for FY 2009–2013. The health reform bill appropriates \$25 million for the secretary of HHS to carry out the demonstration project in FY 2010–2014.
- **Healthy Aging, Living Well.** This initiative authorizes the secretary of HHS to award competitive grants to health departments and American Indian tribes to carry out five-year pilot programs to provide public health community interventions, screenings, and clinical referrals for individuals between ages 55 and 64. Beginning in FY2010, the HHS Secretary, acting through the CDC director, will award these grants to state or local health departments.
- **Essential Health Benefits Requirements.** The act provides an essential health benefits package that is defined by the secretary of HHS and limits cost-sharing. Included in the general benefit categories are preventive and wellness services and chronic disease management. All new health plans in the individual and small group markets and all qualified health plans that participate in the new health insurance exchanges will be required to cover the essential health benefits package by 2014.
- **Coverage of Preventive Health Services.** A group health plan or a health insurance issuer offering group or individual health insurance must provide coverage, without cost-sharing, for evidence-based items or services that have a rating of “A” or “B” in the current recommendations of the U.S. Preventive Services Task Force (USPSTF). Some clinical services with an “A” ranking include colorectal cancer screening for men and women age 50 and older and cervical cancer screening for sexually active women. Examples of “B”-rated clinical services include obesity screening and counseling and diabetes screening. The coverage of preventive health services is effective September 23, 2010.
- **Nutrition Labeling of Standard Menu Items at Chain Restaurants with 20 or more locations.** The HHS Secretary will disseminate proposed regulations requiring nutrition labeling for standard menu items in chain restaurants or food establishments with 20 or more locations. These entities must disclose the number of calories in standard menu items and other required nutritional information. Vending machine operators that own or operate 20 or more machines must disclose the number of calories in each food item in a way that makes the information available before purchase. The HHS Secretary must publish the regulations no later than March 23, 2011.

■ **National Diabetes Prevention Program.** The CDC will manage a grant program to establish community-based model sites for a type 2 diabetes prevention program to assist adults at high risk for the disease. Eligible grantees include state and local health departments,

tribal organizations, national networks of community-based non-profits focused on health and academic institutions or other entities determined by the HHS Secretary. Funding may be authorized beginning in FY2010.

B. PREVENTION AND WELLNESS INITIATIVES IN THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009 (ARRA)

ARRA provided \$1 billion for a Prevention and Wellness Fund, including \$650 million for evidence-based clinical and community-based prevention and wellness strategies. **Communities Putting Prevention to Work (CPPW)** is the centerpiece of this comprehensive public health initiative. CPPW's goal is to change systems and environments – for example, improving access to healthy foods and opportunities for physical activity – and establish policies that will promote the health of populations. As of May 31, 2010, HHS had awarded:

■ \$120 million in funding to 50 states, D.C., Puerto Rico and six Pacific territories to help communities and schools support healthy choices through a variety of methods including using media to support healthy food and beverage choices and increased physical activity, and increasing access to healthy choices and safe places to be active.¹⁶⁰

■ \$373 million to 44 communities to support public health efforts to reduce obesity and smoking, increase physical activity and improve nutrition. Grantees will use the funds for efforts designed to make it easier for community members to make healthy choices, such as increasing the availability of healthy foods and beverages, improving access to safe places for

physical activity, discouraging tobacco use, and encouraging smoke-free environments. Of the \$373 million, \$230 million will fund obesity-prevention efforts in 23 communities and the remainder will fund tobacco-prevention efforts. Communities will have two years to complete their programs.¹⁶¹ (See Section 2C for more information about these ARRA grants.)

■ \$76 million for community and evaluation support.¹⁶²

■ \$27 million in cooperative agreements for state and territorial aging and health departments to help older individuals with chronic conditions to improve their health and reduce their use of costly medical care.¹⁶³

In addition, HHS has announced the following ARRA funding opportunities:

■ \$40 million for a National Prevention and Media Initiative. These funds will be split between media (\$30 million) and national organizations (\$10 million). They will be used to develop effective and hard-hitting prevention and wellness messages and advertisements that will be amplified and extended through the national organizations to complement and reinforce community and state activities.¹⁶⁴

C. FEDERAL OBESITY-RELATED LEGISLATION UP FOR REAUTHORIZATION IN 2010

1) The Child Nutrition and Special Supplemental Nutrition Program for Women, Infants, and Children Reauthorization Act

The Child Nutrition and Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) Act is up for reauthorization by Congress in 2010. The legislation covers virtually all federal child nutrition, including:

- The School Breakfast Program.
- The National School Lunch Program.
- The Summer Food Service Program.
- The Child and Adult Care Food Program.
- The WIC Program.

An estimated 39 million children and 2 million lower-income pregnant or postpartum women are served by the child nutrition programs and WIC.¹⁶⁵ Participation in both the school meal programs and WIC has grown over the past several years as the economic situation in the United States has deteriorated and unemployment has soared.

These programs are administered by the USDA's Food and Nutrition Service in coordination with state education, health, social service and agriculture agencies. There are three primary goals of these federal child nutrition programs: improve children's nutrition, increase access to nutritious meals and snacks for children from lower-income families, and help support the agricultural economy.¹⁶⁶

As Congress prepared to take up reauthorization in the spring of 2010, Agriculture Secretary Tom Vilsack outlined his priorities. "The upcoming reauthorization must substantially improve the nutritional quality of the meals being served to our children and play a central role in the Let's Move! campaign's effort to solve childhood obesity in a generation," he said.¹⁶⁷

USDA has outlined specific priorities for the reauthorization, including:

- Improve nutrition standards for school meals based on the Dietary Guidelines for Americans and ensure compliance with these standards.
- Provide tools to increase access to and participation in the school nutrition programs, streamline applications, and eliminate gap periods.
- Increase education about healthy eating by providing parents and students better information about school nutrition and meal quality.

- Establish standards for all foods sold in schools (including through vending machines, school stores, and other foods sold outside the school meal programs) by creating national baseline standards for all foods sold in elementary, middle and high schools to ensure they contribute effectively to a healthy diet.
- Serve healthier food by promoting increased consumption of whole grains, fruits and vegetables, and low- and non-fat dairy products and by providing additional financial support in the form of reimbursement rate increases for schools that enhance nutrition and quality.
- Strengthen school wellness policy implementation and promote physical activity in schools.
- Train people who prepare school meals and ensure that child nutrition professionals have the skills to serve high-quality meals that are both healthful and appealing to their student customers.
- Provide schools with financial assistance to purchase the equipment needed to produce healthy, attractive meals.
- Enhance food safety by expanding the current requirements of the food safety program to all facilities where food is stored, prepared and served.¹⁶⁸

The President's proposed budget for FY2011 includes an increase of \$1 billion per year for 10 years to help pay for the upgrades in the Child Nutrition Act programs. It is unclear if Congress will be able to identify offsets to pay for the proposed increase.

In March, the Senate Agriculture Committee unanimously approved the Healthy, Hunger-Free Kids Act of 2010, which includes a number of provisions to enhance nutrition and fight obesity.¹⁶⁹ If enacted, the bill's provisions would:

- Increase the federal reimbursement rate for school lunches by six cents per meal if schools meet new meal standards.
- Provide the Secretary of Agriculture with the authority to establish national nutrition standards for all foods served and sold on the school campus throughout the school day.
- Establish nutrition requirements for child-care providers participating in the Child and Adult

Care Food Program and provide guidance and technical assistance to help providers.

- Provide mandatory funding for schools to establish school gardens and to help schools get local foods into school cafeterias.
- Update local school wellness policies by requiring all local educational agencies participating in school meal programs to provide opportunities for public input and trans-

parency in the formulation of policies, and to develop a plan for implementation and measurement of compliance.

- Expand the collection of WIC data on breastfeeding rates.

The Agriculture Committee bill authorizes \$4.5 billion over 10 years in new child nutrition funding, about half of what was included in the President's FY 2011 budget.

REVISED SCHOOL MEAL NUTRITION GUIDELINES

The National School Lunch Program is available in 99 percent of U.S. public schools. In 2008, it provided lunch to more than 30.5 million children. The National School Breakfast Program provided breakfast to 10.5 million children.¹⁷⁰ The school meal nutrition standards have not been updated since the 1995 Dietary Guidelines were set.

In October 2009, the IOM released its long-anticipated report with recommendations on improvements to the National School Lunch and School Breakfast Programs to align them with the most recent Dietary Guidelines for Americans.¹⁷¹ The government recommendations set maximum calorie counts for school breakfasts and lunches, and calls for a reduction in sodium and an increase in fruits, vegetables, and whole grains and a switch to low-fat milk.

The key recommended changes in school meal nutrition requirements include:

- An increase in the daily amount of fruit (with no more than 50 percent served in juice form).
- Two servings of vegetables daily, which must include dark green and orange vegetables, legumes and fewer potatoes.
- At least half of grains/breads served must be whole grain.
- Non-fat (plain or flavored) and plain low-fat (1%) milk only.
- Zero trans fat content and less than 10 percent of total calorie content in saturated fats.
- Limits on meat portions with only two ounces of meat included at lunch and one ounce at breakfast.

For the first time, the guidelines also include both a maximum and minimum for calories.

Grade	Maximum	
	Lunch	Breakfast
K-5	650	500
6-8	700	550
9-12	850	600

The onus is now back on the USDA to review the recommendations and develop a proposed rule to implement the recommendations. The proposed regulatory changes would then be published in the Federal Register, giving the public and interested parties an opportunity to comment on the proposed changes. This is expected to happen late in 2010.

Already several food service companies that provide students with breakfasts and lunches at schools across the country have announced that they would meet the IOM's recommended school meal standards for fat, sugar, whole grains and sodium.¹⁷² The three companies – ARAMARK, Sodexo and Chartwells – also have agreed to include more fruits, vegetables, and low-fat and fat-free milk in their school meals.

REVISIONS IN THE WIC FOOD PACKAGES

On Oct. 1, 2009, states were required to implement the 2007 revisions to the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). The revised regulations update and expand the list of approved foods to include fresh, frozen and dried fruits and vegetables, whole-wheat bread and other whole grains, soy-based beverages and tofu, canned fish and legumes. The revisions are in line with recommendations made by the IOM in a 2005 report.

In addition, the revisions increased the amount of cash vouchers issued to pregnant, postpartum and partially breast-feeding participants for the purchase of fruits and vegetables from \$8 to \$10 per month.¹⁷³

These changes are intended to achieve these goals: Bring the WIC food packages in line with the Dietary Guidelines for Americans and current AAP infant-feeding practice guidelines; better promote and support the establishment of successful long-term breast-feeding; provide WIC participants with a wider variety of food; and provide WIC state agencies with greater flexibility to accommodate cultural preferences.¹⁷⁴

Congress appropriated \$7.252 billion for WIC in FY 2010. By comparison, the appropriation was \$4.0 billion in 2000; \$2.1 billion in 1990; \$1.5 billion in 1985; \$750 million in 1980; and \$20.6 million in 1974.¹⁷⁵

DIETARY GUIDELINES FOR ADULT AND CHILD CARE-SETTINGS

The IOM is currently reviewing the meal requirements for the USDA's Child and Adult Care Food Program (CACFP). CACFP provides meals and snacks to 3.2 million lower-income children in child care and 112,000 adults who receive care in nonresidential adult day-care centers.¹⁷⁶ The program also provides meals to children residing in emergency shelters, and snacks and suppers to youths participating in eligible after-school care programs. A committee is seeking to align the CACFP meal requirements with the Dietary Guidelines for Americans, and will provide its recommendations in a report due sometime in late 2010 or early 2011.



The Childhood Obesity Epidemic: Time to Fight Back

-- By Sen. Tom Harkin

THE HEALTH OF AMERICA'S CHILDREN IS BEING RAVAGED BY A TWIN EPIDEMIC OF OBESITY AND TYPE 2 DIABETES. HOW DID THIS PUBLIC HEALTH CATASTROPHE HAPPEN – AND HOW DO WE REVERSE IT?

A big part of the answer was offered by Dr. Andrew Weil in testimony before the Senate Committee on Health, Education, Labor and Pensions, which I chair. He stated that “the default status of the human body is to be healthy.” In other words, our bodies want to stay healthy; they have tremendous powers of healing. The problem is that, in many ways, the default status of our society and culture works against our natural health.

For example, consider the ways in which society undercuts our children's health. We are building subdivisions without sidewalks for walking, and schools without playgrounds. We have all but eliminated recess and health education. Some time back, the superintendent of schools in Atlanta explained the policy of building schools without playgrounds. In an interview with *The New York Times*, he said: “We are intent on improving academic performance. You don't do that by having kids hanging on the monkey bars.”

Meanwhile, despite many laudable efforts by states and cities around the country, our public schools are ready sources of sugary drinks, candy, and junk food. No parent in his or her right mind would send a child to school with a packed lunch consisting of fried chips and a sugary beverage, but that's exactly the lunch that many children are purchasing in their schools.

Our children spend hours each day parked in front of TV and computer screens, where they are targeted by a relentless barrage of advertisements for junk food. According to the Kaiser Family Foundation, the average child ages 8–12 views 21 food commercials a day – 7,600 per year!

We tolerate all of these things that undermine our children's natural default status to be healthy, and then we are shocked when our kids develop diabetes and show early-warning signs of coronary artery disease as young as age 5.

It's time to wake up and fight back. And I am determined to mobilize Congress to combat childhood obesity on a whole range of fronts. I am also pleased to say that real change is on the way.

This year, Congress is reauthorizing federal child nutrition programs. As a senior member of the Senate Committee on Agriculture, Nutrition and Forestry, which has jurisdiction over these programs, I am seeking to establish national school nutrition standards for all foods sold in schools – not just foods sold in the lunchroom, but also foods sold in vending machines, school snack bars, and à la carte lines.

According to the Government Accountability Office, 83 percent of elementary schools, 97 percent of middle schools, and 99 percent of high schools have so-called “competitive food sources” – meaning places to buy junk foods and sugary beverages.

It is long past time to close the giant loophole that says the U.S. Department of Agriculture can set standards for foods sold in the lunchroom, but cannot set standards for foods sold elsewhere on campus, including right outside the cafeteria. That's a loophole you can drive a junk food delivery truck through.

By all means, we must make changes so the more than \$15 billion that the USDA spends each year on meals provided through the National School Lunch and Breakfast Programs pays for a more nutritious mix of foods. But it makes no sense to do this while still allowing the pervasive sale of junk food and sugary sodas elsewhere on campus.

After years of working on this issue, momentum is finally on our side. The agriculture committee, chaired by Sen. Blanche Lincoln of Arkansas, recently passed out of committee with unanimous, bipartisan support a child nutrition reauthorization bill. Language in this bill is modeled on my legislation that will require the Secretary of Agriculture to establish nutrition standards for all foods sold in schools.

Getting junk food out of our schools is only half of the equation. Our schools should also be actively encouraging kids to eat the right foods. To that end, in the 2002 farm bill, I initiated the Fresh Fruit and Vegetable Program, which makes free fresh fruits and vegetables readily available to elementary schoolchildren during the school day. The program started out in just 100 schools and one American Indian reservation. Kids, teachers, principals and parents loved the program, and other schools clamored to be included. In the 2008 farm bill, this successful program was expanded significantly with \$1 billion in mandatory money. When fully implemented, this funding will enable as many as three million children a year to participate in the program.

We must also look beyond school settings to all places where children learn and eat, including after-school programs, summer programs and child-care facilities. All of these present opportunities to improve the quality of the meals provided, and also to teach and model healthful eating habits that can last a lifetime.

For years, we've been focusing on school-age children with little focus on early childhood settings. I believe that we can and should do more to help child-care settings, both center-based care and home-based care, to put a greater focus on promoting the health of our very youngest children. Doing this means looking not only at the quality of foods provided in early childhood settings, but also looking at the types of care and practices in those settings. For example, we must work to promote physical activity for preschoolers and ensure that, rather than looking at a television screen, kids are getting time to play outside. We can also replace whole-fat milk with lower-fat milk for kids older than 2, which cuts down on calories and saturated fat with no additional cost or effort on the part of early childhood providers. Identifying and implementing policy opportunities such as this, where a simple change can yield significant benefits to health, are critical to eventually improving the health of the country, one step at a time.

Our broader health challenge is to transform America into a genuine "wellness society" – a society emphasizing disease prevention, good nutrition, physical activity and fitness. While the health of our children is the logical place to focus many of our efforts, it is not the only place. We must also think more broadly and seek to transform our current "sick care system," which focuses on treating and curing disease, to a true health care system, with a focus on disease prevention and staying healthy. The recently passed health reform law takes major steps toward that end.

In order to increase the use of recommended preventive services, we have changed the way health care providers are reimbursed for their services. Current payment systems focus on volume of care over value, so that while health care professionals have a personal interest in keeping their patients healthy, they have no economic incentive to provide the preventive services that will help their patients achieve that goal and identify issues early.

Health insurers also lack incentive to cover preventive services as part of a benefit package because very few people maintain the same insurance coverage for any extended period of time. Health reform includes insurance regulation reforms to provide health insurers with the necessary incentives to generously cover proven prevention and wellness services that will keep Americans healthy and keep health care costs under control.

The health reform law also includes a large investment in community, evidence-based disease prevention programs that target behaviors that most influence an individual's health and risk of contracting a preventable disease, such as physical inactivity, poor nutrition, and tobacco use. Reaching people in their communities before they need to go to the doctor's office can have significant financial benefits and improved health outcomes.

Transforming our current sick care system into a real health care system is no small task, but a new focus on and investments in prevention and wellness policies will reduce the number of Americans suffering from chronic disease, reduce health care costs, and help more Americans live long, healthy, and productive lives.

As the Irish say, this isn't a private fight; anyone can join in. Families, schools, day-care facilities, communities, corporate America, and government at every level – we all need to be part of the solution.

Sen. Tom Harkin (D-IA) is the chair of the Senate Health, Education, Labor and Pensions Committee.

2) The Elementary and Secondary Education Act

In March 2010, the U.S. Department of Education unveiled its blueprint for the reauthorization of the Elementary and Secondary Education Act, widely known as the No Child Left Behind Act (NCLB), which covers K-12 education programs. While the federal education bill largely focuses on academic achievement and preparing students for college and careers, parts of the legislation could influence how physical education and physical activity are included within the school day.

For example, the Department of Education would like to expand the 21st Century Community Learning Centers program, which provides competitive grants to states, school districts, and non-profit organizations to implement in-school and out-of-school programs. The programs can provide enrichment activities, which may include activities that improve mental and physical health.¹⁷⁷

Reauthorization also envisions providing competitive grants to states, school districts and their partners via the Successful, Safe and Healthy Students program. Grantees would be required to develop and implement a statewide or district-wide assessment that addresses school safety issues, such as drugs, alcohol and violence, and

report this information to the public. The assessments would be used to help schools improve school safety and promote students' physical and mental health and well-being through nutrition education and physical fitness.¹⁷⁸

In addition, some members of Congress have introduced separate pieces of legislation to be considered in the broader NCLB reauthorization.

Sen. Tom Harkin, D-Iowa, Sen. John Ensign, R-Nev., and Representatives Ron Kind, D-Wisc., Zach Wamp, R-Tenn., and Jay Inslee, D-Wash., have introduced the Fitness Integrated with Teaching (FIT) Kids Act of 2009 (S.634/H.R.1585). This act would require state and local education agency report cards to include information on school health and physical education programs. It also would include the promotion of active lifestyles in educational grant programs; support professional development for teachers and principals to promote student participation in physical activity; and fund a study by the National Academy of Sciences to improve and assess the impact of health education and physical activity on student achievement. The House of Representatives passed the FIT Kids Act on voice vote in April.

PUBLIC-PRIVATE COLLABORATION TO DEVELOP A NATIONAL PHYSICAL ACTIVITY PLAN

A diverse group of public and private organizations released the first National Physical Activity Plan for the United States on May 3, 2010.¹⁷⁹ Developed through a three-year consensus-building process, this comprehensive plan supports environmental and policy changes to create a culture that supports physical activity. The long-term goal of the plan is a marked and progressive increase in the percentage of Americans who meet physical activity guidelines throughout life.

The CDC provided approximately \$300,000 to the University of South Carolina's Prevention Research Center to initiate the project in September 2007. The plan was developed with the participation of national leaders from eight sectors: public health, education, transportation and community planning, business and industry, mass media, health care, parks and recreation and fitness, and non-profit and volunteer organizations.

The plan's strategies and tactics are targeted across these eight sectors. For example, one strategy involves developing a workforce with expertise in physical activity and health. For education, one strategy calls for the development of partnerships with other sectors to link schools to community opportunities for physical activity.

3) Surface Transportation Authorization Act

In June 2009, the House Transportation and Infrastructure Committee approved the Surface Transportation Authorization Act of 2009 (STAA). The measure has yet to be considered by the full House of Representatives. On the Senate side, the Senate Environment and Public Works Committee has not yet introduced reauthorizing legislation for the transportation bill. Instead, both houses of Congress have passed a long-term extension of the old transportation bill (SAFETEA-LU) which will fund all programs through the end of 2010.

While the bulk of the funding goes to highways and highway safety, the reauthorization also could serve as a vehicle for improving federal programs that support active transportation (travel by bike, foot, or other non-motorized means), safe and complete streets, and public transportation.

In addition, some members of Congress have introduced separate pieces of legislation to be considered as part of the broader reauthorization. These include:

- **Safe and Complete Streets Act of 2009 (S. 584/ H.R. 1443)**, introduced by Sen. Tom Harkin, D-Iowa, and Rep. Doris Matsui, D-Calif. The bill seeks to ensure that all users of the transportation system, including pedestrians, bicyclists and transit users, as well as children, older individuals and individuals with disabilities, are able to travel safely and conveniently on streets and highways.
- **Safe Routes to School Program Reauthorization Act (S. 1156)**, sponsored by Sens. Harkin, Richard Burr, R-N.C., Bernard Sanders, I-Vt., Jeff Merkley, D-Ore., and Susan Collins, R-Maine. The bill proposes to strengthen and expand the federal Safe Routes to School program by building on the successes of safe routes programs around the country.
- **Safe Routes to High Schools Act (H.R. 4021)**, introduced by Rep. Earl Blumenauer, D-Ore. The bill would amend the federal transporta-

tion bill to include high school students in the Safe Routes to School program. Currently, the program includes only primary and middle school students.

- **Active Community Transportation Act of 2010 (H.R. 4722)**, introduced by Rep. Blumenauer. This act would provide communities with concentrated investments to complete walking and bicycling networks to shift short driving trips to active transportation. The bill calls for the creation of an active transportation fund at an average of \$400 million per year.
- **National Transportation Objectives Act of 2009 (H.R. 2724)**, introduced by Rep. Rush Holt, D-N.J. This bill seeks to promote energy efficiency; ensure environmental protection and safety for transportation users; improve economic competitiveness and transportation system conditions; and provide equal access to transportation in urban, suburban and rural communities. The bill also would set national transportation performance targets, including tripling the number of Americans who walk, bike and use public transportation.
- **Clean, Low-Emission, Affordable, New Transportation Efficiency Act (CLEAN TEA) (S. 575/ H.R.1329)**, introduced by Sens. Tom Carper, D-Del., and Arlen Specter, D-Pa., and Rep. Blumenauer. This bill would require the Environmental Protection Agency (EPA) to auction 10 percent of emission allowances established under any EPA program providing for the reduction of greenhouse gas emissions, such as the proposed cap and trade program in the House-passed climate and energy bill. The proceeds from the auction would be deposited into the Low Greenhouse Gas Transportation Fund to implement state and metropolitan planning organization (MPO) greenhouse gas emission reduction plans, and provide funding for public and active transportation projects that help reduce such emissions.

DOT POLICY STATEMENT ON BICYCLE AND PEDESTRIAN ACCOMMODATION

In a major policy shift, the U.S. Department of Transportation (DOT) announced that it will incorporate “safe and convenient walking and bicycling facilities into transportation projects.”¹⁸⁰ DOT Secretary Ray LaHood called the policy statement a “sea change” that means “the end of favoring motorized transportation at the expense of non-motorized.”¹⁸¹

Practically speaking, this means the needs of pedestrians and cyclists will be taken into consideration as part of all federally funded transportation projects. Not only will walking and bicycling networks and paths, including links to public transportation, be part of new construction, but transportation projects that negatively affect pedestrians and cyclists will be discouraged.

DOT says such actions will not only help foster walking and bicycling, but also help create more livable, family-friendly communities, and reduce vehicle emissions and fuel consumption.

DOT is encouraging state, tribal, and local governments to adopt similar policies, and is asking them to:

- Treat walking and bicycling as equals with other transportation modes.
- Ensure convenient access for people of all ages and abilities.
- Go beyond minimum design standards.
- Integrate bicycle and pedestrian accommodation on bridges.
- Collect data on walking and biking trips.
- Set targets for increasing walking and bicycling over time.
- Remove snow from sidewalks and shared-use paths as roadways are maintained.
- Improve non-motorized facilities during maintenance projects.

D. OTHER FEDERAL INITIATIVES

1) Let's Move

On Feb. 9, 2010, First Lady Michelle Obama unveiled her domestic policy initiative, Let's Move.¹⁸² The first lady's campaign brings together a diverse group of stakeholders, including government agencies, food and beverage companies, pediatricians and other health care providers, athletes, parents, and children with the ambitious goal of solving the childhood obesity problem in America within a generation.

Let's Move will focus on four objectives:

- Ensuring access to healthy, affordable foods.
- Increasing physical activity in schools and communities.
- Providing healthier foods in schools.

- Empowering parents with information and tools to make good choices for themselves and their families.

While countless U.S. government reports have called attention to the problem of childhood obesity, this is the first time that there has been a call to action from the White House. The First Lady not only has the unique ability to bring stakeholders together with federal officials, she also has the best bully pulpit in the world – the White House – to raise awareness. Let's Move also enjoys the support of cabinet officials.

The First Lady has readily acknowledged that parents and children make the ultimate choices about their health, while government's role is to help make the healthy choices the easy ones.

2) White House Task Force on Childhood Obesity

When it comes to government action, Let's Move emphasizes the importance of a crosscutting, multi-sector response. This is evident in President Obama's creation of a national Task Force on Childhood Obesity as part of the Let's Move initiative. The Task Force is made up of senior officials from not only the Department of Health and Human Services, but also the Departments of Interior, Agriculture, and Education, and the Office of Management and Budget.

The Task Force had 90 days from its establishment to develop a coordinated federal response to address the four priority areas of Let's Move. On May 11, 2010, the Task Force released "Solving the Problem of Childhood Obesity within a Generation," a 140-page report with 70 recommendations for all sectors of society including federal, state, and local governments, school districts, child-care facilities, food and beverage manufacturers, media and advertising, and parents and families.¹⁸³ **The Task Force defines success as returning the childhood obesity rate to 5 percent by 2030.** The current national rate for children ages 2-19 is 16.9 percent, according to scientists at CDC.¹⁸⁴

In addition to laying out the long-term goal of reducing childhood obesity rates to 5 percent, the report includes two key indicators that will be used to show progress:

- **The number of children eating a healthy diet measured by USDA's Healthy Eating Index (HEI).** USDA considers a score of at least 80 out of 100 points to reflect a healthy diet. Currently, the average child scores below 60. To achieve a score of 80 by 2030, the average child should score 65 by 2015, and 70 by 2020.
- **The number of children meeting current physical activity guidelines.** Regular data on children of all ages is not available; therefore the report calls for resources to be directed to develop a survey instrument that can provide a full picture of physical activity levels among children of all ages.

Other measurable benchmarks of success are included throughout the report, giving all stakeholders the opportunity to monitor the nation's progress in targeting behaviors to increase

healthy eating and active living and reduce childhood obesity rates.

A dozen federal agencies participated in the Task Force including those listed above, as well as the Departments of Defense, Housing and Urban Development, Justice, and Transportation, and the Corporation for National and Community Service, the Environmental Protection Agency, the Federal Communications Commission, and the Federal Trade Commission. The American public also weighed in submitting more than 2,500 public comments with specific suggestions.

The recommendations focus on the four priority areas identified by Let's Move (see above) as well as a fifth set of recommendations for actions targeting early childhood, when the risk of obesity first emerges. Many of the recommendations can be implemented right away and are minimal or no-cost.

Among the recommendations for federal action are:

- Increase resources for school meals.
- Create a multi-year Healthy Food Financing Initiative to leverage private funds to address the problem of food deserts.
- Collaborate with the food and beverage industry to develop and implement a standard system of nutritional labeling for the front of packages.
- Consider new rules regarding commercials during children's programming if voluntary efforts to limit marketing of less healthy foods and beverages to kids do not achieve substantial success.
- Promote more physical activity by updating the President's Challenge, reauthorizing the Surface Transportation Act to enhance livability and physical activity, having the EPA assist school districts with setting guidelines for new schools to consider promotion of physical activity, and enhancing the Federal Safe Routes to Schools Program.
- Provide guidance on how to increase physical activity, improve nutrition, and reduce screen time in early child care settings.

OBESITY PREVENTION POLICIES FOR YOUNG CHILDREN

In line with the White House Task Force on Childhood Obesity's special focus on actions targeting early childhood, when the risk of obesity first emerges, an IOM committee is reviewing factors related to excess weight and obesity in children under the age of 6. The committee will identify settings, programs, and policy opportunities for childhood obesity prevention efforts in the first five years.¹⁸⁵ A report with recommendations on these policies is expected out in February 2011.

3) The Healthy Food Financing Initiative

President Obama's FY 2011 budget proposal included \$400 million for a national Healthy Food Financing Initiative, which would help bring healthy food options to underserved communities via investments in new and improved supermarkets, farmers' markets, and other food stores. Congress has not yet approved the FY 2011 budget and it remains unclear whether or not the \$400 million will be appropriated.

According to the USDA, some 23.5 million people, including 6.5 million children, live in low-income areas that are more than one mile from a supermarket. In low-income rural areas, some 2.3 million people are more than 10 miles from a supermarket. Residents of these communities, known as food deserts for the lack of healthy, affordable foods, rely on fast-food restaurants and convenience stores that offer little to no fresh produce. The Healthy Food Financing Initiative would bring together the U.S. Treasury Department, USDA, and HHS to spur investments in underserved communities.

The federal program is modeled on the successful Pennsylvania Fresh Food Financing Initiative. The State of Pennsylvania appropriated \$30 million over three years to the program and The Reinvestment Fund, a national leader in financing neigh-

borhood revitalization, leveraged the investment to create a \$120 million initiative. As of December 2009, the initiative has provided funding for 83 supermarket projects in 34 Pennsylvania counties, creating or preserving almost 5,000 jobs.¹⁸⁶

The national model would use a similar approach and leverage public-private partnerships to eliminate food deserts within seven years. The initiative would use a mix of federal tax credits, below-market rate loans, loan guarantees, and grants to attract private-sector partners and double the federal government's investment. By investing in new food retail spaces, the initiative also seeks to create long-term jobs in both rural and urban communities.

To help local jurisdictions and community leaders identify food deserts in their communities, the USDA has launched a Food Environment Atlas (www.ers.usda.gov/FoodAtlas/) that allows users to create county-level food access profiles. The atlas will provide information on food choices, such as access and proximity to grocery stores, availability of food stores and restaurants, and food prices and taxes. It also will have indicators on health and well-being, such as rates for diabetes, obesity and physical activity, and socio-demographic characteristics.

4) Interagency Working Group on Food Marketed to Children

In the 2009 Omnibus Appropriations Act, Congress established an Interagency Working Group on Food Marketed to Children (IAWG), comprised of the Federal Trade Commission (FTC), the Food and Drug Administration (FDA), CDC, and USDA. The IAWG was charged with recommending (1) nutritional standards for food marketed to children age 17 and under and (2) the scope of media to which these standards should apply. The IAWG recommendations will not be legally binding but instead will serve as guidance for industry.

In December 2009, the IAWG released its tentative proposed nutrition standards for the marketing of foods to children.¹⁸⁷

The public health community praised the IAWG for the strength of the draft standards.¹⁸⁸ The food and beverage industries reacted with frustration and concern, given that almost no products currently marketed to children would qualify. There are, however, plenty of products marketed to adults and families that would qualify.

The IAWG plans to seek formal comments on the proposed nutrition and marketing standards and is scheduled to refine and submit its final recommendations in a report to Congress due July 15, 2010.

A major impetus for the IAWG was a 2008 FTC report on the marketing of food to children and adolescents, which looked at spending and techniques employed by the food and beverage, entertainment and media industries.¹⁸⁹ The report examined 2006 data and found that industry spends more than \$1.6 billion on marketing to children and adolescents each year. Cereal and restaurant foods were the most heavily marketed products, followed by snack foods and sodas. The FTC report recommended that the food industry employ self-regulation to improve the nutritional profile of food marketed to children. The report called on the media to limit cross-promotions to nutritious foods and only place ads for nutritious foods in children's programs. The FTC has begun work on a follow-up food study that will compare the nutritional quality of foods marketed to children in 2009 versus 2006 to see what, if any, changes the food industry has made.

Three recent reports from nonprofit public health groups cast doubt on the efficacy of industry self-regulation. First, an October 2009 report from the Rudd Center for Food Policy and Obesity at Yale University examined compliance with the Children's Food and Beverage Advertising Initiative (CFBAI), an industry-led effort to reduce

unhealthy marketing to children. The report, “Cereal FACTS,” focused on ready-to-eat cereals.¹⁹⁰ The report found that, despite the CFBAI pledges, children are still exposed to unacceptable amounts of marketing and the most heavily marketed cereals to children are those with the least nutritional value. Children’s cereals contain 85 percent more sugar, 65 percent less fiber and 60 percent more sodium than adult cereals. A companion to the report is a scoring system to help parents evaluate the nutrition content of cereal. The tool is available at www.cerealfacts.org.

Next, a December 2009 report from Children Now determined that the majority of advertisements from the 15 food companies participating in CFBAI are for foods of low nutritional value.¹⁹¹ The report, “The Impact of Industry Self-Regulation on the Nutritional Quality of Foods Advertised on Television to Children” found that few companies were meeting their voluntary commitments to reduce unhealthy marketing to children. Instead, more than two-thirds (68.5%) of all advertising from the 15 participating companies is for foods and beverages in the “Whoa” category, the lowest category of nutritional quality. Almost one-third (31%) of the food ads from participating companies are for foods of moder-

ate nutritional value, so-called “Slow” foods. Less than 1 percent of all advertising from participating companies is for “Go” products, such as vegetables, fruits, whole grain breads, and other products that can be consumed anytime. The report also found that in spite of the IOM’s warning to limit the use of licensed characters to promote “Go” foods, the companies involved in CFBAI have doubled their use of licensed characters since 2005 and most are used to market “Whoa” products. Clearly, the report authors note, self-regulatory pledges are failing to limit the marketing of unhealthy foods to kids.

Finally, a March 2010 report from the Center for Science in the Public Interest (CSPI) rated 128 food, restaurant and entertainment companies’ policies on food marketing aimed at children.¹⁹² Three-quarters of companies got an F, and no company received an A. The company with the strongest policy was Mars, which received a B+. Food and beverage companies were more likely to have policies in place than restaurants and entertainment companies. According to the CSPI, 64 percent of food manufacturers that advertise to children have marketing policies, while only 24 percent of restaurants and 22 percent of entertainment companies do.

5) FDA Review of Front-of-Package Food Labeling

According to the Food and Drug Administration (FDA), a majority of Americans (54%) report reading the food Nutrition Facts label the first time they buy a new product, up from 44 percent in 2002.¹⁹³ To help consumers interpret the information on the Nutrition Facts panel, food manufacturers, grocery store chains, and health organizations have developed front-of-package labeling. However, the same study showed that Americans’ use of front-of-package food labels claiming items are “low-fat,” “high-fiber,” or “cholesterol-free” is more mixed, with only 38 percent using such claims often.¹⁹⁴ In fact, a majority of Americans (56%) have doubts about these claims.

A review of the various nutrition rating systems commissioned by Public Health Law & Policy’s NPLAN program, found that they all use different criteria to rate food products, which may confuse consumers.¹⁹⁵

Under federal law, the FDA must authorize scientifically substantiated health claims, such as “low-fat” or “high-fiber” on food. However, the recent controversy over the Smart Choices program, a voluntary initiative of some of the country’s largest food companies, has led nutritionists and public health experts to question the wisdom of current front-of-package food labeling.¹⁹⁶ The program,

which featured a green checkmark on the front of products that met its nutritional criteria, was heavily criticized for promoting cereals with high sugar content, like Kellogg’s Froot Loops®.¹⁹⁷

In August 2009, the FDA voiced concerns about the Smart Choices program, and in October 2009, after the Smart Choice program was suspended, the agency announced that nutrition labeling was a top priority.¹⁹⁸

On March 3, 2010, FDA Commissioner Dr. Margaret Hamburg sent an open letter to the food industry highlighting the importance of providing accurate, reliable nutrition information.¹⁹⁹ She also warned 17 food manufacturers that the labeling for certain food products violates the federal Food, Drug, and Cosmetic Act. Companies that received warning letters were given 15 business days to inform the FDA of the steps they will take to correct their labeling.

The FDA soon will propose guidance regarding calorie and nutrient labeling on the front of food packages and plans to work collaboratively with the food industry to design and implement innovative approaches to front-of-package labeling that can help consumers choose healthy diets. In addition, the IOM expects to release a report in 2010 on front-of-package nutrition labeling.²⁰⁰

A PERSONAL PERSPECTIVE

Game-Changing Policy Advances

-- By Kelly D. Brownell, Ph.D.

THE OBESITY-PREVENTION LANDSCAPE HAS NEVER CHANGED SO RAPIDLY. THE WHITE HOUSE HAS INITIATED A GREAT DEAL OF ACTIVITY THROUGHOUT GOVERNMENT AGENCIES, AND MICHELLE OBAMA HAS MADE THE ISSUE A MAJOR PRIORITY. STATE LEGISLATURES AND CITY GOVERNMENTS AROUND THE COUNTRY ARE SPRINGING INTO ACTION AND ARE CONSIDERING A NUMBER OF ACTIONS TO IMPROVE DIET AND PHYSICAL ACTIVITY. POTENTIALLY IMPORTANT PARTIES, SUCH AS THE STATE ATTORNEYS GENERAL HAVE BECOME INVOLVED. LEADERS ARE READY TO DO SOMETHING. THE QUESTION IS HOW BEST TO PROCEED.

A Rallying Cry: Changing Defaults

A great many interventions have been proposed to address the nation's high rates of obesity. Choices must be made about whether to emphasize adult or child obesity, where to intervene (schools, work-sites, the media, product formulations, etc.), how messages should be framed, and the role government should play.

The nation's view has turned from a clinical/medical perspective where treatment or education gets delivered to individuals, to a public health model where the aim is to reduce population risk. A helpful way to conceptualize this approach emphasizes defaults. The food environment in the United States, and increasingly in other countries, has evolved to create toxic defaults. Portion sizes have increased, pricing incentives encourage purchase of less healthy foods, access to unhealthy foods is too great and to healthy foods too poor, and food marketing creates a relentless, persistent, and powerful message to eat unhealthy foods.

Defaults have a powerful effect on human behavior, and unhealthy defaults create an unhealthy nation. Changing defaults, whether or not articulated in this language, form the basis of the most promising approaches to obesity prevention. Better foods in schools make it easier for children to make healthy choices. Fewer fast-food restaurants and more healthy options in local stores create better neighborhood defaults. There are many such examples. Two prominent ones address children's food marketing and the consumption of sugar-sweetened beverages.

Children's Food Marketing

In October 2009, my colleagues and I at Yale's Rudd Center, led by Jennifer Harris, released a report on the marketing of breakfast cereals to children (www.CerealFacts.org). Our research team did a year's worth of analysis of data on which products are marketed on television, the Internet, and in other venues, and how children are affected.

We began this work partly in response to self-regulatory actions of the food industry in which there were clear pledges to reduce the marketing of the least healthy foods to children. Most notable was the Children's Food and Beverage Advertising Initiative coordinated by the Council of Better Business Bureaus and involving many of the nation's major food companies.

The results of our study were clear – there was almost perfect overlap between the cereals with the worst nutrition rankings and the cereals most aggressively marketed to children. Furthermore, methods of marketing such as Internet gaming sites for children are contributing to the problem in new ways.

A key issue embedded in this discussion is how much faith to place in industry’s self-policing pledges. Having data on industry practices and their impact is critically important in this debate. With the will and support of foundations and government, and good science, adherence to the pledges can be tested, but more important, the public health impact of the pledges can be evaluated. The public health impact is essential to monitor because there is a risk that industry could set such weak standards for itself that even perfect compliance would bring no benefit.

Another food marketing issue pertains to front-of-package nutrition claims. The industry-backed Smart Choices Program, in which food companies could attach labels to products that met designated nutrition criteria, was attacked by the press when products such as Froot Loops® and mayonnaise became Smart Choices. Even more influential were an investigation into Smart Choices by the Connecticut Attorney General and a critical telephone briefing by the Commissioner of the Food and Drug Administration. Industry quickly withdrew the program.

The body of research on the negative effects of children’s food marketing is considerable and is a major impetus for government to take action in the name of protecting consumers. In particular, the Food and Drug Administration, the Federal Trade Commission, and the Federal Communications Commission are playing much more active roles than ever before.

Government is stepping in to play a more visible and potent role in the food marketing arena, something that can change the game.

Taxing Sugar-Sweetened Beverages

Perhaps the most controversial public policy proposal is to tax sugar-sweetened beverages and to use all or part of the revenues to support obesity-prevention programs. Considered most frequently is a penny-per-ounce tax on any beverage with added sugar. Legislation at or near this level of taxation has been proposed or is being considered in 15 states and cities around the country. Some visible political figures such as the governor of New York, Mayor Bloomberg in New York City, and Mayor Nutter in Philadelphia have endorsed the tax.

No public policy proposal has so evoked the ire of industry. Lobbying expenditures for Coca-Cola, PepsiCo and the American Beverage Association combined totaled \$3 million to \$5 million per year for a number of years until 2009, when the discussion of beverage taxes became serious and lobbying skyrocketed to \$37.5 million.

Much like tobacco taxes, taxes on a class of foods so clearly linked to disease (in the case of obesity, risk for diabetes and other diseases) seem logical and are likely to be widespread in the next several years. It’s estimated that a penny-per-ounce tax would reduce consumption of sugar-sweetened beverages by as much as 23 percent, would raise \$150 billion nationally over 10 years, and would reduce health care costs by \$50 billion over that same period.

In sum, there are many signs of game-changing advances. Governments have mobilized to take obesity seriously, to focus on prevention, and to use their legislative and regulatory authority to create healthier nutrition environments. There is every reason to be optimistic, but also to realize that the hard work begins now – to develop, test, and disseminate effective policy approaches.

Kelly D. Brownell is the director of the Rudd Center for Food Policy and Obesity at Yale University

E. CDC GRANTS TO STATES

Each year, the CDC issues a number of grants to states to support efforts to fight obesity. Many states do not receive grants due to limited funding.

APPROPRIATIONS FOR CDC PROGRAMS AND DIVISIONS				
Division/Program	FY 2009	FY 2010	President's FY 2011 Proposal	Difference in Funding
Division of Nutrition, Physical Activity, and Obesity (DNPAO)	\$44,300,000	\$44,991,000	\$43,663,000	-\$1,328,000
Division of Adolescent and School Health (DASH) – Coordinated School Health Program (CSHP)	\$13,600,000	\$13,600,000	\$17,475,000	\$3,875,000
Healthy Communities	\$22,771,000	\$22,823,000	\$22,409,000	-\$414,000
REACH	\$35,553,000	\$39,644,000	\$38,978,000	-\$666,000
Communities Putting Prevention to Work (CPPW) Obesity Grants to Communities*		\$230,000,000		
CPPW State and Territory Grants**		\$120,000,000		

Notes: *CDC awarded these new competitive grants in March 2010. **CDC awarded these new grants in February 2010 for obesity prevention and tobacco prevention/cessation.

The CDC's grant programs include:

The Division of Nutrition, Physical Activity, and Obesity (DNPAO) funds activities in 25 states. Grants allow state health departments to design, implement, evaluate, and disseminate effective policy changes to encourage access to healthy foods and venues to be active, and to strengthen obesity-prevention and -control programs in preschools, child-care centers, worksites and community settings. Grantees are required to create, implement and monitor a nutrition, physical activity and obesity state plan; monitor the prevalence of overweight, obesity, nutrition quality and physical activity levels; and monitor the effectiveness of their programs. DNPAO provides consultation, technical assistance, training and information regarding best practices to states.

Division of Adolescent and School Health's (DASH) Coordinated School Health Program (CSHP) provides funding to 22 states and one tribal government to strengthen the ability of state and local education agencies to fight obesity, asthma, tobacco use, HIV, STDs and teen pregnancy by building their capacity to support science-based, cost-effective health programming. DASH also conducts Healthy Passages, a unique multi-year study that follows a group of fifth-grade students through age 20 to improve understanding of the factors that keep children healthy.

Division of Adult and Community Health (DACH) provides cross-cutting chronic disease and health promotion expertise and support to the CDC's National Center for Chronic Disease

Prevention and Health Promotion. It oversees several programs that address obesity.

The Healthy Communities Program issues grants to initiate community-based obesity programs that focus resources on at-risk populations, and include the participation of local and state health departments and non-governmental organizations with roots in local areas. Since 2003, more than 240 communities have been selected to participate, and an additional 180 communities will be chosen in the next three years.

The Racial and Ethnic Approaches to Community Health (REACH) across the U.S. program works to eliminate racial and ethnic disparities. It supports 40 grantees that have established community-based programs and culturally appropriate interventions to improve the health of Blacks, American Indians, Latinos, Asian-Americans, Alaska natives, and Pacific Islanders in a number of health priority areas, including diabetes and cardiovascular disease.

Communities Putting Prevention to Work (CPPW) supports the use of evidence-based strategies, mobilizes resources at the community level, and strengthens the capacity of states. The initiative has a strong emphasis on policy and environmental change at both the state and local levels. CPPW awarded \$230 million to communities for obesity prevention and \$120 million to states, D.C., Puerto Rico and five territories for obesity and tobacco prevention. Grantees will have two years to show results.

F. SUMMARY OF FEDERAL AGENCIES' INVOLVEMENT IN OBESITY POLICY

Below is a list of the key federal departments, agencies and programs that have the potential to affect obesity.

Let's Move. See pages 83-84.

The **Department of Health and Human Services (HHS)** is involved in more than 300 obesity-related programs nationwide. Most of the agencies within HHS are involved, including:

- The **Centers for Disease Control and Prevention (CDC)**, which oversees the National Center for Chronic Disease Prevention and Health Promotion, including grant programs for states and communities through its Division of Adolescent and School Health (DASH), Division of Nutrition, Physical Activity, and Obesity (DNPAO) and Division of Adult and Community Health (DACH). The CDC's National Center for Environmental Health also studies the relationship between the built environment and health issues, including obesity.

- **Centers for Medicare and Medicaid Services (CMS)** is estimated to pay more than half of the nation's obesity-related health care costs.

- **Food and Drug Administration (FDA)** oversees food labeling requirements and a "Calories Count" initiative. The FDA also "encourages" restaurants to make nutritional information available to consumers and oversees the approvals of weight-loss drugs.

- **National Institutes of Health (NIH)** conducts research and education programs. In 2004, the NIH created a Strategic Plan for NIH Obesity Research, focused on lifestyle modifications, medical approaches, linkages between obesity and health and health disparities related to obesity. A number of Institutes at NIH manage obesity and obesity-related disease-management public education campaigns, and the National Institute of Environmental Health Sciences is examining how the built environment impacts obesity. An updated strategic plan is expected in 2010.

- ▲ The NIH also has launched a \$37 million program to use findings from basic research on human behavior to develop more effective interventions to reduce obesity.²⁰¹ The program will fund interdisciplinary research at seven sites and focus on at-risk populations, including Latino and Black adults, Black adolescents, lower-income populations and pregnant women.

- ▲ NIH, together with CDC, USDA, and the Robert Wood Johnson Foundation (RWJF), is funding the **National Collaborative on Childhood Obesity Research (NCCOR)**. NCCOR's mission is "to improve the efficiency, effectiveness and application of childhood obesity research and to halt – and reverse – the current childhood obesity trend through enhanced coordination and collaboration."²⁰²

- **Health Resources and Services Administration (HRSA)** seeks to expand health care coverage and manages programs such as the Maternal and Child Health Block Grant and the Bright Futures Initiative, which focus on promoting healthy behaviors.

- **Office of Minority Health (OMH)** seeks to improve the health of racial and ethnic minorities, who are at higher risk for obesity. OMH invests in obesity prevention and research. Among its projects is the Youth Empowerment Program, which awarded more than \$3 million to 12 organizations in 2009 to address unhealthy behaviors among minority youth.

- Other HHS offices, including the **Surgeon General's Office**, the **Office of Women's Health**, the **Indian Health Service**, and the **Administration on Aging** manage obesity-related public education campaigns.

- The **President's Council on Physical Fitness and Sports** encourages Americans to be more active and manages the President's Challenge awards program through schools.

- The **Federal Collaboration on Health Disparities Research (FCHDR)** identifies and supports opportunities for federal agencies and other partners to collaborate on innovative research to eliminate health disparities. Federal partners have formed workgroups around four research areas, including obesity, built environment, mental health care, and co-morbidities.

The **United States Department of Agriculture (USDA)** is responsible for a range of food and nutrition programs that impact obesity, including nutritional advice and guidance; food and obesity education campaigns; distribution of food products to schools; and oversight and protection of the nation's agricultural and dairy markets. The USDA's Food and Nutrition Service (FNS) oversees the Supplemental Nutrition Assistance Program (SNAP), (formerly the Food Stamp Program); the Special Supplemental Nu-

trition Program for Women, Infants, and Children Program (WIC); the National School Lunch Program and School Breakfast Program; and the Child and Adult Care Food Program. The **Dietary Guidelines for Americans**, a joint initiative of the USDA and HHS, were released in 2005 and provided Americans with advice about good dietary habits. Updated Dietary Guidelines are expected in October 2010.

The **Federal Trade Commission (FTC)** regulates advertising of food and diets, and has focused on attempts to limit the marketing of junk food to children. The FTC also monitors possible false advertising about diet products and the health benefits of foods.

Office of Personnel Management (OPM) has launched initiatives to educate the federal civilian workforce and retirees about healthy living.

HHS, USDA, Department of Defense and the **Department of the Interior (DOI)** created a Memorandum of Understanding to Promote Public Health and Recreation to support the use of public lands and water resources for physical activity and recreation.²⁰³ The DOI's National Park Service operates the Land and Water Conservation Fund, a matching federal grant program that assists states and localities in acquiring and developing public outdoor recreation areas and facilities.

The **Federal Highway Administration (FHA)** and **Environmental Protection Agency (EPA)** have undertaken efforts to work with states to redesign large highway and roadway projects.²⁰⁴ The EPA has a brownfields initiative devoted to cleaning up and redeveloping former commercial and in-

dustrial sites that are abandoned or contaminated with hazardous substances or pollutants. Many of these brownfields are redeveloped into public space that can be used for recreation.

The **Department of Education** administers the Carol M. White Physical Education Program, which offers competitive grants for the initiation, expansion and improvement of physical education programs for students in grades K–12.

The **Department of Transportation (DOT)** offers Safe Routes to School grants for infrastructure improvements and educational programs, such as building safe street crossings and establishing programs to encourage children to walk or bike to school.

DOT, EPA and the **U.S. Department of Housing and Urban Development (HUD)** joined together in June 2009 to launch the Interagency Partnership for Sustainable Communities to help improve access to affordable housing, more transportation options, and lower transportation costs while protecting the environment.

The **Department of Defense (DOD)** has a number of programs to combat obesity in the armed services. An estimated 16 percent of active duty military are currently obese, and 18.9 percent of active duty soldiers under the age of 21 are obese.²⁰⁵ More than a quarter of young Americans ages 17–24 are too overweight to join the military.²⁰⁶

The **Department of Veterans Affairs (VA)** serves more than 6 million veterans. Nearly 70 percent of these veterans are overweight and approximately 30 percent are obese.²⁰⁷

MILITARY READINESS: ARE AMERICA'S YOUTH FIT TO SERVE?

Obesity is threatening our country's military readiness, according to a group of retired military officers. The group, called Mission: Readiness, released a report that found nine million Americans ages 17–24 (27 percent) are too overweight to join the military.²⁰⁸ Many of these young men and women are turned away by recruiters while others never try to join the military. Among those who do attempt to join, some 15,000 fail their entrance physicals each year. The report says that without action to address childhood obesity, the problem will worsen.



Spotlight Issue – Removing Barriers to Healthy Choices

OVERVIEW

Solving the obesity epidemic seems like it should be simple – all people have to do is eat right and be more active. But why is it so hard for so many people to do that?

It is because millions of Americans face many barriers to making healthy choices.

- Nutritious foods are typically more expensive and not even regularly available in neighborhoods that do not have grocery stores.^{209,210}
- Most Americans face considerable time constraints and buy convenient prepared foods, which are often loaded with calories, and fats and salts. And when Americans go to restaurants, they often end up eating more than double the recommended amounts because portions are so large. Furthermore, the only restaurants often available in lower-income areas are fast-food restaurants where healthy options are limited.²¹¹
- Many people do not live near safe parks, and parents are concerned about letting their children play in unsafe parks without good supervision.^{212,213}
- Gym membership fees are prohibitively expensive for many, and with long work and commuting hours, many people find it challenging to fit regular physical activity into the day.²¹⁴

■ People have deeply held feelings about food, activity and weight. Many people turn to food for comfort and pleasure or to manage stress.^{215,216} And Americans have long-standing traditions about food, with many dishes and cooking styles having deep cultural roots.

Other factors, such as income, education, and cultural and ethnic traditions, also play a role in the choices people make about their health. But we cannot wait for these and other factors to change before we take action to improve the nation’s health. There are many steps we can take – and must take – “to make healthy choices easy choices” in every community and state.

The stakes are high, not only for individuals, but for the entire nation. Research from TFAH found that an investment of \$1 per person per year in proven, effective programs to promote disease prevention can lead to a \$5.60 return in lowered health care costs.²¹⁷

All Americans will benefit from making our communities healthier places to live, work, learn and play.

A. OBESITY AND RACIAL AND ETHNIC DISPARITIES

The barriers to healthy choices are higher for some Americans than others.

Rates of obesity are significantly higher for Blacks and Latinos, reflecting long-standing disparities in income, education and access to health care. The obesity rate among Black adults is more than 10 percent higher than among Whites, and among Latino adults, it’s 5 percent higher than among Whites.²¹⁸ The obesity rate among Black youths ages 2-19 is more than 6 percent higher than among Whites. Among Latino youths, it is more than 8 percent higher than among Whites.²¹⁹ A 2010 study found that, even when comparable economic and other social status factors were taken into account, Black and Latino youths were more likely to be obese or overweight than White youths – and the concentration of the obesity epidemic increased

among lower-income and minority youths from 2003 to 2007.²²⁰ Due to higher rates of obesity, Blacks and Latinos also are at increased risk for developing the range of diseases and health and social problems related to obesity.

While all Americans face obstacles that can get in the way of making healthy choices, the challenges are compounded for lower-income communities that face additional barriers, including:

- There are fewer grocery stores in lower-income areas, and the grocery stores that are in these areas stock fewer nutritious foods, including fruits and vegetables;
- The concentration of fast-food restaurants and convenience stores is higher in lower-income areas;

- Fewer nutritious options and more junk food options are available at lower-income schools;
- There are high rates of advertisements for foods of low nutritional value aimed at minorities and lower-income individuals; and
- There are fewer available recreation spaces and parks that are safe and well maintained in lower-income areas.

This section of the report examines the barriers many racial and ethnic minorities and lower-income communities face and outlines concrete steps policy-makers, community groups and the private sector can take to address some of these underlying barriers.

RACIAL AND ETHNIC OBESITY DISPARITIES IN ADULTS

- In 2008, 44.1 percent of Blacks and 37.9 percent of Latinos were obese, compared with 32.8 percent of Whites, according to a national survey.²²¹
 - ▲ Among men, 37.3 percent of Blacks and 34.3 percent of Latinos were obese, compared with 31.9 percent of Whites.²²²
 - ▲ Among women, 49.6 percent of Blacks and 43 percent of Latinas were obese, compared with 33 percent of Whites.²²³
- Adult obesity rates for Blacks and Latinos are higher than those for Whites in nearly every state. Adult obesity rates for Blacks are at or above 30 percent in 43 states and D.C. In nine states, the rates exceed 40 percent for Blacks. For Latinos, adult obesity rates are at or above 30 percent in 19 states. Meanwhile, only one state -- West Virginia -- has an adult obesity rate for Whites at or above 30 percent.
- Obesity rates varied substantially by location, ranging from 25.8 percent in Nevada to 44 percent in Wisconsin for Blacks, from 20.6 percent in D.C. to 39.5 percent in Tennessee for Hispanics, and from 9 percent in D.C. to 31.2 percent in West Virginia for Whites.
- 11.8 percent of Blacks, 10.4 percent of Latinos, and 7.5 percent of Asian-Americans have been diagnosed with type 2 diabetes, compared with 6.6 percent of Whites, based on 2004–2006 national survey data.²²⁴
 - ▲ Among Latinos, type 2 diabetes rates were 8.2 percent for Cubans, 11.9 percent for Mexican-Americans, and 12.6 percent for Puerto Ricans.²²⁵
- Black men are 30 percent more likely to die from heart disease than White men. This occurs despite the fact that 10 percent of Blacks have heart disease vs. 11 percent of Whites.²²⁶
- Some 32 percent of Blacks had hypertension compared with 22.5 percent of Whites, in 2007.²²⁷
- Blacks and Latinos have lower rates of physical activity than Whites:
 - ▲ Only 36.1 percent of Black women and 45.3 percent of Black men report that they engage in physical activity, and only 40.5 percent of Latina women and 41.9 percent of Latino men report that they engage in physical activity, compared with 49.6 percent of White women and 52.3 percent of White men.²²⁸

Disparities also exist in factors that help contribute to higher rates of obesity and related diseases in these communities:

- Blacks, Latinos, and American Indians and Alaska Natives also are more likely to be uninsured than are Whites; 34 percent of Latinos, 32 percent of American Indians and Alaska Natives, and 21 percent of Blacks are uninsured, compared with 13 percent of Whites.²²⁹
- Among Blacks, 48 percent of adults contend with chronic disease, compared with 39 percent of the general population.²³⁰

RACIAL AND ETHNIC OBESITY DISPARITIES IN CHILDREN AND ADOLESCENTS

Nearly 45 percent of children living in poverty in 2007 were classified as overweight or obese, compared with 22.2 percent of children living in households with incomes four times the poverty level.²³¹ In addition, rates of obesity are higher for Black and Latino children than the overall population of children in the United States:

- 35.9 percent of Black youth and 38.2 percent of Latino youth ages 2-19 are overweight or obese, compared with 29.3 percent of White children.²³²
- Among 2- to 5-year-olds, 14.2 percent of Latinos and 11.4 percent of Blacks are obese, compared with 9.1 percent of Whites.²³³
- Black and Latino children are more likely to develop diabetes than other children. White boys born in 2000 have a 26.7 percent risk of being diagnosed with the disease in their lifetime, and White girls have a 31.2 percent risk, compared with 40.2 percent for Black boys, 45.4 percent for Latino boys, 49 percent for Black girls and 52.5 percent for Latina girls.²³⁴

Food Factors and Obesity Disparities

- Black middle school students have less access to healthy foods at their schools compared with White students. Almost 63 percent of White eighth-graders have fruits and vegetables available, compared with only 46.5 percent of Black eighth-graders.²³⁵
- Latino high school students have greater access to fast food at school than their peers. They can select brand-name fast food from their school cafeterias on an average of two days a week, while Black and White students only have that option an average of once a week.²³⁶

Use of Media and Obesity Disparities

- Black youths spend an average of four hours and five minutes daily watching television, compared with three hours and 23 minutes for Latinos and two hours and 45 minutes for Whites.²³⁷
- In 2007, advertisers spent more than \$566 million on food, beverage and restaurant advertising in Latino media.²³⁸
- According to one study, Black children ages 12-17 view 14 percent more food advertisements than their White peers. That number would be even higher if the study took into account the greater amount of time Blacks spend watching television.²³⁹

Physical Activity and Obesity Disparities

- Children who live in neighborhoods without access to green spaces or recreation centers, or areas that parents report to be poorly kept or dilapidated, are 1.21 times more likely to be overweight or obese.²⁴⁰
- Latino preschoolers are less physically active than White children of the same age.²⁴¹
- Lower-income and minority students in secondary school are getting less exercise at school due to their lower participation in school intramural and team sports.²⁴²
- Residents in Black communities are less likely to have access to parks, green spaces, pools and beaches.²⁴³
- More Latino and Black parents report that their children face barriers to physical activity, including transportation problems, concerns about neighborhood safety and the cost of local activity opportunities, as compared with White parents. Among Black parents, 30.6 percent cite a lack of opportunities as a barrier to physical activity, compared with 13.4 percent of White parents. Among Latino parents, 40.1 percent cite safety concerns, compared with 8.5 percent of White parents.²⁴⁴
- A separate study of the 2007 NSCH data evaluating the impact of socioeconomic and built environments on overweight and obesity found that the odds of a child being obese or overweight were 20 percent to 60 percent higher in unsafe or poor housing neighborhoods and in areas with no access to sidewalks, parks and recreation centers.²⁴⁵

B. MAKING HEALTHY CHOICES EASIER

To help make healthier choices easier choices in every neighborhood in the United States, policies and programs must:

1. Improve access to and affordability of healthy foods.

I. Improving Access to and Affordability of Healthy Foods

The ability to make healthy food choices is often limited by where we live, particularly for people who live in lower-income and rural neighborhoods or communities.²⁴⁶

- Lower-income areas have fewer supermarkets and grocery stores that carry healthy foods than do predominantly White, middle- and high-income neighborhoods.²⁴⁷ A 2009 study by the USDA found that 68 percent of lower-income individuals live in neighborhoods with limited or no access to supermarkets, and 23.5 million people in lower-income areas have to travel more than a mile from their home to reach a supermarket.²⁴⁸
- Latino neighborhoods have one-third as many chain supermarkets and Black neighborhoods only half as many as predominately White areas.²⁴⁹
- Stores in lower-income neighborhoods stock fewer healthy items and have significantly lower-quality fresh produce.²⁵⁰
- Even when fresh foods are available in lower-income areas, the cost is often prohibitive.²⁵¹
- Lower-income neighborhoods have a higher concentration of fast-food restaurants²⁵² and convenience stores, a factor tied to higher rates of obesity in children and teenagers.²⁵³
- Public transportation to supermarkets is often lacking in lower-income neighborhoods.²⁵⁴

The President's FY 2011 budget proposal includes a request for \$400 million for the Healthy Food Financing Initiative, which would seek to remedy the issue of "food deserts," where nutritious foods are not easily available, via tax credits and other incentives. (Please see Section 3D for a detailed description of the initiative.)

In addition, researchers have found that a number of policies and programs aimed at making nutritious foods more accessible and affordable can have positive results.

In May 2009, Leadership for Healthy Communities released its "Action Strategies Toolkit: A Guide for Local and State Leaders Working to

2. Increase access to, availability and affordability of physical activity.
3. Make obesity-prevention health care more accessible.

Create Healthy Communities and Prevent Childhood Obesity," which recommends the following policies and programs to improve nutritious food availability.²⁵⁵

Attract grocery stores that provide high-quality, healthy, affordable foods to lower-income neighborhoods.

- Establish a food policy council or task force to advance healthy food options.
 - Update comprehensive planning documents to include grocery stores as important considerations for developing and redeveloping neighborhoods.
 - Provide financial incentives (grants, loans or tax incentives) to encourage grocery stores to locate in underserved areas.
 - Relax zoning requirements to facilitate the opening of new grocery stores in densely populated urban areas and rural areas.
 - Encourage convenience stores to offer healthier food.
 - Offer incentives to convenience store owners to provide affordable, healthy food options.
 - Require or encourage convenience store owners to accept Electronic Benefit Transfer (EBT) cards for SNAP as a form of payment.
 - Encourage store owners to install point-of-purchase shelf labeling and prompts for healthy foods, while limiting the marketing of unhealthy foods.
 - Establish healthy mobile markets or food carts to help increase the availability of fresh, affordable foods.
 - Provide permits or licenses and incentives to owners to locate mobile markets in lower-income communities with limited or no access to healthy foods.
- #### **Support farmers' markets.**
- Local jurisdictions can establish their own farmers' markets and establish rules and regulations that govern the market.

- Provide incentives, grants and subsidies to local farmers to create farmers' markets in underserved communities.
- Encourage farmers' markets to accept WIC and SNAP participants' payment methods (vouchers or EBT cards).

Support community gardens.

- Convert blighted, neglected areas to community gardens.

Individuals with supermarkets in their neighborhood are more likely to eat more fruits and vegetables,²⁵⁶ have a healthier body weight,^{257,258} and live a longer life.²⁵⁹ Shoppers without easy access to supermarkets have a harder time finding fruits and vegetables, and also end up paying more for the products they do find, compared with those who have access to supermarkets. Evidence from a four-year study of a group of elementary school children found that lower fruit and vegetable prices in their community predict significantly smaller increases in BMI.²⁶⁰

In addition to improving health, increasing the number of supermarkets in lower-income areas and expanding the selection of healthy products at smaller groceries has a variety of other benefits for communities including:

- Job creation.
- Increased revenue.
- Greater potential for commercial revitalization.
- Capacity-building of community organizations and coalitions.
- Market expansion and increased revenue to other local businesses.
- More foot traffic to neighborhoods.²⁶¹

Given the amount of time children spend in school, a school-based strategy for improving access to healthy foods is also important. Such a strategy could entail:

- Only selling and serving healthy foods and beverages such as fruits, vegetables, whole grains snacks, 100% juice, nonfat or low fat milk or milk products, or water.
- Marketing healthy foods in schools.
- For fundraising activities, only use healthy foods, options that involve PA, or sell non-food items.
- At classroom parties, always include healthy foods and beverages.
- Access to water fountains

FOOD DESERT INNOVATION IN MARYLAND

Thanks to \$60,000 in federal stimulus money, two Baltimore neighborhoods – East Baltimore and Washington Village – will soon be able to take advantage of the Virtual Supermarket Project, which will allow them to order groceries online and pick them up with no delivery charge the next day at local libraries.²⁶²

Both neighborhoods are considered “food deserts” with no grocery stores and high numbers of corner stores and fast-food restaurants. The area also has one of the highest mortality rates in the city, along with extremely high rates of heart disease, stroke and diabetes. The local government and health officials have tried to bring grocery stores to these areas in the past, but because of low profits, the stores have closed down or were never opened in the first place.

The Virtual Supermarket Project is just the first of 10 recommendations expected from Baltimore's Food Policy Task Force, convened to deal specifically with these kinds of health problems.

HEALTHY CORNER STORE INITIATIVE

The Healthy Corner Store Initiative (HCSI), a project of The Food Trust, a Philadelphia-based non-profit that works to make healthy food available to all, works with neighborhoods, schools, grocers, farmers and policy-makers to provide greater availability of affordable and healthy foods and nutrition education for young people.

Corner stores are a frequent stop for children walking to and from school, and these visits can add up to 610 calories a day to a child's diet.²⁶³ Students are selected to participate in the Snackin' Fresh Leadership crew, where they work to make changes in their communities. HCSI has also partnered with store owners to increase the availability of fruits and vegetables.

Ensuring that Every American Has Access to Affordable, Nutritious Foods

-- By Yael Lehmann

FOR MORE THAN 40 YEARS, RESIDENTS OF NORTH PHILADELPHIA'S EAST GERMANTOWN NEIGHBORHOOD HAD NO PLACE TO BUY HEALTHY, AFFORDABLE FOODS. THE NEAREST GROCERY STORE WAS A 20-MINUTE BUS RIDE AWAY. THE NEIGHBORHOOD CORNER STORES WERE FILLED WITH UNHEALTHY, AND OFTEN EXPENSIVE, OPTIONS. FAST-FOOD WRAPPERS LITTERED THE STREETS.

And the obesity rate soared.

Nationally, almost one out of every six children between ages 2–19 is obese, a number that has tripled in the years since a grocery store last served the East Germantown community. In East Germantown, almost one out of every two children is overweight or obese.

The story of this Philadelphia neighborhood is not unique. It is the story of the thousands of communities, both urban and rural, all across the country that lack access to healthy, affordable foods. And it is the story of the millions of families who live more than a mile from the nearest grocery store.

Research has shown that you are where you eat, that the neighborhood you live in has a profound impact on the food choices you make. As we work together to address the childhood obesity epidemic, we must consider our children's food environment at home, at school and in our communities.

"The Grocery Gap: Who Has Access to Healthy Food and Why It Matters," published by The Food Trust and PolicyLink, reviewed food access studies in the United States over the past 20 years. The balance of the research found that accessing healthy food is a challenge for many Americans, particularly those living in low-income communities of color and rural areas. The review also found that better access to healthy foods corresponds with healthier eating, and most important, is associated with a lower risk for obesity and other diet-related diseases.

At The Food Trust, we have long advocated this environmental approach to improving health and eating patterns.

Our efforts started in Philadelphia's schools, in partnership with the School District of Philadelphia, where we combined nutrition education with healthy changes in the schools' food environment. Over two years, the initiative resulted in a dramatic 50 percent reduction in the incidence of children becoming overweight.²⁶⁴

The result was encouraging for two reasons. First, Philadelphia schoolchildren are living healthier lives, thanks to this initiative. And second, the results clearly illustrated that positive changes in their food environment can greatly impact children's health. So we expanded our focus, looking beyond the school to the community and the ways in which we can work with families, business owners and community leaders.

Our ever-growing network of more than 30 farmers' markets, many located in low-income Pennsylvania neighborhoods, accepts SNAP benefits.

Our Healthy Corner Store Initiative, which began three years ago as a 10-store effort to change the way children shop in Philadelphia's corner stores and to provide new business opportunities for corner store owners, will reach 1,000 stores throughout the city by 2013.

And the Pennsylvania Fresh Food Financing Initiative, a public-private partnership established in 2004 among the Pennsylvania Department of Community and Economic Development, The Reinvestment Fund and The Food Trust has supported 83 supermarket projects in communities across the state that lacked access to healthy, affordable foods – providing more than 400,000 Pennsylvanians with healthier food choices.

The innovative Pennsylvania Fresh Food Financing, a grants and loan program that encourages supermarket development in underserved neighborhoods, has served as a model for similar efforts in other states, including New York, New Jersey, Illinois, Louisiana and Colorado, and will expand to another eight states with the support of the Robert Wood Johnson Foundation. And in his FY 2011 budget, President Obama called for more than \$400 million to create a national Healthy Fresh Food Financing Initiative, an important component of First Lady Michelle Obama's Let's Move initiative.

But the real successes of the Fresh Food Financing Initiative and this environmental approach can be seen in East Germantown.

On Aug. 21, 2009, the Fresh Grocer supermarket opened its doors in East Germantown. The 50,000-square-foot store ended the neighborhood's 40-year fresh produce drought. "I'm in the store all the time," said Joan Hill who grew up in the neighborhood and lives three minutes from the new supermarket. "The impact on the neighborhood has been invaluable. We now have access to fresh vegetables and fruits. That was sorely lacking in this neighborhood for a very long time."

Yael Lehmann serves as executive director of The Food Trust, www.thefoodtrust.org.

2. Increasing Access to, Availability and Affordability of Physical Activity

It is hard for many Americans to find safe, easily accessible places to be physically active on a regular basis.

- Lower-income communities are significantly less likely to have places where people can be physically active, such as parks, green spaces and bike paths.²⁶⁵
- A study of the link between physical activity facilities and health disparities found that neighborhoods with a higher proportion of college graduates were significantly more likely to have a wide array of physical activity facilities compared with less-educated neighborhoods.²⁶⁶
- More than 60 percent of adults with less than a high-school degree are physically inactive, compared with a little more than 20 percent of college graduates.²⁶⁷
- Children who live in neighborhoods without access to green spaces or recreation centers, or areas that parents report to be poorly kept or dilapidated, are 1.21 times more likely to be overweight or obese.²⁶⁸
- A study of the 2007 NSCH data evaluating the impact of socioeconomic and built environments on overweight and obesity found that the odds of a child's being obese or overweight were 20 percent to 60 percent higher among children in unsafe or poor housing neighborhoods and in areas with no access to sidewalks, parks and recreation centers.²⁶⁹
- A study of elementary schools in Austin, Texas, found that lower-income, Latino children live closer to school areas with lower traffic volumes, but the communities are more likely to be unsafe with poor street environments.²⁷⁰

It is also important to develop and implement culturally and linguistically appropriate strategies to increase minority physical activity rates; a study of four minority groups found that strategies to increase physical activity need to be specifically formatted for cultural relevance to them.²⁷¹ According to the study, messages to encourage increased physical activity and related activities need to be:

- Tailored to the unique cultural and socio-demographic characteristics of each community.
- Sensitive to individual factors such as time and financial constraints.
- Inclusive of friends, family, church and community.²⁷²

Researchers have found a number of policies and programs that can increase safe, affordable places where people can engage in regular physical activity.

For example, there are plenty of opportunities for schools to increase access and availability to physical activity. A school-based strategy could entail:

- Daily physical education.
- Daily PE in elementary schools.
- Intramural sports and physical activity clubs.
- Classroom-based physical activity breaks.
- Walk- and bike-to-school programs.

While schools are a great way to involve children in physical activity, there are also ample opportunities to affect policy and program changes in communities. Leadership for Healthy Communities' "Action Strategies Toolkit: A Guide for Local and State Leaders Working to Create Healthy Communities and Prevent Childhood Obesity" includes the following recommendations to foster active living and enhance the built environment.²⁷³

Improve safety for bicyclists and pedestrians.

- Support legislation that promotes safety for non-motorized transportation.
- Develop or re-evaluate transportation plans to set "active transportation" goals for walking or biking.
- Implement Complete Streets policies in localities, regions and states.
- Support Safe Routes to School programs.

Expand trails, bicycle lanes and connections.

- Support policies that create open spaces that include biking and walking paths.
- Build a network of trails and bicycle lanes through neighborhoods to connect homes with schools and business districts to encourage walking and biking to work or school.
- Convert out-of-service rail corridors into trails.

Re-evaluate urban design and comprehensive land-use plans to improve active living.

- Work with urban planners to promote walkable communities and access to bike paths and mass transit.
- Support mixed-use development and locate businesses, recreation centers, parks, libraries and other facilities near public transportation.
- Site new schools within a 15-minute walk of residential areas to encourage parents and children to walk to school.

Improve community design features to encourage physical activity.

- Ensure streets are built with sidewalks to improve pedestrians' experience and safety.
- Increase connectivity between streets and neighborhoods so that people can travel to various destinations more directly.

Increase access to recreation facilities and open spaces.

- Build new recreation facilities along trails or public transit routes to make them more accessible to residents.
- Locate new schools near parks and recreation facilities.
- Develop policies favoring open spaces that can include recreation facilities.

- Enact policies to redevelop blighted neighborhoods into productive economic and recreational opportunities.

- Develop joint-use agreements that allow community members to use school-owned facilities before and after school hours, on weekends and in the summer.

Keep communities safe and free from crime to encourage outdoor activity.

- Increase policing in high-crime areas, pedestrian walkways and parks.
- Work with communities to receive input on unsafe zones and develop neighborhood watch groups.
- Adopt community-design strategies that discourage crime, such as ensuring safe, attractive walking paths by providing lighting.

A PERSONAL PERSPECTIVE

Creating Healthy Communities for Everyone: The Time is Now

-- By Angela Glover Blackwell

WHERE YOU LIVE HAS A LOT TO DO WITH HOW YOU LIVE. SOME OF US LIVE IN COMMUNITIES RICH WITH JOB OPPORTUNITIES, GOOD SCHOOLS AND RESOURCES SUCH AS PARKS AND PLAYGROUNDS, GROCERY STORES SELLING NUTRITIOUS FOOD, STREETS SAFE FOR WALKING AND TRANSIT OPTIONS THAT PROMOTE PHYSICAL ACTIVITY. MANY OTHERS DO NOT. PREDOMINANTLY BLACK NEIGHBORHOODS, FOR EXAMPLE, HAVE FEW SUPERMARKETS, FARMERS' MARKETS OR GROCERY STORES WHERE RESIDENTS CAN BUY HEALTHY FOOD.²⁷⁴ IN MANY LOWER-INCOME BLACK AND LATINO COMMUNITIES, CHILDREN HAVE FEW SAFE PARKS, BIKE TRAILS AND PUBLIC POOLS WHERE THEY CAN PLAY AND BURN OFF CALORIES.²⁷⁵ FOR EVERY WHITE PARENT WHO SAYS NEIGHBORHOOD SAFETY IS A BARRIER TO PHYSICAL ACTIVITY, FOUR LATINO PARENTS SAY THE SAME.²⁷⁶

Poverty, race and obesity are often linked. Mississippi, the poorest state in the nation, has the highest obesity rate of any state and the highest proportion (40%) of obese children ages 10–17. More than half of Black children in the state are overweight or obese. Lack of access to healthy food may be

partly to blame; in Mississippi, more than 70 percent of food-stamp eligible households must travel more than 30 miles to reach a supermarket.²⁷⁷ The South, the country's poorest region, is particularly hard hit by obesity. Six other Southern states that rank among the poorest in the nation (Louisiana, Kentucky, Alabama, Arkansas, Tennessee and West Virginia) have the highest rates of overweight and obese children.

Research increasingly suggests that the places where people live influence dietary behaviors and affect health outcomes. For example, one study showed people who live near an abundance of fast-food restaurants and convenience stores (as opposed to grocery stores and produce vendors) have a higher prevalence of obesity and diabetes. The study found that a greater proportion of low-income people and people of color live in these environments.²⁷⁸ It suggests that improving the retail food environment may be one promising strategy for reducing the prevalence of obesity and other related chronic conditions such as diabetes that are hitting low-income people of color hard. Almost 43 percent of Mexican-American children and almost 37 percent of Black children ages 6–11 are overweight or obese, compared with 32 percent of White children.²⁷⁹

By 2050, communities of color are slated to become the majority group in America. Already, more than 40 percent of Americans under age 18 are people of color.²⁸⁰ The continued economic vitality of the nation will depend on the contributions of this group; they must be healthy enough to lead. It is urgent that the nation begin improving the communities where people of color live now.

Fortunately, many local communities have begun creating models that address unhealthy living conditions. For instance, in Somerville, Mass., families, schools, local government, civic organizations and workplaces have collaborated on policy and environmental change through Shape Up Somerville. Early evaluation showed the initiative slowed the rates of weight gain among first- through third-graders at high risk for obesity.²⁸¹

In Georgia, a Southern state that is grappling with the third highest percentage (37%) of overweight and obese children in the country, the Healthy Kids, Smart Kids program is making a difference. Developed by Dr. Yvonne Sanders Butler, the principal at Browns Mill Elementary and Magnet School in DeKalb County near Atlanta, the initiative brings about reform through an inclusive community engagement process involving students – the vast majority of whom are Black – and parents, teachers and other allies such as church leaders and local politicians. The program has lengthened the physical activity daily requirement and introduced more nutritious foods such as oatmeal, yogurt, and multiple servings of fresh fruits and vegetables. Some children have lost up to 50 pounds, and school absenteeism has declined, among other benefits. The program has really taken off: 19 schools in the region have implemented Healthy Kids, Smart Kids to date.²⁸²

In the Red Hook area of Brooklyn, N.Y, a nonprofit group, Added Value, is working with young people to build more equitable food systems, involving them in farm-to-classroom programs and urban agriculture projects. Food grown on the urban farm is sold at a local farmers' market that provides low-income residents with access to healthy food.²⁸³

Change can happen by thinking more broadly and comprehensively. The federal transportation bill that is due for reauthorization presents another opportunity to re-imagine the nation's communities. This bill has the power to create better health by guiding funding toward projects that promote walking and bicycling, and by making sure that underserved communities are connected to opportunity, such as jobs, health facilities and other essentials.

Ultimately, to build more healthy communities and make sure that all children have access to nutritious food and safe parks and streets, we must all become policy advocates. Learning from the examples that are beginning to proliferate across the country, we can create healthy environments for all.

Angela Glover Blackwell is the founder and CEO of PolicyLink, a national research and action institute advancing economic and social equity. She also serves as the chair of the Advisory Board for the Robert Wood Johnson Foundation Center to Prevent Childhood Obesity. She is the coauthor of "Uncommon Common Ground: Race and America's Future," published by W.W. Norton (2010).

3. Making Obesity-Prevention Health Care More Accessible

The U.S. Preventive Services Task Force (USPSTF) recognizes physician-based exercise and diet counseling as an important component of effective weight-loss interventions.²⁸⁴ In fact, clinical preventive visits that include obesity-related discussions have been shown to increase levels of physical activity among sedentary patients.²⁸⁵ However, racial and ethnic minorities and lower-income individuals receive less comprehensive care than Whites and higher-income people.²⁸⁶ According to the “2009 National Healthcare Disparities Report” from the Agency for Healthcare Research and Quality (AHRQ):

- The percentage of obese adults who were given advice about eating fewer high-fat or high-cholesterol foods was significantly lower for Blacks than for Whites (44.5% and 51.5%, respectively) and for Latinos compared with non-Latino Whites (42.2% and 53.6%).²⁸⁷
 - ▲ Among obese women, Blacks were less likely than Whites to receive advice about healthy eating (46% and 54% respectively), and Latinos were less likely than non-Latino Whites to receive such advice (48.7% and 55%).²⁸⁸
- The percentage of obese adults who received advice about eating fewer high-fat or high-cholesterol foods was significantly lower for poor, near-poor, and middle-income adults compared with high-income adults (43.3%, 46.6% and 47.4%, respectively, compared with 56.8%).²⁸⁹
- The percentage of obese adults who were given advice about eating fewer high-fat or high-cholesterol foods was significantly lower for people with less than a high school education compared with people with some college education (45.7% compared with 53.4%).²⁹⁰
- Latino adults were less likely than White adults to have ever received advice from a physician to exercise more.²⁹¹
- Latinos age 40 and older were less likely to receive three recommended services for diabetes (HbA1c testing, dilated eye examination and foot examination) than non-Latino Whites (31.6% compared with 44.6%).²⁹²
- The percentage of adults age 40 and older who received three recommended services for diabetes was also significantly lower for poor (33.4%), near-poor (31.9%) and middle-income people (42.7%) than for high-income people (47.8%).²⁹³
- The percentage of adults age 40 and over with diabetes who received three recommended services for diabetes was lower for people with less than a high school education (31.4%) and

high school graduates (42.9%) than for people with at least some college education (46.4%).²⁹⁴

- The rate of hospital admissions for short-term complications from diabetes was more than three times as high for Blacks as for Whites (151.2 per 100,000 population compared with 46.8 per 100,000 population).²⁹⁵

Education and knowledge about obesity and associated conditions, like diabetes, are often lacking in minority patients. A study at Mount Sinai School of Medicine in New York City of 151 people with diabetes showed that one in three lower-income minority individuals thought that their doctor would be able to cure their diabetes, or that they would not always have diabetes.²⁹⁶

One way some of these health care disparities could be remedied is through the Let’s Move campaign’s partnership with the American Academy of Pediatrics (AAP). AAP has agreed to work with the broader medical community to educate doctors and nurses about obesity; ensure that they regularly monitor children’s BMI; provide counseling for healthy eating early on; and even write prescriptions describing the simple things individuals and families can do to increase healthy eating and physical activity.

The IOM has identified some actions the health care sector can take to increase access to obesity-prevention services:²⁹⁷

- Clinicians should take active roles in the prevention of obesity among racial and ethnic minorities and lower-income individuals. Clinicians should routinely measure height and weight; track BMI; provide feedback, interpretation, counseling and guidance on obesity prevention to individuals and their families; and take leadership roles in advocating for obesity prevention in communities.
- Health care professional organizations should make obesity prevention a priority by:
 - ▲ Advocating for community prevention.
 - ▲ Issuing position statements on the importance of obesity prevention, especially for those communities disproportionately affected by the problem.
 - ▲ Working with medical and nursing schools and post-graduate training programs to require that knowledge and skills related to obesity prevention be part of the curricula.
- Medical and nursing training programs should promote effective clinical obesity-prevention and treatment strategies that address socioeconomic, linguistic and cultural factors.

Public Opinion Survey

AMERICAN VOTERS SUPPORT INVESTMENT IN PREVENTING CHILDHOOD OBESITY

Childhood Obesity Seen as a Serious and Urgent Problem, But Voters Are Optimistic About the Future

A recent survey commissioned by the Robert Wood Johnson Foundation and the Trust for America's Health finds eight in 10 American voters in agreement that that childhood obesity is a serious problem.²⁹⁸ This viewpoint transcends all demographic boundaries, with at least 72 percent of every partisan, ideological, regional, gender, age, education, income level and racial group believing the childhood obesity problem is a serious one.

At the center of combating the childhood obesity problem is a belief that weight management and being healthy requires a balance between personal responsibility and government involvement. While voters clearly charge each individual or parent with the responsibility for keeping themselves and their children at a healthy weight, they at the same time acknowledge a role for government in providing access to physical education programs for kids, as well as information and resources that can help people make their own healthy choices.

Key findings from the survey include:

- Seventy-three percent say that preventing childhood obesity is an important priority for government to focus on, with 58 percent citing it as a very important priority.
- A majority (56 percent) says that investing in a comprehensive program to combat childhood

obesity is worth it, even if it would increase government spending by billions of dollars a year (and this during a difficult economic period in which many voters are largely hesitant to support more government spending).

- Voters recognize that preventing childhood obesity carries a real return on investment, with 56 percent believing investing in preventing it will save us money. That said, more than six-in-10 support an investment in childhood obesity prevention regardless of whether it will save money or not.
- Voters see an urgency to the problem, demonstrated by the 50 percent who say that we should invest more in preventing childhood obesity right now, against 37 percent who say that although it is an important issue, we should wait until the economy improves before we invest more in preventing childhood obesity prevention.
- There is optimism about the future – 61 percent of voters believe the childhood obesity epidemic is a problem we can solve within a generation, and they strongly support policies that invest in our kids and schools and increase access to physical education programs, information and resources that help people make healthy choices.

Childhood Obesity Viewed As a Serious, Escalating and Urgent Problem

American voters overwhelmingly agree that childhood obesity is a serious problem (81 percent), and also one that is getting worse (80 percent).

- This sentiment is as broad as it is deep, with at least 72 percent of every demographic subgroup in this survey seeing the problem as both severe and growing.
- This view is bound by neither geography nor partisanship:
 - ▲ Eighty-one percent in the Northeast, 79 percent in the Midwest, 82 percent in the South, and 83 percent in the West view

childhood obesity as a serious problem, while 77 percent in the Northeast, 83 percent in the Midwest, and 80 percent in both the South and West believe the problem is getting worse.

- ▲ Eighty-seven percent of Democrats, 77 percent of Republicans, and 79 percent of Independents call childhood obesity a serious problem, while 85 percent of Democrats, 75 percent of Republicans, and 78 percent of Independents also report the problem is increasing.

Additionally, a plurality of voters see an urgent need to invest in tackling the childhood obesity problem. As noted earlier, 50 percent say that we should invest more in preventing childhood obesity right now, against 37 percent who say that although it is an important issue, we should wait until the economy improves before we invest more in preventing childhood obesity prevention.

Further, when pitted against a broad range of proposals related to health, childhood obesity prevention ranks as a top-tier priority, trumping

even the notion of fixing our health care system to make it more affordable and accessible. As demonstrated by the following table, when asked to rate each proposal on a scale from zero to 10 (where zero means not at all an important priority for government to focus on and 10 means an extremely important priority), 58 percent call preventing childhood obesity a very important priority (percent responding between 8 and 10). More than a third of voters (37 percent) rate it a 10 on this scale.

	Mean	% 8 – 10 score
Tightening regulations and inspections to keep food safe.	7.9	67
Investing in more research to prevent diseases like heart disease and diabetes	7.5	60
Preventing diseases related to childhood obesity like diabetes and heart disease by helping kids eat right and be more physically active	7.2	58
Training doctors and nurses to increase access to High-quality health care	7.1	58
Developing vaccines to prevent a worldwide flu pandemic, like swine flu	7.0	52
Fixing our health care system to make it more affordable and accessible for people	6.9	58
Reducing overcrowding in emergency rooms and hospitals	6.6	48
Making more places smoke free and providing programs to help people quit	6.3	46

Now, I am going to read you a list of proposals related to our country today that some people are suggesting government should focus on. For each, please tell me, on a scale of 0 to 10, how big a priority that proposal should be for government to focus on, with 0 meaning it should not be an important priority at all for government to focus on and 10 meaning it should be an extremely important priority for government to focus on. You can use any number between 0 and 10.

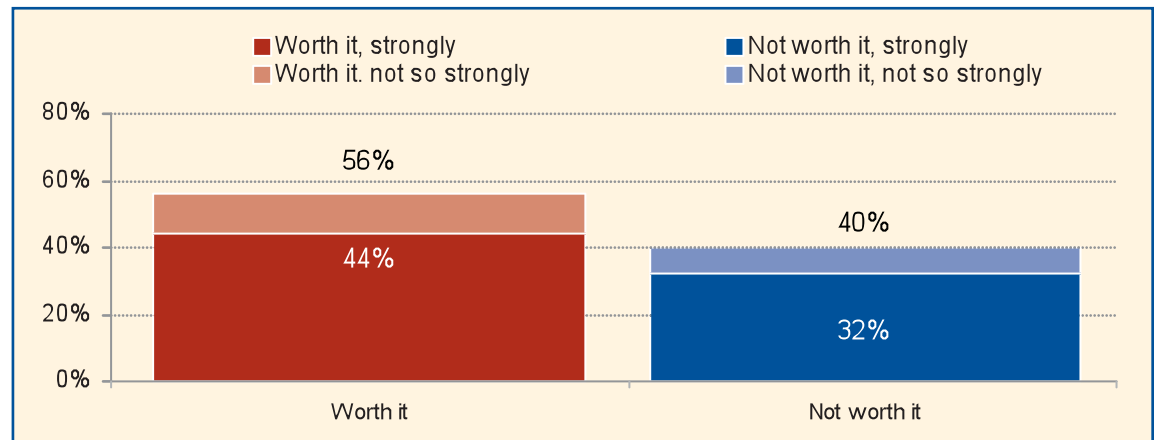
Voters Believe Investing in Childhood Obesity Prevention is Worth the Cost; Recognize Return on Investment

As shown on the following page, a majority says that even if a comprehensive childhood obesity prevention program increased government spending by billions of dollars a year, it would still be worth it to make the investment.

■ There is high intensity behind this sentiment, with 44 percent of all voters feeling this way strongly.

■ This view includes a majority in every region across the country – 62 percent in the Northeast, 57 percent in the South and West, respectively, and 51 percent in the Midwest say it is worth the cost.

■ Even 54 percent of people who believe the community they live in already provides a lot of opportunities to eat healthy and be physically active believe this investment is worth the cost.



“A comprehensive program to prevent childhood obesity might include things like building or improving parks and bringing healthier food into schools – if you knew this type of program would increase government spending by billions of dollars a year, do you think it would be worth it or not worth it to make this investment in preventing childhood obesity?”

As the following table shows, this support for investment is underscored by a belief that investing in preventing childhood obesity will save us money in the long run. However, it is important to note that voters place a premium on health over costs on this issue – by a greater than two-to-one margin, people believe that we should invest in childhood obesity prevention even if it doesn’t save us money, because it will prevent disease and save lives.

	1st statement – 2nd statement
Investing in preventing childhood obesity will save us money by keeping people healthy and lowering rates of disease. OR Investing in preventing childhood obesity will just waste money because people will keep making unhealthy choices no matter what.	56 – 39
Investing in preventing childhood obesity is worth it even if it doesn’t save money, because it will prevent disease and save lives. OR Investing in preventing childhood obesity is not worth it if it doesn’t save money, because reducing health care costs is more important right now.	62 – 26
Now let me read you some short pairs of statements. For each pair, please tell me which statement you agree with more.	

Voters Want Focus on Kids and Schools

Voters express support for and confidence in the effectiveness of a wide range of policy ideas to combat childhood obesity, which largely fall into two categories:

1) Helping our children stay healthy by providing opportunities for good health in schools – in terms of physical activity, nutrition, and education.

- Expand physical education classes in school and provide more after-school programs for kids to be physically active (81 percent favor; 68 percent strongly favor. Eighty-three percent believe it would be effective; 68 percent that it would be very effective)
- Require that all foods served and sold in schools meet or exceed the most recent Dietary Guidelines (84 percent favor; 69 percent strongly favor. Eighty percent believe it would be effective; 64 percent that it would be very effective)

2) Providing access to information that helps people make healthy choices.

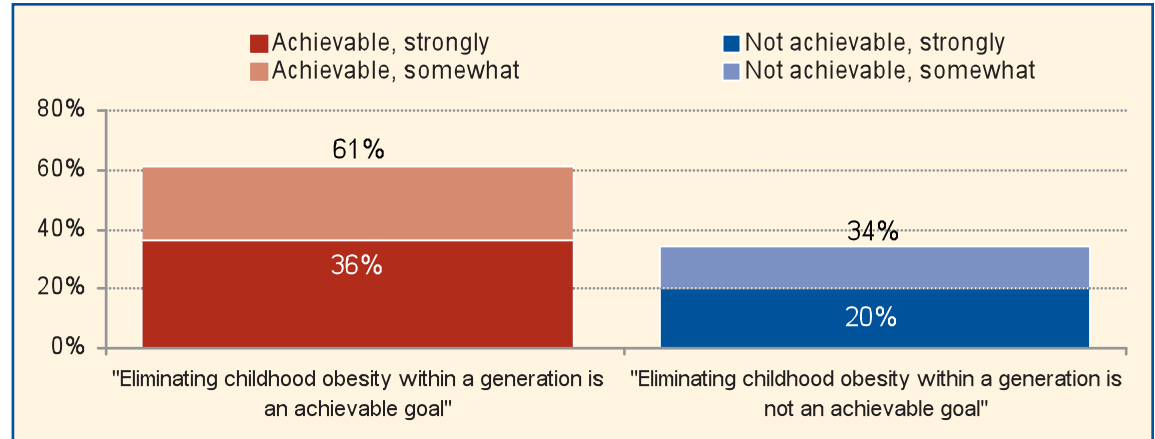
- Post calorie counts and other nutritional information on the menus of large chain and fast-food restaurants (73 percent favor; 61 percent strongly favor. Sixty-four percent believe it would be effective; 50 percent that it would be very effective)
- Limit how companies can advertise and market unhealthy food and beverages to children, similar to what was done for smoking (66 percent favor; 54 percent strongly favor. Sixty-nine percent believe it would be effective; 57 percent that it would be very effective)
- Establish stricter requirements for labeling nutritional information on food and menus (64 percent favor; 50 percent strongly favor. Sixty-one percent believe it would be effective; 44 percent that it would be very effective)

Optimism about the Way Forward, But Both Openings and Challenges Exist

Despite their serious concerns about the childhood obesity epidemic and the importance they place on personal responsibility, American voters are optimistic we can win the battle. By a nearly two-to-one ratio, they say First Lady Michelle Obama's goal of eliminating childhood obesity within a generation is achievable.

The survey also reveals both openings and challenges for combating childhood obesity through

the prism of the economic downturn, which has had an effect on people's personal health habits. While 40 percent report being a) more likely to prepare meals from scratch at home and b) more likely to do outdoor activities that are cheap or free, 20 percent are more likely to order from the value menu at fast-food restaurants and 15 percent have reduced or eliminated gym memberships or other physical activity that costs money.



"Now just so that everyone taking this survey has the same information, First Lady Michelle Obama has partnered with community leaders, teachers, doctors, nurses, and parents to launch a nationwide campaign to eliminate childhood obesity within a generation. This program is called Let's Move. Now let me read you a short pair of statements about the Let's Move program, and please tell me which statement you agree with more."



Conclusion and Recommendations

The numbers speak for themselves. Adult obesity rates continue to rise in the United States. Although childhood obesity rates have stabilized among most groups, older children and the heaviest boys are struggling with their weight more than ever before. And obesity rates continue to be significantly higher among specific ethnic and racial groups, particularly non-Hispanic black girls and Hispanic boys.²⁹⁹

But there are encouraging signs. This year's *F as in Fat* report offers ample evidence that individuals, families, government, the business community, educators, health care providers, and all sectors of American society are increasingly will-

ing to invest time, energy and resources to solve the obesity crisis.

Now it is up to all of us to take the momentum around obesity, health, disease prevention and wellness and carry it forward.

A. ENHANCING OBESITY PREVENTION AND CONTROL EFFORTS WITHIN THE REFORMING U.S. HEALTH SYSTEM

The transformational health reform law – the Patient Protection and Affordable Care Act – will add 32 million Americans to the rolls of the insured. But health insurance coverage alone is not enough. To enhance the prevention of obesity and related diseases within the changing health system, TFAH recommends the following actions:

1. Support obesity- and disease-prevention programs through the Prevention and Public Health Fund.
2. Adopt a Health-in-All-Policies approach through the National Prevention, Health Promotion and Public Health Council.
3. Expand the commitment to community-based prevention programs.
4. Align health insurance coverage and access provisions in health reform with obesity prevention and control.
5. Align federal policies and legislation with the goals of the National Prevention and Health Promotion Strategy.
6. Continue to invest in research and evaluation.

These recommended actions should include a special emphasis on addressing the needs of racial and ethnic minorities and low-income individuals. While the health reform process will help expand access and may help to reduce some of the barriers that make it harder for people to make

healthy choices, health reform alone will not address all of social factors that influence health, such as education, income and cultural beliefs. As a result, every opportunity should be taken to address these underlying problems as the health reform implementation process proceeds.



I. Support Obesity- and Disease-Prevention Programs through the Prevention and Public Health Fund

Central to health reform is the creation of a **Prevention and Public Health Fund**, which provides \$15 billion in mandatory appropriations for public health and prevention programs over the next 10 years. While this fund is meant to support a variety of initiatives, central to its purpose is expansion of the kind of community prevention programs that fight obesity and build public health capacity.

TFAH, therefore, recommends that a substantial portion of the fund be devoted to expansion of the

ARRA community prevention grants and/or implementation of the Community Transformation grants discussed in Section 3A of this report and below. We also recommend that in the short term, capacity-building supported by the fund should be targeted at developing the competencies directly related to community prevention so that state and local governments, as well as nongovernmental organizations, learn how to support the policy, coalition-building, and environmental and social change that are key to community prevention.

2. Adopt a Health-in-All-Policies Approach Via the National Prevention, Health Promotion and Public Health Council

Health reform offers a tremendous opportunity to think about how a range of policies can be adapted to improve health.

The new health reform law mandates the creation of a **National Prevention, Health Promotion and Public Health Council** composed of departmental secretaries from across the federal government, with the surgeon general serving as chair. The council will be housed within HHS and will provide coordination and leadership at the federal level, and among federal departments and agencies, with respect to prevention, wellness and health promotion practices, the public health system and integrative health care.

The council is also responsible for developing the **National Prevention and Health Promotion Strategy**, which will set goals and objectives for federally supported prevention, health promotion, public health, and integrative health care practices. The council will also establish measurable actions and timelines to carry out the strategy. The strategy is due March 23, 2011 – one year after the signing of the law.

Both the council and the strategy present an opportunity to look specifically at obesity, and health in general, across the federal government and to incorporate the principle that health should be considered in all policy decisions. To achieve this, TFAH recommends that the Public Health Council:

- **Adopt a Health-in-All-Policies approach**, which requires thinking about health not only as a product of the health system, but also a product of our agricultural, transportation, land-use, environmental, educational, energy and economic policies.
- **Set SMART goals and objectives.** The National Prevention Strategy must set specific, measurable, achievable, realistic and timely (SMART) goals for improving the health of all Americans, particularly those disproportionately affected by chronic and infectious diseases. These goals must be integrated into the work of all federal agencies.
- **Support the strategy with a detailed implementation plan.** By Sept. 23, 2011 – six months after the release of the strategy – each federal department and agency should have developed an implementation plan detailing the actions it will take to help meet the goals of the strategy. Each department's plan should include measurable goals, a timeline, a description of how the department's budget will fund health-related activities, and evaluation measures.
- **Make certain that, in the long run, the National Prevention and Health Promotion Strategy guides investments from the Prevention and Public Health Fund.** To ensure progress in addressing the biggest health challenges, such as obesity, spending priorities must be aligned with the nation's overall health goals.

3. Expand the Commitment to Community-Based Prevention Programs

A focus on community prevention should be the centerpiece of the changing health system. ARRA grants were a down payment on community prevention as they funneled \$650 million to communities to promote policy and environmental change.

With the health reform act, there are even more opportunities to transform communities into healthy places to live. The Prevention and Public Health Fund offers an opportunity to finance community prevention by focusing on crosscutting approaches to reducing the risks that affect health and cause injury, and by promoting physical activity and improved nutrition. TFAH recommends that initial community prevention priorities (using FY2010 Prevention Fund dollars) should include:

■ **ARRA Obesity Grants.** CDC reports that it has hundreds of millions of dollars in approved but unfunded high-quality community grants. Using this mechanism to finance a portion of the obesity-related “approved but unfunded” grants could be done rapidly and would be consistent with the commitment to community prevention as a use of the fund.

■ **The National Diabetes Prevention Program.** Funding this program, which is authorized in the health reform bill, would bring to scale a dramatically successful, cost-effective program with a real impact on expensive chronic disease rates. Funding would support a four-pronged approach to preventing and controlling type 2 diabetes: 1) a grant program for community-based diabetes prevention program model sites; 2) a program within CDC to determine the eligibility for entities to deliver community-based diabetes prevention services; 3) a training and outreach program for lifestyle intervention instructors; and 4) an evaluation, monitoring, technical assistance and applied research component.

■ **Existing Community Prevention Programs.** HHS could use an existing funding mechanism to support NGOs in doing community prevention work. The ARRA grant process showed that some local health departments do not yet have the capacity to lead community prevention efforts. There is a need for an alternative mechanism to reach these communities. To move money quickly, the CDC could use its existing cooperative agreements with national and community-based organizations. Potential programs that could be funded include:

▲ The CDC’s REACH Program, which supports grantee partners that establish community-based programs and culturally

appropriate interventions to improve health outcomes among racial and ethnic groups.

▲ The CDC’s Healthy Communities Program, which has funded the efforts of more than 240 communities since 2003 to identify and improve policies and environmental factors influencing health in order to reduce the burden of obesity and other chronic diseases.

■ **Community Transformation Grants.** In future years, the federal government should use the newly authorized Community Transformation Grants to support state and local governments and NGOs in developing policy, environmental, programmatic and, as appropriate, infrastructure changes to promote healthy living and reduce disparities. Additionally, funding could support the Healthy Living, Aging Well pilot authorized in health reform legislation, which would provide competitive grants to support public health community interventions and screenings targeted to the pre-Medicare population (ages 55–64).

As the funds from these programs are distributed and programs are implemented, TFAH recommends that federal officials and grant recipients adhere to the following principles:

■ **Coordinate the Community Transformation Grants with Let’s Move and other federal health initiatives.** To optimize the results of these grants, it is important that they not be implemented in isolation from other obesity-prevention initiatives pursued by the administration.

■ **Minimize duplication of efforts and promote coordination with existing funding streams.** Grantees should be encouraged to demonstrate the ability to coordinate their activities with all existing grants in the community, whether or not the grantee has been the actual recipient of the funds. Whether the community is funded through ARRA, the Community Transformation Grants, existing CDC programs, or a privately funded effort, grantees should be encouraged to ensure that their activities are building on, not duplicating, the efforts of existing programs and initiatives, such as Let’s Move. Grantees should be encouraged to demonstrate how they will ensure coordination between the local health care delivery system and all other stakeholders.

■ **Focus on changing policies to support healthy behaviors.** Changing Americans’ eating and physical activity behaviors are critical to reversing the obesity epidemic and putting all

Americans on the path to better health. Grants to help address policy, structural, and environmental barriers to good nutrition and physical activity should be awarded to state, tribal, and local government agencies and community-based organizations.

- **Examine the link between community and clinical prevention.** The emphasis on community prevention does not mean that we can ignore the clinical side of the equation. Clinical providers can support behavior change among their patients and monitor their progress. When possible, grantees should seek to engage the health care provider community, in-

cluding pediatricians and dietitians, and seek to develop care coordination resources. At the same time, clinicians should be encouraged to connect patients with local community-based prevention programs, as appropriate.

- **Include a strong evaluation component.** The evaluation of community-based prevention programs will be critical to determining whether or not they should be replicated by other communities. To the extent feasible, grantees should set aside adequate funding for evaluation, specify what baseline information will be collected and set forth clear evaluation criteria at the outset.

4. Align Health Insurance Coverage and Access Provisions in Health Reform with Obesity-Prevention and Control

Health reform puts the country on the path towards ensuring that every American has access to coverage for preventive medical services, including nutrition and obesity counseling and screening for obesity-related diseases, such as type 2 diabetes, heart disease and some forms of cancer. Policies also should be put in place to encourage the development and incorporation of emerging and innovative new practices as they become available. To reach these goals, TFAH recommends these steps:

- **Ensure obesity treatment and prevention is part of the Essential Health Benefits Package.** Health reform includes the mandate that individuals be offered an essential health benefits package that limits cost-sharing and which is defined by the secretary of HHS. Included in the essential benefit categories are preventive and wellness services and chronic disease management. The secretary should examine the range of treatment and prevention options for obesity and include those with evidence-based results in the package, including, but not limited to, BMI screenings and assessment, and nutrition and physical activity counseling.
- **Work with baby boomers to enhance nutrition and physical activity.** As baby boomers become Medicare-eligible, the percentage of obese individuals age 55 and older could increase significantly.³⁰⁰ One way to control obesity-related Medicare costs is the Healthy Aging, Living Well pilot program, part of the new health reform law. This program awards competitive grants to health departments and Indian tribes to carry out five-year pilot programs to provide public health community interventions, screenings, and when necessary, clinical referrals for individuals ages 55–64. Nutrition, physical activity, and obesity should

be a major focus of these pilot programs. The secretary of HHS should quickly develop a program announcement for the Healthy Aging, Living Well pilot program and open up the request for proposals by FY 2011 to get the funding out to state and tribal authorities.

- **Provide guidance to health care providers regarding obesity-related services available to Medicaid enrollees.** Health reform legislation includes a provision directing the secretary of HHS to provide guidance and relevant information to states and health care providers regarding preventive and obesity-related services that are available to Medicaid enrollees, including obesity screening and counseling for children and adults. It also directs states to design a public awareness campaign to educate Medicaid enrollees regarding availability and coverage of such services. Implementation of these provisions will help ensure that providers are aware of which services they can offer and if they can be reimbursed.
- **Fully implement the Childhood Obesity Demonstration Project.** The Child Health Insurance Program Reauthorization Act of 2009 (CHIPRA) directed the secretary of HHS, in consultation with the Centers for Medicare and Medicaid Services (CMS) administrator, to conduct a demonstration project to develop a comprehensive and systematic model for reducing childhood obesity by awarding grants to eligible entities to carry out the project. The model is to identify, through self-assessment, behavioral risk factors for obesity among children, as well as needed clinical preventive and screening benefits. It also will provide ongoing support to target individuals and their families to reduce risk factors and promote use of preventive and screening benefits.

CHIPRA only included an authorization of appropriations, and in FY 2010 Congress did not appropriate any funds. However, the Patient Protection and Affordable Care Act appropriated \$25 million for the demonstration project in FY 2010–2014. Now that money has been appropriated, the secretary of HHS should work rapidly to develop the program announcement, open up the application process and award the grants to qualified applicants. The Childhood Obesity Demonstration Project should also:

- ▲ Coordinate with the Let’s Move initiative and other federal childhood obesity-prevention efforts.
- ▲ Minimize duplication of efforts and promote coordination with existing funding streams.
- ▲ Emphasize the role of parental involvement in the program announcement.
- ▲ Include a strong evaluation component.

5. Align Federal Policies and Legislation with the Goals of Promoting a Health-in-All-Policies Approach and, after 2011, the National Prevention Strategy

As relevant federal legislation comes up for reauthorization, Congress should work to align U.S. law with the Health-in-All-Policies approach. Such federal legislation includes the Child Nutrition and Special Supplemental Nutrition Program for Women, Infants, and Children Act (CNR); the Elementary and Secondary Education Act (ESEA); and the Surface Transportation Authorization Act, among others.

■ **Child Nutrition and WIC Reauthorization Act (CNR).** TFAH supports the recommendations of the National Alliance for Nutrition and Activity (NANA),³⁰¹ which include the following:

- ▲ **Update the national nutritional standards for school foods sold outside the federal school lunch and breakfast programs.** Congress should give the USDA the authority to update its standards for these foods (sold through vending machines, on à la carte lines, in school stores, etc.), which have not been revised since the 1970s. The USDA should use the 2007 IOM report, “Nutrition Standards for Foods in Schools: Leading the Way toward Healthier Youth,” as a basis for setting new standards.³⁰²
- ▲ **Increase reimbursement rates for school meals** to cover the rising cost of providing healthy meals that meet the 2005 Dietary Guidelines for Americans. Healthier meals tend to be more expensive and involve higher energy and labor costs.
- ▲ **Strengthen local school wellness policies.** As part of the 2004 CNR reauthorization, Congress established school wellness policies. Since 2004, many schools adopted policies to set nutritional standards for competitive foods and to promote physical activity and nutrition education. However, a 2009 evaluation of school wellness policies determined that the majority of policies were fragmented and lacked

provisions for monitoring, enforcing, or revising and updating as needed.³⁰³ Congress should strengthen school wellness policies by requiring schools to:

- ▲ Make parents, students, teachers, staff and state officials aware of their wellness policies and implementation plans.
- ▲ Update and change wellness policies when necessary.
- ▲ Work with existing school health committees, or via a newly established local wellness policy committee, to thoroughly implement and evaluate policies.
- ▲ Include specific policies to promote physical education and activity and limit food marketing in schools.
- ▲ Publish their policies and implementation plans.
- ▲ Conduct periodic assessments of their policies to assess progress and impact on healthy eating and physical activity behaviors.
- ▲ Report the quantity and quality of physical education offered on school district and state report cards.

■ **The Elementary and Secondary Education Act (ESEA).** As Congress works on reforming ESEA (previously known as No Child Left Behind), it should prioritize physical activity and physical education. TFAH recommends that Congress should:

- ▲ Implement the reforms included in the Fitness Integrated with Teaching Kids Act (HR 1585). (See Section 3C for a discussion of the bill.)
- ▲ Provide adequate financial resources to support quality physical education and health.
- ▲ Enhance teacher training in physical education.

- ▲ Expand the 21st Century Community Learning Centers program and specify nutrition and physical activity as allowable uses of funding.
- ▲ Authorize programs to improve health and safety, such as the administration's proposed Successful, Safe, and Healthy Students program, which would award grants to improve school safety and to promote students' physical and mental health and well-being, nutrition education, healthy eating and physical fitness.

■ **The Surface Transportation Authorization Act.** Lawmakers and the public health community must recognize that transportation policies influence our safety, air quality, and opportunities to be physically active. They can promote health, or worsen it. With that in mind, TFAH urges Congress to consider the following principles:

- ▲ Transportation projects should ensure that all users of the transportation system – including pedestrians, bicyclists and transit users, as well as children, older individuals and individuals with disabilities – should be able to travel safely and conveniently on streets and highways.
- ▲ Mass transit and pedestrian/bicycle infrastructure should be enhanced because they help reduce harmful vehicle emissions and promote physical activity.
- ▲ All major transit projects should assess their impact on health.
- ▲ Public health professionals should have a seat at the table when transportation planning occurs.
- ▲ Transportation programs should ensure that members of a community are not iso-

lated and can access nutritious food and physical activity.

- ▲ Additional research and data collection should be funded to strengthen the connection between transportation, the built environment and health.

To advance these principles, TFAH recommends the following:

- ▲ Incorporate Complete Streets approaches into authorization legislation.
- ▲ Provide increased funding for non-motorized transit options and transportation enhancements to encourage physical activity, cleaner air and increased transit options for communities.
- ▲ Expand the Safe Routes to School Program to all elementary, middle and high schools.
- ▲ Link transportation and climate-change policy. If Congress enacts legislation to reduce greenhouse gas emissions, and the legislation generates revenue (e.g., from the auction of carbon emissions allowances or through a carbon tax), some of the revenue should be allocated for mass transit and non-motorized transit to reduce greenhouse gas and other harmful vehicle emissions and promote physical activity.
- ▲ Encourage health representation on Metropolitan Planning Organizations so that the health community can contribute to the transportation decision-making process.
- ▲ Strengthen partnerships between the Department of Health and Human Services and the Department of Transportation to develop mechanisms for assessing the health impact of major transportation projects and enhancing data collection and research on those linkages.

6. Continue to Invest in Research and Evaluation

There is an ever-growing body of research on nutrition, physical activity, obesity, and obesity-related health outcomes and associated interventions. However, more effort, funding and evaluation of obesity-prevention programs are needed in order to develop a set of evidence-based, proven interventions. The Strategic Plan for NIH Obesity Research, first published in 2004, will be updated in 2010. As part of the updated plan, TFAH recommends that researchers should:

- **Translate research into practice.** For public health practitioners, having the results of a new study is not sufficient. Many of these studies demonstrate the “efficacy” of an intervention or medical treatment while failing to consider how “effective” they will be under real-world circumstances. Researchers should continue to translate their work into practice, which means considering the full range of environmental and socioeconomic factors that influence people. The National Collaborative on Childhood Obesity Research (NCCOR) is an excellent example of the type of collaboration necessary to solve the obesity epidemic.³⁰⁴ Researchers should also address cost effectiveness and give public health officials a sense of per-capita costs as they attempt to use these small controlled interventions on a community-wide level. The Institute of Medicine’s April 2010 report, *Bridging the Evidence Gap in Obesity Prevention*, provides a framework decision makers and researchers can use to evaluate evidence on obesity policies and programs.³⁰⁵
- **Focus on environmental and socio-cultural factors.** More evidence is emerging linking where people live to what they eat and how much they exercise. Continued research on the impact of the built environment on obesity is needed, as are research and evaluation of policies and programs designed to change the built environment and social norms.
- **Recognize that the benefit of physical activity goes beyond BMI.** Obesity is a result of a chronic energy imbalance – too many calories in, too few calories expended through physical activity. Many obesity interventions seek to boost people’s level of physical activity and measure the effect on weight gain and BMI. However, researchers are discovering that physical activity has a whole host of positive health benefits, including enhanced academic performance in children and adolescents, reduced risk behavior in adolescents and adults and improved mental health. More research on the link between physical activity and overall health is needed.
- **Improve surveillance data, especially for children.** Researchers rely on the annual National Health and Nutrition Examination Survey (NHANES) for data on obesity and overweight for children age 2 and older. The Behavioral Risk Factor Surveillance System (BRFSS) provides researchers with state-specific estimates for adult obesity and overweight rates, while the Youth Risk Behavior Survey (YRBS) provides data on high school students in a majority of states. However, there is limited state-specific data on obesity and overweight rates for younger children. The National Survey of Children’s Health (NSCH) is only conducted every four years, and data are released nearly two years after it is collected. We need better surveillance data, especially for children. Researchers and public health officials should work with HHS’s Office of the National Coordinator for Health Information Technology (ONC) to ensure that new health IT systems and electronic health records are designed with the surveillance needs of public health and medical researchers in mind.



Fast Facts about Obesity

The information presented in Appendix A is intended to serve as a quick reference guide to obesity and overweight in the United States.

The information includes a summary of the many factors that influence nutrition and physical activity, including those that can be shaped by changes in federal, state, and local policies. There is also information on the health impact of obesity on adults, children and adolescents; a summary of the 2008 Physical Activity Guidelines for

Americans and trends in physical activity; a summary of the 2005 Dietary Guidelines for Americans and trends in Americans' eating habits; details on the economic costs of obesity; and, finally, a summary of the bias and discrimination faced by those who are overweight and/or obese.

WHAT IS BEHIND THE OBESITY EPIDEMIC?

MANY ISSUES INFLUENCE NUTRITION AND PHYSICAL ACTIVITY BEHAVIORS

Food Choices and Changes

- Sharp decline in prices in recent decades (adjusted for inflation) for low-nutrient, energy-dense foods and beverages, such as sodas and fast-food hamburgers.³⁰⁶
- Greater consumption of low-nutrient, energy-dense foods.³⁰⁷
- Dramatic rise in price of more nutritious foods, such as fruits, vegetables, lean meats and low-fat dairy products. One study found a 19.5 percent increase in prices for these healthy foods between 2004 and 2006.³⁰⁸
- Increases in caloric intake; adults consumed approximately 300 more calories daily in 2008 than they did in 1985.³⁰⁹
- Limited access to supermarkets and nutritious, fresh foods in many urban and rural neighborhoods.
- “Portion distortion” or the rise of bigger portions.
- “Value sizing” or placing a higher value on the amount of food versus the quality of food.
- Less in-home cooking and more frequent reliance on takeout food and eating in restaurants.

Schools

- Availability of low-nutrition foods and beverages in à la carte lines, school stores, vending machines and fundraisers, and at classroom parties.
- Reduction in the amount of physical education, recess and recreation time.
- Few safe routes to school that encourage kids to walk and bike.

- Limited opportunities for health education that includes health topics on nutrition and physical activity and fitness.
- Marketing in schools.

Community Design

- Communities designed to foster driving rather than walking or biking.
- Lack of public transportation options.
- No sidewalks or poor upkeep of sidewalk infrastructure.
- Walking areas often unsafe or inconvenient.
- Limited park and recreation space, including indoor facilities.
- Poor upkeep and security in local parks.
- Lack of affordable indoor physical activity options.
- Communities built at low densities.
- Retail and employment centers separated from housing.
- Zoning codes prohibit many smart growth strategies that would create more opportunities for physical activity and increase access to healthy foods.

Marketing and Advertising

- More advertising and marketing of unhealthy foods, particularly to kids.
- Newer forms of marketing to kids, including online promotions and text messaging, which take place out of the view of parents.
- Marketing of extreme or fad weight loss programs.

Workplaces Not Conducive to Health

- Many desk jobs limit or discourage physical activity and become part of the sedentary lifestyle.
- Worksites typically not designed to foster movement.
- Limited opportunities for physical activity or recreation during the workday.
- Unhealthy options in cafeterias or work lunch sites.
- Lack of bike racks and/or shower facilities that discourage active transportation.
- Lack of support for breast-feeding mothers.

Economic Constraints

- Health insurance coverage for obesity-prevention services often has been limited or unavailable.
- Lack of either appropriate preventive services or follow-up care for people without health insurance.
- “Value sizing” of less nutritious foods and the higher costs of many nutritious foods.

- Expense, including taxes, of gym memberships, exercise classes, equipment, facility use and sports league fees.
- Fewer and smaller grocery stores in lower-income neighborhoods, which often means residents have less access to affordable fruits and vegetables in lower-income neighborhoods.

Family and Home Influences

- Influence of other family members’ habits on eating and exercise patterns.
- “Electronic culture” options for entertainment and free time, including TV, video games and the Internet.
- More people working outside the home or far from home.

Limited Time

- Long work hours lead to more meals, many of them high in calories, eaten outside the home.
- Car time and commuting cut into free time that could be used for physical activity.

RISK FACTORS AND OTHER ISSUES THAT AFFECT WEIGHT GAIN

Genetics, Physiology and Life Stages

- Metabolism.
- Childbearing.
- Increased risk factors for obesity and related diseases in children with obese parents, particularly mothers.
- Aging factors, including menstruation, premenopause, and menopause for women.
- Weight gain as a side effect from some commonly used medications such as insulin, antiretrovirals, antidepressants, oral contraceptives and injectable contraceptives.

Psychology

- Body image concerns.
- Eating disorders.
- Consumers’ frustration with conflicting nutrition information and advice.
- Eating to combat stress, anxiety or depression.
- Depression and stigma.
- Turning to eating as a replacement for smoking or other unhealthy behaviors.

OBESITY'S IMPACT ON HEALTH

HEALTH IMPACT OF OBESITY AND PHYSICAL INACTIVITY

Below are some key findings based on a range of research into the health impact of obesity. Physical activity has been shown to have a role in reversing or preventing many of these health problems.

Type 2 Diabetes

- Over a 10-year period, the number of newly diagnosed diabetes cases in the United States nearly doubled from 4.8 per 1,000 in 1995-1997 to 9.1 per 1,000 in 2005-2007.³¹⁰
- More than 80 percent of people with type 2 diabetes are overweight.³¹¹
- More than 20 million adult Americans have diabetes.³¹²
- Another 57 million Americans are pre-diabetic, which means they have prolonged or uncontrolled elevated blood sugar levels that can contribute to the development of diabetes.³¹³
- Diabetes is the seventh leading cause of death in the United States and accounts for 11 percent of all U.S. health care costs.³¹⁴
- The CDC projects that 48.3 million Americans will have diabetes by 2050.³¹⁵
- Approximately 176,500 individuals under the age of 20 have diabetes.³¹⁶
- Two million adolescents ages 12-19 have pre-diabetes.³¹⁷
- The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) found that a 7 percent weight loss together with moderate levels of physical activity (walking 30 minutes a day, five days a week) decreased the number of new type 2 diabetes cases by 58 percent among people at risk for diabetes.³¹⁸

Heart Disease and Stroke

- People who are overweight are more likely to have high blood pressure, high levels of blood fats, and LDL, or bad cholesterol, which are all risk factors for heart disease and stroke.³¹⁹
- Physically inactive people are twice as likely to develop coronary heart disease compared with regularly active people.³²⁰
- Heart disease is the leading cause of death in the United States, and stroke is the third leading cause.³²¹
- One in four Americans has some form of cardiovascular disease.³²²

- One in three adults has high blood pressure. Approximately 30 percent of cases of hypertension may be attributable to obesity, and the figure may be as high as 60 percent in men under 45.³²³

Cancer

- People who are overweight “may increase the risk of developing several types of cancer, including cancers of the colon, esophagus and kidney. Overweight is also linked with uterine and postmenopausal breast cancer in women.”³²⁴
- Approximately 20 percent of cancer in women and 15 percent of cancer in men is attributable to obesity.³²⁵
- Cancer is the second leading cause of death in the United States.³²⁶
- It is not known why being overweight can increase cancer risk. One theory is that fat cells may affect overall cell growth in the body.³²⁷

Neurological and Psychiatric Diseases

- Obesity may increase adults' risk for dementia. A review of 10 published studies found that people who were obese at the beginning of the studies were 80 percent more likely to later develop Alzheimer's disease than those adults who had a normal weight at enrollment.³²⁸
- An analysis of data from a health survey of more than 40,000 Americans found a correlation between depression and obesity. Obese adults were more likely to have depression, anxiety and other mental health conditions than healthy-weight adults.³²⁹ The odds of experiencing any mood disorder rose by 56 percent among obese individuals ($30 \leq \text{BMI} \leq 39.9$) and doubled among the extremely obese ($\text{BMI} \geq 40$).³³⁰

Kidney Disease

- Obese individuals ($\text{BMI} \geq 30$) are 83 percent more likely to develop kidney disease than normal-weight individuals ($18.5 < \text{BMI} < 25$), while overweight individuals ($25 < \text{BMI} < 30$) are 40 percent more likely to develop kidney disease.³³¹
- An estimated 24.2 percent of kidney disease cases among U.S. men and 33.9 percent of cases among women are related to overweight and obesity.³³²

Liver Disease

- Obese individuals are at greater risk of nonalcoholic steatohepatitis (NASH), a liver disease which can lead to cirrhosis, in which the liver is permanently damaged and scarred and no longer able to work properly. NASH ranks as one of the major causes of cirrhosis in America, behind hepatitis C and alcoholic liver disease.³³³
- NASH affects 2 percent to 5 percent of Americans. An additional 10 percent to 20 percent have fat in their liver, but no inflammation or liver damage, a condition called “fatty liver.” Both types of liver disease have become more common as obesity rates have risen in the country.³³⁴

Arthritis

- Obesity is a known risk factor for the development and progression of osteoarthritis of the knee and possibly of other joints. Obese adults are up to four times more likely to develop osteoarthritis of the knee than healthy-weight adults.³³⁵
- Among individuals who have received a doctor’s diagnosis of arthritis, 68.8 percent are overweight or obese.³³⁶
- For every pound of body weight lost, there is a 4 percent reduction in knee joint stress among overweight and obese people with osteoarthritis of the knee.³³⁷

HIV/AIDS

- Antiretroviral treatments are less effective for obese patients. One study found that obese individuals had significantly smaller gains in CD4 cell count after starting HIV treatment than both patients of normal weight and those who were overweight.³³⁸

Obesity and Children’s Health

- Nearly 32 percent of U.S. children and adolescents ages 2–19 are overweight or obese.³³⁹
- Children who are obese are more than twice as likely to die before age 55 as children whose BMI is in the normal range.³⁴⁰
- The number of fat cells a person has is determined by late adolescence; although overweight and obese children can lose weight, they do not lose the extra fat cells.³⁴¹
- Children who are obese after the age of 6 are 50 percent more likely to be obese as adults, regardless of parental obesity status.³⁴²
 - ▲ Among children who were overweight at ages 10–15, 80 percent were obese at age 25.³⁴³

- ▲ About 70 percent of obese youth have at least one additional risk factor for cardiovascular disease, such as elevated total cholesterol, triglycerides, insulin or blood pressure.³⁴⁴
- ▲ Nearly 40 percent have at least two or more additional risk factors.³⁴⁵
- ▲ At least one out of every five U.S. teenagers has abnormal cholesterol levels, a major risk factor for heart disease.³⁴⁶ Among obese teenagers, the rate jumped to more than two out of five (43 percent).³⁴⁷
- Overweight and obesity are associated with a 52 percent increased risk of a new diagnosis of asthma among children and adolescents.³⁴⁸
- Children and adolescents with a BMI greater than 28 are four to five times more likely to experience sleep-disordered breathing than their peers with a lower BMI.³⁴⁹

Obesity and Pregnancy

- There is a growing body of evidence documenting the links between maternal health conditions, including obesity and chronic diseases, and increased risks before, during and after birth.³⁵⁰
- Many pregnant women are overweight, obese, or have diabetes, all of which can have negative effects on the fetus as well as the mother. According to the CDC, approximately 50 percent of women of child-bearing age (between 18 and 44) were either overweight or obese in 2002; 3 percent experienced high blood pressure and 9 percent had diabetes.³⁵¹
- Teenage mothers who are obese before pregnancy are four times more likely than their healthy-weight counterparts to develop gestational diabetes, a form of diabetes that arises during pregnancy and increases a woman’s risk of developing type 2 diabetes later on.³⁵²
- The CDC and the Kaiser Permanente Northwest Center for Health Research found in a recent study that obesity during pregnancy is associated with an increased use of health care services and longer hospital stays.³⁵³ The study of more than 13,000 pregnancies found that obese women required more outpatient medications, were given more obstetrical ultrasounds, and were less likely to see nurse midwives or nurse practitioners in favor of physicians. Cesarean delivery rates were 45.2 percent for extremely obese women, compared with 21.3 percent for healthy-weight women.³⁵⁴

WEIGHT BIAS AND QUALITY OF LIFE

As obesity rates have gone up in the United States, so, too, has the prevalence of weight discrimination. Researchers at the Yale University Rudd Center on Food Policy and Obesity report weight discrimination has increased by 66 percent over the past decade in the United States and is now found at rates similar to racial discrimination.^{355,356}

Weight bias and discrimination are found in all areas of life including the workplace, health care facilities, schools and universities, mass media and personal relationships. Researchers at the Rudd Center published a comprehensive review of articles on the stigma of obesity in January 2009.³⁵⁷ A selection of documented findings on obesity bias and stigma are listed below.

Weight Bias in Employment

- In one survey of overweight and obese women, 25 percent of participants said they experienced on-the-job discrimination because of their weight, 54 percent reported stigma from co-workers, and 43 percent experienced stigma from their supervisors.³⁵⁸
- A 2007 study of more than 2,800 adults found that overweight adults were 12 times more likely to report weight-based employment discrimination, obese adults were 37 times more likely and severely obese adults were 100 times more likely.³⁵⁹
- Compared with job applicants with the same qualifications, obese applicants are rated more negatively and are less likely to be hired.³⁶⁰
- Overweight people earn 1 percent to 6 percent less than non-overweight people in comparable positions.³⁶¹

Weight Bias in Health Care

- More than 50 percent of primary care physicians surveyed viewed obese patients as awkward, unattractive, ugly and noncompliant. One-third of the doctors surveyed described obese patients as weak-willed, sloppy and lazy.³⁶²
 - ▲ Surveys of nurses,³⁶³ medical students,³⁶⁴ fitness professionals³⁶⁵ and dieticians³⁶⁶ revealed similar biases.

Weight Bias in Education

- Teachers view overweight students as untidy, more emotional, less likely to succeed on homework and more likely to have family problems.³⁶⁷ They also have lower expectations for overweight students.³⁶⁸

Physical and Emotional Health Consequences of Weight Bias

- Weight bias is associated with psychological consequences, including depression,³⁶⁹ lower levels of self-esteem³⁷⁰ and body image dissatisfaction.³⁷¹
- Weight bias also is associated with unhealthy eating behaviors,³⁷² physical activity levels³⁷³ and cardiovascular health outcomes.³⁷⁴
- Weight-based teasing of overweight and obese adolescents is related to increased susceptibility to depression, according to a literature review of the psychological and social effects of obesity or overweight.³⁷⁵
- A review of the effects of obesity and overweight on children and adolescents found that higher BMI is associated with more severe and frequent victimization.³⁷⁶
- Overweight and obese youths are more frequently rejected by their peers, chosen less as friends, and are generally not as well liked as healthy-weight children.³⁷⁷

OBESITY AND PHYSICAL INACTIVITY

2008 PHYSICAL ACTIVITY GUIDELINES FOR AMERICANS

In 2008, the U.S. Department of Health and Human Services (HHS) issued the first-ever Physical Activity Guidelines for Americans.³⁷⁸ The Guidelines provide information on the types and amounts of physical activity that provide substantial health benefits for Americans age 6 and older. The main idea behind the Guidelines is that regular physical activity over months and years can produce long-term health benefits.

Adults

- The guidelines recommend that adults engage in a minimum of two-and-a-half hours each week of moderate-intensity exercise, or one-and-a-quarter hour of vigorous physical activity.
 - ▲ Brisk walking, water aerobics, ballroom dancing and general gardening are examples of moderate-intensity aerobic activities. Vigorous-intensity aerobic activities include race walking, jogging or running, swimming laps, jumping rope and hiking uphill or with a heavy backpack.
- Aerobic activity should be performed in episodes of at least 10 minutes.
- For more extensive health benefits, adults should increase their aerobic physical activity to five hours per week of moderate-intensity or two-and-a-half hours per week of vigorous-intensity aerobic physical activity.
- Adults should incorporate muscle strengthening activities such as weight training, push-ups, sit-ups, carrying heavy loads or heavy gardening at least two days per week.

Older Adults

- Older adults should follow the guidelines for other adults when it is within their physical capacity. If a chronic condition prohibits their ability to follow those guidelines, they should be as physically active as their abilities and conditions allow. If they are at risk of falling, they should also do exercises that maintain or improve balance.

Pregnant Women

- During pregnancy and the time after delivery, healthy women should get at least two-and-a-half hours of moderate-intensity aerobic activity per week, preferably spread throughout the week.
- Pregnant women who habitually engage in vigorous aerobic activity or who are highly active can continue during pregnancy and the time after delivery, provided they remain healthy and discuss with their health care provider how and when activity should be adjusted over time.

Adults with Disabilities

- Adults with disabilities who are able should get at least two-and-a-half hours of moderate aerobic activity per week, or one-and-a-quarter hour of vigorous aerobic activity per week.
- Adults with disabilities should incorporate muscle-strengthening activities involving all major muscle groups two or more days per week.
- Those who are not able to meet the guidelines should engage in regular physical activity according to their abilities and should avoid inactivity.

People with Chronic Medical Conditions

- Adults with chronic conditions get important health benefits from regular physical activity. They should do so with the guidance of a health care provider.

Children and Adolescents

- Children and adolescents should do 60 minutes or more of physical activity daily.
 - ▲ Aerobics: Most of the 60 or more minutes should include either moderate- or vigorous-intensity aerobic physical activity, and should include vigorous-intensity physical activity at least three days a week. Examples of moderate-intensity aerobic activities include hiking, skateboarding, rollerblading, bicycle riding and brisk walking. Vigorous-intensity aerobic activities include bicycle riding, jumping rope, running and sports such as soccer, basketball and ice or field hockey.
 - ▲ Muscle-strengthening: The 60 or more minutes of daily physical activity should include muscle-strengthening activities at least three days a week. Examples of muscle strengthening activities for younger children include: gymnastics, playing on a jungle gym and climbing a tree. Examples of muscle strengthening activities for adolescents include; push-ups, pull-ups and weightlifting exercises.
 - ▲ Bone-strengthening: The 60 or more minutes of daily physical activity should include bone-strengthening activities at least three days a week. Examples include jumping rope, running and skipping.
- It is important to encourage young people to participate in physical activities that offer variety are enjoyable, and are age-appropriate.

TRENDS IN PHYSICAL ACTIVITY

Adults

- The World Health Organization estimates that 1.9 million deaths worldwide are attributable to physical inactivity. Chronic diseases associated with physical inactivity include cancer, diabetes and coronary heart disease.³⁷⁹
- More than a quarter of U.S. adults do not engage in any leisure-time physical activity (i.e., any physical activities or exercises such as running, calisthenics, golf, gardening or walking).³⁸⁰
 - ▲ The percentage of adults who do not engage in any leisure-time physical activity is higher among Blacks (31.9%) and Latinos (34.6%) than Whites (22.2%).³⁸¹
- Sixty percent of adults are not sufficiently active to achieve health benefits.³⁸²
- A study of more than 30,000 healthy adult U.S. women found that middle-aged women need at least an hour of moderate activity a day to maintain a healthy weight without restricting calories.³⁸³
 - ▲ For those middle-aged women who are already overweight (which includes most American women), even more exercise is recommended to avoid gaining weight without eating less.³⁸⁴
- Physical activity is significantly associated with better survival and function among the very old (age ≥ 85 years).³⁸⁵
- Sedentary adults pay \$1,500 more per year in health care costs than physically active adults.³⁸⁶
- Studies suggest that moderate-to-high levels of physical activity substantially reduce, or even eliminate, the mortality risk of obesity.³⁸⁷
- Non-leisure time physical activity has decreased substantially in the past 20 to 30 years due to increasing mechanization at work and at home.³⁸⁸

- ▲ “Non-leisure time physical activity” is defined as energy spent in a normal day outside of sports, exercise and recreation. This includes manual labor on the job, walking and biking to work and household chores.³⁸⁹

- A majority of U.S. adults ages 20-74 walk less than two to three hours per week and accumulate less than 5,000 steps per day.³⁹⁰ U.S. physical activity guidelines call for adults to walk 10,000 steps daily.
- The automobile has significantly reduced physical activity by its frequent use for short trips for shopping, going to the cleaners and other errands, and taking children to school.³⁹¹

Youth

- Current studies show that most youth do not meet physical activity guidelines for children and adolescents that recommend engaging in 60 minutes or more of moderate-to-vigorous physical activity per day.^{392,393}
- Only 42 percent of children ages 6-11 engage in 60 minutes or more of moderate-to-vigorous physical activity on five or more days per week.³⁹⁴
 - ▲ That figure drops to 8 percent for adolescents ages 12-15 and to 7.6 percent for adolescents ages 16-19.³⁹⁵
- An analysis of accelerometer data for children and adults shows that the amount of time spent in moderate-to-vigorous physical activity plummets as children reach adolescence.³⁹⁶
- The number of children walking to and from school has declined dramatically over the past 40 years, from 48 percent of students in 1969 to 16 percent of students in 2001.³⁹⁷
- There is substantial evidence that physical activity has a positive effect on students' academic performance, including grades and standardized test scores, according to a review of 50 studies conducted by CDC.³⁹⁸

THE IMPACT OF THE BUILT ENVIRONMENT ON NUTRITION AND PHYSICAL ACTIVITY

Nutrition

- A 2003 study showed a direct relationship between living near at least one supermarket and meeting the U.S. Dietary Guidelines for Americans for fruit and vegetable intake. The presence of each additional supermarket was related to a 32 percent increase in fruit and vegetable consumption among Blacks and an 11 percent increase among Whites.³⁹⁹
- A study of nearly 700 neighborhoods found that low-income areas have access to half as many supermarkets as the wealthiest areas. Predominantly minority and racially mixed communities have access to fewer supermarkets compared with predominantly White communities.⁴⁰⁰

Physical Activity

- Communities with lower levels of neighborhood safety were associated with decreased levels of physical activity accord-

ing to a study of more than 12,000 students in grades 8-10 who live in urban, suburban and rural neighborhoods.⁴⁰¹

- ▲ The same study found students' perception of safety as they traveled to and from school was also associated with physical activity levels.⁴⁰²

- Children and youth living in neighborhoods with more green space, such as parks, playing fields, trails and schoolyards, were less likely to be overweight than their counterparts in less-green neighborhoods.⁴⁰³
- Communities with high levels of poverty are significantly less likely to have places where children can be physically active, such as parks, green spaces and bike paths and lanes.⁴⁰⁴
- In general, states with the highest levels of bicycling and walking have the lowest levels of obesity, high blood pressure and diabetes, and have the greatest percentage of adults who meet the recommended 30-plus minutes a day of physical activity.⁴⁰⁵

NUTRITION: THE OTHER SIDE OF THE ENERGY BALANCE

2005 DIETARY NUTRITION GUIDELINES FOR AMERICANS

The Dietary Guidelines for Americans are a joint initiative of the Department of Health and Human Services (HHS) and the Department of Agriculture (USDA).⁴⁰⁶ The Guidelines, which have been published every five years since 1980, provide people with advice about how good dietary habits can promote health and reduce risk for major chronic diseases. They serve as the basis for Federal food and nutrition education programs. The 2010 Guidelines are due out by the end of the year.

Key Recommendations

- Consume a variety of nutrient-dense foods and beverages within and among the basic food groups while picking foods that limit the intake of saturated and trans fats, cholesterol, added sugars, salt and alcohol.
- Consume more dark green vegetables, orange vegetables, legumes, fruits, whole grains and low-fat milk and milk products.
- Eat fewer calories, refined grains, added sugars and total fats. Eat foods lower in sodium.

Specific Recommendations for Adults

- An adult consuming 2,000 calories per day should have two cups of fruit and two-and-a-half cups of vegetables.
- Consume three or more ounce-equivalents of whole-grain products per day. At least half of grain intake should come from whole grains.
- Consume three cups per day of fat-free or low-fat milk or milk products.
- Increase dietary intake of calcium, potassium, fiber, magnesium and vitamins A, C, and E.

Specific Recommendations for Children and Adolescents

- At least half of grains consumed should be whole grain. Children ages 2–8 should consume two cups per day of fat-free or low-fat milk or milk products and children age 9 and older should drink three cups per day.
- Increase dietary intake of calcium, potassium, fiber, magnesium and vitamin E.

AMERICANS' UNHEALTHY EATING HABITS

The American diet has skewed towards large portion sizes that are high in fat and calories. The USDA reports that Americans are not meeting the 2005 Dietary Guidelines for Americans. In order to meet them, Americans would need to substantially lower their intake of added fats, refined grains, sodium, and added sugars and sweeteners, and increase their consumption of fruits, vegetables, whole grains, and low-fat milk and milk products.⁴⁰⁷

Some unhealthy eating habits that have developed over the past few decades include:

More Calories

- Americans' average daily caloric intake is 300 calories higher than it was in 1985 and 600 calories higher than in 1970, according to 2008 USDA data.⁴⁰⁸
- Children ages 2–18 consume almost three snacks a day, and snacking accounted for up to 27 percent of children's daily caloric intake.⁴⁰⁹

Bigger Portion Sizes

- From 1977 to 1998, portion sizes for selected popular food items and overall energy intake increased for foods purchased in restaurants or fast-food establishments and for foods prepared at home. The increase ranged from 49 to 133 calories for all selected popular foods, such as salty snacks, hamburgers, soft drinks and french fries.⁴¹⁰

Fewer Fruits, Vegetables and Whole Grains

- Consumption of fruits and vegetables in the United States increased by 19 percent from 1970 to 2005; however, Americans still are not meeting the Dietary Guidelines' rec-

ommendations of two cups of fruit and two-and-a-half cups of vegetables per day.⁴¹¹

- Children are eating less fruit and consuming more beverages, such as fruit drinks, sport drinks and fruit juice.⁴¹²

More Sugar

- "Added sugar" consumption is nearly three times the USDA recommended intake.⁴¹³
- Average consumption of added sugars increased 14 percent from 1970 to 2008.⁴¹⁴
- Children who reduced sugar by the equivalent of one can of soda per day had improved glucose and insulin levels. This means that parents can reduce the risk of type 2 diabetes in their children by eliminating one can of soda per day, regardless of any other diet or exercise changes.⁴¹⁵

More Dietary Fat

- Americans consumed an average of 640 calories worth of added fats per person per day in 2008.⁴¹⁶

A Large Increase in Soda and Fruit Juice Consumption

- Sugar-sweetened beverages make up nearly 11 percent of children's total caloric consumption.⁴¹⁷

A Major Increase in Eating Out

- Since the 1960s, the money Americans spend on foods eaten outside the home has nearly doubled.⁴¹⁸
- In 2004, 63 percent of children ages 1–12 ate out at a restaurant one to three times per week.⁴¹⁹

ECONOMIC COSTS OF OBESITY

Health Care Costs

■ Obesity-related medical costs total \$147 billion a year, or nearly 10 percent of all annual medical spending (based on 2006 data). The bulk of the spending is generated from treating obesity-related diseases such as diabetes.⁴²⁰

▲ Of the \$147 billion, Medicare and Medicaid are responsible for \$61.8 billion. Medicare and Medicaid spending would be 8.5 percent and 11.8 percent lower, respectively, in the absence of obesity.⁴²¹

▲ Obese people spend 42 percent more on health care costs than healthy-weight people.⁴²²

■ Childhood obesity alone is responsible for \$14.1 billion in direct costs.⁴²³

■ Annually, the average total health expenses for a child treated for obesity under Medicaid is \$6,730, while the average health cost for all children covered by Medicaid is \$2,446. The average total health expenses for a child treated for obesity under private insurance is \$3,743, while the average health cost for all children covered by private insurance is \$1,108.⁴²⁴

■ Hospitalizations of children and youths with a diagnosis of obesity nearly doubled between 1999 and 2005, while total costs for children and youth with obesity-related hospitalizations increased from \$125.9 million in 2001 to \$237.6 million in 2005, measured in 2005 dollars.⁴²⁵

■ In California alone, the economic costs of overweight, obesity and physical inactivity are estimated to cost the state \$41 billion a year.⁴²⁶

Decreased Worker Productivity and Increased Absenteeism

■ Obesity-related job absenteeism costs \$4.3 billion annually.⁴²⁷

■ Obesity is associated with lower productivity while at work (presenteeism), which costs employers \$506 per obese worker per year.⁴²⁸

■ As a person's BMI increases, so do the number of sick days, medical claims and health care costs associated with that person.⁴²⁹

Higher Workers' Compensation Claims

■ A number of studies have shown obese workers have higher workers' compensation claims.^{430, 431, 432, 433, 434, 435}

■ Obese employees had \$51,091 in medical claims costs per 100 full-time employees, compared with only \$7,503 in medical claims costs for healthy-weight workers. And obese workers had \$59,178 in indemnity claims costs per 100 full-time employees, compared with only \$5,396 in indemnity claims costs for healthy-weight employees.⁴³⁶

Occupational Health and Safety Costs

■ Emergency responders and health care providers face unique challenges in transporting and treating the heaviest patients. According to one study, the number of severely obese (BMI \geq 40) patients quadrupled between 1986 and 2000 from one in 200 to one in 50. The number of super-obese (BMI \geq 50) patients grew by a factor of five, from one in 2,000 to one in 400.⁴³⁷

■ A typical ambulance outfitted with equipment and two emergency medical technicians (EMTs) that can transport a 400-pound patient costs \$70,000. A specially outfitted bariatric ambulance that can transport patients weighing up to 1,000 pounds costs \$110,000.⁴³⁸

■ A standard hospital bed can hold 500 pounds and costs \$1,000. A bariatric hospital bed that can hold up to 1,000 pounds costs \$4,000.⁴³⁹

Methodology for Obesity and Other Rates Using BRFSS

Data for this analysis was obtained from the Behavioral Risk Factor Surveillance System (BRFSS) dataset (publicly available on the web at www.cdc.gov/brfss). This analysis was conducted by Daniel Eisenberg, PhD, and Edward N. Okeke, PhD, MBBS, of the Department of Health Management and Policy of the University of Michigan, School of Public Health.

BRFSS is an annual cross-sectional survey designed to measure behavioral risk factors in the adult population (18 years of age or older) living in households. Data are collected from a random sample of adults (one per household) through a telephone survey. The BRFSS currently includes data from 50 states, the District of Columbia, Puerto Rico, Guam and the Virgin Islands. The most recent data available was 2009.

To account for the complex nature of the survey design and obtain estimates accurately representative at the state level, researchers used sample weights provided by the CDC in the dataset. The main purpose of weighting is to reduce bias in population estimates by up-weighting population sub-groups that are under represented and down-weighting those that are over represented in the sample. Also estimation of variance, which indicates precision and is used in calculating confidence intervals, needs to take into account the fact that the elements in the sample will generally not be statistically independent as a result of the multistage sampling design.

Researchers specified the sampling plan to STATA⁴⁰ using the `svyset` command and the following set of weights: sample weight variable (FIMALWT), first-stage stratification variable (STSTR), and primary sampling unit variable (PSU). Omission of the stratification variable in STATA implies no stratification of PSUs prior to first-stage sampling. Omission of the primary sampling unit variable implies one-stage sampling of elements and no clustering of sampled elements. Omission of the sample weight implies equally weighted sample elements. Mean proportions for each variable were estimated using the `svy: proportion` command.

Variables of interest included BMI, physical inactivity, diabetes and hypertension. BMI was calculated by dividing self-reported weight in kilograms by the square of self-reported height in metres. The variable ‘obesity’ is the percentage of all adults in a given state who were classified as obese (where obesity is defined as BMI greater than or equal to 30). Researchers also provide results broken down by race/ethnicity and gender. Another variable ‘overweight’ was created to capture the percentage of adults in a given state who were either overweight or obese. An overweight adult was defined as one with a BMI greater than or equal to 25 but less than 30. For the physical inactivity variable a binary indicator equal to one was created for adults who reported not engaging in physical activity or exercise during the previous thirty days other than their regular job. For diabetes, researchers created a binary variable equal to one if the respondent reported ever being told by a doctor that he/she had diabetes. Researchers excluded all cases of gestational and borderline diabetes as well as all cases where the individual was unsure.

To calculate prevalence rates for hypertension, researchers created a dummy variable equal to one if the respondent answered “Yes” to the following question: “Have you ever been told by a doctor, nurse or other health professional that you have high blood pressure?” This definition excludes respondents classified as borderline hypertensive, and women who reported being diagnosed with hypertension while pregnant. Note that the hypertension estimates are different from the estimates in the last report because of differences in the methodology. In previous analyses, we aggregated data from 2001/2003/2005 and compared to data from 2003/2005/2007. In order to make that comparison, we had to make a number of simplifying assumptions because of differences in how the question was asked between 2001 and 2005 (Please see the 2008 *F as in Fat* report available at www.healthyamericans.org for a further explanation of the changes in the hypertension variable).

In 2001, when asked the question, *“Have you ever been told by a doctor, nurse or other health professional that you have high blood pressure?”* respondents could answer “yes”, “no” or “don’t know”. In 2003, a follow-up question was introduced: female respondents answering “yes” to the hypertension question were now asked a follow-up question: *“Was this only when you were pregnant?”* If the answer to the follow-up question was also “yes”, the respondent was classified as having gestational hypertension. This category did not exist in 2001. To compare data from earlier years to data from later years, we therefore had to make some assumption about those classified as having gestational hypertension. A reasonable assumption to make was that those classified as having gestational hypertension in 2003 would have been classified as a “yes” in 2001. This seems like a plausible assumption given that the follow-up question in 2003 was only asked of women who answered “yes” to the main question. This year, because our first year of data was 2003, there was no need to make any assumptions about those classified as having gestational hypertension, we simply treated them as a different category. Gestational hypertension is different from regular hy-

per-tension and researchers excluded this category from the calculation of hypertension prevalence rates. This is why the rates from this year’s calculations are lower than the rates calculated in 2008 (for the same 2003/2005/2007 time period); because this time researchers did not include respondents classified as gestational hypertension in the calculation of overall hypertension prevalence rates.⁴⁴¹

Researchers calculated rolling three year averages, first by averaging data from 2006-2008 and then by averaging data from 2007-2009 (after merging data from the relevant time periods). Researchers report mean proportions for each three-year period as well as standard errors and 95 percent confidence intervals for all variables of interest. In addition researchers carried out a Pearson statistical test of proportions and report which states experienced a significant increase or decrease between periods (significant at the 5 percent level).

The 2006-2008 sample consisted of 1,143,720 observations while the 2007-2009 sample consisted of 1,217,061 observations. Researchers excluded observations with missing values from the analysis.⁴⁴²



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