ISSUE REPORT

The State of Obesity:

Better Policies for a Healthier America 2015






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Acknowledgements

Trust for America's Health is a non-profit, non-partisan organization dedicated to saving lives by protecting the health of every community and working to make disease prevention a national priority.

For more than 40 years the **Robert Wood Johnson Foundation** has worked to improve health and health care. We are striving to build a national Culture of Health that will enable all to live longer, healthier lives now and for generations to come. For more information, visit www.rwjf.org. Follow the Foundation on Twitter at www.rwjf.org/twitter or on Facebook at www.rwjf.org/facebook.

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State of Obesity:

BETTER POLICIES FOR A HEALTHIER AMERICA

Letter from Risa Lavizzo-Mourey, M.D., M.B.A., president and Chief Executive Officer of the Robert Wood Johnson Foundation (RWJF), and Jeffrey Levi, Ph.D., executive director of the Trust for America's Health (TFAH)

Obesity remains one of the biggest threats to the health of our children and our country:

- Around 17 percent of children and more than 30 percent of adults are currently considered obese — putting them at heightened risk for a wide range of health problems.
- Obesity is one of the biggest healthcare cost drivers — adding up to billions of dollars in preventable spending each year.
- If we fail to change the course of the nation's obesity epidemic, the current generation of young people may be the first in American history to live shorter, less healthy lives than their parents.

The Trust for America's Health and the Robert Wood Johnson Foundation believe that all children in the United States — no matter who they are or where they live — should have the chance to grow up at a healthy weight. And, that all adults should have the opportunity to be as healthy as they can be no matter what their weight.

For more than a decade, the annual *State of Obesity: Better Policies for a Healthier America* report has raised awareness about the health problems, supported the development of a national prevention-focused strategy and highlighted promising approaches for improving nutrition and increasing activity in America.

In 2007, RWJF made a major investment of $500 million to reverse the childhood obesity epidemic. Since then, we have worked with communities, industry, healthcare, government, schools, child care and families around the country to find ways to make healthy choices easier in our daily lives. We've learned a lot about what works to change public policies, improve school and community environments and strengthen industry practices in ways that help promote healthy eating and physical activity.

We've seen encouraging signs of progress. In just the last year, more school districts, cities, counties and states have reported declines in their childhood obesity rates. Those reports come from Tennessee; Seminole County, Florida; Lincoln, Nebraska; and the Chetek-Weyerhaeuser school district in Wisconsin, among others.

But there is far more to do and we can't stop now. In particular, troubling inequities persist: obesity rates are higher among children of color and families living in poverty. These inequities require a renewed and intensified focus.

Our goal is to help every community build a Culture of Health. We all have a role to play in our homes, schools and neighborhoods.

This year, RWJF announced an additional commitment of $500 million over the next 10 years to expand efforts to help all children grow up at a healthy weight. One of the biggest lessons we've learned is the importance of starting off in childhood — to set the course and stay on track for a lifetime of better health. Building on key areas of work and progress accomplished, this commitment will focus on five big bets:

- Ensure that all children enter kindergarten at a healthy weight;
- Make a healthy school environment the norm and not the exception across the United States;
- Make physical activity a part of the everyday experience for children and youth;
- Make healthy foods and beverages the affordable, available and desired choice in all neighborhoods and communities; and
- Eliminate the consumption of sugar-sweetened beverages among 0- to 5-year-olds.

In this year's *State of Obesity report*, we ask others to join us in stepping up to reinvigorate the commitment to improve the health of our children. The signs of progress are promising. And the stakes are too high not to push forward.

Introduction

The obesity epidemic remains one of the nation's most serious health crises — putting millions of Americans at increased risk for a range of chronic diseases and costing the country billions of dollars in preventable healthcare spending.

Obesity rates rose sharply during the 20 years between 1980 to 2000 — with adult rates doubling and children's rates more than tripling during that time.[1] Starting around 2000, as there was increased recognition of the epidemic, there have been important inroads toward preventing and reducing obesity. However, change has been slow and obesity rates remain very high: more than 30 percent of adults, nearly 17 percent of children (ages 2 to 19) and more than 8 percent of young children (ages 2 to 5) were found to be obese in national surveys.

As former Surgeon General David Satcher has put it, "On one level, the problem is simple. Americans continue to eat too much, especially foods with excess calories and few nutrients. We don't get enough physical activity, and spend too much time in our cars or in front of our various digital screens… But the obesity crisis [will] not be solved by treating it as a personal failing…."[2]

Change requires an increased understanding that decisions are not made in a vacuum. Healthy, affordable foods are often more expensive and scarce in many neighborhoods, while cheap processed foods are widely available. Finding safe, accessible places to be physically active can be a challenge for many. Obstacles are often higher for people with lower incomes and less education, and for racial and ethnic minorities. Where families live, learn, work and play all have a major impact on the choices they 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 barriers to healthy eating and active living — to foster a Culture of Health that makes healthy choices easier for all Americans.

Some key milestones toward advancing this goal have included:

- The Healthy, Hunger-Free Kids Act of 2010 helped raise the nutrition standards in the nation's schools and child care settings, made school meals more easily accessible through community eligibility programs, and strengthened requirements for local school wellness policies throughout the country;
- The Affordable Care Act (ACA) of 2010 included a new emphasis on disease prevention through the Prevention and Public Health Fund (PPHF), extended preventive obesity-related healthcare services to millions of additional Americans and required new restaurant menu labeling;
- The ACA also required the creation of the National Prevention Strategy (NPS) and National Prevention Council's Action Plan — the country's first comprehensive approach for improving the health of all Americans — which led to identifying steps that 20 federal departments and agencies can take, and encouraged state and local governments and private organizations

to develop strategies and create partnerships across different sectors;

- The ACA also supported non-profit hospitals in assessing the health needs of their communities and helped encourage potential additional support for community-based prevention through community-benefit programs;
- Within federal nutrition assistance programs, the Special Supplemental Nutrition Assistance Program (SNAP) has increased focus on nutrition education, including through expanding the SNAP-Education (SNAP-Ed) program, and access to farm-fresh produce; and the Supplemental Nutrition Program for Women, Infants and Children (WIC) increased focus on improving nutrition, increasing breastfeeding, and encouraging physical activity among young low-income children and new mothers;
- The Child Care Development Block Grant (CCDBG) now includes increased requirements for promoting nutrition, physical activity and health in child care programs;
- Healthy food financing initiatives have been created to help bring affordable nutritious foods to more communities;
- The Complete Streets initiative was created and is now in a majority of states and hundreds of communities nationwide, and there has been a growing focus on healthy built environment policies and programs; and
- The Partnership for a Healthier America, Let's Move!, and other public-private efforts have led to commitments to improving nutrition and activity in thousands of child care settings, increasing physical activity before and after schools, increasing workplace wellness programs, expanding the availability of grocery stores and healthy foods served in low-income communities, and reducing calories, fat, and sugar in foods.

Two major lessons have emerged from this work:

- **Prevention among children is key.** It is easier and more effective to prevent overweight and obesity — particularly focusing on helping every child maintain a healthy weight — than it is to reverse trends later. Starting in early childhood pays the biggest dividends — promoting good nutrition and physical activity so they enter kindergarten at a healthy weight and establishing healthy habits for life.
- **Healthy people live in healthy communities.** Small changes to make healthy food and beverages more accessible and affordable, and to make safe places to be physically active more convenient can lead to big differences. Lower-income communities often face higher hurdles, and more targeted efforts are needed, but can also yield bigger changes. The U.S. Centers for Disease Control and Prevention (CDC), The New York Academy of Medicine (NYAM) and other experts have identified a range of programs that have proved effective in reducing obesity and obesity-related disease levels by 5 percent or — in some cases — more.[3, 4, 5] These policies and programs can help give every child the opportunity to maintain a healthy weight and for all adults to improve their health at any weight.

While the signs of progress are promising, overall, the efforts made so far to address the epidemic have not matched the scale and scope of the problem. It is time to step up efforts and begin a new phase — one that uses the lessons learned so far to modernize policies and programs designed to prevent and control obesity.

Changing the trends — to begin to reduce rates — will require a greater focus on prevention. It means investing in getting children on the right track early to help them maintain a healthy balance of nutrition and physical activity throughout their lives. And it means focusing on strategies to curb the rise in obesity among adults by making healthy choices easier in people's daily lives, and placing a higher value on prevention instead of dealing with obesity-related health problems after they happen.

The next step will require placing a higher priority and increasing investments in policies and programs that give all American children the opportunity to grow up at a healthy weight — no matter who they are or where they live — and support all adults at every weight to be as healthy as possible. The next phase will require increased innovation and change that:

1) Brings effective nutrition, physical activity and obesity-prevention community-based programs to full scale with increased investments;

2) Incentivizes increased use of available preventive health services and community resources — and finds ways to better integrate healthcare with community-based programs, services and support that can help improve health beyond the doctor's office in people's daily lives;

3) Targets intensive efforts where obesity rates are the highest and where there are marked inequities in access to affordable healthy foods and opportunities for physical activity; and

4) Prioritizes innovative approaches and developing partnerships — from education to transportation to housing to financing policies — that leverage and align the strengths and efforts of many groups in many sectors to work together to achieve change that no single sector can achieve alone.

In this report, TFAH and RWJF examine:

Section 1: Obesity-Related Rates and Trends

- **A.** Adult Obesity and Overweight Rates
- **B.** Childhood and Youth Obesity and Overweight Rates
- **C.** Racial and Ethnic Inequity and Obesity
- **D.** Health and Obesity
- **E.** Physical Activity in Adults
- **F.** Economics and Obesity

Section 2: Moving Toward Modernizing Obesity Policies and Programs: a review of federal nutrition and physical activity and obesity-related policies and programs

- **A.** Early Childhood and Healthy Weight
- **B.** Schools and Healthy Weight
- **C.** Communities and Healthy Weight
- **D.** Nutrition — Assistance and Education for Families
- **E.** Quality, Affordable Healthcare and Obesity

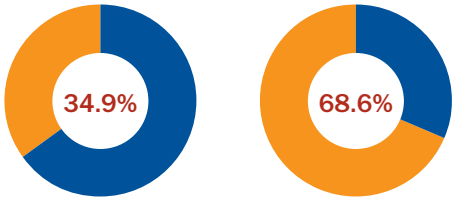
Section 3: Signs of Progress

KEY FINDINGS

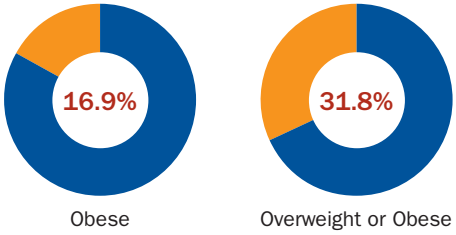
OBESITY RATES REMAIN HIGH

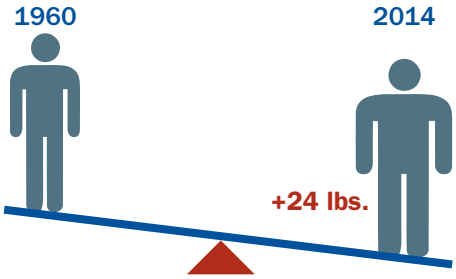
- **Adults:** More than a third of adults (34.9 percent) were obese as of 2011 to 2012.[6] More than two-thirds of adults were overweight or obese (68.6 percent).[7]
  - Nearly 40 percent of middle-aged adults, ages 40 to 59, were obese (39.5 percent), which was more than younger adults, ages 20 to 39 (30.3 percent) or older adults, ages 60 and over (35.4 percent).[8]
  - More than 6 percent of adults were severely obese (body mass index (BMI) of 40 or higher).
  - More women than men, ages 20 and over, have higher rates of obesity and extreme obesity (36.1 percent and 8.3 percent versus 33.5 percent and 4.4 percent).[9]
  - Obesity rates were highest among Black (47.8 percent) adults, followed by Latino (42.5 percent) and White (32.6 percent) adults and lowest among Asian American (10.8 perfect) adults.[10]
- **Children:** Approximately 17 percent of children and teenagers (ages 2 to 19) were obese from 2011 to 2012, and 31.8 percent were either overweight or obese.[11]
  - More than one-in-12 children (8.4 percent) are obese in early childhood (2- to 5-year-olds).
  - By ages 12 to 19, 20.5 percent of children and adolescents were obese.
  - More than 2 percent of young children were severely obese, 5 percent of 6- to 11-year-olds were severely obese and 6.5 percent of 12- to 19-year olds were severely obese.[12]
  - Racial and ethnic inequities persist among children also; 22.5 percent of Latino children and 20.2 percent of Black children are obese, compared to 14.1 percent of non-Latino White and 6.8 percent of Asian-American children.

Adult Obesity in America 2011-12



Childhood Obesity in America 2011-12





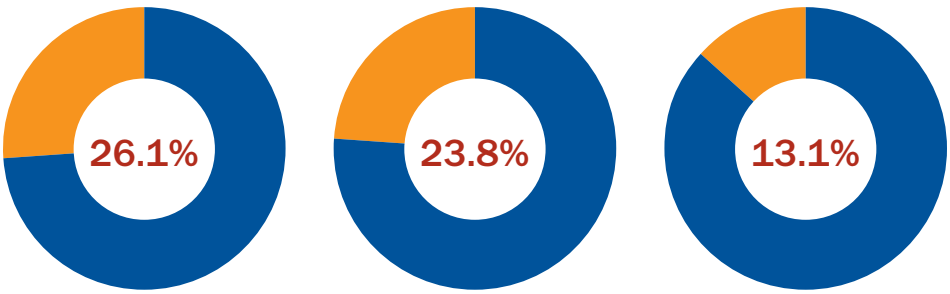
STABILIZING — AT A HIGH RATE

- **Adults:** Over the past 35 years, obesity rates have more than doubled. From 2005 to 2006 to 2011 to 2012, rates remained the same.[13] The average American is more than 24 pounds heavier today than in 1960.[14]
- **Children:** Childhood obesity rates have more than tripled since 1980.[15] The overall rates have remained the same for the past 10 years.[16]
- **Some cohorts stable, some rising:** While rates have remained stable among girls, regardless of race or ethnicity, rates have continued to increase among men and boys and Black and Mexican American women.[17,18,19,20]

AGE DIFFERENCES

- **Adults:** Among obese adults (ages 20+), female obesity rates (36.5 percent) are higher than male obesity rates (33.1 perfect). This is also seen among adults that are severely and morbidly obese.[21]
- Adults ages 40 to 59 (39.5 percent) have higher obesity than adults ages 20 to 39 (30.3 percent) and ages 60+ (35.4 percent). This is also true among those who are severely and morbidly obese, where those between ages 40 to 59 have higher rates than those between ages 20 to 39 and ages 60+.
- **Children:** Overall boys and girls ages 2 to 19 have similar obesity rates (16.7 percent versus 17.2 percent). However preschool (ages 2 to 5) boys have a higher obesity rate (9.5 percent) than preschool girls (7.2 percent). The reverse is true among ages 6 to 11 where girls' obesity rates more than double to 17.9 percent and the rates among boys increase to 16.4 percent.[22]
- Indian/Native Alaskan low-income preschool children (ages 2 to 4) have the highest obesity rates — at 21.1 percent. Overall rates among low-income preschoolers remain high at 14.7 percent, with Latinos at 18.7 percent, Whites at 12.7 percent, Blacks at 11.8 percent, and Asian/Pacific Islanders at 11.6 percent.[23]
- Among children between ages 6 to 11, Latino (26.1 percent) and Black (23.8 percent) obesity rates are higher than the White (13.1 percent) rate. These same increased rates are seen among Latino and non-Latino black teenagers ages 12 to 19 (2011 to 2012).[24]

Obesity Rates in Chidren Ages 6 to 11 by Race and Ehnicity



Obesity-Related Rates and Trends

A. ADULT OBESITY AND OVERWEIGHT RATES

Twenty-two states have adult obesity rates above 30 percent, 45 states have rates above 25 percent, and every state is above 20 percent.

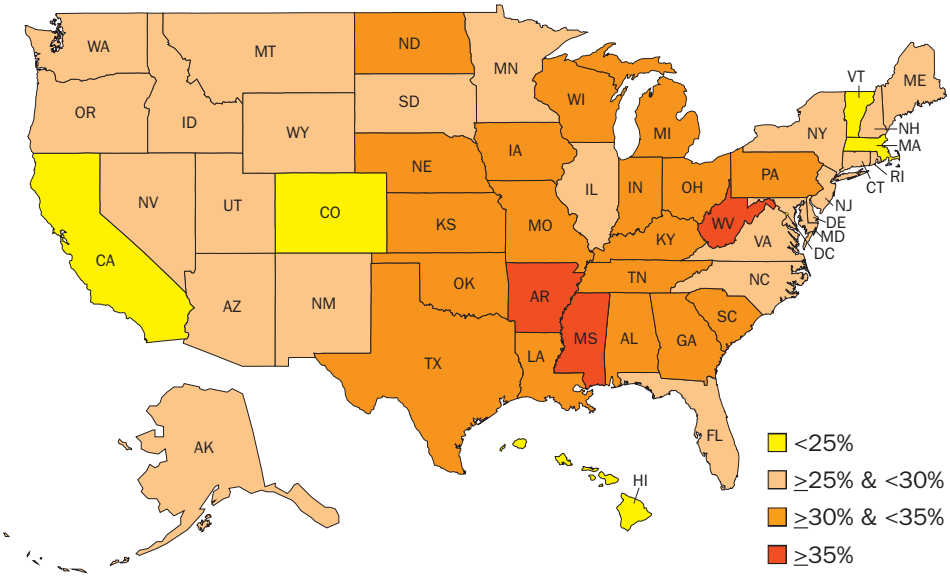
In 1980, no state had an adult obesity rate higher than 15 percent; in 1991, no state was over 20 percent; in 2000, no state was over 25 percent; and, in 2007, only Mississippi was above 30 percent.

Seven of the 10 states with the highest rates are in the South and 23 of the 25 states with the highest rates of obesity are in the South and Midwest.

Arkansas had the highest obesity rate at 35.9 percent, while Colorado had the lowest rate at 21.3 percent. Northeastern and Western states comprise most of the states with the lowest obesity rates.[25]

In 2010, the U.S. Department of Health and Human Services (HHS) set a national goal to reduce the adult obesity rate from 33.9 percent to 30.5 percent by 2020, which would be a 10 percent decrease.[26] *Healthy People 2020* also set a goal of increasing the percentage of people at a healthy weight from 30.8 percent to 33.9 percent by 2020; as of 2014, 17 states fell short of that goal.[27]

2014 ADULT OBESITY RATES



(Note: BRFSS methodological changes were made in 2011. Estimates should not be compared to those prior to 2010)[28]

Territory	Obesity Rate
Guam	28.0
Puerto Rico	28.3

CHART ON OBESITY AND OVERWEIGHT RATES

	ADULTS								
	Obesity		Overweight & Obese	Diabetes		Physical Inactivity		Hypertension	
States	2014 Percentage (95% Conf Interval)	Ranking	2014 Percentage (95% Conf Interval)	2014 Percentage (95% Conf Interval)	Ranking	2014 Percentage (95% Conf Interval)	Ranking	2013 Percentage (95% Conf Interval)	Ranking
Alabama	33.5 (+/-1.5)	5	67.0 (+/-1.6)	12.9 (+/-0.9)	4	27.6 (+/-1.3)[v]	7	40.3% (+/-1.7)	2
Alaska	29.7 (+/-2.0)	24	64.8 (+/-2.1)	7.4 (+/-0.0)	49	19.2 (+/-0.0)	45	29.8% (+/-1.9)	39
Arizona	28.9 (+/-1.3)	29	64.0 (+/-1.4)	10.0 (+/-0.7)	25	21.2 (+/-1.1)[v]	34	30.7% (+/-2.4)	32
Arkansas	35.9 (+/-2.1)	1	70.6 (+/-2.1)	12.7 (+/-1.2)	5	30.7 (+/-1.9)[v]	2	38.7% (+/-1.9)	7
California	24.7 (+/-1.2)	47	59.7 (+/-1.4)	10.3 (+/-0.8)	21	21.7 (+/-1.2)	30	28.7% (+/-1.1)	45
Colorado	21.3 (+/-0.9)	51	57.4 (+/-1.1)	7.3 (+/-0.5)*	50	16.4 (+/-0.8)[v]	51	26.3% (+/-0.9)	50
Connecticut	26.3 (+/-1.4)	43	60.4 (+/-1.7)	9.2 (+/-0.8)	35	20.6 (+/-1.3)[v]	38	31.3% (+/-1.4)	27
Delaware	30.7 (+/-2.1)	17	67.4 (+/-2.2)	11.1 (+/-1.2)	15	24.9 (+/-1.9)[v]	16	35.6% (+/-1.7)	10
D.C.	21.7 (+/-2.3)	50	54.9 (+/-2.8)	8.4 (+/-1.2)	44	20.8 (+/-2.2)	37	28.4% (+/-1.8)	48
Florida	26.2 (+/-1.3)	44	62.2 (+/-1.4)	11.2 (+/-0.8)	13	23.7 (+/-1.2)[v]	19	34.6% (+/-1.1)	13
Georgia	30.5 (+/-1.6)	19	65.7 (+/-1.7)	11.6 (+/-0.9)	10	23.6 (+/-1.4)[v]	20	35% (+/-1.4)	12
Hawaii	22.1 (+/-1.4)	49	58.1 (+/-1.7)	9.8 (+/-1.0)*	27	19.6 (+/-1.3)[v]	42	28.5% (+/-1.5)	47
Idaho	28.9 (+/-1.9)	29	65.7 (+/-2.0)	7.6 (+/-0.9)	48	18.7 (+/-1.5)[v]	47	29.4% (+/-1.6)	42
Illinois	29.3 (+/-1.8)	28	63.8 (+/-1.9)	10.1 (+/-1.0)	23	23.9 (+/-1.6)	17	30.1% (+/-1.7)	37
Indiana	32.7 (+/-1.2)	7	66.5 (+/-1.3)	10.7 (+/-0.7)	19	26.1 (+/-1.1)[v]	10	33.5% (+/-1.1)	17
Iowa	30.9 (+/-1.4)	16	66.9 (+/-1.4)	9.5 (+/-0.7)	32	22.6 (+/-1.2)[v]	26	31.4% (+/-1.3)	26
Kansas	31.3 (+/-1.0)*	13	66.0 (+/-1.1)	10.3 (+/-0.6)*	21	23.8 (+/-0.9)[v]	18	31.3% (+/-0.7)	27
Kentucky	31.6 (+/-1.5)	12	66.7 (+/-1.6)	12.5 (+/-0.0)	6	28.2 (+/-0.0)	6	39.1% (+/-1.4)	5
Louisiana	34.9 (+/-1.5)	4	68.9 (+/-1.5)	11.3 (+/-0.8)	12	29.5 (+/-1.4)[v]	3	39.8% (+/-2)	4
Maine	28.2 (+/-1.3)	33	64.5 (+/-1.5)	9.5 (+/-0.7)	32	19.7 (+/-1.1)[v]	41	33.3% (+/-1.3)	19
Maryland	29.6 (+/-1.5)	26	64.9 (+/-1.7)	10.1 (+/-0.8)	23	21.4 (+/-1.3)[v]	31	32.8% (+/-1.2)	20
Massachusetts	23.3 (+/-1.1)	48	58.9 (+/-1.3)	9.7 (+/-0.7)*	28	20.1 (+/-1.0)[v]	40	29.4% (+/-1.1)	42
Michigan	30.7 (+/-1.3)	17	65.6 (+/-1.4)	10.4 (+/-0.7)	20	25.5 (+/-1.2)	12	34.6% (+/-1.1)	13
Minnesota	27.6 (+/-0.9)*	36	64.1 (+/-0.9)	8.1 (+/-0.5)	46	20.2 (+/-0.8)[v]	39	27% (+/-1.3)	49
Mississippi	35.5 (+/-2.1)	3	70.7 (+/-2.1)	13.0 (+/-1.2)	2	31.6 (+/-2.0)[v]	1	40.2% (+/-1.6)	3
Missouri	30.2 (+/-1.7)	20	65.6 (+/-1.8)	11.1 (+/-1.0)*	15	25.0 (+/-1.5)[v]	14	32% (+/-1.6)	23
Montana	26.4 (+/-1.5)	42	63.0 (+/-1.7)	8.8 (+/-0.8)*	42	19.6 (+/-1.3)[v]	42	29.3% (+/-1.2)	44
Nebraska	30.2 (+/-1.1)	20	66.7 (+/-1.1)	9.2 (+/-0.6)	35	21.3 (+/-0.8)[v]	32	30.3% (+/-1.1)	36
Nevada	27.7 (+/-2.4)	35	63.5 (+/-2.6)	9.6 (+/-1.3)	31	22.5 (+/-2.1)	27	30.6% (+/-2.3)	34
New Hampshire	27.4 (+/-1.7)	37	63.6 (+/-1.9)	9.1 (+/-0.9)	37	19.3 (+/-1.4)[v]	44	30.1% (+/-1.4)	37
New Jersey	26.9 (+/-1.2)	41	63.1 (+/-1.4)	9.7 (+/-0.7)	28	23.3 (+/-1.1)[v]	22	31.1% (+/-1.2)	30
New Mexico	28.4 (+/-1.5)*	32	64.9 (+/-1.7)	11.5 (+/-0.9)	11	23.3 (+/-1.4)	22	29.5% (+/-1.3)	41
New York	27 (+/-1.5)	39	61.1 (+/-1.6)	10.0 (+/-0.8)	25	25.9 (+/-1.3)	11	31.5% (+/-1.3)	25
North Carolina	29.7 (+/-1.3)	24	65.6 (+/-1.5)	10.8 (+/-0.8)	18	23.2 (+/-1.2)[v]	25	35.5% (+/-1.3)	11
North Dakota	32.2 (+/-1.8)	9	68.8 (+/-1.8)	8.6 (+/-0.8)	43	21.3 (+/-1.4)[v]	32	29.7% (+/-1.4)	40
Ohio	32.6 (+/-1.5)*	8	66.7 (+/-1.5)	11.7 (+/-0.8)*	9	25.0 (+/-1.4)[v]	14	33.5% (+/-1.2)	17
Oklahoma	33 (+/-1.3)	6	68.2 (+/-1.4)	12 (+/-0.8)	7	28.3 (+/-1.2)[v]	5	37.5% (+/-1.3)	9
Oregon	27.9 (+/-1.7)	34	61.7 (+/-1.8)	9.0 (+/-0.9)	39	16.5 (+/-1.3)[v]	50	31.8% (+/-1.5)	24
Pennsylvania	30.2 (+/-1.3)	20	64.1 (+/-1.4)	11.2 (+/-0.7)*	13	23.3 (+/-1.1)[v]	22	33.7% (+/-1.1)	16
Rhode Island	27 (+/-1.6)	39	62.4 (+/-1.8)	9.4 (+/-0.8)	34	22.5 (+/-1.4)[v]	27	33.8% (+/-1.5)	15
South Carolina	32.1 (+/-1.2)	10	67.0 (+/-1.3)	12.0 (+/-0.7)	7	25.3 (+/-1.1)	13	38.4% (+/-1.3)	8
South Dakota	29.8 (+/-2.0)	23	65.2 (+/-2.1)	9.1 (+/-1.1)	37	21.2 (+/-1.7)[v]	34	30.7% (+/-1.8)	32
Tennessee	31.2 (+/-2.0)	14	67.1 (+/-2.0)	13.0 (+/-1.2)	2	26.8 (+/-1.7)[v]	9	38.8% (+/-1.8)	6
Texas	31.9 (+/-1.4)	11	67.8 (+/-1.4)	11.0 (+/-0.8)	17	27.6 (+/-1.2)[v]	7	31.2% (+/-1.3)	29
Utah	25.7 (+/-0.9)*	45	59.5 (+/-1.0)	7.1 (+/-0.5)	51	16.8 (+/-0.8)[v]	49	24.2% (+/-0.9)	51
Vermont	24.8 (+/-1.3)	46	60.2 (+/-1.5)	7.9 (+/-0.8)	47	19.0 (+/-1.1)	46	31.1% (+/-1.4)	30
Virginia	28.5 (+/-1.3)	31	64.7 (+/-1.4)	9.7 (+/-0.7)	28	23.5 (+/-1.2)[v]	21	32.5% (+/-1.3)	21
Washington	27.3 (+/-1.3)	38	63.4 (+/-1.4)	8.9 (+/-0.7)	41	18.1 (+/-1.1)[v]	48	30.4% (+/-1.1)	35
West Virginia	35.7 (+/-1.5)	2	69.6 (+/-1.5)	14.1 (+/-1.0)	1	28.7 (+/-1.4)[v]	4	41% (+/-1.5)	1
Wisconsin	31.2 (+/-1.6)	14	67.4 (+/-1.7)	9.0 (+/-0.9)	39	21.2 (+/-1.4)[v]	34	32.3% (+/-1.7)	22
Wyoming	29.5 (+/-2.0)	27	64.6 (+/-2.2)	8.4 (+/-1.0)	44	22.1 (+/-1.7)[v]	29	28.7% (+/-1.4)	45

Source: Behavior Risk Factor Surveillance System (BRFSS), CDC. Red and * indicates a statistically significant increase and green and [v] indicates a statistically significant decrease.

AND RELATED HEALTH INDICATORS IN THE STATES

CHILDREN AND ADOLESCENTS

States	2013 YRBS			2011 PedNSS	2011 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 Low-Income Children Ages 2-4	Percentage of Obese Children Ages 10-17	Ranking	Percentage Participating in Vigorous Physical Activity Every Day Ages 6-17
Alabama	17.1 (+/- 2.7)	15.8 (+/- 2.7)	24.8 (+/- 2.4)	14.1%	18.6% (+/- 3.9)	11	32.7%
Alaska	12.4 (+/- 2.1)	13.7 (+/- 2.6)	20.9 (+/- 2.8)	N/A	14.0% (+/- 3.3)	32	32.9%
Arizona	10.7 (+/- 2.7)	12.7 (+/- 1.9)	21.7 (+/- 2.5)	14.5%	19.8% (+/- 4.6)	7	26.4%
Arkansas	17.8 (+/- 2.2)	15.9 (+/- 2.5)	27.5 (+/- 3.0)	14.2%	20.0% (+/- 4.2)	6	31.6%
California	N/A	N/A	N/A	16.8%v	15.1% (+/- 4.1)	21	25.2%
Colorado	N/A	N/A	N/A	10.0%*	10.9% (+/- 3.6)	47	28.3%
Connecticut	12.3 (+/- 2.3)	13.9 (+/- 1.6)	26.0 (+/- 3.2)	15.8%	15.0% (+/- 3.2)	23	25.8%
Delaware	14.2 (+/- 1.4)	16.3 (+/- 1.7)	23.7 (+/- 2.0)	N/A	16.9% (+/- 4.1)	16	26.5%
D.C.	N/A	N/A	N/A	13.1%	21.4% (+/- 5.5)	3	26.8%
Florida	11.6 (+/- 1.2)	14.7 (+/- 1.2)	25.3 (+/- 1.4)	13.1%v	13.4% (+/- 3.3)	38	31.5%
Georgia	12.7 (+/- 1.7)	17.1 (+/- 2.1)	24.7 (+/- 2.2)	13.2%v	16.5% (+/- 3.8)	17	30.6%
Hawaii	13.4 (+/- 1.9)	14.9 (+/- 2.0)	22.0 (+/- 1.5)	9.2%	11.5% (+/- 2.6)	44	28.7%
Idaho	9.6 (+/- 1.5)	15.7 (+/- 1.3)	27.9 (+/- 2.7)	11.5%v	10.6% (+/- 3.4)	49	25.5%
Illinois	11.5 (+/- 1.8)	14.4 (+/- 1.7)	25.4 (+/- 2.3)	14.7%	19.3% (+/- 3.9)	9	23.5%
Indiana	N/A	N/A	N/A	14.3%	14.3% (+/- 3.7)	28	28.6%
Iowa	N/A	N/A	N/A	14.4%v	13.6% (+/- 3.2)	35	31.2%
Kansas	12.6 (+/- 2.1)	16.3 (+/- 1.8)	38.3 (+/- 2.3)	12.7%v	14.2% (+/- 3.6)	31	28.2%
Kentucky	18.0 (+/- 2.5)	15.4 (+/- 2.1)	22.5 (+/- 2.6)	15.5%	19.7% (+/- 3.9)	8	32.3%
Louisiana	13.5 (+/- 2.7)	16.4 (+/- 1.9)	N/A	N/A	21.1% (+/- 4.0)	4	31.1%
Maine	11.6 (+/- 1.6)	14.2 (+/- 0.9)	22.3 (+/- 1.6)	N/A	12.5% (+/- 3.0)	42	32.0%
Maryland	11.0 (+/- 0.4)	14.8 (+/- 0.4)	21.6 (+/- 0.6)	15.3%v	15.1% (+/- 3.7)	21	24.4%
Massachusetts	10.2 (+/- 1.8)	12.9 (+/- 1.7)	23.0 (+/- 2.3)	16.4%v	14.5% (+/- 3.5)	25	25.5%
Michigan	13.0 (+/- 1.8)	15.5 (+/- 1.3)	26.7 (+/- 2.8)	13.2%v	14.8% (+/- 3.6)	24	27.7%
Minnesota	N/A	N/A	N/A	12.6%v	14.0% (+/- 3.7)	32	28.7%
Mississippi	15.4 (+/- 2.4)	13.2 (+/- 2.6)	25.9 (+/- 3.5)	13.9%v	21.7% (+/- 4.4)	1	27.7%
Missouri	14.9 (+/- 2.8)	15.5 (+/- 2.3)	27.2 (+/- 2.6)	12.9%v	13.5% (+/- 3.0)	36	33.7%
Montana	9.4 (+/- 1.1)	12.9 (+/- 1.2)	27.7 (+/- 1.7)	11.7%	14.3% (+/- 3.4)	28	32.4%
Nebraska	12.7 (+/- 2.0)	13.8 (+/- 1.6)	32.3 (+/- 2.6)	14.3%	13.8% (+/- 3.1)	34	31.3%
Nevada	11.4 (+/- 2.0)	14.6 (+/- 2.5)	24.0 (+/- 2.6)	12.7%	18.6% (+/- 4.2)	11	22.4%
New Hampshire	11.2 (+/- 1.7)	13.8 (+/- 1.6)	22.9 (+/- 2.3)	14.6%v	15.5% (+/- 3.6)	19	28.1%
New Jersey	8.7 (+/- 2.2)	14.0 (+/- 2.2)	27.6 (+/- 3.7)	16.6%v	10.0% (+/- 2.9)	50	25.3%
New Mexico	12.6 (+/- 2.4)	15.0 (+/- 1.8)	31.1 (+/- 2.4)	11.3%v	14.4% (+/- 3.7)	27	29.6%
New York	10.6 (+/- 1.1)	13.8 (+/- 1.1)	25.7 (+/- 3.3)	14.3%v	14.5% (+/- 3.2)	25	24.6%
North Carolina	12.5 (+/- 1.9)	15.2 (+/- 2.2)	25.9 (+/- 2.6)	15.4%	16.1% (+/- 4.0)	18	31.6%
North Dakota	13.5 (+/- 1.8)	15.1 (+/- 1.8)	24.7 (+/- 2.5)	13.1%	15.4% (+/- 3.8)	20	30.4%
Ohio	13.0 (+/- 2.4)	15.9 (+/- 2.0)	25.9 (+/- 3.7)	12.4%	17.4% (+/- 3.7)	14	28.5%
Oklahoma	11.8 (+/- 2.0)	15.3 (+/- 2.4)	38.5 (+/- 3.4)	N/A	17.4% (+/- 3.6)	14	34.9%
Oregon	N/A	N/A	N/A	14.9%	9.9% (+/- 2.8)	51	28.5%
Pennsylvania	N/A	N/A	N/A	12.2%*	13.5% (+/- 3.5)	36	27.0%
Rhode Island	10.7 (+/- 1.3)	16.2 (+/- 2.5)	23.2 (+/- 3.8)	16.6%	13.2% (+/- 3.3)	41	25.2%
South Carolina	13.9 (+/- 2.5)	16.8 (+/- 2.1)	23.8 (+/- 3.0)	N/A	21.5% (+/- 4.1)	2	30.3%
South Dakota	11.9 (+/- 2.3)	13.2 (+/- 1.6)	27.7 (+/- 2.5)	15.2%v	13.4% (+/- 3.3)	38	30.2%
Tennessee	16.9 (+/- 1.9)	15.4 (+/- 2.3)	25.4 (+/- 3.1)	14.2%*	20.5% (+/- 4.2)	5	34.5%
Texas	15.7 (+/- 1.9)	15.6 (+/- 1.6)	30.0 (+/- 2.4)	N/A	19.1% (+/- 4.5)	10	29.0%
Utah	6.4 (+/- 1.9)	11.0 (+/- 2.2)	19.7 (+/- 2.7)	N/A	11.6% (+/- 3.3)	43	18.1%
Vermont	13.2 (+/- 2.1)	15.8 (+/- 1.0)	25.4 (+/- 1.9)	12.9%	11.3% (+/- 2.7)	45	33.3%
Virginia	12.0 (+/- 1.3)	14.7 (+/- 1.4)	23.8 (+/- 1.6)	N/A	14.3% (+/- 3.6)	28	26.1%
Washington	N/A	N/A	N/A	14.0%v	11.0% (+/- 3.1)	46	28.5%
West Virginia	15.6 (+/- 2.3)	15.5 (+/- 2.0)	31.0 (+/- 2.4)	14.0%	18.5% (+/- 3.4)	13	34.1%
Wisconsin	11.6 (+/- 2.1)	13.0 (+/- 1.2)	24.0 (+/- 2.3)	14.0%	13.4% (+/- 3.1)	38	28.3%
Wyoming	10.7 (+/- 1.4)	12.8 (+/- 1.2)	28.2 (+/- 2.0)	N/A	10.7% (+/- 4.2)	48	30.2%

Source: Youth Risk Behavior Survey (YRBS) 2013, CDC. YRBS data are collected every 2 years. Percentages are as reported on the CDC website and can be found at <http://www.cdc.gov/HealthyYouth/yrbs/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 least 60 minutes per day on each of the 7 days before the survey.

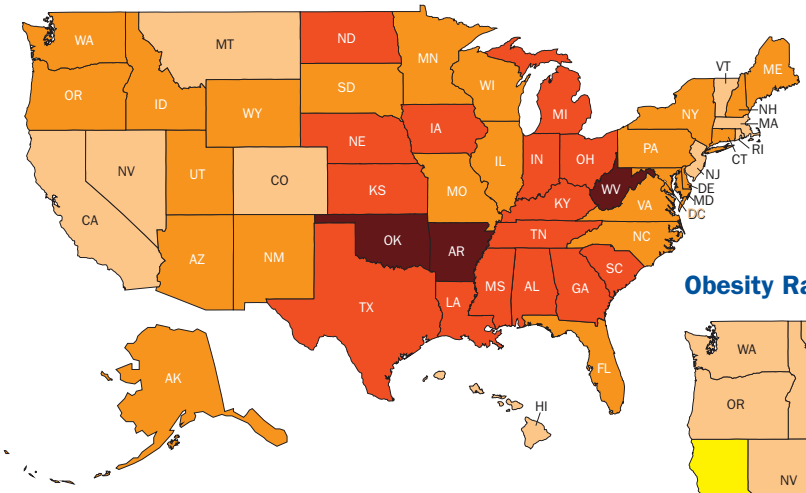
Source: CDC. Obesity Among Low-Income, Preschool-Aged Children—United States, 2008-2011. Vital Signs, 62(Early Release): 1-6, 2013. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm62e0806a1.htm. Red and * indicates a statistically significant increase and green and v indicates a statistically significant decrease from 2008-2011.

Source: National Survey of Children's Health, 2011. Health Resources and Services Administration, Maternal and Child Health Bureau. * & red indicates a statistically significant increase and v & green indicates a statistically significant decrease ($p<0.05$) from 2007 to 2011. Over the same time period, SC had a statistically significant increase in obesity rates, while NJ saw a significant decrease.

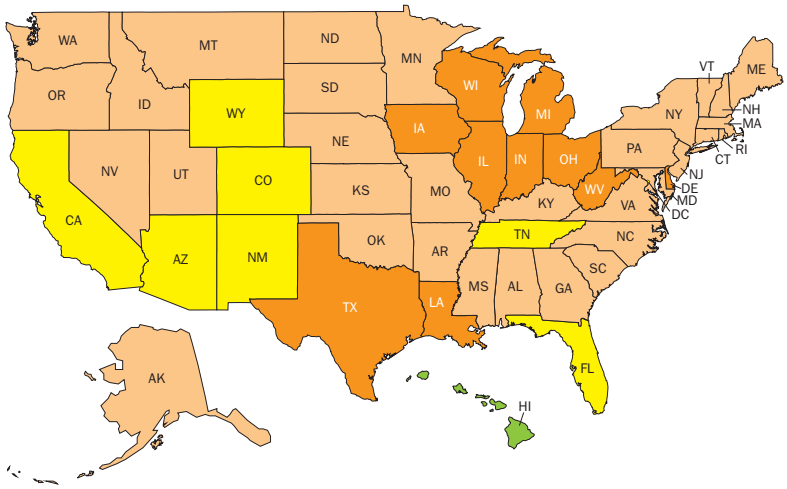
OBESITY RATES BY AGE AND ETHNICITY

	Obesity Rates by Age — 2014								Obesity Rates by Ethnicity — 2012–2014					
	18-24 Years		25-44 Years		45-64 Years		65+		Obesity Among Blacks		Obesity Among Latinos		Obesity Among Whites	
	2014 Percentage (95% Conf Interval)	Rank	2014 Percentage (95% Conf Interval)	Rank	2014 Percentage (95% Conf Interval)	Rank	2014 Percentage (95% Conf Interval)	Rank	2012 – 2014 Percentage (95% Conf Interval)	Rank	2012 – 2014 Percentage (95% Conf Interval)	Rank	2012 – 2014 Percentage (95% Conf Interval)	Rank
Alabama	20.4 (+/-4.3)	6	36.2 (+/-3.1)	6	38.7 (+/-3.4)	8	28.9 (+/-2.2)	17	42.4 (+/-1.9)	6	25.4 (+/-8.9)	46	30.4 (+/-1.0)	11
Alaska	14.0 (+/-5.1)	35	30.6 (+/-3.6)	29	34.9 (+/-4.4)	22	29.6 (+/-4.1)	12	40.4 (+/-8.7)	11	27.7 (+/-6.5)	39	27.0 (+/-1.2)	28
Arizona	16.6 (+/-4.1)	24	31.1 (+/-2.6)	24	34.2 (+/-2.9)	25	24.7 (+/-1.5)	43	35.5 (+/-6.5)	30	33.9 (+/-3.0)	11	23.7 (+/-1.1)	45
Arkansas	23.9 (+/-7.4)	1	38.8 (+/-4.4)	3	41.7 (+/-4.7)	1	29.2 (+/-2.6)	15	44.4 (+/-3.3)	1	39.5 (+/-6.8)	1	32.9 (+/-1.3)	2
California	13.3 (+/-2.9)	40	25.9 (+/-2.3)	43	28.3 (+/-3.0)	47	24.1 (+/-2.4)	45	34.7 (+/-3.2)	35	31.3 (+/-1.3)	23	22.6 (+/-0.8)	46
Colorado	10.9 (+/-2.7)	49	21.4 (+/-1.8)	50	25.4 (+/-2.3)	50	20.5 (+/-1.6)	50	29.3 (+/-3.8)	43	28.1 (+/-1.7)	36	19.1 (+/-0.5)	49
Connecticut	11.4 (+/-3.8)	48	25.9 (+/-2.8)	43	31.3 (+/-3.3)	38	27.2 (+/-2.4)	30	34.7 (+/-3.1)	35	30.9 (+/-2.9)	27	24.2 (+/-0.9)	43
Delaware	17.4 (+/-6.8)	19	30.2 (+/-4.3)	31	36.1 (+/-4.6)	17	30.5 (+/-3.2)	8	37.2 (+/-2.9)	23	31.9 (+/-5.2)	18	28.2 (+/-1.2)	21
D.C.	10.3 (+/-6.0)	51	19.0 (+/-4.0)	51	29.8 (+/-5.2)	43	23.7 (+/-3.1)	47	34.7 (+/-2.0)	35	20.5 (+/-6.2)	51	9.9 (+/-1.3)	51
Florida	15.3 (+/-3.9)	30	27.7 (+/-2.8)	37	30.8 (+/-3.1)	41	23.2 (+/-1.8)	48	35.0 (+/-2.6)	33	26.2 (+/-2.1)	43	24.3 (+/-0.9)	41
Georgia	17.0 (+/-4.6)	22	31.2 (+/-3.2)	20	35.7 (+/-3.7)	18	29.5 (+/-2.5)	13	37.5 (+/-1.9)	22	27.0 (+/-4.2)	42	27.5 (+/-1.1)	24
Hawaii	13.8 (+/-3.7)	36	26.9 (+/-2.8)	40	25.1 (+/-3.6)	51	14.1 (+/-2.1)	51	36.0 (+/-10.1)	27	31.3 (+/-3.5)	23	18.8 (+/-1.5)	50
Idaho	18.9 (+/-5.5)	14	31.2 (+/-3.7)	20	32.5 (+/-4.3)	33	26.2 (+/-2.8)	37	N/A	N/A	35.9 (+/-5.0)	5	27.4 (+/-1.1)	27
Illinois	13.1 (+/-4.4)	43	28.7 (+/-3.4)	35	35.0 (+/-4.1)	21	31.0 (+/-3.1)	4	40.2 (+/-3.5)	12	33.0 (+/-3.7)	14	27.5 (+/-1.1)	24
Indiana	19.9 (+/-3.8)	9	33.8 (+/-2.5)	9	38.3 (+/-2.7)	11	30.2 (+/-1.9)	10	42.5 (+/-3.1)	5	32.0 (+/-3.9)	17	31.1 (+/-0.8)	6
Iowa	15.0 (+/-3.9)	32	31.2 (+/-2.8)	20	37.1 (+/-3.1)	13	30.9 (+/-2.1)	5	40 (+/-7.1)	13	35.5 (+/-5.3)	7	30.9 (+/-0.8)	7
Kansas	15.2 (+/-2.8)	31	33.2 (+/-2.0)	12	37.5 (+/-2.4)	12	28.7 (+/-1.6)	20	39.5 (+/-3.1)	16	34.2 (+/-2.8)	10	29.6 (+/-0.5)	14
Kentucky	14.6 (+/-4.3)	34	34.7 (+/-3.1)	7	37.1 (+/-3.3)	13	27.5 (+/-2.2)	27	41.9 (+/-4.0)	7	23.2 (+/-7.3)	49	31.6 (+/-0.9)	4
Louisiana	19.4 (+/-4.7)	10	38.0 (+/-3.0)	4	39.3 (+/-3.3)	5	32.0 (+/-2.5)	3	43.2 (+/-2.1)	2	31.3 (+/-7.3)	23	30.5 (+/-1.2)	10
Maine	14.7 (+/-4.2)	33	29.2 (+/-2.9)	32	32.8 (+/-2.9)	32	25.9 (+/-1.9)	39	32.2 (+/-12.3)	40	24.2 (+/-8.2)	48	28.5 (+/-0.8)	20
Maryland	11.5 (+/-4.2)	47	31.1 (+/-3.2)	24	34.6 (+/-3.3)	23	29.0 (+/-2.4)	16	37.9 (+/-1.8)	21	26.0 (+/-3.9)	44	26.0 (+/-0.9)	37
Massachusetts	10.6 (+/-2.9)	50	21.5 (+/-2.1)	49	28.7 (+/-2.6)	45	25.1 (+/-1.9)	42	34.6 (+/-3.1)	38	31.4 (+/-2.5)	22	22.6 (+/-0.7)	46
Michigan	11.6 (+/-3.0)	46	31.2 (+/-2.8)	20	36.2 (+/-2.9)	16	32.7 (+/-2.2)	2	36.9 (+/-2.3)	25	35.5 (+/-5.1)	7	30.2 (+/-0.8)	13
Minnesota	16.2 (+/-2.6)	27	26.7 (+/-1.6)	41	32.2 (+/-2.1)	36	28.5 (+/-1.6)	22	31.2 (+/-3.7)	42	31.7 (+/-4.3)	20	26.1 (+/-0.7)	35
Mississippi	22.0 (+/-6.5)	3	41.5 (+/-4.3)	1	38.8 (+/-4.8)	7	28.8 (+/-2.9)	19	43 (+/-1.9)	3	21.1 (+/-8.1)	50	31.3 (+/-1.3)	5
Missouri	18.9 (+/-5.0)	14	32.7 (+/-3.5)	15	33.5 (+/-3.7)	29	27.9 (+/-2.4)	25	39.9 (+/-3.5)	15	35.5 (+/-7.6)	7	28.9 (+/-1.1)	18
Montana	16.5 (+/-4.8)	25	27.6 (+/-3.2)	38	28.6 (+/-3.5)	46	26.7 (+/-2.5)	34	N/A	N/A	30.1 (+/-6.4)	29	23.9 (+/-0.8)	44
Nebraska	17.3 (+/-3.0)	20	31.0 (+/-2.0)	26	35.7 (+/-2.4)	18	28.6 (+/-1.5)	21	35.2 (+/-4.1)	32	31.0 (+/-2.8)	26	29.0 (+/-0.6)	17
Nevada	12.7 (+/-7.1)	44	33.2 (+/-4.7)	12	27.4 (+/-5.5)	49	27.6 (+/-3.8)	26	37.1 (+/-5.6)	24	27.8 (+/-3.3)	38	26.4 (+/-1.4)	34
New Hampshire	13.6 (+/-5.2)	38	29.0 (+/-3.4)	33	30.3 (+/-3.7)	42	28.4 (+/-2.6)	23	25.3 (+/-10.9)	45	29.3 (+/-9.0)	32	27.5 (+/-0.9)	24
New Jersey	13.3 (+/-3.8)	40	27.0 (+/-2.3)	39	31.0 (+/-2.9)	40	27.3 (+/-2.4)	28	36.7 (+/-2.1)	26	28.8 (+/-1.9)	35	25.4 (+/-0.8)	38
New Mexico	19.1 (+/-4.6)	11	33.5 (+/-3.2)	10	31.7 (+/-3.3)	37	20.8 (+/-2.1)	49	34.9 (+/-7.2)	34	30.1 (+/-1.4)	29	22.5 (+/-1.0)	48
New York	13.8 (+/-4.0)	36	25.5 (+/-2.7)	48	33.2 (+/-3.4)	30	27.3 (+/-2.7)	28	32.5 (+/-2.6)	39	29.3 (+/-2.3)	32	24.5 (+/-0.9)	39
North Carolina	18.0 (+/-4.4)	17	32.0 (+/-2.6)	17	34.0 (+/-3.2)	27	25.9 (+/-2.1)	39	40.0 (+/-1.8)	13	29.7 (+/-3.0)	31	26.8 (+/-0.9)	30
North Dakota	16.3 (+/-5.0)	26	36.8 (+/-3.6)	5	36.8 (+/-3.7)	15	29.9 (+/-2.5)	11	24.9 (+/-10.4)	46	37.9 (+/-9.8)	2	30.7 (+/-1.0)	8
Ohio	15.8 (+/-4.1)	28	31.0 (+/-2.9)	26	39.5 (+/-3.2)	4	33.4 (+/-2.3)	1	38.6 (+/-2.8)	19	29.1 (+/-5.3)	34	30.4 (+/-0.8)	11
Oklahoma	21.6 (+/-4.5)	4	32.9 (+/-2.6)	14	40.0 (+/-3.1)	3	28.9 (+/-2.0)	17	38.3 (+/-3.4)	20	33.4 (+/-3.6)	13	31.9 (+/-0.9)	3
Oregon	13.4 (+/-5.3)	39	29.0 (+/-3.6)	33	32.3 (+/-3.9)	34	27.1 (+/-2.3)	31	35.3 (+/-10.1)	31	30.2 (+/-4.6)	28	27.0 (+/-0.9)	28
Pennsylvania	17.2 (+/-4.3)	21	32.0 (+/-2.7)	17	33.6 (+/-2.8)	28	29.5 (+/-2.0)	13	36.0 (+/-2.4)	27	36.7 (+/-4.2)	4	29.2 (+/-0.7)	16
Rhode Island	17.9 (+/-5.7)	18	28.6 (+/-3.4)	36	29.5 (+/-3.4)	44	26.1 (+/-2.5)	38	31.3 (+/-4.7)	41	28.0 (+/-3.3)	37	26.6 (+/-1.0)	33
South Carolina	20.1 (+/-4.2)	7	33.4 (+/-2.5)	11	38.4 (+/-2.9)	10	27.1 (+/-1.8)	31	42.7 (+/-1.5)	4	32.2 (+/-5.3)	16	28.1 (+/-0.9)	22
South Dakota	15.8 (+/-6.3)	28	31.7 (+/-3.7)	19	35.6 (+/-4.7)	20	26.7 (+/-3.0)	34	24.3 (+/-11.8)	47	27.1 (+/-10.0)	41	28.9 (+/-1.1)	18
Tennessee	18.6 (+/-6.4)	16	32.5 (+/-4.1)	16	38.7 (+/-4.4)	8	23.9 (+/-2.5)	46	40.6 (+/-3.0)	10	31.7 (+/-9.5)	20	30.7 (+/-1.1)	8
Texas	19.1 (+/-3.7)	12	30.9 (+/-2.3)	28	38.9 (+/-3.4)	6	30.7 (+/-2.5)	7	40.7 (+/-2.9)	9	35.8 (+/-1.5)	6	26.7 (+/-0.9)	32
Utah	13.3 (+/-2.2)	40	25.9 (+/-1.5)	43	31.2 (+/-2.4)	39	28.4 (+/-2.0)	23	25.6 (+/-7.7)	44	27.5 (+/-2.2)	40	24.5 (+/-0.6)	39
Vermont	12.6 (+/-4.0)	45	25.7 (+/-2.6)	46	28.0 (+/-3.0)	48	25.5 (+/-2.4)	41	23.2 (+/-11.8)	49	25.5 (+/-9.5)	45	24.3 (+/-0.8)	41
Virginia	20.0 (+/-4.2)	8	26.6 (+/-2.3)	42	34.3 (+/-2.9)	24	26.9 (+/-2.2)	33	38.9 (+/-2.1)	17	24.5 (+/-3.7)	47	26.1 (+/-0.9)	35
Washington	19.0 (+/-4.2)	13	25.6 (+/-2.5)	47	32.3 (+/-2.9)	34	26.4 (+/-2.0)	36	35.7 (+/-4.8)	29	31.8 (+/-3.1)	19	27.8 (+/-0.7)	23
West Virginia	20.6 (+/-5.2)	5	39.7 (+/-3.1)	2	40.2 (+/-3.4)	2	30.8 (+/-2.4)	6	40.9 (+/-6.3)	8	37.1 (+/-9.2)	3	34.7 (+/-0.9)	1
Wisconsin	16.7 (+/-4.5)	23	34.0 (+/-3.4)	8	34.2 (+/-3.7)	25	30.3 (+/-2.8)	9	38.8 (+/-5.8)	18	33.9 (+/-7.1)	11	29.6 (+/-1.1)	14
Wyoming	23.5 (+/-8.4)	2	30.6 (+/-4.0)	29	33.1 (+/-4.1)	31	24.7 (+/-2.3)	43	24.3 (+/-12.0)	47	32.7 (+/-5.3)	15	26.8 (+/-1.1)	30

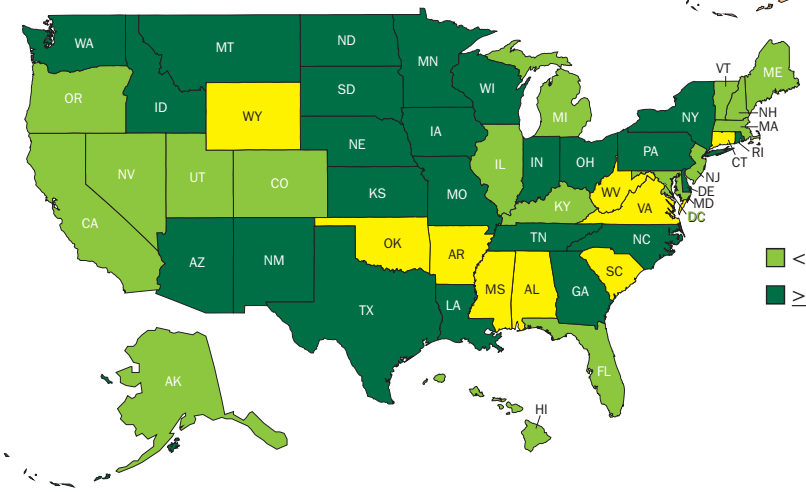
Obesity Rates for Baby Boomers (45-to 64-year-olds)

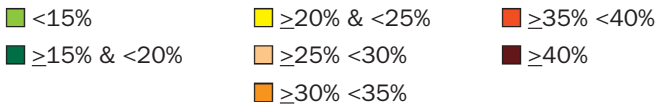


Obesity Rates for Seniors (65-+ year-olds)



Obesity Rates for Young Adults (18- to 25-year-olds)





STATES WITH THE HIGHEST OBESITY RATES		
Rank	**State**	**Percentage of Adult Obesity** (Based on 2014 Data, Including Confidence Intervals)
1	Arkansas	35.9 (+/-2.1)
2	West Virginia	35.7 (+/-1.5)
3	Mississippi	35.5 (+/-2.1)
4	Louisiana	34.9 (+/-1.5)
5	Alabama	33.5 (+/-1.5)
6	Oklahoma	33.0 (+/-1.3)
7	Indiana	32.7 (+/-1.2)
8	Ohio	32.6 (+/-1.5)
9	North Dakota	32.2 (+/-1.8)
10	South Carolina	32.1 (+/-1.2)

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

STATES WITH THE LOWEST OBESITY RATES		
Rank	**State**	**Percentage of Adult Obesity** (Based on 2014 Data, Including Confidence Intervals)
51	Colorado	21.3 (+/-0.9)
50	D.C.	21.7 (+/-2.3)
49	Hawaii	22.1 (+/-1.4)
48	Massachusetts	23.3 (+/-1.1)
47	California	24.7 (+/-1.2)
46	Vermont	24.8 (+/-1.3)
45	Utah	25.7 (+/-0.9)
44	Florida	26.2 (+/-1.3)
43	Connecticut	26.3 (+/-1.4)
42	Montana	26.4 (+/-1.5)

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

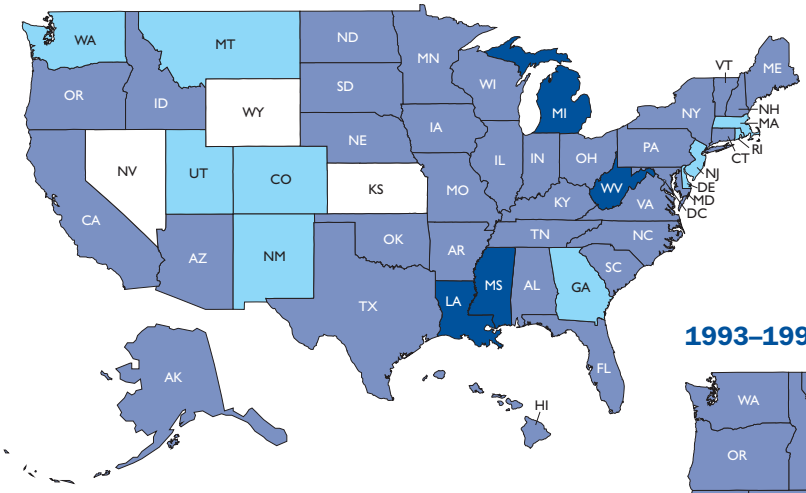
PAST OBESITY TRENDS* AMONG U.S. ADULTS

BRFSS: 1991, 1993 to 1995, 1998 to 2000, and 2005 to 2007 Combined Data

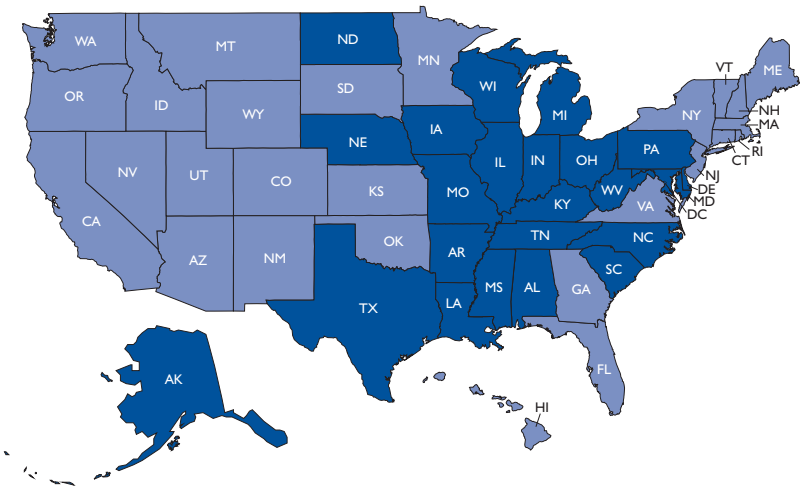
(*BMI >30, or about 30lbs overweight for 5'4" person)

Interactive maps and timelines for all years are available at stateofobesity.org

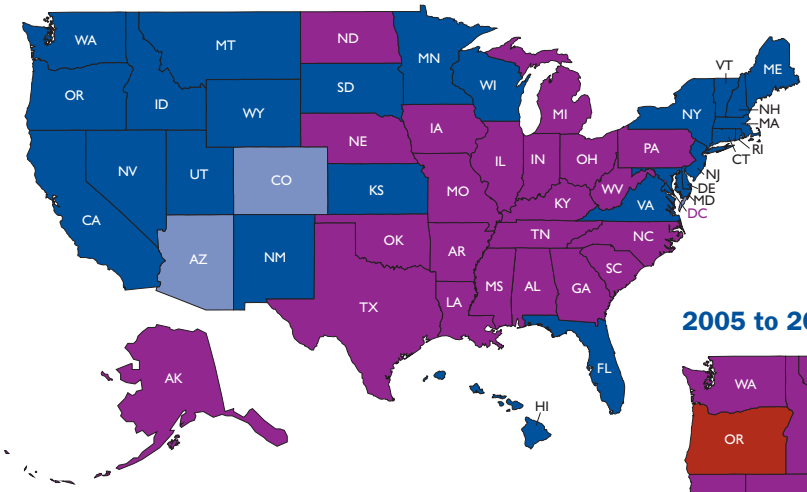
1991



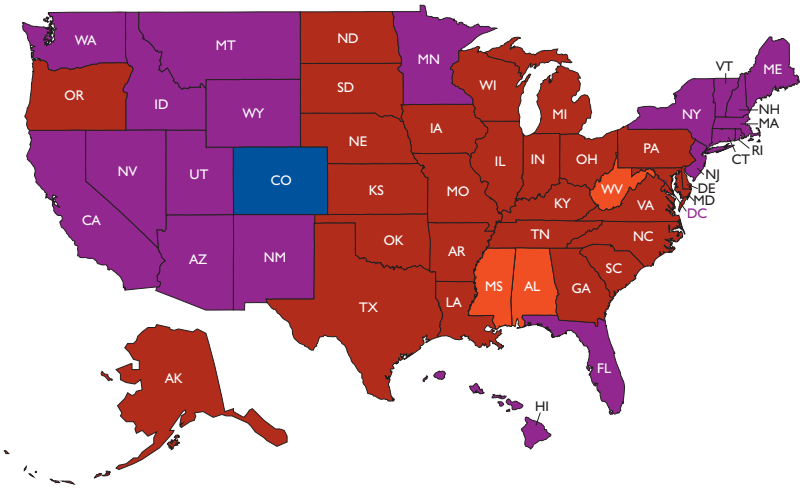
1993–1995 Combined Data



1998 to 2000 Combined Data



2005 to 2007 Combined Data



- No Data
- <10%
- ≥10% & <15%
- ≥15% & <20%
- ≥20% <25%
- ≥25% <30%
- ≥30%

RATES AND RANKINGS METHODOLOGY[29]

The analysis in *State of Obesity* compares data from the Behavioral Risk Factor Surveillance System (BRFSS).

BRFSS is the largest ongoing telephone health survey in the world. It is a state-based system of health surveys established by CDC in 1984. BRFSS completes more than 400,000 adult interviews each year. For most states, BRFSS is the only source of population-based health behavior data about chronic disease prevalence and behavioral risk factors.

BRFSS surveys a sample of adults in each state to get information on health risks and behaviors, health practices for preventing disease and healthcare access mostly linked to chronic disease and injury. The sample is representative of the population of each state.

Washington, D.C., is included in the rankings because CDC provides funds to the city to conduct a survey in an equivalent way to the states.

Racial and Ethnic Populations — Limited Data

Many states do not have large enough populations of Asian/Pacific Islanders and American Indian/Native Alaskans — and in some states even of Blacks and Latinos — to be reflected within the survey findings. The sample size is often around 600 to 800 people per state. With increased funds to expand the sample size, there would be the opportunity to collect more meaningful information about different racial and ethnic groups in each state.

The data are based on telephone surveys by state health departments, with assistance from CDC.

People self-report their weight and height, which are used to calculate BMI. A number of studies have shown that rates of overweight and obesity are probably higher than shown by the data because people tend to underreport their weight and exaggerate their height.[30]

BRFSS made two changes in methodology for its dataset starting in 2011 to make the data more representative of the total population. The changes included making survey calls to cell phone numbers and adopting a new weighting method:

- The first change is including and then growing the number of interview calls made to cell phone numbers. Estimates today are that three in 10 U.S. households have only cell phones.
- The second is a statistical measurement change, which involves the way the data are weighted to better match the demographics of the population in the state.

The new methodology means the BRFSS data will better represent lower-income and racial and ethnic minorities, as well as populations with lower levels of formal education. Although generalizing is difficult because of these variables, it is likely that the changes in methods will result in somewhat higher estimates for the occurrence of behaviors that are more common among younger adults and certain racial and ethnic groups.

The change in methodology makes direct comparisons to data collected prior to 2011 difficult.

More information on the methodology is available in Appendix A.

DEFINITIONS OF OBESITY AND OVERWEIGHT

Obesity is defined as an excessively high amount of body fat or adipose tissue in relation to lean body mass.[31,32] Overweight refers to increased body weight in relation to height, which is then compared to a standard of acceptable weight.[33] Body mass index is a common measure expressing the relationship (or ratio) of weight to height. The equation is:

$$\text{BMI} = \left(\frac{\text{Weight in pounds}}{(\text{Height in inches}) \times (\text{Height in inches})} \right) \times 703$$

Note: In the metric system, BMI is kg / height^2
(the 703 is the conversion needed when using pounds and inches.)

Adults with a BMI of 25 to 29.9 are considered overweight, while individuals with a BMI of 30 or more are considered obese.

For children, overweight is defined as a BMI at or above the 85th percentile and lower than the 95th percentile for children of the same age and sex; childhood obesity is defined as a BMI at or above the 95th percentile for children of the same age and sex; and severe childhood obesity is defined as a BMI greater than 120 percent of 95th percentile for children of the same age and sex. CDC makes growth charts available to plot BMI for children and adolescents (ages 2 to 20) to determine percentile at http://www.cdc.gov/healthyweight/assessing/bmi/childrens_bmi/about_childrens_bmi.html.

BMI is considered an important measure for understanding population trends. For individuals, it is one of many factors that should be considered in evaluating healthy weight, along with waist size, body fat composition, waist circumference, blood pressure, cholesterol level and blood sugar.[34]

B. CHILDHOOD AND YOUTH: OBESITY AND OVERWEIGHT RATES

Children who are overweight or obese are more likely to be obese as adults. Being overweight or obese can put children at a higher risk for health problems such as heart disease, hypertension, type 2 diabetes, stroke, cancer, asthma and osteoarthritis—during childhood and as they age.[35, 36, 37] Growing up at a healthy weight can set the stage for lifelong health. Creating healthier child care, school and community environments will allow children to maintain a healthy weight from early in life.

While overall childhood obesity rates have stabilized over the past decade, they are still increasing among Black boys, and the rates are disproportionately higher among Black, Latino and American Indian/Native Alaskan groups.

IMPACT OF CHILDHOOD OBESITY

- Preventing obesity early can impact a child's lifetime trajectory. A study of more than 7,700 children found that a third of the children who were overweight in kindergarten were obese by eighth grade. When the children entered kindergarten, 12.4 percent were obese and another 14.9 percent were overweight; in eighth grade, 20.8 percent were obese and 17 percent were overweight. Overweight 5-year-olds were four times as likely as healthy-weight children to become obese.[38]
- Children who are overweight or obese are more likely to have lower academic achievement than non-overweight or obese children.[39, 40, 41]
  - Children who are persistently overweight or obese are likely to score poorer academically in math than their healthy-weight peers.[42] Poor scores were seen as early as the first grade.
  - Adolescents with metabolic syndrome — a composite of obesity components — have significantly lower overall intelligence scores, including in math and spelling, and have lower mental flexibility and attention spans than adolescents without metabolic syndrome.[43]
  - Children who are more physically active and have a lower BMI have greater academic scores.[44] Increasing extracurricular activity has been shown to improve classroom behavior and self-esteem, decrease dropout rates and indirectly improve academic achievement.[45]
  - There is developing evidence suggesting a link between access to healthy, nutritious foods and academic achievement. Students that skip breakfast; lack consumption of fruits, vegetables and dairy products; and are hungry due to insufficient food intake or have deficiencies in nutrients — Vitamins A, B6, B12, C, folate, iron and zinc — are more likely to have decreased cognitive performances, lower grades, higher rates of absenteeism and tardiness and are unable to focus in the classroom.[46]
- Overweight and obesity in childhood is associated with $14.1 billion in additional prescription drug, emergency room and outpatient visit healthcare costs annually. Additionally, obesity contributes an estimated incremental lifetime medical cost of $19,000 per 10-year-old child when compared with a healthy-weight 10-year-old child.[47, 48] Children who are obese also have a higher healthcare cost:
  - A child who is obese has $194 higher outpatient visit expenditures, $114 higher prescription drug expenditures and $25 higher emergency room expenditures, based on a two-year Medical Expenditure Panel Survey.[49]
  - The average total annual health cost 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.[50]
  - Hospitalizations of children and youths with a diagnosis of obesity nearly doubled between 1999 and 2005, while total costs for children and youths with obesity-related hospitalizations increased from $125.9 million in 2001 to $237.6 million in 2005 (in 2005 dollars).[51]

1. EARLY CHILDHOOD AND OBESITY TRENDS

More than 8 percent of all preschoolers in the United States were obese in 2011 to 2012, and an additional 23 percent of children ages 2 to 5 were overweight.[52]

According to the Pediatric Nutrition Surveillance Survey (PedNSS) in 2011, 14.7 percent of children between the ages of 2 and 4 from lower-income families that participate in WIC were obese.[54,55]

This is an overall increase from 14.1 percent in 1998, but a decrease from the peak of 15.2 percent in 2003.

- **State Trends:** From 2008 to 2011, obesity rates decreased among this age group in 18 states and the U.S. Virgin Islands, and increased in only three states.[56]
- **Racial/Ethnic Trends:** Since 2003, obesity rates have stabilized or decreased among every racial and ethnic group for children ages 2 to 4, except among American Indian/Alaska Natives, which increased from 16.3 percent in 1998 to 18.9 percent in 2003 to 21.1 percent in 2011.[57]

OBESE — 2 TO 5 YEARS, 2011-2012 — NHANES[53]

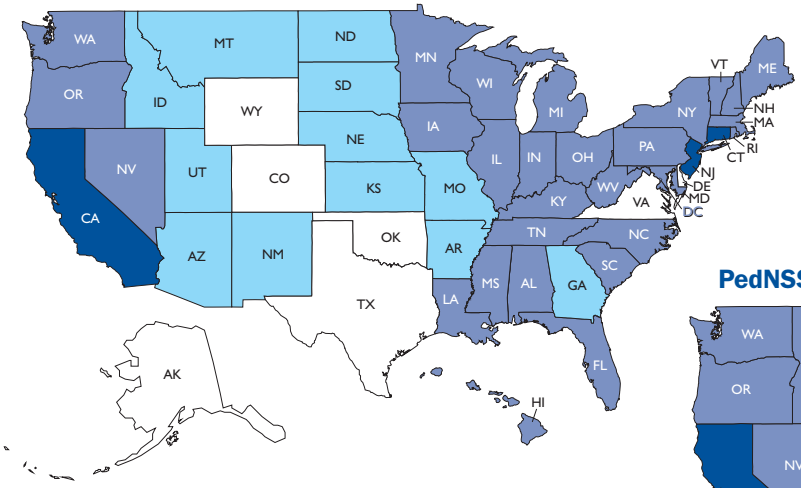
Total	**8.4%**
White	3.5%
Black	11.3%
Latino	16.7%

TRENDS IN OBESITY RATES AMONG CHILDREN 2 TO 4 YEARS OF AGE, BY RACE AND ETHNICITY, 1998-2011 — PEDNSS[58]

Race/Ethnicity	1998	2003	2011
Total	13.0%	15.2%	14.7%
White	10.5%	13.1%	14.7%
Black	11.1%	12.7%	11.8%
Latino	18.1%	19.7%	18.7%
Asian/Pacific Islander	14.3%	13.6%	11.7%
American Indian/Alaska Native	16.3%	19.0%	21.1%

NOTE: PedNSS data 1998 through 2011. **SOURCE:** Adopted from Pan et al., 2015

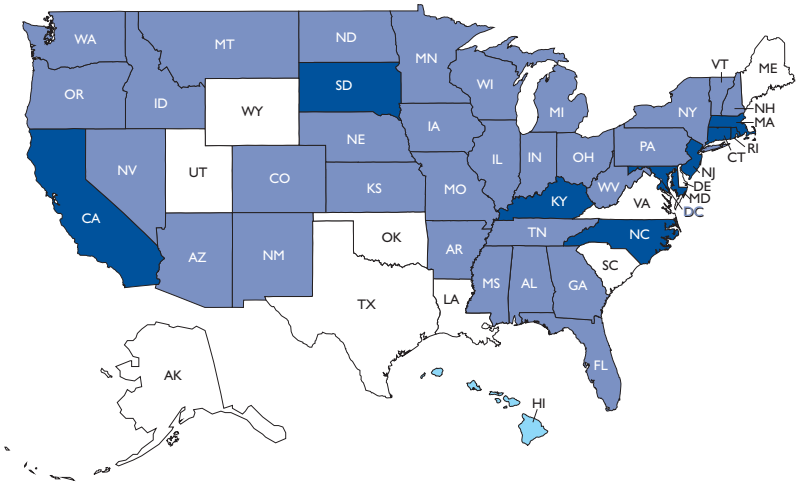
PedNSS 1998[59]



Interactive maps and timelines for 1989-2011 are available at stateofobesity.org.

The data for PedNSS is based on actual measurements rather than self-reported data.

PedNSS 2011



2. STUDY OF CHILDREN AND TEENAGERS AGES 10 TO 17 (2011)

Obesity rates for children and teenagers ages 10 to 17 ranged from a low of 9.9 percent in Oregon to a high of 21.7 percent in Mississippi according to the most recent state-by-state level data from the 2011 National Survey of Children's Health (NSCH).[60]

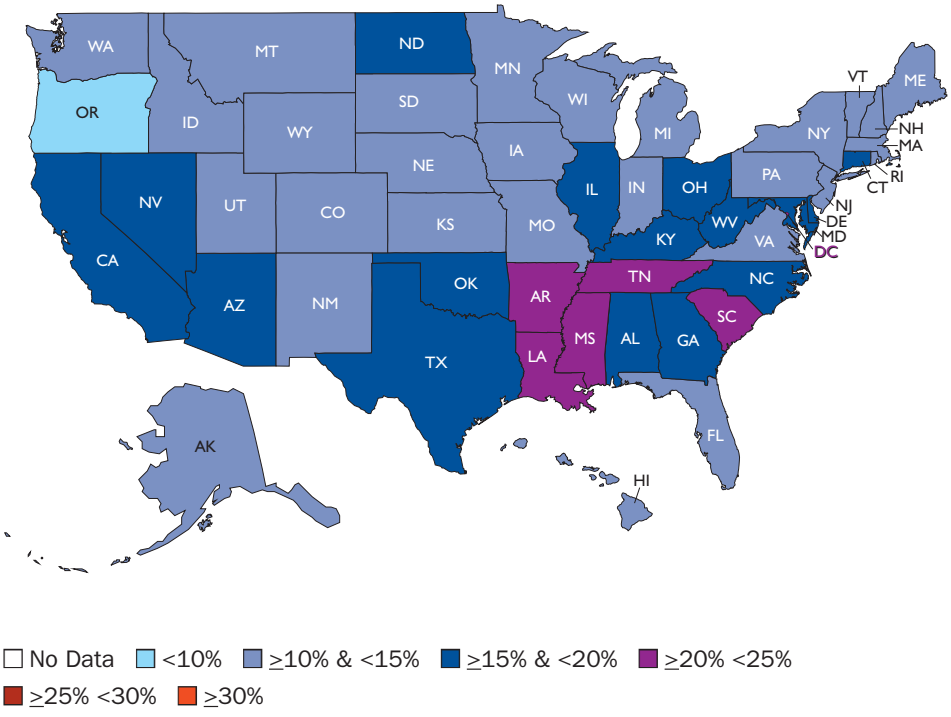
Seven of the 10 states with the highest rates of childhood obesity are in the South. Only two states had statistically significant changes to their childhood obesity rates between 2008 and 2011: South Carolina saw an increase and New Jersey saw a decrease.

Note: NSCH is based on a survey of parents in each state. The data are from parental reports, so they are not as reliable as measured data, but they are the only source of comparative state-by-state data for children. NSCH has typically been conducted and released every four years.

Seven of the 10 states with the highest rates of childhood obesity are in the South.

PERCENTAGE OF CHILDREN AGES 10 TO 17 CLASSIFIED AS OBESE BY STATE, 2011 NSCH

An interactive map and timeline of these data are available at stateofobesity.org



No Data <10% ≥10% & <15% ≥15% & <20% ≥20% <25%
≥25% <30% ≥30%

Source: National Survey on Children's Health, 2011.

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

STATES WITH THE HIGHEST RATES OF OBESITY AMONG 10- TO 17-YEAR-OLDS		
Rank	**States**	**Percentage of Obese 10- to 17-year-olds**
1	Mississippi	21.7%
2	South Carolina	21.5%
3	D.C.	21.4%
4	Louisiana	21.1%
5	Tennessee	20.5%
6	Arkansas	20.0%
7	Arizona	19.8%
8	Kentucky	19.7%
9	Illinois	19.3%
10	Texas	19.1%

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

STATES WITH THE LOWEST RATES OF OBESITY AMONG 10- TO 17-YEAR-OLDS		
Rank	**States**	**Percentage of Obese 10- to 17-year-olds**
51	Oregon	9.9%
50	New Jersey	10.0%
49	Idaho	10.6%
48	Wyoming	10.7%
47	Colorado	10.9%
46	Washington	11.0%
45	Vermont	11.3%
44	Hawaii	11.5%
43	Utah	11.6%
42	Maine	12.5%

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

CHILDREN AND TEENS SELF-PERCEPTIONS

Analysis of the 2005 to 2012 NHANES on children and adolescents, 8 to 15 years, on their perception of their own weight found:[61]

- Around 30 percent misperceive their weight status (e.g. perceiving they are a healthy weight when they are not);
- Among obese children and adolescents, 48 percent of boys and 38 percent of the girls consider themselves to be about the correct weight; and
- The majority of overweight children (81 percent boys and 71 percent of girls) believe they are about the correct weight.

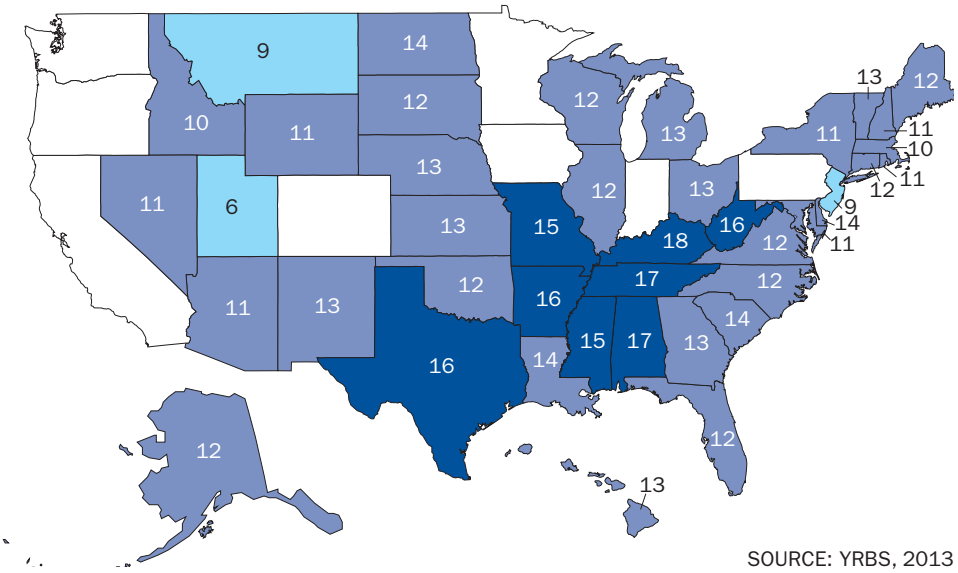
3. STUDY OF HIGH SCHOOL STUDENTS (2013)

According to the 2013 Youth Risk Behavior Surveillance System (YRBSS), 13.7 percent of high school students were obese, and an additional 16.6 percent were overweight.[62] The information from YRBSS is based on a survey of participating states and uses self-reported information. State obesity rates ranged from a low of 6.4 percent in Utah to a high of 18 percent in Kentucky, with a median of 12.4 percent.

In the 1999 YRBSS, 10.6 percent of students were reported as obese and 14.1 percent were overweight.[63]

PERCENTAGE OF HIGH SCHOOL STUDENTS WHO WERE OBESE — Selected U.S. States, Youth Risk Behavior Surveillance System, 2013

An interactive map and timeline of these data are available at stateofobesity.org



SOURCE: YRBS, 2013

UNDERWEIGHT CHILDREN — CONSEQUENCES AND RATES

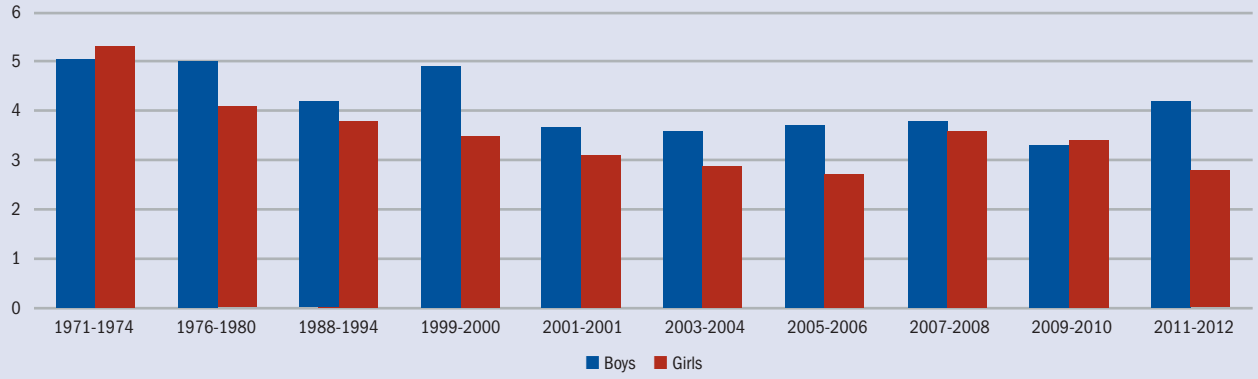
Around 3.5 percent of U.S. children and teens (ages 2 to 19) are underweight. Combining underweight (3.5 percent) and obese (17 percent) children — 20.5 percent of children have increased health risks due to being an unhealthy weight.[64, 65]

Underweight can be a sign of malnutrition, and can result from poverty and/or inability to access nutritious food. Children who are malnourished are deprived of essential vitamins, minerals and nutrients that are required for proper early childhood and adolescent cognitive and psychosocial-behavioral development. Studies over the last 20 years have found stunted development processes resulting in decreased academic achievement, increased social behavioral problems, emotional deficits and physical inactivity. [66,67,68,69,70]

- Underweight rates are consistent across all age groups. Boys are 1.5 times more likely to be underweight (4.2 percent) than girls (2.8 percent).[71]
- Underweight rates have been relatively stable for the past 15 years.

Prevalence of Underweight Among Children and Adolescents Aged 2-19 Years, by Sex: United States 1971–1974 through 2011–2012

National Health and Nutrition Examination Survey



Notes: Underweight is body mass index (BMI) less than the sex- and age-specific 5th percentile from the BMI-for-age 2000 CDC Growth Charts. Pregnant females were excluded from analysis beginning with 1971–1974.

Source: CDC/NCHS, National Health Examination Surveys (NHES) 1963–1965 and 1966–1970; and National Health and Nutrition Examination Surveys (NHANES) 1971–1974; 1976–1980; 1988–1994, and 1999–2012

C. RACIAL AND ETHNIC INEQUITIES AND OBESITY

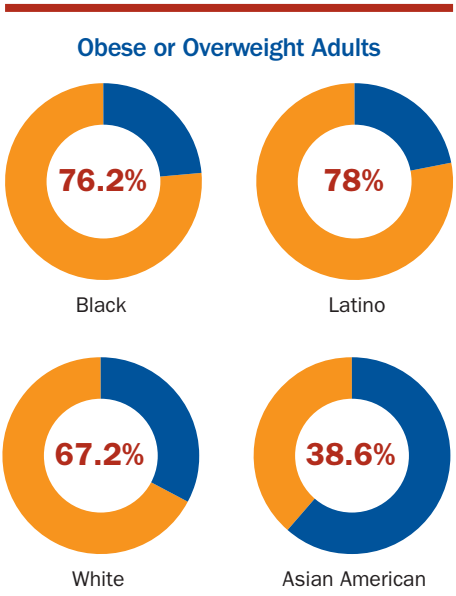
Obesity rates significantly vary by race and ethnicity, particularly when factors such as gender, education level, income and neighborhood socioeconomic characteristics are included.

Inequities in access to healthcare, the quality of care received and opportunities to make healthy choices where people live, learn, work and play all contribute to the rates of obesity being higher for Black, Latino and American Indian/Native American adults and children than for Whites. In addition, Black, Latino and American Indian/Native American communities experience higher rates of hunger and food insecurity, limited access to safe places to be physically active and targeted marketing of less nutritious foods.[72, 73] It is also noteworthy that Latinos are the fastest-growing population in the United States — it is estimated that nearly one in three children will be Latino by 2030 — so addressing these inequities is particularly important not only for the well-being of individuals and families but also for the impact these trends will have on the nation's healthcare spending and productivity.[74]

Eliminating health inequalities could reduce medical expenditures by $54 billion to $61 billion per year, and recover $13 billion annually because of work missed due to illness and about $250 billion per year due to premature deaths, according to a study of data from 2003 to 2006.[75, 76] Another study conducted by the Urban Institute found that the differences in rates among Latinos, Blacks and Whites for a set of preventable diseases (diabetes, heart disease, high blood pressure, renal disease and stroke — many of which are often related to obesity) cost the healthcare system $23.9 billion annually.[77] Based on current trends, by 2050, this is expected to more than double to $50 billion a year.

Among adults:

- Obesity rates are higher among Black (47.8 percent) and Latino (43 percent) adults than Whites (32.6 percent) and Asian Americans (10.8 percent).[78]
- Rates of obesity (56.6 percent) and severe obesity are highest among Black women.
- Nearly 78 percent of Latino and 76.2 percent of Black adults are either overweight or obese, compared to 67.2 percent of Whites and 38.6 percent of Asian Americans.[79]
- Black women are more than twice as likely to be severely obese and Latinas are nearly 1.5 times more likely to be severely obese than White women.[80]
- A reported 54 percent of American Indian/Alaska Native adults, ages 20 to 74, are obese and 81 percent are overweight or obese, according to an Indian Health Survey data.[81]



Obesity and Overweight Rates for Adults, National Health and Nutrition Examination Survey (NHANES), 2011 to 2012[87, 88] (with American Indian/Alaska Native Rates per 2008 Indian Health Services[89])

	White Both Genders	Latino Both Genders	Black Both Genders	Asian American Both Genders	Native American/ Alaska Native Both Genders	White Men	Latino Men	Black Men	White Women	Latino Women	Black Women
Obese	32.6%	42.5%	47.8%	10.8%	54%	32.4%	40.1%	37.1%	32.8%	44.4%	56.6%
Obese and Overweight Combined	67.2%	77.9%	76.2%	38.6%	81%	71.4%	78.6%	69.2%	63.2%	77.2%	82%

Note: The Centers for Disease Control and Prevention uses the term Hispanic in analysis. White = Non-Hispanic Whites; Black = Non-Hispanic African Americans

Among children:

- Overweight and obesity rates are higher, start at earlier ages and increase faster among Black and Latino children than among White children.
- More than 20 percent of Black, 22.4 percent of Latino, 14.1 percent of White and 8.6 percent of Asian American children and teenagers ages 2 to 19 are obese.[82]
- Severe obesity rates are 8.5 percent among Black, 6.6 percent among Latino and 4.8 percent among White children.
- 35.2 percent of Black, 38.9 percent of Latino, and 28.5 percent of White children are overweight or obese.[83]
- More than 20 percent of Black and Latina girls and 15.6 percent of White girls are obese; 19.9 percent of Black boys, 24.1 percent of Latino boys and 12.6 percent of White boys are obese.[84]
- For 2- to 5-year olds, 11.3 percent of Blacks, 16.7 percent of Latinos and 3.5 percent of Whites are obese.
- By ages 6 to 11, 23 percent of Black children are obese compared to 13.1 percent of Whites.[85]
- Among American Indian/Native Alaskan children:
  - 25 percent of 2- to 5-year olds are obese, and 45 percent are overweight or obese;
  - 31 percent of 6- to 11-year olds are obese, and 49 percent are overweight or obese; and
  - 31 percent of 12- to 19-year olds are obese, and 51 percent are overweight or obese.[86]

Obesity and Overweight Rates for Children Ages 2 to 19, NHANES, 2011 to 2012[90]

	White	Black	Latino	Asian American
Severely Obese	4.8%	8.5%	6.6%	NA
Obese (including Severely Obese)	14.1%	20.2%	22.4%	8.6%
Obese and Overweight Combined	28.5%	35.2%	38.5%	19.5%

Note: The Centers for Disease Control and Prevention uses the term Hispanic in analysis. White = Non-Hispanic Whites; Black = Non-Hispanic African Americans

Severe obesity in children = BMI at or above 99th percentile

Obesity and Overweight Rates for Children Ages 2 to 19 by Gender NHANES, 2011 to 2012[91]

	Girls	White Girls	Latino Girls	Black Girls	Boys	White Boys	Latino Boys	Black Boys
Severely Obese	N/A	4.8%	7.3%	10.1%	N/A	3.3%	7.9%	10.1%
Obese (including Severely Obese)	17.2%	15.6%	20.6%	20.5%	16.7%	12.6%	24.1%	19.9%
Obese and Overweight Combined	31.6%	29.2%	37%	36.1%	32.0%	27.8%	40.7%	34.4%

Note: The Centers for Disease Control and Prevention uses the term Hispanic in analysis. White = Non-Hispanic Whites; Black = Non-Hispanic African Americans

AMERICAN INDIAN/ALASKA NATIVE STATE DATA

According to an analysis by the Kaiser Family Foundation (KFF) of BRFSS surveys in states with reportable data for American Indian/Alaska Native populations, 11 of the 25 states analyzed had adult obesity rates above 70 percent among American Indians/ Native Alaskans. Arizona had the highest adult rate at 81.0 percent, and Texas had the lowest at 51.6 percent.

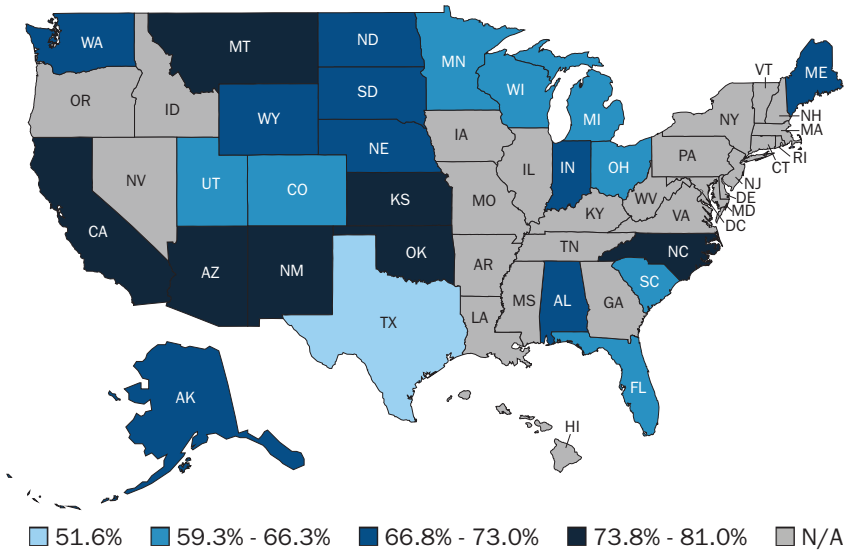
States with the Highest Reported Overweight and Obesity Rates for American Indian/Native Alaska Adults

Rank	States	Percentage of Adults Obese and Overweight
1	Arizona	81.0%
2	North Carolina	78.1%
3	New Mexico	77.5%
4	Oklahoma	76.6%
5	California	75.3%
6	Kansas	75.0%
7	Montana	73.8%

States with the Lowest Reported Overweight and Obesity Rates for American Indian/Native Alaska Natives

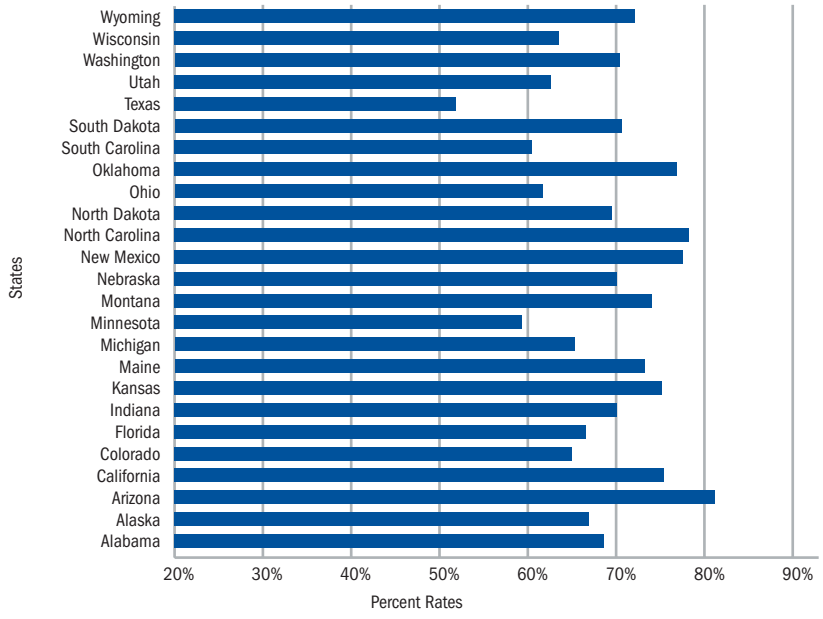
Rank	States	Percentage of Adults Obese and Overweight
25	Texas	51.6%
24	Minnesota	59.3%
23	South Carolina	60.1%
22	Ohio	61.4%
21	Utah	62.6%
20	Wisconsin	63.4%
19	Colorado	64.9%

Overweight and Obesity Rates for Native American/Alaska Native Adults



Overweight and Obesity Rates for Native American/Alaska Native Adults

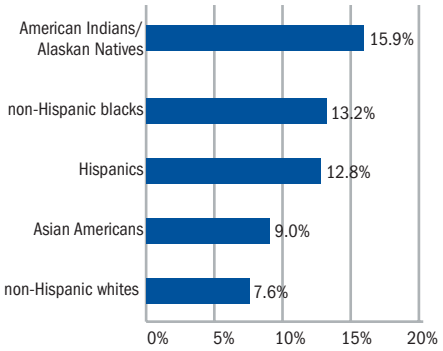
2013 BRFSS Data



D. HEALTH AND OBESITY

- **Type 2 Diabetes:** West Virginia has the highest rate of diabetes at 14.1 percent. Nine of the 10 states with the highest type 2 diabetes rates are in the South.
  - Diabetes rates have nearly doubled in the past 20 years—from 5.5 percent in 1988 to 1994 to 9.3 percent in 2005 to 2010.[92]
  - More than 29 million American adults have diabetes and another 86 million have prediabetes.[93] The CDC projects that one-in-three adults could have diabetes by 2050.[94]
  - More than one-quarter of seniors (ages 65 and older) have diabetes (25.9 percent or 11 million seniors).
  - Diabetes is the seventh leading cause of death in the United States, and costs the country around $245 billion in medical costs and lost productivity each year.[95] Average medical expenditures are around 2.3 times higher among people with diagnosed diabetes than what expenditures would be absent diabetes.
  - More than 80 percent of people with diabetes are overweight or obese.
  - Approximately 208,000 children (ages 2 to 20) have diabetes and 2 million teens (ages 12 to 19) have prediabetes.[96, 97] Children and youth (ages 0 to 19) type 2 diabetes rates have increased by more than 30 percent since 2001.[98]
  - Diabetes rates are higher among American Indians/Alaska Natives (15.9 percent) Blacks (13.2 percent) and Latinos (12.8 percent) than Asian Americans (9.0 percent) and Whites (7.6 percent).[99]
    - Among Asian Americans, rates are 12.0 for Asian Indians, 11.3 percent of Filipinos, 4.4 percent for Chinese and 8.8 percent for other Asian Americans.
    - Among Latinos, rates are 14.8 percent for Puerto Ricans, 13.9 percent for Mexican Americans, 9.3 percent for Cubans and 8.5 percent for Central and South Americans.

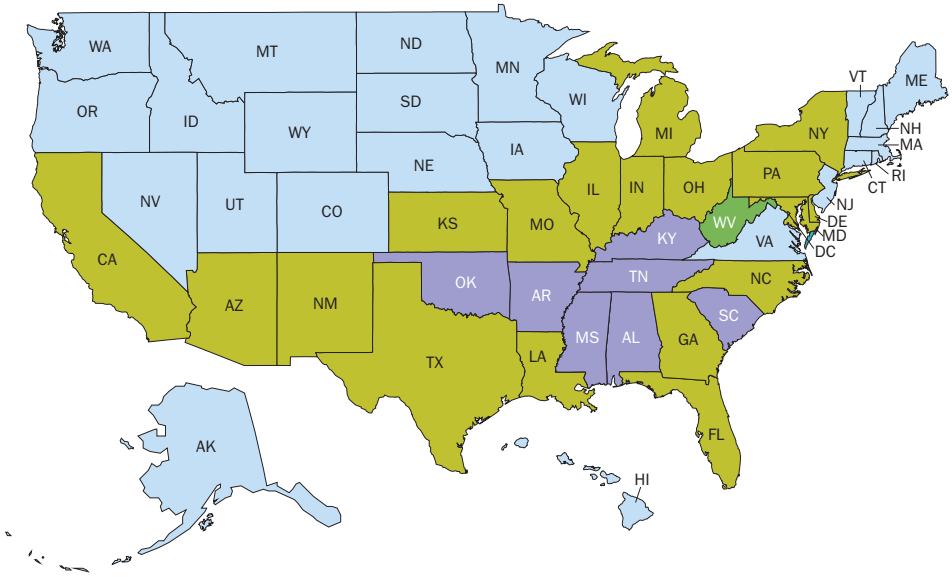
Rates of Diagnosed Diabetes

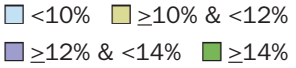


Source: American Diabetes Association, 2012 data

PERCENTAGE OF ADULTS WITH DIABETES BY STATE, 2014 BRFSS

An interactive map and timeline of these data are available at stateofobesity.org

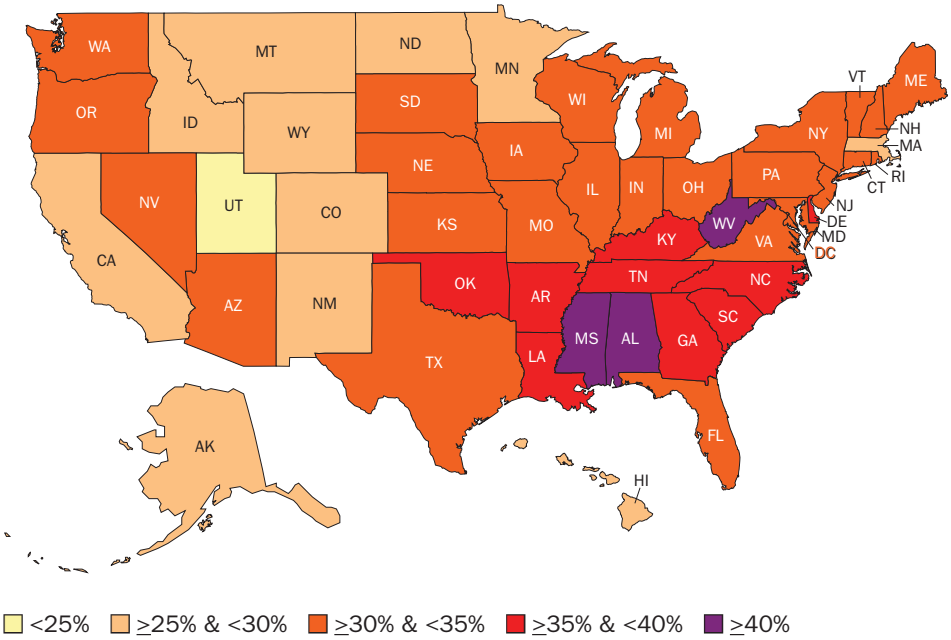


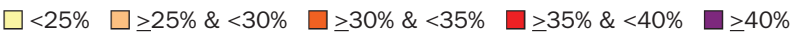


- **Heart Disease and Hypertension:** The 10 states with the highest rates of hypertension are in the South. West Virginia had the highest rate at 41 percent.
  - One in four Americans has some form of cardiovascular disease. Heart disease is the leading cause of death in the United States — responsible for one in three deaths.[100, 101]
  - At least one out of every five U.S. teens has abnormal cholesterol, a major risk factor for heart disease; among obese teens, 43 percent have abnormal cholesterol.[102]
  - One in three adults has high blood pressure, a leading cause of stroke.[103] 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 age 45.[104]
  - People who are overweight are more likely to have high blood pressure, high levels of blood fats and high LDL (bad cholesterol), which are all risk factors for heart disease and stroke.[105]
  - Deaths from heart disease and stroke are almost twice as high among Blacks than among Whites.[106]
  - Latinos are more likely to suffer a stroke than are other ethnic groups. Specifically, Mexican Americans are 43 percent more likely to have a stroke — the leading cause of disability and the third-leading cause of death — than Whites.[107]

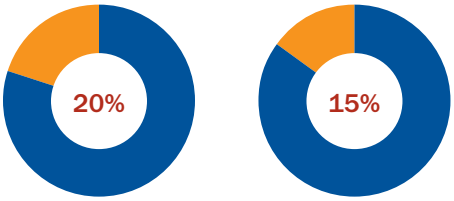
PERCENTAGE OF ADULTS WITH HYPERTENSION BY STATE, 2013 BRFSS

An interactive map and timeline of these data are available at stateofobesity.org

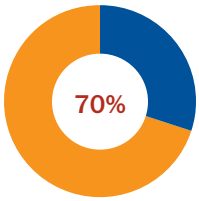




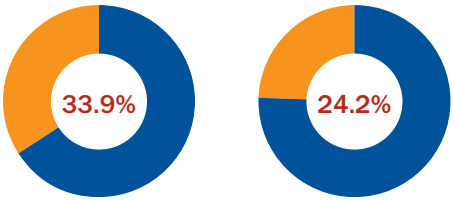
Cancers Attributable to Obesity



Arthritis Attributable to Obesity



Kidney Disease Attributable to Obesity



- **Cancer:** Up to 40 percent of some forms cancers are attributable to obesity.[108] Approximately 20 percent of cancer deaths in women and 15 percent of cancer deaths in men are attributable to overweight and obesity.[109]
- **Arthritis:** Almost 70 percent of individuals diagnosed with arthritis are overweight or obese.[110]
- **Nonalcoholic Fatty Liver Disease:** Up to 25 percent of adults have nonalcoholic fatty liver disease (NFLD), which can lead to liver damage (cirrhosis) or the need for transplants.[111]
- **Kidney Disease:** An estimated 24.2 percent of kidney disease cases among men and 33.9 percent of cases among women are related to overweight and obesity.[112]
- **Alzheimer's/Dementia:** Both overweight and obesity at midlife independently increase the risk of dementia, Alzheimer's disease and vascular dementia.[113, 114]
- **Mental Health:** Studies have shown an association between anxiety and obesity, and that this association is true for both men and women.[115, 116, 117] The direction of the association can seem to be related to both cause and effect. Obese adults are more likely to have depression, anxiety and other mental health conditions.[118]
  - Among patients with type 2 diabetes, depression is associated with obesity and cardiovascular disease.[119]
  - A study of women ages 40 to 65 found that moderate to severe depression was almost 4 times greater (25.4 percent versus 6.5 percent) among women with a BMI greater than 35 (obese) than among those with a BMI less than 25 (healthy weight).[120]
  - According to a review of obesity and depression trends between 2005 and 2010:[121]
    - Adults with depression were significantly more likely to be obese (43 percent) than adults without depression (33 percent).
    - Among women, those who were depressed were also significantly more likely to be obese (46.7 percent) than those were not depressed (33.4 percent). This significance was seen across all age groups (20 to 39, 40 to 59 and 60+).
    - Among men over the age of 60, 46.6 percent of depressed men were obese, which is higher than rates for those who were not depressed. This age group of men were also more likely to be obese than those aged 20 to 39.
    - White women who are depressed are significantly more likely to be obese than non-depressed white women (45.2 percent versus 31.6 percent), and no other racial/ethnic group showed this difference.

PRECONCEPTION AND PRENATAL HEALTH

A mother's health — including her health status when she becomes pregnant and during pregnancy — can have a significant impact on the health of her children.

Approximately 62 million American women are of childbearing age. By the age of 25, about half of all women in the United States give birth; by the age of 44, 85 percent of women give birth.[122] Rates of obese pregnant women increased from 17.6 percent in 2003 to 20.5 percent in 2009[123] and severe maternal morbidities significantly increased between 1998 to 1999 and 2010 to 2011.[124]

Traditionally, healthcare for pregnant women has started with conception. But, many experts now believe that prenatal care, which usually begins during the first three months of pregnancy, comes too late to prevent many serious maternal and childhood health problems. Even the first few weeks after conception are critical for healthy fetal development. Medical professional recommend an increased focus on regular well-care and preventive healthcare for women throughout childbearing age, including screening for risk of obesity and related chronic conditions.

Once a woman is pregnant, good prenatal healthcare can also help reduce risks and complications.

The health of mothers — including poor nutrition, obesity, type 2 diabetes and other risks — can increase risk for miscarriage, birth defects, slow fetal growth, prematurity, and low birth weight babies. One in nine children in the United States is born prematurely (before 37 weeks of gestation or three weeks early). Premature births cost the country $26.2 billion annually, or $51,600 per baby, in direct medical and lifetime added costs.[125, 126]

On average, there were around 24,000 infant deaths per year in the United States over the past decade.[127] The U.S. infant mortality rate (6.14 per 1,000 live births, 2010) is almost twice as high as some countries, ranking sixth among developed countries.[128]

Nutrition and Obesity-Related High-Risk Pregnancy Health Risks

Risks	Current Prevalence	Heightened Health Concerns
Poor or Inadequate Nutrition	• More than 1,972,000 women received WIC, this includes women that are pregnant (during pregnancy and up to six weeks after birth or end of pregnancy), postpartum (up to six months after birth or end of pregnancy) or breastfeeding (up to the infant's first birthday).[129] • 34 percent of households with food insecurity are headed by single women with children.[130] Individuals who live in food insecure households are at greater risk of being malnourished.	• Increased risk for gestational diabetes and obesity during pregnancy.[131] • Increases risk for abnormal brain development, diabetes, hypertension and heart disease, obesity and lower IQ in babies. • Lack of key vitamins and nutrients can increase risk for a range of health problems – for instance, poor iron intake can lead to preterm births, low birth weight and infant mortality – and sufficient levels of folic acid prior to conception can reduce neural tube defects by up to 50 percent, while inadequate folic acid intake increases risk for unhealthy development of the brain, spinal cord and skull, and can lead to increased risk of infant mortality.[132]
Obesity	• 31.8 percent of women under the age of 40 are obese. [133]	• Increases risk for gestational diabetes, high blood pressure, preeclampsia, prematurity, and cesarean delivery. • Children of mothers who are obese during pregnancy are at increased risk for birth defects, birth injuries, large birth weight and childhood obesity.[134]
Gestational and Pre-Existing Diabetes[135]	• 1 in 16 pregnant women are diagnosed with diabetes – 6.4 percent of women giving birth annually (250,000). • Gestational diabetes: 18 percent higher costs than normal pregnancy. • Pre-existing diabetes 55 percent higher costs than normal pregnancy. Medicaid covers 43 percent of mothers with pre-existing diabetes and 36 percent of mothers with gestational diabetes.	• Increased risk for miscarriage, hypertension, preterm birth, preeclampsia and eclampsia, urinary and amniotic cavity infections, Cesarean delivery, and other concerns.[136] • Infants experience higher risk of low blood sugar, loss of oxygen and birth asphyxia, respiratory distress syndrome, endocrine and metabolic disturbances, congenital anomalies, jaundice and large body size. • Women with gestational diabetes are more than 7 times as likely to develop type 2 diabetes, with a 35 to 65 percent chance of developing diabetes within 10 to 20 years.[137]

E. PHYSICAL ACTIVITY IN ADULTS

Being physically inactive is responsible for one in 10 deaths among U.S. adults.[138]

Eighty percent of American adults do not meet the government's physical activity recommendations for aerobic and muscle strengthening.[139] Sixty percent of adults are not sufficiently active to achieve health benefits.[140] There are also health risks to being sedentary (physically inactive), including increased risk of mortality and metabolic syndrome.[141] Sedentary adults pay $1,500 more per year in healthcare costs than physically active adults.[142] Studies have also found the more sedentary the mother, the more sedentary the child, and the more physically active the mother, the more physically active the child early in life.[143]

Reports of physical inactivity rates among adults are based on the number of survey respondents who said that they did not engage in any physical activity or exercise during the previous 30 days other than doing their regular jobs.

Mississippi had the highest reported percentage of inactivity among adults at 31.6 percent.

In 2015, the IOM's Roundtable on Obesity Solutions hosted a public workshop on the role of physical activity in the prevention and treatment of obesity.[144] Some key conclusions summarized by the STOP Obesity Alliance included:

- Research suggests that individuals do not increase sedentary behavior or increase food intake to compensate for participating in increased physical activity or exercise. When individuals engage in moderate to vigorous physical activity, they are likely to prevent weight gain and improve body composition.
- Weight loss and changes in body composition are comparable across different types of exercise, including endurance training, strength training, endurance plus strength training and physical activity alone.
- A 10-year study of children found that physical activity lowers risk for becoming overweight or obese and higher TV time increases it.

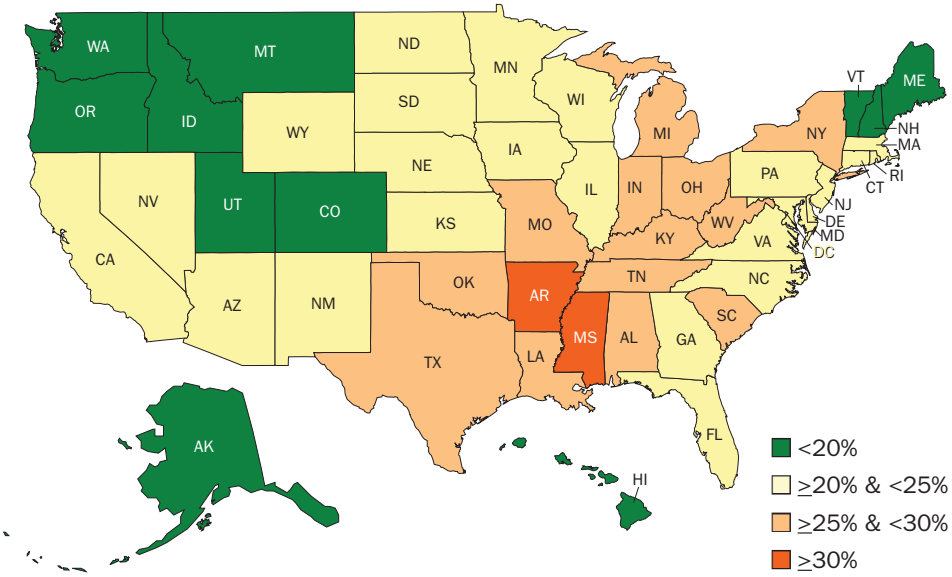
Adults who do not meet the aerobic and muscle strengthening recommendations for physical activity

80%

Sedentary adults pay $1,500 more per year in healthcare costs than physically active adults

PERCENTAGE OF ADULTS WITH PHYSICAL ACTIVITY BY STATE, 2014 BRFSS

An interactive map and timeline of these data are available at stateofobesity.org



F. ECONOMICS & OBESITY

1. HEALTHCARE COSTS

Obesity is one of the biggest drivers of preventable chronic diseases and healthcare costs in the United States. Currently, estimates for these costs range from $147 billion to nearly $210 billion per year.[145] In addition, obesity is associated with job absenteeism, costing approximately $4.3 billion annually[146] and with lower productivity while at work, costing employers $506 per obese worker per year.[147]

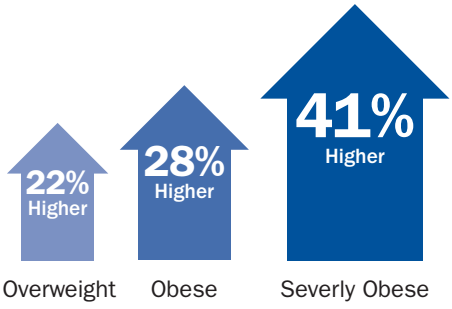
As a person's BMI increases, so do the number of sick days, medical claims and healthcare costs.[148] For instance:

- Obese adults spend 42 percent more on direct healthcare costs than adults who are a healthy weight.[149]
- Per capita healthcare costs for severely or morbidly obese adults (BMI >40) are 81 percent higher than for healthy weight adults.[150] In 2000, around $11 billion was spent on medical expenditures for morbidly obese U.S. adults.
- Moderately obese (BMI between 30 and 35) individuals are more than twice as likely as healthy weight individuals to be prescribed prescription pharmaceuticals to manage medical conditions.[151]
- Costs for patients presenting at emergency rooms with chest pains are 41 percent higher for severely obese patients, 28 percent higher for obese patients and 22 percent higher for overweight patients than for healthy-weight patients.[152]

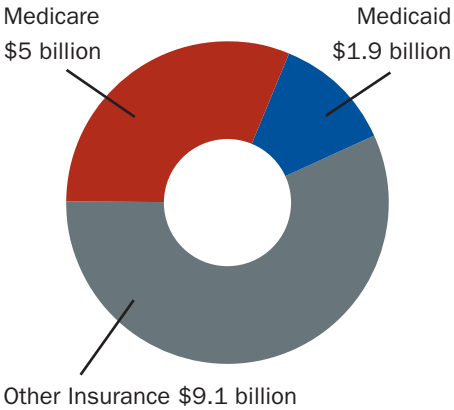
Reducing obesity, improving nutrition and increasing activity can help lower costs through fewer doctor's office visits, tests, prescription drugs, sick days, emergency room visits and admissions to the hospital and lower the risk for a wide range of diseases.

A 2008 study by the Urban Institute, The New York Academy of Medicine and TFAH found that an investment of $10 per person in proven community-based programs to increase physical activity, improve nutrition and prevent smoking and other tobacco use could save the country more than $16 billion annually within five years. That's a return of $5.60 for every $1 invested.[153] Out of the $16 billion, Medicare could save more than $5 billion and Medicaid could save more than $1.9 billion. Also, expanding the use of prevention programs would better inform the most effective, strategic public and private investments that yield the strongest results.

Difference in Emergency Room Costs for Patients Presenting With Chest Pains Compared with a Normal-weight Patient



FIVE-YEAR ROI ON $10 PER PERSON COMMUNITY-BASED INVESTMENT



2. SOCIOECONOMICS AND OBESITY

Individuals with lower income and/or education levels are disproportionately more likely to be obese:

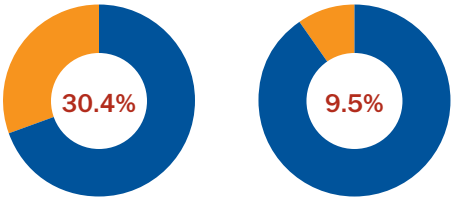
- Nearly 33 percent of adults who did not graduate high school were obese, compared with 21.5 percent of those who graduated from college or technical college.
- More than 33 percent of adults who earn less than $15,000 per year are obese, compared with 24.6 percent of those who earned at least $50,000 per year.[154]

SOCIOECONOMICS AND OBESITY AMONG CHILDREN

An analysis of the 2007 National Survey of Children's Health found that:[155,156,157]

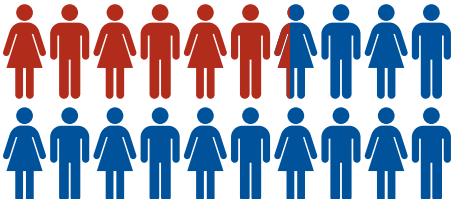
- Children of parents with less than 12 years of education had an obesity rate 3.1 times higher (30.4 percent) than those whose parents have a college degree (9.5 percent).
- Children living below the federal household poverty level have an obesity rate 2.7 times higher (27.4 percent) than children living in households exceeding 400 percent of the federal poverty level.
- Children living in low-income neighborhoods are 20 percent to 60 percent more likely to be obese or overweight than children living in high socioeconomic status neighborhoods and healthier built environments.
- Girls (ages 10 to 17) living in neighborhoods having lower socioeconomic characteristics are more likely to be obese (19.2 percent) and overweight (35.7 percent) than are girls living in neighborhoods having higher socioeconomic characteristics.

Obesity Rates for Children Based on Parental Educational Attainment



No High School Diploma | College Degree

Obesity Rates for Girls Ages 10 to 17 in Lower Socieconomic Circumstances



35.7%

FOOD INSECURITY, FOOD DESERTS AND HEALTHY WEIGHT

More than 14 percent of U.S. households (17.4 million) are "food insecure" — defined by U.S. Department of Agriculture (USDA) as having their access to adequate food and nutrition limited due to cost, proximity and/or other resources.[158] Around 5.6 percent (6.9 million) of U.S. households are very food insecure — defined by USDA as being food insecure with hunger, indicating lack of money and other resources for food caused a reduction in food intake or eating pattern of one or more household member during the year.

- Nationally, very low food insecurity remained unchanged from 2013. Two states had a significant increases in very low food insecurity (Louisiana and Virginia) and four states had a significant decrease (New Mexico, Hawaii, Georgia and California).
- Around 15.5 million children — 20.9 percent — experience food insecurity —remaining essentially unchanged from 2013.[159, 160]
- Low-income Americans (at/under 100 percent of the federal poverty level (FPL)) spend a larger percentage of their income on food (16.1 percent) but spend less in real dollar amounts ($35 per person per week) than do higher-income Americans (13.2 percent; $50 per person per week).[161, 162]
- Around 25 percent of Black and Latino families experience food insecurity compared to 11 percent of White households.[163] Black and Latino families have earned $1 for every $2 earned by White families for the past 30 years.[164]
- Black and Latino families spend around $10 per person per week less on food ($40) compared to White families ($50).[165] ZIP codes with the highest concentration of Blacks have about half the number of chain supermarkets as ZIP codes with the highest concentration of Whites, and ZIP codes with the highest concentrations of Latinos have only one-third as many.[166] Many of these same neighborhoods also are struggling with high rates of obesity, unemployment and depressed economies.

More than 29 million Americans live in "food deserts," meaning they do not have a supermarket or supercenter within a mile of their home if they live in an urban area, or within 10 miles of their home if they live in a rural area — making it challenging to access healthy, affordable food. [167]

- Families in predominantly minority and low-income neighborhoods have limited access to supermarkets and fresh produce. Greater accessibility to supermarkets is consistently linked to lower rates of overweight and obesity.[168] Studies have found that there is less access to supermarkets and nutritious, fresh foods in many urban and lower-income neighborhoods and less healthy items are also often more heavily marketed at the point-of-purchase through product placement in these stores.[169, 170]

Difference in Chain Supermarket Distribution between Communities

Predominantly White Communities

50% Less

Predominantly Black Communities

66% Less

Predominantly Latino Communities

Over 29 million

Americans don't have access to a supermarket within a mile of their home if they live in urban areas, or within 10 miles if they live in rural area.s

FOOD INSECURITY BY LOCATION

By Region/State[171]

- Food insecurity varies significantly by state — ranging from a low of 8.4 percent in North Dakota to a high of 22.0 percent in Mississippi. Very low food security ranges from 2.9 percent in North Dakota to 8.1 percent in Arkansas.
- Regionally, food insecurity rates are 15.1 percent in the South; 13.8 percent in the Midwest; 13.3 percent in the Northwest; and 13.1 percent in the West. Rates of very low food insecurity are 6.0 percent in the South; 5.8 percent in the Midwest; 5.2 percent in the Northeast; and 4.9 percent in the West.
- Fourteen states have food insecurity rates higher than the national average: Arkansas, Georgia, Missouri, Mississippi, North Carolina, Ohio, Tennessee and Texas; 20 states have rates lower than the national average: Alaska, Delaware, Iowa, Illinois, Massachusetts, Minnesota, Montana, North Dakota, New Hampshire, New Jersey, Pennsylvania, South Dakota, Virginia and Wisconsin; and 16 states and Washington, D.C. have rates that do not differ statistically from the national average.

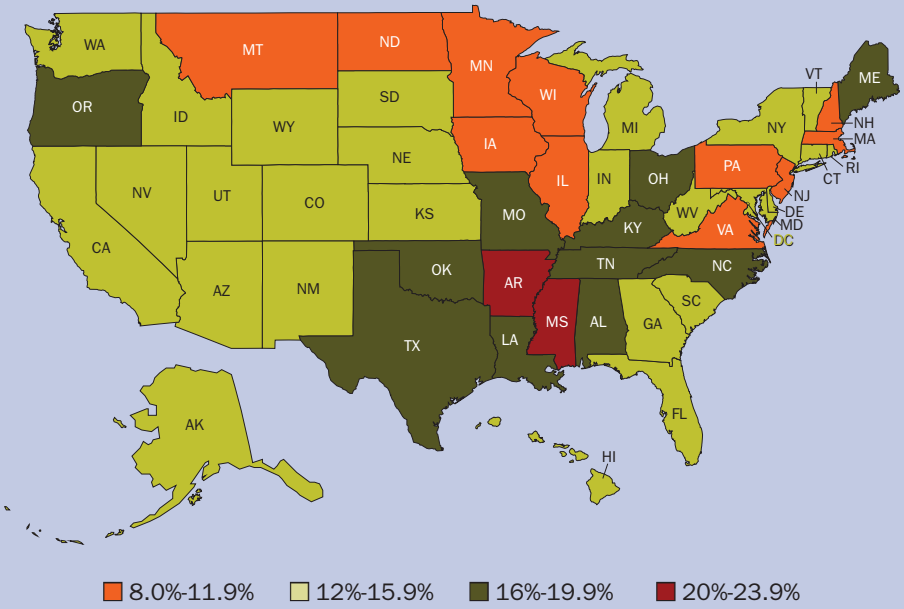
By County

- Ninety percent of counties with the highest rates of food insecurity are in the South, 52 percent are rural and 24 percent are metropolitan.[172]
- Food insecurity is largely concentrated in specific areas of the country. In 324 counties, the average rate of food insecurity is 23 percent — compared to 14 percent in 2,810 counties.[173]

By Family

- Food insecurity rates are highest among households 1) with incomes near or below the federal poverty line; 2) headed by a single woman or man; 3) headed by a Black or Latino; and/or 5) in large cities or rural areas.[174]

FOOD INSECURITY, STATE AVERAGES, 2011-2013, USDA DATA



Moving Toward Modernizing Obesity Policies and Programs

The following section reviews a range of current federal nutrition, physical activity and obesity-related policies and programs that have been instrumental in addressing the rise in obesity and serve as a baseline for a greater focus on prevention. Sections include policies and programs related to:

A. Early Childhood and Healthy Weight

B. Schools and Healthy Weight

C. Communities and Healthy Weight

D. Nutrition — Assistance and Education for Families

E. Quality, Affordable Healthcare and Obesity

A. EARLY CHILDHOOD AND HEALTHY WEIGHT

Good nutrition and physical activity are among the most important factors for health. They are particularly significant for infants, toddlers, and young children who need an adequate intake of key nutrients while their brains and bodies are rapidly developing. The foundations for lifelong healthy eating and physical activity begin in these formative years.

- More than 8 percent of preschoolers in the United States were obese in 2011 to 2012, and an additional 23 percent of children ages 2 to 5 were overweight.[175] Two percent of young children (2 to 5) are severely obese.[176]
- Obesity rates among preschool children from low-income families are higher than the national average at 14.4 percent. However, from 2008 to 2011, national rates of preschooler obesity have shown some decline — and the rates decreased in 18 states and the U.S. Virgin Islands, and increased in only three states.[177]

There are a number of federal policies and programs aimed specifically at improving nutrition, activity and health for infants, toddlers and young children both at home and in child care settings. Some key programs and areas of focus include:

1. **The Special Supplemental Nutrition Program for Women, Infants and Children;**
2. **Child Care and Early Education Programs; and**
3. **Breastfeeding: Infant Nutrition**

1. THE SPECIAL SUPPLEMENTAL NUTRITION PROGRAM FOR WOMEN, INFANTS, AND CHILDREN PROGRAM: 40TH ANNIVERSARY

WIC provides benefits to around 8.6 million individuals each month, including 2 million infants, 4.6 million children (under the age of 5), and 2 million women.[178] More than half (52 percent) of all infants in the United States participate in WIC.

WIC was created in 1974 to safeguard the health of low-income pregnant, postpartum and breastfeeding women, infants and children up to age 5 who are at nutritional risk.[179]

The WIC federal grant-based program was funded at $6.6 billion in Fiscal Year (FY) 2015,[180] and supports programs in all 50 states, 34 Indian Tribal Organizations (ITO), American Samoa, the District of Columbia, Guam, the Commonwealth of the Northern Mariana Islands, Puerto Rico and the Virgin Islands. WIC is administered via services at a variety of clinic locations, such as county health departments, hospitals, schools and Indian Health Service facilities. It is fully federally funded and administered by USDA's Food and Nutrition Service (FNS); state matching funds are not required. The 90 state agencies, nearly 1,900 local WIC agencies and 10,000 WIC clinic sites provide nutritious foods, nutrition education, breastfeeding promotion and support and referrals to other health and social services to participants at no charge.[181]

The WIC food packages are designed to supplement participants' diets with specific nutrients, depending on the recipients' needs. Authorized foods include infant cereal, baby foods, iron-fortified adult cereal, fruits and vegetables, vitamin C-rich fruit or vegetable juice, eggs, milk, cheese, yogurt, soy-based beverages, tofu, peanut butter, dried and canned beans/peas, canned fish, whole wheat bread and other whole-grain options. Participants also have access to a number of resources, such as health screening, nutrition and breastfeeding supplies and counseling, immunization screening and referral and substance abuse referral.[182]

Since 2009, WIC food packages were updated to offer healthier foods — including adding fruits and vegetables, whole grains, and low-fat dairy products and eliminating fruit juices from the infant food package. After revisions of WIC food packages, a number of studies have shown improved availability, variety and sales of healthy foods and increased consumption of fruits, vegetables, whole grains, and low-fat milk by children.[183, 184, 185, 186] Improvements made to the WIC food packages in recent years have contributed to healthier food environments in low-income neighborhoods, enhancing access to fruits, vegetables, and whole grains for all consumers regardless of whether they participate in WIC. As of April 2015, 40 states, six ITO state agencies, Washington, D.C., Puerto Rico, Guam and the U.S. Virgin Islands operate the WIC Farmers' Market Nutrition Program.[187] In 2014, the average value of food per participant in the program was $61.94 per month (the cost to the government was $43.65 due to discounts).

Among WIC's top priorities is to promote breastfeeding. The program can provide educational materials, peer counselor support, an enhanced food package, breast pumps and other supplies to nursing mothers.[188]

WIC programs have a track record of helping improve the health of participants, including:[189, 190, 191]

- For every dollar spent on a WIC pregnant woman, up to $4.21 is saved in Medicaid spending;
- WIC reduces the probability of delivering a low birth weight baby by 29 percent and very low birth weight infant by more than 50 percent;
- Reduced risk of maternal obesity at the onset of subsequent pregnancies;
- Improving vocabulary scores for children of mothers who participated in WIC prenatally;
- Increasing initiation and duration rates of breastfeeding;
- Improving healthy growth weights for children;
- Increasing the nutritional density of children's diet — including positive intake of key nutrients and reducing iron deficiency;
- Children whose mothers participated in the program prenatally had improved vocabulary scores, and children who participated in WIC after the first year of life experienced significantly improved memory; and
- Increasing the likelihood a child will receive well care and have an ongoing medical provider.

The Benefits of WIC Spending

$1 WIC Spent on a Pregnant Woman = Up to $4.21 in Medicaid Savings

In 2011, CDC reported **significant declines in obesity rates among low-income preschoolers enrolled in the WIC program.** Researchers identified the nutritional improvements and increases in breastfeeding rates among WIC-enrolled mothers as possible contributing factors in this decline.[192]

Focusing on nutrition early can help improve a child's future health — particularly among children from low-income families:

- Nearly half (48 percent) of infants and toddlers (5.4 million) under 3-years-old live in low-income families (family income is less than two times the federal poverty threshold), including 25 percent (2.8 million) in poor families (family income is below the federal poverty level).[193]
  - More than one third of poor families (6.6 percent of the U.S. population) live in "deep" poverty — earning less than $6,000 per year or are raising a child on less than $7,600 per year (per household).[194]
  - Around 71 percent of Black children under the age of 3 (1.1 million) live in low-income families, 66 percent of Latino children under the age of 3 (1.9 million) live in low-income families, and 35 percent of White children under the age of 3 (2 million) live in low income families.
- Children who grow up in poor neighborhoods are at a higher risk of obesity. A recent study found that by the age of 2, low birth weight infants from poor areas had higher BMIs compared to those measured in the low birth weight category from wealthier neighborhoods.[195] According to the Pediatric Nutrition Surveillance System the obesity rate among preschool children from low-income families is higher than the national average.[196]
- Children who are overweight or obese are likely to be obese as adults. Being overweight or obese can put them at higher risk for health problems—such as heart disease, hypertension, type 2 diabetes, stroke, asthma and osteoarthritis—during childhood and as they age into adulthood.[197]
- Overweight 5-year-olds are four times as likely as normal-weight children to become obese, based on a study of more than 7,700 children.[198] More than 12 percent of the children were obese when they entered kindergarten, and, by eighth grade, 20.8 percent were obese. Another 14.9 percent were overweight in kindergarten and, by eighth grade, 17 percent were overweight.

IMPACT OF HUNGER ON CHILDREN

Feeding America's Child Food Insecurity: The Economic Impact on our Nation report found that child hunger has negative consequences for:[199]

- **Health:** Hungry children are sick more often, and more likely to be hospitalized (the costs of which are passed along to the business community as insurance and tax burdens); suffer growth impairment that precludes reaching their full physical potential; and incur developmental impairments that limit their physical, intellectual and emotional development.
- **Education:** Hungry children, ages 0- to 3-years-old, cannot learn as much, as fast, or as well when malnourished. Chronic under nutrition harms their cognitive development during this critical period of rapid brain growth, actually changing the fundamental neurological architecture of the brain and central nervous system. These children do worse in school and have lower academic achievement because they are not well prepared for school and cannot concentrate; they also have more social and behavioral problems because they do not feel well, have less energy for complex social interactions and cannot adapt as effectively to environmental stresses.
- **Job Readiness and the Future Workforce:** Workers who experienced hunger as children are not as well prepared physically, mentally, emotionally, or socially to perform effectively in the contemporary workforce. That leads to a workforce pool that is less competitive, with lower levels of skills, and constrained human capital.

2. CHILD CARE AND EARLY EDUCATION PROGRAMS

More than half of American children under the age of 6 regularly spend a significant amount of time in non-parental child care settings.[200]

More than 11 million children under age 6 spend an average of 30 hours in non-parental child care settings, with children of working mothers spending almost 40 hours a week in such care.[201]

The Institute of Medicine (IOM) has recommended including specific requirements in child care regulations related to physical activity, sedentary activity and feeding.[202] The American Academy of Pediatrics (AAP), American Public Health Association (APHA), and National Resource Center for Health and Safety in Child Care and Early Education have identified more than 250 components — with 47 high-impact components — that all types of early care and education settings, including centers and family child care homes, should include in standards for infant feeding, nutrition, physical activity and screen time.[203]

• Child and Adult Care Food Program (CACFP)

More than 3.3 million children and 120,000 adults receive nutritious meals and snacks each day as part of their day care or home-based child care via CACFP.[204]

The Child and Adult Care Food Program was established in 1968 to ensure children in day care centers received nutritious meals. In 1987, the program was extended to cover select adult day care centers.

CACFP currently provides two meals and one snack daily to eligible low-income children in Head Start, child care centers and family- and home-based day care, and free snacks to children and teenagers in afterschool programs where at least half of the children are eligible for free or reduced-price meals. For-profit child care centers are also eligible if at least 25 percent of their children come from families with incomes below 185 percent of the FPL.

The program regulates meal patterns and portion sizes, provides nutrition education and offers sample menus and training in meal planning and preparation to help providers comply with nutrition standards.[205] The Healthy, Hunger-Free Kids Act of 2010 directed USDA to improve and better align the CACFP meal patterns with the dietary guidelines. Regulations were proposed in January 2015 to update meal and snack pattern standards, with final regulations expected in 2016.

Studies show that child care programs participating in CACFP serve meals that are nutritionally superior to those served by child care programs that do not participate in CACFP.[206] Children in participating institutions have higher intake of key nutrients and fewer servings of fat and sweets than children in non-participating programs.[207] In addition, 87 percent of child care provided in family homes that are considered to be high quality participate in CACFP.

• The Child Care and Development Block Grant

The Child Care and Development Block Grant, reauthorized in 2014, is the primary federal funding stream for child care in the United States, providing subsidies for low-income families.[208] CCDBG offers broad guidance and flexibility to states for creating both the child care assistance program and a program of basic regulation for child care operations. Under its reauthorization, for the first time, the grants include provisions for child care provider training around healthy eating and physical activity as an allowable activity for quality improvement and allow states to make healthy eating and physical activity a part of their health and safety requirements.

• Head Start

Head Start is a federal child development program that serves more than one million children between the ages of 3 and 5 from low-income families.[209] Head Start's focus on school readiness includes health, nutrition, education, social services and parental engagement components. Head Start programs are required to adhere to federal regulations that ensure: (1) parents receive guidance on nutrition and physical activity; (2) Head Start facilities not co-located in public schools (so covered under the USDA school meal programs) participate in the CACFP; (3) meals and snacks provide one-third to one-half of the daily nutritional needs of children in part- or full-day programs; (4) staff model healthy eating behaviors and attitudes for children; and (5) facilities provide opportunities for outdoor and indoor active play.[210]

• Let's Move! Child Care

Lets' Move! Child Care encourages child care and early education providers to meet a basic set of best practices in five goal areas:

1) Physical activity: provide one to two hours of physical activity throughout the day, including outside play when possible;

2) Screen time: none for children under age 2 and for those 2 years and older, limit screen time to 30 minutes per week during child care and no more than one to two hours per day at home;

3) Food: serve fruits or vegetables at every meal, eat meals family-style whenever possible, and avoid serving fried foods;

4) Beverages: give water during meals and throughout the day and avoid sugary drinks. For children two years and older, serve low- or non-fat milk and four to six ounces maximum of 100 percent juice a day; and

5) Infant feeding: provide breast milk to infants of mothers who wish to breastfeed, welcome mothers to nurse mid-day, and support parents' decisions with infant feeding.[211]

The Department of Defense, General Services Administration, Bright Horizons, Knowledge Universe, the Learning Care Group, New Horizons, YMCA, the Boys and Girls Clubs of America, and others have made commitments to the Partnership for a Healthier America to meet the *Let's Move! Child Care* goals.[212]

CDC AND EARLY CHILD EDUCATION (ECE) PROGRAMS

CDC's Division of Nutrition, Physical Activity and Obesity (DNPAO) supports a number of obesity prevention initiatives aimed at early child care and education. The agency provides funding, training and technical assistance to a variety of state and community agencies and other organizations to implement obesity prevention efforts targeting ECE settings. Some key projects include:[213]

- Development of a framework and technical assistance materials for obesity prevention efforts targeting ECE settings and regular convening of stakeholders working on these efforts and dissemination of resources.
- State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health: This five-year cooperative agreement provides funding to all 50 states and Washington, D.C. for chronic disease prevention efforts. All grant recipients are required to promote physical activity in ECE settings and many are also implementing nutrition standards.
- National Early Care and Education Learning Collaborative: This five-year cooperative agreement, launched in 2012, funds Nemours to establish and implement state ECE learning collaboratives to make improvements in nutrition, breastfeeding support, physical activity, and screen time. Participating providers exchange ideas with peers, learn from experts, share tools, and receive training to assist them in improving their policies and practices. Year one (FY 2012) provided funding to Arizona, Florida, Indiana, Kansas, Missouri and New Jersey. Year two (FY 2013) funding expanded the project to Kentucky, Los Angeles County, and Virginia. As of May 1, 2015, 771 centers serving more than 77,000 children fully participated in learning collaboratives and an additional 524 centers serving more than 50,000 children were in the process of completing learning sessions.[214]

Spectrum of Opportunities for Obesity Prevention in the Early Care and Educational Setting

PHYSICAL ACTIVITY AND YOUNG CHILDREN

According to the National Association of Sports and Physical Education (NASPE), each day toddlers (2- to 3-year-olds) should get at least 30 minutes of structured physical activity (adult-led); at least 60 minutes unstructured physical activity (free play); and not be inactive for more than one hour at a time (except for sleeping).[215]

Active children have lifelong health benefits of stronger muscles and bones, leaner bodies by controlling body fat, lower risk of high blood pressure or high blood cholesterol levels, and are less likely to become overweight or obese and to develop type 2 diabetes.[216]

Unsafe conditions and neighborhoods and limited knowledge among parents and caregivers about recommended types and amount of activity at each stage of development can contribute to young children not being sufficiently active.

The IOM also recommends that parents and caregivers limit young children's screen time, since it promotes sedentary behavior and takes away from time that could be spent in more physical activities.[217] The AAP specifically recommends no screen time for children under 2-years-old, and less than one to two hours for children over the age of 2.[218] In addition, the IOM recommends child care providers and parents keep children active throughout the day and ensure children sleep an adequate amount each night.

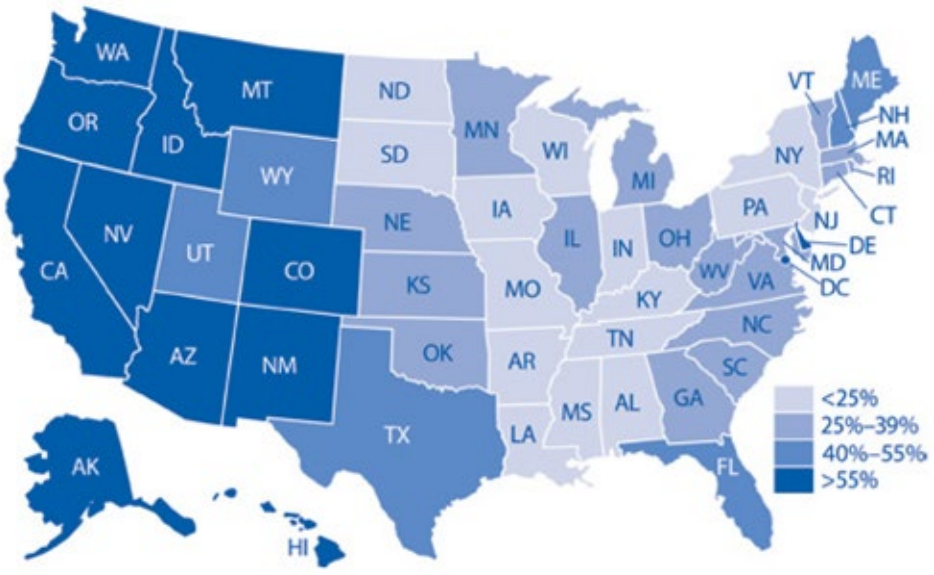
3. BREASTFEEDING: INFANT NUTRITION

Nearly one-quarter of babies are never breastfed. Less than half (49 percent) are breastfeeding at 6 months — with rates ranging from 19.7 percent in Mississippi to 71.3 in California.[219]

- Fewer than 60 percent (58.9 percent) of Black mothers breastfeed, compared to 75.2 percent of White and 80 percent of Latino mothers. Breastfeeding rates for Black mothers did increase from 47.4 percent in 2000 due to strong healthcare and public health campaigns and policies.[220]
- Only 27 percent of babies are still breastfed at 12 months.[221]

The American Academy of Pediatrics recommends breastfeeding as a natural source of nutrition that "provides the healthiest start for an infant." The IOM and AAP recommend that babies be breastfed exclusively for the first 6 months and should continue to receive supplemental breastfeeding through the first year of life.[222, 223, 224]

Percent of hospitals and birth centers with most infants rooming-in at least 23 hours per day — mPINC 2011



According to the IOM, without the benefit of outside advice or resources, mothers are less likely to start breastfeeding or may stop earlier than is recommended.[225]

CDC's Division of Nutrition, Physical Activity and Obesity helps protect, promote and support breastfeeding, which has been shown to have numerous short- and long-term benefits for infants and mothers.

CDC's *Breastfeeding Report Card* helps analyze breastfeeding trends and supportive policies across the country and tracks and promotes best practices and policies.[226] From the 2014 report:

- Only 54.4 percent of hospitals and birth centers have at least 90 percent of mothers and infants engage in skin-to-skin contact for at least 30 minutes within one hour of an uncomplicated vaginal birth;
- Only 37 percent of hospitals and birth centers have at least 90 percent of healthy full-term infants share a room with the mother for at least 23 hours per day;
- Twenty-two percent of infants receive formula before 2 days of age; and
- Only seven states have child care regulations that support onsite breastfeeding.

BREASTFEEDING BENEFITS

- **Benefits for Infants:** Lower risk of ear and gastrointestinal infections, necrotizing entercolitis (a gastrointestinal disease), diabetes and obesity.[227] Some research suggests it may also reduce risk for asthma and allergies, childhood leukemia and SIDS.[228, 229, 230, 231] Some research has found children who are breastfed longer are more likely to have better developed language skills, verbal and nonverbal intelligence during childhood, greater upward social mobility, higher neurological development and lower stress markers.[232, 233]
- **Benefits for Mothers:** Lower risk of breast and ovarian cancer, type 2 diabetes and postpartum depression. It has been shown to help mothers bond with the child and mothers who nurse miss less work.[234]
- **Economic Benefits:** Families can save on cost of formula. In addition, according to CDC, around $2.2 billion could be saved in annual medical costs if breastfeeding recommendations were met.[235]

B. SCHOOLS AND HEALTHY WEIGHT

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Studies show that school-based programs can help prevent and reduce obesity.[236] Children spend a significant portion of their time at school and in before- and after-school programs. They often eat as many as two meals and several snacks in these settings.

The federal government can set national goals, recommendations and nutrition standards that are tied to schools' participation in federally-supported programs or compliance with grant requirements for other federal programs. For other policies, including physical education and activity and wellness programs, the more than 14,000 school districts in the country have primary jurisdiction — or "local control." States often try to create incentives for districts to follow compliance rules to qualify for state funding.

Over the past decade, school-based efforts have focused on improving the quality of food available in schools; improving the duration and quality of physical education; increasing opportunities for physical activity before, during and after school; and building evidence-based wellness programs. Some key programs and areas of focus include:

1. **National School Breakfast and Lunch Programs — and Related School Nutrition Initiatives**
   - **Smart Snacks in Schools**
   - **Fresh Fruit and Vegetable Program**
   - **Department of Defense Fresh Fruit and Vegetable Program**
   - **Farm-to-School Grants**
   - **USDA Summer Food Service Program;**
2. **CDC's Division of Population Health (DPH) School Health Branch**
3. **Carol M. White Physical Education Program (PEP)**
4. **Safe Routes to Schools**
5. **Presidential Youth Fitness Program and Let's Move Active Schools**
6. **Expanded Coverage for Healthcare in School: Centers for Medicare and Medicaid Services (CMS) "Free Care" Rule Clarification**

1. NATIONAL SCHOOL BREAKFAST AND LUNCH PROGRAM: 70TH ANNIVERSARY

Nearly 31 million children receive nutritionally-balanced, free or low-cost lunches through the National School Lunch Program (NSLP) each school day — operating in more than 100,000 public and non-profit private schools and residential child care institutions.[237]

For many children, the only reliable meals they have are at school. Many U.S. children and teens consume up to half of their total daily calories at school.[238, 239]

While all students may purchase low-cost lunches through the NSLP, more than 70 percent of students — **around 21.5 million** — who participate are eligible for reduced-price or free lunches.[240]

In 2013, for the first time in U.S. history, **a majority — 51 percent — of U.S. public school students were from low- income families and were eligible for free or reduced-cost meals.**[241] Twenty-four years ago (in 1989), less than 32 percent of public school students were low-income.

The National School Lunch Program will mark its 70th anniversary in 2016, having been signed into law by President Harry Truman in 1946 largely in response to high rates of poor nutrition and related health among World War II military recruits. It has served more than 224 billion lunches since then.[242]

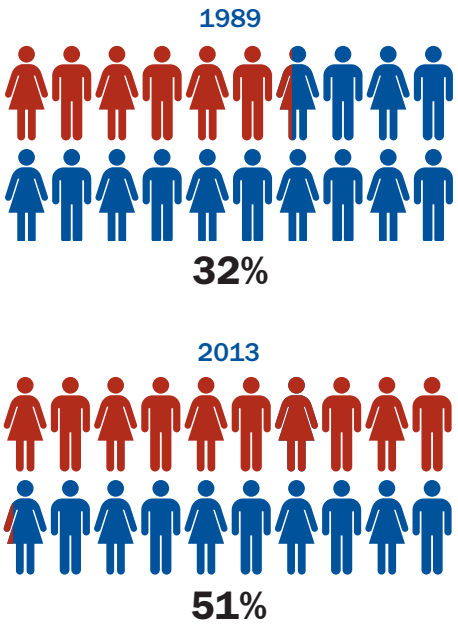
The program was originally developed as "a measure of national security, to safeguard the health and well-being of the Nation's children and to encourage the domestic consumption of nutritious agricultural commodities and other food, by assisting the States, through grants-in aid and other means, in providing an adequate supply of food and other facilities for the establishment, maintenance, operation and expansion of nonprofit school lunch programs."[243]

Breakfasts were added to the school meal program in 1966, and snacks for afterschool programs were added to the school meal program in 1998.

Nearly 14 million children participate in the School Breakfast Program (SBP), with almost 12 million receiving free or reduce-priced meals.[244] More than 90,000 schools or institutions participate.

The law authorizing the school meal programs, the Child Nutrition Act, was last authorized in 2010 as the Healthy, Hunger-Free Kids Act. Child nutrition programs, including school meal programs, are up for reauthorization in 2015.

Percentage of Students from Low Income Families — 1989 vs. 2013



Who is Eligible?

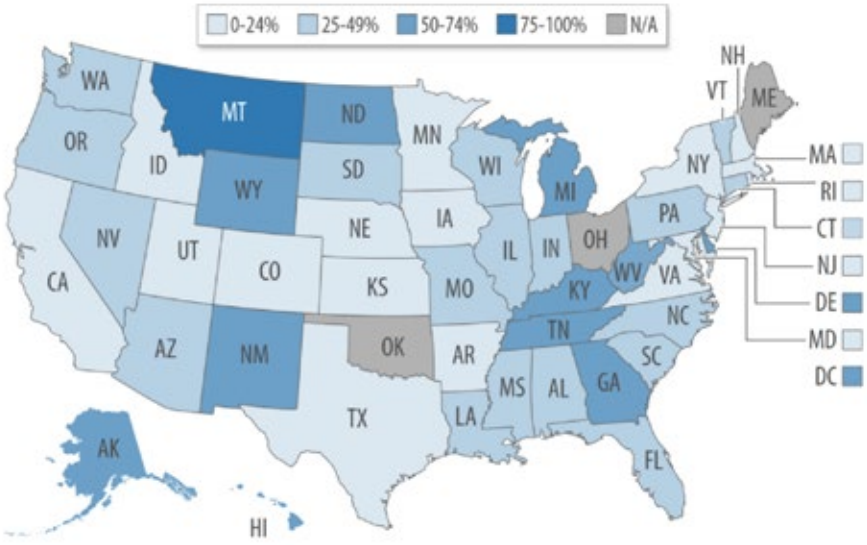
School districts and independent schools that participate in the program receive cash subsidies for each meal they receive. In return, they must offer free and reduced-price meals to eligible students and the meals must meet federal nutrition standards set by USDA that correspond to the *Dietary Guidelines for Americans (DGA)*. Children from families with incomes at or below 130 percent of the poverty level are eligible for free meals, and those with annual incomes between 130 percent (around $30,615 for a family of four) and 185 percent (around $43,568 for a family of four) of the poverty level are eligible for reduced-price meals (as of the 2013 to 2014 school year). Children from families above 185 percent of FPL may participate and pay full price.[245]

Schools with high numbers of low-income students can offer meals at no charge to all students through a Community Eligibility Provision, which was available nationwide in the 2014 to 2015 school year. This helps reduce labor, process and paperwork costs — families no longer have to complete applications and schools do not have to verify a family's status. Schools may also qualify for higher "severe need" reimbursement rates if 40 percent or more of their lunches are free or reduced-price meals.

- An estimated **6 million children have better access to school meals** because of the Community Eligibility Provision.[246]
- **More than 14,000 high poverty schools in more than 2,200 school districts adopted community eligibility** for the 2014 to 2015 school year. This represents roughly half of all eligible schools.

School meal programs are administered by USDA's Food and Nutrition Service and work in partnership with state and local education agencies around the country that operate the programs. The budget for the NSLP was $12 billion and the SBP budget was $4 billion in FY 2015.[247]

Percentage of Eligible School Districts Adopting Community Eligibility



Source: CBPP analysis of data on eligible schools published by state child nutrition agencies in May 2014 and data on schools districts adopting community eligibility collected directly from state child nutrition agencies September 2014–January 2015.

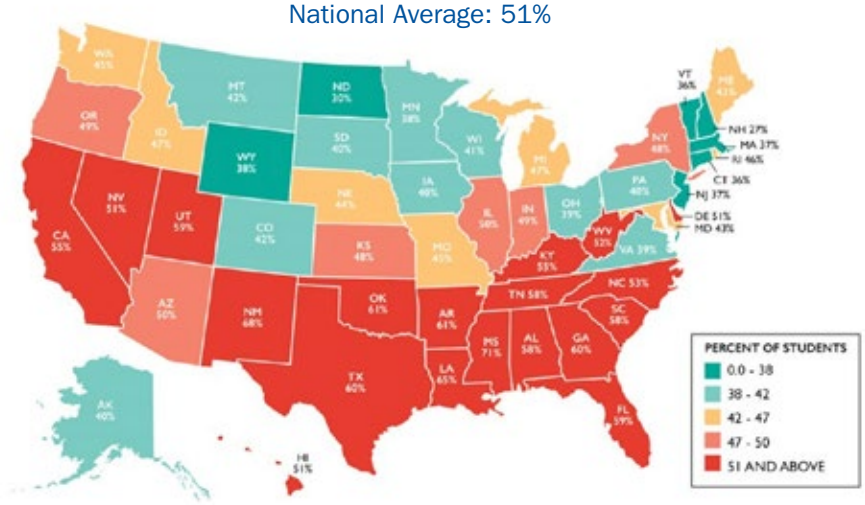
LOW-INCOME PUBLIC SCHOOL STUDENTS BY STATE

A Southern Education Foundation analysis of National Center for Education Statistics (NCES) data found that 51 percent of U.S. public school students are from low-income families — and are eligible for free or reduced-price meals.[248]

- Mississippi has the highest rate of low-income students at 71 percent. New Hampshire has the lowest rate at 27 percent.
- A majority of public school students were low income in 21 states and Washington, D.C: Alabama, Arizona, Arkansas, California, Delaware, Florida, Georgia, Hawaii, Illinois, Kentucky, Louisiana, Mississippi, Nevada, New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Utah and West Virginia.
- Rates are 40 percent or higher in 40 states and Washington, D.C.
- Nine states have rates between 45 percent and 49 percent: Idaho, Indiana, Kansas, Michigan, Missouri, New York, Rhode Island, Oregon and Washington.
- 10 additional states have rates between 40 percent and 44 percent: Alaska, Colorado, Iowa, Maine, Maryland, Montana, Nebraska, Pennsylvania, South Dakota and Wisconsin.
- Fifty-seven percent of students in the South are low-income, with 51 percent in the West, 44 percent in the Midwest and 42 percent in the Northeast.
- Thirteen out of 15 Southern states have rates above 50 percent.

Percentage of Low Income Students in U.S. Public Schools 2013

National Average: 51%



School Meal Program Eligibility, as of 2015		
	Household Income: Free Lunch Eligible	Household Income: Reduced Lunch Eligible
	130 percent of FPL	185 percent of FPL
Household size: 2	$20,709	$29,471
Household size: 4	$31,525	$44,863

UPDATED SCHOOL MEAL NUTRITION STANDARDS

Beginning in the fall of 2012, updated national standards went into effect for the school meal programs. The Healthy, Hunger-Free Kids Act of 2010 required USDA to issue regulations to align school meal standards with the *2010 Dietary Guidelines for Americans.*

The revised standards include more fruits, vegetables and whole grains, low-fat dairy products, and fewer unhealthy sugars and fats. As of December 2014, 95 percent of schools are meeting the updated meal standards.[249] Since 2009, USDA has provided $185 million in school kitchen equipment funding to all 50 states, which distribute the funds to local school districts through competitive bidding processes.[250] States are required to prioritize funding to schools where at least half of students qualify for free or reduced-price meals. USDA also provides technical assistance to school to help implement the healthier standards.

An analysis in Childhood Obesity found that, comparing 2012 (before the updated standards took effect) to 2014 (after updated standards took effect), students consumed more fruit, threw away less of their entrees and vegetables (lowering the amount of wasted food) and consumed the same amount of milk.[251]

• Smart Snacks in Schools Nutrition Standards

Schools also sell other foods, snacks and drinks outside of breakfast and lunch, in vending machines, school stores, bake sales, and à la carte lines. USDA defines these as competitive foods — which encompasses any food or beverage served or sold at school during the school day that is not part of the USDA school meals program.[252] USDA's "Smart Snacks in Schools" nutrition standards for competitive foods and beverages took effect for the 2014 to 2015 school year, requiring more whole grains, low-fat dairy, fruits, vegetables and lean protein, and setting limits on fat, sugar and salt.[253, 254]

• Fresh Fruit and Vegetable Program

The Fresh Fruit and Vegetable Program (FFVP) is a federal program that provides free fruits and vegetables to participating elementary schools during the school day, outside of the school meal programs.[255] A pilot program started in 2002 has, since 2008, been a permanent program in all 50 states, Washington, D.C., Guam, Puerto Rico, and the Virgin Islands. FFVP is targeted to elementary schools with the highest numbers of students eligible for free and reduced-price school meals.

The program is administered by USDA's Food and Nutrition Service and is fully federally funded — with a budget of $159 million for FY 2015. It is typically managed by state education agencies through agreements with school food authorities. Participating schools receive between $50 and $75 per student per school year. Schools have the flexibility to choose the types of produce and when it is served — and may acquire produce locally or through the Department of Defense (DoD) Fresh Fruit and Vegetable program.

A USDA evaluation found that students participating in FFVP eat approximately one-third of a cup more fruits and vegetables per day than non-participating students on days when produce is offered. Eighty-two percent of all FFVP schools serve fruits and vegetables 3 to 5 times per week.[256]

• Department of Defense Fresh Fruit and Vegetable Program

DoD's Fresh Fruit and Vegetable program was started in 1994 when FNS was looking for ways to provide more fresh produce to schools.[257] At least 48 states, Washington, D.C., Puerto Rico, the Virgin Islands and Guam participate in the program using commodity entitlement funds. The program taps into the efficiencies and reliability of DoD's food procurement and distribution system — and leverages greater buying power, consistent deliveries, emphasis on high quality, a large variety of produce items (including pre-cuts and locally grown) and an easy-to-use ordering website with funds tracking. Schools received more than $120 million worth of produce during the 2013 to 2014 school year.

• Special Milk Program

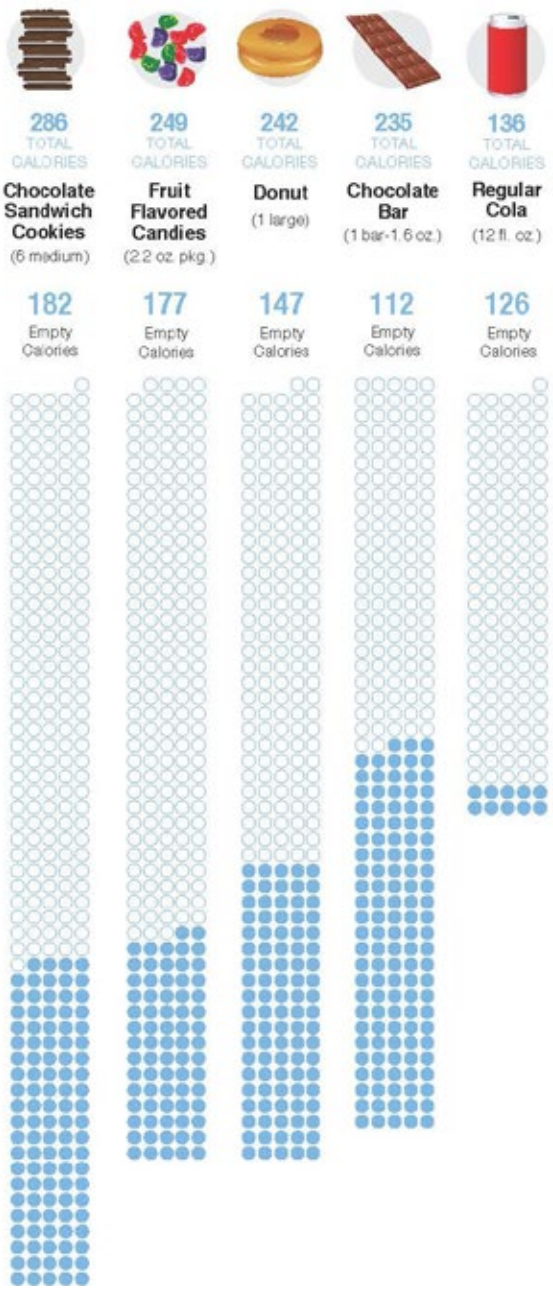
USDA's Special Milk Program (SMP) offers cash assistance to schools and non-profit child care institutions that do not participate in other federal child nutrition programs.[258] The milk must be low-fat or fat-free. More than 3,600 schools and residential child care institutions participate in the program, along with more than 570 summer camps and 480 non-residential child care institutions. Schools that participate in the national school meal programs may employ SMP to provide milk to qualifying half-day pre-kindergarten and kindergarten students.

SMART SNACKS IN SCHOOL

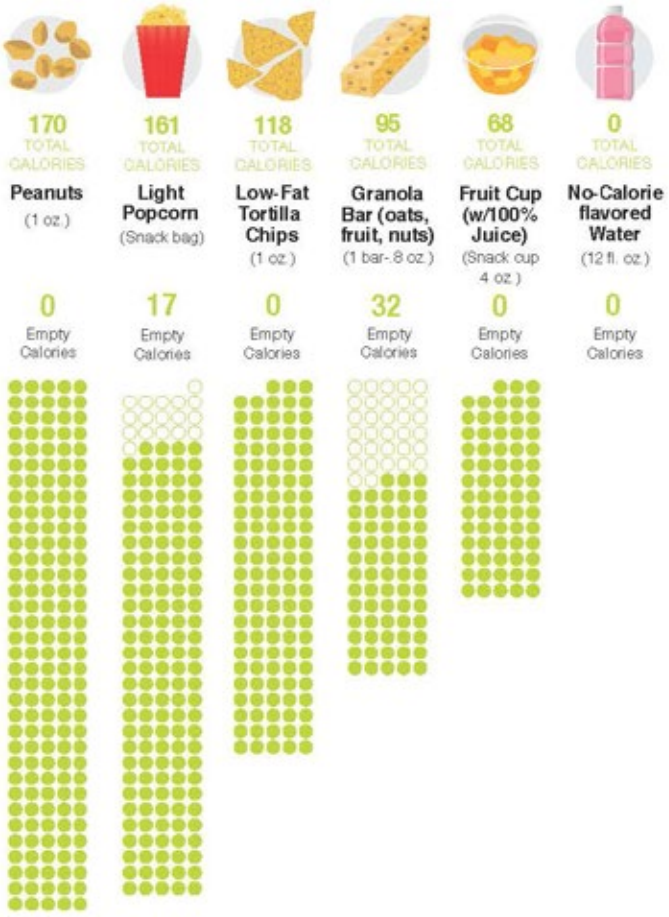
The Healthy, Hunger-Free Kids Act of 2010 requires USDA to establish nutrition standards for all foods sold in schools — beyond the federally-supported meals programs. This new rule carefully balances science-based nutrition guidelines with practical and flexible solutions to promote healthier eating on campus. The rule draws on recommendations from the Institute of Medicine, existing voluntary standards already implemented by thousands of schools around the country, and healthy food and beverage offerings already available in the marketplace.

● Equals 1 calorie ○ Shows empty calories*

Before the New Standards



After the New Standards



*Calories from food components such as added sugars and solid fats that provide little nutritional value. Empty calories are part of total calories.

Farm-to-School Grants

USDA awards up to $5 million in competitive grants annually for training, supporting operations, planning, purchasing equipment, developing school gardens, developing partnerships and implementing farm-to-school programs. USDA's recent Farm-to-School Census found that more than 4,300 of the nation's 13,133 public school districts are participating in farm-to-school programs benefiting more than 23 million students.[259]

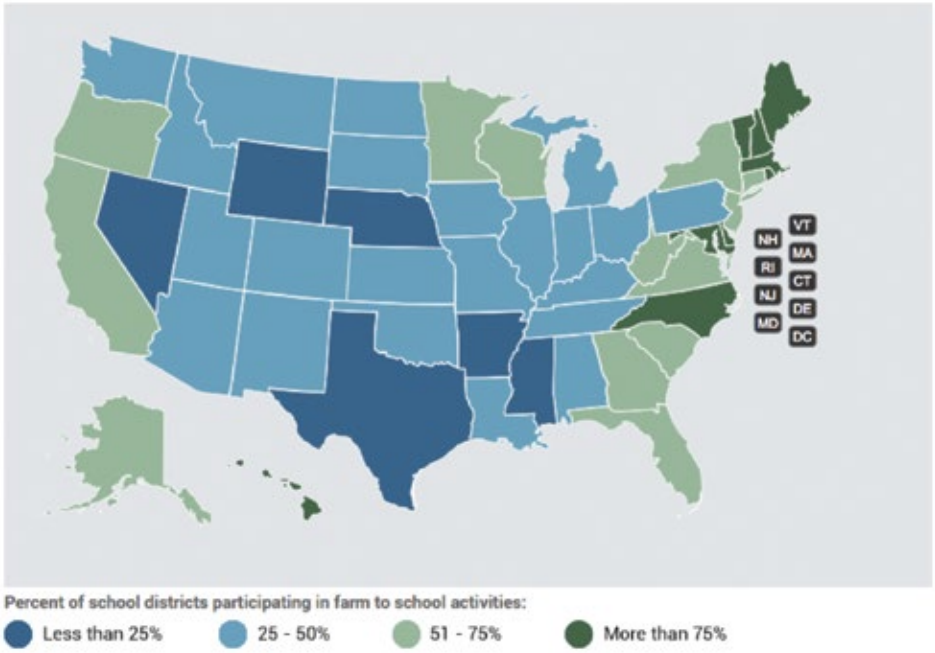
The Farm-to-School Network just released an updated summary of farm-to-school legislation proposed or enacted throughout the U.S. As of October 2014, 46 states and Washington, D.C. have proposed farm-to-school legislation and 40 states and D.C. have enacted it.

- **As of October 2014, 40 states and Washington, D.C., have enacted farm-to-school programs:** Alabama, Alaska, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Illinois, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia and Wisconsin. However, many of these programs cover only select students or schools in these states rather than all students or schools.

Farm-to-school programs have shown results in improving students' nutritional intake.[260]

A study by researchers at the University of California, Davis found that farm-to-school programs not only increase consumption of fruits and vegetables, but actually change eating habits, leading students to choose healthier options at lunch. A recent health impact assessment examining Oregon's farm-to-school reimbursement law found that the law would create and maintain jobs for Oregonians, increase student participation in the school meals program, improve household food security and strengthen connections within Oregon's food economy.[261]

Farm-to-school programs not only increase consumption of fruits and vegetables, but actually change eating habits, leading students to choose healthier options at lunch.



• USDA Summer Food Service Program

Nearly 3.2 million children participated daily in the Summer Food Service Program (SFSP) or school-sponsored summer programs in 2014, an increase of 7.3 percent from 2013.[262] Around one in seven children is eligible for free and reduced-price school meals served by these summer meal programs.

USDA's SFSP is a federally-funded, state-administered program that provides free, healthy meals to children in low-income areas when school is not in session.[263] SFSP alone provided more than 160 million meals in 2014. At its peak in July, it served 2.63 million children on an average day. Combined with the summer option of the NSLP, more than 187 million summer meals were provided, with 3.8 million children participating on an average day at the peak time. The SFSP meal pattern includes one serving of fluid milk, one serving of fruit or vegetable and one serving of grain.

According to an analysis by the Food Research and Action Center (FRAC):[264]

- Only four top-performing states and Washington, D.C. reached at least one in four of the states' low-income children in July 2014, when comparing summer nutrition program participation to regular school-year free and reduced-price lunch participation: Washington, D.C. (ratio of 59.0:100), New Mexico (37.0:100), New York (31.2:100), Connecticut (27.0:100) and Vermont (29.4:100). Six additional states reached at least one in five children with summer meals: Arkansas (23.3:100), Idaho (22.6:100), Maine (22.6:100), Maryland (21.6:100), South Carolina (20.1:100) and Indiana (20.0:100)
- Nine states fed summer meals to fewer than one in ten of the states' low-income children in July 2014. Oklahoma (6.7:100), Kansas (7.0:100) and Kentucky (7.5:100) were the three lowest-performing states.

WHY HEALTHY SCHOOL FOOD AND BEVERAGES MATTER

- A number of studies have shown that proper nutrition improves healthy growth, brain capacity, cognitive capabilities and academic performance in school-aged children.[265] Conversely, an unhealthy diet, too much food of low nutritional value and/or insufficient food decreases academic performance and limits the ability for the brain to perform properly.
- School breakfast programs can help improve attendance rates and decrease tardiness, and, among undernourished children, can improve academic performance and cognitive functioning.[266] A long-range study found that school breakfast participation is associated with significantly lower BMI among students.[267]
- Students who are hungry have been found to be more likely to have lower math scores, need to repeat a grade, be suspended from school and not get along with other children.[268]
- Students in states with strong laws restricting the sale of unhealthy snack foods and beverages in school gained less weight over a three-year period than those living in states with no such policies.[269]
- Children eat less of their lunch, consume more fat, take in fewer nutrients and gain weight when schools sell unhealthy snacks and drinks outside of meals.[270,271,272,273,274,275,276]
- Elementary schools are less likely to sell candy, ice cream, sugary drinks, cookies, cakes and other unhealthy snacks when states or school districts have policies that limit the sale of such items.[277]
- A 2012 health impact assessment found that schools serving healthier snacks and drinks generally increased their total food service revenues.[278]
- Children are more vulnerable to rapid BMI gains and food insecurity during the summer – a time when many do not have access to the good nutrition provided by the school meal programs.[279, 280, 281]

HUNGER IN SCHOOLS

In 2015, No Kid Hungry, an initiative of Share Our Strength, conducted a national survey of educators and a series of focus groups. Public school teachers report that:[282]

- Three out of four students regularly come to school hungry;
- Hunger contributes to: inability to concentrate, lack of energy or motivation, poor academic performance, tiredness, behavioral problems, and students feeling sick;
- Regular breakfasts help: students concentrate through the day, improve academic performance and general health; prevent headaches and stomachaches; and lead to better behavior;
- Current problems with the school breakfast program are: students are embarrassed to be singled out as "poor" and it is often served before families are able to get their children to school;
- Serving breakfast in the classroom was supported by 75 percent of the educators; and
- "Second-chance" breakfasts, served later in the morning, and "grab and go" carts, particularly in high schools, have been developed to ensure children have the opportunity to have breakfast.

WATER AVAILABILITY

Schools are required to provide easily accessible, clean water to students at no cost under federal law. According to a review by Bridging the Gap, more than 10 percent of middle and high schools and nearly 15 percent of elementary schools did not meet the drinking water requirements during the 2011 to 2012 school year — ranging from 57 ounces to 78 ounces depending on age and gender..[283]

Most children are not drinking recommended levels of water during the school day.[284] Children who drink more water consume less sugar and other beverages.[285] While many schools have water fountains available, students may not make use of them due to limited availability, cleanliness or time-use barriers. Availability of cups or water bottles can help encourage greater water consumption.

How Many Schools Met Federal Drinking Water Requirements, 2011-2012 School Year

	Elementary Schools	Middle Schools	High Schools
Fountains only	64.1%	61.9%	60.6%
Dispensers only	13.3%	14.9%	11.9%
Fountains and dispensers	7.5%	9.3%	16.6%
Other combinations	1.4%	1.4%	0.3%
Did not meet requirement	13.6%	12.6%	10.6%

Source: Colabianchi N, Turner L, Hood NE, Chaloupka FJ, Johnston LD. Availability of drinking water in US public school cafeterias. A BTG Research Brief. Chicago, IL: Bridging the Gap, 2014.

2. CDC'S DIVISION OF POPULATION HEALTH, SCHOOL HEALTH BRANCH PROGRAMS

Schools play a critical role in helping children develop lifelong, healthy habits and research has shown that school health programs can have a positive effect on academic performance. Each day, 132,000 schools provide a setting to 55 million students to learn about health and healthy behaviors.

CDC's **Division of Population Health, School Health Branch** works to prevent chronic disease and promote the health and well-being of children and adolescents through schools by:[286]

- Providing evidence-based guidance for schools on ways to implement policies and practices that effectively promote healthy choices and behaviors among youth around nutrition and physical activity and obesity prevention.
- Monitoring the status of student health behaviors and school health policies and practices specific to physical activity, healthy eating and obesity through CDC school-based surveillance systems.
- Providing programs and support to schools and states to better promote healthy eating and physical activity as part of a healthy school environment.
- State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Related Risk Factors and Promote School Health.

Through this multi-faceted cooperative agreement, CDC's Division of Population Health School Health Branch funds all 50 states and Washington, D.C. to implement evidence-based practices to create healthier nutrition environments in schools, comprehensive physical activity programs, and multi-component physical education policies, and 32 states receive enhanced funding to achieve greater health impact.[287] The CDC school health program supports the implementation of evidence-based school health strategies by funding state health departments, providing technical assistance, increasing the capacity of schools through professional development and training, and developing specialized tools and resources to help the work between state health and education agencies. CDC also funds non-governmental organizations to help schools and communities across the country to create environments that improve health and educational outcomes among children and adolescents.

School Health Guidelines to Promote Healthy Eating and Physical Activity

In 2011, CDC conducted a broad review and synthesized research and best practices related to promoting healthy eating and physical activity in schools and issued a set of nine guidelines and implementation strategies.[288] The guidelines (available at http://www.cdc.gov/mmwr/pdf/rr/rr6005.pdf) include:

1. Use a coordinated approach to develop, implement, and evaluate healthy eating and physical activity policies and practices.
2. Establish school environments that support healthy eating and physical activity.
3. Provide a quality school meal program and ensure that students have only appealing, healthy food and beverage choices offered outside of the school meal program.
4. Implement a comprehensive physical activity program with quality physical education as the cornerstone.
5. Implement health education that provides students with the knowledge, attitudes, skills, and experiences needed for lifelong healthy eating and physical activity.
6. Provide students with health, mental health, and social services to address healthy eating, physical activity, and related chronic disease prevention.
7. Partner with families and community members in the development and implementation of healthy eating and physical activity policies, practice and programs.
8. Provide a school employee wellness program that includes healthy eating and physical activity services for all staff members.
9. Employ qualified persons and provide professional development opportunities for physical education, health education, nutrition services and health, mental services and social services staff members, as well as staff members who can supervise recess, cafeteria time and out-of-school-time programs.

- **School Health Index: Self-Assessment and Planning Guide 2014**

CDC's 2014 School Health Index (SHI) is a key assessment tool that helps guide school-based obesity prevention and health promotion efforts.[289] CDC updated its SHI and worked with the Alliance for a Healthier Generation to offer a unified assessment tool, making it easier for schools to implement policies and practices that can help students stay healthy and ready to learn. CDC continues to provide trainings, professional development, and technical assistance to schools to use the 2014 SHI and implement action plans.

LOCAL SCHOOL WELLNESS POLICIES

The Child Nutrition Act of 2004 required every school district participating in the National School Breakfast and Lunch Programs to develop and implement a local wellness plan — and the Healthy, Hunger-Free Kids Act of 2010 strengthened the requirements. School district plans must include:

- Goals for nutrition promotion and education, physical activity and other school-based activities that promote students wellness.
- Nutrition guidelines for all foods available on each school campus during the school day to promote student health and reduce childhood obesity.
- Participation by parents, students, representatives of the school food authority, teachers of physical education, school health professionals, the school board, school administrators and the general public to participate in the development, implementation and update of the wellness policy.
- Informing and updating the public (including parents, students and others in the community) about the content and implementation of the local school wellness policy.
- Periodically measuring the extent to which schools are in compliance with the local wellness policy, the extent to which the local education agency's local wellness policy compares to model local school wellness policies and the progress made in attaining the goals of the local wellness policy, and making this assessment available to the public.

CDC and Bridging the Gap developed a series of briefs highlighting opportunities to support wellness policies through evidence-based strategies. These briefs provide an assessment of policies across school districts nationwide during the 2012 to 2013 school year, related to seven wellness policy components. They also highlight areas of opportunity for state agencies, school districts, and schools to strengthen wellness policy components.

CDC's Putting Local School Wellness Policies Into Action: Stories from School Districts and Schools also provides a resource for addressing challenges and barriers to implementing local wellness plans with school and district settings (available at: http://www.cdc.gov/healthyyouth/npao/pdf/SchoolWellnessInAction.pdf and briefs available at: http://www.cdc.gov/healthyyouth/npao/wellness.htm)

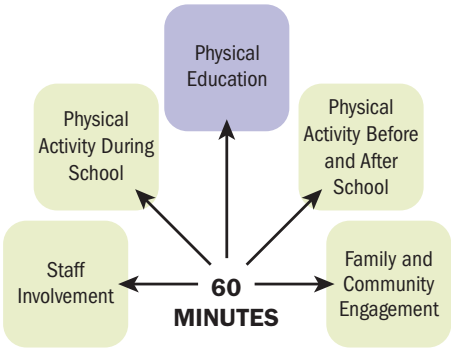
In 2014, as part of a proposed rule to update local school wellness policy standards, USDA proposed that wellness policies require that schools only allow marketing of foods and beverages that meet the Smart Snacks in Schools nutrition standards set by USDA.

• Comprehensive School Physical Activity Program (CSPAP)

Only one-quarter of children ages 6 to 15 meet the national recommendations of one hour of moderate-to-vigorous physical activity every day.[290] The United States earned a D- for overall physical activity in the 2014 U.S. report card on physical activity for children and youth by the National Physical Activity Plan Alliance and the American College of Sports Medicine.[291] In 2011, around 20 percent of Black and 15.9 percent of Latino youth did not participate in at least one hour of daily physical activity during the prior week, compared with 11 percent of White youth.[292]

CDC has collaborated with SHAPE America (Society of Health and Physical Educators) and other partners to develop the Comprehensive School Physical Activity Program, a multi-component approach by which districts and schools provide opportunities for children and teens to achieve the nationally-recommended goal of at least 60 minutes of physical activity per day, most of which should be moderate or vigorous in intensity.[293, 294, 295]

CSPAP coordinates physical education, physical activity before, during, and after school, staff involvement, and family and community engagement. Physical education provides students with the opportunity to learn knowledge and skills to maintain a physically active lifestyle. Physical activity before, during, and after school may include interscholastic sports, intermural sports and physical activity clubs, classroom physical activity breaks, before school access to physical activity opportunities or facilities, recess for elementary school students, walking and biking to school, sharing facilities with community physical activity organizations, and opening physical activity facilities to families outside of school hours.[296] CDC also developed the National Framework for Physical Activity and Physical Education (available at: http://www.cdc.gov/healthyyouth/physicalactivity/pdf/National_Framework_Physical_Activity_and_Physical_Education_Resources_Support_CSPAP_508_tagged.pdf), which provides a comprehensive overview of resources, policy and assessment tools, trainings, initiatives, and data sources to help practitioners implement the five components of a CSPAP.



COMPREHENSIVE SCHOOL PHYSICAL ACTIVITY PROGRAM

Source: CDC

A range of research shows that regular physical activity has physical and mental benefits for children:

- For youth, regular physical activity participation: helps maintain a healthy weight; builds healthy bones and muscles; decreases the likelihood of obesity and disease risk factors such as high blood pressure, high cholesterol and type 2 diabetes; reduces anxiety and depression; and promotes positive mental health.[297, 298, 299]
- According to a CDC review of 50 studies on academic performance and physical activity, there is substantial evidence that physical activity can help improve academic achievement, including grades and standardized test scores; and physical activity can have an impact on cognitive skills, attitudes and academic behavior (including enhanced concentration, attention and improved classroom behavior).[300]
- Regular physical activity also is associated with improved academic performance, enhanced academic focus, and better behavior in the classroom.[301]
- Well-structured physical education programs can result in children who are more active.[302] In addition, providing short activity breaks during the school day can increase physical activity in students and improve some measures of health, such as muscle strength, endurance and flexibility.[303]
- Nationwide, millions of children and adolescents participate in after-school programs. Integrating physical activity into the daily routine of such programs can lead to increased physical activity among youths.[304]
- When young people have access to school recreational facilities outside of school hours, they tend to be more active.[305]

School Health Profiles

Since 1996, CDC has collaborated with state and local health departments and schools to measure school health policies and practices at middle and high schools and releases a bi-annual set of profiles.[306] It features state, large city, territorial and tribal specific information related to hundreds of health issues; including information related to nutrition, physical education and activity, school health and wellbeing. Examples from the 2012 profiles include:

Percentage of Secondary Schools That Required Physical Education in Any of Grades 6 to 12 and the Percentage That Offered Specific Physical Activity Opportunities for Students.

	Required physical education (any amount)	Offered intermural sports programs or physical activity clubs (open to all students)	Offered physical activity breaks outside of physical eduction during the school day	Offered interscholastic clubs	Offered all 4 physical activity opportunities
National Median	97.7%	62.8%	41.5%	86.1%	23.7

Percentage of Secondary Schools that Prohibited Advertisements for Candy, Fast-food Restaurants or Soft Drinks

	In the school building	On school grounds	On school buses or other vehicles used to transport students	In school publications
National Median	62.9%	55.3%	69.9%	58.3%

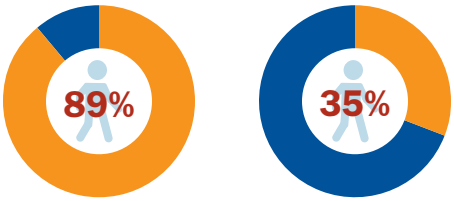
3. Carol M. White Physical Education Program

The Carol M. White Physical Education Program, the only federal funding stream for physical education programs, provides federal grants to school districts and community organizations that implement comprehensive physical fitness and nutrition programs for students designed to help reach state physical education standards. Authorized by the Elementary and Secondary Education Act (ESEA), $44 million was appropriated for PEP in Fiscal Year 2015.[307] While all 50 states have enacted physical education standards or requirements, the scope of these laws and the degree to which they are funded and enforced varies significantly. Currently, no more than 5 percent of school districts nationwide have wellness policies that require the recommended amount of daily physical education,[308] and children at highest risk for obesity are the least likely to attend schools that offer recess.[309]

Reauthorization of ESEA is under consideration in 2015. The bill was last reauthorized in 2002 for five years; since 2007, Congress has enacted temporary extensions of the current law. In the interim, proposals have included increasing resources for PEP, providing funding for schools to hire additional physical education teachers and requiring school boards to collect and publish data on the extent to which they have made progress in meeting national physical education and physical activity standards.

Currently, no more than 5 percent of school districts nationwide have wellness policies that require the recommended amount of daily physical education

Percent of K–8th grade students who lived within one mile of school who usually walked or biked to school



4. Safe Routes to School (SRTS)

Safe Routes to Schools was created by the Department of Transportation (DOT) to promote walking and biking to school. The program supports improving sidewalks, bike paths and safe street crossings; reducing speeds in schools zones and neighborhoods; addressing distracted driving; and educating people about pedestrian and bike safety. The program includes a range of partners, such as educators, parents, students, government officials, city planners, business and community leaders, health officials and members of the community. Early studies of the program have shown a positive effect on physically active travel among children and a reduction in crashes involving pedestrians.[310, 311, 312]

While every state currently participates in some form of SRTS activities, implementation and funding support varies. SRTS programs operate in all 50 states and Washington, D.C., benefiting close to 15,000 schools. Every state and Washington, D.C., has an SRTS coordinator.

In many states, the program is targeted for traditionally underserved school communities. As of 2013, 69 percent of schools receiving SRTS awards are classified as Title I schools, or as having a high percentage of low-income families. Forty-seven percent of SRTS schools enroll students who are eligible to receive free and reduced-price meals.[313]

In 1969, 89 percent of kindergarten through eighth grade students who lived within one mile of school usually walked or biked to school. By 2009, only 35 percent did so even once a week.[314] An analysis by Bridging the Gap found that laws requiring sidewalks, crossing guards and traffic safety measures increase the number of children walking or biking to school, and that certain laws, such as busing requirements for particularly short distances, decrease biking and walking rates.[315]

5. Presidential Youth Fitness Program and *Let's Move!* Active Schools

There are a number of additional federal programs aimed at helping schools and afterschool programs support students' physical fitness. Two of these initiatives include:

• Presidential Youth Fitness Program

The Presidential Youth Fitness Program provides a model for fitness education that helps physical educators assess, track and recognize youth fitness and physical activity. The program provides resources and tools for physical educators to improve their current physical education process, which includes:

- FITNESSGRAM® health-related fitness assessment;
- Instructional strategies to promote student physical activity and fitness;
- Communication tools to help physical educators increase awareness about their work in the classroom; and
- Options to recognize fitness and physical activity achievements.[316]

Hundreds of schools nationwide have received funding to help bring Presidential Youth Fitness Program resources to their schools.

• *Let's Move!* Active Schools

Let's Move! Active Schools is a program working to help implement Comprehensive School Physical Activity Programs in schools. The program helps teachers, principals, administrators and parents create environments that enable all students get and stay active. Schools that sign up for the program are guided through a process that helps them build a team, make a plan and access free in-person trainings, program materials and activation grants, and direct, personal assistance from certified professionals. Once schools achieve their fitness goals they are publicly recognized and celebrated for their achievement.[317]

6. Expanded Coverage for Healthcare in School: Centers for Medicare and Medicaid Services "Free Care" Rule Clarification

In December 2014, CMS issued a clarification of a longstanding rule that permits schools to be reimbursed for health services provided to students who are covered by Medicaid.[318] This updated interpretation could have a significant impact in the delivery of health services through schools — including adding the ability to provide increased obesity screening, ongoing obesity-related counseling and other related forms of services — as covered under Medicaid.

GREEN RIBBON SCHOOLS

The Department of Education's Green Ribbon Schools recognition award initiative includes improving the health and wellness of students and staff, including nutrition and fitness, as one of its top three measures.[319] The award is a tool to encourage state education agencies, stakeholders and higher education officials to consider matters of facilities, health and environment comprehensively and in coordination with state health, environment and energy agency counterparts.

Forty-eight schools from around the country were named Green Ribbon Schools in 2014.[320]

ADDITIONAL STATE SCHOOL-BASED PHYSICAL ACTIVITY AND HEALTH SCREENING LAWS

Physical Education and Activity

- Every state has some physical education requirements for students. However, these requirements are often limited or not enforced, and many programs are inadequate.[321]

Many states have started enacting laws requiring schools to provide a certain number of minutes and/or a specified difficulty level of physical activity. Seventeen states specifically require schools to provide physical activity or recess during the school day: Arkansas, Arizona, Colorado, Hawaii, Iowa, Mississippi, Missouri, North Carolina, North Dakota, Oklahoma, Rhode Island, South Carolina, Tennessee, Texas, Utah, Virginia and Wisconsin.

Shared-use Agreements

- Twenty-eight states have laws supporting shared use of facilities, including: Alabama, Arizona, Arkansas, California, Delaware, Georgia, Hawaii, Idaho, Indiana, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, North Carolina, North Dakota, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington and Wisconsin.

Many communities do not have enough safe and accessible places for people to be physically active, indoors and out. Schools often have gymnasiums, playgrounds, tracks and fields, but they are not accessible to the community. Many schools keep their facilities closed after school hours for fear of liability in the event of an injury, vandalism and the cost of maintenance and security. Some states and communities have laws encouraging or requiring schools to make facilities available for use by the community through shared- or joint-use agreements.[322] These agreements allow school districts, local governments and community-based organizations to overcome common concerns, costs and responsibilities that come along with opening school property to the public after hours.

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Health Assessment and Health Education

Physical activity, nutrition and other factors impact the overall health of students. A number of states have instituted legislation to conduct health assessments to help parents, schools and communities understand the health of children and teens, and nearly every state requires some form of health education classes for students.

Health Assessments

- Twenty-one states have legislation that requires BMI screening or weight-related assessments other than BMI.
  - States with BMI screening requirements: Arkansas, California*, Florida, Illinois, Maine, Missouri, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Tennessee, Vermont and West Virginia.
  - States with other weight-related screening requirements: Delaware, Iowa, Louisiana, Massachusetts, Nevada, South Carolina and Texas.

  * As of July 2010, statewide distribution of diabetes risk information to schoolchildren, California Education Code § 49452.7, replaced individual BMI reporting, California Education Code § 49452.6.

BMI and other health assessments are intended to help schools and communities assess rates of childhood obesity, educate parents and students and serve as a means to evaluate obesity prevention and control programs in that school and community. The American Academy of Pediatrics recommends that BMI be calculated and plotted annually for all youth as part of normal health supervision within the child's medical home, and the Institute of Medicine recommends annual school-based BMI screenings.[323, 324] CDC has identified safeguards for schools who conduct BMI screenings to ensure they focus on promoting health and positive wellness for children.[325] CDC Safeguards for BMI measurement programs are available at: http://www.cdc.gov/healthyyouth/obesity/BMI/BMI_measurement_schools.htm

Health Education

- Only two states — Colorado and Texas — do not require schools to provide health education.

Health education curricula often include community health, consumer health, environmental health, family life, mental and emotional health, injury prevention and safety, nutrition, personal health, prevention and control of disease and substance use and abuse. The goal of school health education is to prevent premature deaths and disabilities by improving the health literacy of students.[326]

According to a 2012 CDC study, health education standards and curricula vary greatly from school to school.[327]

- The percentage of states that require districts or schools to follow national or state health education standards increased from 60.8 percent in 2000 to over 90 percent in 2012; the percentage of districts that required this of their schools increased from 68.8 percent to 82.4 percent.
- Just over 88 percent of states and 39.1 percent of districts required each school to have a school health education coordinator.

COLLEGES AND HEALTHY WEIGHT

A number of colleges and universities have Healthy Campus Initiatives and are undertaking efforts to promote healthier culture, including by promoting better nutrition and increased activity.

For instance, the University of New Hampshire (UNH) has developed a Healthy UNH initiative in alignment with the National Prevention Strategy that includes a set of action items to promote active living and nutrition, such as:[328]

- Help promote Health Services' Pedometer Program for students;
- Develop new layers to the Healthy UNH Fitness Map to include schedules of on-campus athletic facilities and walking distances of campus paths;
- Help promote the programs and services that are available to employees, such as the outdoor pool, indoor pool and employee fitness center;
- Alter dining hall station format so that each station in each dining hall at every meal features healthy items;
- Extend nutritional education to faculty and staff, who have meal plans, through consultation by Dining Services' Registered Dietitian;
- Help recruit employees to participate in the Employee Fitness Program;
- Integrate Cooperative Extension work with current faculty research around children and fitness;
- Eliminate high fructose corn syrups and trans fats from recipes offered in dining halls; and
- Provide more information about portion sizing.

C. COMMUNITIES AND HEALTHY WEIGHT

Many Americans only have doctor's appointments once or twice a year. The rest of the year they are often on their own to try to find ways to follow their doctor's advice in their daily lives. A growing body of evidence shows that Americans cannot achieve health goals—including eating healthier, increasing physical activity and managing obesity and related health problems—without support in their neighborhoods, workplaces and schools.[329]

"Health professionals are adept at treating a vast range of diseases, injuries and other medical conditions. But their training and healthcare delivery incentives do not emphasize addressing the root causes of health problems that occur outside of the healthcare system — factors such as education, access to healthy food, job opportunities, safe housing, environment and toxic stress — that fundamentally shape how long or well people live," according to a report by the RWJF Commission to Build a Healthier America.[330]

There are a range of nontraditional policies and programs — initiatives and partnerships across sectors that recognize and incorporate ways to improve health as part of their overall goals — that have a major impact on the health of Americans.

1. **Let's Move!**
2. **Centers for Disease Control and Prevention — Winnable Battle**
3. **Healthy Communities — Access to Healthy Food and Active Living Efforts**

1. *LET'S MOVE!*

In 2010, First Lady Michelle Obama launched *Let's Move!* to bring together a diverse group of stakeholders — including government agencies, food and beverage companies, pediatricians and other healthcare providers, parents and children — to promote improved nutrition and increased physical activity.[331] Some highlighted efforts include *Let's Move!* Cities, Towns and Counties; Chefs Move to Schools; *Let's Move!* Faith and Communities; *Let's Move Outside!; Let's Move!* Museums and Gardens; *Let's Move!* in Indian Country; *Let's Move!* Child Care; and *Let's Move!* Salad Bars 2 Schools.[332]

2. Centers for Disease Control and Prevention — Winnable Battle

More than half of Americans live with one or more chronic diseases and they are the biggest healthcare cost driver in the country. Research by CDC has shown that a majority of these illnesses could be prevented through lifestyle and environmental changes. Much of the burden of chronic disease is attributable to a short list of key risk factors, including obesity, high blood pressure, physical inactivity, diets low in fruits and vegetables and diets high in saturated fats.[333]

In 2010, CDC Director Thomas Frieden, MD, selected nutrition, physical activity and obesity as one of six priority winnable battles. CDC is the primary health agency that focuses on disease prevention and health promotion. The focus of this winnable battle strategy is to "support all Americans in achieving optimal health by making nutritious foods and physical activity easy, attractive and affordable."[334] Key action steps include:

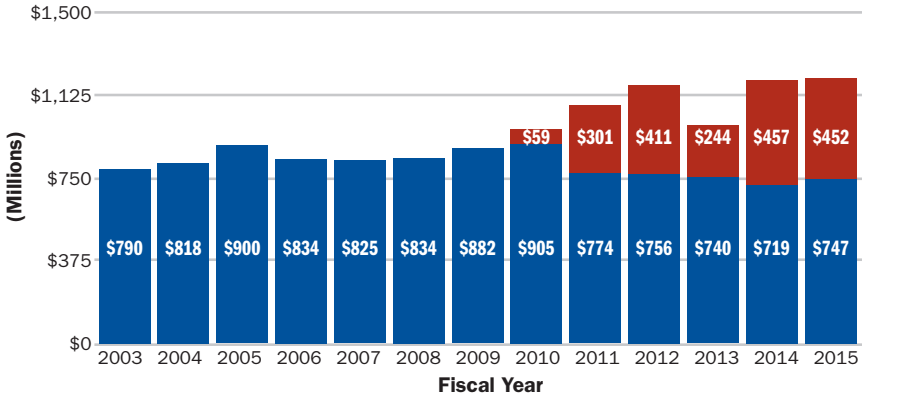
- Improve the food environments of child care centers, schools, hospitals, workplaces and food retail outlets;
- Reduce consumption of calories from added sugars;
- Improve the environments/policies of child care centers, schools, workplaces and communities to support increased physical activity;
- Improve the quality of breastfeeding-related maternity care practices; and
- Eliminate artificial trans fat in the food supply.

CDC supports a range of programs that promote making healthy choices easier choices within communities.

The National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) — including the Division of Nutrition, Physical Activity and Obesity — is the lead center working on obesity prevention and control, and it works in partnership with the School Health Branch of the Division of Population Health, Division of Heart Disease and Stroke, Division of Diabetes Translation and Division of Community Health. They work to prevent and reduce chronic diseases and their risk factors through: 1) epidemiology and surveillance; 2) environmental approaches like policies and changes in communities that help make the healthy choice the easy choice; 3) healthcare system interventions that help doctors diagnose chronic diseases earlier and manage them better; and 4) community programs linked to clinical services — that help improve health both inside and outside the doctor's office by providing support for people in their daily lives.[335] In addition, the National Center for Environmental Health (NCEH) also studies the relationship between the built environment (such as community planning and transportation) and health issues like obesity.

Federal funding for chronic disease prevention reached an all-time high of $1.16 billion in FY 2012 (inflation-adjusted), but then experienced a 17 percent cut in FY 2013. Funding was largely restored in FY 2014 and maintained in FY 2015 at a total of $1.2 billion. The overall limited nature of funding for prevention has meant decreased and inconsistent support for the various categorical disease-prevention and health-promotion programs.

Chronic Disease Funding — Fiscal Year 2003 to Fiscal Year 2015*



*FY 2010-2015 values are supplemented by the Prevention and Public Health Fund

A large majority of NCCDPHP's budget goes to state and community grant programs — including for prevention of obesity and its risk factors. However, not every state receives federal support for all programs often due to limited funds. Some key obesity-related grants include:

- **State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Related Risk Factors and Promote School Health ("1305" awards)**
  - Provides $33 million to enhance key chronic disease prevention programs in states.
  - Supports cross-cutting approaches to prevent risk factors that contribute to chronic diseases.
  - Created a National Center for Chronic Disease Prevention and Promotion initiative across four divisions — Division of Heart Diseases and Stroke Prevention; Division of Diabetes Translation; Division of Nutrition, Physical Activity and Obesity; and Division of Population Health — aimed at efficiently implementing cross-cutting strategies that address risk factors for a range of chronic diseases, increasing coordination to improve the impact of preventing of obesity, diabetes, heart disease and other related conditions.
- **State and Local Public Health Actions to Prevent Obesity, Diabetes, and Heart Disease and Stroke (1422 awards)**
  - Four-year project to create community strategies to promote health and integrate with healthcare systems.
  - $69.5 million given to 17 states and four large cities.
- **Partnership to Improve Community Health (PICH)**
  - A three-year initiative supporting evidence-based strategies to address leading risk factors for major causes of death and disability — such as poor nutrition and physical inactivity.
  - In 2014, $49.3 million was awarded to 39 communities ($30.9 million to 13 large cities and urban counties; $14.2 million to 20 small cities and counties; and $4.2 million to six American Indian tribes).
- **Racial and Ethnic Approaches to Community Health (REACH)**
  - $50.05 million supports 39 grants for culturally-tailored, evidence-based strategies to reduce health inequities at the community level.
- **Million Hearts Campaign**
  - $4 million supports a national initiative aimed at preventing 1 million heart attacks and strokes by 2017.
- **Good Health and Wellness in Indian Country**
  - $11 million supports 22 grants to prevent and manage heart disease, diabetes and associated risk factors in American Indian tribes and Alaskan Native villages.
- **Preventive Health and Health Services Block Grant**
  - Provides every state with flexible support to address what they determine to be their most important health needs.
  - Block grant funds have doubled from $80 million in fiscal year 2013 to $160 million in fiscal years 2014 and 2015 under the Prevention and Public Health Fund.

DIVISION OF NUTRITION, PHYSICAL ACTIVITY AND OBESITY

CDC's Division of Nutrition, Physical Activity and Obesity focuses on the obesity epidemic, improving nutrition and increasing physical activity. DNPAO tracks and analyzes obesity, nutrition and physical activity trends at national, state and local levels, and studies and promotes best practices for effective strategies and programs.

In FY 2013 and FY 2014, DNPAO was able to provide funding to all 50 states, including $16.7 million for obesity prevention. Currently, CDC does not have sufficient or sustained funds to maintain obesity prevention activities or to build upon or scale effective programs.

In addition, DNPAO works on a series of obesity prevention priority initiatives, including breastfeeding, early child care education, and a "high-risk" program that provides $5 million in competitive grants to communities where obesity rates are above 40 percent.

As priority initiatives have been created, DNPAO's total budget has only grown slightly from $47.5 million in FY 2013 to $49.5 million in FY 2014. This has functionally resulted in a cut of 21 percent in funding to support its core activities.

Division of Nutrition, Physical Activity and Obesity FY 2013 to FY 2014 Funding

	FY 2013	FY 2014
DNPAO Total	$47.5 million	$52 million
· Breastfeeding initiative	$2.5 million	$8 million
· Early child care education (ECE)	$4 million	$4 million
· High-risk obesity	n/a	$5 million
Total unrestricted for core activities	$41 million	$35 million

**15.8 percent decrease in unrestricted funds from FY 2013 to FY 2014*

NATIONAL PHYSICAL ACTIVITY PLAN

HHS, CDC and USDA partnered with more than 20 public and private organizations representing eight different sectors — business and industry; education; healthcare; mass media; parks, recreation, fitness and sports; public health; transportation, land use and community design; and volunteer and non-profit — to create the first National Physical Activity Plan.[336] The plan was released in 2010 and is a living document, where each of the sectors develops evidence-based strategies and tactics to promote physical activity.

3. HEALTHY COMMUNITIES — ACCESS TO HEALTHY FOOD AND ACTIVE LIVING EFFORTS

A number of policies and programs have been developed across federal agencies to help improve the overall health of communities — including through transportation, housing and other areas that can make it easier for people to access healthy foods and safe places to be physically active.

Built environment policies can have a significant impact on health:

- According to the National Academy of Sciences (NAS), a healthy built environment, which includes having safe, accessible places to walk, bike or engage in other physical activity, "can facilitate… physical activity. The built environment can be structured in ways that give people more…opportunities and choices to be physically active."[337]

- Residents of walkable communities are twice as likely to meet physical activity guidelines as those who do not live in walkable neighborhoods.[338]
- Children in neighborhoods that lack access to parks, playgrounds and recreation centers have a 20 percent to 45 percent greater risk of becoming overweight.[339,340, 341] 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.[342]
- National and local community studies show that access to public parks, public pools and green space is much lower in neighborhoods largely occupied by racial and ethnic minorities, and are related to higher obesity and lower physical activity rates.[343,344] For example, only one-third of Latinos live within walking distance of a park compared with almost half of all Whites.[345]

Federal, state and local transportation policy impacts how all Americans move daily, and has the potential to provide more opportunities for Americans to walk, bike and be more physically active. Research has shown that children and families are more active when they live in neighborhoods that have sidewalks, parks, bicycle lanes and safe streets.[346]

• Complete Streets and Transportation Alternatives Program

Department of Transportation policies and programs can have a major impact on how active Americans are. Community planning of where and how roads, public transportation, walking, and biking projects can either promote or deter physical activity.

DOT has issued a Mayors' Challenge to promote Complete Streets approaches across the country. According to the challenge:

"A Complete Streets policy incorporates safe and convenient walking and bicycling facilities into transportation projects; improves conditions and opportunities for walking, and bicycling; integrates walking and bicycling into transportation systems; and provide safe and convenient facilities for these modes.

A complete streets approach changes the way every day transportation decisions are made; changes design guidelines; educates and trains everyone on the new approach; and uses new measures of success. The ultimate goal will be that pedestrians, bicyclists, motorists and transit riders of all ages and abilities will be able to safely, conveniently and easily use roads, sidewalks, bike paths, transit and rails to get to their destination."

Across the country, more than 665 regional and local communities have adopted Complete Streets policies, including 30 states, Washington, D.C. and Puerto Rico.[347]

DOT's **Transportation Alternatives Program** also provides grants to states and localities to help support walking and biking projects. The Safe Routes to Schools, Recreational Trails and Transportation Enhancement Programs were incorporated into this initiative in 2012.

• Sustainable Communities

DOT, the Department of Housing and Urban Development (HUD) and the Environmental Protection Agency (EPA) partner to support the Sustainable Communities initiative, which works to improve access to affordable housing, increase transportation options, and lower transportation costs while protecting the environment.

Sustainable Communities supports active living and food availability efforts.

- One-third of the 143 HUD Sustainable Communities Regional Planning and Community Challenge planning grantees have engaged partners from the health and medical sectors as they develop local and regional plans for their communities' futures.[348] They have collectively engaged more than 70 such partners as they incorporate issues, such as active living, fresh food access, and health outcome performance measurement into their integrated housing, transportation, and economic development plans.

For example, Phoenix's "Reinvent PHX" initiative includes a collaborative project with the city, Arizona State University, St. Luke's Health Initiatives and local organizations to support development of the city's light rail system. Projected benefits include increased access to nutritious foods, opportunities to incorporate walking and biking into everyday life and urban design features to increase public safety.

• USDA Local Food Places

Local Food, Local Places is a federal initiative that provides technical support and expertise to local, rural communities to develop comprehensive strategies and strengthen local food systems and economies.[349] Six federal agency partners — USDA, EPA, DOT, CDC, Appalachian Protection Agency and Delta Regional Authority — selected 26 regions in 14 states — Alabama, Arizona, Arkansas, California, Kentucky, Louisiana, Maine, Mississippi, Missouri, New York, North Carolina, Oklahoma, Ohio and Pennsylvania — to develop specific projects and implement action plans to promote local foods and businesses, create permanent grocery stores, and revitalize communities and underused land.[350] Communities can diversify their local economies, while building sustainable communities, expanding accessibility to healthy foods, while making their population healthier.

• National Parks

The National Park Service has formal partnership agreements in place with healthcare or public health organizations at 41 park units, serving **64 million visitors per year**.[351]

National Parks provide places for people to be physically active in safe, outdoor settings. In 2013, the National Park Service launched the *Healthy Parks Healthy People*, a public-private initiative to provide additional healthy opportunities for park visitors. For instance, in partnership with the American Heart Association, Gateway National Recreation Area in New York City — which had more than six million visitors in 2013 — trained youth ambassadors to welcome city residents and introduce the many outdoor activities available. In 2015, the Every Kid in a Park initiative provided all fourth-graders with a pass for a free year of family visits to National Parks as part of the centennial anniversary of the park system.[352]

• Bureau of Indian Affairs

The Bureau of Indian Affairs (BIA) has developed a number of initiatives to help promote healthy nutrition, increase physical activity, and improve overall health outcomes among American Indian/Alaska Natives. Among these efforts, BIA's Families and Children's Education (FACE) initiative has partnered with HHS and USDA to develop comprehensive approaches to address wellness in the schools and communities, including strategies to reduce obesity rates and improve the overall health of Indian youth and their parents.[353]

D. NUTRITION — ASSISTANCE AND EDUCATION FOR FAMILIES

Many of the foods and beverages that Americans purchase and consume do not meet dietary guideline recommendations for maintaining a healthy weight or proper nutrition. Healthier foods (such as fruits and vegetables, low and non-fat dairy, lean meats and whole grains) are often more expensive, while foods of lower nutritional value (such as products high in refined grains, added sugars and fats) are often cheaper, more easily mass produced, and more widely available.[355, 356, 357] Many lower nutrition foods are high in calories and are more likely to be overconsumed.[358]

Low-income families have even less access to healthy, affordable foods — both due to cost and logistics. So while the typical American family spends $50 per person per week on food, low-income families spend $37.50 per person per week and spend a relative higher proportion of their income on food.[359]

According to USDA and CDC, Americans eat more than the daily recommendations of total calories, sodium, saturated fats, refined grains and added sugars, while consuming too few whole grains, fruits, vegetables, dairy, seafood and oils.[360]

- **Calories:** On average, Americans consume nearly 460 more calories a day than in 1970 (2,568 calories in 2010 compared to 2,109 in 1970).[361]
- **Portion distortion:** Portions sizes have grown significantlyover time — with restaurant portion sizes doubling or tripling over the past 20 years.[362, 363]
- **Sugar:** Americans consume nearly three times the recommended amount of sugar; added sugar consumption has increased by 14 percent since 1970.[364, 365]

PORTION DISTORTION

20 Years Ago	Today
Bagel	
 140 calories 3 inches (diam.)	 350 calories 6 inches (diam.)
Coffee	
 With whole milk & sugar 45 calories 8 ounces	 Mocha, steamed whole milk & mocha syrup 350 calories 16 ounces
Muffin	
 210 calories 1.5 ounces	 500 calories 4 ounces
Cheeseburger	
 333 calories	 590 calories
Pizza	
 500 calories	 850 calories
Popcorn	
 270 calories 5 cups	 630 calories 11 cups

A typical American family spends $50 per person per week on food.[354]

- **Sugar-sweetened beverages (SSBs):** Five percent of the U.S. population consumes at least 567 calories from SSBs on any given day — equivalent to more than four 12-oz cans of soda. SSBs make up nearly 11 percent of children's and 12 percent of young adult's (20 to 24 year olds) total daily calories.[366] While the most common consumed SSB is soda, there is a rise in nontraditional SSBs consumption — fruit drinks, sweetened bottle water, sports drinks and energy drinks — and adolescent sports drink and energy drink consumption has tripled, from 4 percent to 12 percent. [367]
- **Dietary Fat:** Americans consume an average of 640 calories worth of added fats per person per day.[368]
- **Fruits and Vegetables:** 37.7 percent of adults and 36 percent of adolescents eat fruit less than once per day and 22.6 percent and 37.7 percent of adolescents eat vegetables less than once time a day.[369]
- **Restaurants, fast food and prepared foods:** Americans consume around one-third of their calories — and spend nearly half (48 percent) of their food budget ($631.8 billion annually) — eating out.[370, 371] Food eaten outside the home often can be higher in fat and sodium. Consumers routinely underestimate calories and fat when eating out, and children eat nearly double the number of calories when they eat out versus eating at home.[372, 373, 374, 375, 376]

In the second half of the twentieth century, much of the nation's nutrition policy was focused on alleviating hunger — providing direct food assistance — recognizing that basic nutrition is inherently related to health, productivity, national security and vitality.

Programs, such as the Supplemental Nutrition Assistance Program; the Special Supplemental Nutrition Program for Women, Infants, and Children; and the School Breakfast and Lunch Programs, were developed to help tens of millions of families ensure access to nutritious food. These federal nutrition programs help improve the quality of nutrition and reduce food insecurity among participants — which helps promote maintaining a healthy weight, limiting hunger, and reducing obesity.

Over time, there have been a number of efforts to work within these programs — to develop complementary efforts — to help promote and provide healthier nutrition and options. This has become an increasing priority in the past 10 to 15 years, responding to the rise in obesity and the corresponding understanding that healthier foods can be more expensive and less available to low-income families.

Some key government efforts to help families afford basic nutrition needs and help inform them about ways to make healthy choices about food and drinks include:

1. **Supplemental Nutrition Assistance Program and SNAP-Education;**
2. **Special Supplemental Nutrition Program for Women, Infants and Children;**
3. **Marketplace Incentives and Healthy Food Financing Initiatives; and**
4. **Education through the Dietary Guidelines for Americans, Food and Menu Labeling and Marketing Standards**

1. SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM: 50TH ANNIVERSARY

The Supplemental Nutrition Assistance Program helped more than 46 million Americans — around 15 percent of the nation — afford adequate, nutritious food in 2014.[377, 378, 379] In 2013, nearly 70 percent of recipients were in families with children, and more than 25 percent were seniors or disabled.

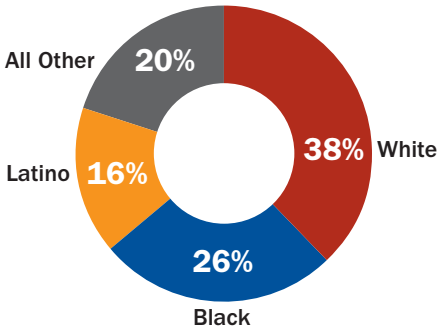
SNAP is the largest federal food assistance program, accounting for more than 70 percent of all federal nutrition assistance. More than 90 percent of SNAP benefits go to households living below the poverty line, and 57 percent of the benefits go to households that are in deep poverty — below half of the poverty line. Still, roughly one in five people who are eligible for SNAP are not enrolled in the program. In 2013, 38 percent of SNAP participants were White, 26 percent were Black and 16 percent were Latino families.[380]

SNAP was signed into law in 1964 as an anti-hunger program to provide nutrition assistance to low-income children and adults. The federal government funds the program benefits and splits the administrative costs of operating the program with states.

In 1981, nutrition education, known now as SNAP-Ed, was added as a matching grant program. Funding for SNAP-Ed was $400 million in FY 2014, and every state provides SNAP-Ed to its participants.

In FY 2014, federal funding for SNAP was $76 billion, with more than 90 percent going directly to benefits, 5 percent going to state administration and other funds supporting related nutrition assistance programs.[381] SNAP spending decreased by 8 percent between FY 2013 and FY 2014, due to a decrease in participants and lower average benefits (which decreased after short-term, recession-related increases expired).

Percent of SNAP Participants by Race and Ethnicity



According to Moody's Analytics, every $1 increase in SNAP benefits generates about $1.70 in economic activity.[382] The Congressional Budget Office (CBO) has found that SNAP is one of the most effective programs for increasing economic activity and employment per budget dollar spent because the program stimulates job growth and creates jobs.

SNAP helps increase food security and access to healthy nutrition for millions of low-income Americans.[383]

- SNAP helped lift around 4.8 million people out of poverty in 2013, including about 2.1 million children, based on an analysis by the Center on Budget and Policy Priorities (CBPP) using the Supplemental Poverty Measure.[384] It also lifted 1.3 million children out of deep poverty (50 percent of the poverty line).
- Counting SNAP benefits as income reduced the number of extremely poor households (families living on less than $2 a day) in 2011 by nearly half (from 1.6 million to 857,000) and the number of extremely poor children by around two-thirds (from 3.6 million to 1.2 million).[385]
- Participation in SNAP for six months reduced the number of households that were food insecure — based on both single point in time and longer-range analyses — reducing food insecurity by 6 percent and severe food insecurity by 12 percent based on a single point in time (cross-sectional) analysis; and reducing food insecurity by 17 percent and severe food insecurity by 19 percent based on an over the course of time (longitudinal) analysis.[386]
- Participation in SNAP for six months is associated with lower likelihood of food insecurity among children — by 36 percent using the single point in time analysis and by 38 percent using the over-time analysis.[387]
- Young children in food insecure households receiving SNAP benefits are less likely to be in poor or fair health, overweight, or at developmental risk than children in food insecure homes not receiving SNAP benefits.[388, 389]
- Mothers in food insecure households who receive SNAP benefits are less likely to experience symptoms of maternal depression and are less likely to be in poor or fair health than mothers in food insecure households not receiving SNAP benefits.[390]

How much is the Benefit?

SNAP benefits can only be spent on food and beverages. Nearly 90 percent of the food that SNAP households purchase is fruits and vegetables, meats, grains and dairy products.[391]

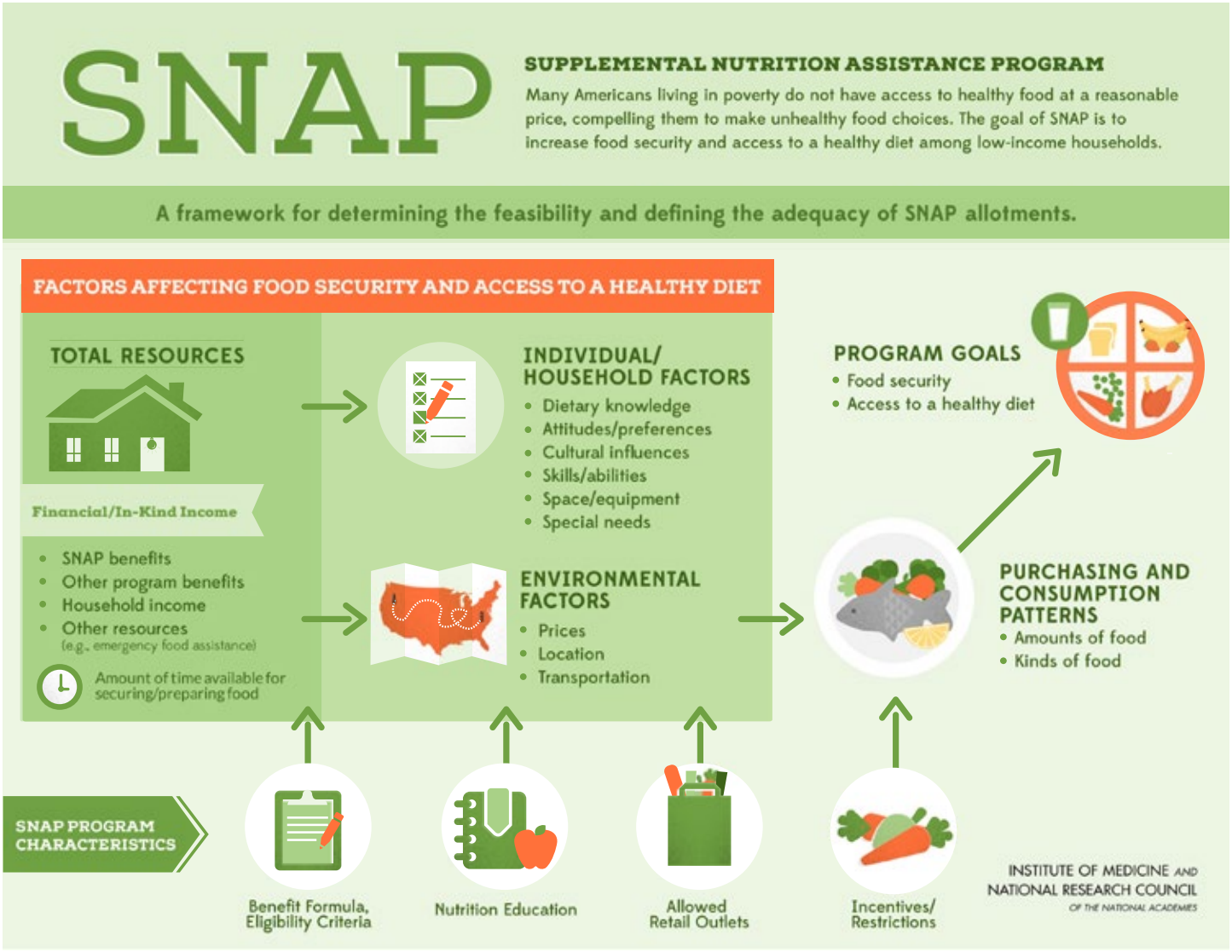
The average SNAP benefit was around $125 a month in FY 2014 — around $1.40 per person per meal. [392] A needs-based formula determines the exact amount a family may receive.

The maximum SNAP allotment is based on the Thrifty Food Plan, which is a model shopping market basket of food that represents a nutritious diet at minimal cost. A 2013 IOM report found this benefit determination is based on ideal shopping and food availability circumstances, and does not adequately take into account realistic factors. These factors include distance, limited transportation options to access food outlets, geographic and neighborhood food price variations, limited time to bargain-hunt and limited time to prepare meals.[393]

Who is Eligible?

Individuals or families whose gross monthly household income is below 130 percent of FPL, net monthly income after allowable expenses are below 100 percent of FPL, or resources/assets are below $2,250 (or $3,250 if a person in the household is over 60 or disabled).[394]

More than 250,000 retailers were authorized to accept SNAP benefits as of 2013, including superstores, supermarkets, grocery stores, convenience and corner stores and farmers' markets.[395] More than 80 percent of benefits are redeemed at superstores, supermarkets and grocery stores, while 5 percent are redeemed at convenience stores.



SNAP-Ed and Updates to Promote Nutrition and Education

All 50 states, Washington, D.C. and U.S. territories participate in SNAP-Ed — a grant program that provides resources to states to manage evidence-based nutrition education programs for SNAP participants. The Healthy, Hunger-Free Kids Act of 2010 transformed SNAP-Ed into a Nutrition Education and Obesity Prevention grant program that expanded the scope of the program in order to increase the likelihood that low-income people will make healthy food choices within a limited budget and choose physically active lifestyles. In 2014, a physical activity component was added to the program.

SNAP-Ed provides states with an obesity prevention Toolkit and an Evaluation Framework to enable states to easily identify evidenced-based obesity prevention strategies and interventions to include in their annual SNAP-Ed plans. These public health strategies and interventions are designed to provide to change the food environment to make healthy choices the easy choice.

SNAP also includes a number of other provisions aimed at expanding participants' access to healthy, affordable foods:

- Retailers will be required to stock at least seven items in each of four basic food categories — fruits and vegetables, grains, dairy and meat — and perishable, fresh items in at least three of the categories;
- Farmers' markets, farm stands, and other non-traditional retailers may be eligible to participate in SNAP and accept the Electronic Benefit Transfer (EBT) payment cards. As of 2014, at least 36 states (72 percent), Washington, D.C., Puerto Rico, Guam, the U.S. Virgin Islands and several tribes participated in the SNAP farmers' market benefit — an increase from 21 percent of states in 2013.[396, 397] By June 2015, there were 6,400 farmer's markets and direct marketing farmers participating in the SNAP program;
- SNAP benefits may be used to purchase Community Supported Agriculture (CSAs) shares, which allow consumers to pay in advance for a share of a farmer's production and, in return, receive a weekly share of the results, such as a box of fresh fruits and vegetables;[398] and
- Food Insecurity Nutrition Incentive (FINI) grants help promote the purchase of fruits and vegetables by SNAP participants through point-of-purchase incentives, such as "double value" for dollars spent on produce. USDA awarded $31.5 million in FINI grants in March 2015.[399]

WHOLESOME WAVE DOUBLE VALUE COUPON PROGRAM

Wholesome Wave, a 501(c)(3) nonprofit dedicated to making healthy, locally, and regionally grown food affordable to everyone, regardless of income, launched the Double Value Coupon Program (DVCP) in 2008. The program provides customers a monetary incentive for spending federal nutrition benefits at participating farmers' markets. The program encompasses a network of more than 50 nutrition incentive programs operated at around 500 farmers' markets in at least 31 states and Washington, D.C. The incentive matches the amount spent and can be used to purchase healthy, fresh, locally grown fruits and vegetables.

The program reaches more than 40,000 participants and their families and impacts more than 3,500 farmers. Wholesome Wave collaborates with underserved communities, nonprofits, farmers, farmers' markets, healthcare providers and government entities to form networks that improve health, increase fruit and vegetable consumption and generate revenue for small and mid-sized farms.

- In 2013, federal nutrition benefits and private sector DVCP incentives accounted for $2.45 million in sales at farmers' markets.[400]
- Communities also see an increase in economic activity. The $2.45 million spent at local farmers' markets creates a significant ripple effect. In addition to the dollars spent at markets, almost one-third of DVCP consumers said they planned to spend an average of nearly $30 at nearby businesses on market day, resulting in more than $1 million spent at local businesses. [401]
- Wholesome Wave's 2011 Diet and Behavior Shopping Study indicated 90 percent of DVCP consumers increased or greatly increased their consumption of fresh fruit and vegetables — a behavior change that hopefully continues well after market season ends.[402]

2. MARKETPLACE INCENTIVES TO IMPROVE HEALTHY FOOD AVAILABILITY IN MORE COMMUNITIES: HEALTHY FOOD FINANCING INITIATIVES (HFFI) AND NEW MARKET TAX CREDITS (NMTC)

USDA, HHS, and the Department of Treasury (Treasury) have developed a number of initiatives to incentivize grocery stores with healthier food options to locate in low-income communities.

Having local, accessible stores with a quality selection of healthy foods helps make healthier choices easier:

- Supermarkets and supercenters provide the most reliable access to a variety of healthy, high-quality products at the lowest cost, and shoppers generally prefer these stores to smaller grocery stores and convenience stores.[403]
- Adults living in neighborhoods with supermarkets or with supermarkets and grocery stores have the lowest rates of obesity (21 percent), and those living in neighborhoods with no supermarkets and access to only convenience stores and/or smaller grocery stores had the highest rates of obesity (32 percent to 40 percent).[404]
- Blacks living in a census tract with a supermarket are more likely to meet dietary guidelines for fruits and vegetable consumption, and for every additional supermarket in a tract, produce consumption rises 32 percent. Among Whites, each additional supermarket corresponds with an 11 percent increase in produce consumption.[405]
- Adults with no supermarkets within a mile of their homes are 25 percent to 46 percent less likely to have a healthy diet than those with the most supermarkets near their homes.[406]
- New and improved grocery stores can catalyze commercial revitalization in a community. An analysis of the economic impacts of five new stores that opened with Fresh Food Financing Initiative assistance found that, for four of the stores, total employment surrounding the supermarket increased at a faster rate than citywide trends.[407]

Healthy Food Financing Initiatives

Healthy Food Financing Initiatives are public-private partnerships which use grants and loans to provide support to full-service supermarkets or farmers' markets that are located in lower-income urban or rural communities. The federal government has funded Healthy Food Financing Initiative grants through HHS and Treasury since 2011.[408] HFFI has distributed more than $109 million in grants across the country, helping to support the financing of grocery stores and other healthy food retail outlets including farmers' markets, food hubs, and urban farms. The Farm Bill of 2014 established a permanent federal HFFI program at USDA, authorized at $125 million.

Healthy food financing programs are active in at least 21 states and have been funded with a variety of federal, state, local and philanthropic dollars. For example, the California FreshWorks Fund has raised $272 million to bring grocery stores, fresh produce markets, and other healthy food retail stores to communities that do not have them.[409] In New Orleans, the City Council prioritized healthy food retail as a rebuilding strategy after Hurricane Katrina, creating the Fresh Food Retailer Initiative to provide direct financial assistance to retail businesses by awarding forgivable and/or low-interest loans to supermarkets and other fresh food retailers.[410, 411] Most recently, the Circle Foods store — the first Black owned grocery store in the city, which was originally opened in 1939 and was destroyed by Hurricane Katrina — reopened in 2014 with the help of such assistance. The most successful program to date is the Pennsylvania Fresh Food Financing Initiative (FFFI), which, since 2004, has financed supermarkets and other fresh food outlets in 78 urban and rural areas serving 500,000 residents.[412] FFFI has also created or retained 4,860 jobs in underserved neighborhoods. Home values near new grocery stores have increased from 4 percent to 7 percent, and local tax revenues also have increased.[413]

The New Market Tax Credit

The New Market Tax Credit program at the Department of Treasury also encourages investment in low-income communities.[414] Since NMTC was created in 2000, it has distributed more than $40 billion in federal tax credit authority matched by private sector investments. The NMTC helped finance 49 supermarket and grocery store projects between 2003 and 2010 that improved healthy food access in low-income communities for more than 345,000 people, including 197,000 children.[415]

3. INFORMATION TO MAKE CHOICES: DIETARY GUIDELINES FOR AMERICANS, FOOD AND MENU LABELING, AND MARKETING STANDARDS

A number of federal agencies, including the Food and Nutrition Service, the Center for Nutrition Policy and Promotion and the Expanded Food and Nutrition Program of USDA, and CDC and FDA at HHS and the Federal Trade Commission (FTC) are involved in efforts aimed at helping Americans make informed choices about nutrition. A few key efforts include: the Dietary Guidelines for Americans, food and menu labeling requirements and attempts to influence food and beverage marketing guidelines.

Dietary Guidelines for Americans: 35th Anniversary

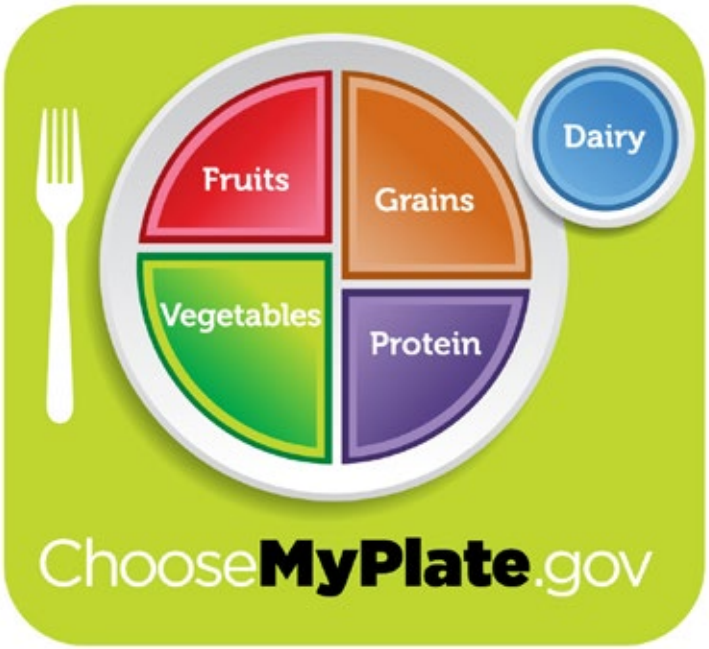
In 1977, the U.S. Senate Select Committee on Nutrition and Human Needs released a report on Dietary Goals for the United States.[416] The report was released to highlight that the leading causes of death in the United States were linked to diet. It provided guidance to the public on dietary choices consistent with prevention of chronic diseases. It also recommended government actions around food labeling, nutrition education and research.

In 1980, USDA and HHS (then the Department of Health, Education and Welfare) released the first formal *Dietary Guidelines for Americans,* and since 1990, the two agencies have been required to jointly release revised versions every five years to reflect new developments in nutrition science.

An updated version of the guidelines is expected to be released by the end of 2015.[417] In February 2015, the Dietary Guidelines Advisory Committee issued its scientific report to USDA and HHS to help inform the next edition of the guidelines.

The current 2010 *Dietary Guidelines for Americans* focuses on two overarching goals:[418]

- **"Maintain calorie balance over time to achieve and sustain a healthy weight.** People who are most successful at achieving and maintaining a healthy weight do so through continued attention to consuming only enough calories from foods and beverages to meet their needs and by being physically active. To curb the obesity epidemic and improve their health, many Americans must decrease the calories they consume and increase the calories they expend through physical activity."
- **"Focus on consuming nutrient-dense foods and beverages.** Americans currently consume too much sodium and too many calories from solid fats, added sugars and refined grains. These replace nutrient-dense foods and beverages and make it difficult for people to achieve recommended nutrient intake while controlling calorie and sodium intake. A healthy eating pattern limits intake of sodium, solid fats, added sugars, and refined grains and emphasizes nutrient-dense foods and beverages—vegetables, fruits, whole grains, fat-free or low-fat milk and milk products, seafood, lean meats and poultry, eggs, beans and peas, and nuts and seeds."



MyPlate. USDA's Center for Nutrition Policy and Promotion, updated the DGA food icon following release of the 2010 DGA, replacing a food pyramid with MyPlate, which included a new graphic designed to represent eight behavior-specific messages:

- Make half your plate fruits and vegetables.
- Enjoy your food, but eat less.
- Drink water instead of sugary drinks.
- Avoid oversized portions.
- Be active your way.
- Compare sodium, sugars, and saturated fats in foods and choose the foods with lower numbers.
- Make at least half your grains whole.
- Switch to fat-free or low-fat (1 percent) milk (dairy).

Food Labeling: 25th Anniversary — and New Menu Labeling Requirements

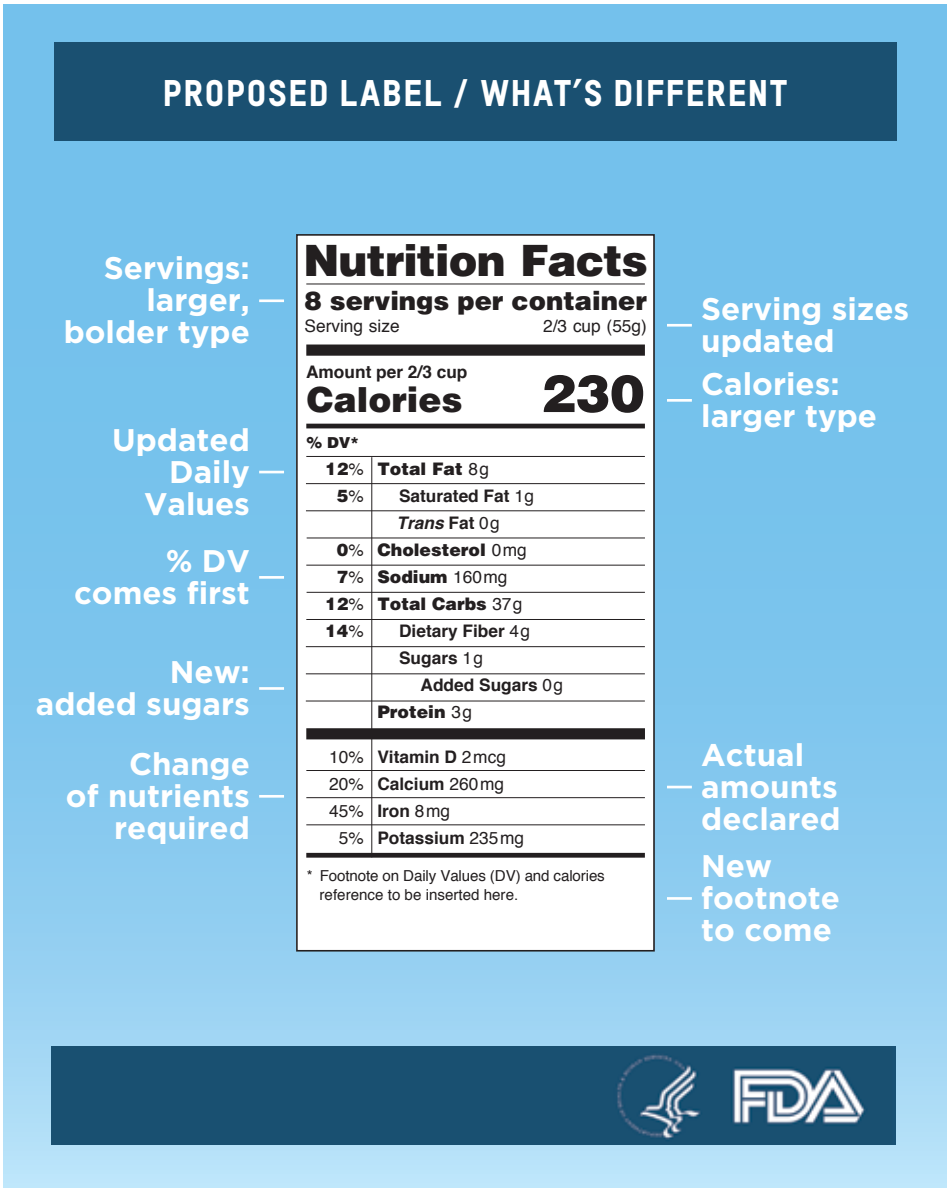
The 1990 Food Labeling and Education Act requires most packaged foods to include labels that provide standardized information about serving sizes and nutrition content to allow consumers to better evaluate and inform their food choices.[419] Nutrition Facts labels were required by 1993.

In 2014, the FDA proposed changes to the Nutrition Facts labels to reflect 1) current nutrition science; 2) more current serving size requirements; and 3) a refreshed design.[420] Some of the proposed changes include:

- Requiring information about added sugar;
- Reflecting today's larger portion sizes, packaged foods and drinks would be required to represent calories typically consumed in one sitting as the single serving; and
- Making calories and number of serving sizes per package more prominent — and listing the Percent Daily Value of key nutrients to show how they fit into the context of a daily diet — and to help clarify the content of key nutrients, such as calcium, iron, vitamin D and potassium, within a food product.

In addition, FDA published the restaurant menu labeling requirements in 2014, which were mandated by the 2010 Affordable Care Act.[421]

All chain restaurants (with 20 or more locations) and similar food establishments — including bakeries, grocery stores, convenience stores and coffee chains — will be required to clearly post the calorie count for each standard item on their menus. Other nutrition information — such as calories from fat, total fat, saturated fat, trans fat, cholesterol, sodium, total carbohydrates, fiber, sugars, and protein — will be required to be made available in writing upon consumer request. In July 2015, the FDA extended the deadline for covered restaurants to comply with this rule by one year, to December 1, 2016. Also by December 2016, vending machines will be required to post nutrition information in a "direct, accessible, and consistent manner" so that consumers can see it clearly before purchasing items.



Examples from FDA of restaurant-type foods that are covered when sold by a facility that is part of a chain with 20 or more locations include:

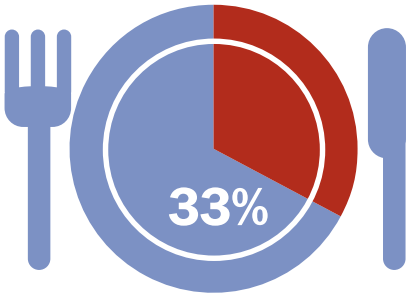
- Meals from sit-down restaurants;
- Foods purchased at drive-through windows;
- Take-out food, such as pizza;
- Foods, such as made-to-order sandwiches, ordered from a menu or menu board at a grocery store or delicatessen;

- Foods you serve yourself from a salad or hot food bar;
- Muffins at a bakery or coffee shop;
- Popcorn purchased at a movie theater or amusement park;
- A scoop of ice cream, milk shake, or sundae from an ice cream store;
- Hot dogs or frozen drinks prepared on site in a convenience or warehouse store; and
- Certain alcoholic beverages.

Food and menu labeling encourage food companies to offer healthier food items and can help Americans better understand their food and beverage choices:

- Americans consume one-third of their calories from eating out and spend around half of their food budget at restaurants.[422, 423] Research has shown that food eaten away from home can often be higher in fat and sodium. Consumers routinely underestimate calories and fat when eating out, and children eat nearly double the number of calories when they eat out versus eating at home.[424, 425, 426, 427, 428]
- The primary impact of food and menu labels is to provide food companies an incentive to offer healthier food items. Food labels highlight for consumers items with excess calories, sugar, fat and salt which will make lead many consumers to avoid them.
- Menu labeling can influence consumer purchasing decisions, and market research by weight management groups have shown some segments of the population are highly influenced by this information. [429, 430]
- Evidence from surveys and simulation studies suggests menu labeling reduces calories purchased or consumed, but evidence from real-world cafeteria and restaurant studies regarding calories purchased or menu items selected is mixed.[431] The impact of menu labeling is not uniform. It may have a greater effect on women than men, on higher-calorie items and among certain types of restaurant chains.
- Menu labeling has prompted some restaurants to offer more healthful options or reformulate their current offerings.[432]

Americans Consume One-third of their Calories From Eating Out



Americans Spend Around Half of their Food Budget at Restaurants

A November 2014 statement by the National Restaurant Association president and CEO Dawn Sweeney stated that:[433]

"The National Restaurant Association strongly believes in the importance of providing nutrition information to consumers to empower them to make the best choices for their dietary needs. Under the federal menu labeling regulations which the Association sought and supported, nutrition information will soon be available in more than 200,000 restaurant locations nationwide. We joined forces with more than 70 public health and stakeholder groups to advocate for a federal nutrition standard so that anyone dining out can have clear, easy-to-use nutrition information at the point of ordering — information that is presented in the same way, no matter what part of the country. From Portland, Oregon to Portland, Maine, diners in restaurants will have a new tool to help them make choices that are right for them. We believe that the Food and Drug Administration has positively addressed the areas of greatest concern with the proposed regulations and is providing the industry with the ability to implement the law in a way that will most benefit consumers."

Food Marketing Efforts

The FTC regulates advertising of food and diets and monitors false advertising claims about health benefits of foods and diet products.

While the FTC oversees advertising of food and beverages, and monitors advertising claims about health benefits of foods and diet products, there are currently no federal regulations for such advertising.

In 2009, a federal Interagency Working Group on Food Marketed to Children (IWG) was established, comprised of representatives from the FTC, FDA, CDC and USDA. In 2011, the IWG proposed voluntary recommendations for 1) nutritional standards for food marketed to children age 17 and under and 2) the scope of media to which these standards should apply. In 2012, the FTC issued a follow up report recommending industry continue to improve self-regulation but no funding has been appropriated to move forward with the working group or associated efforts.[434]

According to the National Prevention Strategy 2013 status report, "FTC will monitor and report on marketing of food to children (e.g. expenditures and promotional activities) to assess any changes in marketing practices, provide data for researchers, and inform recommendations."[435]

FOOD MARKETING TRENDS AND INDUSTRY EFFORTS

The food and beverage industry spends nearly $2 billion annually to market foods and beverages to children and adolescents in the United States, reaching young people where they live, learn and play. A report from the Institute of Medicine concluded that food advertising affects children's food choices, food purchase requests, diets and health.[436] Food marketing is especially prevalent in Black and Latino neighborhoods.

- Each day, Black children see twice as many calories advertised in fast food commercials as White children.[437]

The products most frequently marketed to Blacks are high-calorie, low-nutrition foods and beverages. Billboards and other forms of outdoor advertisements, which often promote foods of low nutritional value, are 13 times denser in predominantly Black neighborhoods than they are in White neighborhoods.[438]

- Latinos are a major and increasing target for food marketers, particularly due to their population growth and relative spending power. Studies have found that 84 percent of youth-targeted food advertising on Spanish-language TV promotes food of low nutritional value. Between 2010 and 2013, fast food restaurants increased their overall advertising expenditures on Spanish-language TV by 8 percent. Latino preschoolers viewed almost one fast food ad on Spanish-language TV every day in 2013, a 16 percent increase from 2010. In addition, low-income Latino neighborhoods have up to nine times the density of outdoor advertising for fast food and sugary drinks as high-income White neighborhoods,[439] and Latino children are more likely to attend a school that is close to fast-food restaurants and convenience stores.[440]

Although food marketing directed at children decreased by around 20 percent between 2006 and 2009 according to the FTC, the majority of foods marketed to children remain unhealthy.[441]

The largest self-regulatory effort to date is the voluntary Children's Food and Beverage Advertising Initiative (CFBAI), which, in 2014, adopted a set of uniform nutrition criteria for all 18 member companies.[442] The updated guidelines set stricter limits on the amount of calories, sugar, fats and sodium in the foods marketed to children than earlier, company-specific standards. While the updated guidelines are a step in the right direction, they still allow companies to market some low-nutritional value foods and beverages to young people, including popsicles, fruit-flavored snacks, marshmallow treats, and several sugary cereals. In addition to nutrition criteria, CFBAI also provides guidance on what constitutes food marketing to children overall. A recent report from an expert panel tasked with providing recommendations on food marketing to children, found that the current CFBAI guidelines could be strengthened in a number of areas. For example, CFBAI criteria only cover children up to age 11 and do not cover marketing on packages or in stores, toy giveaways and other premiums, many forms of marketing in elementary schools, any marketing in middle and high schools, branded merchandise, or brand advertising (advertising that promotes an overall brand, not a specific product).[443]

Expert Panel recommendations urge CFBAI to adopt a strong set of marketing definitions to cover more areas where children are exposed to junk food marketing.

Schools offer an important venue to limit junk food marketing aimed at kids. While schools have the ability to limit food marketing during the school day, as of 2013, only 20 percent of public school districts have a wellness policy that addresses food marketing, and only half of those districts specifically prohibit unhealthy food and beverage marketing.[444] Food and beverage companies continue to market to children in schools, whether through signs, scoreboards, posters, branded fundraisers, corporate incentive programs, scholarships and education materials. In 2014, as part of a proposed rule to update local school wellness policy standards, USDA proposed that wellness policies reflect a requirement that all schools — elementary, middle and high schools — only allow marketing of foods and beverages that meet the Smart Snacks in Schools nutrition standards set by USDA.[445] The final rule is expected in 2015.

E. QUALITY, AFFORDABLE HEALTHCARE

Access to affordable, quality healthcare is important for maintaining good health. Doctors and other healthcare providers can provide guidance around nutrition and activity for patients, screen patients who are at risk for or who have developed obesity or obesity-related illnesses, and provide counseling and support for ongoing care.

New models are also emerging to encourage and incentivize increased connection between doctor's care and support and services for people's daily lives.

The Affordable Care Act includes a number of provisions to support the prevention and control of obesity and related illnesses including:

- Expanding requirements for new health plans (including private, self-insurers and Medicare) to cover a set of evidence-based preventive healthcare services recommended by the U.S. Preventive Services Task Force (USPSTF) — including no-cost screening and counseling for obesity.
- Incentivizing state Medicaid programs to cover the range of providers who may deliver preventive services. In 2013, CMS issued a rule that gives states greater flexibility in what types of providers could provide recommended preventive services, such as for obesity education and counseling activities.
- Integrating public health and healthcare via new approaches, such as expanding Accountable Care Organizations (ACOs) into Accountable Care Communities (ACCs). Coordination efforts can improve the overall health of beneficiaries, offer strong incentives to providers to deliver the most effective care possible and maximize effectiveness, including community-based prevention programs and services that support patients' ability to follow doctors' advice in their daily lives. ACOs are groups of healthcare providers who bear risk and prioritize coordinated care and quality goals to achieve improved health for their patients, which reduces costs.[446]
- Strengthening tax-exempt hospitals' community benefit requirements by requiring a community health needs assessment and implementation strategy in order to maintain tax-exempt status. New U.S. Treasury Regulations on community benefit administered by the IRS allow for implementation strategies that include activities related to ensuring adequate nutrition and preventing obesity.

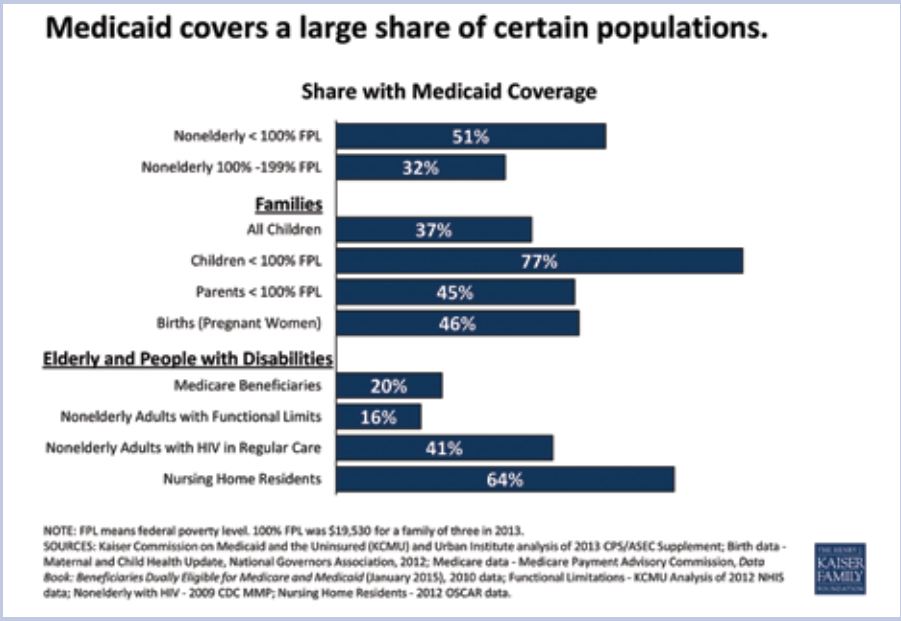
Some key government efforts to prevent and reduce obesity through healthcare include:

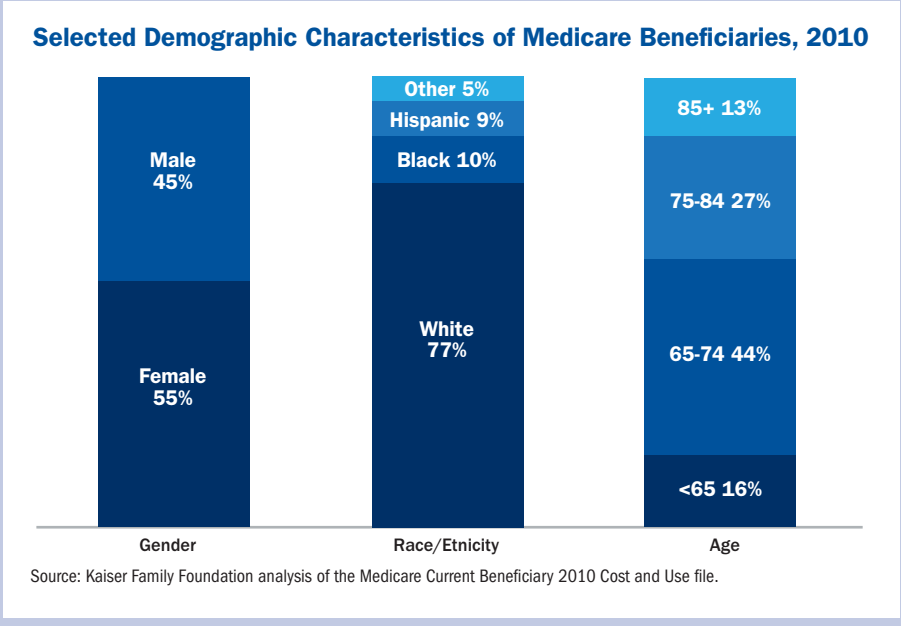
1. **Medicare and Medicaid Obesity Coverage;**
2. **Department of Defense and Veterans Administration Obesity Coverage;**
3. **Federal Government Employees and Obesity Coverage and Prevention; and**
4. **Obesity Medical Research, Drugs, and Devices**

1. MEDICARE AND MEDICAID: 50TH ANNIVERSARY

Medicare and Medicaid were signed into law in 1965 to offer health insurance protection to the elderly, poor, and disabled. Fifty years later:

- **Around one-third of all children** (around 40 million at some point in a given year) **are covered by Medicaid or the Children's Health Insurance Program (CHIP)**, including approximately one-fifth of White children and half of Latino and Black children;[447]
- **Around 12.7 million adults (non-disabled, non-elderly) are enrolled in state Medicaid programs;** and
- **More than 53.6 million Americans ages 65 and older are enrolled in Medicare.**[448]





Source: Kaiser Family Foundation analysis of the Medicare Current Beneficiary 2010 Cost and Use file.

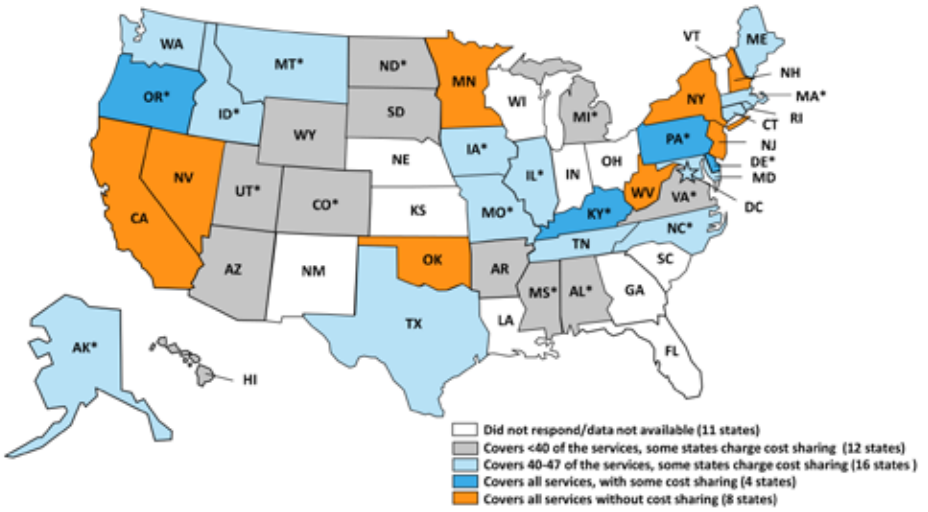
CMS pays for more than half of the nation's obesity-related healthcare costs.[449] Eleven percent of U.S. adult Medicaid expenditures are spent on treating obesity-related medical conditions.

Traditionally, like most private insurance plans, Medicaid and Medicare have been more involved in payment for the treatment of obesity-related illnesses, rather than on services and programs to help prevent obesity and promote healthy nutrition and activity, particularly for adult care.

- **Children — Obesity, Nutrition and Health Screenings and Counseling:** Medicaid requires all states to cover Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) benefits — which includes nutrition and obesity screening and counseling — for all eligible children and youth under the age of 21. However, many children still are not routinely screened. Only 17 states and Washington, D.C. meet the program goal of ensuring at least 80 percent of 1- to 2-year-olds receive EPSDT, and only 11 states and Washington, D.C. ensure that at least 70 percent of 3- to 5-year-olds receive EPSDT.[450] Among those screened, even fewer receive regular and ongoing counseling care. Bright Futures — a collaboration between AAP and the Human Resources and Services Administration (HRSA) — also provide a baseline for services required by EPSDT and ACA coverage. HRSA also supports programs such as the Maternal and Child Health Block Grant, which increases the access, participation, and quality of health services for children, particularly, low-income children enrolled in Medicaid, and promote healthy behavior as part of daily life.

- **Medicaid Coverage of Obesity for Adults:** States with traditional Medicaid plans can determine the level of coverage or co-payment requirements for obesity and related diseases within their plans. CMS provides a one percentage point increase in the federal medical assistance percentage (FMAP) incentive for Medicaid states to provide coverage of preventive services recommended with an "A" or "B" rating by the U.S. Preventive Services Task Force — including obesity screening and counseling — to Americans enrolled in traditional Medicaid programs without cost-sharing. Eight states have submitted applications to CMS to implement this enhanced match option. Adults covered through states participating in Medicaid expansion or are insured through healthcare exchanges are eligible for "Preventive and Wellness Services and Chronic Disease Management" coverage — including obesity screening and counseling — with no co-payments. According to a 2013 survey by the Kaiser Family Foundation, 28 states cover both healthy nutrition counseling and obesity screening and counseling services.[451] Alaska covers obesity screening and counseling but not healthy diet counseling. Medicaid programs generally cover obesity-related surgery, such as gastric bypass or lap band, if patients meet certain conditions.

Medicaid Coverage of Recommended Adult Preventive Services, Jan. 2013



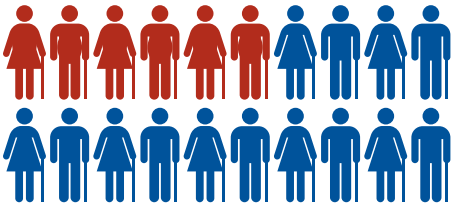
NOTE: *Indicates the state reported cost-sharing for at least one of the services. Coverage of preventive services and immunizations recommended for non-elderly adults by the USPSTF, HRSA, and ACIP. Data are limited to adult fee-for-service as of January 2013. Data are not available for following states because they did not respond to the survey or did not provide necessary data: FL, GA, IN, LA, KS, NE, NM, OH, SC, VT, and WI.
SOURCE: KCMU Survey of State Medicaid Coverage of Adult Preventive Services.

- **Medicare Coverage for Obesity:** Medicare requires coverage of preventive services, including an annual wellness visit and obesity screening and counseling. Beneficiaries are eligible for a weekly 15-minute face-to-face counseling session for one month, followed by counseling sessions every other week for an additional five months. Individuals who lose at least 6.6 pounds during the first six months are eligible for monthly visits for an additional six months. Medicare covers obesity-related surgery, such as gastric bypass or lap band, if patients meet certain conditions.
  - A 2014 analysis by the STOP Obesity Alliance found that less than 1 percent of Medicare enrollees — 120,000 — have participated in obesity counseling since it became available in 2011.[452] Around 30 percent of seniors — more than 15 million Medicare enrollees — are obese and would be eligible for the benefit. By contrast, around 250,000 Medicare enrollees participate in tobacco cessation every year, while an estimated 9 percent of seniors are smokers. Some reasons cited for the low levels of uptake of obesity counseling include: the benefit has not been well-publicized; only primary care providers, nurse practitioners, or physician assistants working in doctors' offices can be reimbursed under the regulations versus other practitioners, such as dieticians, obesity specialists and clinical psychologists who have specific training in this area of healthcare; counseling must be provided during a separate appointment versus when a patient comes for other services; and reimbursement rates are $26 for a 15-minute counseling session, while many primary care fees are three or four times that level.

CMS is also supporting and piloting a range of new models for healthcare, many of which include more coordinated care or patient-centered approaches that are consistent with healthcare services and community-based programs aimed at preventing and controlling obesity, including:

- **Flexibility for Medicaid Coverage for Additional Types of Healthcare Providers:** In 2013, CMS issued a rule that would give states greater flexibility in what types of providers could provide preventive services, such as for obesity education and counseling activities.

30% Percent of Seniors are Obese



- **Childhood Obesity Performance Improvement Projects:** States implementing a Medicaid managed care program are required by the federal government to require health plans to complete performance improvement projects (PIPs).[453] A number of states reported childhood obesity related PIPs among their participating health plans during the 2011 to 2012 and 2012 to 2013 reporting cycles. Georgia, Michigan, New Jersey and Pennsylvania required managed care organizations to conduct childhood obesity PIPs. The projects typically focus on increasing rates of measurement and BMI documentation and providing or referring patients to nutrition or physical activity counseling. Interventions included beneficiary outreach and education through community events, visit reminders, incentives and newsletters as well as care delivery changes and provider training. For instance, Priority Health in Michigan partnered with a community-based organization to develop FitKids 360, an eight-week class for overweight kids and their families that addresses nutrition, physical activity and self-esteem. After the program's initial success at multiple sites in southwestern Michigan, two additional sites started the program in 2013.[454]

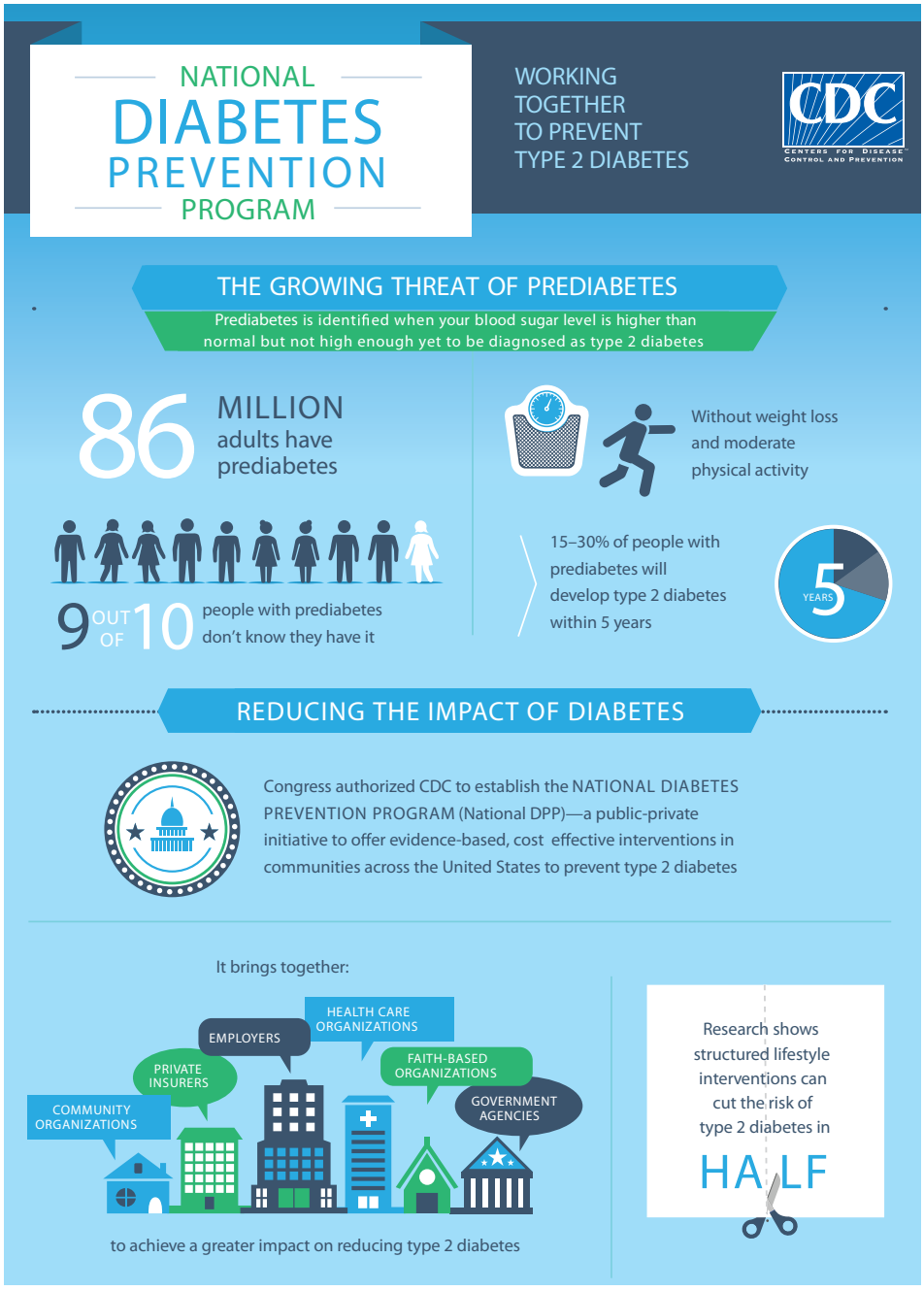
- **Childhood Obesity Research Demonstration (CORD) project:** The Childhood Obesity Research Demonstration is a four-year project led by the CDC.[455] The goal is to improve obesity-related behaviors including diet and physical activity and ultimately reduce childhood obesity among underserved children. The program aims to identity strategies for integrating pediatric primary care with community prevention and other public health efforts to help prevent childhood obesity. Community health workers were used to help link families with community programs, health insurance enrollment, and other resources for disease prevention and management. The demonstration built on existing child care, school, healthcare and community efforts and strategies to prevent and manage childhood obesity. The project's goal is to improve low-income children's nutrition and physical activity behaviors in the places where they live, learn and play by:
  - Increasing children's physical activity and consumption of fruits, vegetables and healthier beverages;
  - Ensuring children get enough sleep; and
  - Decreasing children's screen time and consumption of sugary drinks and energy-dense (low-nutritional value) foods.[456]

The project is targeted to children ages 2 to 12 in communities with a high percentage of children eligible for Medicaid or CHIP. The demonstration grantees are: San Diego State University and Imperial County Health Department; University of Texas School of Public Health and Children's Nutrition Research Center, Baylor University; and Massachusetts Department of Public Health, Harvard Pilgrim, Harvard University. The University of Houston serves as the Evaluation Center. An evaluation report is expected in 2016.

The National Center for Chronic Disease Prevention and Health Promotion — including the Division of Nutrition, Physical Activity and Obesity — is the lead center working on obesity prevention and control, and it works in partnership with the School Health Branch of the Division of Population Health, Division of Heart Disease and Stroke, Division of Diabetes Translation and Division of Community Health.

- **National Diabetes Prevention Program (DPP):** CDC leads the National Diabetes Prevention Program, an evidence-based lifestyle change program for preventing type 2 diabetes. More than 625 organizations offer the program nationally. The year-long program helps participants make lifestyle changes, such as eating healthier, incorporating physical activity into their daily lives, and improving problem-solving and coping skills. Participants meet with a trained lifestyle coach and a small group of people who are making lifestyle changes to prevent diabetes. Sessions are weekly for six months and then monthly for six months. Evidence shows DDP has cut participants' risk for developing type 2 diabetes by 58 percent.[457]

  - CMS supports a DPP-demonstration program among 10,000 Medicare beneficiaries with prediabetes. The National Council of Young Men's Christian Association of the United States of America (YMCA USA), local YMCA affiliates and the Diabetes Prevention and Control Alliance (a subsidiary of United Health Group) are working in 17 communities in eight states (Arizona, Delaware, Florida, Indiana, Minnesota, New York, Ohio and Texas) to examine the effectiveness of the program on improving health and saving healthcare costs. The demonstration program runs through 2016.



Health Homes connect what happens in the doctor's office, at home and in the community.

- **Health Homes:** The ACA created an optional Medicaid State Plan benefit for states to establish Health Homes to coordinate care for patients with chronic conditions, using a "whole person" philosophy — integrating primary, acute, behavioral health, and long-term services. Health Homes connect what happens in the doctor's office, at home and in the community by paying for comprehensive care management, care coordination, health promotion, comprehensive transitional care/follow-up, patient and family support and referral to community and social support services. Health Homes are eligible for Medicaid enrollees with chronic conditions — including diabetes, heart disease and being overweight.[458] Participating states have flexibility to determine providers, who can be a designated provider, a team of health professionals, or a health team that can include social workers, dieticians, behavioral health providers, community health workers and others. As of March 2015, 19 states have a total of 26 approved Medicaid health homes.[459]

- **Next Generation Accountable Care Organization Model:** In April 2015, CMS announced a new program that will allow provider groups that are experienced in ACO- approaches (i.e. that bear risk and coordinate care for their patient populations aimed at improving health and reducing costs instead of standard fee-for-service models) to assume higher levels of financial risk and reward than have been currently available.[460] The model will test whether strong financial incentives for ACOs, coupled with tools to support better patient engagement and care management, can improve health outcomes and lower expenditures. This model provides inherent incentives for providers to prevent and control obesity and related health conditions — by focusing on improving the overall health of their patient pool.

- **State Innovation Grants:** CMS supports the State Innovation Models initiative to develop new and innovative approaches to improving health system performance and quality of care while decreasing costs for state-led, multi-payer healthcare payment, and service delivery models.[461] In December 2014, CMS announced a second round of awards totaling $622 million to 11 Model Test and 22 Model Design grantees. Many of the models include a focus on better integration of primary healthcare with community health initiatives, promoting value-based payment structures that prioritize improving overall health, patient-centered medical homes and ACO models, and statewide population health improvement plans. These approaches also focus on total health improvement and addressing systemic health problems in communities — including obesity, diabetes, heart disease.

- **Medicaid Innovation Accelerator Program (IAP):** CMS launched the IAP in July 2014 to improve health and healthcare for Medicaid beneficiaries by supporting states' efforts to accelerate new payment and service delivery reforms.[462] These types of reform efforts could help spur innovative and more integrated healthcare and public health approaches to supporting obesity prevention and control efforts.

STATUS OF MEDICAID FEE-FOR-SERVICE TREATMENT OF OBESITY INTERVENTIONS

A 2014 review of obesity-related fee-for-service coverage by state Medicaid programs conducted by the George Washington University and the STOP Obesity Alliance found that:[463]

- **Prevention:*** Eight states and Washington, D.C. cover all obesity-related preventive care — via established medical fee billing called Current Procedural Terminology (CPT) codes. Nineteen states cover one or more obesity-related preventive care CPT codes. Twenty-one states cover no obesity-related preventive care CPT codes and/or assert that obesity-related preventive care services are explicitly excluded in respective provider manuals.
- **Nutrition:*** Fifteen states and Washington, D.C. cover all obesity-related nutritional consult CPT codes. Thirteen states cover one or more obesity-related nutritional consult CPT codes. Twenty states cover no obesity-related nutritional consult CPT codes. Provider manuals indicated that while six states — Connecticut, Minnesota, New Mexico, South Dakota, Utah and West Virginia — may utilize nutrition CPT codes, they are not reimbursable for treating obesity. Provider manuals also indicated that four states — Georgia, Michigan, Nebraska and Vermont — that do not utilize nutrition CPT codes do reimburse for nutritional counseling.
- **Disease Management:*** One state covers all obesity-related disease management CPT codes. Eighteen states and Washington, D.C. cover one or more obesity-related disease management CPT codes. Twenty-nine states cover no obesity-related disease management CPT codes.
- **Behavioral Consultation:*** Twelve states and Washington, D.C. cover all obesity-related behavioral consultation CPT codes. Seventeen states cover one or more obesity-related behavioral consult CPT codes. Nineteen states cover no obesity-related behavioral consult CPT codes.
- **Pharmaceuticals:*** Fourteen states cover obesity drugs. Of these states, five — Alabama, Louisiana, North Dakota, New Jersey and South Carolina — limit their coverage to lipase (fat) inhibitors (Orlistat/Xenical). Five states — Alabama, Hawaii, North Dakota, Virginia and Wisconsin — require that certain weight-loss benchmarks be met over a specified timeframe in order to continue medication coverage once started. Thirty-six states explicitly exclude all obesity drug coverage, with one state — Vermont — expressly citing safety concerns as justification for non-coverage.
- **Bariatric Surgery:** Forty-seven states and Washington, D.C. cover bariatric surgery. Of these states, 36 require prior authorization and 37 require criteria beyond BMI to determine eligibility. Three states — Montana, Mississippi and Ohio — explicitly exclude bariatric surgery.

**Note: Coverage for one state (KS) was undetermined. Coverage for TN was not assessed as the state's Medicaid population is entirely managed care.*

2. DEPARTMENT OF DEFENSE AND VETERANS AFFAIRS OBESITY COVERAGE AND PREVENTION

Sixty-one percent to 83 percent of Department of Defense beneficiaries (including dependents) and 78 percent of Veterans are overweight or obese — excess weight is estimated to cost at least $370 per patient per year in additional medical and non-medical costs.[464]

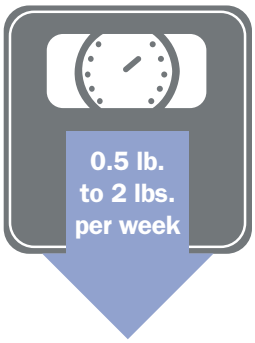
The Department of Defense and Department of Veterans Affairs (VA) provide healthcare coverage to the nation's military, their families and Veterans.

This includes coverage of obesity and related illnesses. Under the VA/DoD Clinical Practice Guidelines for Screening and Management of Overweight and Obesity:[465]

- Healthy weight and overweight patients without obesity-associated chronic health conditions may be offered education, information and counseling about a healthy lifestyle and maintaining or achieving a healthy weight.
- Comprehensive lifestyle intervention for weight loss should be offered to all obese patients and overweight patients with obesity-associated chronic health conditions.
- Comprehensive lifestyle intervention is the foundation of treatment for overweight and obesity and should include at least 12 contacts over a year of an intervention that combines dietary, physical activity and behavioral components.
- Diet and physical activity together must create an energy deficit of 500 to 1,000 calories per day for effective weight loss.
- Adherence to any particular calorie-deficit diet is more important than choice of a specific diet.
- Physical activity, through short bursts of activity or a single longer episode, typically must accumulate to at least 150 minutes per week.
- On average, weight loss will occur at the rate of 0.5 to 2 pounds per week, plateauing between three and six months. After a plateau is reached, reassessment for weight maintenance or additional weight loss is required.

In addition, DoD and the VA have undertaken a number of initiatives to improve overall health — focusing on obesity and disease prevention.

Diet + excercise to create an energy deficit of 500 to 1,000 calories a day =



DoD's Operation Live Well (OLW) and Healthy Base Initiative (HBI)

More than 70 percent of young adults in 39 states are ineligible for military service, exceeding the height-weight and percent body fat for military standards.[466] In 2011, more than 12 percent of active duty service members were obese, a 61 percent increase from 2002. Obese service members are more likely to be injured compared to healthy weight members. Unfit or overweight service members are dismissed, costing more money to screen and train replacements.

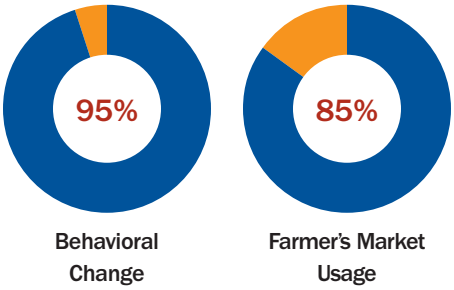
DoD's Operation Live Well is a strategic approach to create more ready, more resilient and healthier armed forces and military communities.[467] OLW brings together the resources and capabilities of local military communities, including commanders; health and medical experts; commissaries and dining facilities; education resources; places of worship; and morale, welfare and recreation programs.

OLW is DoD's long-term initiative to improve the health and wellness of the more than 10 million members of the U.S. defense community, including service members and their families, retirees and DoD civilians.

The initiative includes demonstration projects such as the **Healthy Base Initiative**, which is being implemented at **14 DoD sites worldwide**. Action plans for HBI are based on assessments completed at the selected installations. HBI aims to identify best-practice efforts in reducing obesity and tobacco use, while improving fitness, readiness and resilience. In a survey of more than 600 employees at one of the HBI sites (the Defense Logistics Agency (DLA)), 93 percent of employees said the initiative is helping change their behaviors, including eating habits and physical activity, while 83 percent used the farmers' market and 65 percent participated in the stairwells program. A DoD evaluation of the first phase of HBI implementation is expected to be released in August 2015.

There is also continued support for the DoD school systems to launch initiatives to serve healthier meals to children. For example, Fort Campbell Army Base is a Department of Defense Education Activity school district of nine schools with 4,700 students that participates in the National School Lunch Program.[468] With the help of registered dieticians, schools developed and implemented nutrition goals, launched Farm-to-School programs and trained food service workers on nutrition standards — with the goal of having healthier food and beverages at schools lead to children maintaining a healthy weight.

Impact of the Healthy Base Initiative on DLA Employees



U.S. Department of Veteran's Affairs: VA's MOVE!® and Healthy Teaching Kitchen (HTK)

The Veterans Health Administration (VHA) provides healthcare, including evidence-based health promotion and disease prevention programs, education, resources and guidance, to millions of America's military Veterans.[469]

Some of the prevention focused initiatives include:

- VA's MOVE!® Weight Management Program provides Veterans with comprehensive, evidence-based, multi-disciplinary weight care to improve health and reduce the risk of chronic disease. Twenty percent of MOVE! patients lost at least 5 percent of their body weight, a clinically significant amount; this is an increase of 6 percent since the program began. More than 500,000 Veterans have enrolled in MOVE!®.
- VHA's Specialty Care Transformation Healthy Teaching Kitchen initiative successfully promotes improved nutrition and the prevention and management of chronic disease among Veterans. Supported by VHA's Healthy Diet Directive, HTKs provide hands-on healthy cooking demonstrations that help Veterans improve their eating habits. HTKs also extend the reach of VA Nutrition and Food Services by promoting early intervention for Veterans who are overweight/obese and/or diabetic. Now at 50 VA Medical Centers, and planned for 12 more, HTKs rely on a multi-disciplinary team approach and serve as a building block for comprehensive, innovative nutrition, and food services. HTKs reached approximately 4,000 new Veterans in FY 2007 and 5,000 in FY 2012. By 2015, HTKs will expand to 152 facilities with an expected reach of at least 15,000 new Veterans. A recently initiated assessment program will measure clinical outcomes (BMI and hemoglobin A1c) to gauge the value of HTKs for Veterans with diabetes.

MISSION READINESS

According to the nonprofit, nonpartisan national security organization of more than 500 retired generals, admirals and other senior military leaders, approximately one in four young American ages 17 to 24 are too overweight to join the military — and being overweight or obese is the leading medical reason why young adults cannot enlist.[470]

3. FEDERAL GOVERNMENT EMPLOYEES AND OBESITY COVERAGE AND PREVENTION

The federal government provides healthcare coverage to its employees — including coverage of obesity and related health concerns — and has also undertaken a series of prevention-oriented initiatives to help promote good nutrition and physical activity for federal employees.

The General Services Administration (GSA) — which manages federal buildings across the country and provides services and facilities management across much of the federal government — is developing programs and policies to improve food choices and provide employees access to health and wellness programs like bike sharing, in-house fitness centers, and initiatives to increase use of stairs instead of elevators. To ensure healthier food options in federal cafeterias and vending facilities, GSA has developed standardized Health and Sustainability Guidelines for Federal Concessions and Vending Operations in partnership with HHS, including:

- 86 percent of cafeterias in GSA-managed buildings now provide healthier food choices;
- 97 percent of GSA-sponsored child care centers attained certification under *Let's Move!* guidelines for good nutrition and physical activity; and
- GSA sponsors 19 active farmers' markets at federal buildings nationwide.[471]

4. OBESITY MEDICAL RESEARCH, DRUGS AND DEVICES

The federal government also helps support ongoing medical research and regulation of community-based and medical approaches, drugs and devices to help prevent, control and treat obesity and related illnesses.

National Institutes of Health (NIH) and Obesity Research

NIH conducts and invests in biomedical research and promotes related health education programs. The NIH Obesity Research Task Force released its most recent Strategic Plan for NIH Obesity Research in 2011.[472] The Task Force notes that the "increase in obesity over the past 30 years has been fueled by a complex interplay of environmental, social, economic and behavioral factors, acting on a background of genetic susceptibility."[473] The strategic plan focuses on:[474]

- Discovering key processes that regulate body weight and influence behavior;
- Understanding the factors that contribute to obesity and its consequences;
- Designing and testing new approaches for achieving and maintaining a healthy weight;
- Evaluating promising strategies to prevent and treat obesity in real-world settings and diverse populations;
- Using technology to advance obesity research and improve healthcare delivery; and
- Enhancing research on the effects of policy changes to weight-related behaviors and development of obesity. Several priority areas of policy research include capacity development, agriculture and food supply, economic research, the built environment and educational approaches.

Obesity-Related Drugs and Devices Regulation

FDA regulates the safety of drugs and devices. For instance, in the past year, the agency has approved a number of new obesity-related products, including expanding the use of Vyvanse® aimed at curbing binge eating, Contrave and Saxenda® aimed at weight management, and the Maestro Rechargeable System for certain obese adults, the first weight loss treatment device that targets the nerve pathway between the brain and the stomach that controls feelings of hunger and fullness.[475, 476, 477, 478]

SECTION 3:

The State of Obesity: *Obesity Policy Series*

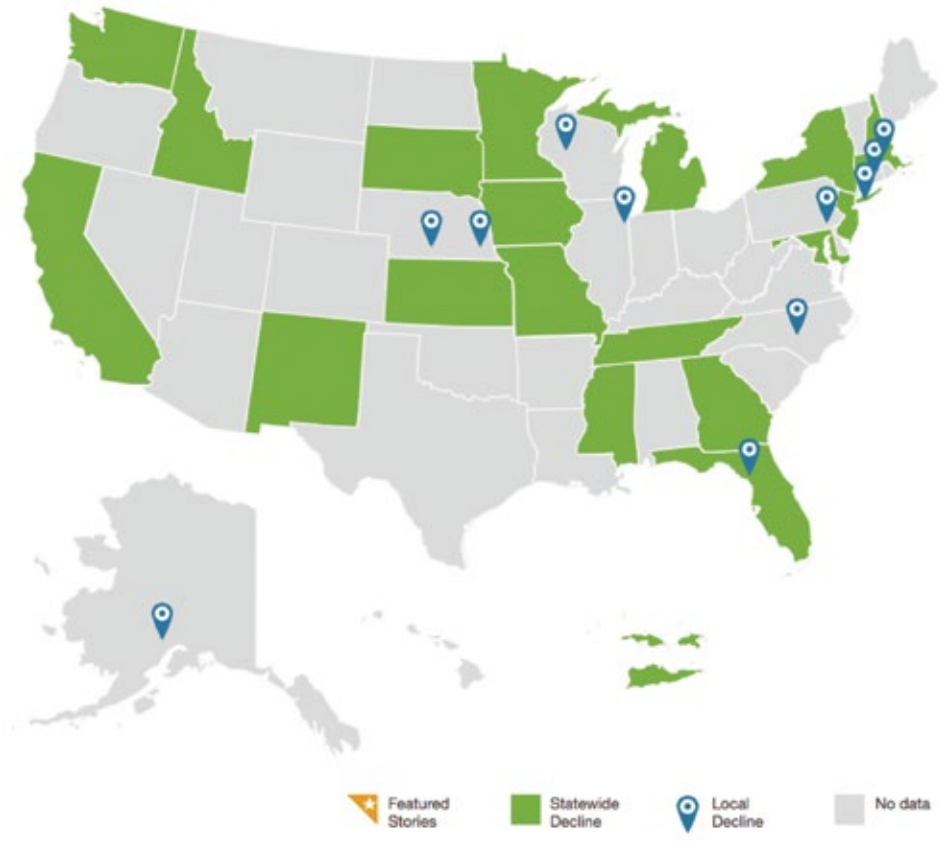
Building on Signs of Progress

Signs of progress have been emerging in some school districts, cities, counties and states across the country that have reported declines in obesity rates, particularly in places that are addressing obesity early and comprehensively. While the progress is promising, these efforts will need to be intensified and replicated in other places to achieve major changes.

Moving forward, the nation needs to redouble its commitment to giving all Americans the chance to be healthy by increasing access to affordable healthy foods and beverages and safe places to be active.

The following section features examples of some areas with positive signs of progress.

SIGNS OF PROGRESS: OVERVIEW AND EXAMPLES



SIGNS OF PROGRESS SPOTLIGHT:

Lincoln, Nebraska Reports 8.2 Percent Decline in Obesity Among Children in Grades K Through 8

Lincoln is a city whose leaders are committed to a creating a Culture of Health across all sectors — and it shows. Residents are becoming more physically active and eating healthier, and obesity rates are declining among both school-age children and adult employees of local businesses.

The Partnership for a Healthy Lincoln is a coalition dedicated to making healthy choices easier, through innovative efforts and programs like:

- A healthy beverage initiative, including a "Rethink Your Drink" public service campaign and an effort to encourage employers to stock, promote and competitively price healthy beverage options;
- The Lincoln Public Schools Wellness office, which focuses on changing policies and practices to improve students' health and fitness and is overseen by a full-time wellness facilitator;
- A community-wide initiative providing education and support to pregnant and breastfeeding moms; and
- Community engagement programs, like "Fit by 2015," an effort to reduce the number of obese children in Lincoln's elementary and middle schools to below 15 percent by the 2015 to 2016 school year and Streets Alive, an annual outdoor "moving festival" featuring events like a farmers' market and a celebration of cycling.

Other highlights of Lincoln's all-hands-on-deck approach to obesity prevention include:

- Workplace wellness programs adopted by city businesses have reported declining obesity rates among participating employees.
- Lincoln became an early champion of *Let's Move!* Cities, Towns, and Counties after adopting the 5-4-3-2-1-GO childhood obesity prevention program in 2013. The program emphasizes good nutrition, adequate physical activity and minimal screen time.
- The city health department sponsors a Summer Food Service Program, which provides healthy summer meals to children from low-income families.

In 2013, Mayor Chris Beutler issued a five-year "Community Health Challenge," to make healthy living a top priority and to work toward becoming the healthiest city in the nation. The city's trailblazing efforts represent some big steps in the right direction.

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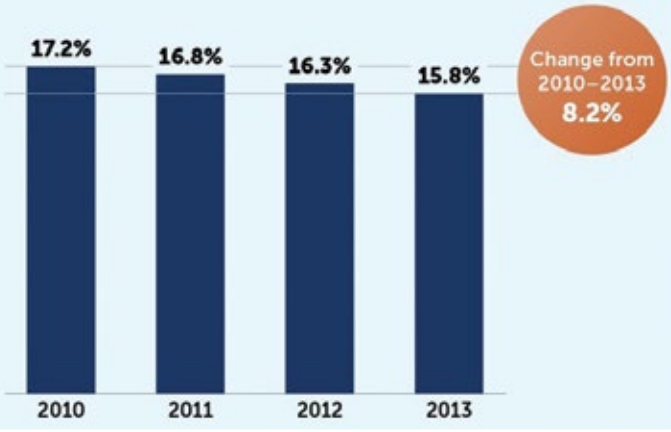
Combined Overweight and Obesity Rates Among Public School Students in Grades K–8

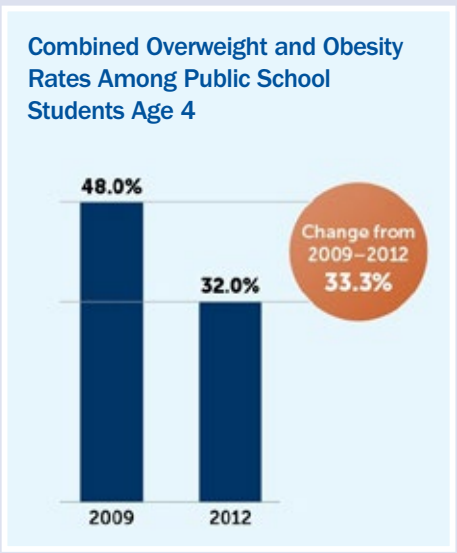


SIGNS OF PROGRESS SPOTLIGHT:

New Britain, Connecticut Reports 33.3 Percent Decline In Overweight and Obesity for 4-Year-Old Children

In 2008, the Coalition for New Britain's Children drafted an ambitious blueprint for improving the lives of the city's youngest children, from birth through age 8. The plan involved families, clergy, healthcare providers, educators and policymakers who live and work in New Britain and are passionate about offering their children the opportunity for a healthy, successful future.

Combined Overweight and Obesity Rates Among Public School Students Age 4



Some of the city's recent strategies for improving children's health include:

- Preschools that serve meals have improved their menus by adding more fresh fruits and vegetables. Many preschools, family resource centers, and other local organizations also offer workshops to teach parents how to prepare healthy meals.
- Federal policy changes to the Women, Infants and Children program in 2009 that promoted breastfeeding and encouraged healthy eating affected nearly 80 percent of families with babies in New Britain. Ensuring that farmers' markets accept WIC vouchers has been effective in helping New Britain's families make healthier food choices.
- The Coalition helped create 90 community garden plots for families to grow their own fresh, healthy food and with help from the Food Corps, New Britain also is creating gardens in schools across the city. Collaboration is key. In 2012, New Britain's mayor designated unused city property to be used for community garden sites.
- Making changes in the citywide school district to help students eat healthy and be active, including launching the 'Chefs to School' program to offer students weekly healthy cooking and nutrition education classes and using a $1 million physical education grant to purchase HopSports, an interactive technology that leads students through physically active lessons.
- Implementing a robust Complete Streets Master Plan to help give residents and families more safe options for walking, biking and using public transit, encourage physical activity, and reduce traffic congestion.
- New Britain also has an accurate, reliable system for assessing obesity rates that allows city officials to track trends over time and evaluate initiatives aimed at reducing obesity.

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SIGNS OF PROGRESS SPOTLIGHT:

Seminole County, Florida Reports Declines in Obesity Among Students in Grades 1, 3 and 6

The Florida Department of Health has a straightforward, if bold, vision: for Florida to be the healthiest state in the nation. Seminole County, on the outskirts of Orlando, is doing all it can to help the state achieve that vision, creating healthier communities for its citizens along the way. In the last several years the county has made a wide variety of changes to help make sure young people in the county can grow up at a healthy weight.

- Seminole County Public Schools creates healthy entrée options in onsite kitchens. It participates in the U.S. Department of Agriculture's Fresh Fruit and Vegetable Program, providing a fresh fruit or vegetable snack to students daily along with weekly nutrition education and monthly promotions. Many schools also have gardens which host educational events, promote physical activity and use produce to make nutritional snacks.
- The county's WIC program actively participates in outreach activities throughout the year, helping qualifying participants enroll, and providing participants with healthy grocery shopping workshops. It also has an active breastfeeding support group, which works to increase rates of breastfeeding and continuation of breastfeeding among clients.
- County officials have worked with Nemours Children's Health System to distribute 5-2-1-Almost None messaging and materials in schools and rec centers throughout the county. The program encourages young people to eat five fruits or vegetables each day, have no more than two hours of screen time, get one hour of physical activity, and drink almost no sugary drinks.
- The county has developed over 40 miles of paved multipurpose trails, allowing residents and visitors to walk, jog, ride bicycles and roller blade safely from one side of the county to the other. These trails connect neighborhoods to schools, shopping, parks and places of business.
- Greenwood Lakes Park, located between a middle school and a high school, installed ten new exercise stations to help residents be active. There are plans to install further equipment in other parks this year.
- The county hosts a 4-H Healthy Kids Cooking program for youth 8 to 12. The classes help teach young people that healthy snacks and meals can be delicious, fast, and easy.
- The Expanded Food and Nutrition Education Program (EFNEP) helps families create healthier eating practices and get more physical activity, and the program has seen success. For every $1 spent on EFNEP programming, $10.64 is saved on healthcare costs, and $2.48 is saved on food expenses.

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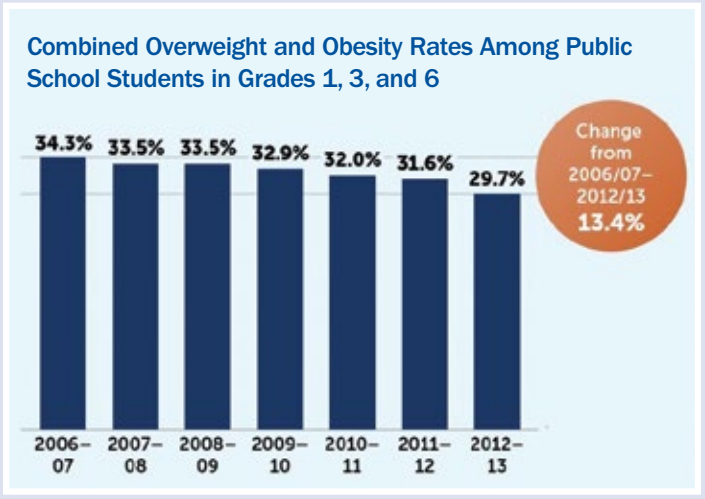

Together, the county's school system and Leisure Services Department are working to create healthier school and community environments for children and families.

"Seminole County is moving forward with fostering strong partnerships to ensure health is considered in all policies," said Dr. Swannie Jett, Health Officer of the Florida Department of Health in Seminole County. "As a community, the more we work together and keep health at the forefront, the more we can change the behaviors, choices and environment in which people live."

SIGNS OF PROGRESS SPOTLIGHT:

Dupage County, Illinois Reports 4.5 Percent Decline in Overweight and Obesity Among Students in Kindergarten, Grades 6 and 9

DuPage County in 2009 launched a major obesity-prevention effort called FORWARD (Fighting Obesity Reaching healthy Weight Among Residents of DuPage). FORWARD has been the key driver of the county's efforts to create healthier communities for children and families, and childhood obesity rates have started to go down in the county. Since 2009, FORWARD has:

- Annually measured student BMI to help it track rates of overweight and obesity over time.
- Spread the 5-4-3-2-1 Go!® recommendations created by the Consortium to Lower Obesity in Chicago's Children to schools, libraries, doctor's offices, after-school programs and other local organizations. The recommendations encourage children to get five servings of fruits and vegetables, four servings of water, three servings of low-fat dairy, two hours or less of screen time, and one hour or more of physical activity every day.
- Launched "Rethink your Drink" in 2012 with the Illinois Alliance to Prevent Obesity (IAPO). Participating hospitals and businesses display signage to encourage people to choose healthier drinks, such as water. Working with FORWARD and IAPO, all five hospital systems serving DuPage County have made improvements to their food and beverage environments, including labeling and creating price incentives for healthy foods, offering more fresh fruits and vegetables, and offering water as the default beverage in meal deals.
- Created the FORWARD Action Network (FAN) to support healthcare providers' efforts to address obesity. The FAN provides guidance to help providers address nutrition, physical activity, and obesity with pediatric patients. It also connects providers with local resources that encourage healthy eating and physical activity, such as ProActive Kids—a free wellness program for families.
- In 2013, awarded mini-grants totaling $42,000 to 11 county organizations, including elementary schools, food pantries, and local YMCAs, to purchase physical activity equipment, upgrade kitchen equipment, and improve community gardens. These capacity building grants build on close to $200,000 in grants to local organizations over the previous four years.

The county has considered health in many other aspects of its planning too, such as its long-term environmental plans. In 2012, DuPage signed onto the Cool Counties Initiative to reduce greenhouse gases. One of the recommendations states that the County should educate consumers about the benefits of buying locally grown food and shopping locally, which spurred the County to work with FORWARD to increase the number of school and community gardens.

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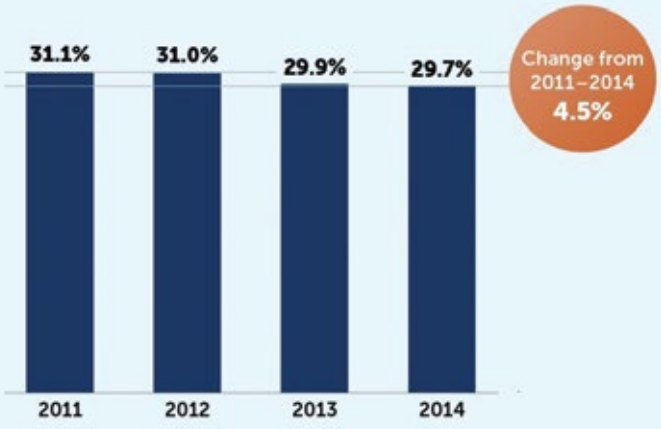
Combined Overweight and Obesity Rates Among Children in Grades K, 6, and 9



SIGNS OF PROGRESS SPOTLIGHT:

Tennessee Reports 6.3 Percent Decline in Overweight and Obesity Among Students in Grades K, 2, 4, 6, 8 and High School.

Many of Tennessee's obesity prevention efforts have centered on schools. In 2001, the state department of education established the Office of Coordinated School Health (CSH) to improve student health and their capacity to learn. By the 2007 to 2008 school year — bolstered by funding from the state and a grant from the Centers for Disease Control and Prevention — all Tennessee public schools had implemented CSH. Some of the progress made to create healthy schools across the state includes:

- The percentage of schools no longer selling soda or non-100 percent fruit juice increased from 27 percent in 2006 to 69 percent in 2012.
- Beginning in 2007, schools were required to provide 90 minutes per week of physical activity time for students. By the end of the 2013 to 14 school year, more than 85 percent of school districts reported compliance and nearly two-thirds of all school districts reported exceeding the minimum requirements.
- Since CSH was implemented statewide, 289 schools have set up in-school fitness rooms for students; 324 schools have created new gardens; 331 schools have new or updated playgrounds; and 467 schools have developed walking tracks or trails.

Other statewide efforts also aim to help improve health and reduce obesity among residents of all ages:

- The Tennessee Department of Transportation adopted a statewide Complete Streets policy in 2010 to encourage walking and biking on new and existing roads.
- The Tennessee Grocery Access Taskforce received a grant and technical assistance from the Food Trust to put forward a plan that will bring more supermarkets and other healthy food retail stores to underserved neighborhoods.

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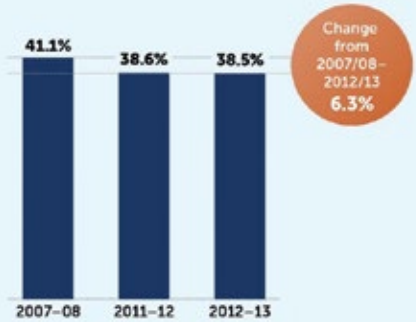
Combined Overweight and Obesity Rates Among Students in Grades K, 2, 4, 6, 8, and High School



SIGNS OF PROGRESS SPOTLIGHT:

Chetek-Weyerhaeuser School District, Wisconsin reports 30.2 percent decline in combined overweight and obesity for children in grades K through 12.

In 2009, 43 percent of the approximately 900 students in this rural Wisconsin school district were overweight or obese — but today, that rate is down by more than 30 percent. The district has implemented a number of changes to help students grow up at a healthy weight.

The district's students are eating healthier at school:

- Meals are healthier, modeled on recommendations from the Institute of Medicine. There are more fruit and vegetable options, more whole grains, and salt is being incrementally reduced.
- On most days, 1 percent and skim milk are the only milk options in the cafeteria.
- Retrofitted water filling stations, specialized to fill water bottles, were installed above pre-existing drinking fountains. Each student was given a water bottle and encouraged to drink water in the classroom throughout the day.
- The foodservice staff has adopted new nutrition analysis software, to help build healthy, age-appropriate menus and post nutrition facts online.
- Health and home economics students lead their classmates in lessons on health and nutrition, through peer-teaching projects.

With help from the local Tri-County Medical Society, school leaders also applied for a grant from the U.S. Department of Education's Carol M. White Physical Education — and received $975,000 to help students get moving. Additional in-kind donations brought total funding to $1.3 million.

The district has used the grant to expand students' opportunities for activity beyond competitive sports, and to help create healthy, lifelong personal habits. The district's investments include:

- New playground equipment;
- A 40-foot-long, 10-foot-high climbing wall;
- In-line skates, snowshoes, canoes, kayaks, cross-country skis and mountain bikes; and
- Indoor exercise equipment, such as treadmills, elliptical machines and weight machines.

The upper Midwest's cold winters mean that being active is not always easy, but students in the Chetek-Weyerhaeuser Area School District are learning fun ways to stay active year-round.

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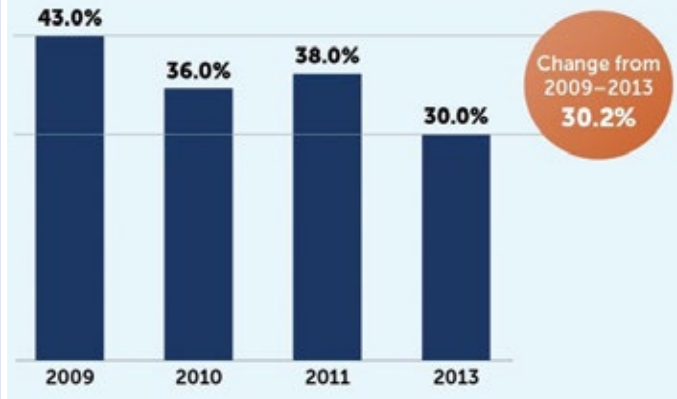
Combined Overweight and Obesity Among Children in Grades K–8



Methodology for Behavioral Risk Factor Surveillance System for Obesity, Physical Activity and Fruit and Vegetable Consumption Rates

Methodology for Obesity and Other Rates Using BRFSS

Annual Data

Data for this analysis was obtained from the Behavioral Risk Factor Surveillance System dataset (publicly available on the web at www.cdc.gov/brfss). The data were reviewed and analyzed for TFAH and RWJF by Daniel Eisenberg, PhD, Associate Professor, Health Management and Policy at 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.

Variables of interest included BMI, physical inactivity, diabetes, hypertension and consumption of fruits and vegetables five or more times a day. BMI was calculated by dividing self-reported weight in kilograms by the square of self-reported height in meters. 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 — researchers report results for Whites, Blacks and Latinos — 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 either unsure, or refused to answer.

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.

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