Healthy Communities:
What Local Governments Can Do To Reduce and Prevent Obesity

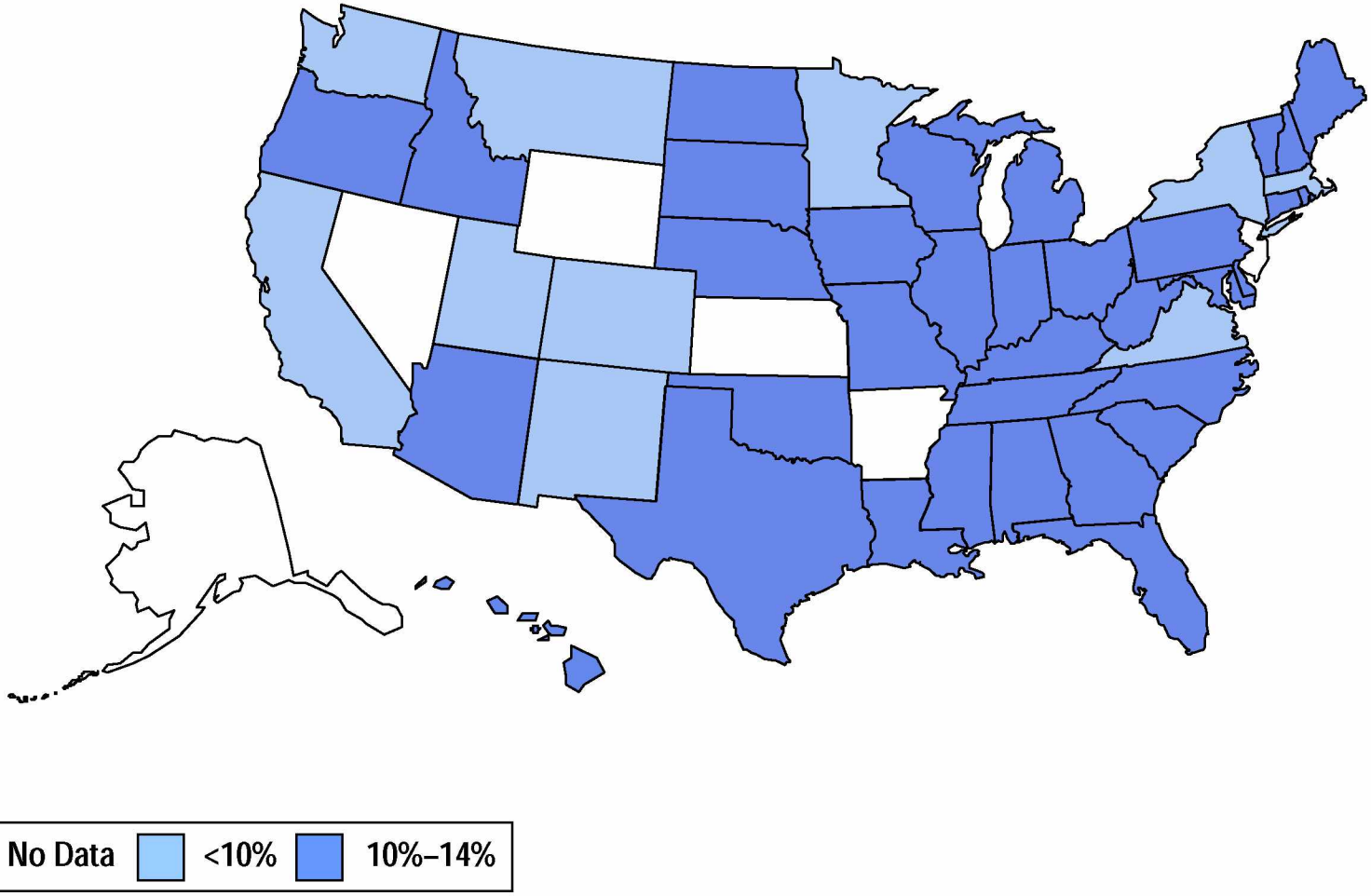
National Center for Chronic Disease Prevention and Health Promotion
Division of Nutrition, Physical Activity, and Obesity

Presentation Overview

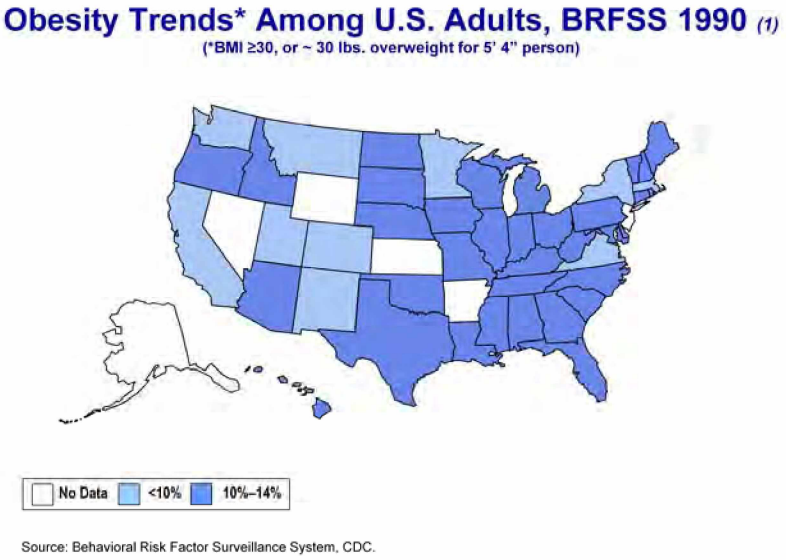
1. Overview of the Obesity Epidemic
2. How Did We Get Here?
3. Why Should Local Governments Care?
4. Policy & Environmental Change to Address Obesity
5. CDC Recommended Community Strategies and Measurements to Prevent Obesity

Obesity Trends* Among U.S. Adults, BRFSS 1990 *(1)*

(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)



Source: Behavioral Risk Factor Surveillance System, CDC.



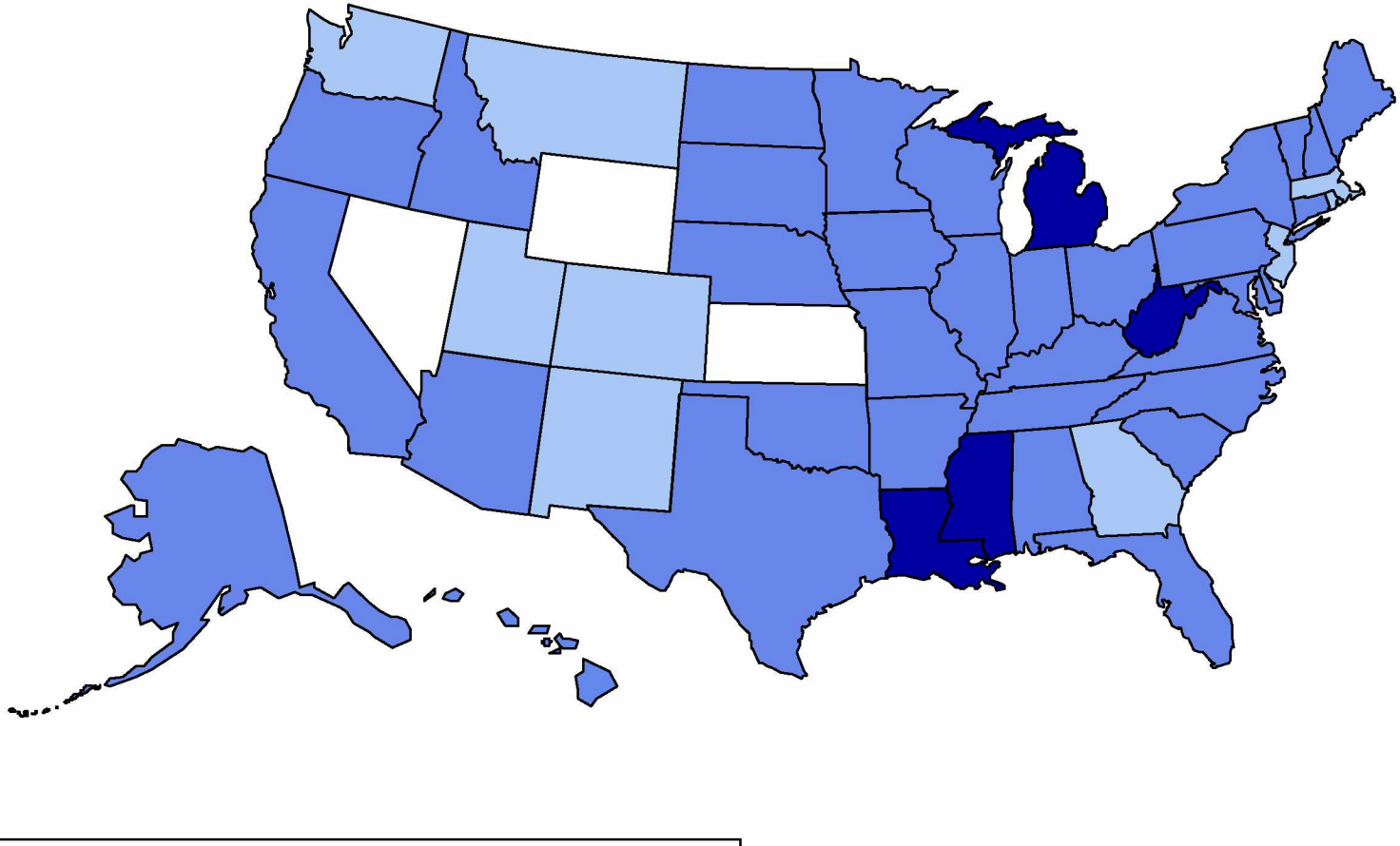
For many years CDC has demonstrated through data and graphic maps the continuing rise in obesity. The data shown in the following maps were collected through CDC's Behavioral Risk Factor Surveillance System (BRFSS).

- In 1990, among states participating in the Behavioral Risk Factor Surveillance System, ten states had a prevalence of obesity less than 10% and no states had prevalence equal to or greater than 15%.

- In 2009, only one state (Colorado) and the District of Columbia had a prevalence of obesity less than 20%. Thirty-three states had a prevalence equal to or greater than 25%; nine of these states (Alabama, Arkansas, Kentucky, Louisiana, Mississippi, Missouri, Oklahoma, Tennessee, and West Virginia) had a prevalence of obesity equal to or greater than 30% (1)

Obesity Trends* Among U.S. Adults, BRFSS 1991

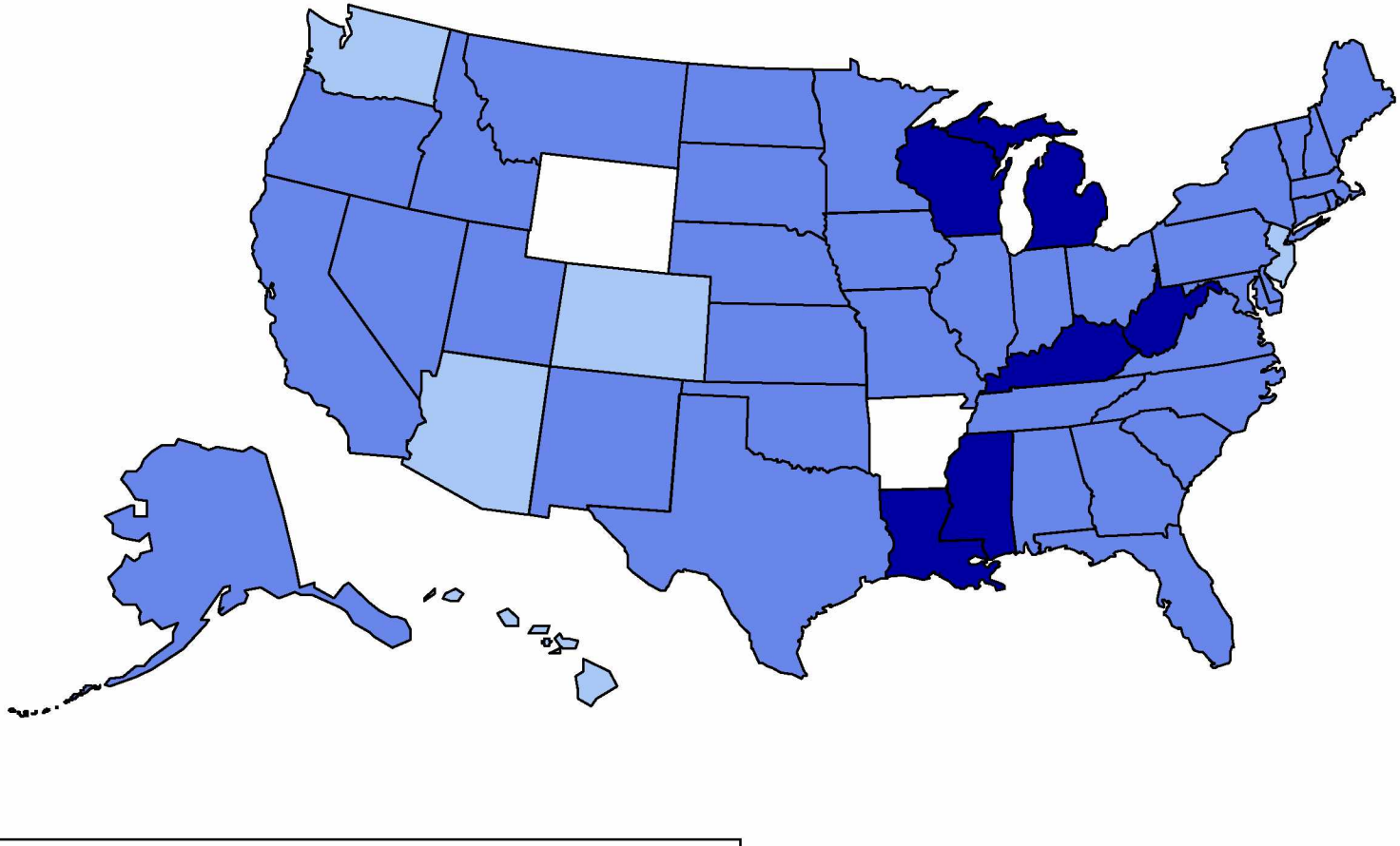
(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)



Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity Trends* Among U.S. Adults, BRFSS 1992

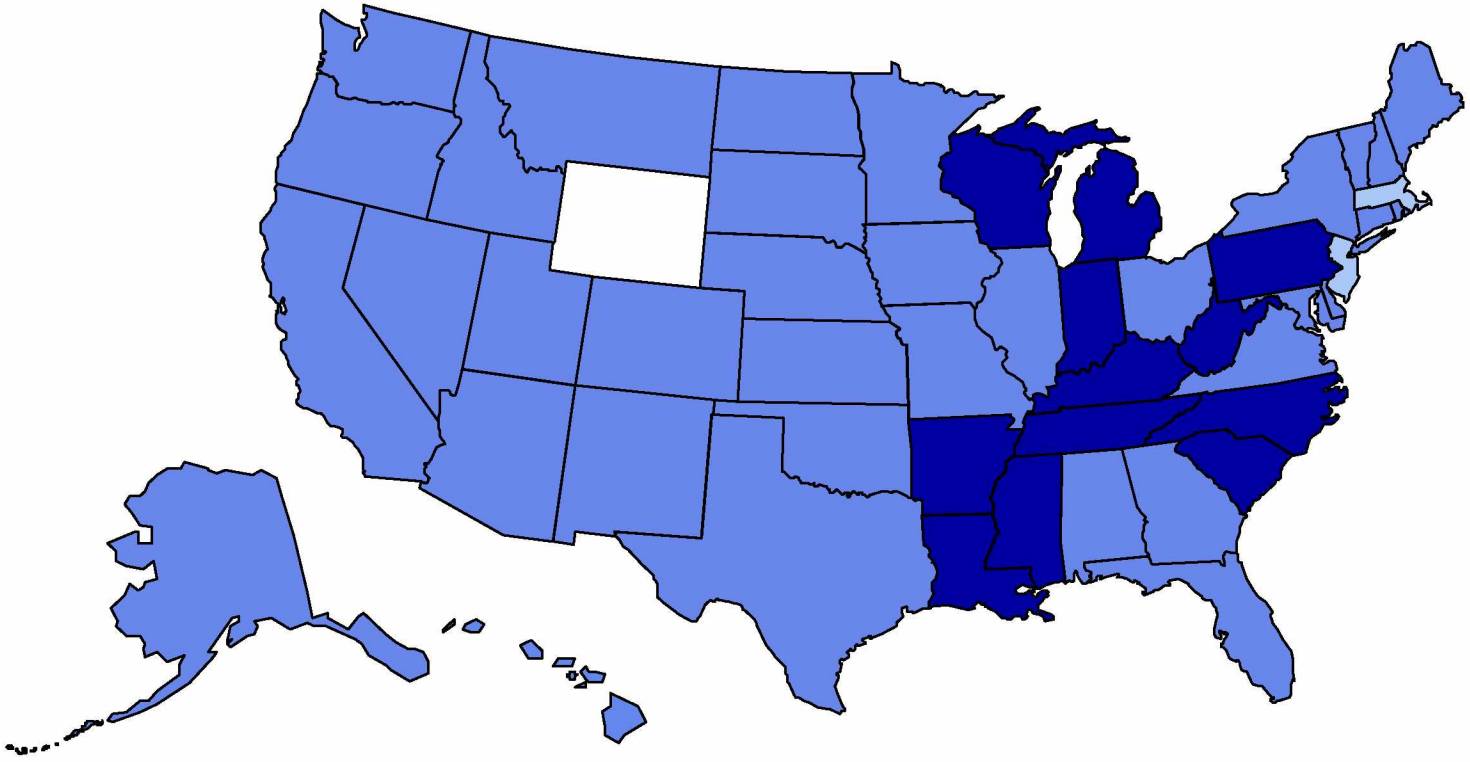
(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)



Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity Trends* Among U.S. Adults, BRFSS 1993

(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)

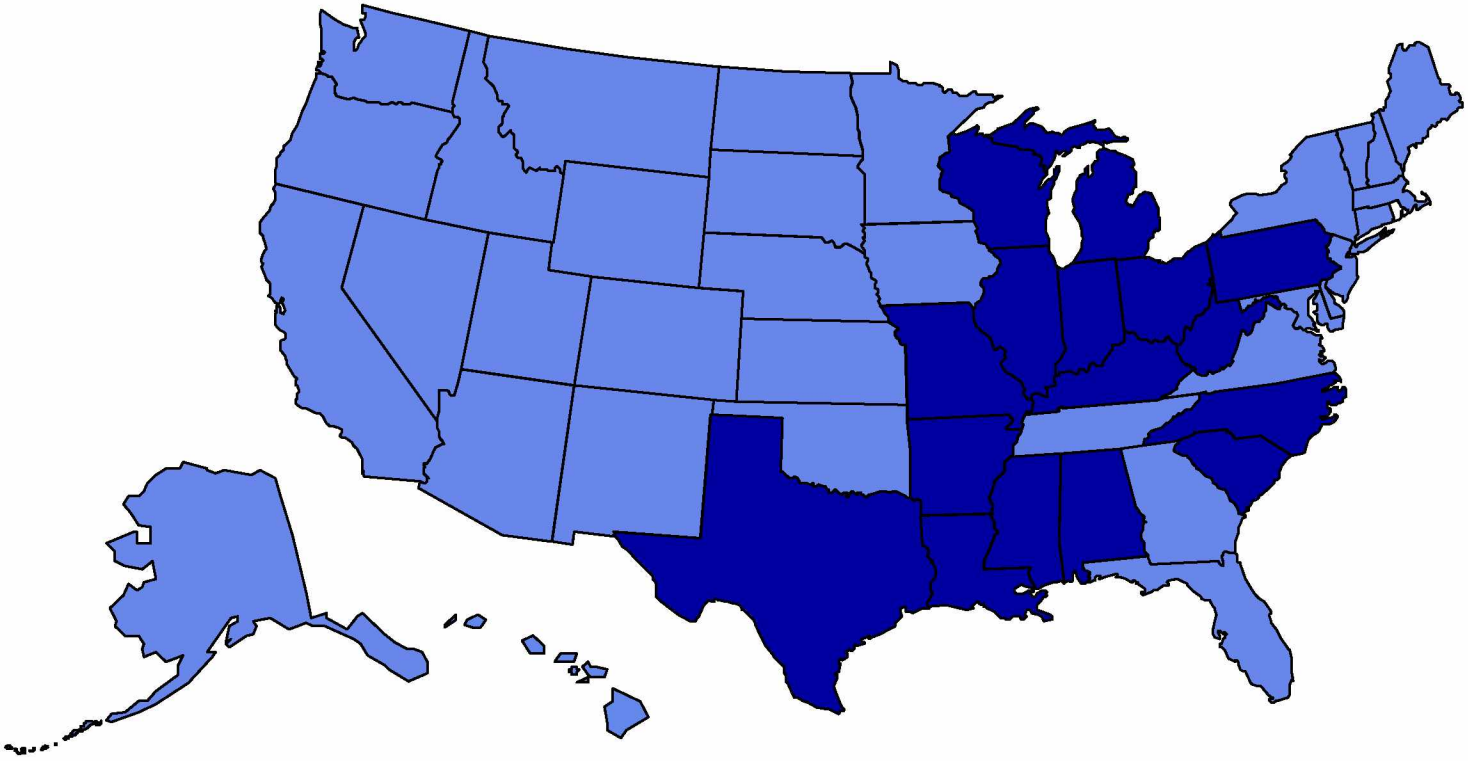


No Data | <10% | 10%–14% | 15%–19%

Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity Trends* Among U.S. Adults, BRFSS 1994

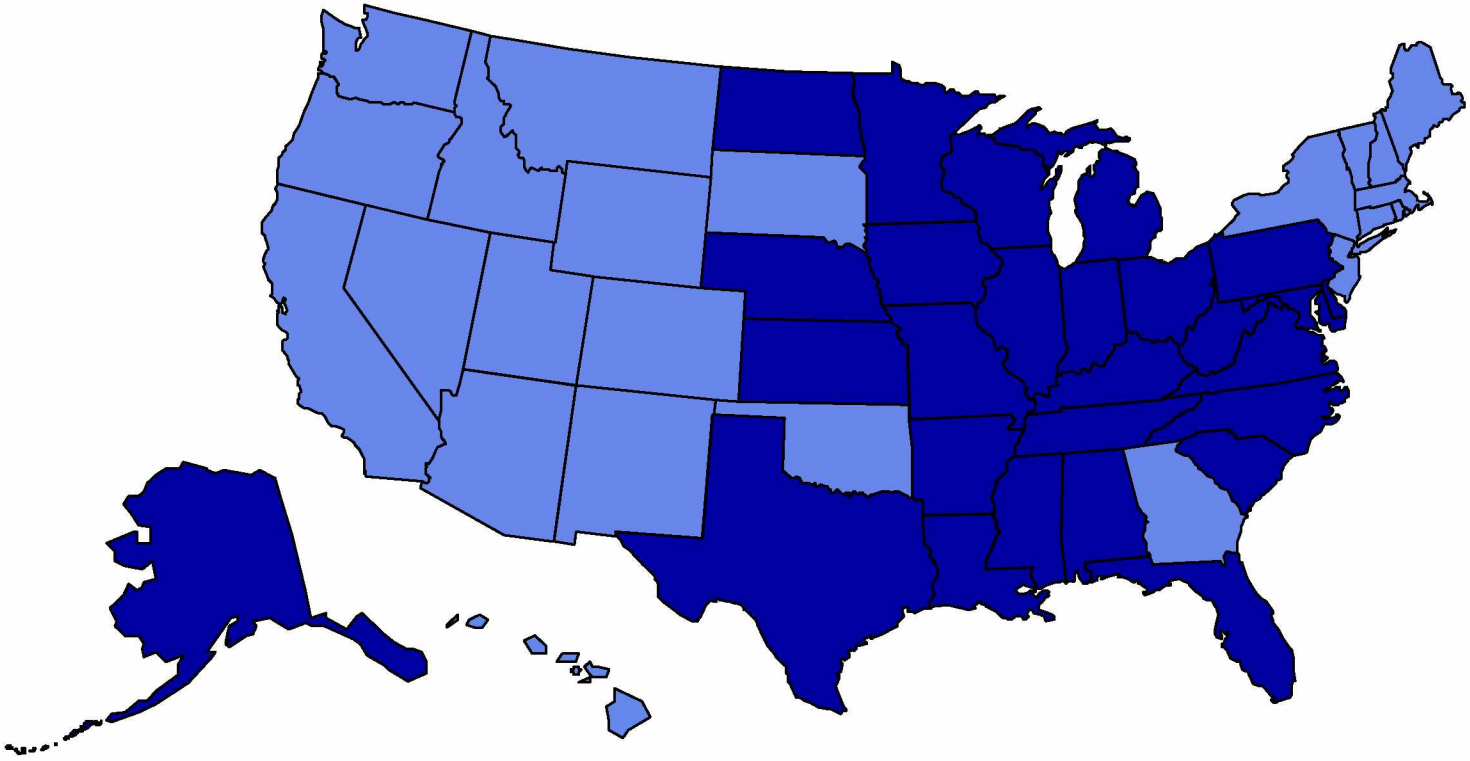
(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)

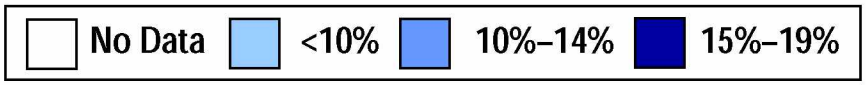


Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity Trends* Among U.S. Adults, BRFSS 1995

(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)

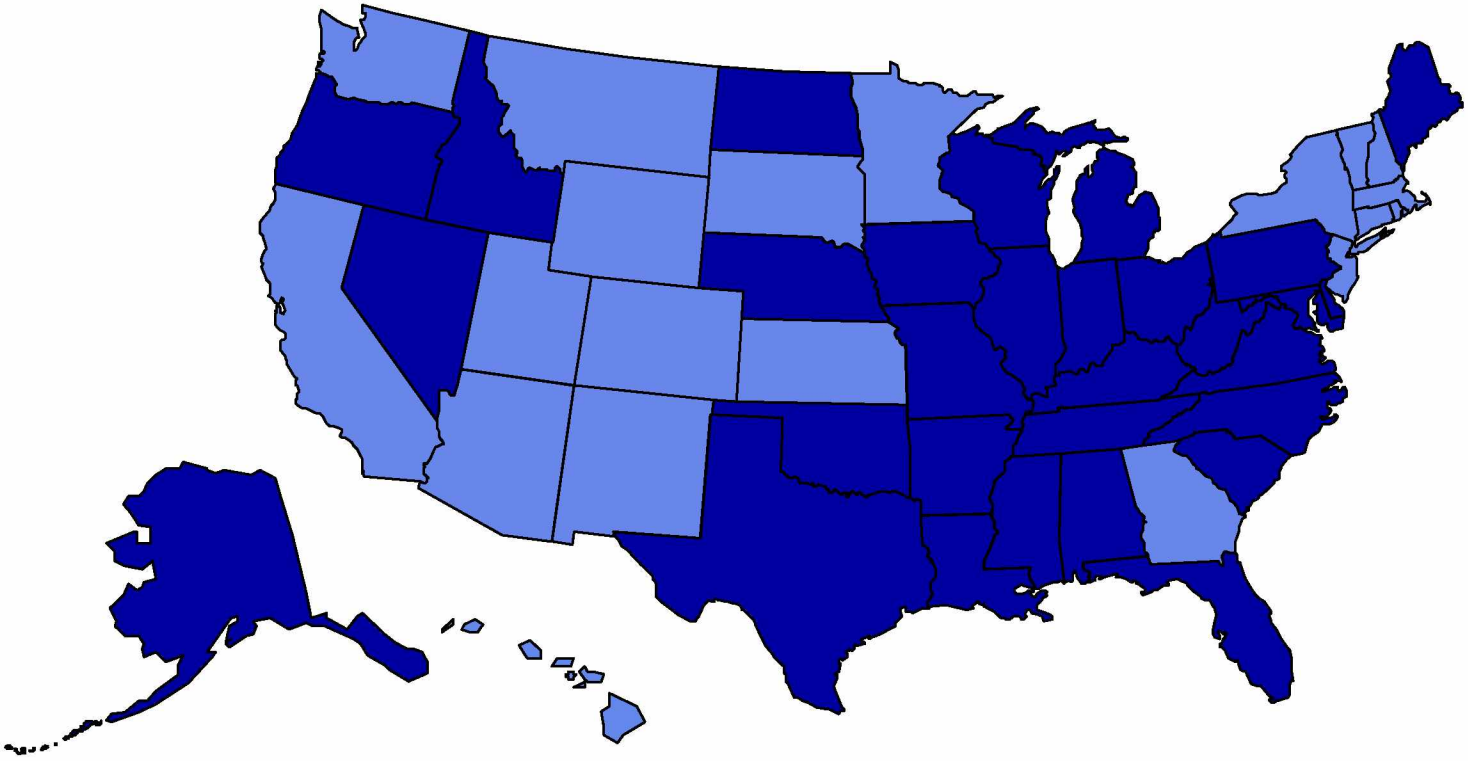




Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity Trends* Among U.S. Adults, BRFSS 1996

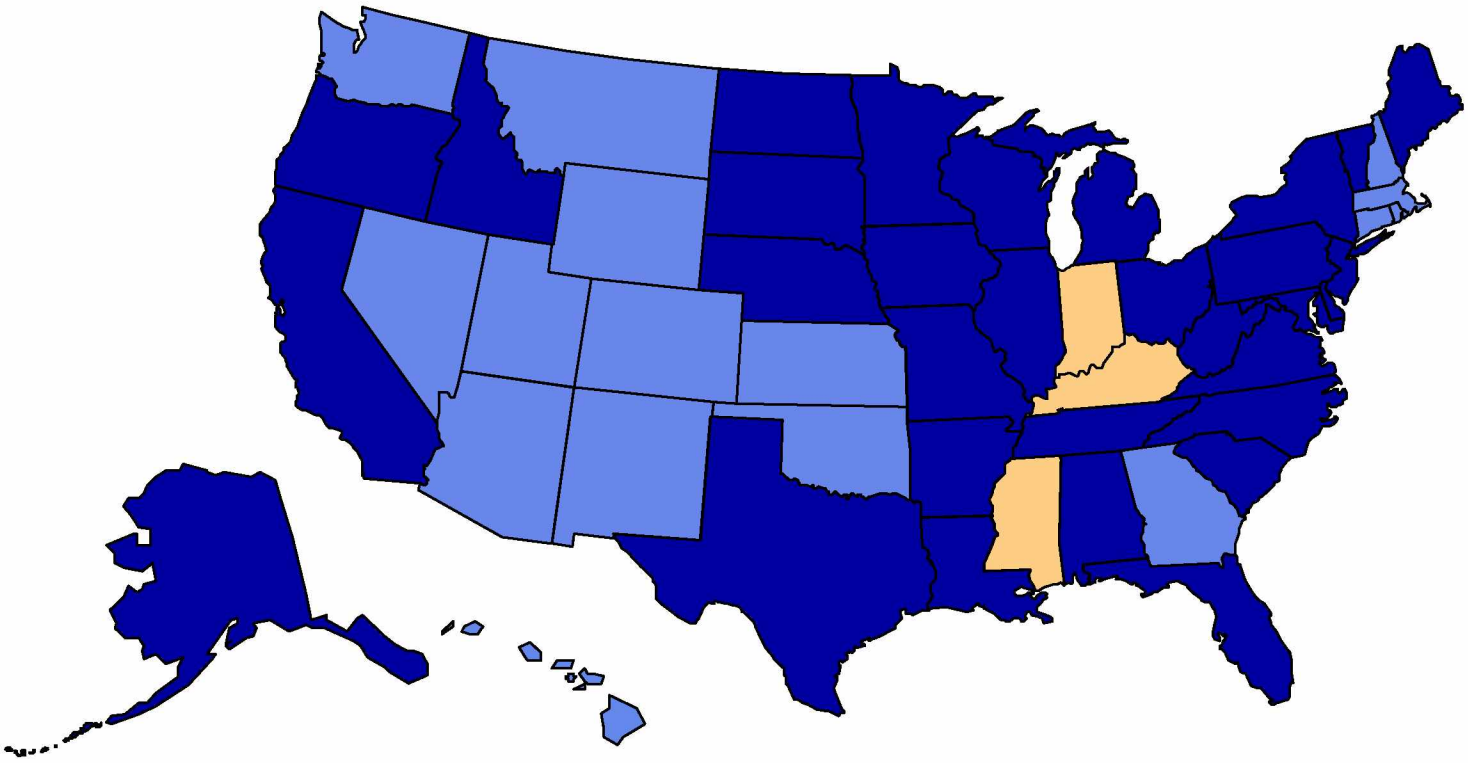
(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)



Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity Trends* Among U.S. Adults, BRFSS 1997

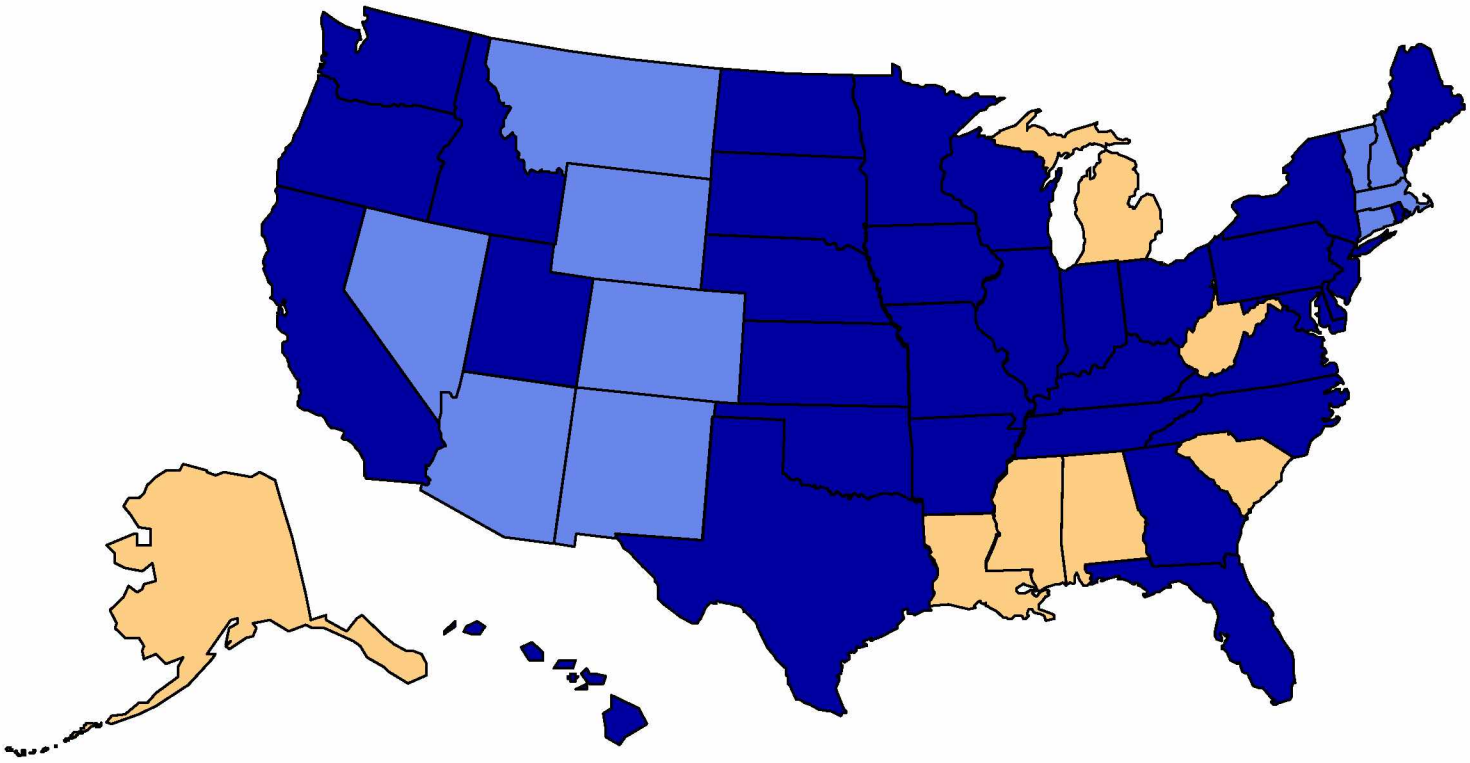
(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)

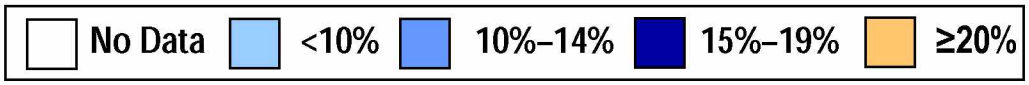


Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity Trends* Among U.S. Adults, BRFSS 1998

(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)

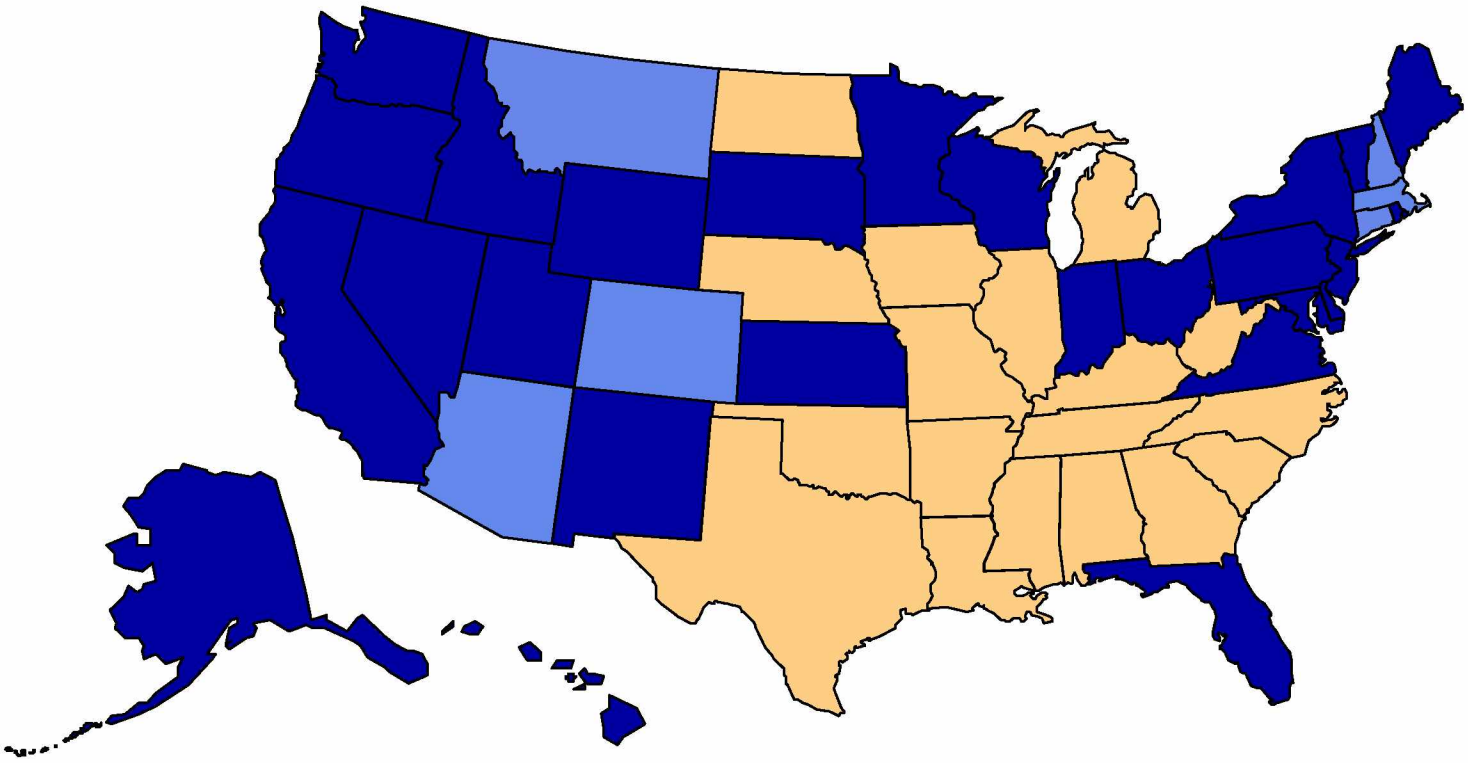




Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity Trends* Among U.S. Adults, BRFSS 1999

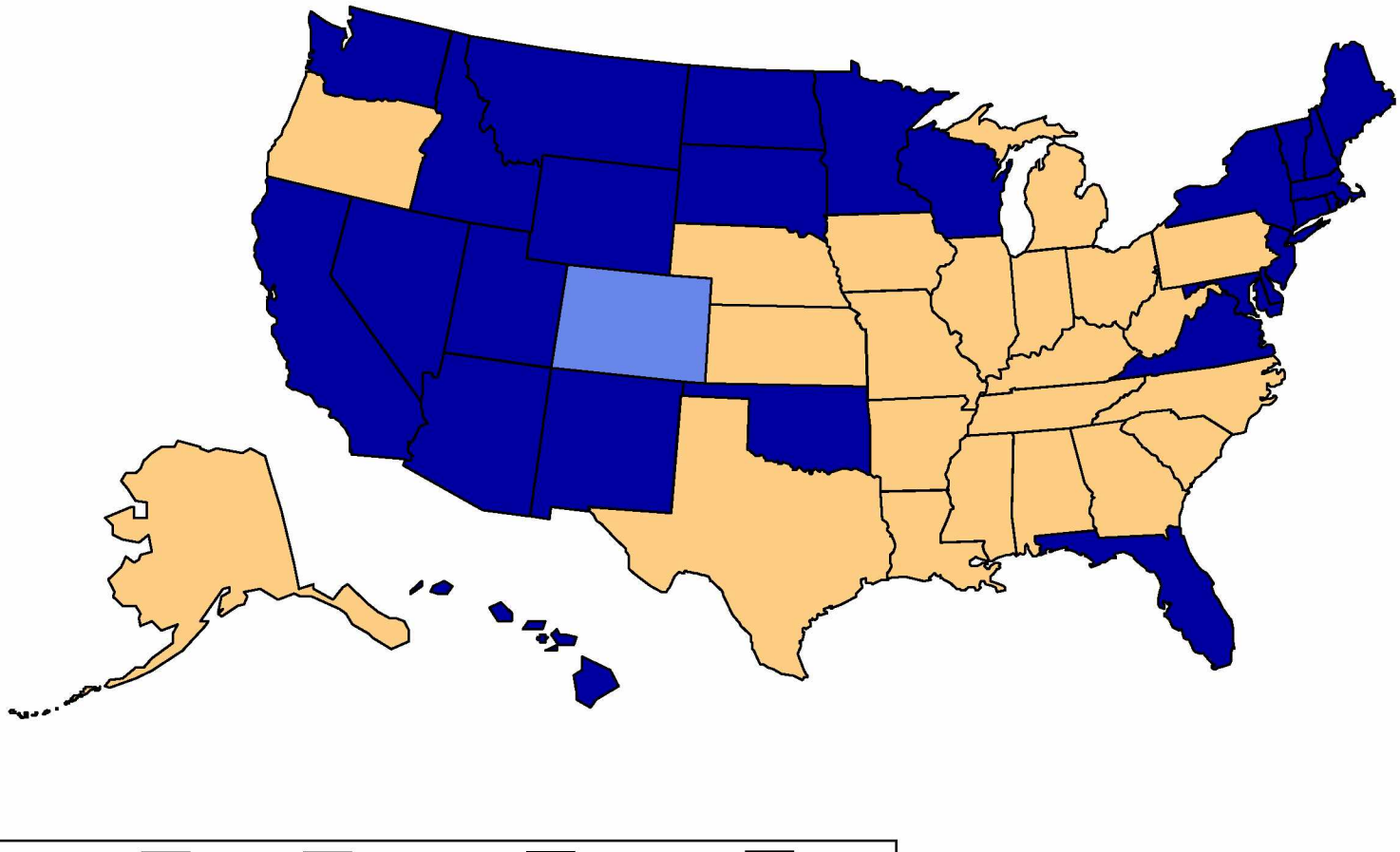
(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)



Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity Trends* Among U.S. Adults, BRFSS 2000

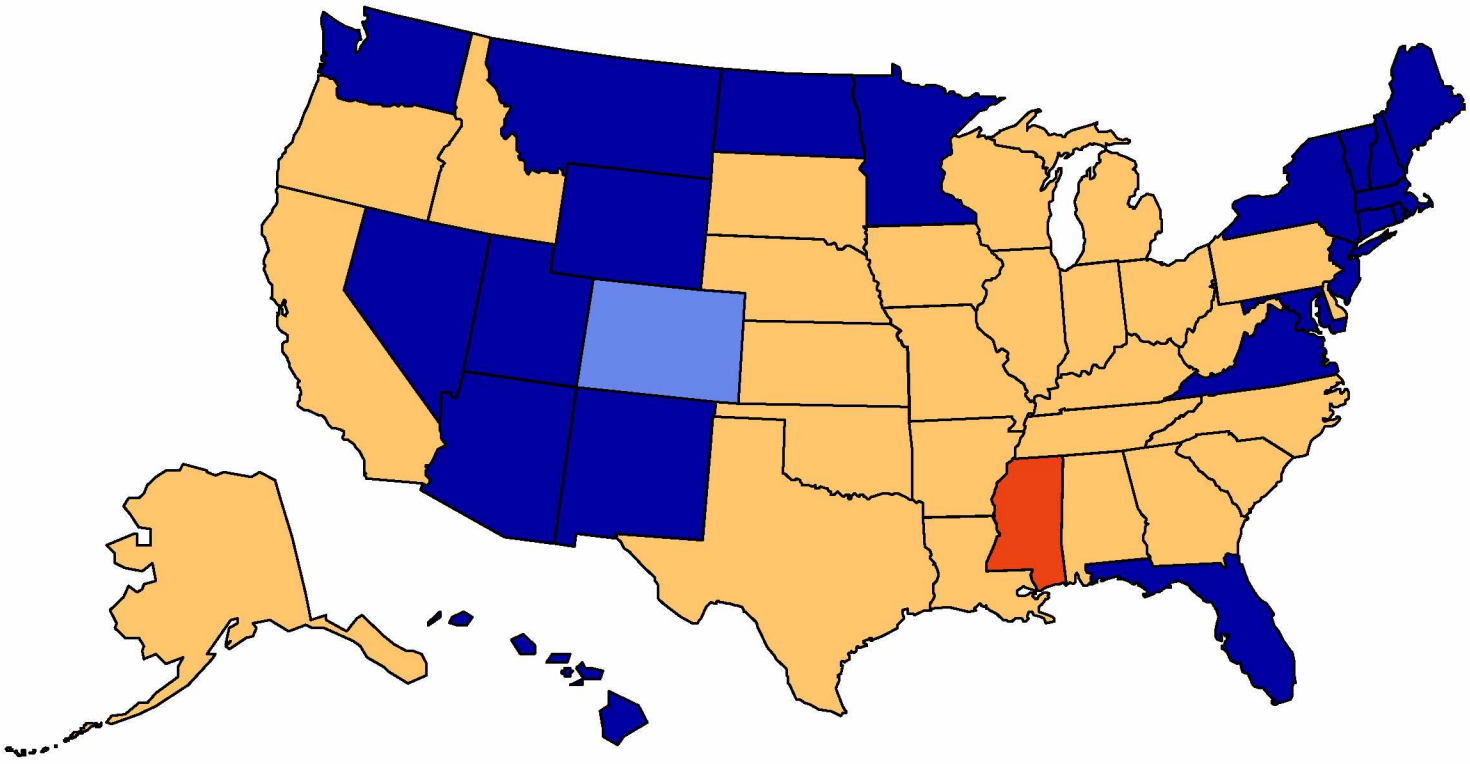
(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)

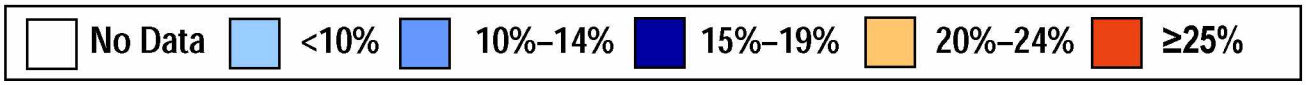


Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity Trends* Among U.S. Adults, BRFSS 2001

(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)

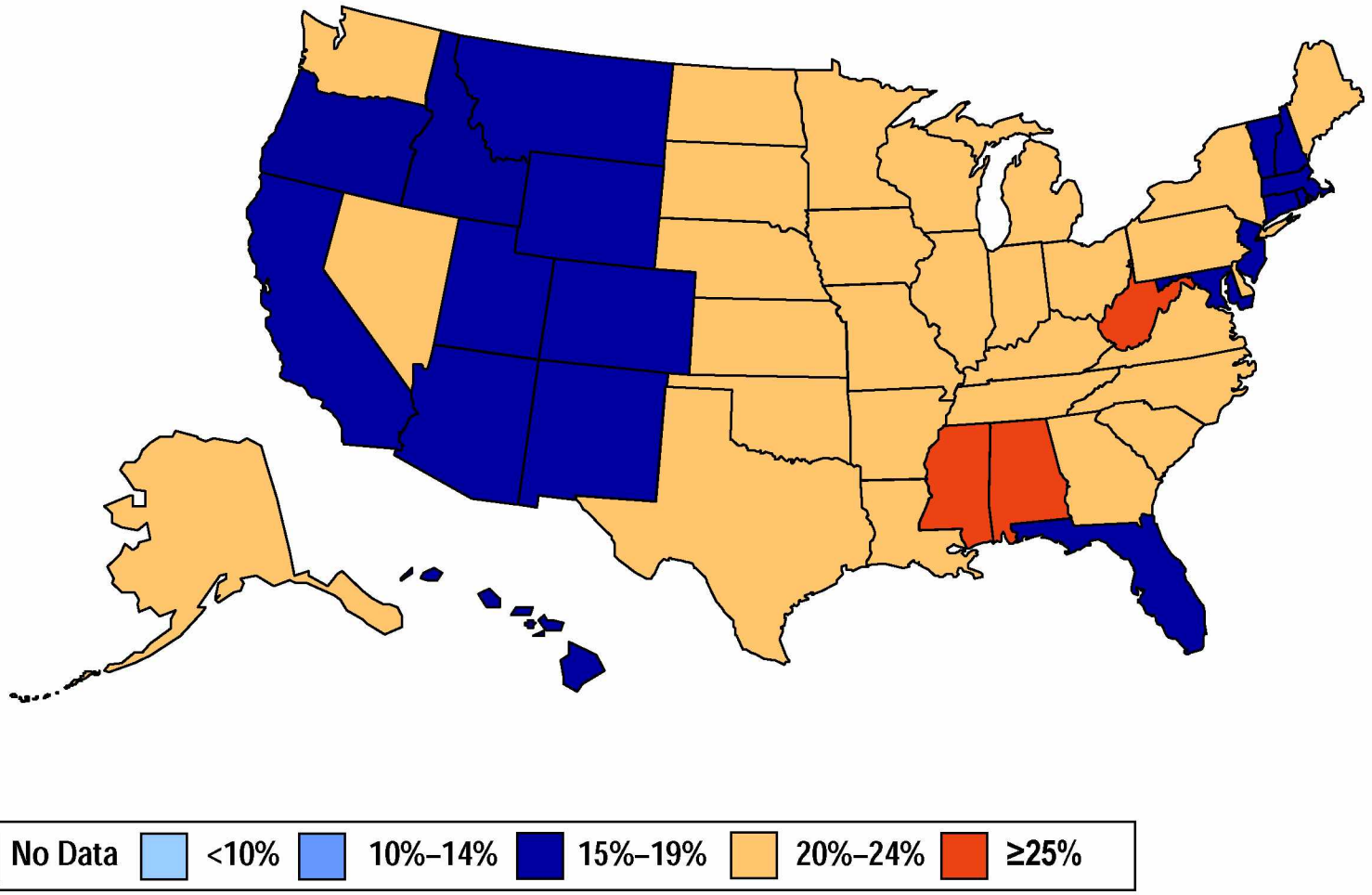




Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity Trends* Among U.S. Adults, BRFSS 2002

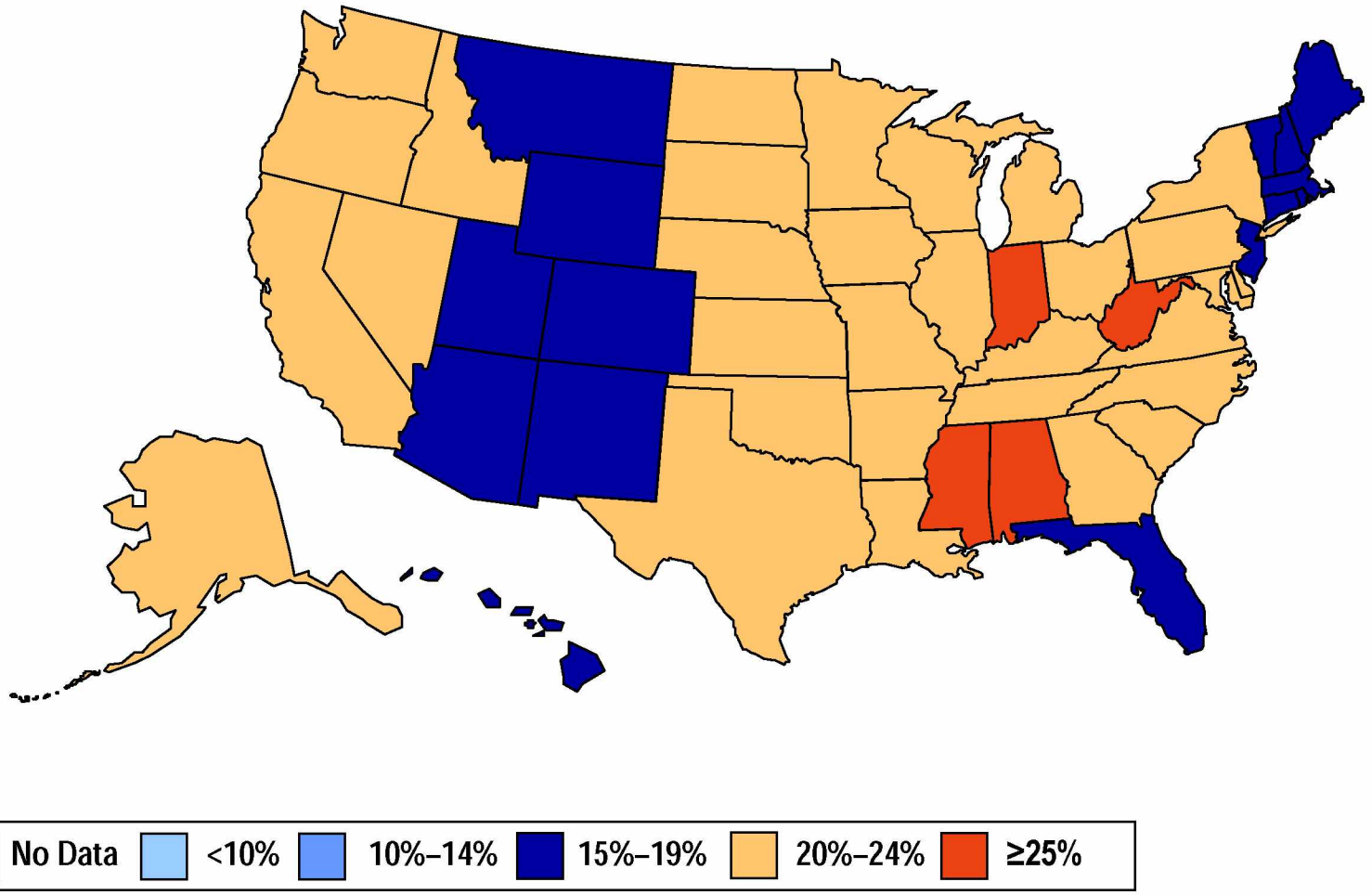
(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)



Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity Trends* Among U.S. Adults, BRFSS 2003

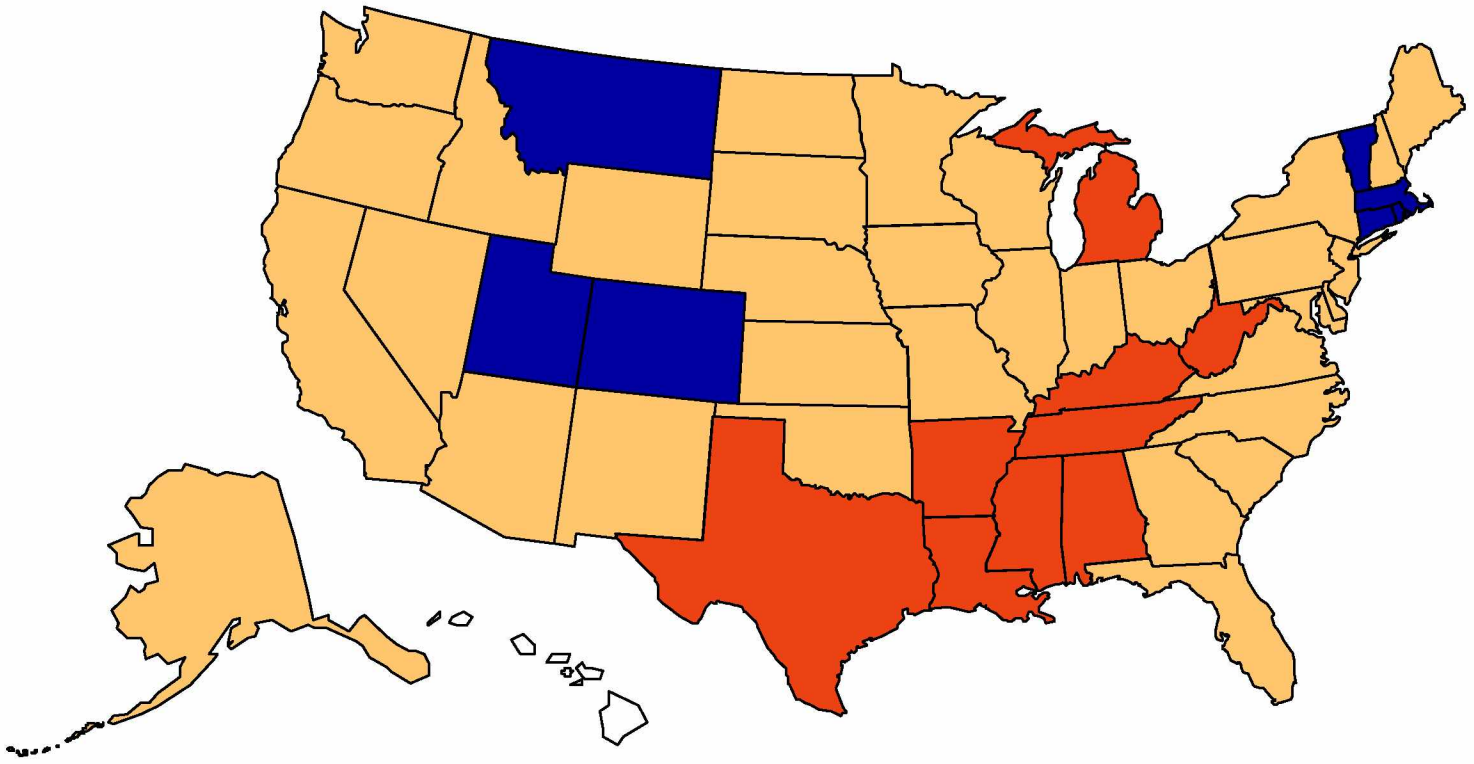
(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)

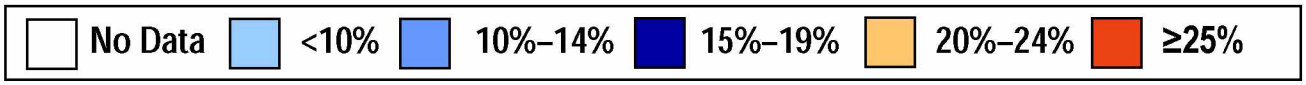


Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity Trends* Among U.S. Adults, BRFSS 2004

(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)

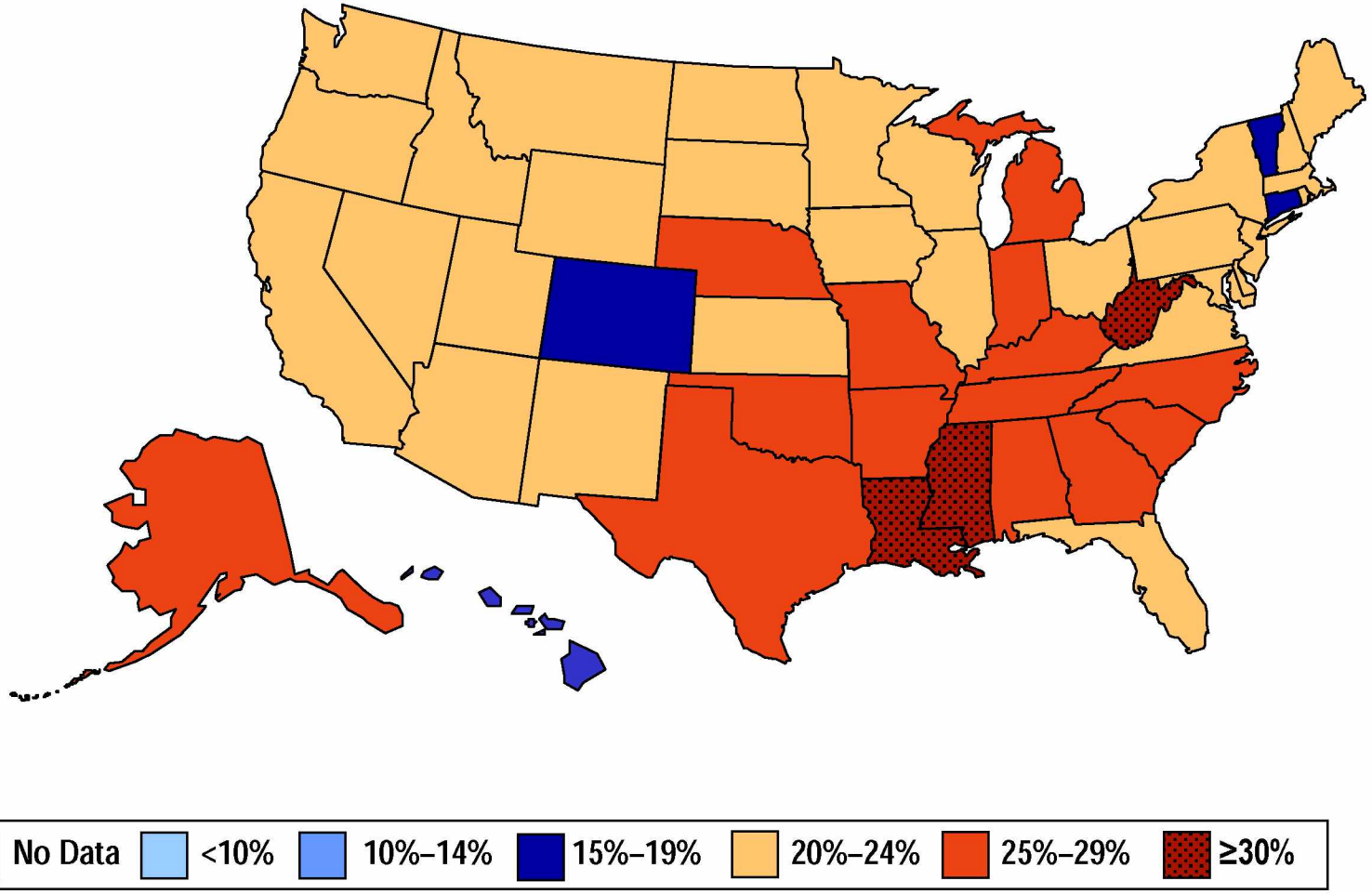




Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity Trends* Among U.S. Adults, BRFSS 2005

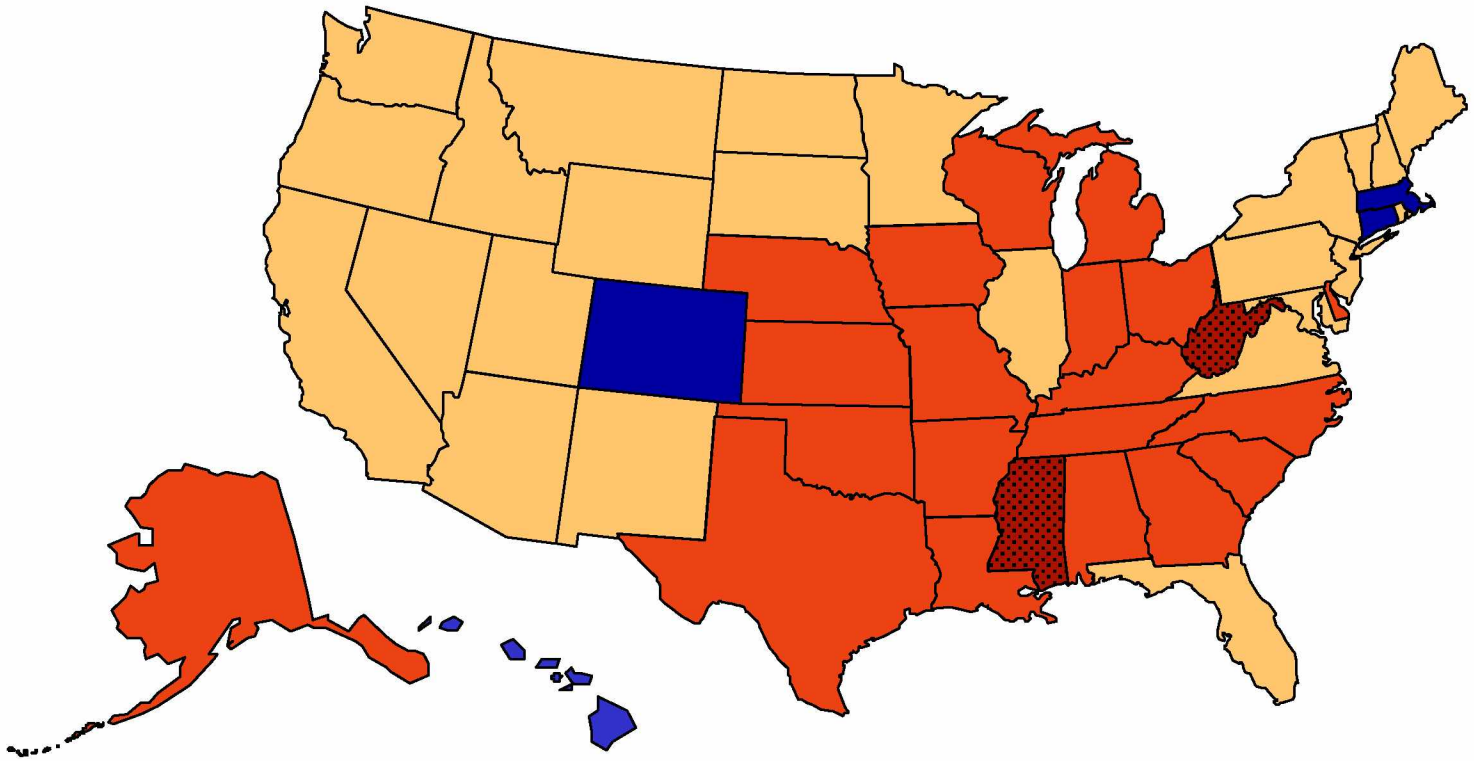
(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)

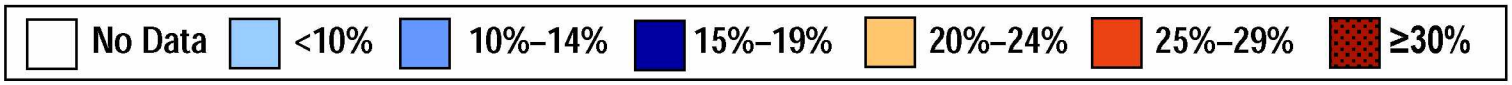


Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity Trends* Among U.S. Adults, BRFSS 2006

(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)

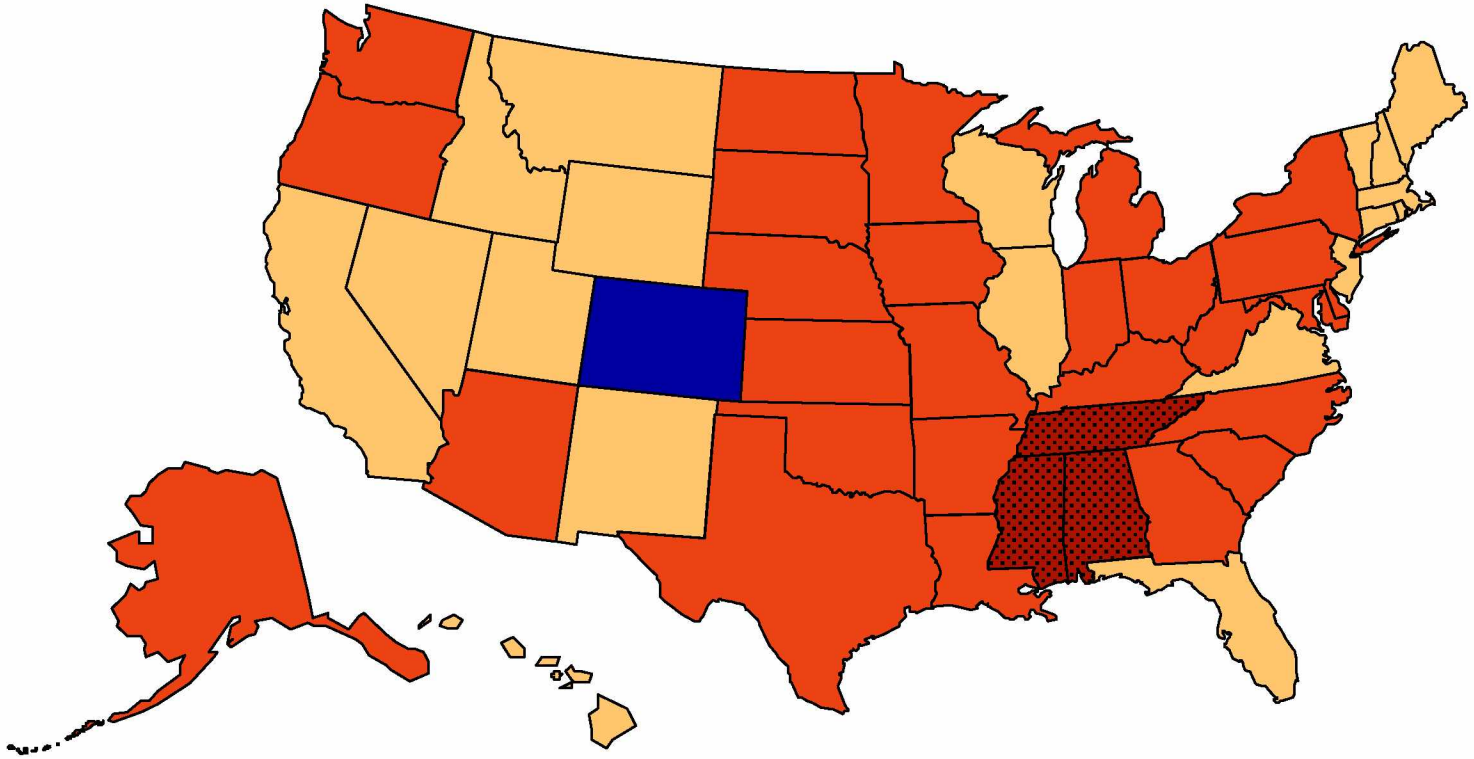




Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity Trends* Among U.S. Adults, BRFSS 2007

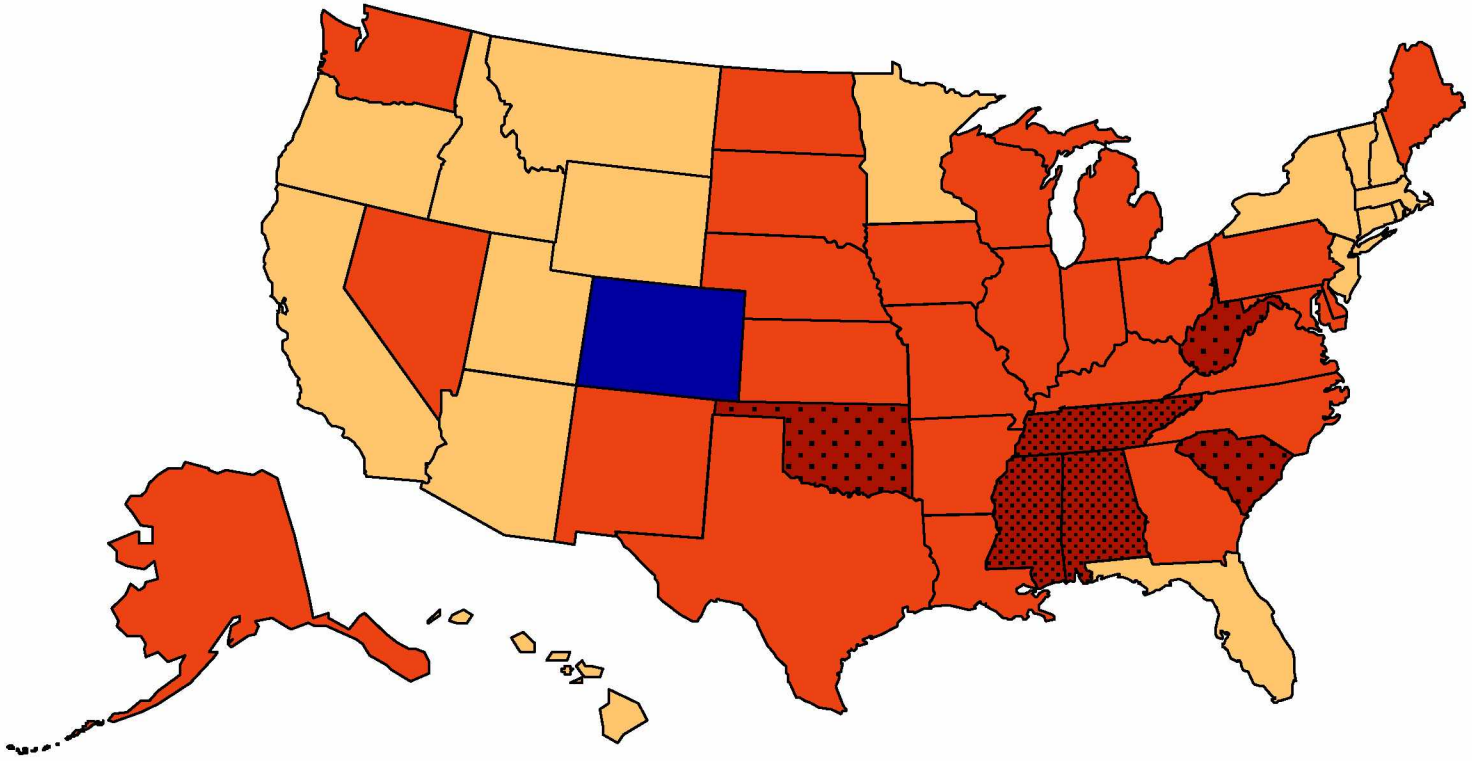
(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)



Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity Trends* Among U.S. Adults, BRFSS 2008

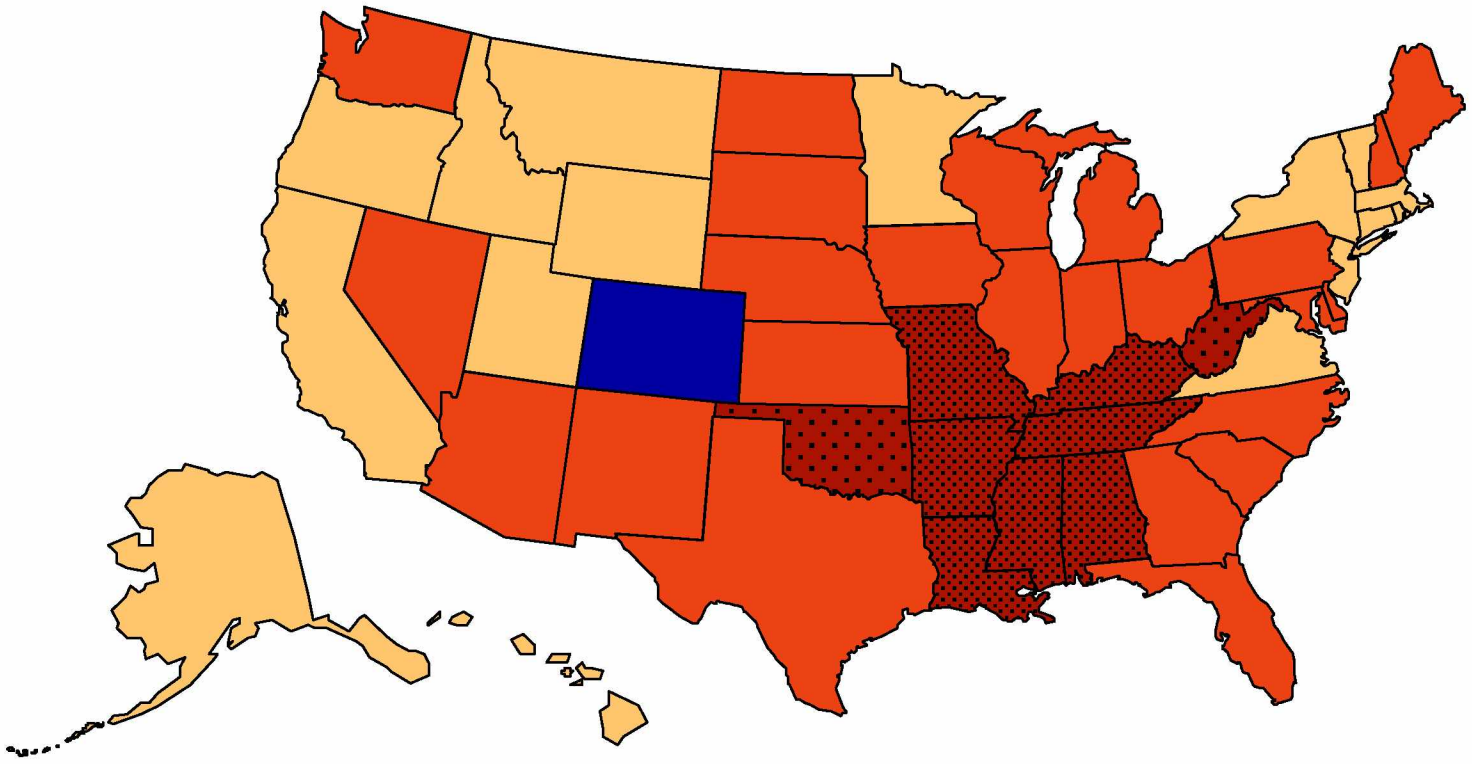
(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)

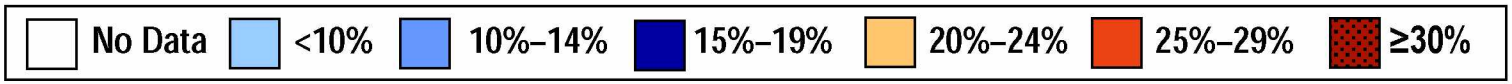


Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity Trends* Among U.S. Adults, BRFSS 2009

(*BMI ≥30, or ~ 30 lbs. overweight for 5' 4" person)





Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity Statistics

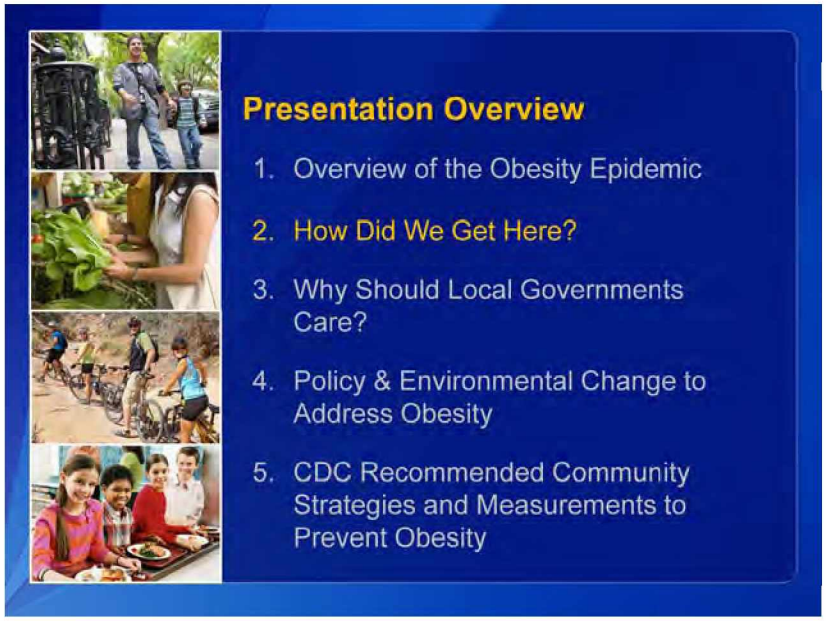
- Between 1980–2008, obesity prevalence among U.S. adults doubled (2,3), and recent data indicate an estimated 34% of adults are obese (BMI ≥ 30) (4) .
- More than one in six U.S. children is obese, three times the rate in the 1970's (BMI at or above the 95% percentile of the sex specific BMI for age growth charts) (5).
- According to 2006-2008 self reported data, Blacks had 51% higher prevalence of obesity, and Hispanics had 21% higher obesity prevalence compared with whites (6).

Information on these obesity statistics, as well as state specific data, can be found on CDC's Division of Nutrition Physical Activity and Obesity website: http://www.cdc.gov/obesity/data/trends.html#State

- Obesity Trends by State
- Obesity by Race Ethnicity
- County Specific Diabetes and Obesity Prevalence
- Overweight Trends Among Children and Adolescents

Presentation Overview

1. Overview of the Obesity Epidemic
2. How Did We Get Here?
3. Why Should Local Governments Care?
4. Policy & Environmental Change to Address Obesity
5. CDC Recommended Community Strategies and Measurements to Prevent Obesity



Overall, there are a variety of factors that play a role in obesity, this makes it a complex health issue to address. Overweight and obesity result from an energy imbalance, which involves eating too many calories and not getting enough physical activity. In this section, we will describe how individual behavior and our environment contribute to the obesity epidemic.

Dietary Behaviors

- Increased consumption of sugar sweetened beverages
- Continued low consumption of fruits and vegetables

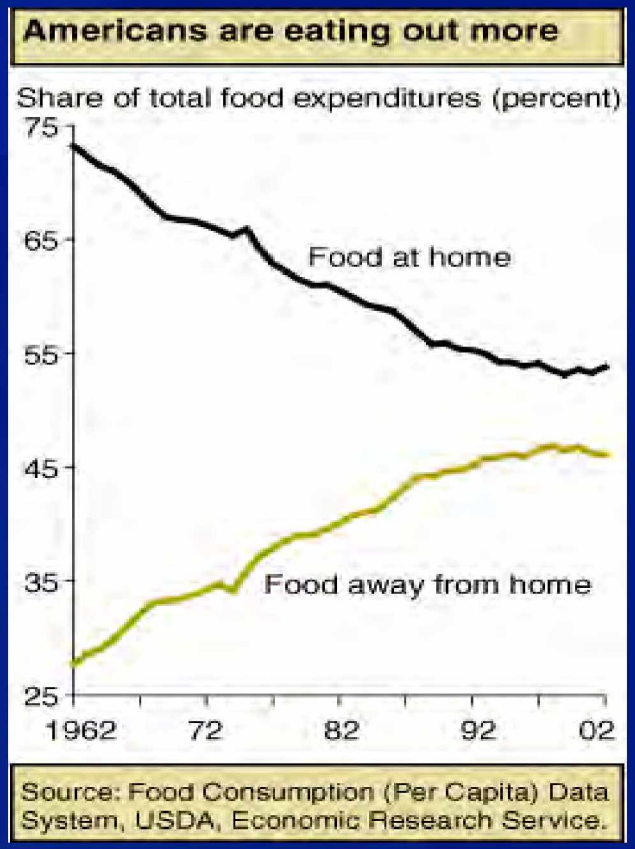
• Sugar-sweetened beverages (SSBs) are the largest source of added sugar and an important contributor of calories in the U.S. diet (8). High consumption of SSBs has been associated with obesity. Many longitudinal studies, but not all, have shown an association between SSBs and various measures of increased body fat (9-16). SSBs also tend to have few, if any, nutrients. SSBs include: soft drinks (soda or pop), fruit drinks, sports drinks, tea and coffee drinks, energy drinks, sweetened milk or milk alternatives, and any other beverages to which sugar, typically high fructose corn syrup or sucrose (table sugar), has been added.

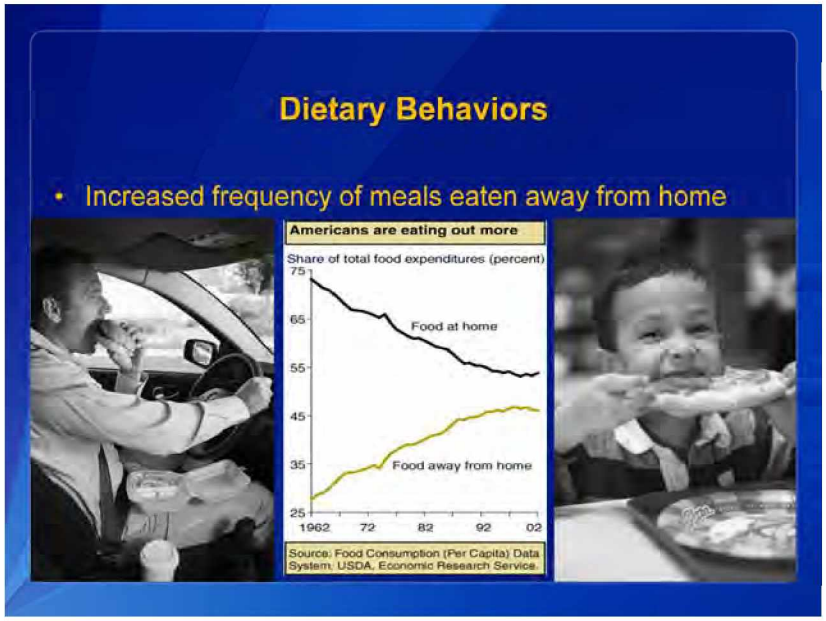
• Fruits and vegetables, as part of a healthy diet, are important for optimal child growth, weight management, and chronic disease prevention. Fewer than 1 in 10 American adolescents and adults consume recommended amounts of fruits & vegetables (17)

Additional Presenter Information: For state specific information on fruit and vegetable consumption patterns and policy & environmental supports, please see CDC's *2009 State Indicator Report on Fruits and Vegetables*, available at: http://www.fruitsandveggiesmatter.gov/health_professionals/statereport.html

Dietary Behaviors

- Increased frequency of meals eaten away from home





• The percentage of the food budget spent on away-from home food has increased steadily since the 1970's and this trend is projected to continue. Approximately 1/3 of daily caloric intake in the United States comes from foods consumed away from home. Studies suggest that consuming quick service food is associated with increased caloric intake and weight status (7).

• It is estimated that children eat almost twice as many calories in restaurant meals compared to meals at home, 770 vs. 420 calories (35)

The Food Environment

- Increased number of fast food establishments in the U.S.
- Lack of access to full service grocery stores selling affordable healthful foods
- Less healthy food & beverage advertising aimed at children

• In addition to dietary behaviors of individuals, the food environment has grown to encourage higher caloric intake. Convenience has become a way of life for many individuals and families. There has been a dramatic rise in consumption of foods eaten away from home which may contribute to the rise in obesity through the following:(7):

-Increased number of fast food establishments in the U.S.

-Availability of large portion sizes when dining out

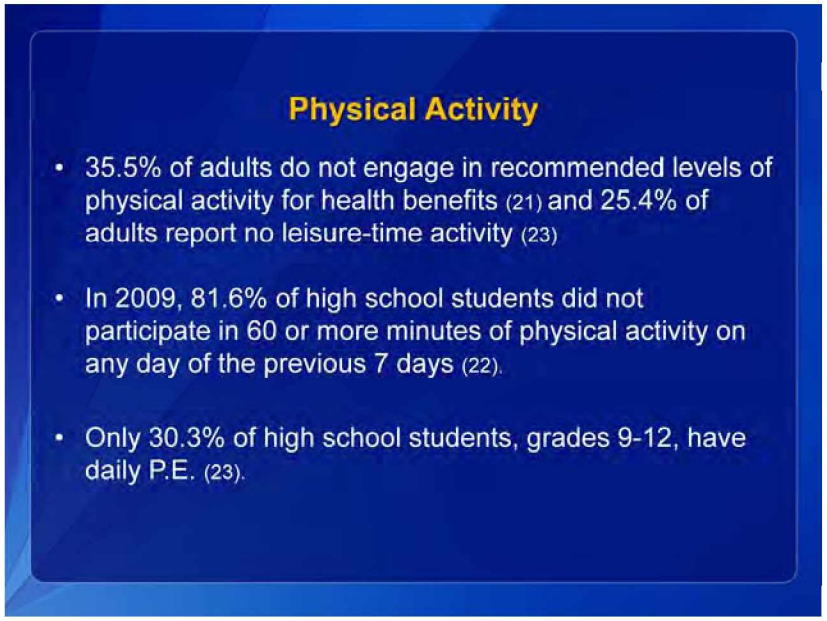
-Tendency to select more calorie dense, nutrient poor, foods when $\text{dining}_{\text{out}}$

• People with better access to supermarkets and other retail stores that provide healthful foods, tend to have healthier diets, including higher intake of fruits and vegetables. Research suggests that residents of rural, minority, and lower income neighborhoods are more likely to have poor access to supermarkets (18). Access to more healthful foods can be improved by building and attracting new supermarkets; improving transportation to stores that provide fruits and vegetables; and increasing the availability of affordable fruits and vegetables at existing stores, or corner stores.

• Food marketing to children and adolescents is a big business. The Federal Trade Commission (FTC) estimates that in 2006, food, beverage, and quick-serve restaurant companies spent more than $1.6 billion to promote their products to young people (19). Children and adolescents are an important demographic for marketers for several reasons: (a) they are customers themselves; (b) they influence purchases made by parents and caregivers; and (c) they are the future adult market (20).

Physical Activity

- 35.5% of adults do not engage in recommended levels of physical activity for health benefits (21) and 25.4% of adults report no leisure-time activity (23)
- In 2009, 81.6% of high school students did not participate in 60 or more minutes of physical activity on any day of the previous 7 days (22).
- Only 30.3% of high school students, grades 9-12, have daily P.E. (23).



Extensive research shows that regular physical activity is important for preventing and treating obesity and other chronic diseases (e.g., cardiovascular disease, diabetes mellitus, breast cancer, colon cancer), disabling conditions (e.g., osteoporosis, arthritis) and risk factors for chronic disease (e.g., hypertension, high cholesterol) (24). Health benefits from regular physical activity occur for children and adolescents, young and middle aged adults, older adults, and those in every studied racial and ethnic group(25).

The 2008 Physical Activity Guidelines for Americans recommends that children and adolescents participate in 60 minutes or more of physical activity daily. To obtain substantial health benefits, adults are recommended to accumulate at least 150 minutes of moderate-intensity or 75 minutes of vigorous-intensity aerobic physical activity per week, or an equivalent combination of the two(25).

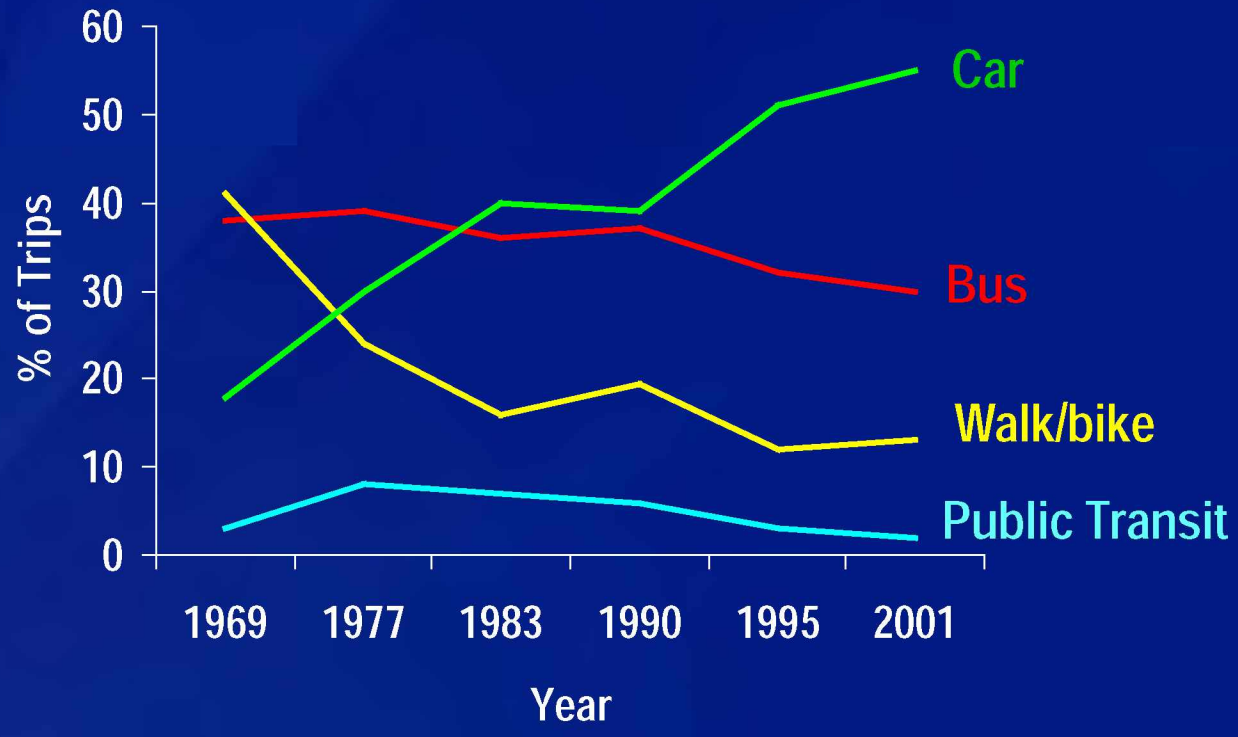
Additional Presenter Information:

- CDC's *State Indicator Report on Physical Activity, 2010*, provides additional information on physical activity behavior and policy and environmental supports with in each state. The report can be found: http://www.cdc.gov/physicalactivity/downloads/PA_State_Indicator_Report_2010.pdf

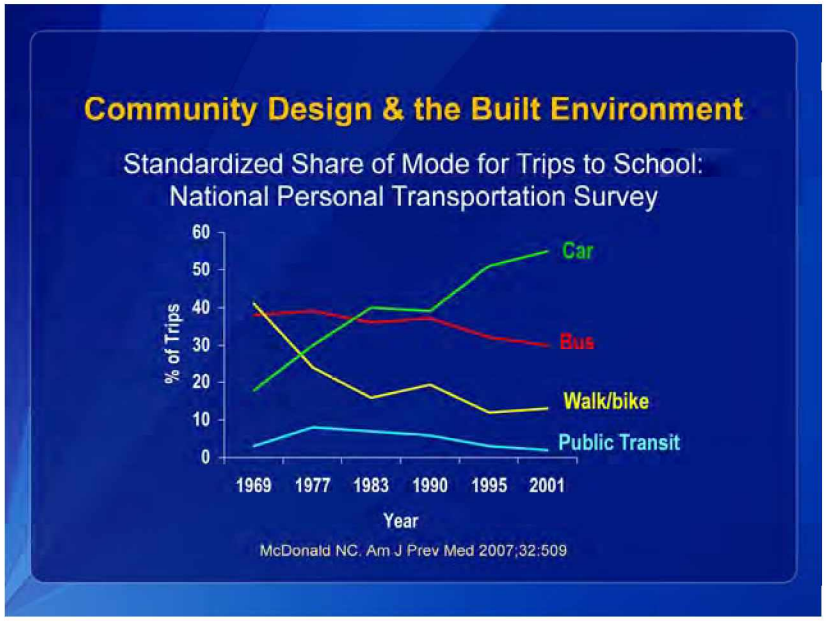
- Physical Activity statistics for selected metropolitan cities across the U.S. can be found: http://www.cdc.gov/nccdphp/dnpa/physical/stats/metropolitan.htm

Community Design & the Built Environment

Standardized Share of Mode for Trips to School:
National Personal Transportation Survey



McDonald NC. Am J Prev Med 2007;32:509



• Here is an example of how transportation patterns have changed in the U.S. over time; it illustrates our increased automobile dependence.

• Policies supporting physical activity through urban design, land use, or developing non-motorized travel options are environmental strategies to increase physical activity(26).

Community Design & the Built Environment

- Environmental factors beyond the control of individuals contribute to increased obesity rates by reducing the likelihood of healthy eating and active living behaviors.
- Environmental factors that influence physical activity behavior (26, 27):
  - Lack of infrastructure supporting active modes of transportation, i.e. sidewalks & bike facilities
  - Access to safe places to play and be active
  - Access to public transit
  - Mixed use & Transit Oriented Developments

"Place Matters": The physical environment affects the daily choices we make, which in turn, affect our health and weight. For example, children who live in unsafe neighborhoods may be restricted to watching television indoors instead of playing outside after school. Families living in neighborhoods that are zoned exclusively for residential use must drive to work and school because it is too far to walk. Communities that lack full-service grocery stores and neighborhood food markets have less access to fresh fruits and vegetables. Therefore, it is important to develop community environments that foster and support healthier lifestyle choices.

Presentation Overview

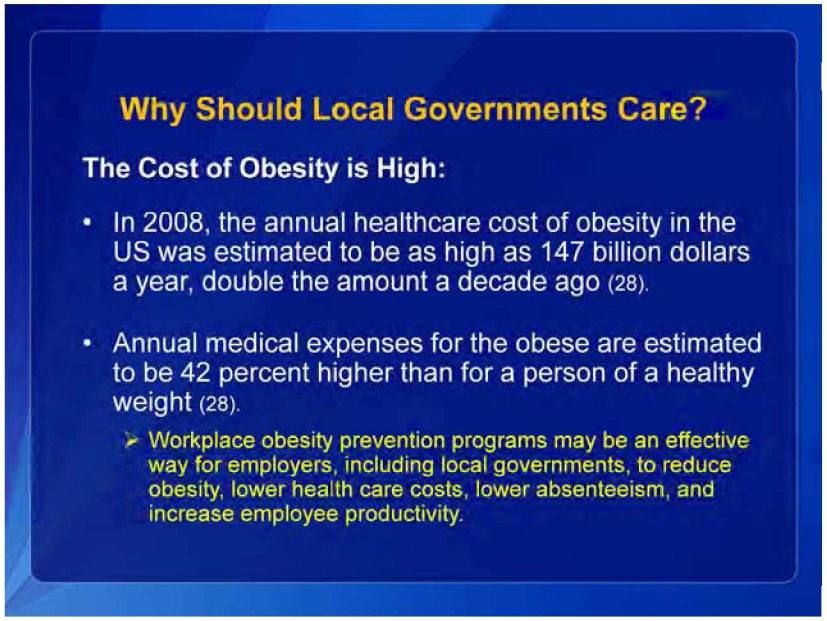
1. Overview of the Obesity Epidemic
2. How Did We Get Here?
3. Why Should Local Governments Care?
4. Policy & Environmental Change to Address Obesity
5. CDC Recommended Community Strategies and Measurements to Prevent Obesity

Why Should Local Governments Care?

The Cost of Obesity is High:

- In 2008, the annual healthcare cost of obesity in the US was estimated to be as high as 147 billion dollars a year, double the amount a decade ago (28).

- Annual medical expenses for the obese are estimated to be 42 percent higher than for a person of a healthy weight (28).
  - Workplace obesity prevention programs may be an effective way for employers, including local governments, to reduce obesity, lower health care costs, lower absenteeism, and increase employee productivity.



Additional Information for Presenter:

If you are interested in creating a worksite obesity prevention and control program please visit **"CDC's LEAN *Works!* Leading Employees to Activity and Nutrition"** website at: http://www.cdc.gov/leanworks/index.html. This is a **FREE** web-based resource that offers interactive tools and evidence-based resources to design effective worksite obesity prevention and control programs, including an obesity cost calculator to estimate how much obesity is costing your company and how much savings your company could reap with different workplace interventions.

Why Should Local Governments Care?

Local government officials are community leaders and can enact policies that support healthy community design

- For example, local zoning ordinances & economic incentives affect the presence and absence of:
  - Parks and open spaces for recreation
  - Bike facilities
  - Mixed use developments
  - Healthy food retailers & farmers markets

Local Government Can Be Part of the Solution

Policies and environments that affect peoples' health are determined by a variety of local government entities, including:

- City Councils/County Commissions
- Zoning Boards
- School Districts
- Transportation & Planning departments
- Parks & Recreation departments

Advantages of Policy & Environmental Change to Address Obesity:

- Potential for *systemic change* in a community's food and physical activity environment.
- *Broad Reach:* Opportunity to *"level the playing field"* for all members of a community, including disproportionately impacted populations.
- *Flexibility*: Consider the unique characteristics and needs of your community and implement obesity prevention initiatives to address them.

Advantages of Policy & Environmental Initiatives to Address Obesity:

- Policy-based strategies have proven *very effective* in other major public health battles, for example, the tobacco control movement.
  - **Local Policy Example:** After a decade with no decrease in smoking, New York City implemented a five point tobacco control program, which included two policy initiatives: aggressive increases in cigarette taxation (2002) and smoke free air legislation (2003). During 2002-2004, estimated adult smoking prevalence decreased from 21.5% to 18.4%, representing nearly 200,000 fewer smokers in New York city (29-31).

Call To Action

- What can local governments do right now to address obesity?
  - Enact policy and environmental initiatives that support healthy eating and active living
  - Partner with a variety of local agencies to leverage resources and achieve greater impact (i.e. Planning Dept, Economic Redevelopment Agency, Parks & Recreation Dept, Public Health Dept)
  - Set feasible short and long term goals to address the unique needs of your community
  - Measure your community's performance and adjust goals as necessary

Presentation Overview

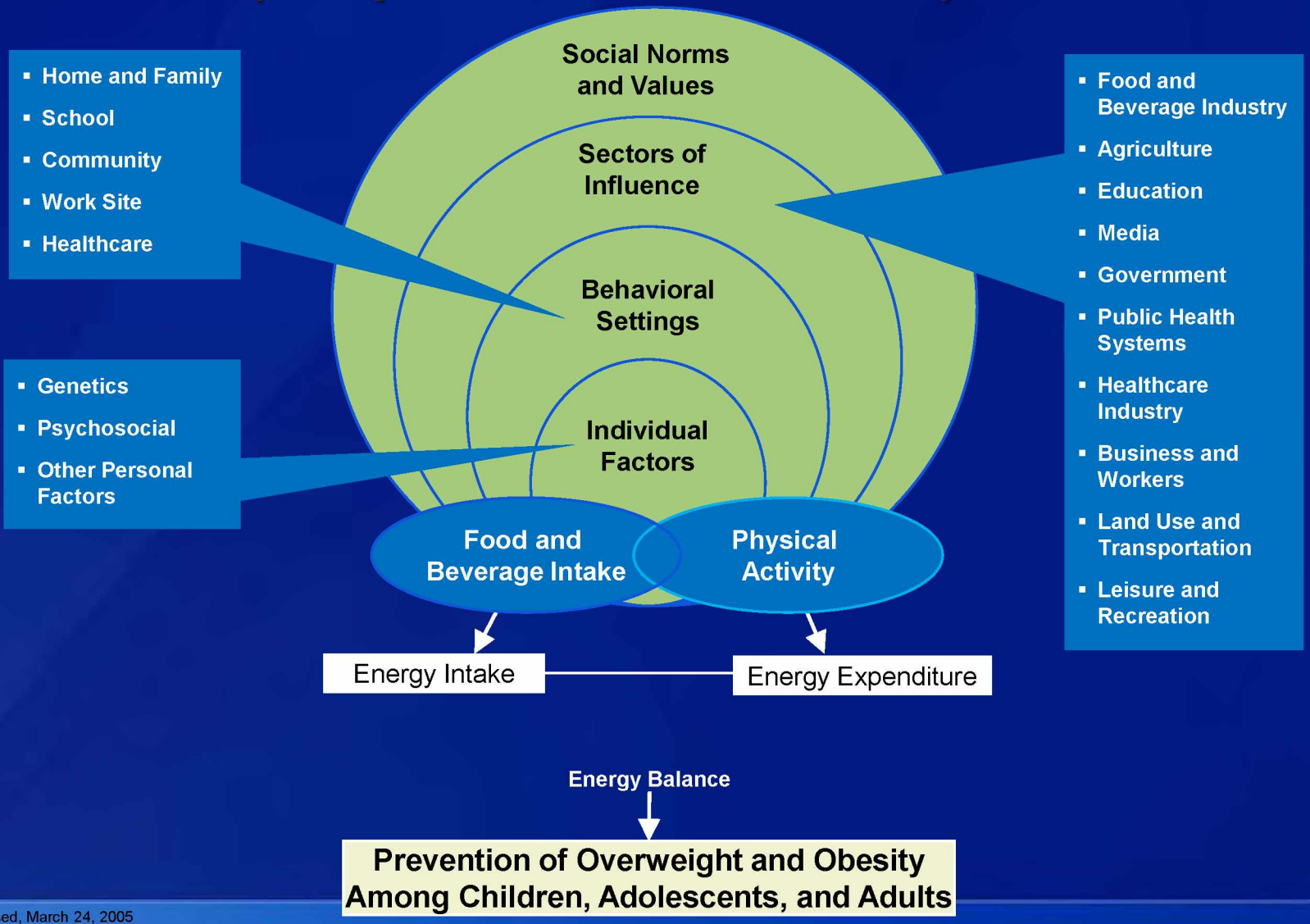
1. Overview of the Obesity Epidemic
2. How Did We Get Here?
3. Why Should Local Governments Care?
4. Policy & Environmental Change to Address Obesity
5. CDC Recommended Community Strategies and Measurements to Prevent Obesity

Target Behaviors for Change

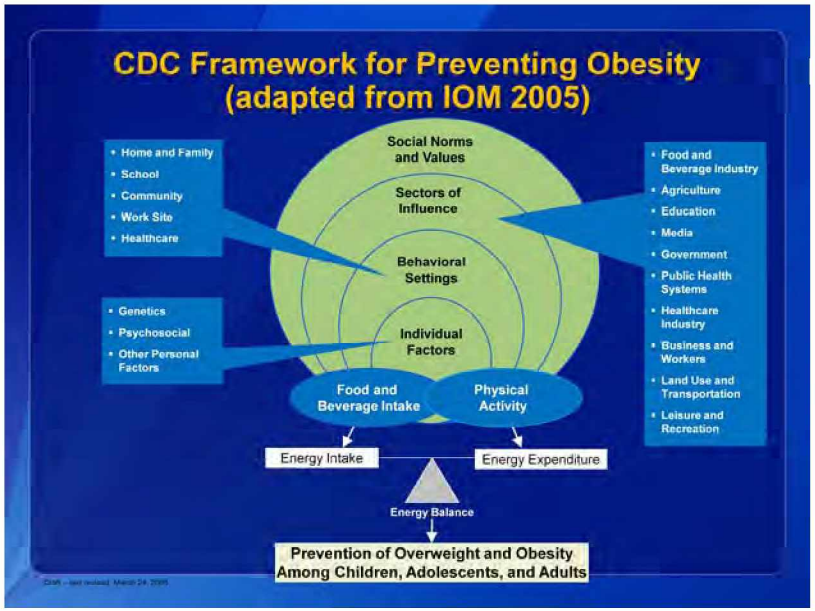
- CDC focuses on six target behaviors for the prevention of obesity and other chronic diseases
  1. Increase physical activity
  2. Increase consumption of fruits and vegetables
  3. Increase breastfeeding initiation, duration, and exclusivity
  4. Decrease consumption of sugar sweetened beverages
  5. Decrease consumption of high energy dense, nutrient poor, foods
  6. Decrease television viewing

CDC sees these six target behaviors as key to preventing and reducing the prevalence of obesity and other chronic disease.

CDC Framework for Preventing Obesity (adapted from IOM 2005)



Draft – last revised, March 24, 2005



• The Social-Ecological Model stresses that society is composed of interconnected elements that invariably affect one another. The model is based on the premise that changes in individual behavior will come about through a combination of societal, community, organizational, interpersonal, and individual efforts.

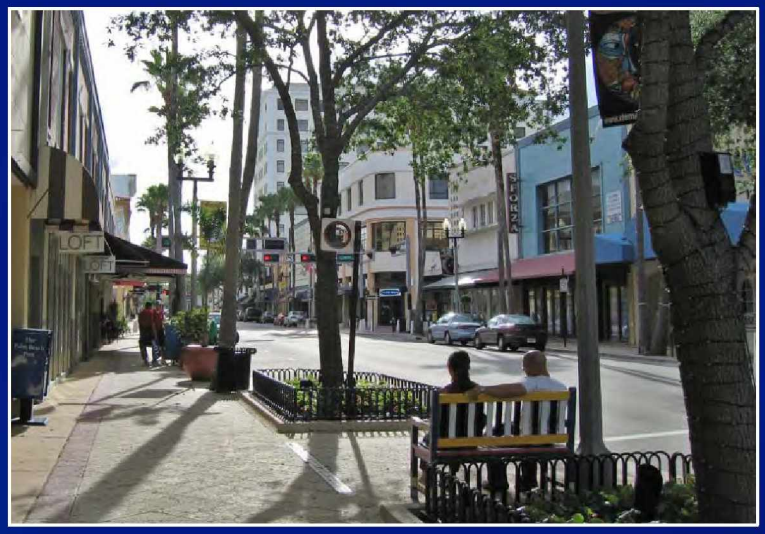
• Effective obesity prevention initiatives should address multiple *levels* of the environment and engage multiple *sectors* of society in order to affect social change and achieve health impact. For these reasons, CDC supports population based approaches to prevent and control obesity, such as policy, systems, and environmental change, in various settings and at all levels of government (i.e. local, state, and federal).

Example: West Palm Beach, FL (32)

- Goal: Improve the street environment for non-motorized users; enhance aesthetics; affect driving behavior

- Policy: Enacted a downtown-wide traffic calming policy

- Outcome:
  - Enhanced traffic safety
  - Enhanced personal safety
  - Increased street connectivity
  - Increased mixed-use zoning



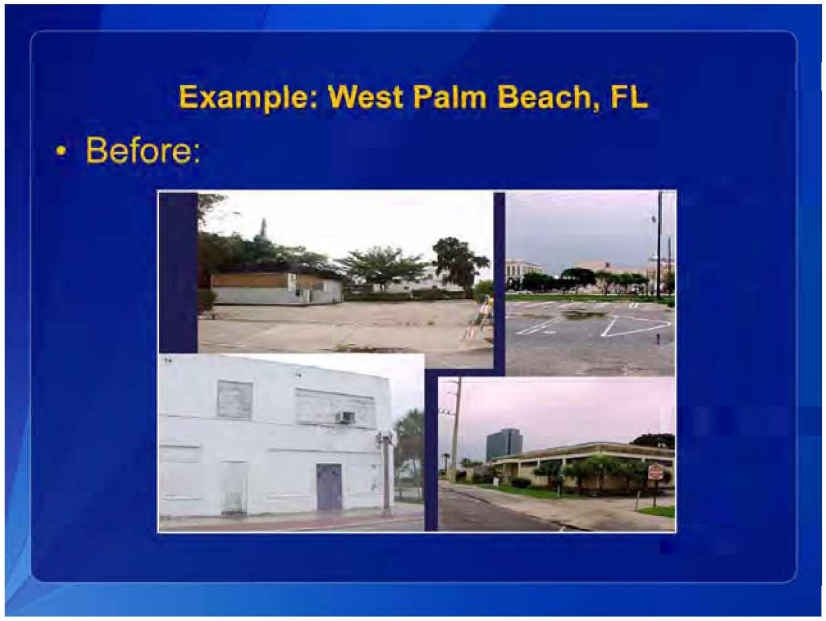
Example: West Palm Beach, FL (32)

- Goal: Improve the street environment for non-motorized users; enhance aesthetics; affect driving behavior
- Policy: Enacted a downtown-wide traffic calming policy
- Outcome:
  - Enhanced traffic safety
  - Enhanced personal safety
  - Increased street connectivity
  - Increased mixed-use zoning

The following slides provide examples of local governments who successfully implemented policy and environmental initiatives that encourage opportunities for daily physical activity and access to healthy food options.

Example: West Palm Beach, FL

- Before:



Before:

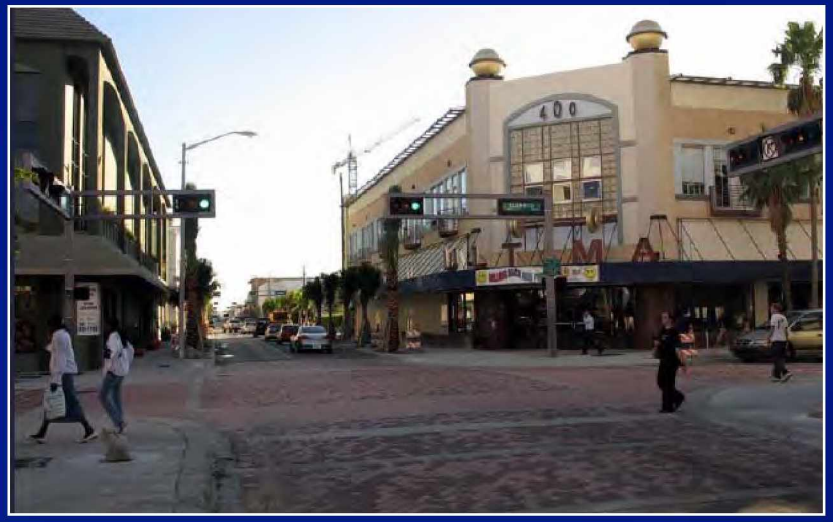
- Little connectivity of streets
- Abandoned buildings
- City streets not suitable for physical activity or community engagement
- Commercial rental rates as low as $6/sq ft; vacancy rates over 80%

Example: West Palm Beach, FL

- After
  - two-way traffic
  - wide shaded sidewalks

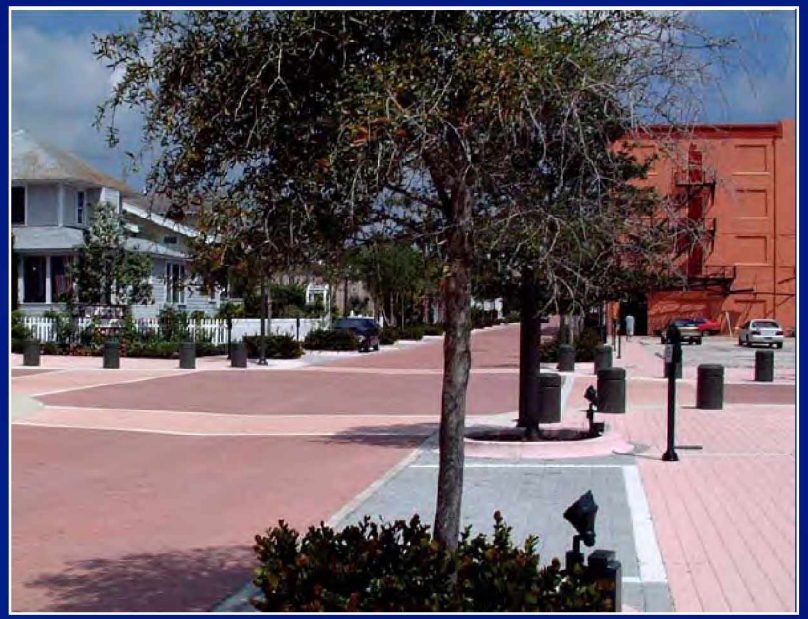
Example: West Palm Beach, FL

- After:
  - raised intersections
  - shortened pedestrian crosswalks
  - narrowed streets
  - on street parking



Example: West Palm Beach, FL

- After
  - Renovated abandoned buildings for mixed use development



Example: West Palm Beach, FL

- After

Additional advantages to enhancing traffic safety and creating “pedestrian friendly” streets:

- Property values along the city’s main street more than doubled
- Commercial space 80% occupied and rental property at $30/sq ft
- Attracted major national retailers, restaurants, and bars; private Investment now exceeds $350 million
- Residents report enhanced sense of safety

Example: Somerville, MA (33)

- Goal: Increase access to affordable healthier foods
- Environmental Change: Implemented a farmers market that was culturally and economically appropriate for the community.

- Outcome:
  - Created an incentive program for WIC & food stamp beneficiaries to shop at the market
  - Instructions for vendors on how to accept food stamps
  - Promotional materials produced in four languages
  - Increases in attendance, the percentage of foreign born and low income patrons, & the redemption rate of WIC Special Supplemental Nutrition Program vouchers

Example: City of Corning and Corning Union School District, CA (36)

- Goal: Increase community access to safe places for physical activity
- Policy Change: Established a Joint Use Agreement that opens up school recreation facilities and resources for public use.

  - Public use of school facilities during after-school hours, on weekends, and non-school days.
  - Shared recreation facilities include: gymnasiums, swimming pools, tennis courts, and athletic fields.
  - Shared responsibility for facility maintenance and repair costs.

Example: New York City (34)

- Goal: Decrease consumption of Sugar Sweetened Beverages among children age six and under.
- Policy Change: The NY City Board of Health amended its health code to prohibit serving beverages with added sweeteners and places limits on beverages served in licensed day care facilities.
  - Limits the serving size of 100% fruit juice to 6 oz per day for children 8 months and older
  - When milk is served, children 2 years of age and older must receive low-fat 1% or non fat milk
  - Water must be readily available throughout the day

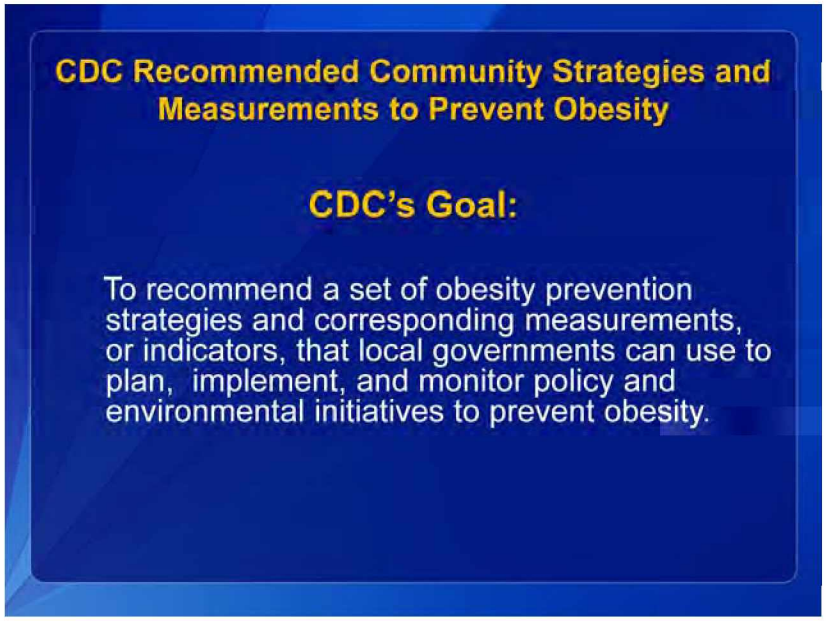
Presentation Overview

1. Overview of the Obesity Epidemic
2. How Did We Get Here?
3. Why Should Local Governments Care?
4. Policy & Environmental Change to Address Obesity
5. CDC Recommended Community Strategies and Measurements to Prevent Obesity

CDC Recommended Community Strategies and Measurements to Prevent Obesity

CDC's Goal:

To recommend a set of obesity prevention strategies and corresponding measurements, or indicators, that local governments can use to plan, implement, and monitor policy and environmental initiatives to prevent obesity.



To assist local governments with identifying the policy and environmental changes most likely to be effective in preventing and reducing the prevalence of obesity, CDC initiated the Common Community Measures for Obesity Prevention project.

MMWR
Morbidity and Mortality Weekly Report
www.cdc.gov/mmwr

Recommendations and Reports | July 24, 2009 / Vol. 58 / No. RR-7

Recommended Community Strategies and Measurements to Prevent Obesity in the United States

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION

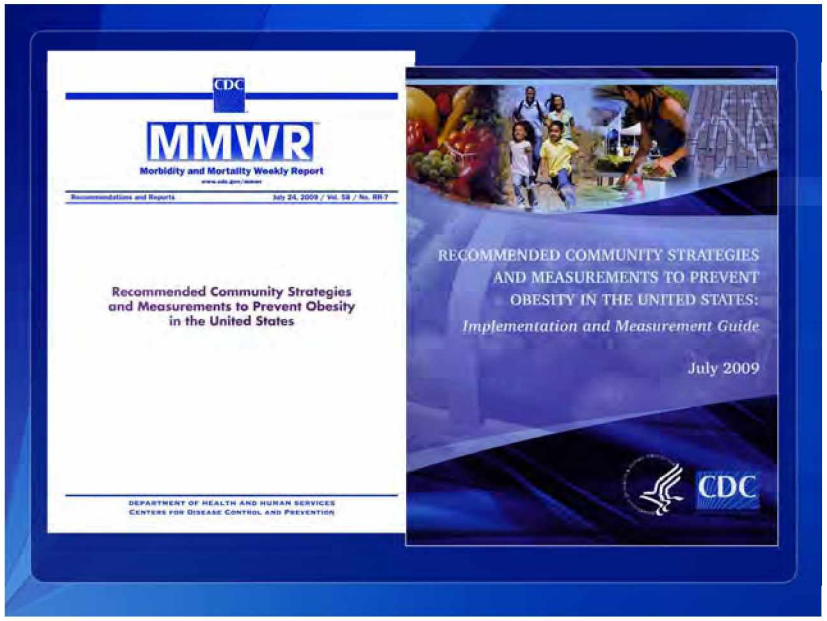
RECOMMENDED COMMUNITY STRATEGIES AND MEASUREMENTS TO PREVENT OBESITY IN THE UNITED STATES:

Implementation and Measurement Guide

July 2009

DEPARTMENT OF HEALTH & HUMAN SERVICES • USA

CDC



As a result of this innovative work, CDC released a set of community based recommendations that promote healthy eating and active living. Two resources were developed to assist local governments in their efforts to implement the CDC Recommendations in community settings:

• The **MMWR** report contains 24 recommended obesity prevention strategies, and their corresponding measurement, focusing on environmental and policy level change initiatives. The report also presents the project process and methodology in detail.

• A companion **Implementation and Measurement Guide** was developed to assist local governments, states, and policy makers implement the CDC recommended obesity prevention strategies and report on the associated measurements. The guide includes measurement data protocols, a listing of useful resources, and examples of communities that successfully implemented each obesity prevention strategy.

• To download these tools please visit: http://www.cdc.gov/nccdphp/DNPAO/publications/index.html

How can Local Governments use CDC Strategies and Measurements to Prevent Obesity?

1. Baseline Assessment

- Do the policies and environmental conditions in our community currently promote active living and healthy eating?
- How do we compare to other communities of similar size, type, and population?

2. Identify Priorities for Action

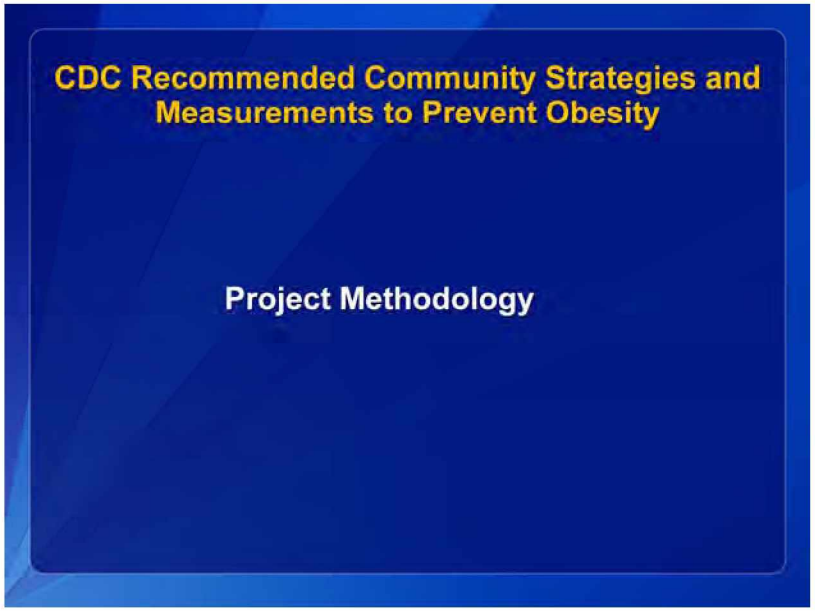
- What aspects of our environment are in greatest need of improvement to promote the health of our citizens?

3. Measure Change Over Time

- Are we making progress in changing policies and environmental conditions to promote active living and healthy eating?

CDC Recommended Community Strategies and Measurements to Prevent Obesity

Project Methodology



The following slides describe the process for identifying and selecting the final 24 community-based Recommendations, including a high level overview of the project methodology and approach.

CDC Recommended Community Strategies and Measurements to Prevent Obesity

Project Approach:

- Recommended Strategies and Measurements are:
  - Grounded in existing evidence (systematic review of literature)
  - Grounded in expert opinion
  - Guided by principles of transparency, stakeholder involvement, and documentation.

CDC Recommended Community Strategies and Measurements to Prevent Obesity

Strategy Identification:

- The project team conducted a literature search in PubMed and reviewed additional "seminal documents" based on expert opinion.

  Search results yielded 94 articles for review:

  - 791 potential obesity prevention strategies were identified
  - Similar and overlapping strategies were collapsed, resulting in 179 environmental or policy-level strategies for obesity prevention.

CDC Recommended Community Strategies and Measurements to Prevent Obesity

Project Expertise

- 15 Academic Select Panelists
- 60 CDC Workgroup Members
- 20 Local Government Experts
- 6 Measurement Experts

•CDC recruited approximately 75 internal and external Content Area Experts in the field(s) of urban planning, built environment, obesity prevention, nutrition, and physical activity to assist in the identification, nomination, and selection of the recommended strategies and measurements.

•Local Government Experts provided knowledge of city management, resources, and perspective on the utility, feasibility, and practicality of the strategies and measurements for local government capacity and needs. Local government experts were members of the International City/County Management Association (ICMA).

•Measurement Experts reviewed the selected measurements for technical precision of their structure, phrasing, and content.

Strategy Rating & Selection

Select panelists rated each strategy using the following criteria and identified the most promising strategies:

Criterion	Definition
Reach	The strategy is likely to affect a large percentage of the target population
Mutability	The strategy is in the realm of the community's control
Transferability	The strategy can be implemented in communities that differ in size, resources, and demographics
Effect Size	The potential magnitude of the health effect for the strategy is meaningful
Sustainability of health impact	The health effect of the strategy will endure over time.

Strategy Rating & Selection

Select panelists rated each strategy using the following criteria and identified the most promising strategies:

Criterion	Definition
Reach	The strategy is likely to affect a large percentage of the target population
Mutability	The strategy is in the realm of the community's control
Transferability	The strategy can be implemented in communities that differ in size, resources, and demographics
Effect Size	The potential magnitude of the health effect for the strategy is meaningful
Sustainability of health impact	The health effect of the strategy will endure over time.

- The CDC Workgroup also reviewed strategies from a public health perspective and identified the highest

- The Project Team selected the final 24 recommended strategies based on ranking and prioritization scores.

Measurement Nomination & Selection

- Three Content Area Experts were assigned to each strategy according to area of expertise
- Assigned experts reviewed the evidence base for each strategy and nominated up to three measures
- Through a voting process the top 2 measures were selected for each strategy

Measurement Expert Review

Selected measures were reviewed and rated by measurement experts using rating criteria

Criterion	Definition
Utility	The measure serves the information needs of communities for planning and monitoring community-level programs and strategies.
Feasibility	The measure can be collected and used by local government (e.g. cities, counties, towns) without the need for surveys, access to proprietary data, specialized equipment, complex analytical techniques and expertise, or unrealistic resource expenditure.
Construct Validity	The measure accurately assesses the environmental strategy or policy that it is intended to measure

Local Government Pilot Test

- Twenty local government representatives pilot tested the measures:
  - Local Government representatives included City Managers, Urban Planners, and Budget Analysts
  - Each community pilot tested a subset of the measures
  - They provided feedback on their ability to report on each measurement, the level of effort required to gather the necessary data, and the perceived utility of each measurement.

CDC Recommended Community Strategies and Measurements to Prevent Obesity

Outcome:

- CDC recommended 24 policy and environmental change strategies to promote healthy eating and active living and reduce the prevalence of obesity in the U.S.
- CDC also identified a suggested measurement for each strategy that communities can use to assess implementation and track progress over time.

CDC's Recommended Strategies to Prevent Obesity

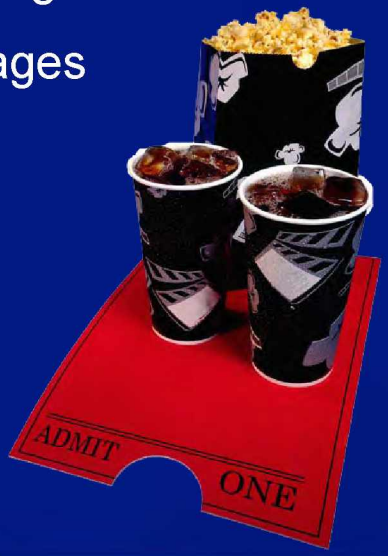
Strategies to Promote the Availability of Affordable Healthy Food & Beverages

1. Increase availability of healthier food and beverage choices in public service venues
2. Improve availability of affordable healthier food and beverage choices in public service venues
3. Improve geographic availability of supermarkets in underserved areas
4. Provide incentives to food retailers to locate in and/or offer healthier food and beverage choices in underserved areas
5. Improve availability of mechanisms for purchasing foods from farms
6. Provide incentives for the production, distribution, and procurement of foods from local farms

CDC's Recommended Strategies to Prevent Obesity

Strategies to Support Healthy Food and Beverage Choices

7. Restrict availability of less healthy foods and beverages in public service venues
8. Institute smaller portion size options in public service venues
9. Limit advertisements of less healthy foods and beverages
10. Discourage consumption of sugar-sweetened beverages



CDC's Recommended Strategies to Prevent Obesity

Strategy to Encourage Breastfeeding

11. Increase support for breastfeeding

Strategies to Encourage Physical Activity or Limit Sedentary Activity Among Children and Youth

12. Require Physical Education in schools
13. Increase the amount of physical activity in PE programs in schools
14. Increase opportunities for extracurricular physical activity
15. Reduce screen time in public service venues

CDC's Recommended Strategies to Prevent Obesity

Strategies to Create Safe Communities That Support Physical Activity

16. Improve access to outdoor recreational facilities
17. Enhance infrastructure supporting bicycling
18. Enhance infrastructure supporting walking
19. Support locating schools in residential neighborhoods
20. Improve access to transportation
21. Zone for mixed-use development
22. Enhance personal safety where people are or could be physically active
23. Enhance traffic safety in areas where persons are or could be physically active

Strategy to Encourage Communities to Organize for Change

24. Participate in community coalitions or partnerships to address obesity

Resources for Implementing Strategies and Measures and Monitoring Performance

- Published in CDC's MMWR Recommendations and Reports supplement, July, 2009: http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5807a1.htm

- A detailed Implementation and Measurement Guide was developed to assist local governments, states, and policy makers in implementing the CDC recommended strategies and reporting on the associated measurements: http://www.cdc.gov/obesity/downloads/community_strategies_guide.pdf

- Measures were incorporated into ICMA's Center for Performance Measurement system: http://www.icma.org/performance

References

1. BRFSS, Behavioral Risk Factor Surveillance System, http://www.cdc.gov/brfss/
2. Flegal KM, Carroll MD, Ogden CL, Johnson CL. Prevalence and trends in obesity among U.S. adults, 1999-2000. JAMA. 2002 Oct 9; 288 (14); 1723-1727.
3. Ogden CL, Carroll MD, Curtin LR, McDowell MA, Tabak CJ, Flegal KM. Prevalence of overweight and obesity in the United States, 1999-2004. JAMA. 2006 Apr 5; 295 (13); 1549-55.
4. National Center for Health Statistics. Health, United States, 2009: With Special Feature Medical Technology. Hyatsville, MD. 2010.
5. Cynthia L. Ogden; Margaret D. Carroll; Lester R. Curtin; Molly M. Lamb; Katherine M. Flegal. Prevalence of High Body Mass Index in US Children and Adolescents, 2007-2008
   JAMA. 2010;303(3):242-249.
6. Centers for Disease Control & Prevention. Differences in Prevalence of Obesity Among Black, White, & Hispanic Adults—United States, 2006-2008. MMWR 2009; 58 (27); 740-744.
7. Centers for Disease Control & Prevention. *Incorporating Away-From-Home Food into a Healthy Eating Plan.* Research to Practice Series (No. 6). Atlanta, GA: National Center for Chronic Disease Prevention and Health Promotion, Division of Nutrition and Physical Activity.
8. Block G. Foods contributing to energy intake in the US: data from NHANES III and NHANES 1999-2000. *J Food Composit Anal*. 2004;17(3-4): 439-447
9. Berkey CS, Rockett HR, Field AE, Gillman MW, Colditz GA. Sugar-added beverages and adolescent weight change. Obes Res. 2004;12(5): 778-788.

References

10. Striegel-Moore RH, Thompson D, Affenito SG, et al. Correlates of beverage intake in adolescent girls: The National Heart, Lung, and Blood Institute Growth and Health Study. J Pediatr. 2006;148(2): 183-187.
11. Dubois L, Farmer A, Girard M, Peterson K. Regular sugar-sweetened beverage consumption between meals increases risk of overweight among preschool-aged children. J Am Diet Assoc. 2007;107(6): 924-934.
12. Tordoff MG, Alleva AM. Effect of drinking soda sweetened with aspartame or high-fructose corn syrup on food intake and body weight. Am J Clin Nutr. 1990;51(6): 963-969.
13. DiMeglio D, Mattes R. Liquid versus solid carbohydrate: effects on food intake and body weight. Int J Obes Relat Metab Disord. 2000;24 (6): 794-800.
14. Raben A, Vasilaras TH, Møller AC, Astrup A. Sucrose compared with artificial sweeteners: different effects on ad libitum food intake and body weight after 10 wk of supplementation in overweight subjects. Am J Clin Nutr. 2002;76(4): 721-729.
15. James J, Thomas P, Cavan D, Kerr D. Preventing childhood obesity by reducing consumption of carbonated drinks: cluster randomized controlled trial. BMJ. 2004;328 (7450): 1237.
16. Ebbeling CB, Feldman HA, Osganian SK, Chomitz VR, Ellenbogen SJ, Ludwig DS. Effects of decreasing sugar-sweetened beverage consumption on body weight in adolescents: A randomized, controlled pilot study. Pediatrics. 2006;117(3): 673-680
17. Kimmons J, Gillespie C, Seymour J, Serdula M, Blanck HM. Fruit and vegetable intake among adolescents and adults in the United States: percentage meeting individualized recommendations. *Medscape J Med.* 2009;11(1):26.
18. Larson N, Story M, Nelson M. Neighborhood Environments Disparities in Access to Healthy Foods in the U. S. *Am J Prev Med.* 2009.

References

19. Federal Trade Commission.(2008) *Marketing Food to Children and Adolescents: A Review of Industry Expenditures, Activities, and Self-Regulation. Washington, D.C.: Federal Trade Commission.Retrieved from: http://www.ftc.gov/os/2008/07/P064504foodmktingreport.pdf, at ES-1.*
20. Escobar-Chaves, S.L., Anderson, C.A.(2008).Media and Risky Behaviors.Children and Electronic Media.18(1).Retrieved from: http://futureofchildren.org/futureofchildren/publications/docs/18_01_07.pdf
21. Centers for Disease Control and Prevention. (2010). *State Indicator Report on Physical Activity, 2010 National Action Guide.* Retrieved from: http://www.cdc.gov/physicalactivity/downloads/PA_State_Indicator_Report_2010_Action_Guide.pdf
22. Centers for Disease Control and Prevention. Youth Risk Behavior Surveillance — United States, 2009. Surveillance Summaries, [6-4-2010]. MMWR 2010;59(5).
23. Centers for Disease Control and Prevention. (2010). *State Indicator Report on Physical Activity, 2010 National Action Guide.* Retrieved from: http://www.cdc.gov/physicalactivity/downloads/PA_State_Indicator_Report_2010_Action_Guide.pdf
24. US DHHS. *Physical Activity and health: A report of the Surgeon General.* Atlanta, GA: US. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, The President's Council on Physical Fitness and sports: 1996
25. U.S. Department of Health and Human Services. *2008 Physical Activity Guidelines for Americans.* Hyattsville, MD: U.S. Department of Health and Human Services, 2008.

References

26. Resources for State and Community Programs March 2010. “CDC’s Guide to Strategies for Increasing Physical Activity in the Community.” CD-ROM. Centers for Disease Control and Prevention, 2010.
27. Heath GW, Brownson RC, Kruger J, et al. The effectiveness of urban design and land use and transport policies and practices to increase physical activity: A systematic review. J Phys Act Health. 2006;3(suppl 1):S55–S76.
28. Finkelstein EA, Trogdon JG, Cohen JW, Dietz W. Annual medical spending attributable to obesity: payer-and service-specific estimates. Health Aff (Millwood). 2009 Sep-Oct;28(5):w822-31
29. Chang C, Leighton J, Mostashari F, McCord C, Frieden TR. The New York City Smoke-Free Air Act: second-hand smoke as a worker health and safety issue. Am J Ind Med 2004;46:188--95.
30. Frieden TR, Mostashari F, Kerker BD, Miller N, Hajat A, Frankel M. Adult tobacco use levels after intensive tobacco-control measures: New York City, 2002--2003. Am J Public Health 2005;95:1016--23.
31. New York City Department of Health and Mental Hygiene. EpiQuery: NYC interactive health data. Available at https://a816-health3ssl.nyc.gov.

References

32. Lockwood, I., & Stillings, T. (1998). *Traffic calming for crime reduction & neighborhood revitilization.* West Palm Beach, FL: City of West Palm Beach
33. Active Living by Design. (2006). *Shape-Up Somerville, Somerville Massachusetts.* Chapel Hill, NC: Author.
34. NY City Department of Health and Mental Hygiene (2006). Notice of adoption of amendments to Article 47 of the New York City health code. New York, NY; Author.
35. 6. Zoumas-Morse C, Rock CL, Sobo EJ, Neuhouser ML. "Children's Patterns of Macronutrient Intake and Associations with Restaurant and Home Eating." J Am Dietetic Assoc 2001;101:923-925.
36. Strategic Alliance ENACT. (2008). Policy detail: Corning Union High School District Facilities Use Agreement. Retrieved August 5, 2010, from http://eatbettermovemore.org/sa/policies/policy_detail.php?s_Search=&issue=&env=&keyword=73&s_State=California&jurisdiction=3&year=&policyID=333

Reversing the obesity epidemic is a shared responsibility. Social and environmental changes are influenced by the efforts of many…

There is a role for everyone in discovering ways to create supportive environments to help individuals and families to easily make healthy food choices, enjoy a physically active lifestyle, and move toward a healthy weight.

The content contained in this PowerPoint presentation is in the public domain. However, if you use any text or change the text, please remove the Centers for Disease Control and Prevention (CDC) and Department of Health and Human Services (HHS) logos, and credit CDC for the data.

For more information please contact Centers for Disease Control and Prevention
1600 Clifton Road NE, Atlanta, GA 30333
Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov Web: www.cdc.gov