



# **Smart Growth: A Prescription for Today's Public Health Challenges**

**January 29, 2008**

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Safe & Healthy Communities Consulting**

# America's Big Problem

## Physical Activity and Health

A Report of the Surgeon General  
Executive Summary

U.S. 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



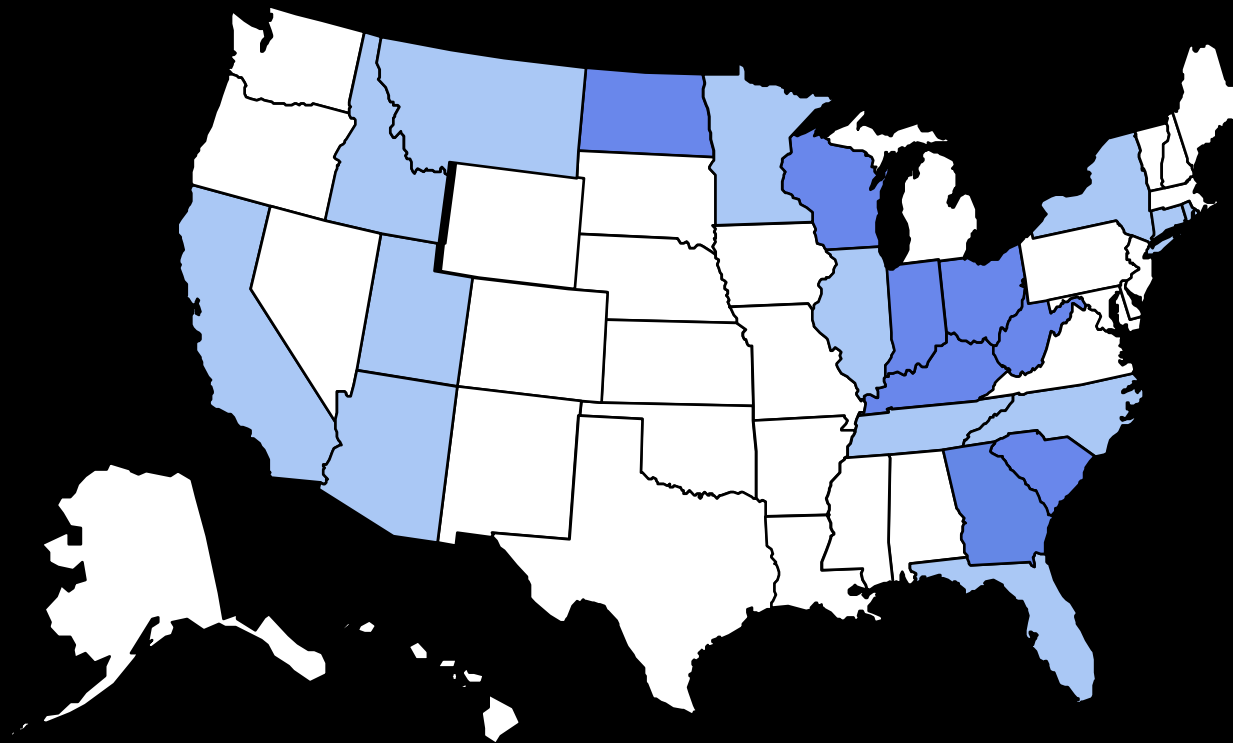
The President's  
Council on  
Physical Fitness  
and Sports

- 60% of adults not active enough
- CVD, cancer, diabetes, obesity
- Physical inactivity is a primary factor in over 250,000 deaths annually.
- Medical costs associated with physical inactivity may exceed \$76 billion annually.

# Obesity Trends\* Among U.S. Adults

## BRFSS, 1985

(\*BMI  $\geq 30$ , or  $\sim 30$  lbs overweight for 5'4" woman)

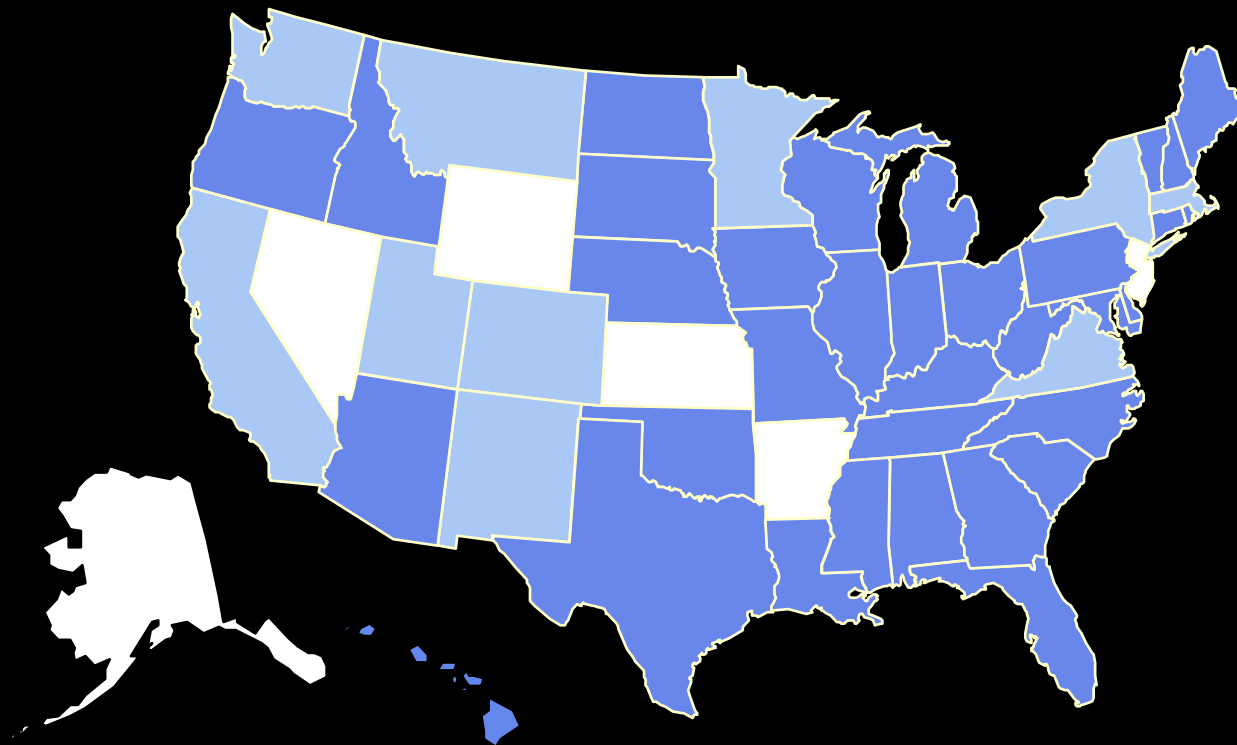


□ No Data    ■ <10%    ■ 10%-14%

# Obesity Trends\* Among U.S. Adults

## BRFSS, 1990

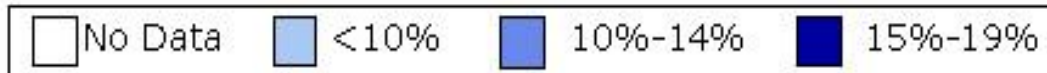
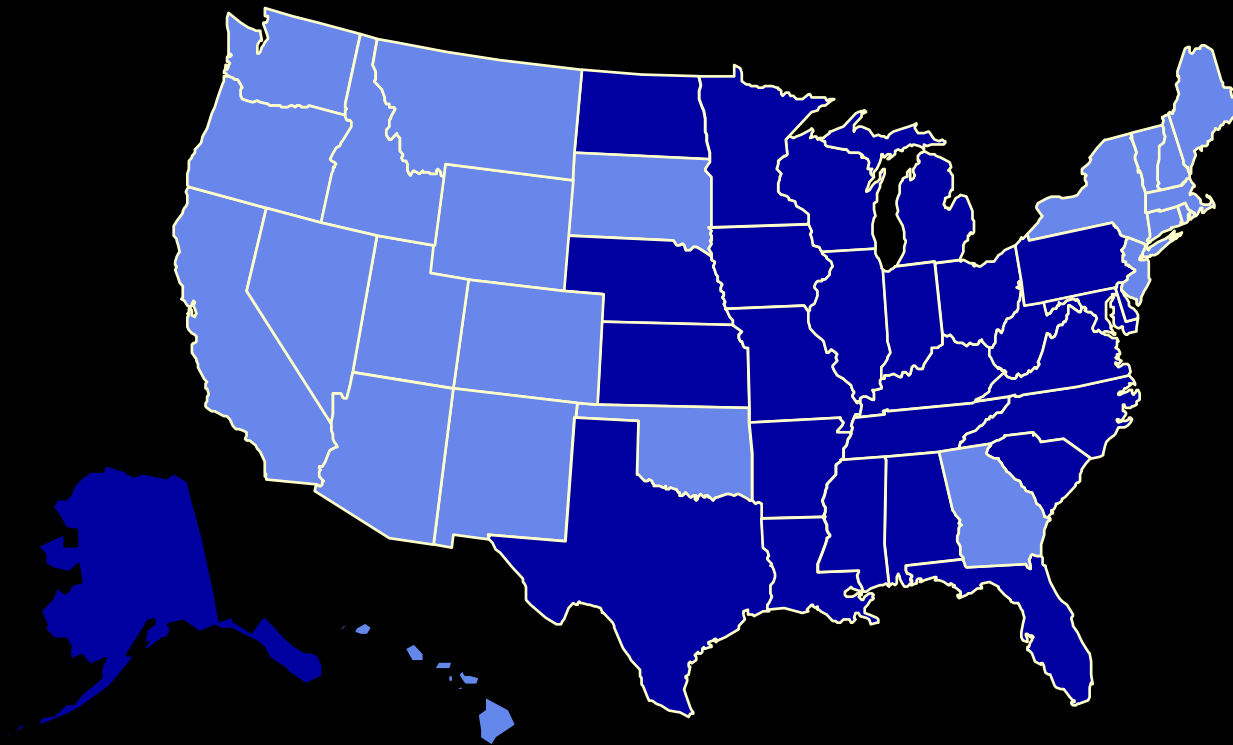
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□ No Data    ■ <10%    ■ 10%-14%

# Obesity Trends\* Among U.S. Adults

## BRFSS, 1995

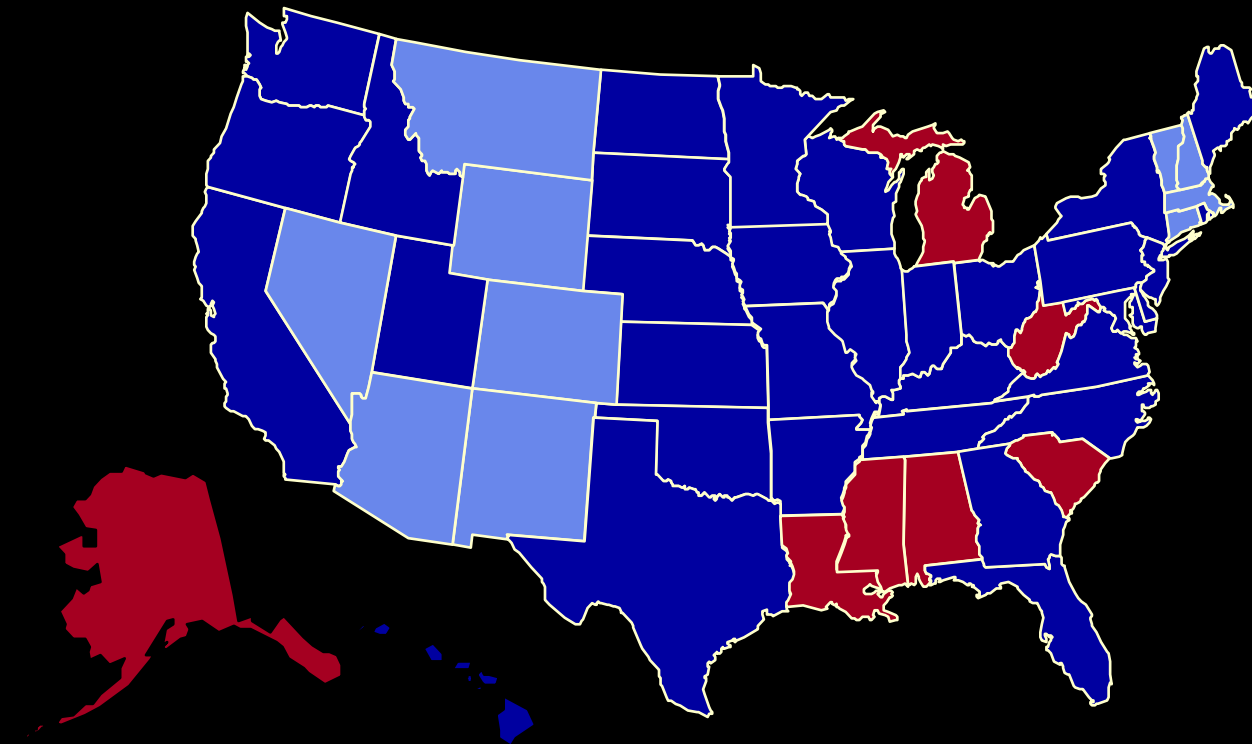
(\*BMI  $\geq 30$ , or  $\sim 30$  lbs overweight for 5'4" woman)

Slide series produced by Centers for Disease Control and Prevention  
Source: Mokdad A H, et al. *J Am Med Assoc* 1999;282:16, 2001;286:10.

# Obesity Trends\* Among U.S. Adults

## BRFSS, 1998

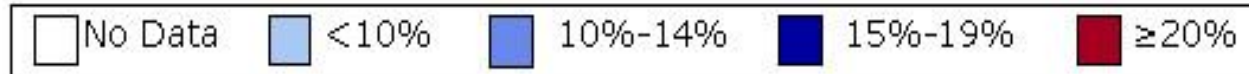
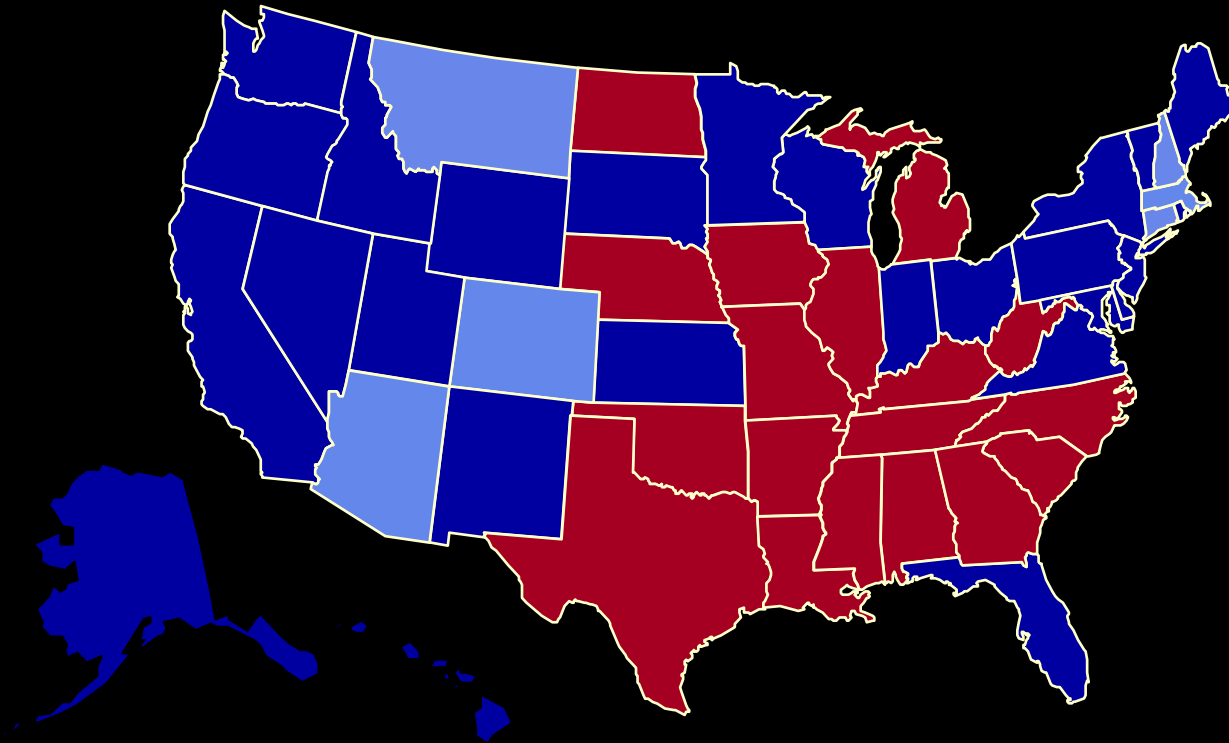
(\*BMI  $\geq 30$ , or  $\sim 30$  lbs overweight for 5'4" woman)



Legend:   
No Data   
 <10%   
 10%-14%   
 15%-19%   
  $\geq 20\%$

# Obesity Trends\* Among U.S. Adults

## BRFSS, 1999

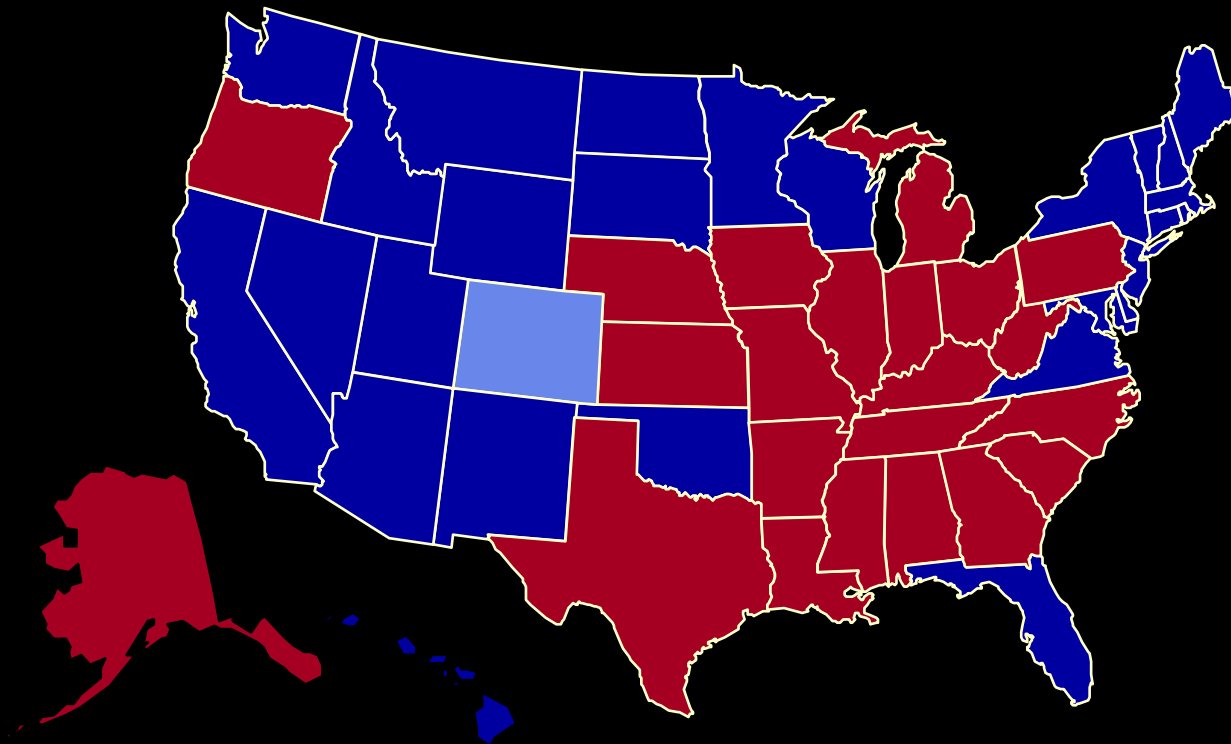
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# Obesity Trends\* Among U.S. Adults

## BRFSS, 2000

(\*BMI  $\geq 30$ , or  $\sim 30$  lbs overweight for 5'4" woman)



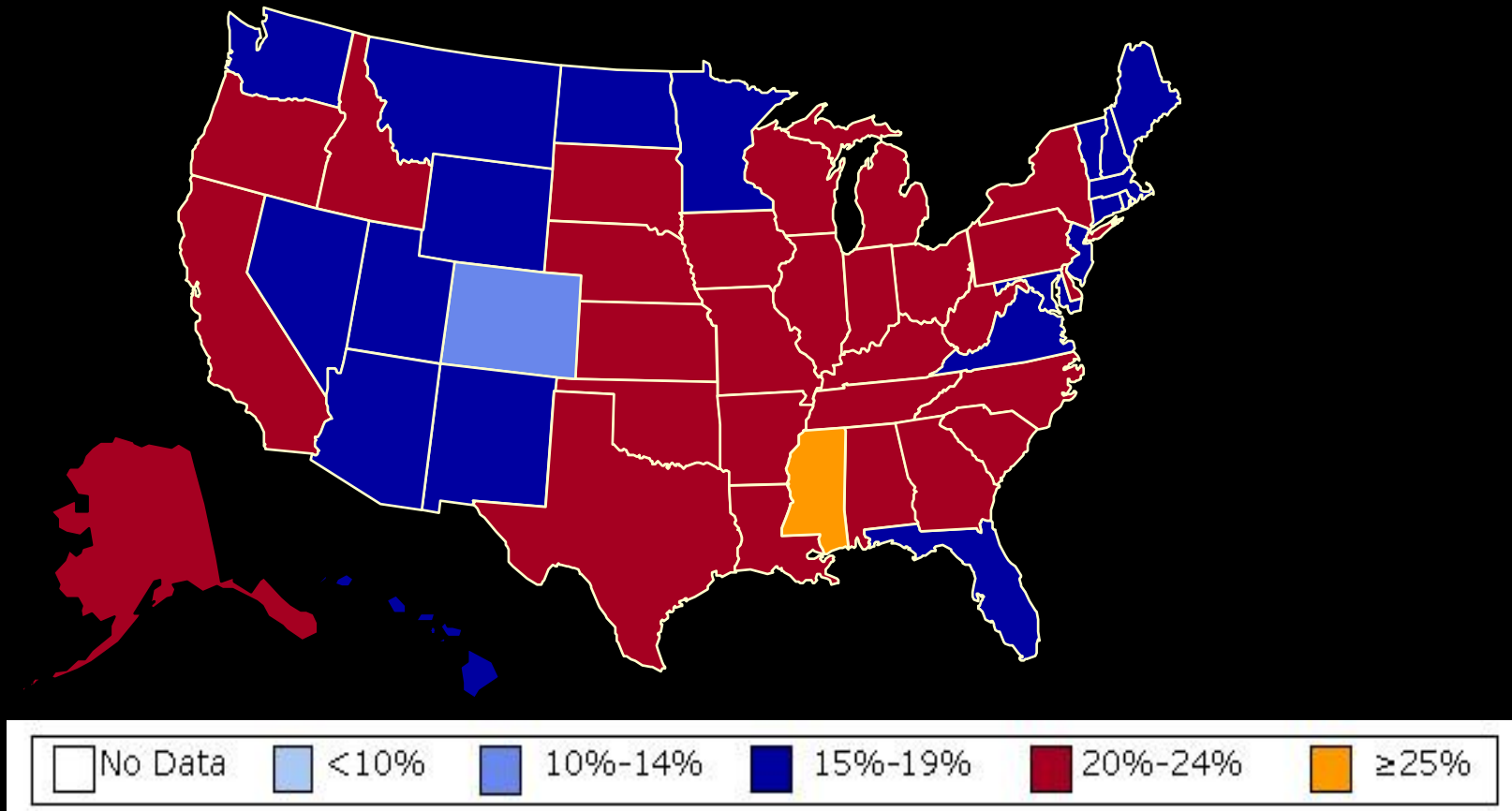
Legend:  No Data  <10%  10%-14%  15%-19%   $\geq 20\%$



# Obesity Trends\* Among U.S. Adults

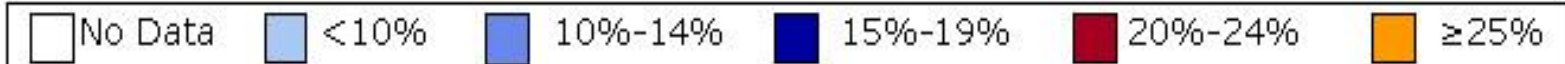
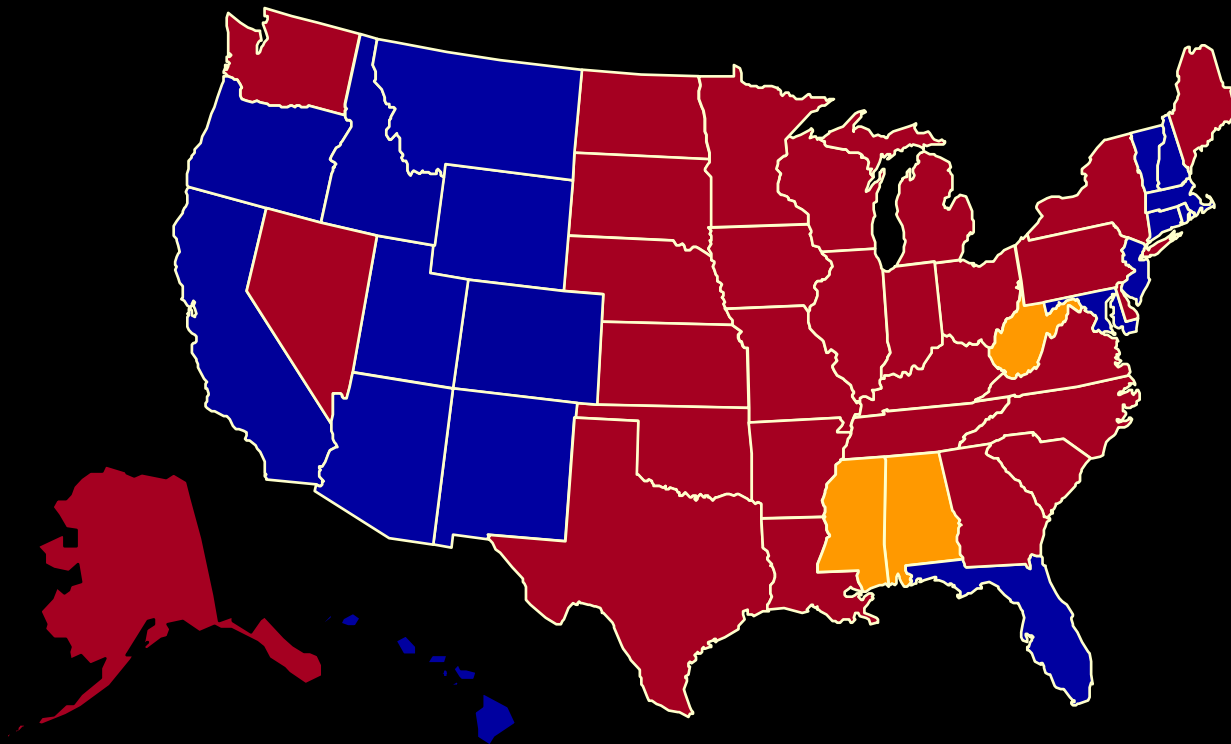
## BRFSS, 2001

(\*BMI  $\geq 30$ , or  $\sim 30$  lbs overweight for 5'4" woman)



# Obesity Trends\* Among U.S. Adults

## BRFSS, 2002

(\*BMI  $\geq 30$ , or  $\sim 30$  lbs overweight for 5'4" woman)

Slide series produced by Centers for Disease Control and Prevention  
Source: Mokdad A H, et al. *J Am Med Assoc* 1999;282:16, 2001;286:10.

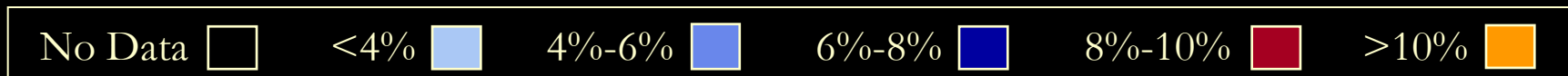
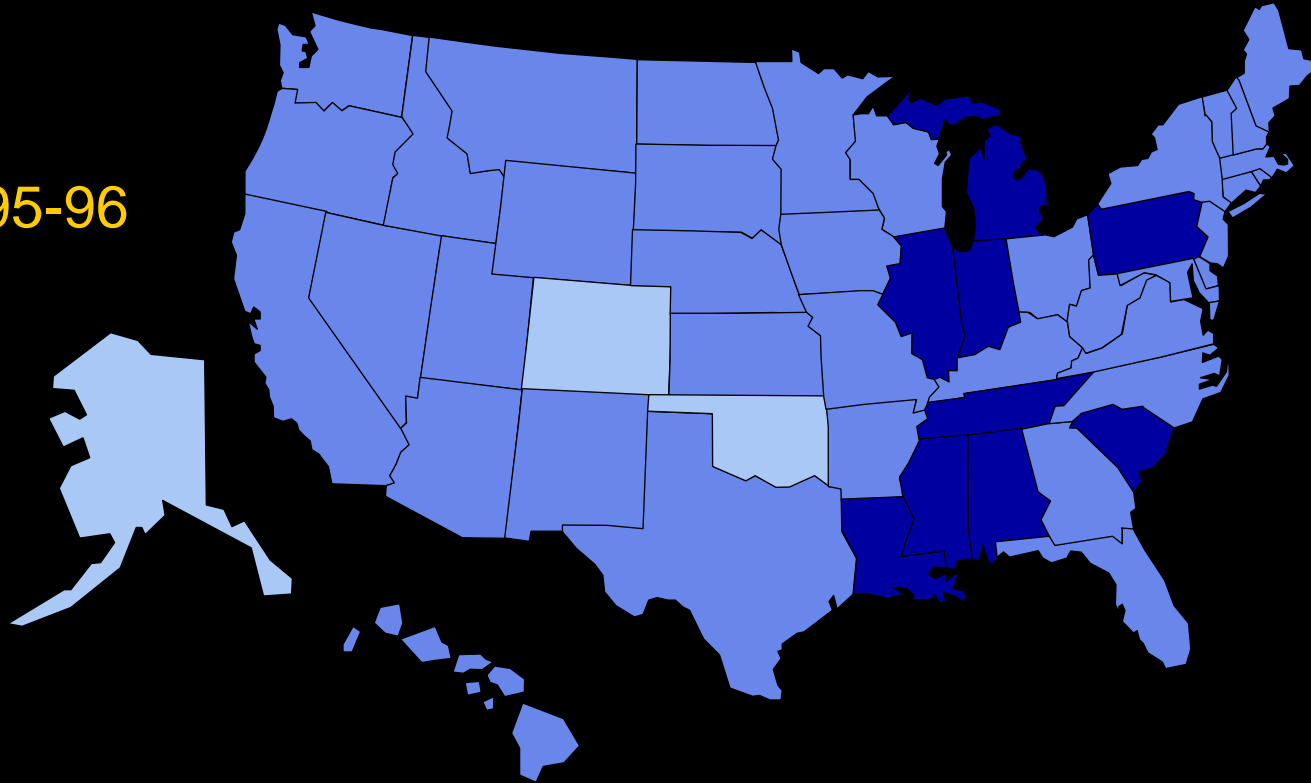
# Diabetes and Gestational Diabetes Trends Among Adults in the U.S., BRFSS



Mokdad AH, Ford ES, Bowman BA, et al. Prevalence of obesity, diabetes and other obesity-related health risk factors, 2001. JAMA 2003 Jan 1;289

# Diabetes and Gestational Diabetes Trends Among Adults in the U.S., BRFSS

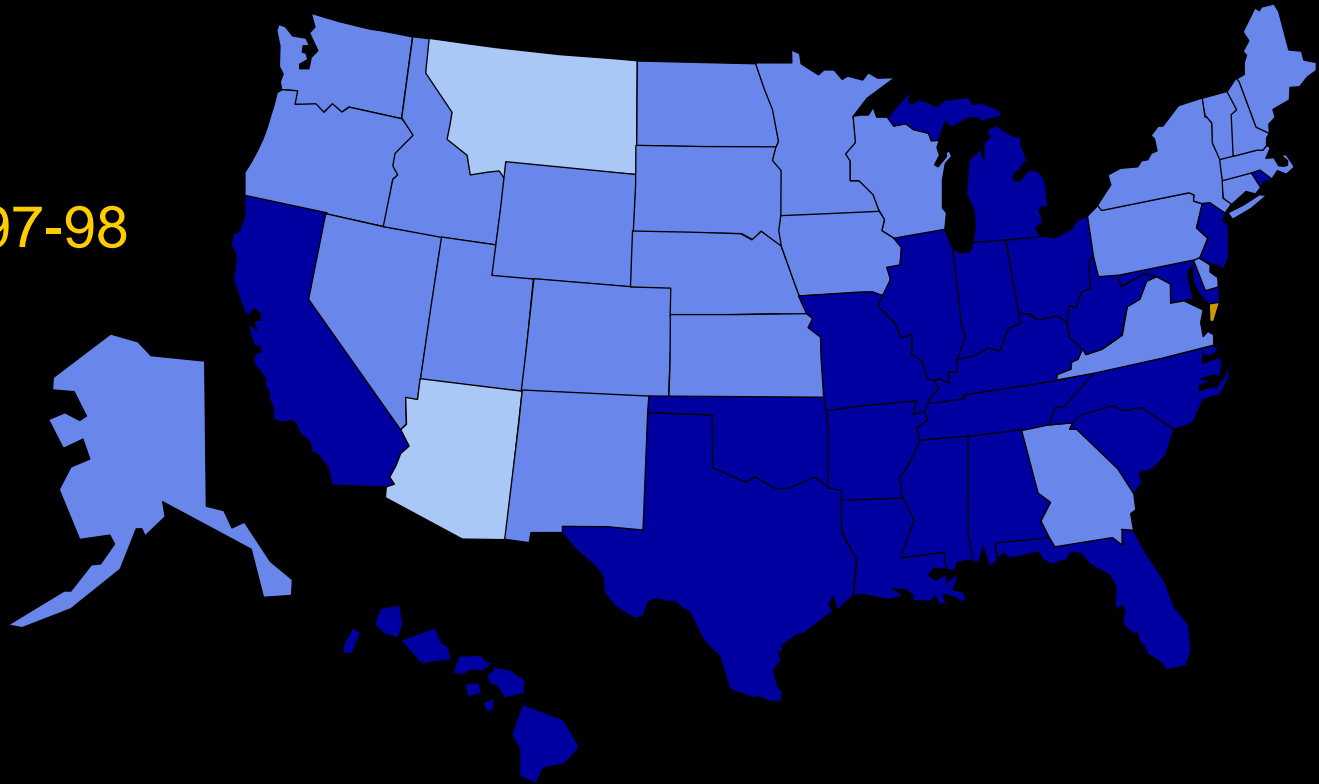
1995-96



Mokdad AH, Ford ES, Bowman BA, et al. Prevalence of obesity, diabetes and other obesity-related health risk factors, 2001. JAMA 2003 Jan 1;289


# Diabetes and Gestational Diabetes Trends Among Adults in the U.S., BRFSS


1997-98




No Data 

<4% 

4%-6% 

6%-8% 

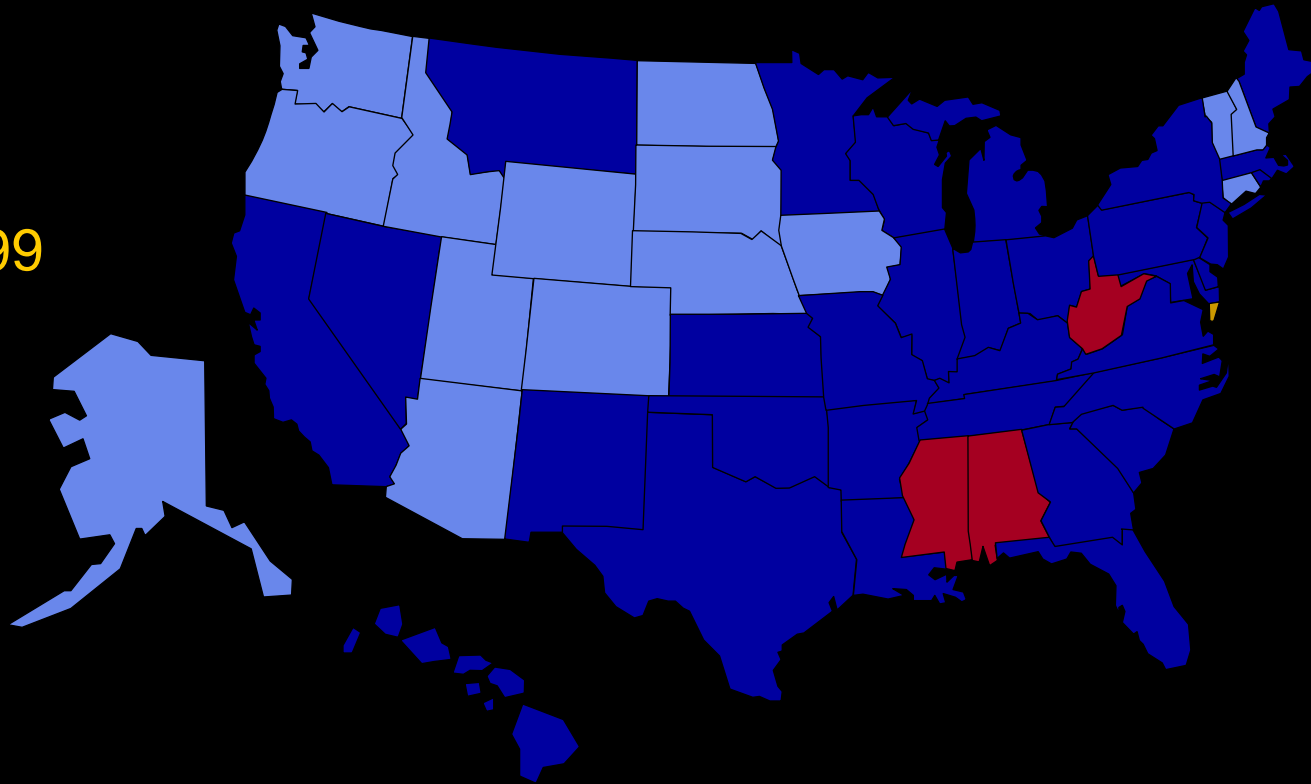
8%-10% 

>10% 

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# Diabetes and Gestational Diabetes Trends Among Adults in the U.S., BRFSS

1999



No Data ☐

<4% ☐

4%-6% ☐

6%-8% ☐

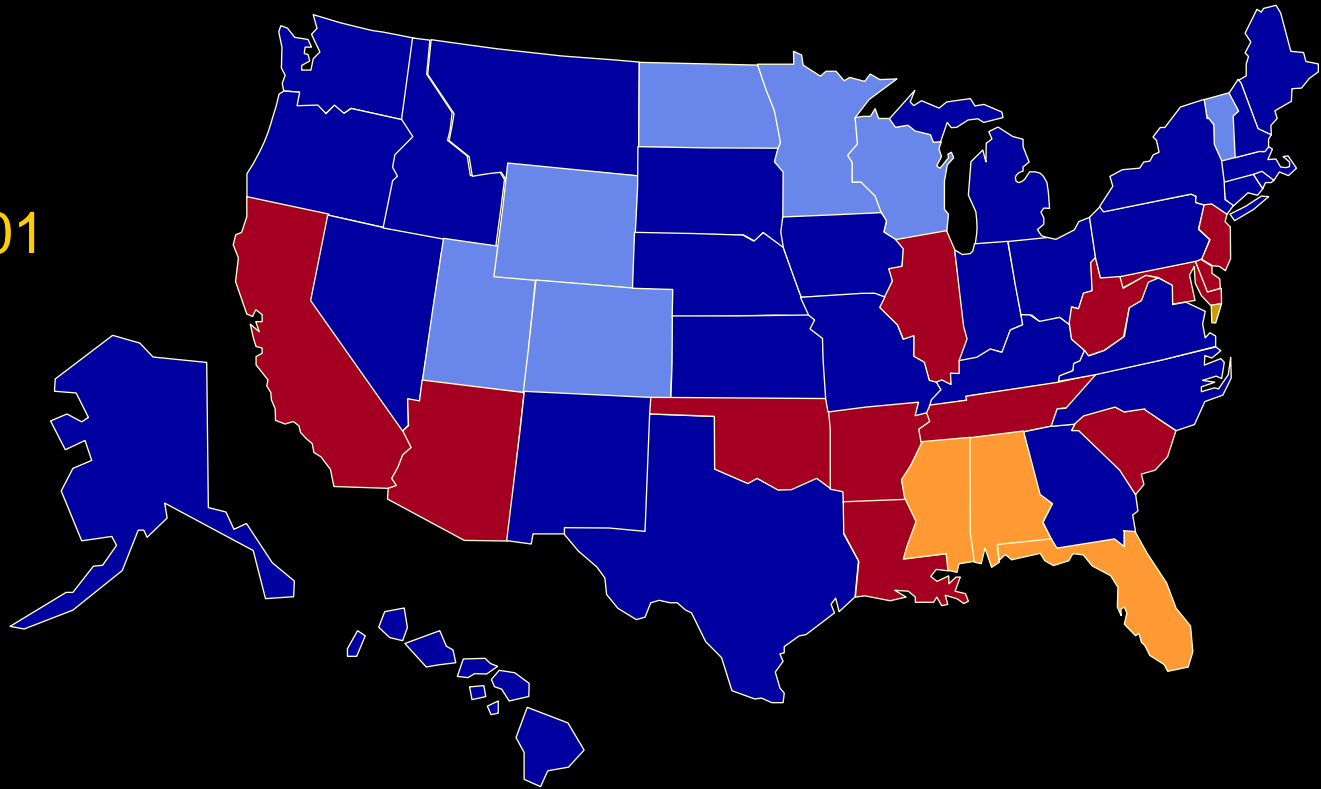
8%-10% ☐

>10% ☐

Mokdad AH, Ford ES, Bowman BA, et al. Prevalence of obesity, diabetes and other obesity-related health risk factors, 2001. JAMA 2003 Jan 1;289

# Diabetes and Gestational Diabetes Trends Among Adults in the U.S., BRFSS

2001



No Data ☐ <4% ☐ 4%-6% ☐ 6%-8% ☐ 8%-10% ☐ >10% ☐

Mokdad AH, Ford ES, Bowman BA, et al. Prevalence of obesity, diabetes and other obesity-related health risk factors, 2001. JAMA 2003 Jan 1;289



# Supersized Kids

- Rate of overweight kids has doubled in past 30 years
- 78% don't get enough physically activity
- Overweight as a kid = overweight as an adult
- Future: 1 in 3 will be diabetic

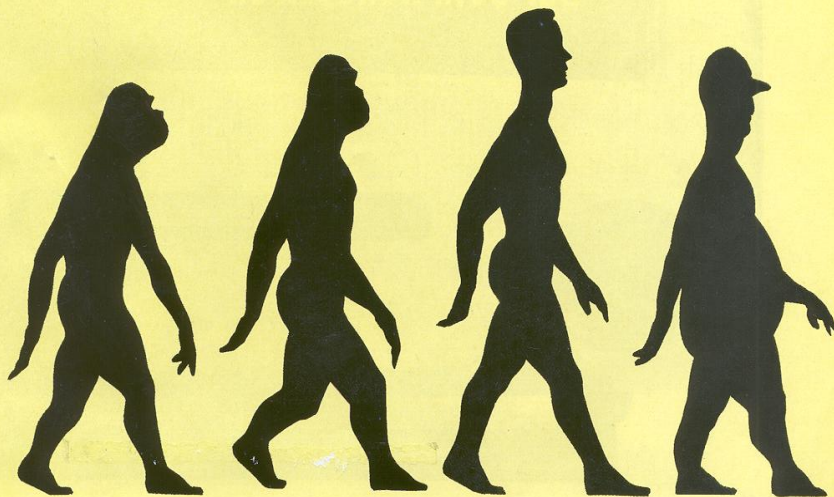
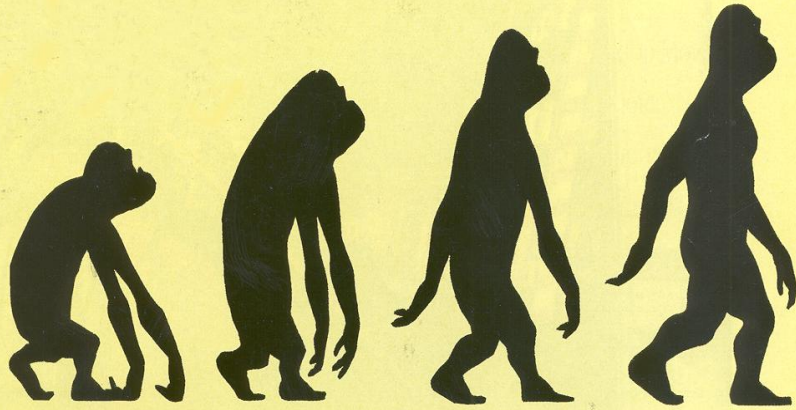
***1<sup>st</sup> generation of kids in the US that aren't expected to live as long as their parents***



PRICE \$3.00

# THE NEW YORKER

MAR. 13, 2000



## Explaining the Epidemic

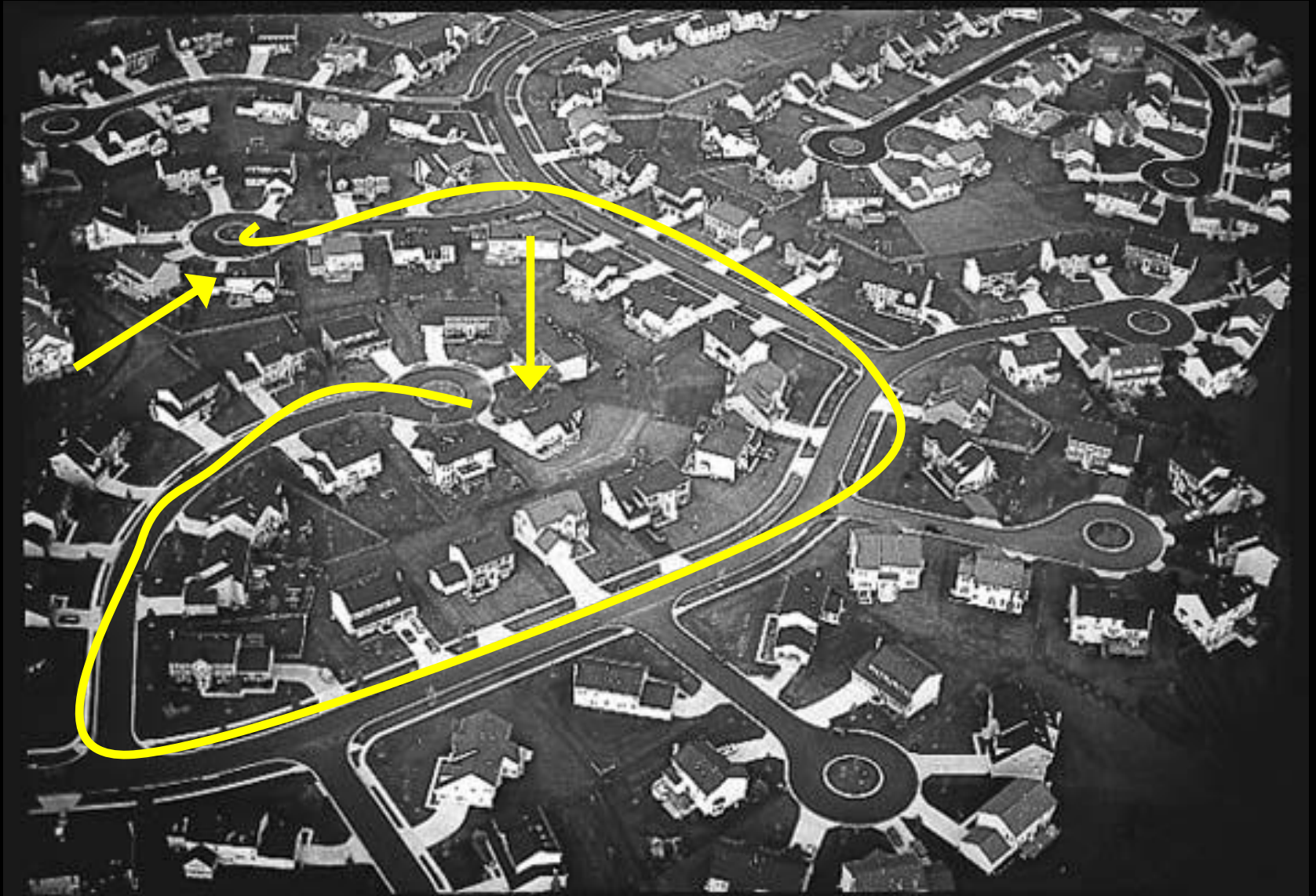
- Not genetic or biological changes
- But sweeping societal and environmental changes

# Supersizing our Communities





# Long distances, no destinations



# Designing for the 40 mph shopper



Main Street, USA



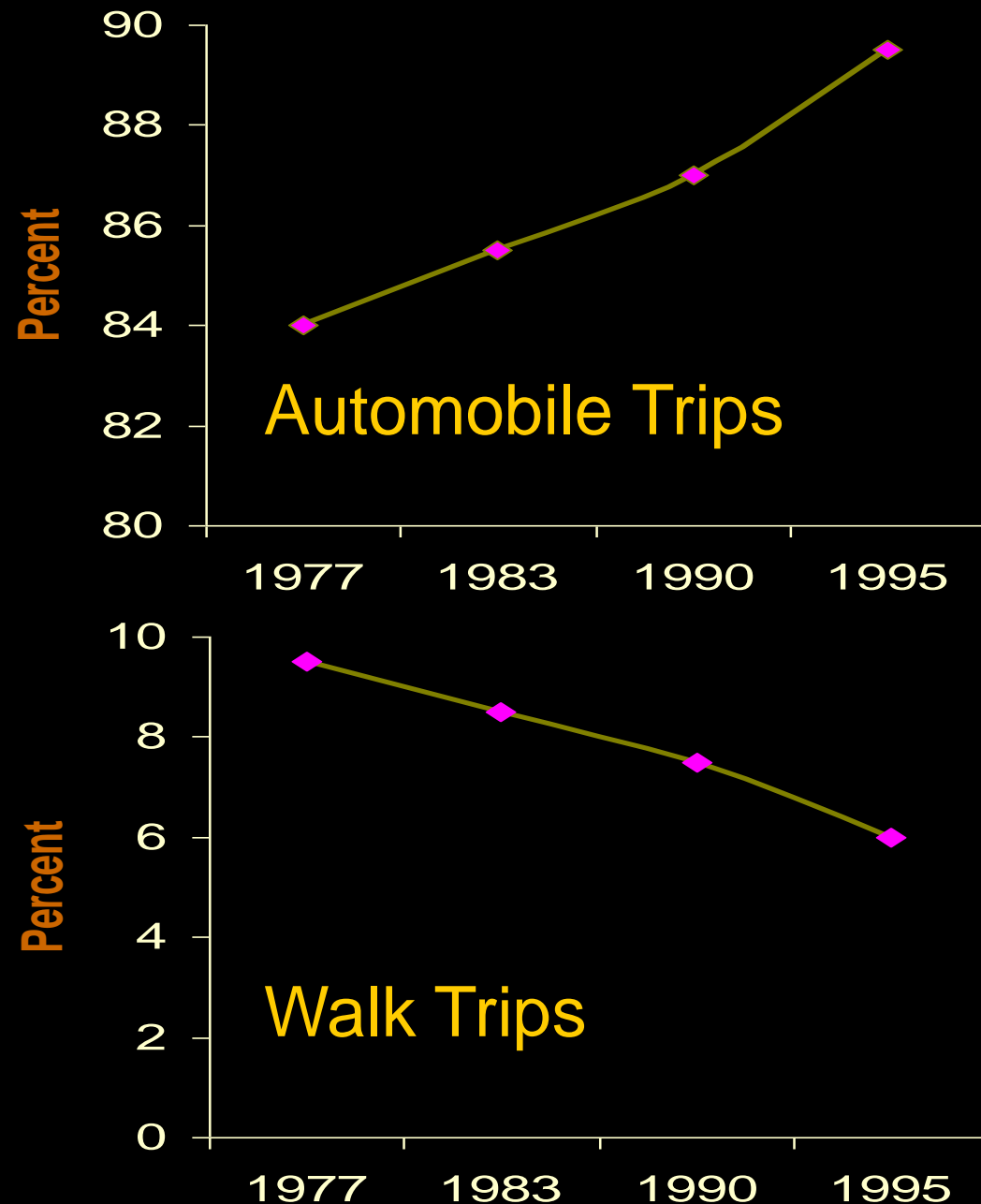
Commercial Strip, USA





# America's Car Culture

- 250% increase in vehicle miles traveled (U.S., 1960-1997)
- 200% increase in workers commuting to another county





# The disappearing walk to school

- Less than 14% of kids walk or bike to school
- ¼ of kids trips are to/from school
- 25% of the morning rush hour traffic is parents driving kids to school



# Schools Then & Now



Big Box design, on the fringes

Credit: Manitovic Public School District

The social and physical center of the community





Neighborhood environment is one of the strongest predictors of whether a person will be physically active.

Brownson, et al. 2001.

The built environment can facilitate or constrain physical activity.

TRB/IOM Report, 2005



# The Good News!

- 3x more walking with square city blocks vs. cul-de-sacs
- 1-2 more walk trips/week in walkable neighborhoods
- San Diego study:
  - 70 minutes more physical activity/week
  - 35% vs. 60% overweight

# But, isn't it really just about making bad choices?



“It is unreasonable to expect people to change their behavior easily when so many forces in the social, cultural and physical environment conspire against such change.”

Institute of Medicine



# Does our environment influence our behavior?



Ask any marketing expert....

# Cars, Air Pollution & Asthma



- 50% increase in kids with asthma in past two decades
- Kids living near busy roads are 3X more likely to be treated for asthma



# Have we designed for those most in need?

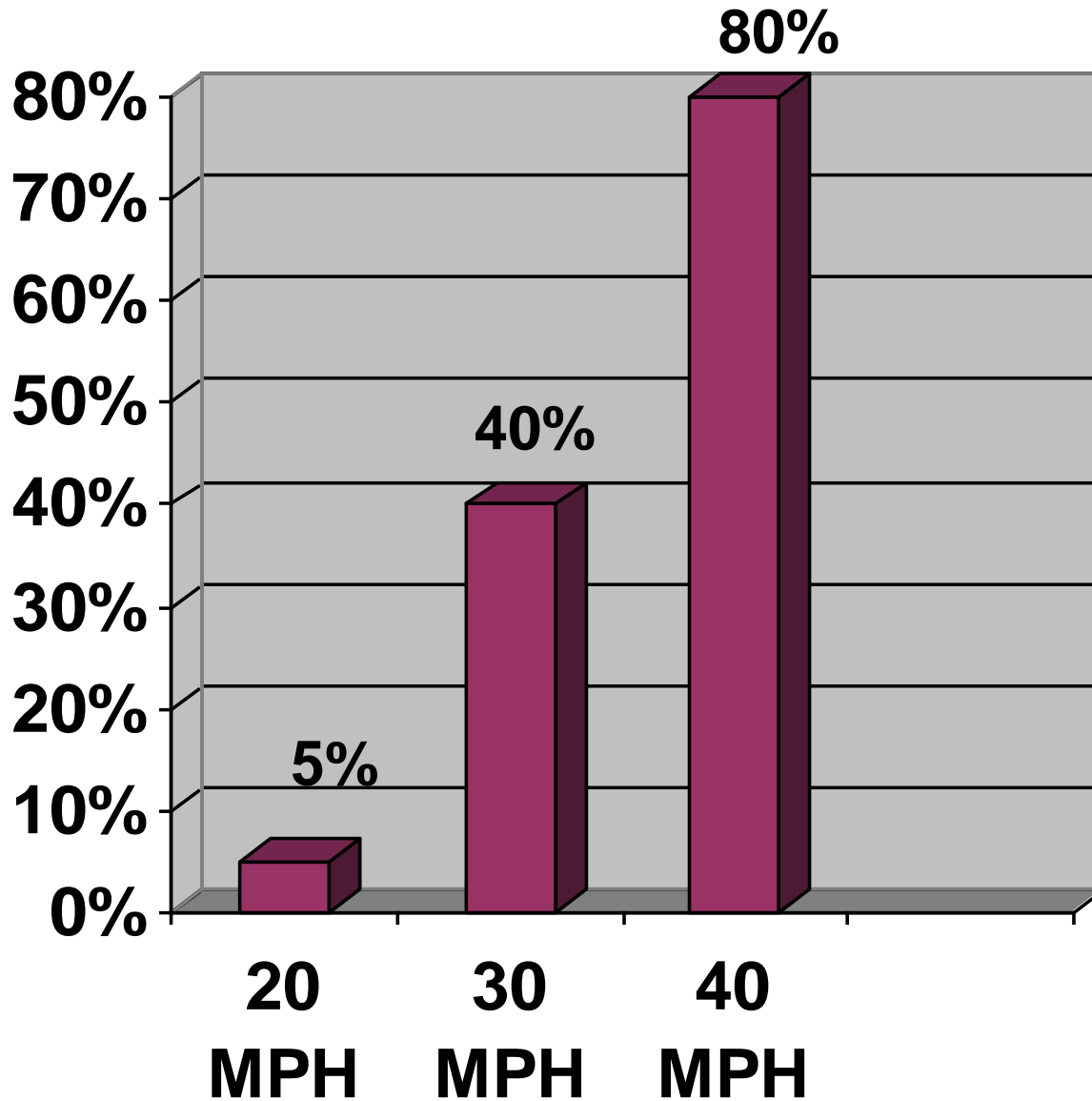


Seniors: represent 23% of pedestrian deaths but only 13% of US population

School kids: being hit by a car is a leading cause of injury death



# ***Speed Kills***



■ **Percent of  
Pedestrians  
Killed at  
Various Car  
Speeds**

# The forgotten pedestrian

- Traffic flow prioritized over pedestrian safety
- Transportation budgets allocate minimal funds to pedestrian projects
- Traffic laws reinforce the bias against pedestrian



If drivers were treated like pedestrians...





# The life of a Battery Hen

Cooped-Up  
Indoors

# Battery Hen or Free-Range Kids?

*“Children need access to an environment that allows them to play out what is natural to them – physical, dramatic, constructive and spontaneous games. But, in our high-tech society, children go indoors right after school and eat junk food and play video games.”*

*Joe Frost, University of Texas*





# Design Affects Social Networks & Social Capital



- 3x more friends, 2x more acquaintances in walkable neighborhoods
- People with strong social networks:
  - Live longer
  - Have fewer heart attacks and heart disease
  - Are less depressed and use alcohol and drugs less
  - Have fewer teen births
  - Are healthier overall



# Senior Health & Mobility

*Walkable/Livable Communities Promotes:*

- *Fewer falls*
- *Greater mobility*
- *Maintain social networks*
- *Increase lifespan & QOL*
- *Decrease health care costs*



# The Public Health Impacts of the Built Environment

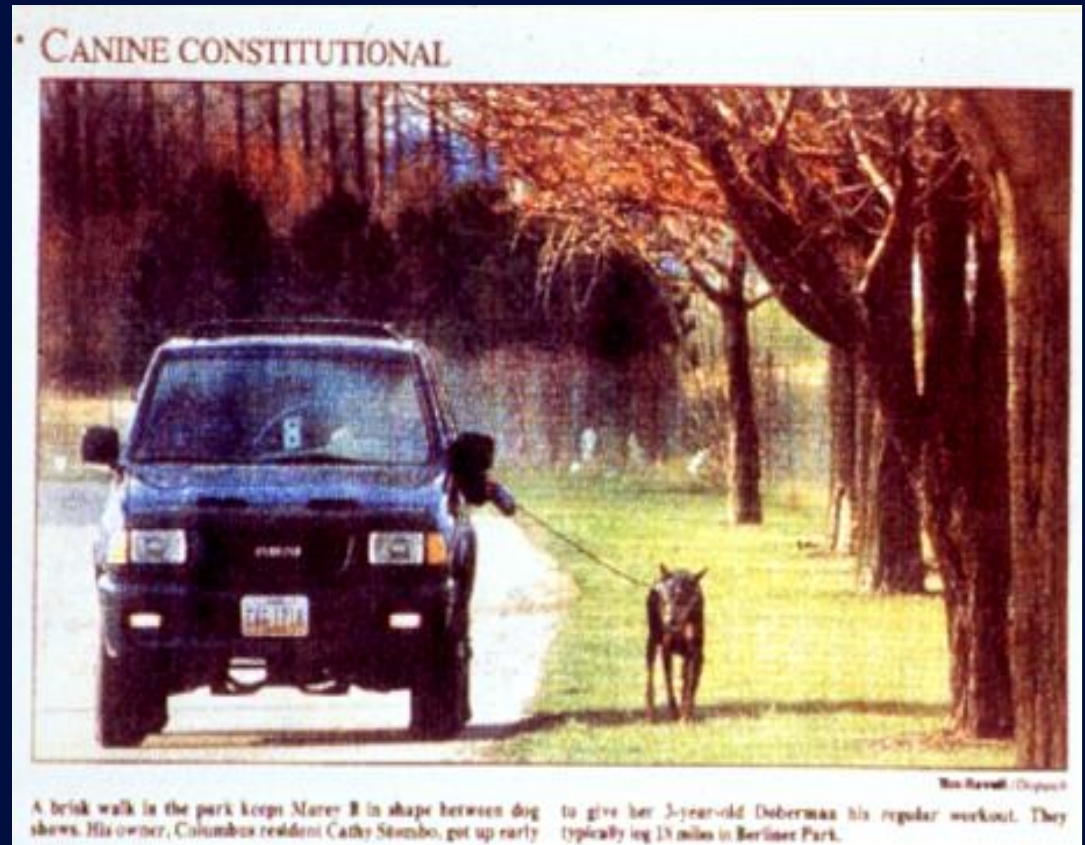


- Physical activity
- Obesity & chronic disease
- Pedestrian injuries/death
- Asthma & respiratory disease
- Crime & violence
- Social capital
- Elder health & mobility
- Water quality & quantity
- Mental health
- Health disparities



# Consider the possibility that...

- The pattern of growth has upset the balance of human behavior
- The social costs of how we've developed may be far more reaching than traffic congestion



# Smart Growth: *A Public Health Strategy*

## Ten Principals of Smart Growth

- Create walkable neighborhoods
- Mix land uses
- Compact building design
- Foster distinctive, attractive places with a strong sense of place
- Strengthen and direct development towards existing communities
- Provide a variety of transportation choices
- Preserve open space, farmland and critical environmental areas
- Create a range of housing opportunities & choices
- Encourage community/stakeholder collaboration

# Put “health” back into planning

The challenge facing those with responsibility for assuring the health and quality of life of Americans is clear. We must integrate our concepts of ‘public health issues’ with ‘urban planning issues’. Urban planners, engineers, and architects must begin to see that they have a critical role in public health. Similarly, public health professionals need to appreciate that the built environment influences public health as much as vaccines or water quality.

Jackson & Kochtitzky, 2001



# The Call to Action

- Recognize that our local land use and transportation decisions greatly influences the health of our residents
- Use the public health message to support walkable, bikable, livable community design
- Integrate public health as a goal in land use and transportation planning

In this vast work, the incentive  
has not been chiefly the  
improvement of property but  
the betterment of human life.

John Nolen, 1869-1937



# Thank you!

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