

Mississippi & the Global Obesity Epidemic

Mitch Morris, MPH

MS SHINE Project Director

Aaron E. Henry Community Health Center

Clarksdale, MS

Preview

- Global Epidemic
- Obesity in the US
- Effects of this Epidemic
- Obesity in Mississippi
- Causes
- Solutions



Disclaimer

- Some illnesses may lead to obesity or weight gain. (i.e. Cushing's disease & polycystic ovary syndrome)
- Genetic disorders can directly cause obesity (i.e. Bardet-Biedl syndrome & Prader-Willi syndrome)
- Pharmaceuticals such as steroids and some antidepressants may also cause weight gain
- These represent a very small portion of the total prevalence of overweight & obesity
- ***This presentation does not consider excess weight caused by such circumstances***

Definitions

- Body Mass Index (BMI): a measure of an adult's weight in relation to height (kg/m^2)
- Overweight: BMI of 25 – 29.9
- Obese: BMI of 30 or higher
- Example of a 5'9" adult:

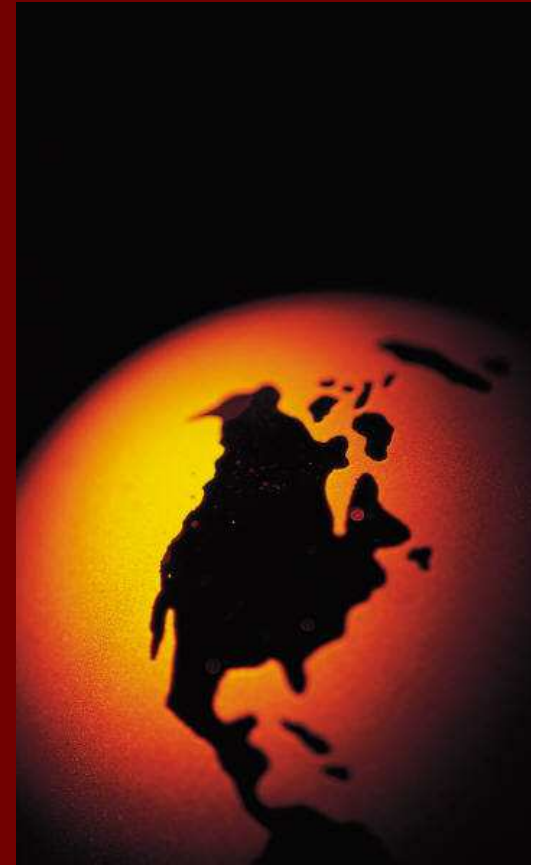
Weight (pounds)	BMI	Result
124 -	18.5 -	Underweight
125-168	18.5-24.9	Healthy weight
169-202	25-29.9	Overweight
203 +	30 +	Obese

Definitions

- Epidemic: An outbreak or unusually high occurrence of a disease or illness in a population or area (*The American Heritage® Stedman's Medical Dictionary*)

A Global Epidemic

- Over 1 billion adults are overweight (of 6.4 billion total population)
- Over 300 million are obese
- South Africa: A third of all men & half of all women are overweight
- Morocco: 40% are overweight
- Middle East: 25% are overweight
- Kenya: 12% are overweight



Obesity in the U.S.

- Fattest country in the world?
- Dramatic increase in a few years
- 2/3 of US adults are overweight
- 30% of US adults are obese (over 60 million)
- 16% of US children/teens are overweight (over 9 million)
- In 2001, U.S. Surgeon General declared obesity to be an epidemic



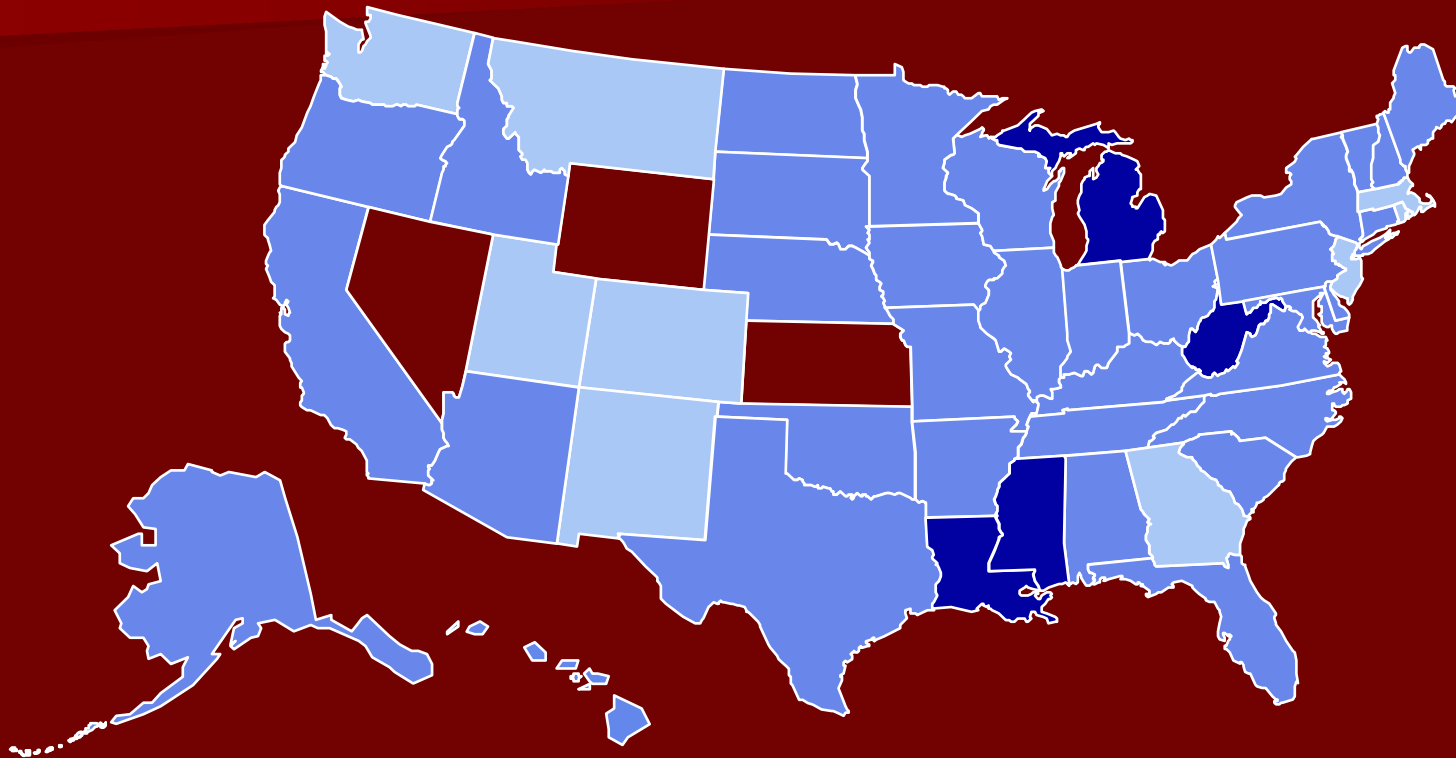
The Problem is Getting B-I-G-G-E-R



Obesity Trends* Among U.S. Adults

BRFSS, 1991

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

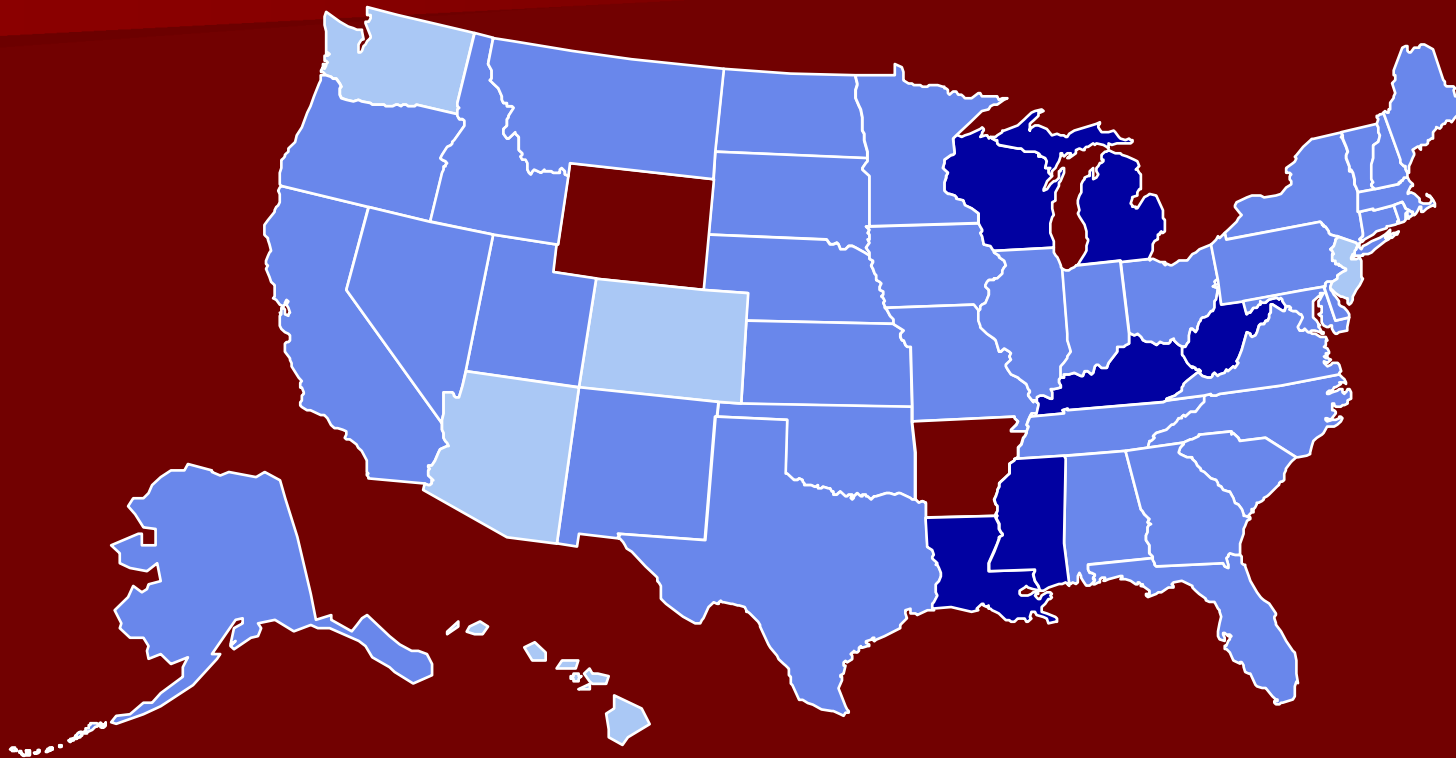


Legend: No Data, <10%, 10%-14%, 15%-19%

Obesity Trends* Among U.S. Adults

BRFSS, 1992

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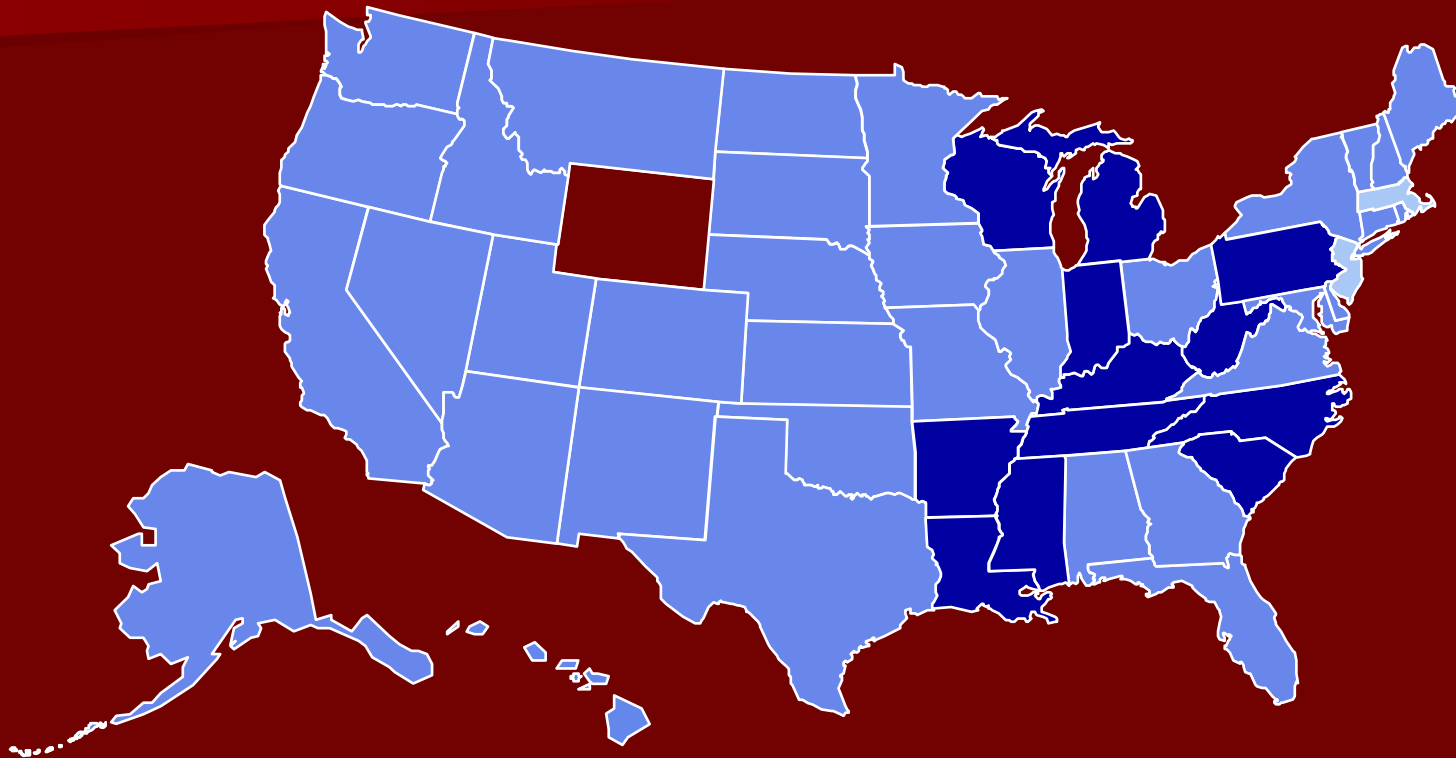


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Obesity Trends* Among U.S. Adults

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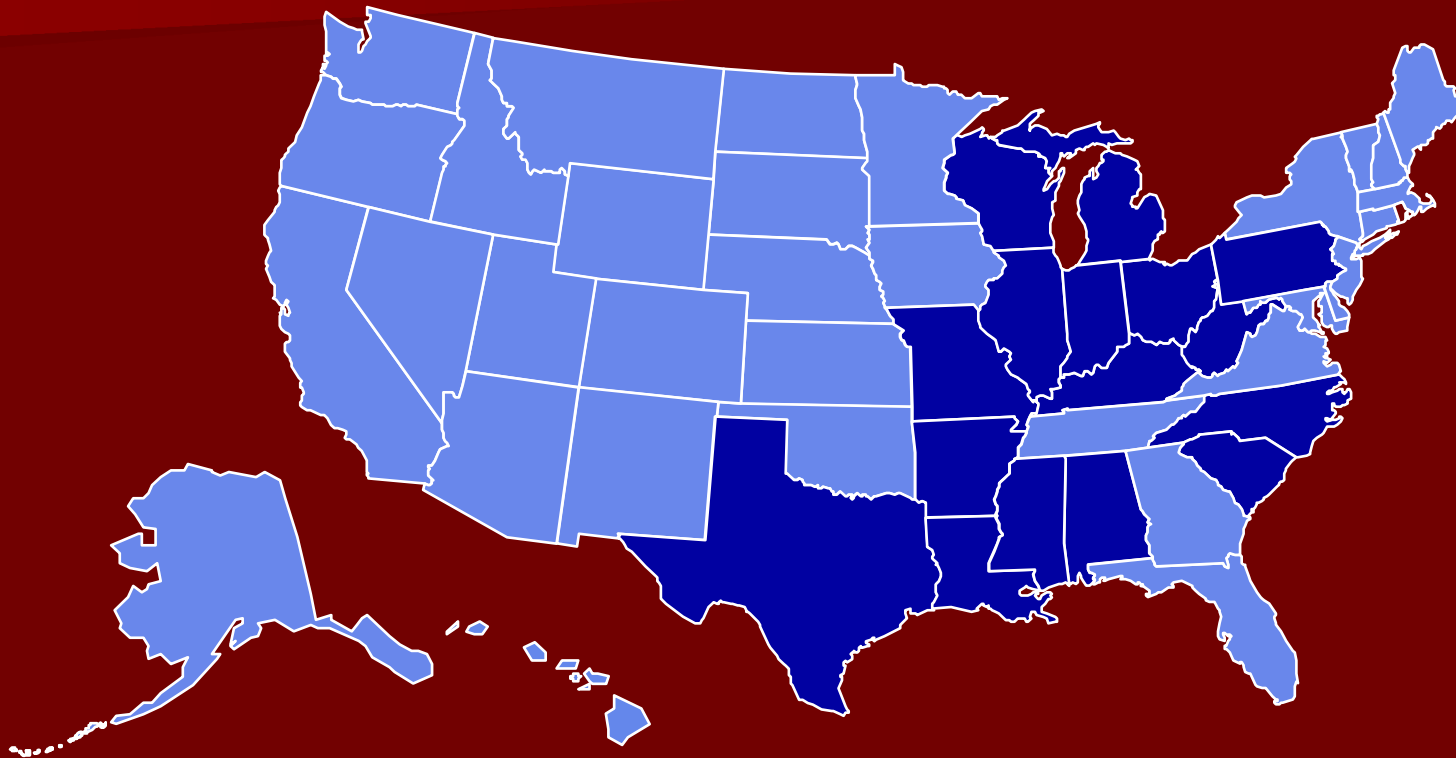


Legend: No Data <10% 10%-14% 15%-19%

Obesity Trends* Among U.S. Adults

BRFSS, 1994

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

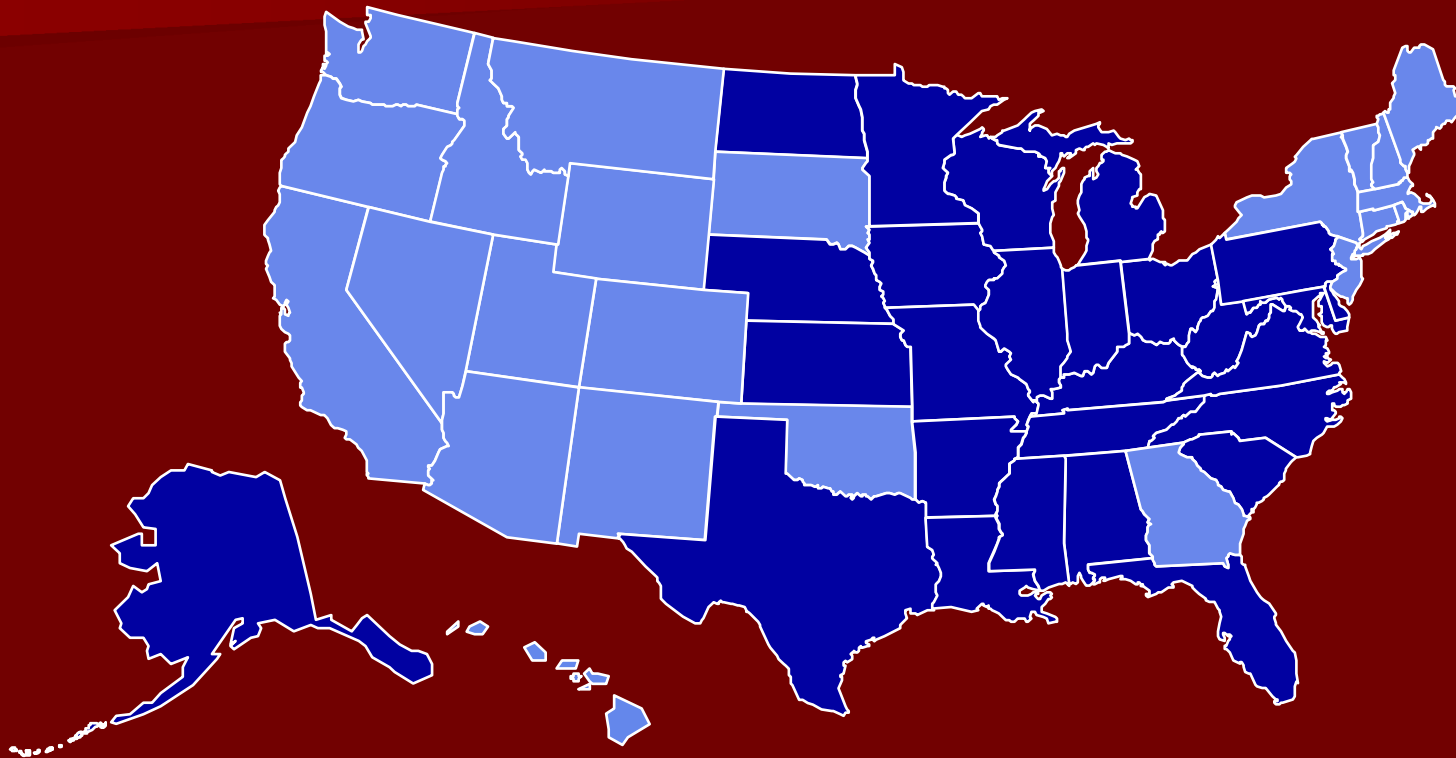


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Obesity Trends* Among U.S. Adults

BRFSS, 1995

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

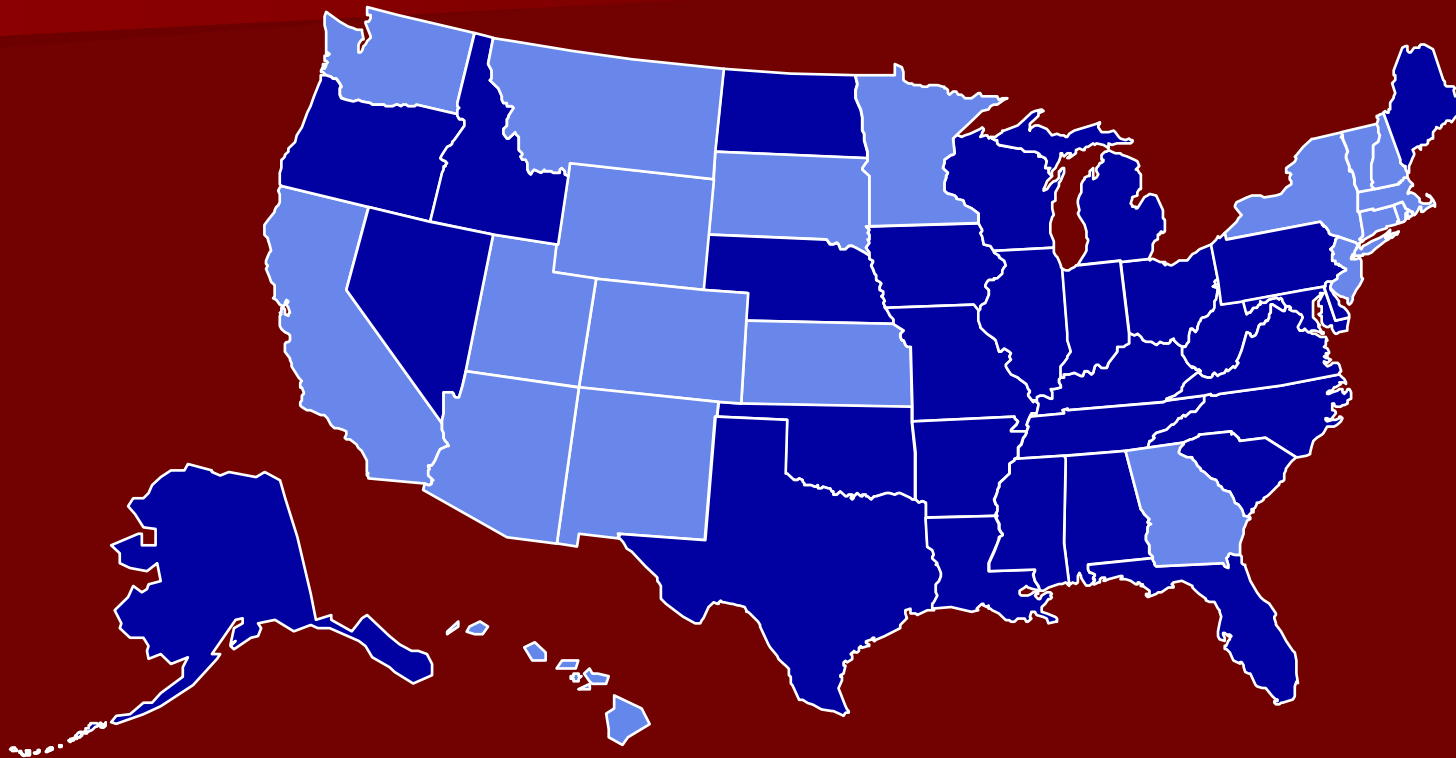


Legend: No Data <10% 10%-14% 15%-19%

Obesity Trends* Among U.S. Adults

BRFSS, 1996

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

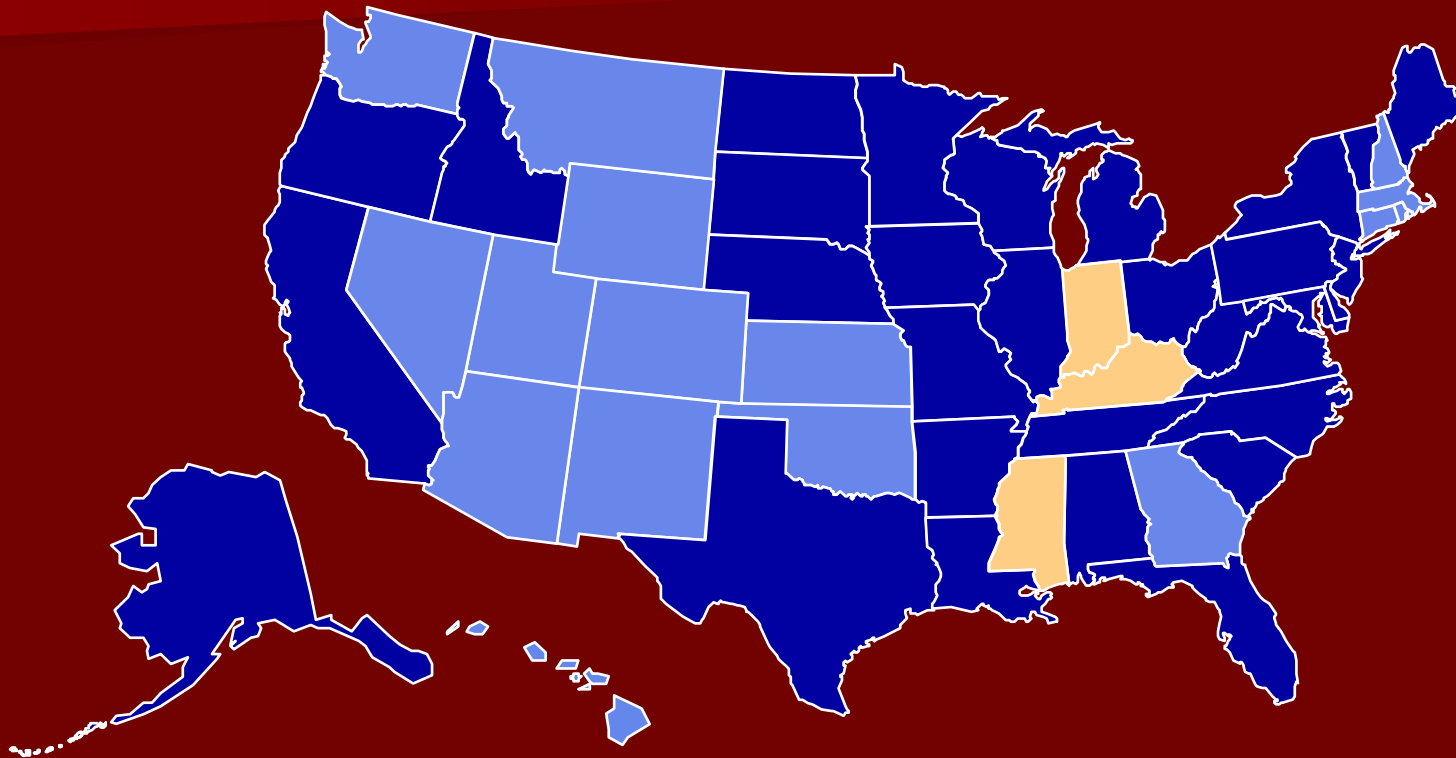


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Obesity Trends* Among U.S. Adults

BRFSS, 1997

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

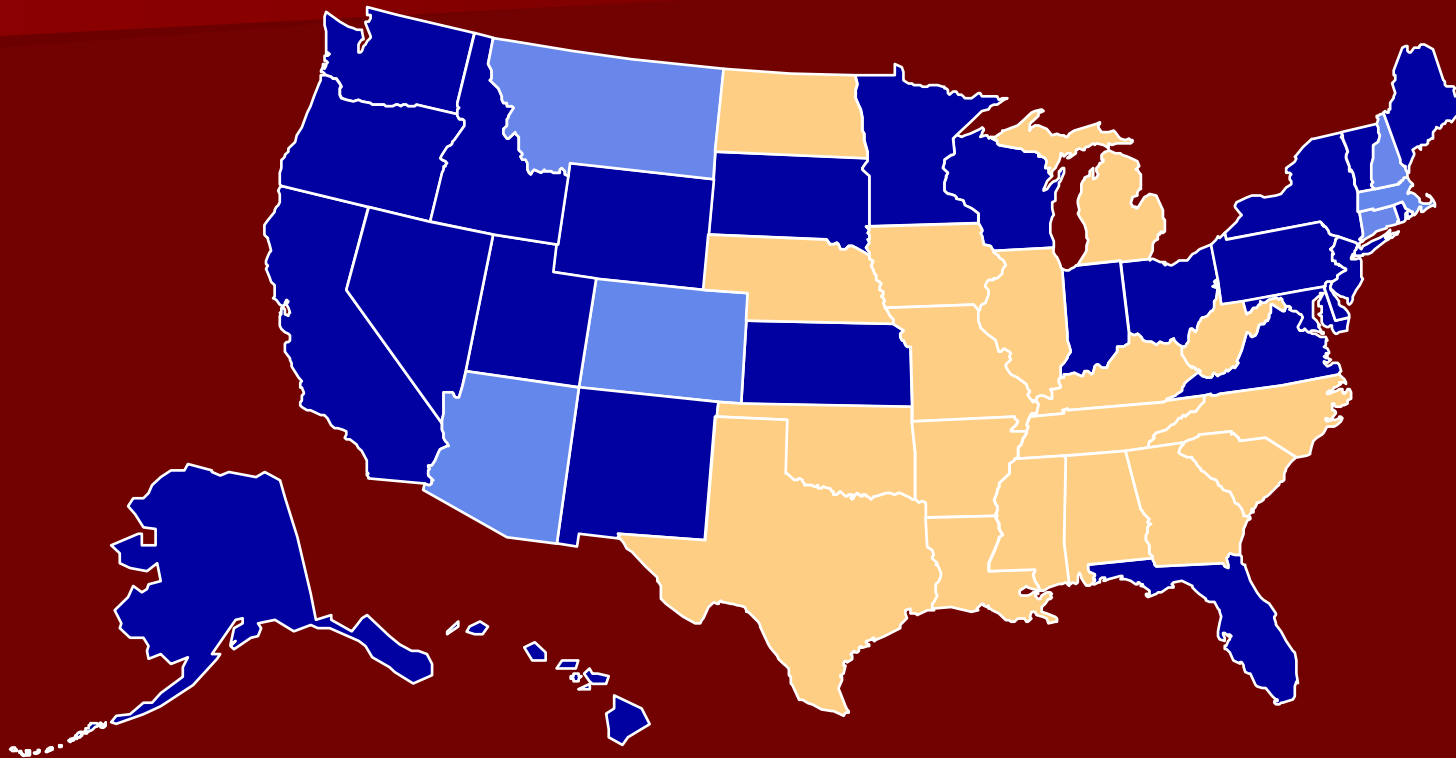


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Obesity Trends* Among U.S. Adults

BRFSS, 1999

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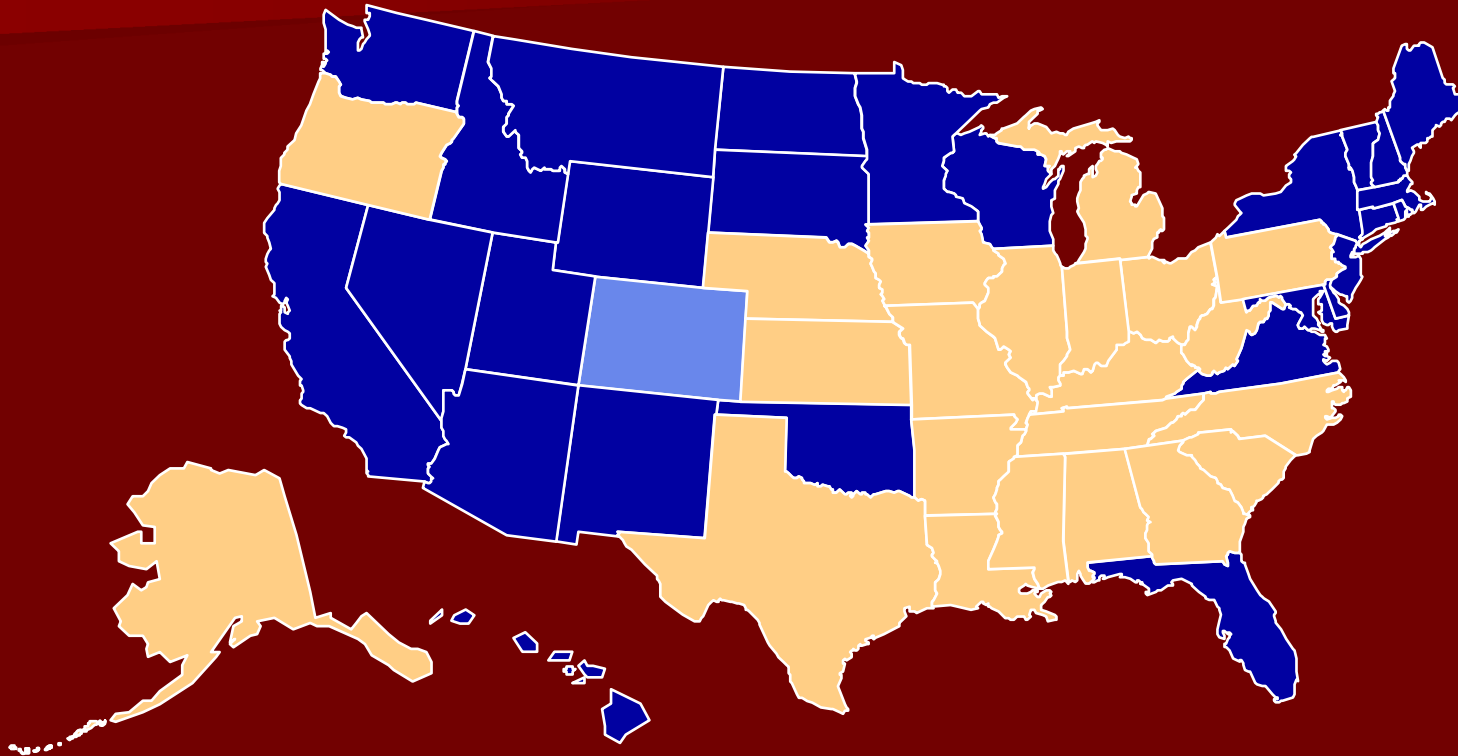


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Obesity Trends* Among U.S. Adults

BRFSS, 2000

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

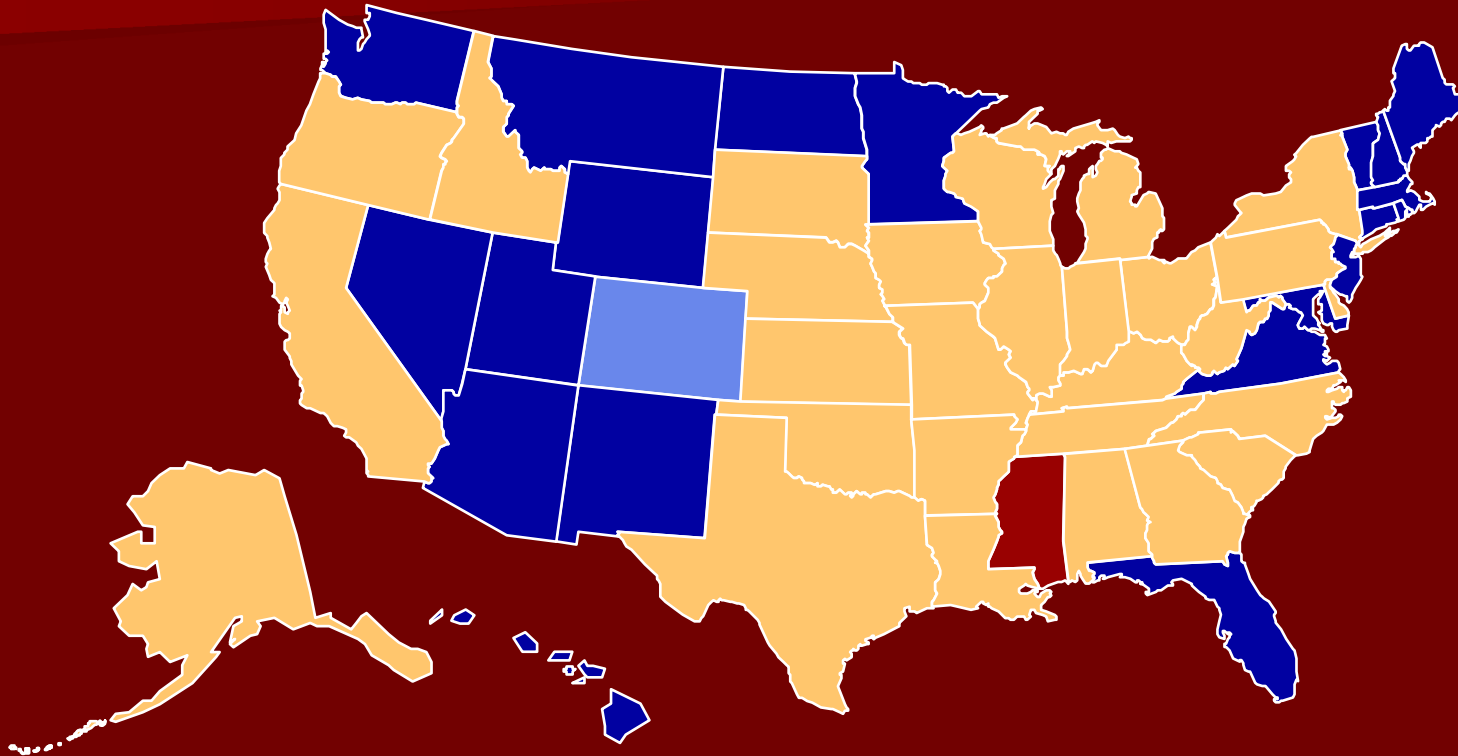


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Obesity Trends* Among U.S. Adults

BRFSS, 2001

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

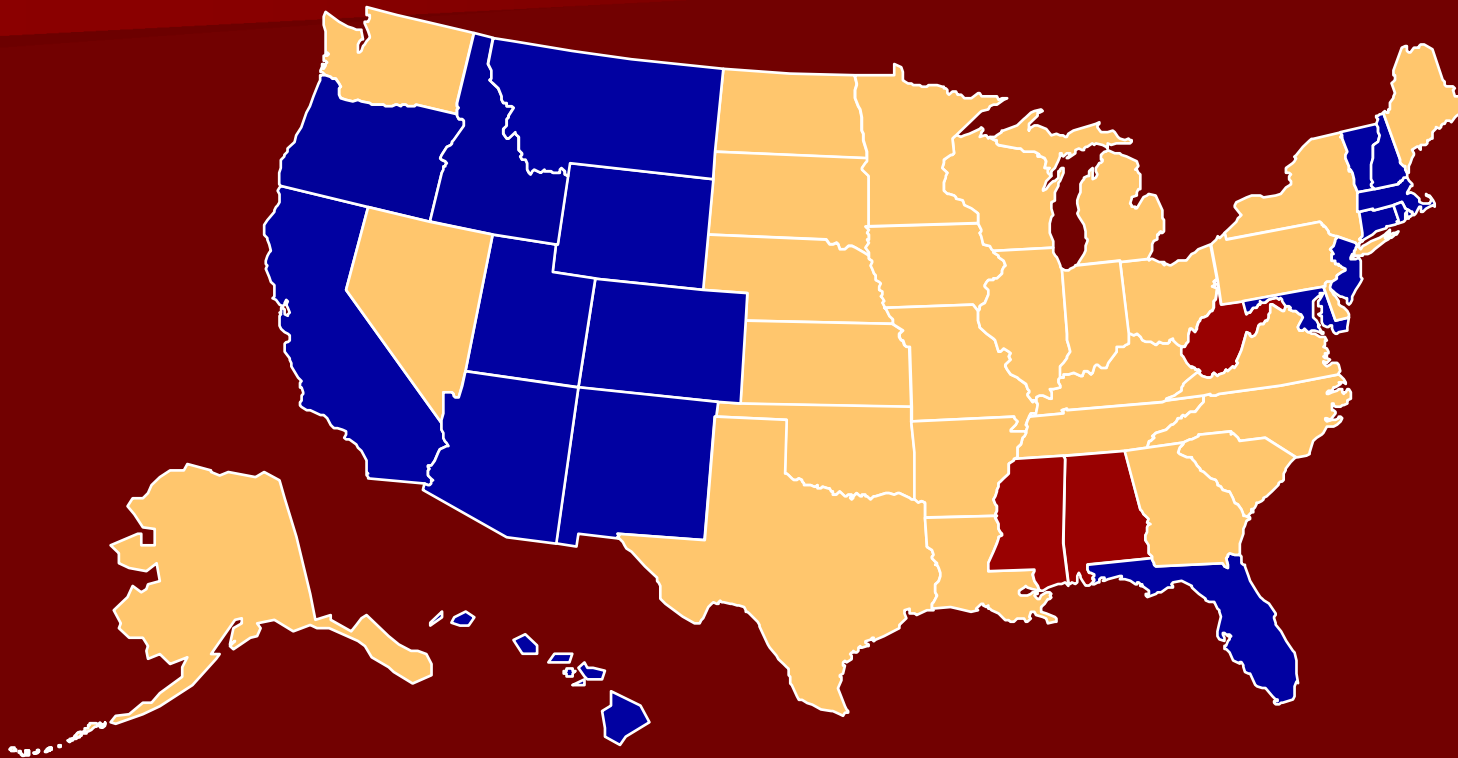


Legend: No Data, <10%, 10%-14%, 15%-19%, 20%-24%, $\geq 25\%$

Obesity Trends* Among U.S. Adults

BRFSS, 2002

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

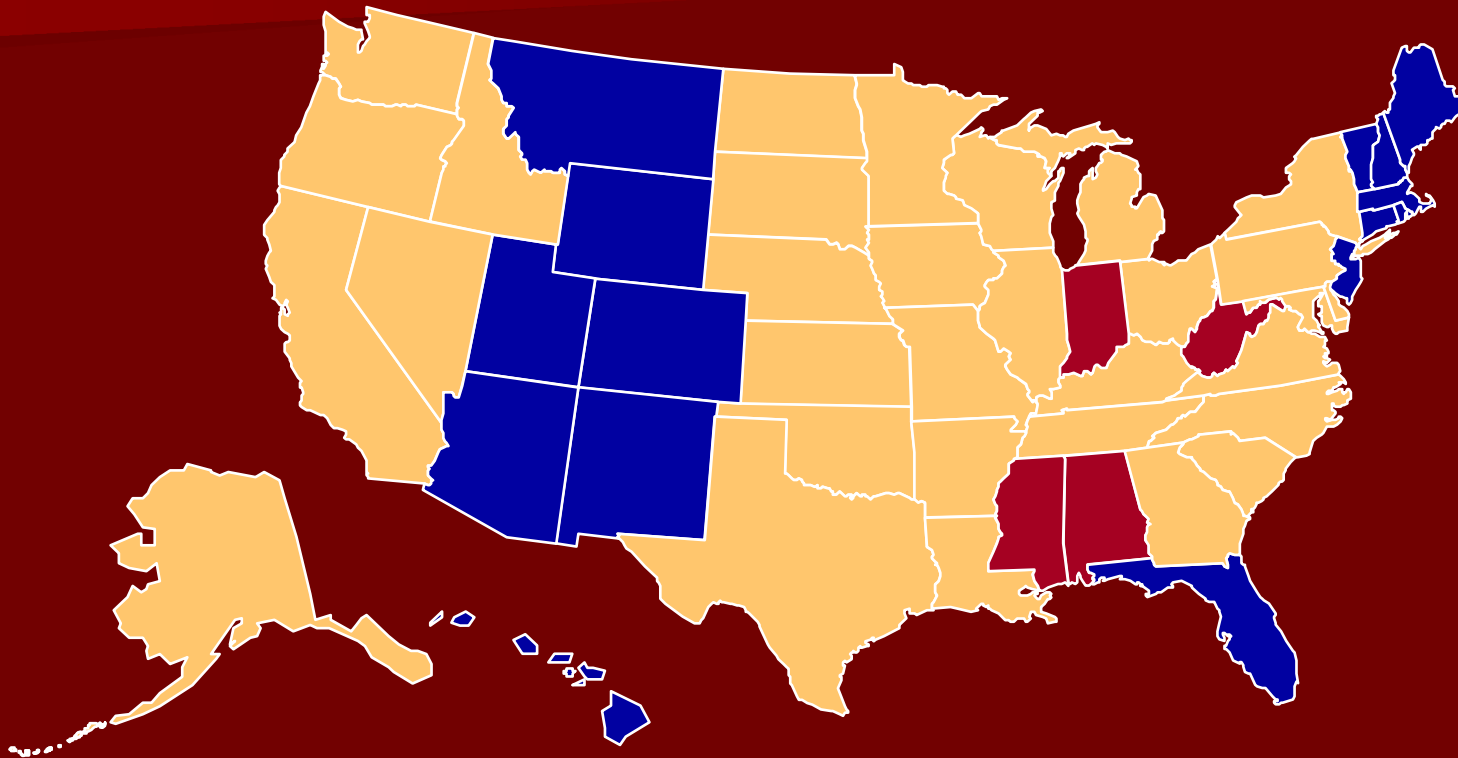


Legend: No Data, <10%, 10%-14%, 15%-19%, 20%-24%, $\geq 25\%$

Obesity Trends* Among U.S. Adults

BRFSS, 2003

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

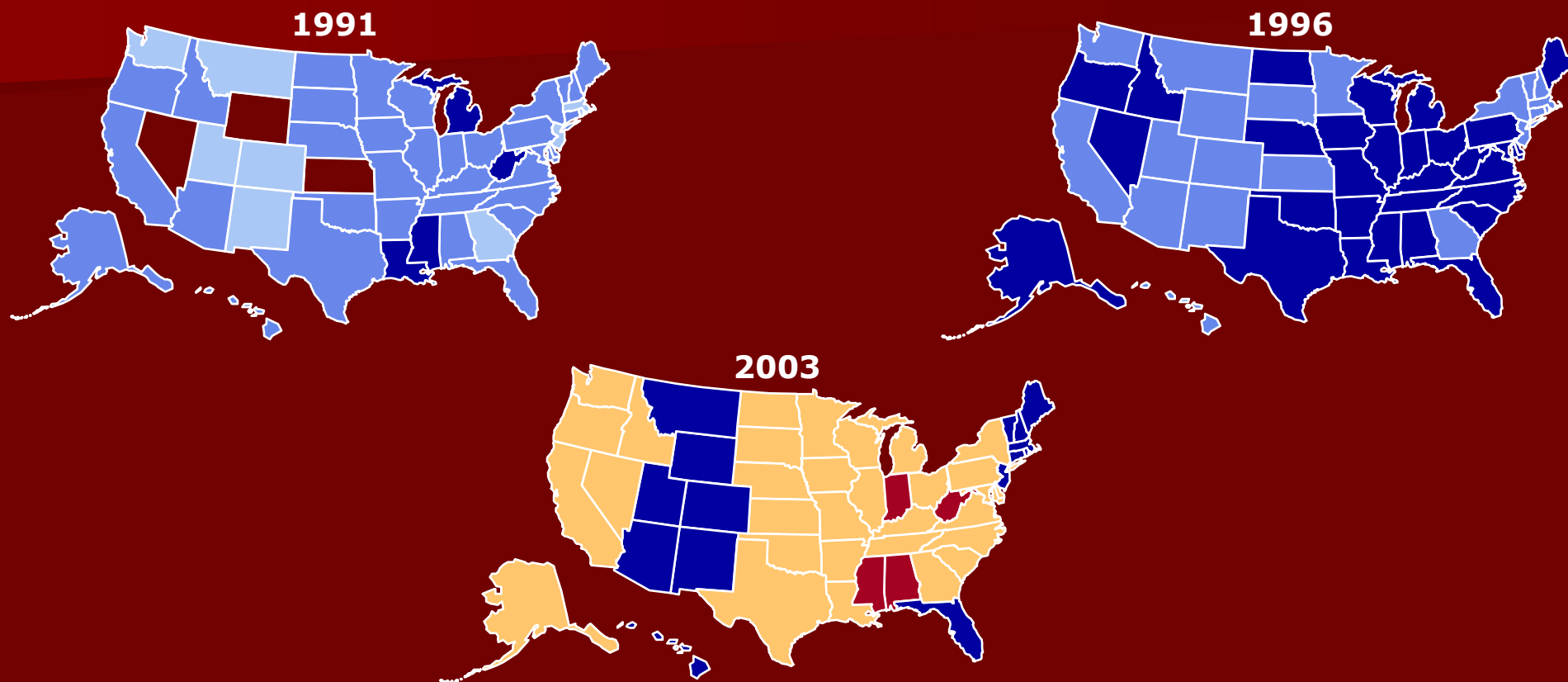


Legend: No Data, <10%, 10%–14%, 15%–19%, 20%–24%, $\geq 25\%$

Obesity Trends* Among U.S. Adults

BRFSS, 1991, 1996, 2003

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



□ No Data □ <10% □ 10%-14% □ 15%-19% □ 20%-24% □ $\geq 25\%$

Source: Behavioral Risk Factor Surveillance System, CDC.

Obesity in the U.S. (continued)

- From 1991 to 2003, the number of obese adults doubled
- Since 1980, the number of overweight Americans increased by an average of 1% each year
- If current trends persist, 100% will be overweight by 2040



So What?!



500,000 are expected to die in 2005
from illnesses related to obesity.

Being overweight is a key risk factor for many diseases:

- Hypertension
- Type 2 diabetes
- Heart disease
- Stroke
- Gallbladder disease
- Osteoarthritis
- Sleep apnea and respiratory problems
- Some cancers (endometrial, breast, and colon)
- Depression & low self-esteem



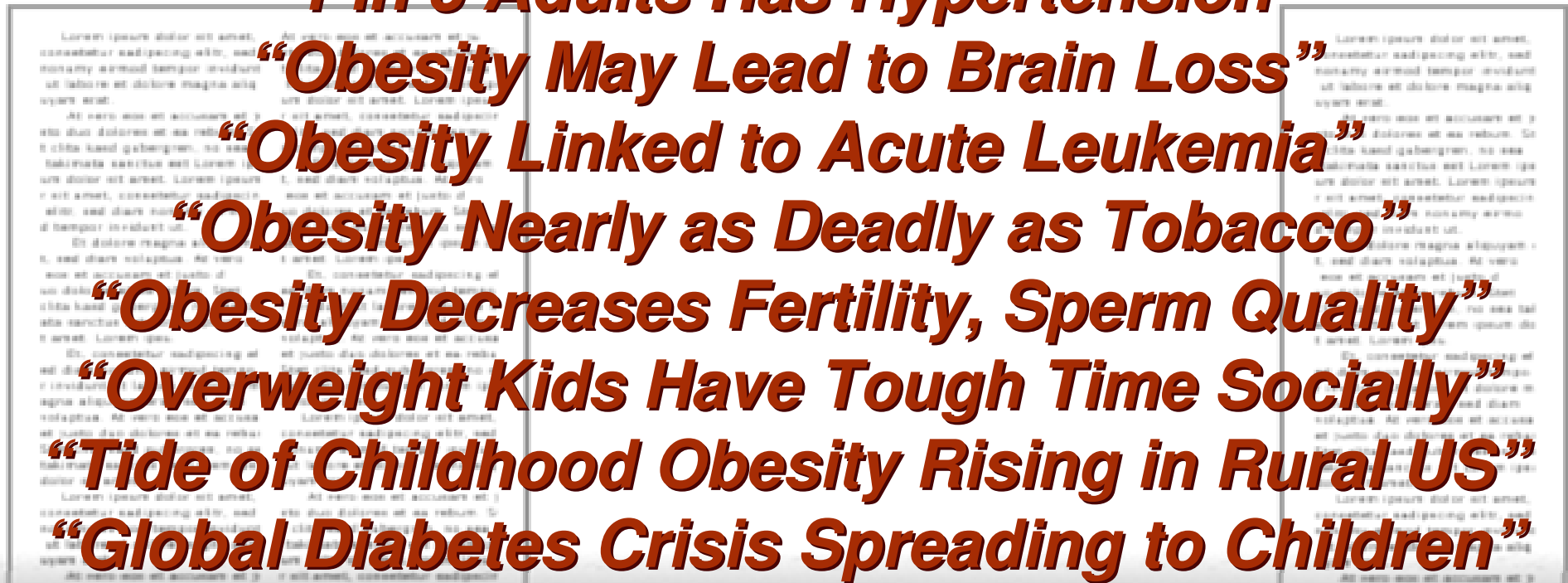


Obesity hurts.

Recent Headlines



“Obesity to Lower US Lifespan”
“Obesity Changes Heart Muscle”
“1 in 3 Adults Has Hypertension”



“Obesity May Lead to Brain Loss”

“Obesity Linked to Acute Leukemia”

“Obesity Nearly as Deadly as Tobacco”

“Obesity Decreases Fertility, Sperm Quality”

“Overweight Kids Have Tough Time Socially”

“Tide of Childhood Obesity Rising in Rural US”

“Global Diabetes Crisis Spreading to Children”

“High Blood Pressure: The New Childhood Scourge”

Financial Impact



Financial Impact - Public

- The cost of obesity & overweight in the U.S. exceeds \$120 billion/year
- 1998 study: the cost of overweight & obesity represents over 9% of total US expenditures
- Annual health care costs of obese adults are 36% greater than those of normal weight (medication costs are 77% greater)
- Annual health expenditures for diabetics exceed \$13,000/person, compared to \$2,600/person without diabetes. (Approx. 80% with diabetes are overweight)
- Medicaid & Medicare pay at least half of obesity-related costs (low-income, disability, & age)

Financial Impact - Business

- Obesity-related health problems cost U.S. businesses an estimated \$13 billion in 1994
 - \$8 billion in health insurance costs
 - \$2.4 billion for sick leave
 - \$1.8 billion for life insurance
 - \$1 billion for disability insurance

Obesity in Mississippi

- The fattest state in the fattest country?
- Over 2/3 of MS adults are overweight
- Over 26% are obese
- Only 38% get recommended amount of physical activity
- #1 in heart disease deaths
- #1 in young adults with diabetes
- Annual state costs associated with overweight & obesity were estimated at \$757 million in 2000

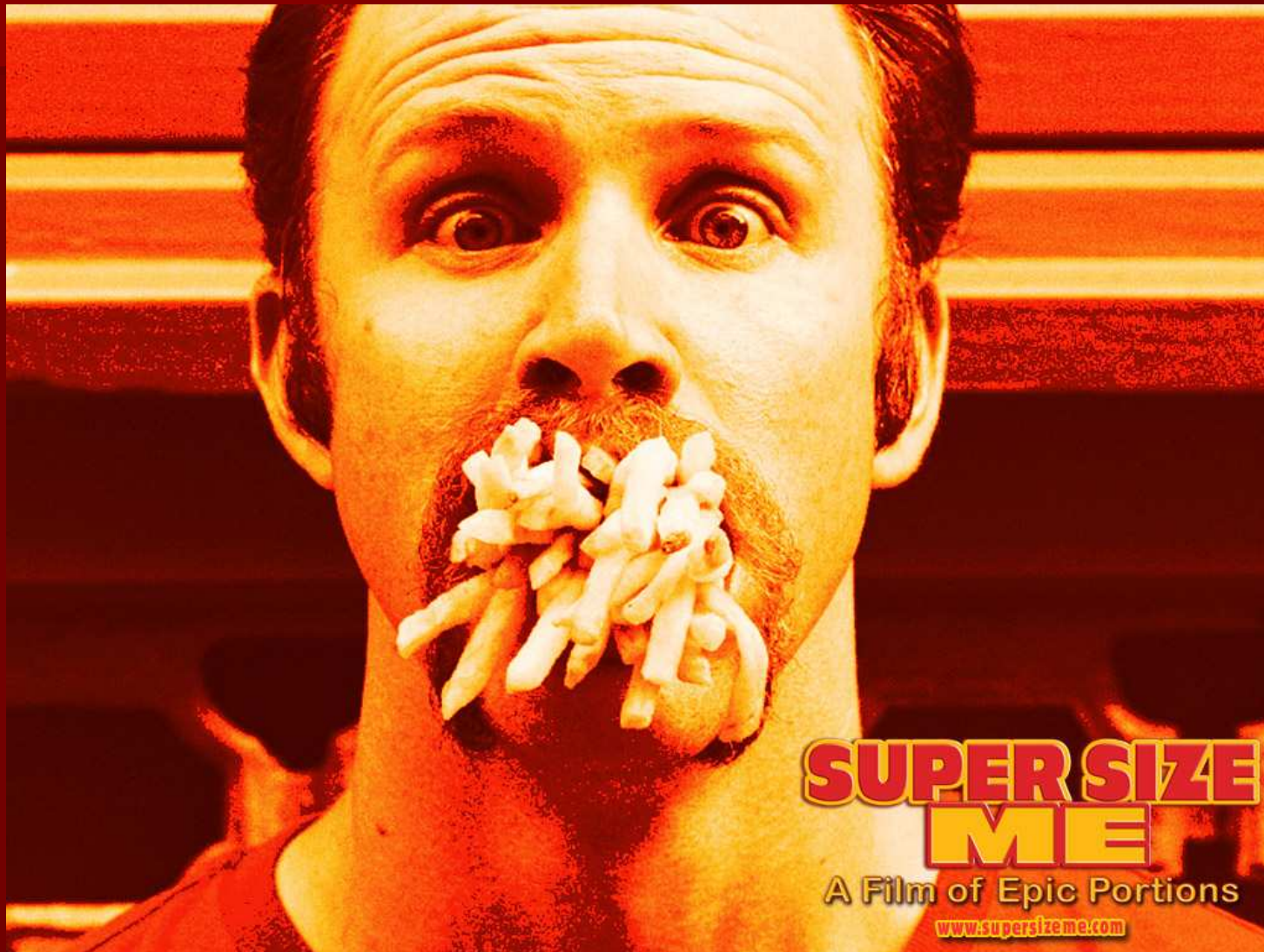


What Caused this Problem?

- Toxic environment?
- Bad policies?
- Food industry?
- Excess of food?
- Easy access to unhealthy foods?
- Barriers to healthier foods?
- Lack of discipline?



Personal Responsibility



Personal Responsibility

- Weight gain is caused by an energy imbalance (calories in, calories out)
- Compared to 10 years ago, Americans eat 200 more calories/day
- 200 calories more a day for 14 days can lead to roughly 1 pound of weight gained (25 lbs/yr)
- Bottom line: we choose what we eat & drink and we eat too much *bad* food, too little *healthy* food, and too much in general!
- Simple, but contributing factors are complex...

Food Industry



Growth of Restaurant Industry



Growth of Restaurant Industry

- Employs 12 million (second only to government)
- Annual sales of \$440 billion
- Americans spend 49 cents of every food dollar on food eaten outside the home, where they consume 30 % of their calories
- Home-cooked meals tend to be healthier (lower in fat, calories, salt, etc.)
- Home-cooked meals also tend to entail smaller portion sizes

Larger Portion Sizes

"Pennsylvania Eatery Offers 15 Pound Burger!"



Larger Portion Sizes

- 1950s advertising jingle: "Pepsi-Cola hits the spot/12 full ounces, that's a lot."
- Since the 1970s, soft drink bottles have grown to 20, 24, & 33.8 ounces (1 liter)
- 7-11 offers a 64 oz. Double Gulp (1/2 gallon)
- Super Size, Biggie Size, Value Sized, etc.
- "All you can eat!"

Fast Food Culture



Fast Food Culture

- On a typical day, 30 % of US children ages 4 to 19 eat fast food (older and wealthier ones eat even more)
- 20 to 25 % of the US population eat in some kind of fast-food restaurant each day (7% in McDonalds)
- We give our kids Happy Meals?! (high calorie, high fat, trans fat, high sugar, high salt, etc.)
- Compared to at-home meals, children eat 126 calories/day more in fast-food restaurants (13 pound weight gain in a year)

Television



Television

- “The single best behavioral predictor of obesity in children and adults is the amount of television viewing...this relationship mirrors that of smoking & lung cancer” - Gortmaker, Harvard School of Public Health
- Sedentary activity represents 1/3 of the effect
- Changes in eating habits represent 2/3 of the effect
- Food industry’s job is to increase food intake (advertise)
- TV industry’s job is to increase viewing (sell advertising)

Diet Industry



Diet Industry

- Unrealistic expectations add to the problem
- Weight gain occurs gradually over time
- Weight loss cannot happen overnight
- Drastic reductions in calorie consumption almost always results in more weight gained
- Body goes into 'starvation mode' and attempts to conserve every calorie
- Healthy, long-term lifestyle changes (improved nutrition & increased activity) are best option

Sedentary Nature of *Developed* Cultures



Sedentary Nature of Developed Cultures

- Technology has created an immobile existence
- More & more jobs require long periods of sitting
- Cities are designed for cars, not walking or biking
- Modern conveniences: elevators, riding mowers, microwaves, remote controls, golf carts, video games...
- Our kids sit in front of a TV or computer, ride a bus or car to school, and even have rolling backpacks!
- Fear of crime?

Policy



U.S. Policy: Food Pyramid

- Food Guide Pyramid (1992-2004) suggest 6-11 daily servings from the "bread, cereal, rice, & pasta" group, more than any other category
- Such starches are nearly all high-glycemic carbohydrates, which drive obesity, hyperinsulinemia, and Type II diabetes
- The pyramid was developed by the Department of *Agriculture*, not a health agency (NIH, DHHS)
- It can be argued that the food pyramid was the product of intensive lobbying by agribusinesses

U.S. Policy: Farm Subsidies

- Billions in subsidies are provided for grains (corn & wheat)
- In addition to cob, kernel, and cream corn; large quantities are used to produce corn sweeteners and animal feed (Big Macs)
- Likewise, wheat is used for the production of refined carbohydrates (processed snack foods)
- No subsidies for *healthier* items (fruits, veg., beans, nuts)
- The result: increased consumption of less healthy food choices due to artificially low prices

School Policies



School Policies

- Physical education reduced or eliminated
- Fast-food style school menus
- Soft drinks and candy in vending machines
- Snack food advertisements in school
- Attempts to save money (& make money) appear to cost more in the long run in terms of health status and the cost associated with increased prevalence of chronic diseases

Poverty?



Poverty

- Inverse relationship between the prevalence of obesity and socioeconomic status?
- MS is #1 in obesity (26%) and poverty (23%)
- Energy-dense, refined foods (that taste good) are cheaper per calorie consumed than buying fish, fresh fruits, and vegetables (subsidies?)
- Access to facilities (safe walking routes, exercise facilities, gym fees, etc.)

Poverty

- “Food stamp cycle” – Families with food insecurity tend to overeat when food is available and then experience short periods of food restriction
- This cycle appears to cause gradual weight gain over time (starvation mode)
- Individuals with lower educational attainment experience roughly twice the rate of obesity

How Do We Address this Problem?

- Individual Response
- Parents
- Schools
- Communities
- Corporate Policy
- State Policy
- Federal Policy



Individual & Family Response

- Understand connection between lifestyle, weight, and health status
- Lifestyle changes
- Healthier eating habits
- Better grocery shopping
- Increased physical activity



Schools & Communities

- Nutrition education
- Physical education
- Healthier menus
- Vending machines
- Policy changes
- Community education
- Recreation facilities



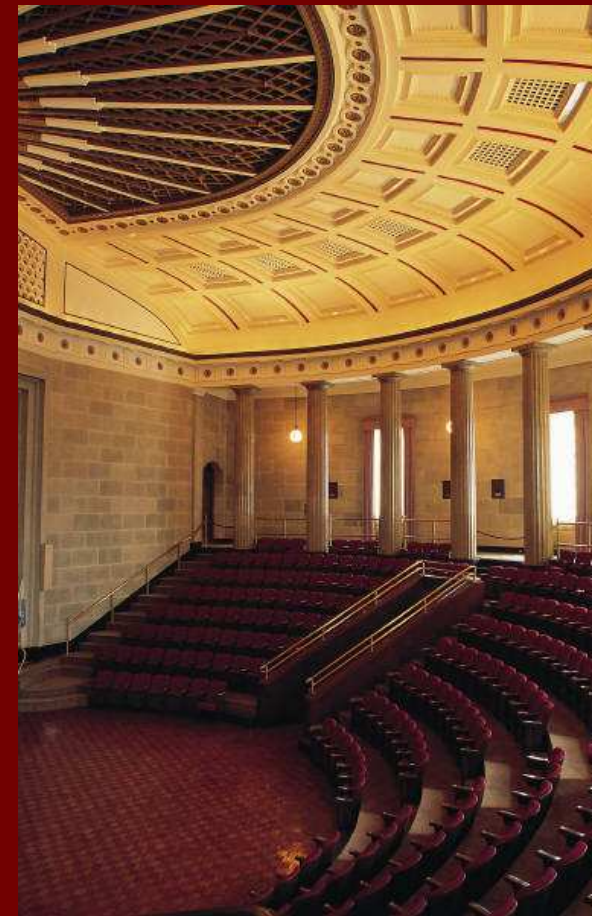
Corporate Policy

- Wellness programs
- Health education
- Exercise program
- Incentives
- ROI appears high



State & Federal Policy

- School policies
- Preventive health services (education & screenings)
- Insurance regulations
 - Cover obesity treatments
 - Pricing & incentives
 - Is obesity a disease or a risk factor?
- Food & farm industry regulations
- Public & industry support?



MS SHINE Project

- 9 regional health networks across 41 counties
- Primary focus is obesity & related chronic diseases
- Various programming initiatives
- Health policy agenda



Is this our future?



80% of Americans could realize health benefits by losing weight

Contact Info

- Mitch Morris, MS SHINE Project Director
- Phone: (662) 624-4292
- Email: msshineproject@yahoo.com
- Website: www.msshine.com
- Address: Aaron E. Henry Community Health Center
PO Drawer 1216
Clarksdale, MS 38614

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