

“LIFESTYLE AND HEALTH: A PUBLIC HEALTH PERSPECTIVE”

**Richard F. Southby, Ph.D. (Med)
F.F.P.H., F.R.S.M., F.C.L.M. (Hon)**

Distinguished Professor of Global Health
and Executive Dean Emeritus
The George Washington University Medical Center
Washington, DC

OUTLINE

- Spectrum of Health Care and Factors Influencing Health Status
- Responsibility for Health
- Global Burden of Disease and Major Causes of Morbidity and Mortality
- The Neglected Diseases and the Need for an Integrated Response
- The Demographic Transition: Developed and Developing Countries
- Some Major Current Health Challenges in the USA
- Promotive, Preventive and Curative Responses
- Reintegration of Clinical Medicine and Public Health
- Some Guidelines

Spectrum of Health Care

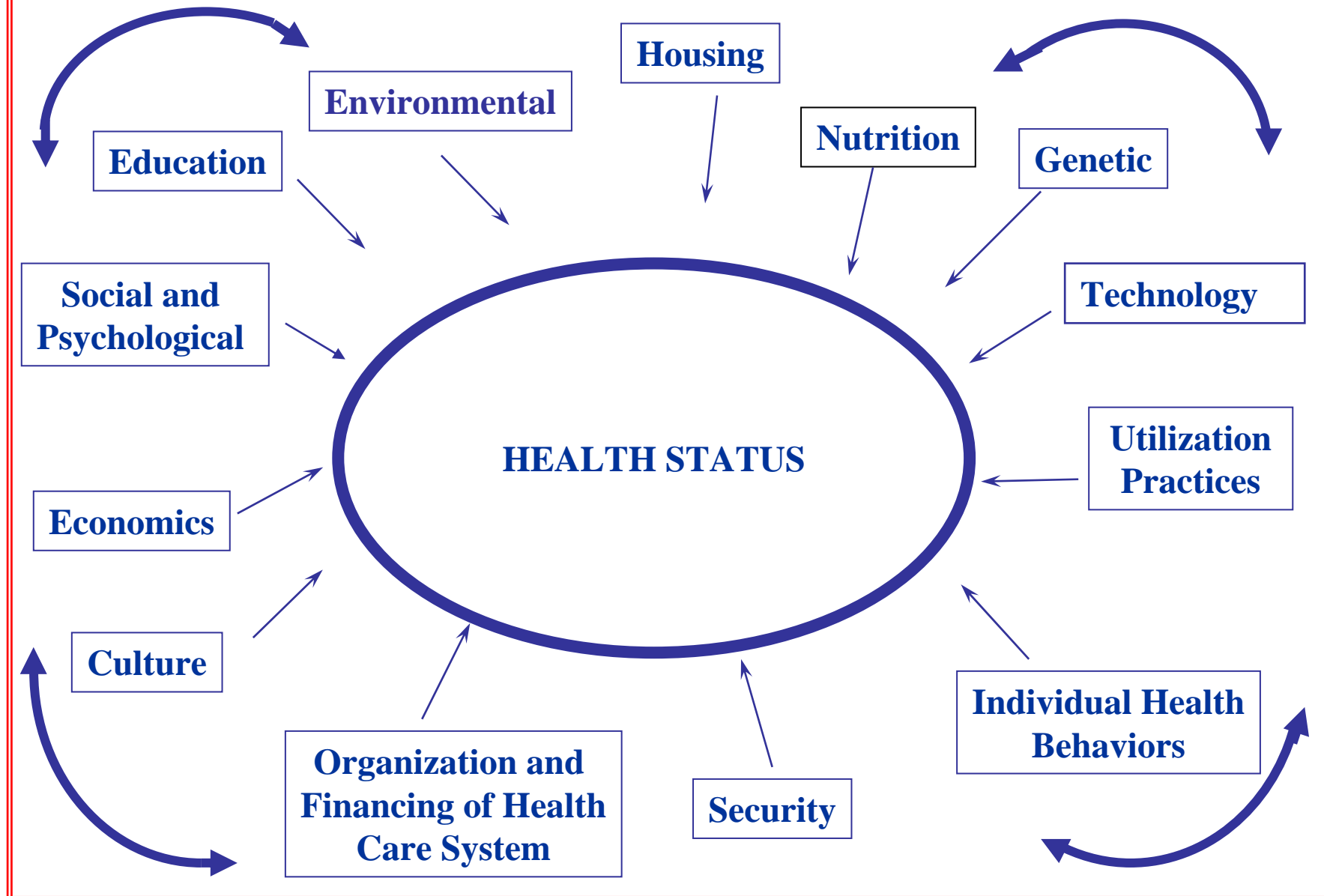
PROMOTION
Idealistic

PREVENTION
Dull, neglected

THERAPY
*Dramatic, obvious,
active*

REHABILITATION
*Long term,
unspectacular*

Factors Influencing Health Status



Responsibility for Health

- Individuals
- Physicians and Other Health Professionals
- Families, Employers, Community Organizations
- Governments

Global Burden of Disease

Ranking of 15 leading causes in 2020, ranked in DALY's:

- Ischemic heart disease
- Unipolar major depression
- Road traffic accidents
- Cerebrovascular disease
- Chronic obstructive pulmonary disease
- Lower respiratory infections
- Tuberculosis
- War
- Diarrheal diseases
- HIV
- Conditions arising during perinatal period
- Violence
- Congenital anomalies
- Self-inflicted injuries
- Trachea, bronchus and lung cancers

Changes in Rankings for 15 Leading Causes of Death, 2002 and 2030 (Baseline Scenario)

Category	Disease or Injury	2002 Rank	2030 Ranks	Change in Rank
Within top 15	Ischemic heart disease	1	1	0
	Cerebrovascular disease	2	2	0
	Lower respiratory infections	3	5	-2
	HIV/AIDS	4	3	+1
	COPD	5	4	+1
	Perinatal conditions	6	9	-3
	Diarrhoeal diseases	7	16	-9
	Tuberculosis	8	23	-15
	Trachea, bronchus, lung cancers	9	6	+3
	Road traffic accidents	10	8	+2
	Diabetes mellitus	11	7	+4
	Malaria	12	22	-10
	Hypertensive heart disease	13	11	+2
	Self-inflicted injuries	14	12	+2
	Stomach cancer	15	10	+5
Outside top 15	Nephritis & nephrosis	17	13	+4
	Colon & rectal cancers	18	15	+3
	Liver cancers	19	14	+5

Effective Strategies

- Increased individual responsibilities
- Better surveillance
- More effective health promotion and disease prevention
- Sound clinical interventions
- Well designed organizational and policy initiatives

The Neglected Diseases

“Ancient Afflictions of Stigma and Poverty”

Core Group of 13

- Protozoan Infections
 - African Trypanosomiasis
 - Chagas Disease
 - Leishmaniasis
- Bacterial Infections
 - Buruli Ulcer
 - Leprosy
 - Trachoma
- Helminth Infections
 - Ascariasis
 - Hookworm Infection
 - Trichuriasis
 - Schistosomiasis
 - Lymphatic Filariasis
 - Onchocerciasis
 - Dracunculiasis

The Neglected Diseases ...

- Combined disease burden rivals the “Big Three” – AIDS, Tuberculosis and Malaria
- Impacts on poverty, child health and development, maternal and perinatal conditions, worker productivity and co-infections
- Requires integrated responses – vaccine development and sustained physical, educational, social and economic improvements

Demographic-Epidemiologic Transitions

- Shift from dominance of acute-communicable to chronic-degenerative conditions
- Ageing populations
- Affecting developed and developing countries
- Re-emergence of common infectious diseases and problems of drug resistance
- Cure versus Care

Some Major Current Health Challenges

- Ageing/Independence
- Alcohol abuse
- Climate change
- HIV/Aids
- Illicit drugs
- “Iron Triangle – Quality, Access, Cost
- Mental health – lifestyle balance
- Motor vehicle accidents
- Overweight and Obesity - Diabetes
- People friendly environments
- Physical inactivity
- Preparedness
- SARS, Avian influenza
- Smoking
- Violence

Some Illustrations from the USA...

SMOKING:

- 440,000 American deaths per year
- Annual cost, direct medical expenses and lost productivity, \$157 billion

OBESITY:

- Poor diet and physical inactivity about to displace tobacco as leading preventable cause of death in the USA
- Major contributor to heart disease
- 2/3 Americans overweight or obese
- Every 90 seconds an American dies from fat-related illness (1,000 per day, 400,000 per year)
- 15% of children, 6-19 years old, overweight or obese
- Minorities, both adults and children, more overweight than Caucasians

More Illustrations...

PHYSICAL ACTIVITY:

- Only 1 in 5 American adults engages in a high level of physical activity
- Only 1 in 4 engages in little or no physical activity

FINANCE AND OBESITY:

- \$136 billion is spent for hospital stays, lost productivity and pharmaceuticals to treat chronic conditions
- \$78 billion, out of total health spending of \$1.5 trillion, is spent on obesity-related illnesses
- Airlines have paid \$275 million for additional fuel costs due to overweight passengers

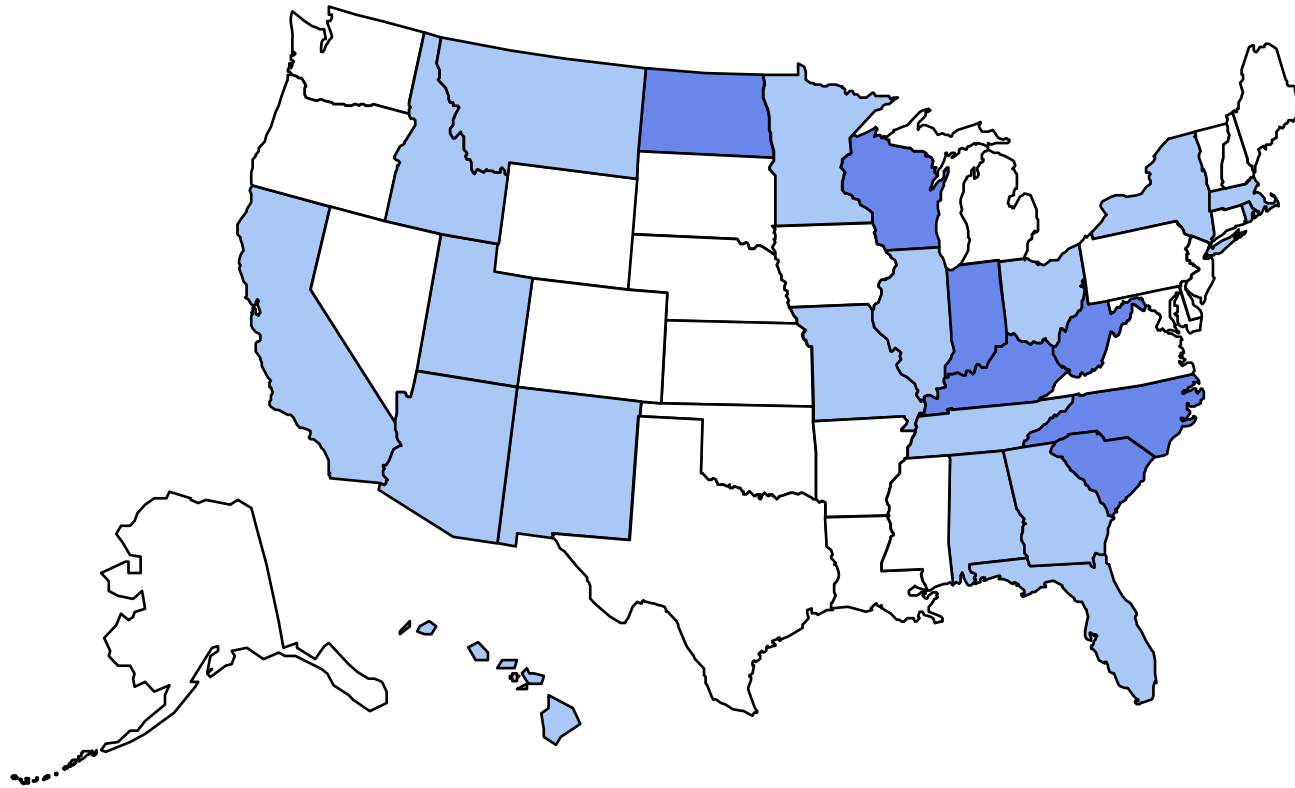
Mapping the National Epidemic of Obesity in America



Obesity in America

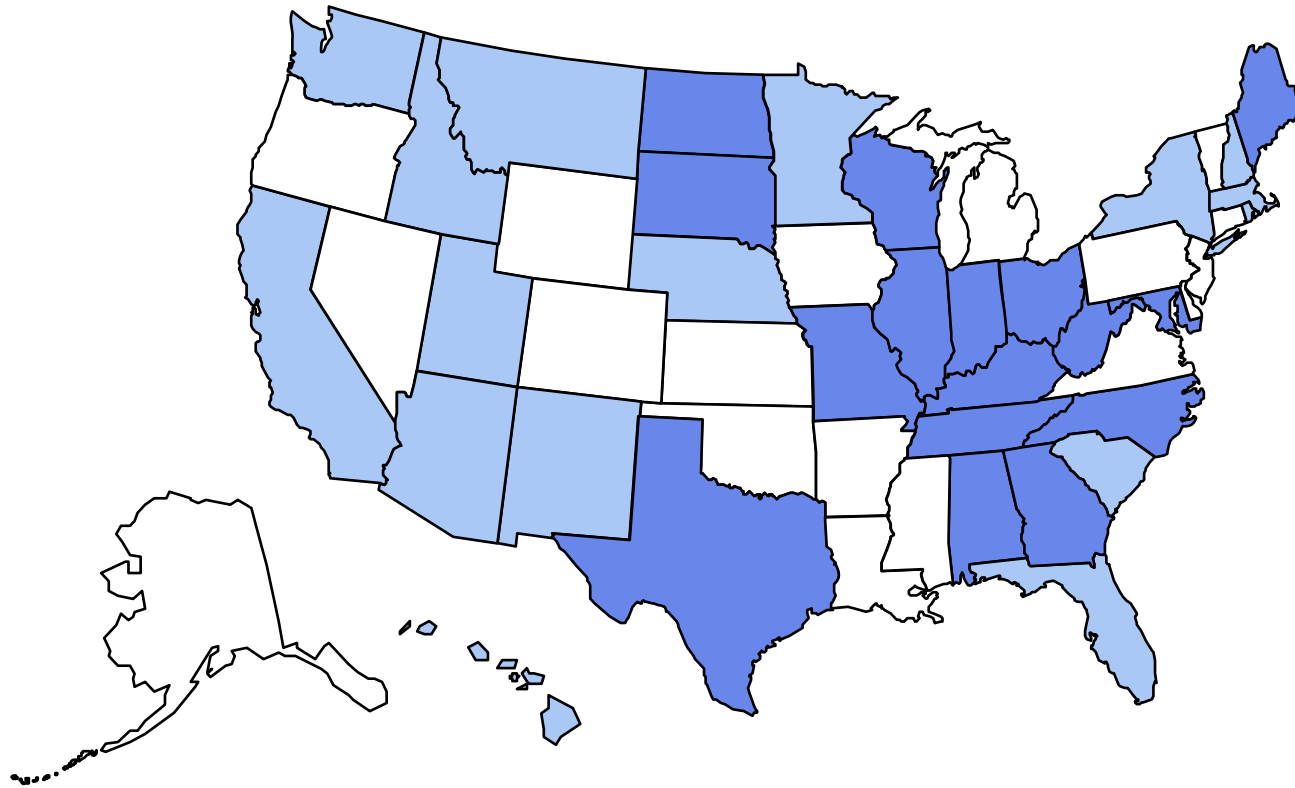
Obesity Trends* Among U.S. Adults

BRFSS, 1986



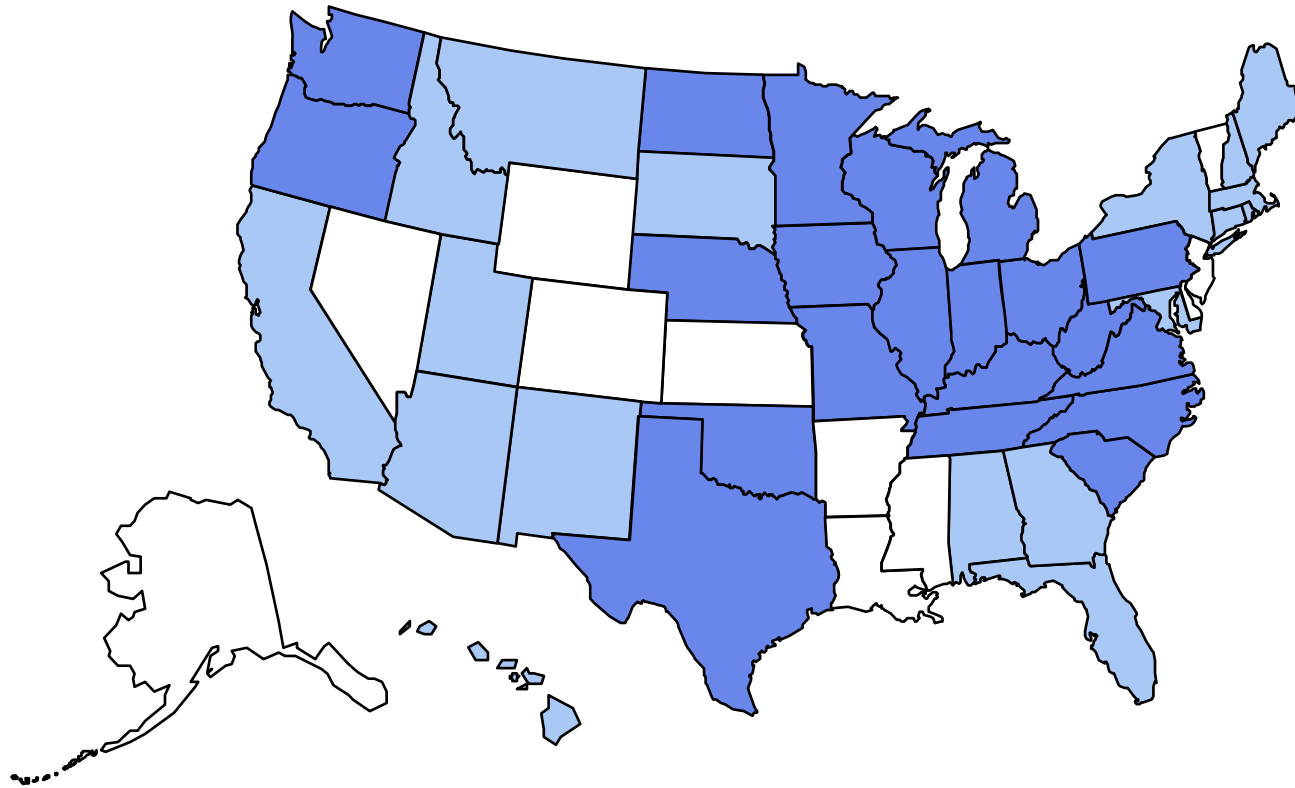
Obesity Trends* Among U.S. Adults

BRFSS, 1987



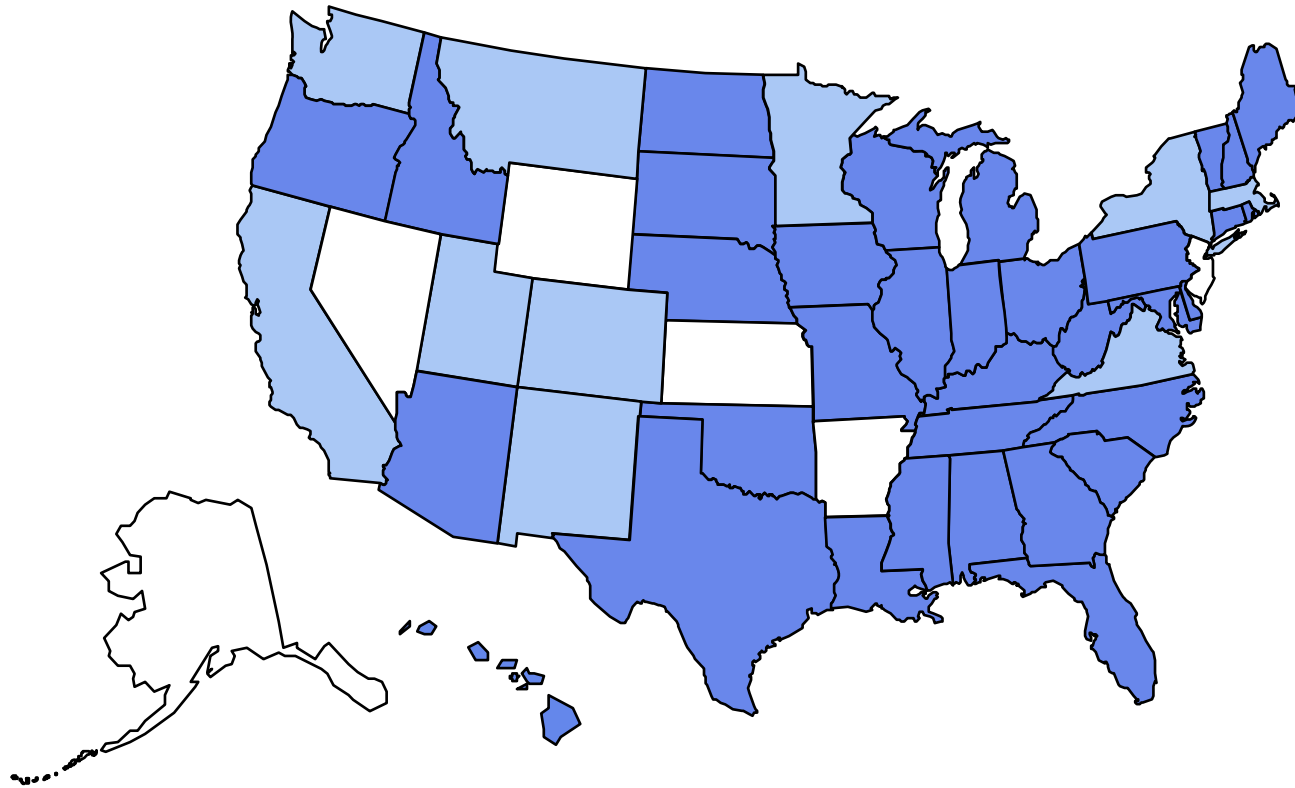
Obesity Trends* Among U.S. Adults

BRFSS, 1989



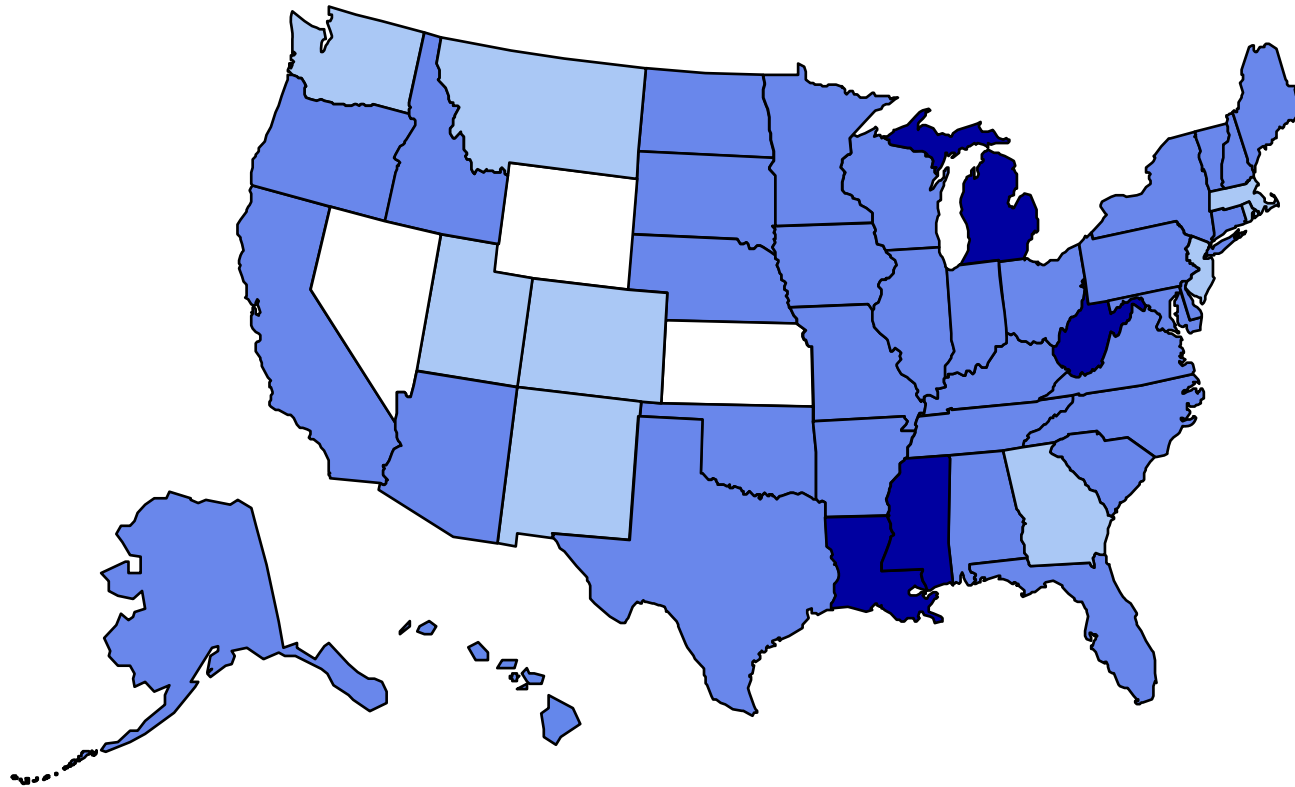
Obesity Trends* Among U.S. Adults

BRFSS, 1990



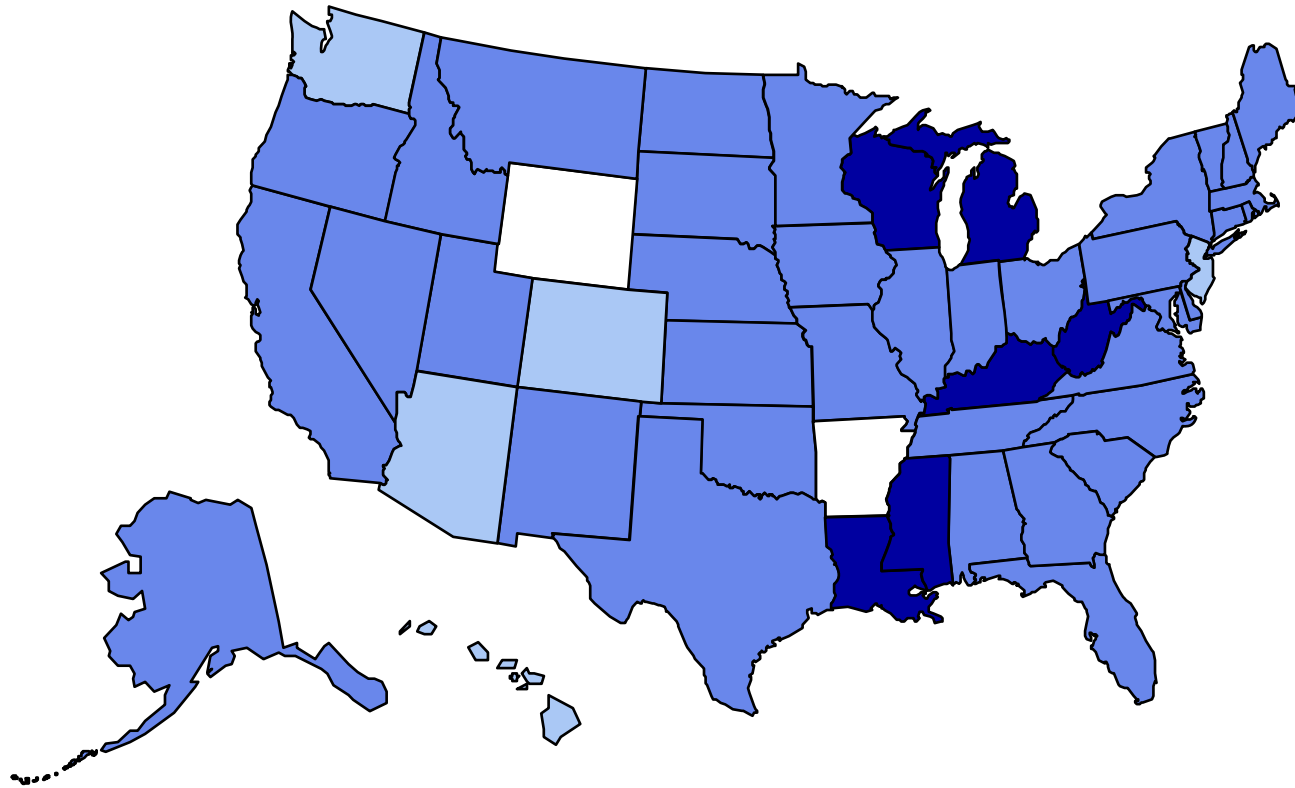
Obesity Trends* Among U.S. Adults

BRFSS, 1991



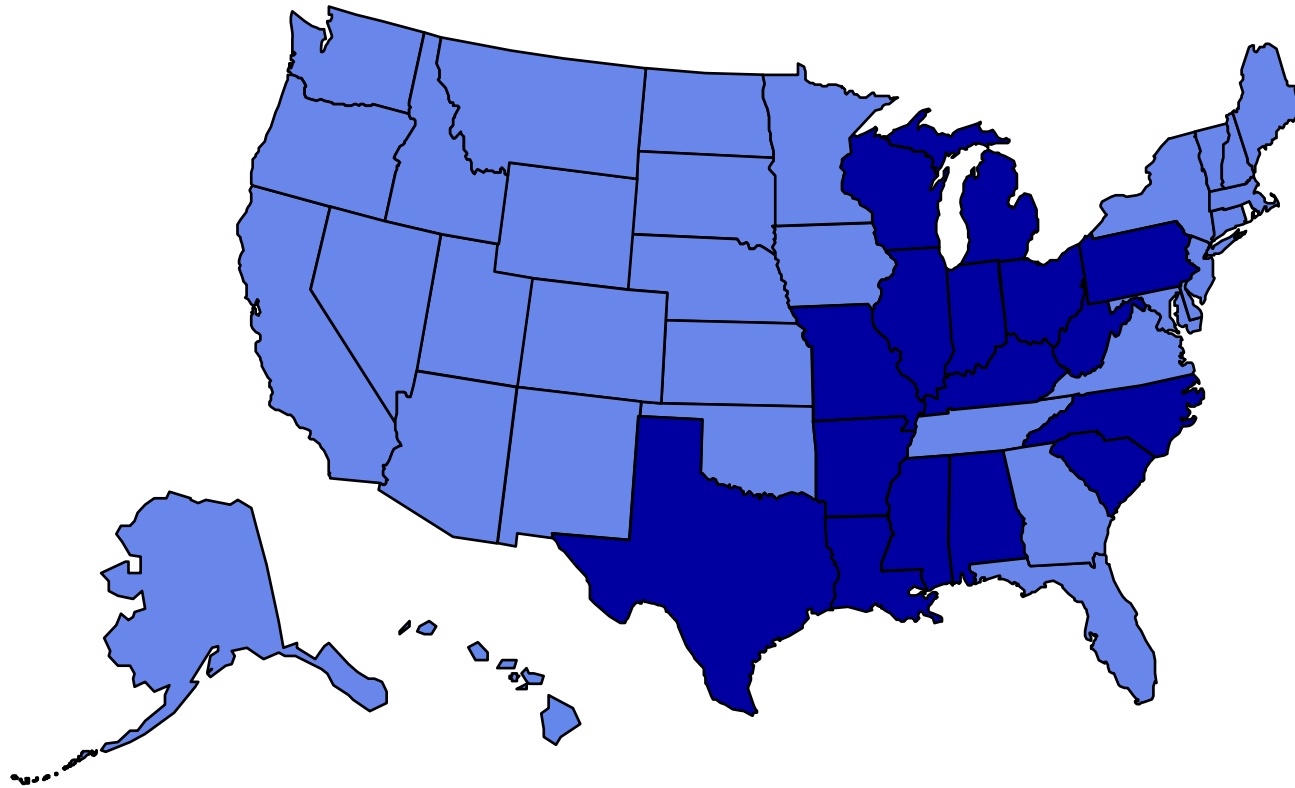
Obesity Trends* Among U.S. Adults

BRFSS, 1992



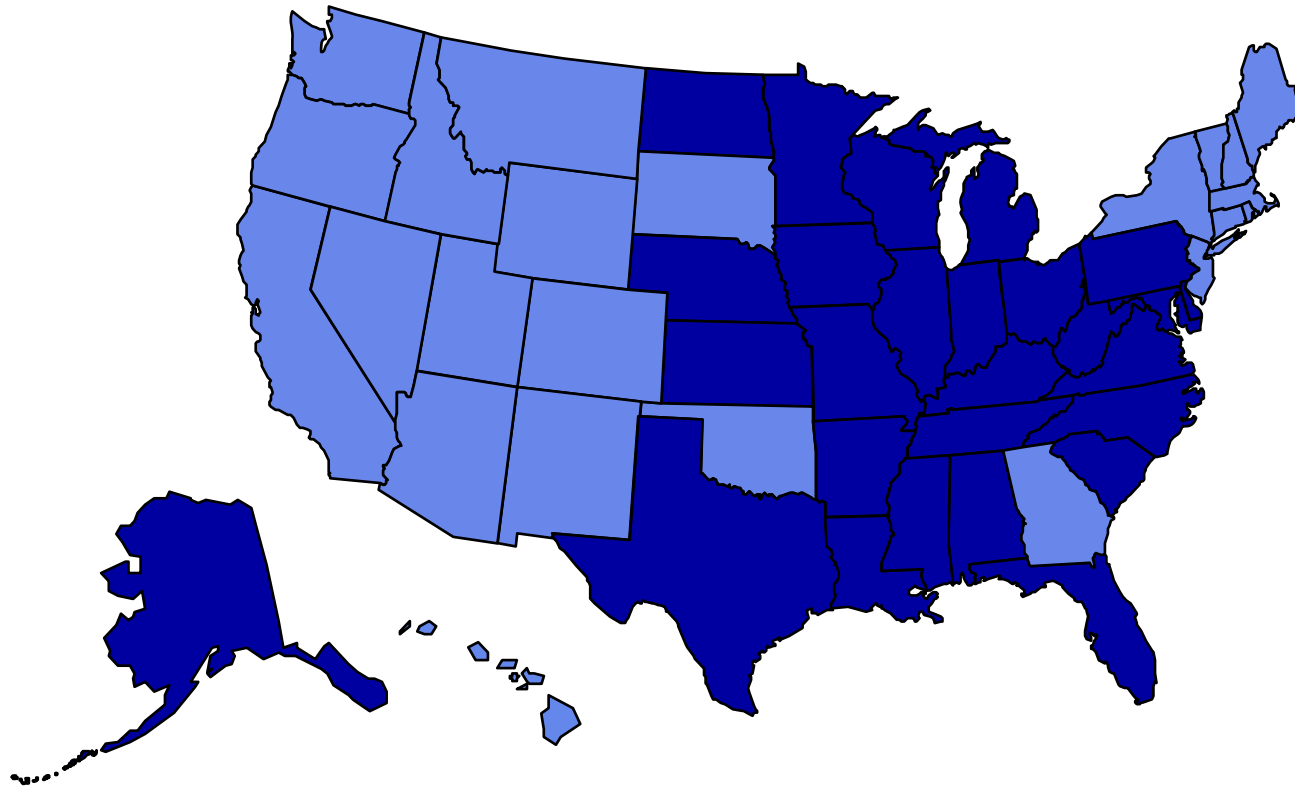
Obesity Trends* Among U.S. Adults

BRFSS, 1994



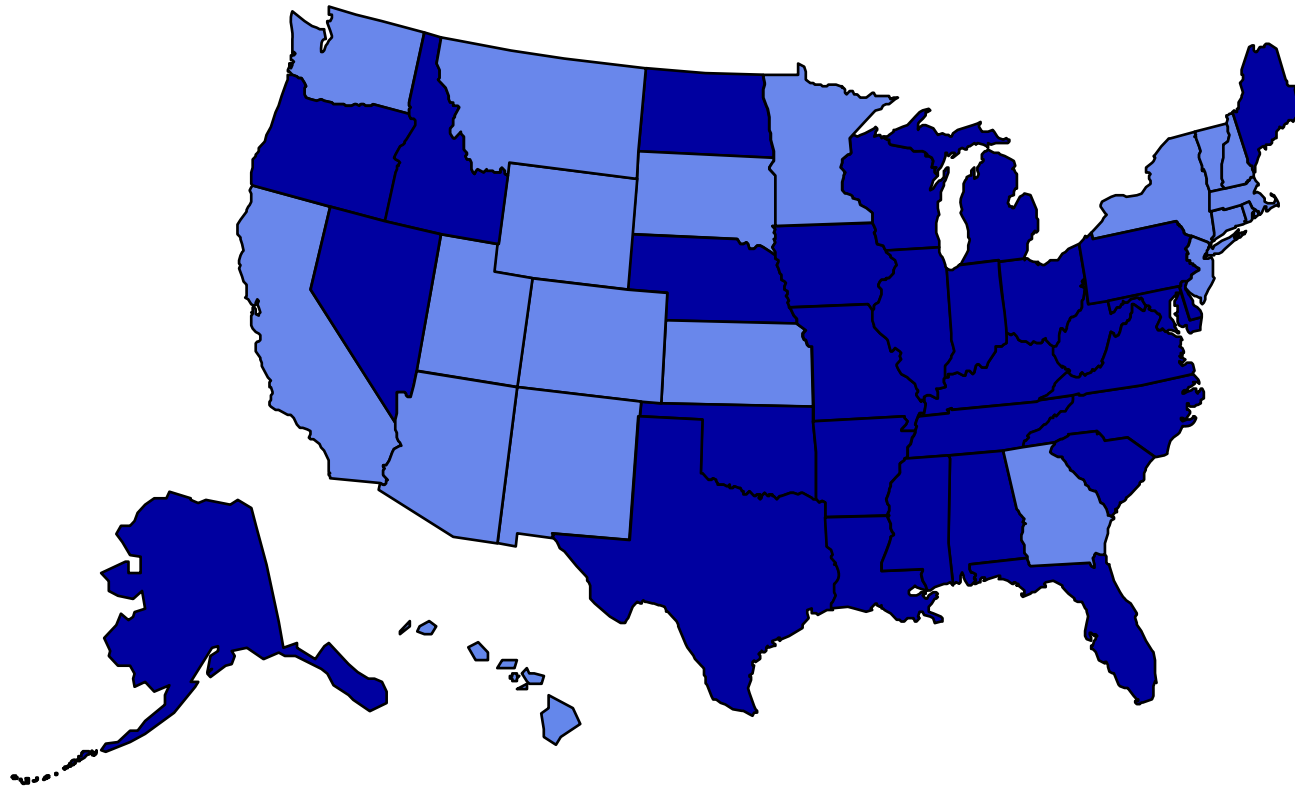
Obesity Trends* Among U.S. Adults

BRFSS, 1995



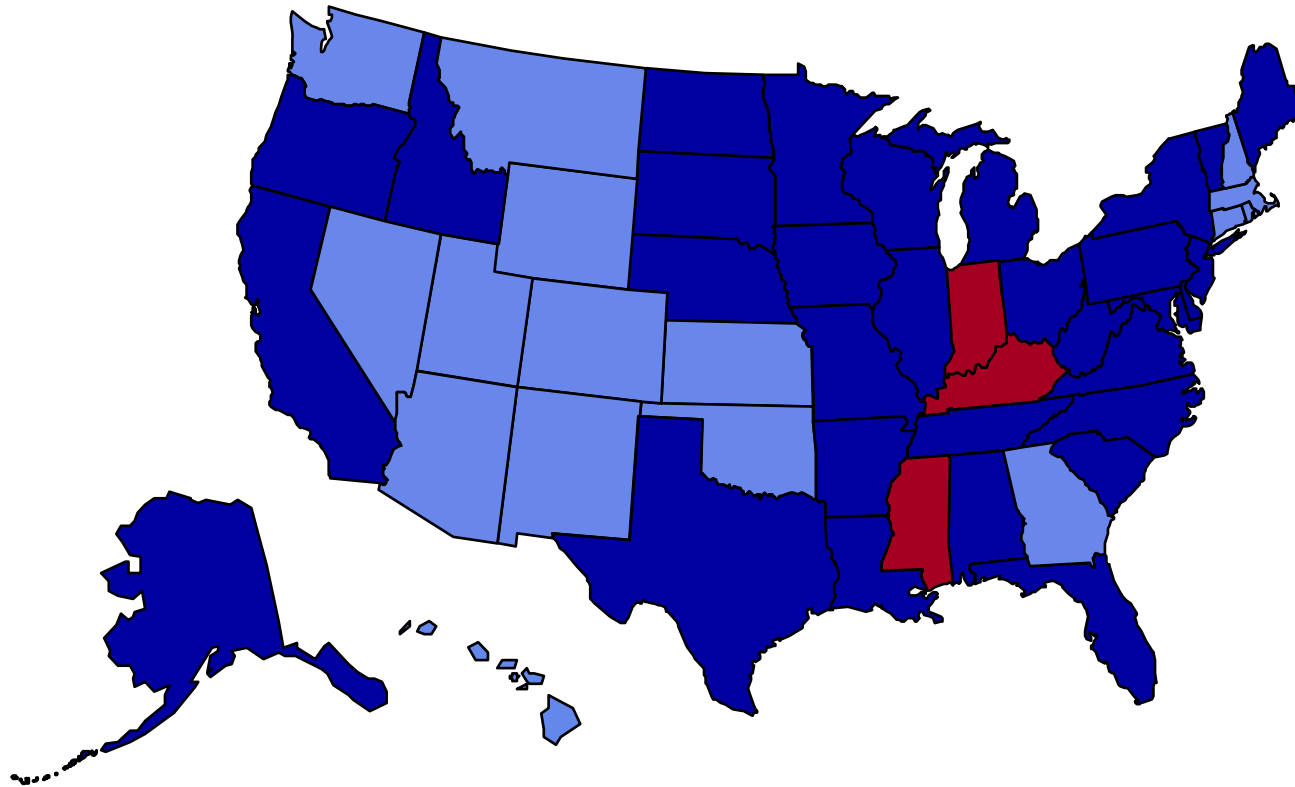
Obesity Trends* Among U.S. Adults

BRFSS, 1996



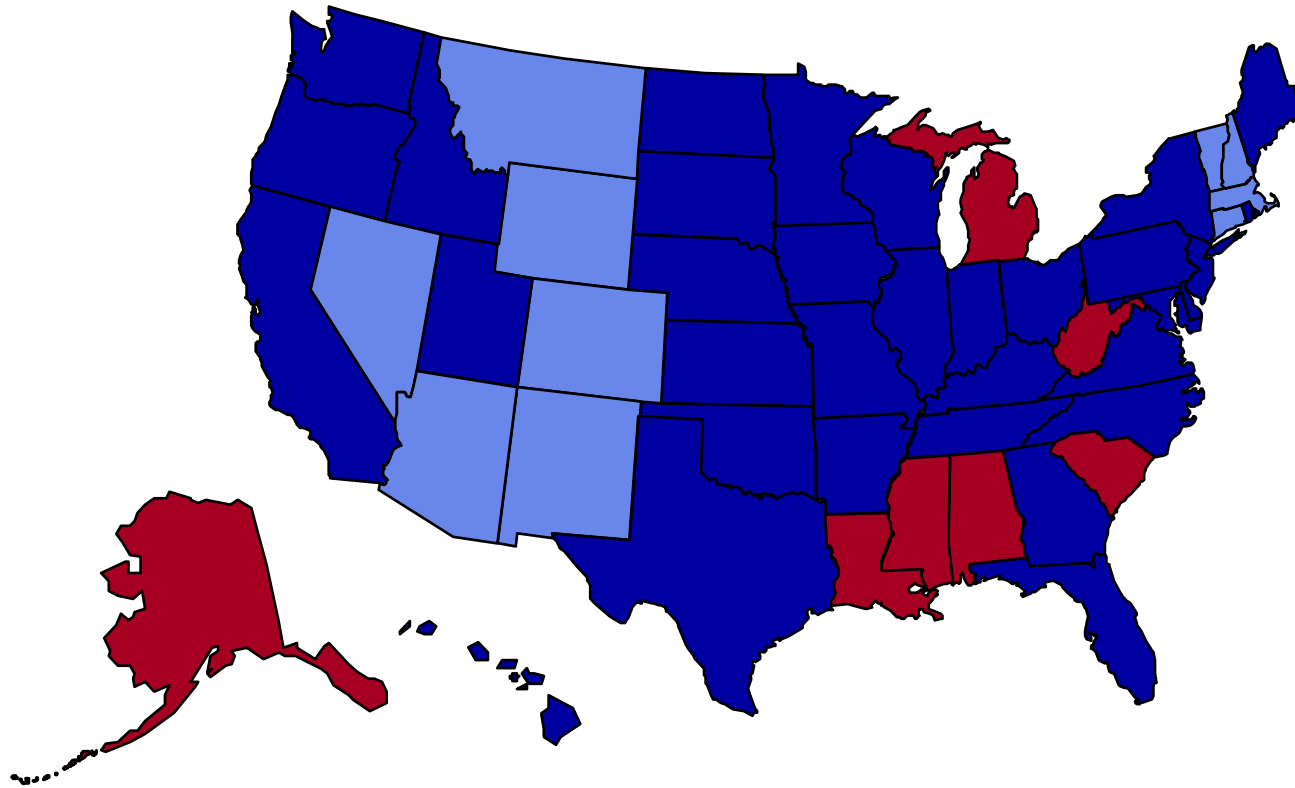
Obesity Trends* Among U.S. Adults

BRFSS, 1997



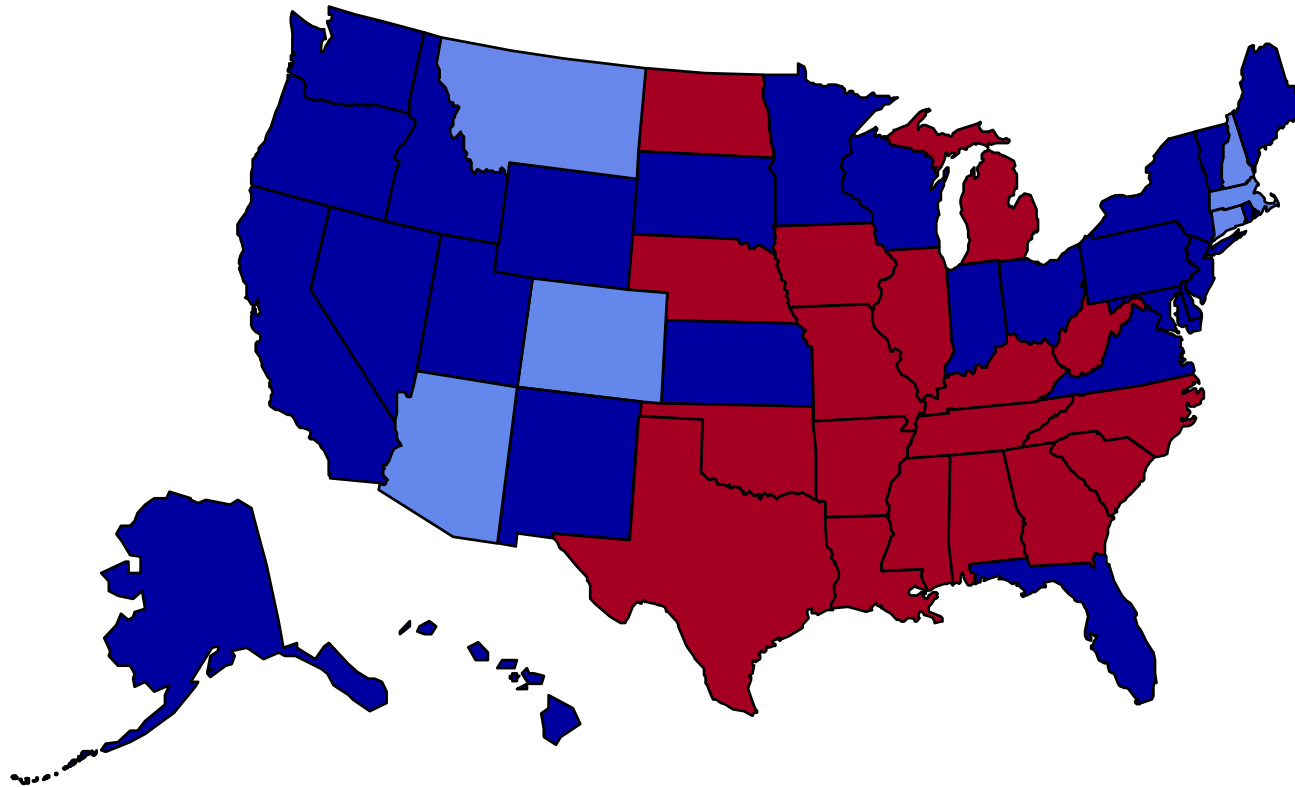
Obesity Trends* Among U.S. Adults

BRFSS, 1998



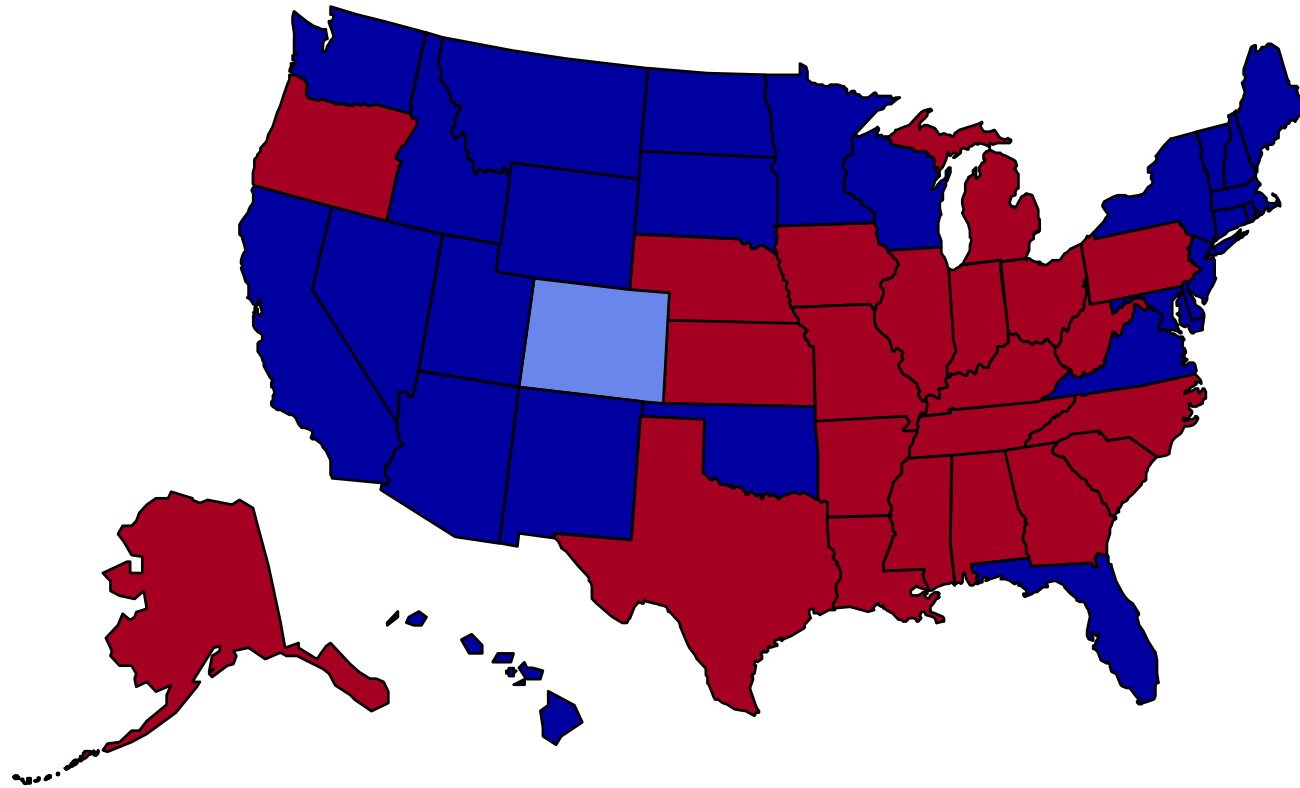
Obesity Trends* Among U.S. Adults

BRFSS, 1999



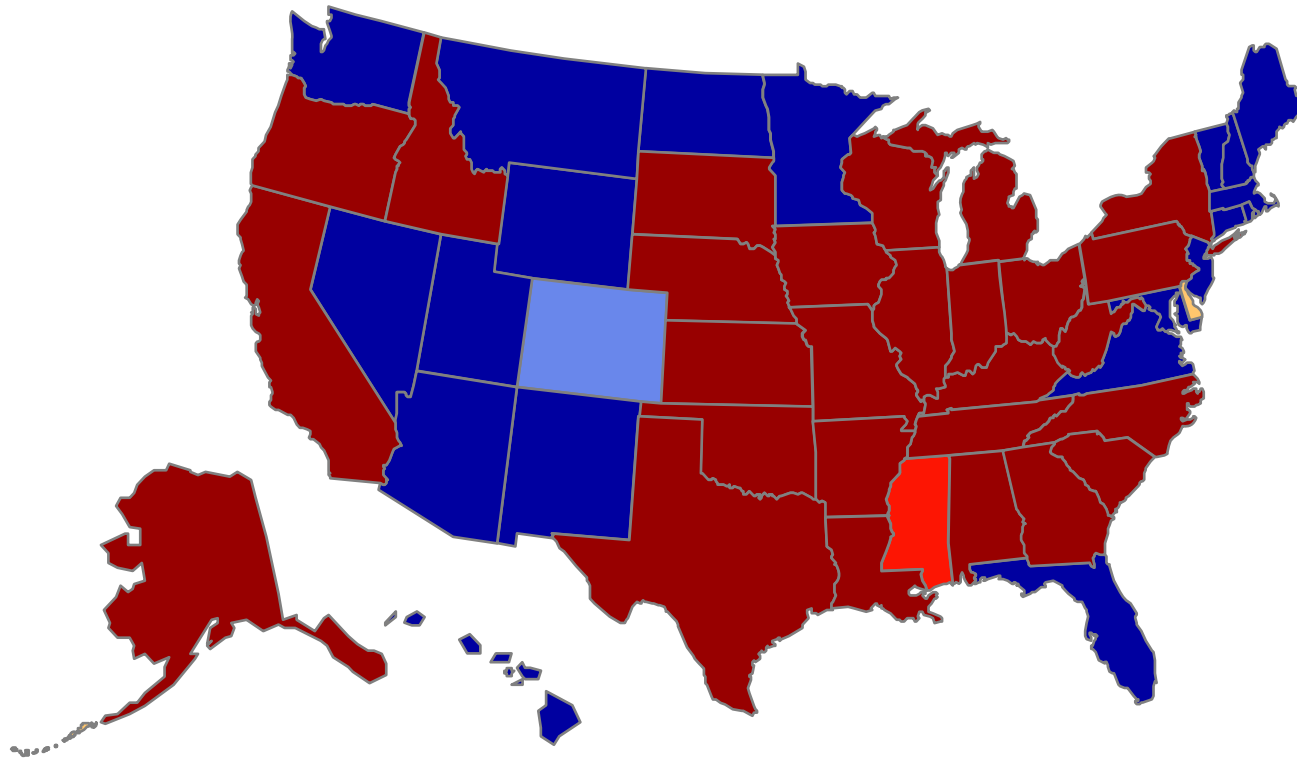
Obesity Trends* Among U.S. Adults

BRFSS, 2000



Obesity Trends* Among U.S. Adults

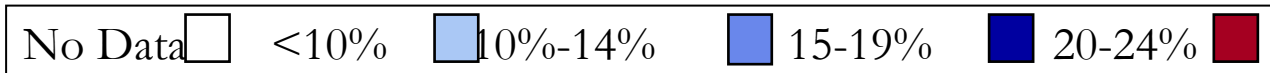
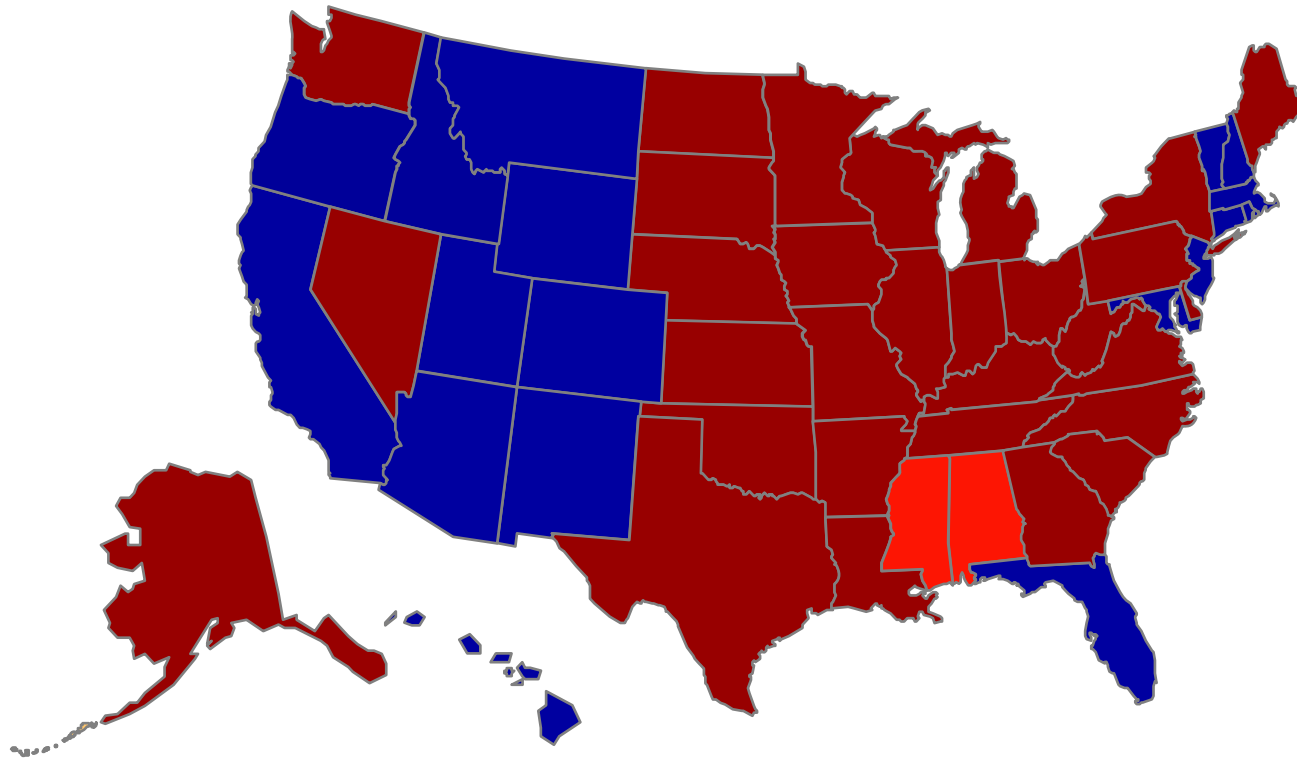
BRFSS, 2001



Obesity Trends* Among U.S. Adults

BRFSS, 2002

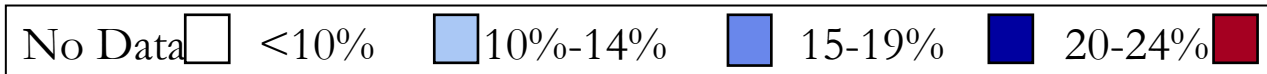
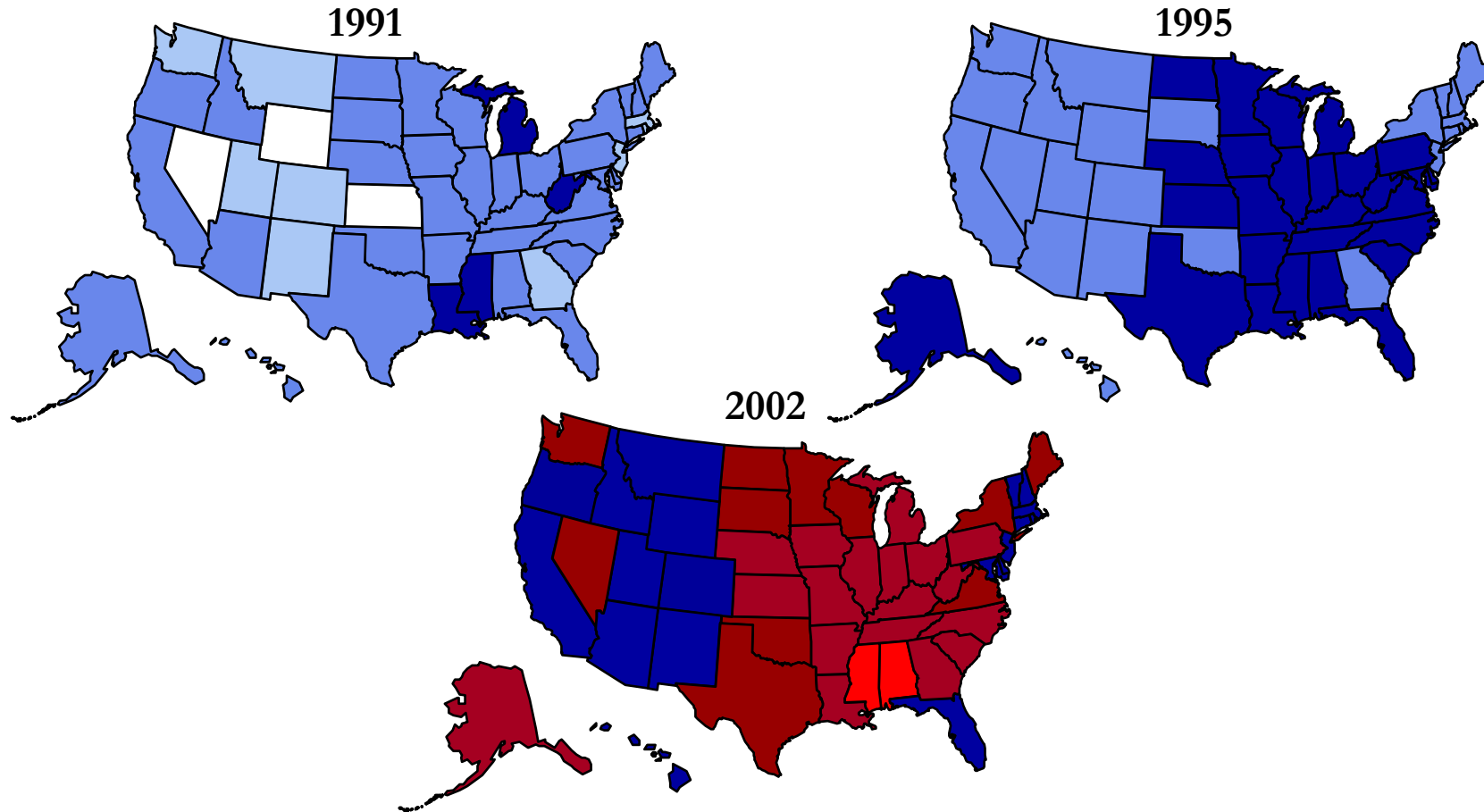
(*BMI ≥ 30)



Obesity Trends* Among U.S. Adults

BRFSS, 1991, 1995 and 2002

(*BMI \geq 30, or \sim 30 lbs overweight)



Source: Mokdad AH, et al. *J Am Med Assoc* 1999;282:16.



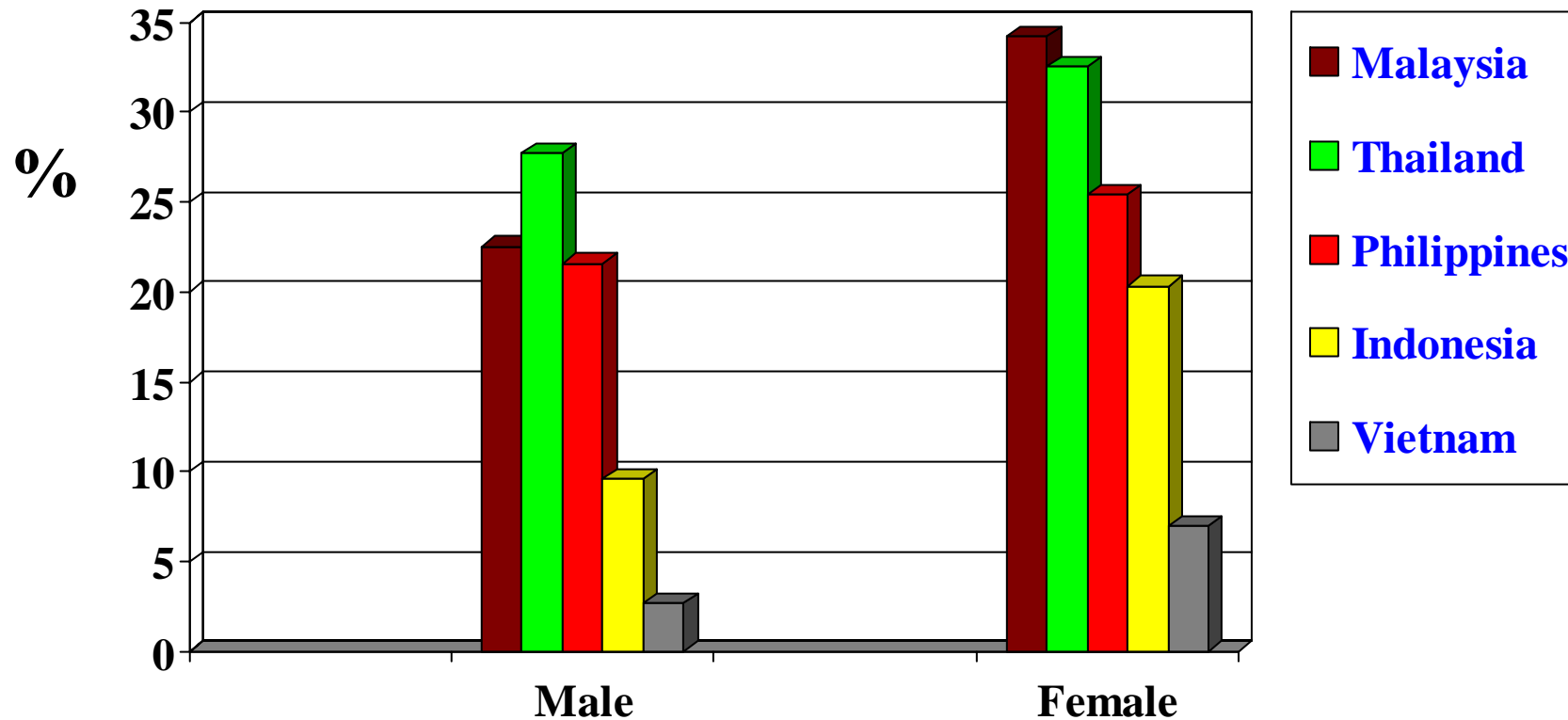
Obesity Trends Among U.S. Adults

Those with a BMI of 30 or more increased by 24% between 2000 and 2005.

- The proportion with a BMI of 40 or more increased by 50%.
- The proportion with a BMI of 50 or more increased by 75%

Prevalence of overweight adults (aged 15 years and above) in Southeast Asia

(BMI ≥ 25 kg/m²)



(WHO Global InfoBase Online 2002)

Obesity in Malaysia - 2007

- Malaysia has the largest number of obese people in the region.
- Up from 20% a decade ago, almost 40% of 26 million citizens are obese — in tandem with country's economic prosperity, which has provided rich and plentiful food (Feb 07)
- 63% of Malaysian Indians, 54% ethnic Malays, 51% ethnic Chinese and 45% others are overweight (Sep 06)
- More than 70% of Malaysian males are obese or overweight
- 47% of males and 60% of females suffer from abdominal obesity
- Abdominal obesity is associated with cardiovascular disease, hypertension, lipid disorders, diabetes mellitus and heart attacks

Obesity in Australia

- 56% of Australians are overweight or obese
 - 64% of adult males and 47% of adult females
- 16% of adult males and 17% of adult females are obese (2005)
- At every age, males are more likely than females to be overweight or obese
 - The average male has gained 3.5 kg in the past decade, gaining one extra gram per day
- About 1 in 4 children are overweight or obese (2005)
- Australia has fastest rising rate of childhood obesity in the world, double that of the US and triple that of the UK (*The Australian*, 15 Aug 06)

Obesity in Australia (Cont.)

- The rising tide of obesity threatens the positive trend in healthy life expectancy
- Poor Diet and Lack of Physical Activity
 - The two most common risk factors affecting health status and contributing to the burden of disease
 - In 1997, Australians ate almost 1.2 B fast food meals/snacks
 - 69% of adults are sedentary or have low exercise levels
 - Labour-saving devices (email, remote controls, escalators and so on) do not encourage activity
 - Australians would need to walk an extra 19 km per day to match the activity level of their ancestors

Obesity in Australia (Cont.)

- Chronic diseases associated with obesity impact productivity, quality of life and health spending (2005):

Cardiovascular disease (doubles risk)	\$12.6 B
Cancers (↑ risk 1.7 times)	\$ 3.9 B
Diabetes (triples risk)	\$ 2.3 B
Loss in productivity	<u>\$ 1.7 B</u>
Obesity total costs:	\$ 21 B - 2 x 'Medicare'

- Federal Government announced a \$116 M project to encourage physical activity at schools and healthy school foods (2006)

Promotive, Preventive and Curative Responses

- Health Communications
- Health Education
- Technology
- Role Models – Peers, Family, Work
- Life Style and Behavioral Changes – Balanced nutrition strategies, exercise, etc.
- Environmental and Occupational Health Measures – Sensible approaches to work and recreation...

Surgeon General's Prescription for the American People

(Dr. David Satcher, 1999)

- Moderate physical activity at least 30 minutes per day
*(Reduction of deaths from cardiovascular disease by 50%
and onset of diabetes by 60%)*
- At least 5 servings of fruits and vegetables per day
- Avoidance of toxins (tobacco, abuse of alcohol and illicit drugs)
- Responsible sexual behavior

Some Guidelines for Individuals

- Accept responsibility for your health
- Implement a sensible approach to diet, exercise, and alcohol consumption – do not smoke and avoid secondary smoke
- Use authority and influence to encourage positive, and discourage negative, attitudes and behaviors
- Be good role models for others
- Stay informed and seek advice from health professionals

Nutritional Guide to 104 Menu Choices

Facts ON FAST FOOD

McDonald's®

Big Mac®
Big N' Tasty®
Cheeseburger
Chicken McNuggets®, 6
Egg McMuffin®
English Muffin
Filet-O-Fish®
French Fries, medium
Fruit 'n Yogurt Parfait
Grilled Chicken Caesar Salad*
Grilled Chicken Cobb Salad*
Hamburger
McChicken®
Quarter Pounder®
Triple Thick® Vanilla Shake, 16 oz.
Vanilla Reduced Fat Ice Cream Cone

Burger King®

Angus Steak Burger
Bacon Double Cheeseburger
BK Fish Filet® Sandwich
BK Veggie® Burger
Cheeseburger
Chicken Tenders®, 5
Croissan'wich® w/egg & cheese
French Fries, medium, salted
Hamburger
Onion Rings, medium
Tendergrill® Chicken Sandwich w/mayo
Vanilla Milk Shake, medium
Whopper®
Whopper® w/cheese

Pizza Hut®

Breadstick, 1
Hand-Tossed Pizza, cheese**
Hand-Tossed Pizza, Meat Lovers***
Pan Pizza, cheese**
Pan Pizza, pepperoni**
Pan Pizza, Veggie Lover's***
Stuffed Crust® Pizza, cheese**
Thin 'N Crispy® Pizza, cheese**
Thin 'N Crispy® Pizza, supreme**

*Without dressing

**One slice from a large pizza



DIRECTIONS

Pull purple indicator to locate desired food. In the window below, read calorie, fat, saturated fat, trans fat, cholesterol, sodium, carb and fiber counts.

CALORIES	FAT/SAT FAT (grams)	TRANS FAT (grams)	CHOLESTEROL (milligrams)	SODIUM (milligrams)	CARBS (grams)	FIBER (grams)
560	30/10	1.5	80	1010	47	3

Wendy's®

Baked Potato, Plain
Baked Potato, Sour Cream & Chive
Big Bacon Classic®
Chicken BLT Salad w/o dressing
Chicken Nuggets, 5
Chili, small
Classic Single® w/everything
French Fries, medium
Frescata® Club
Frosty™, chocolate, medium
Homestyle Chicken Sandwich
Jr. Cheeseburger
Jr. Hamburger
Mandarin Chicken Salad w/o dressing
Southwest Taco Salad w/o dressing
Ultimate Chicken Grill Sandwich

Domino's® Pizza®

Breadstick, 1
Cheese Pizza*
Deluxe Feast® Pizza*
Hawaiian Feast® Pizza*
MeatZZa Feast® Pizza*
Pepperoni Feast® Pizza*
Pepperoni Pizza*
Vegi Feast® Pizza*

*One slice from a large pizza with hand-tossed crust

Taco Bell®

7-Layer Burrito
Bean Burrito
Burrito Supreme®, beef
Chalupa Baja, beef
Cheese Quesadilla
Cinnamon Twists
Mexican Pizza
Mexican Rice
Nachos
Nachos BellGrande®
Pintos 'n Cheese
Soft Taco, Chicken
Taco, Crunchy
Tostada

KFC®

Baked Beans
Biscuit
Cole Slaw
Colonel's Crispy Strips®, 3
Extra Crispy™ Chicken Breast
Extra Crispy™ Drumstick
Honey BBQ Sandwich
Hot Wings, 6
KFC® Snacker
Mashed Potatoes & Gravy
Original Recipe® Chicken Breast
Original Recipe® Drumstick
Tender Roast® Sandwich w/sauce
Twister®, Crispy

ay®

Cheese Steak, 6" sub**
Cold Cut Combo, 6" sub**
Gardenburger®, 6" sub
Ham, 6" sub*
Italian BMT®, 6" sub**
Meatball Marinara, 6" sub**

HEALTHFUL HINTS

- The key to healthful eating in fast-food restaurants is knowing what to select, as well as knowing how to balance and vary the rest of the day's intake.
- Choose main dish items that are lowest in fat. Instead of eating a bacon cheeseburger, have a regular hamburger or a grilled chicken sandwich.
- Side salads and salad-bar vegetables provide extra vitamins and add dietary fiber without adding lots of calories. Use low-fat or nonfat dressings on the salads.
- Select grilled or baked foods instead of breaded and fried. To increase dietary fiber, choose whole-wheat or whole-grain buns and rolls. Have fresh fruit or low-fat frozen yogurt for dessert.

CALORIES	FAT/SAT FAT (grams)	TRANS FAT (grams)	CHOLESTEROL (milligrams)	SODIUM (milligrams)	CARBS (grams)	FIBER (grams)
790	44/12	7	35	1300	79	10

Remember these 3 KEY POINTS for a Healthful Diet

- ↓ Cut down on total fat, saturated fat, trans fat, cholesterol and sodium
- ↑ Increase whole grains
- ↑ Increase intake of fruits and vegetables

WATCH PORTION SIZE

At fast-food restaurants, servings are often super-sized. These large portions may be great money values, but they also contribute to excess weight gain, which can lead to serious diseases. Here are some ways to fight the super-size problem:

- Choose the smallest size possible, especially if ordering hamburgers or fried foods.
- Share large or high-fat items with someone else.
- Eat half of your order and take the rest home. (You can ask for the take-out container at the start of the meal so

Facts ON FAST FOOD



Reintegration of Clinical Medicine and Public Health

- Different perspectives:
Individual versus Population
- Different time frames
- Different priorities
- Clinical Epidemiology