

# Physical Activity and the *2008 Physical Activity Guidelines* for Americans

Fleetwood Loustalot, PhD  
EIS Officer

Division of Nutrition, Physical Activity, and Obesity  
Physical Activity and Health Branch



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# Outline

- Review the importance of physical activity
- Examine the recently released *2008 Physical Activity Guidelines for Americans*
- Compare the *2008 Guidelines to the Healthy People 2010* criteria for physical activity
- Examine state estimates and trends
- Explore challenges, potential solutions, and future directions

# Physical Activity and Health

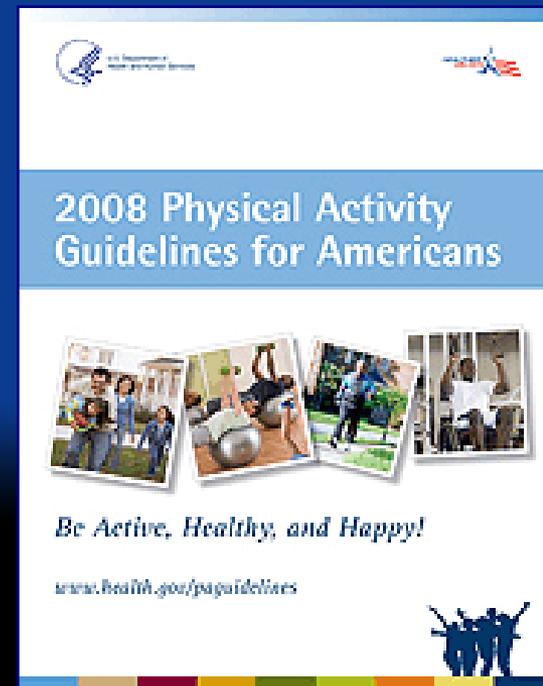
- All-cause mortality
- Cardiorespiratory Disease
- Metabolic Disease
- Cancer
- Mental Health
- Musculo-skeletal and Functional Health

Physical activity guidelines advisory committee. *Physical Activity Guidelines Advisory Committee Report, 2008*. Washington (DC): Department of Health and Human Services; 2008.

# 2008 Physical Activity Guidelines for Americans



- Information and guidance on the types and amount of physical activity that provide substantial health benefits
- First major review of the science on benefits of physical activity in over a decade
- Complement previous recommendations





# Physical Activity Guidelines for Americans



	<b>Aerobic</b>	<b>Muscle-strengthening</b>	<b>Bone-strengthening</b>
<b>Children (&gt;6 years)</b>	✓	✓	✓
<b>Adults (≥18-65 years)</b>	✓	✓	
<b>Older Adults (&gt;65 years)</b>	✓	✓	
<b>Special Populations*</b>	✓	✓	

\*Pregnancy, Disabilities, Chronic Medical Conditions

[www.health.gov/PAGuidelines/guidelines](http://www.health.gov/PAGuidelines/guidelines)



# Physical Activity Guidelines for Americans



	Aerobic	Muscle-strengthening	Bone-strengthening
Children (>6 years)	√	√	√

- 60 minutes (1 hour) or more of physical activity daily
- Aerobic physical activity should be performed daily and be either moderate- or vigorous-intensity physical activity, and include at least 3 days a week of vigorous-intensity physical activity.
- Muscle- and Bone-strengthening should be included on at least 3 days of the week



# Physical Activity Guidelines for Americans



	Aerobic	Muscle-strengthening
<b>Adults, Older Adults, &amp; Special Populations*</b>	✓	✓
<ul style="list-style-type: none"> <li>- <b>≥ <u>150 minutes</u> a week of moderate-intensity, or 75 minutes a week of vigorous-intensity aerobic physical activity, or an equivalent combination</b></li> <li>- <b>≥ <u>300 minutes</u> a week of moderate-intensity, or 150 minutes a week of vigorous-intensity aerobic physical activity, or an equivalent combination</b></li> <li>- <b>Muscle strengthening ≥ 2 days per week</b></li> </ul>		

\*Pregnancy, Disabilities, Chronic Medical Conditions

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# 2008 Guidelines: Equivalent Combination

- Combination of Moderate- and Vigorous-Intensity Minutes

- Moderate-intensity = 1
- Vigorous-intensity = 2

- Pat's Week of Activity:

- 10 minutes of brisk walking daily for 5 days = 50
- 50 minutes of jogging on Saturday = + 100
- Total minutes = 150/week

# Examples of Intensity



## Moderate-intensity

- Walking briskly
- Water aerobics
- Bicycling slower than 10 miles per hour
- Tennis (doubles)
- Ballroom dancing
- General gardening

## Vigorous-intensity

- Racewalking, jogging, or running
- Swimming laps
- Tennis (singles)
- Aerobic dancing
- Bicycling 10 miles per hour or faster
- Jumping rope
- Heavy gardening



# Physical Activity Guidelines for Americans



	Aerobic	Muscle-strengthening	Bone-strengthening
Children (>6 years)	✓	✓	✓
Adults (≥18-65 years)	✓	✓	
Older Adults (>65 years)	✓	✓	
Special Populations*	✓	✓	

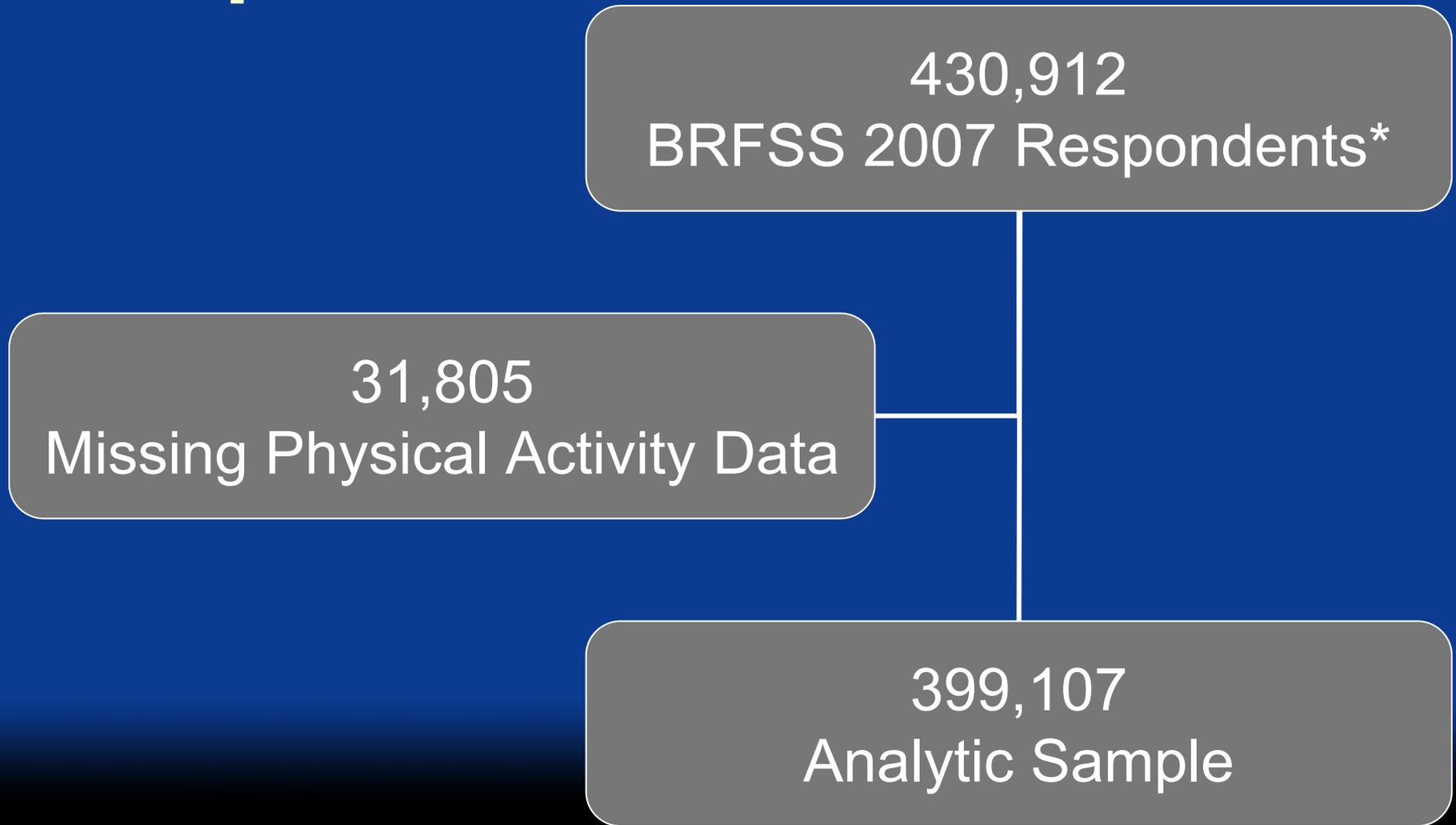
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# Surveillance of *2008 Guidelines*

- Behavioral Risk Factor Surveillance System (BRFSS)
  - State-based, random-digit-dialed telephone survey
  - Non-institutionalized adults ( $\geq 18$  years)
  - All 50 states, District of Columbia, Puerto Rico, Guam and the US Virgin Islands
- Aerobic physical activity
  - Participation, Frequency, and Duration
  - Does not assess muscle-strengthening activities

# Sample



# Comparison of Physical Activity Standards

Healthy People 2010 Criteria		
Intensity	Duration	Frequency
Moderate <i>or</i>	≥ 30 minutes	5 X week
Vigorous	≥ 20 minutes	3 X week

2008 Guidelines		
Intensity	Duration	Frequency
Moderate <i>or</i>	≥ 150 minutes	Week
Vigorous <i>or</i>	≥ 75 minutes	Week
Equivalent Combination	≥ 150 minutes	Week

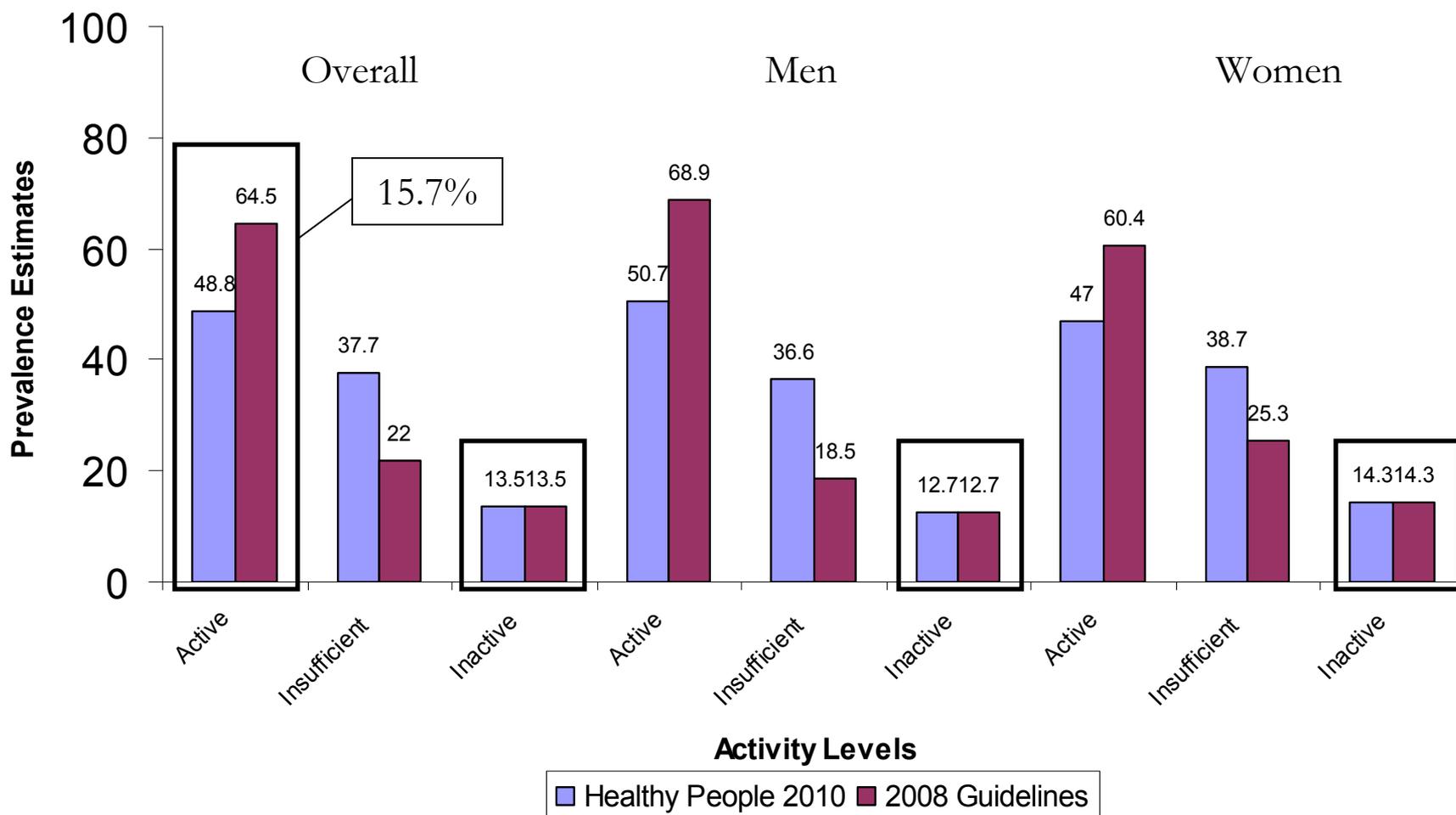
# Physical Activity Categories

<b>Active</b>	<b>Reported meeting 2008 Guidelines or HP2010 criteria for physical activity</b>
<b>Insufficiently Active</b>	<b>Participated in moderate or vigorous intensity activities, but did not meet minimum standards</b>
<b>Inactive</b>	<b>Reported no activity in episodes of at least 10 minutes</b>

# Results

- **Physical Activity Prevalence**  
**Comparing *Healthy People 2010* vs. *2008 Guidelines***
  - Overall
  - State-specific
  - Trends
- **Differences between groups**

# Comparison of age-adjusted prevalence estimates from the 2008 Physical Activity Guidelines and the Healthy People 2010 objectives, BRFSS - 2007



# Differences between *Healthy People 2010 Objectives* and *2008 Guidelines*

	Absolute Difference (%)	Relative Difference (%)
<b>Overall</b>	<b>15.7</b>	<b>32.2</b>
<b>Sex</b>	<b>13.4-18.2</b>	<b>28.5-39.5</b>
<b>Age</b>	<b>11.9-17.9</b>	<b>25.4-37.0</b>
<b>Race/Ethnicity</b>	<b>15.1-16.8</b>	<b>30.6-39.9</b>
<b>Body Mass Index</b>	<b>14.8-16.7</b>	<b>27.4-39.3</b>
<b>Education</b>	<b>13.8-16.3</b>	<b>30.2-35.9</b>

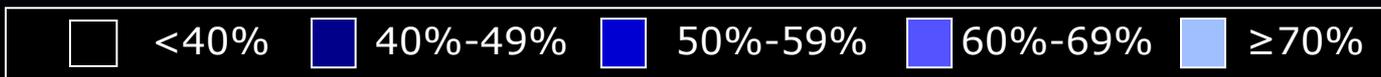
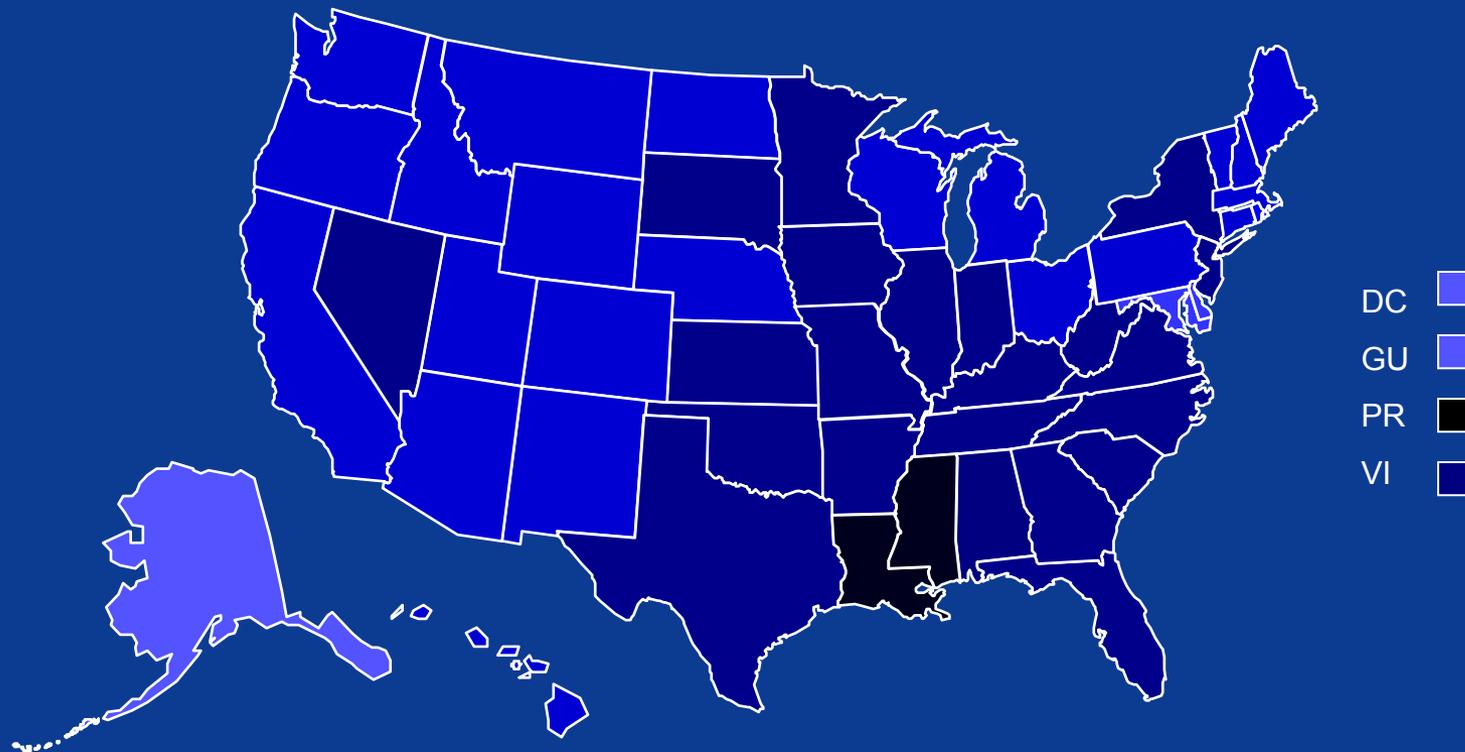
# State Prevalence Estimates

- **Similar patterns among demographic groups**
- **Absolute percent difference**
  - Range: 11.7 - 19.1%
- **Relative percent difference**
  - Range: 23.7 - 44.6%



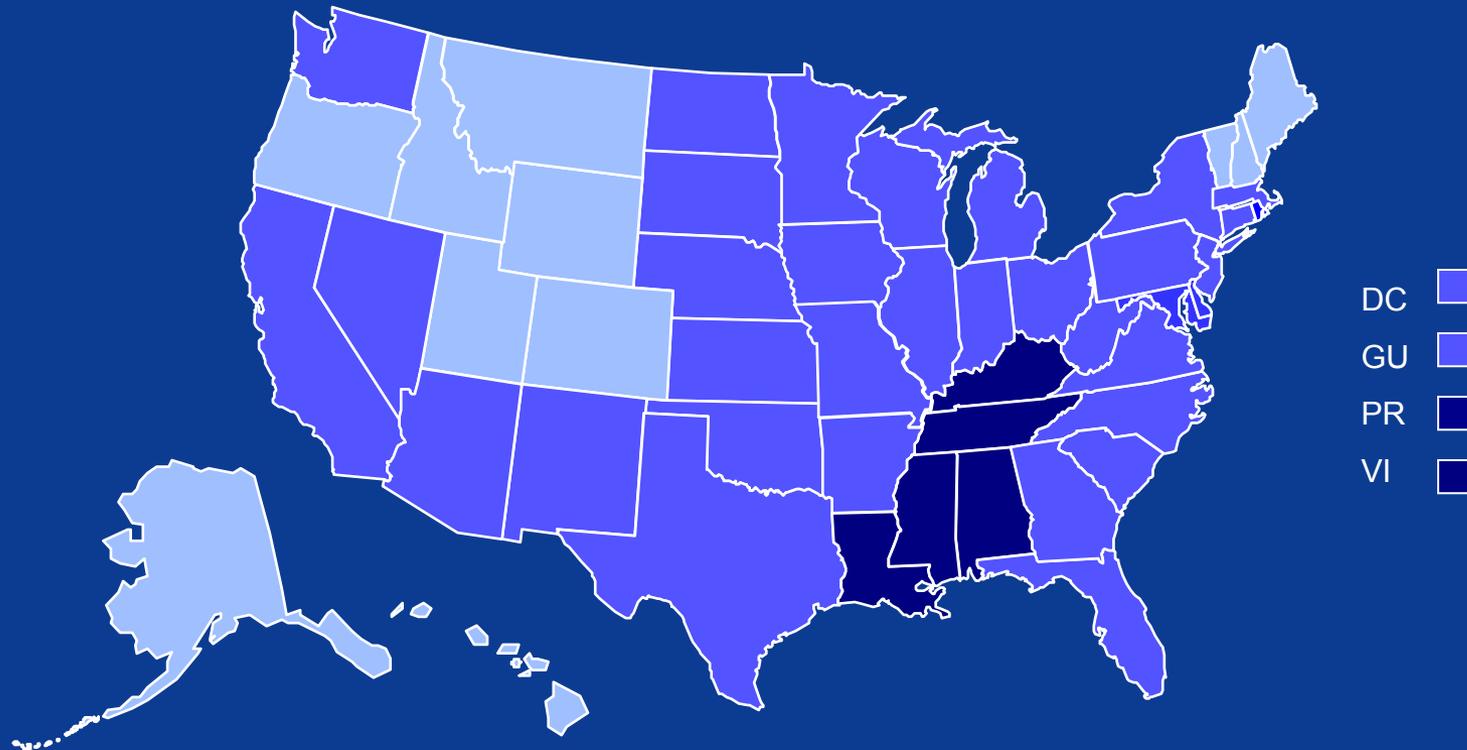
# Healthy People 2010 Criteria BRFSS, 2007

## Prevalence of Meeting Recommendations for Physical Activity



# 2008 Physical Activity Guidelines BRFSS, 2007

## Prevalence of Meeting Recommendations for Physical Activity



# State Comparison

## Alaska

- **Healthy People**
  - 60.0%
- **2008 PAG**
  - 72.5%
- **Absolute Difference**
  - 12.5%
- **Relative Difference**
  - 20.8%

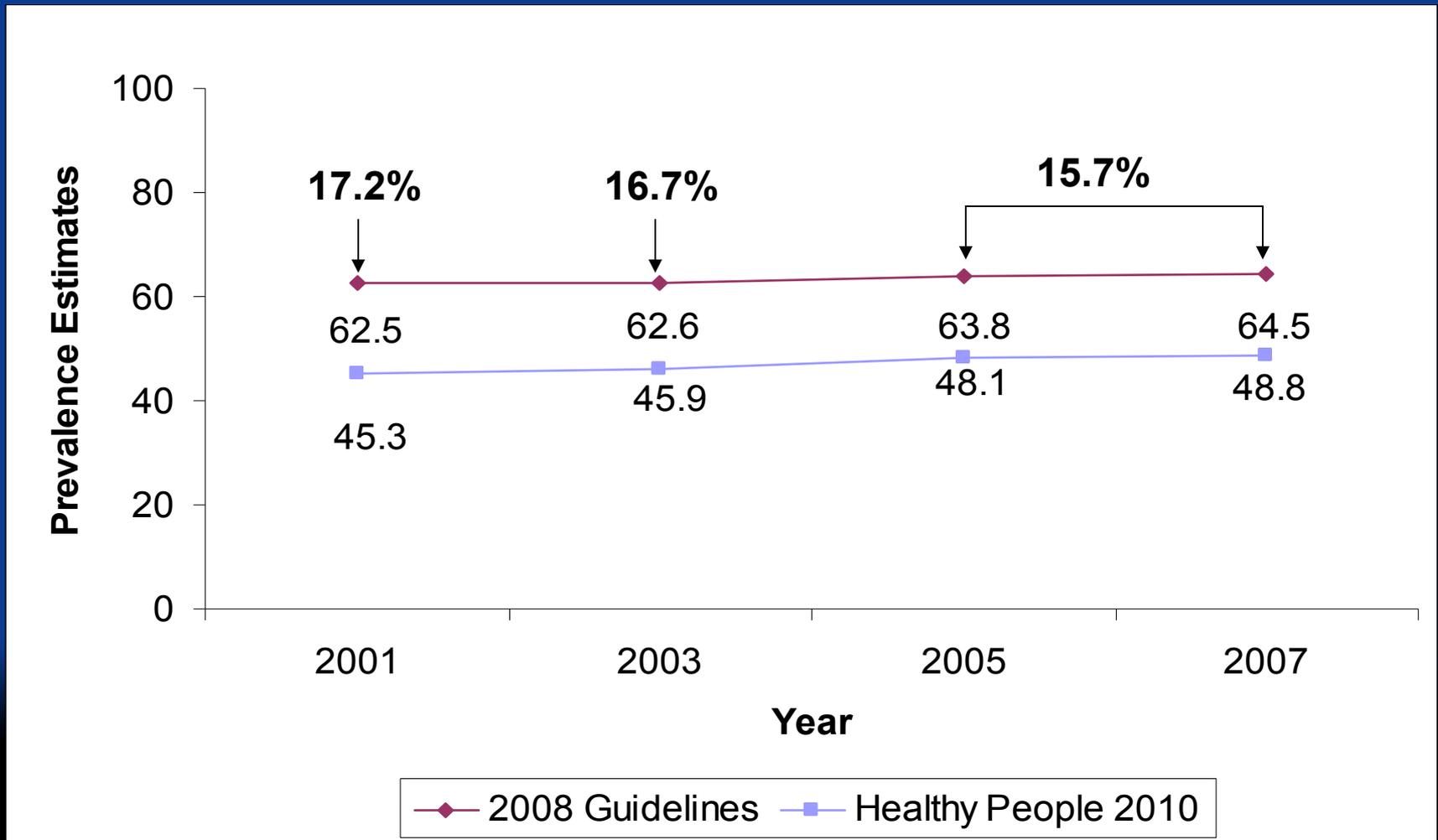


## Mississippi

- **Healthy People**
  - 39.7%
- **2008 PAG**
  - 57.2%
- **Absolute Difference**
  - 17.5%
- **Relative Difference**
  - 44.1%



# Trends: 2008 Guidelines and Healthy People 2010 Objectives



# Difference in Estimates

- Reasons for shift
  - Removal of frequency or duration requirement
  - Combination of minutes
- Breakdown of shifts
  - 15.7% difference in prevalence estimates
    - ▲ 5.4% - removal of frequency or duration requirement
    - ▲ 4.3% - combination of moderate- and vigorous-intensity minutes
    - ▲ 6.0% - for either reason

# Discussion

- Larger proportion report meeting the minimum aerobic physical activity levels according to the *2008 Physical Activity Guidelines* when compared to *Healthy People 2010* criteria for physical activity
- Difference related to change in definition of physical activity in the *2008 Physical Activity Guidelines*
  - Not an actual increase in physical activity

# Strengths / Limitations

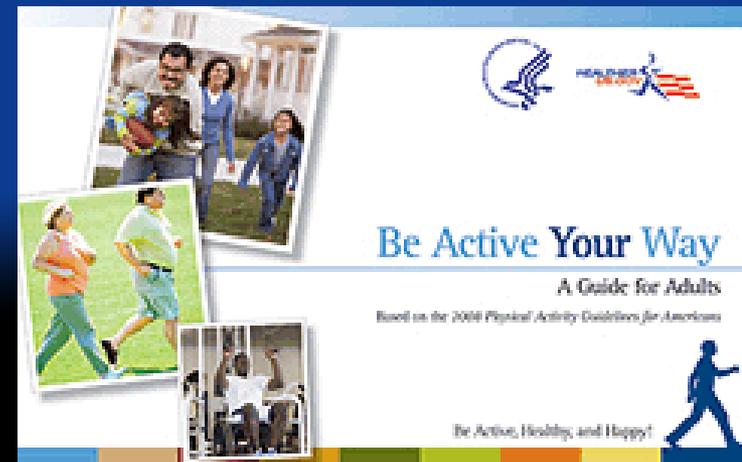
- **Strengths**
  - Large sample size
  - Consistent physical activity questions since 2001
- **Limitations**
  - Self-reported
    - ▲ Recall and social desirability bias
    - ▲ Over-reported
  - Sampling methods
    - ▲ Landline telephone survey
    - ▲ Lower response rates

# Communicating the *Guidelines*

## *2008 Physical Activity Guidelines for Americans* Toolkit – Be Active Your Way

- Part 1 – Getting Started
- Part 2 – Making Physical Activity a Part of Your Life
- Part 3 – Keeping It Up, Stepping It Up
- Part 4 – Being Active for Life

[www.health.gov/paguidelines](http://www.health.gov/paguidelines)



# Public Health Importance

- Tracking physical activity using the *2008 Guidelines*
  - Statistical syntax
- Muscle-strengthening
- Evidenced-based update

# Physical Activity and the 2008 *Physical Activity Guidelines*

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Division of Nutrition, Physical  
Activity, and Obesity

## Contact Information

Fleetwood Loustalot

EIS Officer

Division of Nutrition,  
Physical Activity, and  
Obesity

Physical Activity and  
Health Branch

[floustalot@cdc.gov](mailto:floustalot@cdc.gov)



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