



Georgia Department of Public Health

Georgia Youth Obesity: Georgia High School Youth Risk Behavior Survey



Presentation to: Chronic Disease University

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Date: October 8, 2015

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Objectives

1. To describe Georgia High School Youth Risk Behavior Survey
2. To describe obesity in the context of BMI percentile
3. To describe youth obesity among Georgia high school students

GEORGIA HIGH SCHOOL YOUTH RISK BEHAVIOR SURVEY

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Youth Risk Behavior Survey (YRBS) Methods

- Biennial
- Questionnaire development (HS)
 - At least 60 of 89 questions from standard
 - Total number of questions less than 100
 - 8th grade reading level

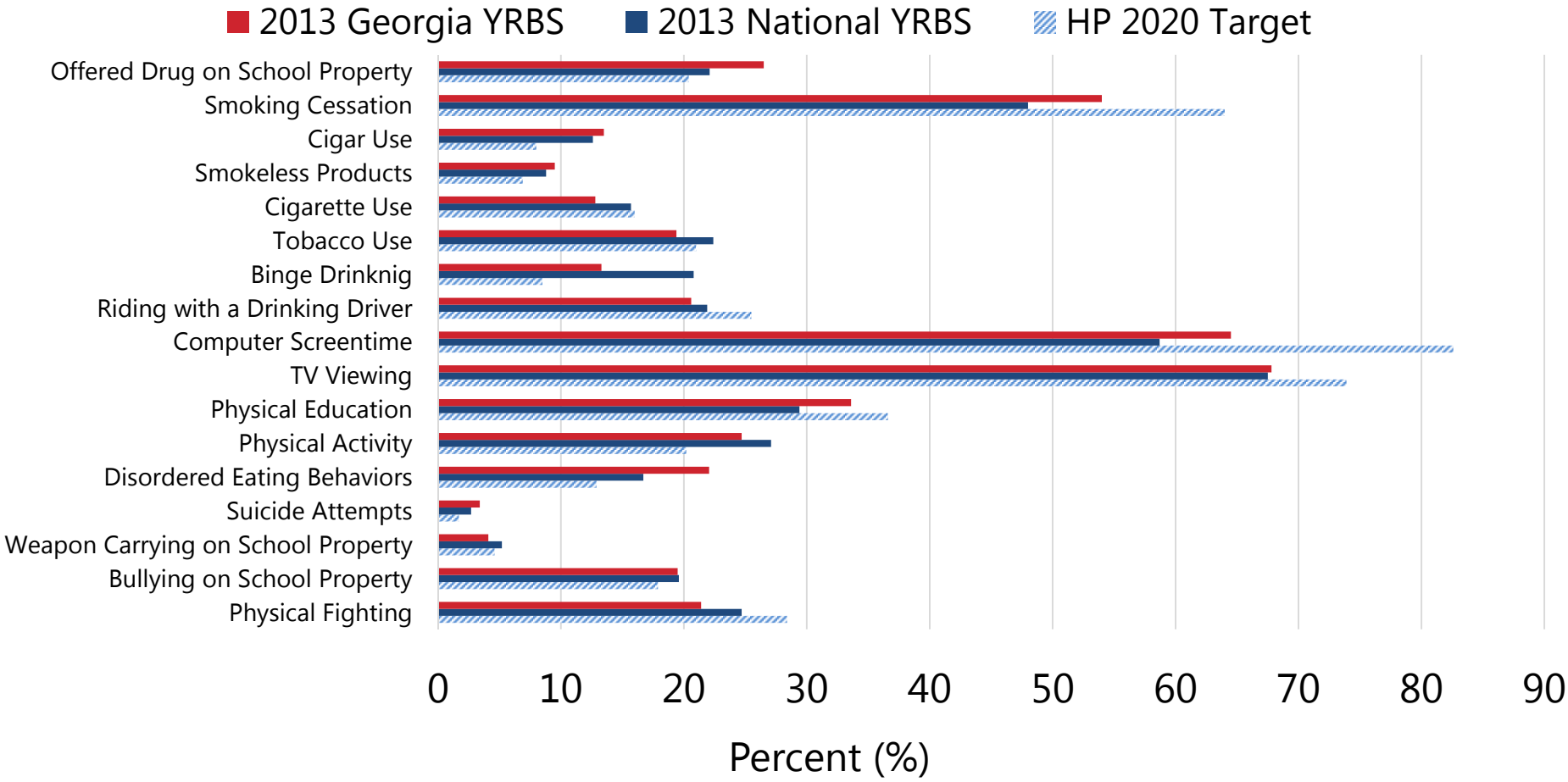
2013 Youth Risk Behavior Survey Sample

- Sample of students enrolled in public high schools
 - Regular public schools
 - Alternative schools
- Sample of 50 high schools
- 1,992 students in 35 public high schools
 - Representative of 9th – 12th grade students

What YRBS Measures

- Behaviors that result in unintentional injury and violence
- Tobacco use
- Alcohol and other drug use
- **Dietary behavior**
- **Physical activity**
- **Height, Weight**

17 Healthy People 2020 Targets & 2013 Georgia and National YRBS



BODY MASS INDEX, OVERWEIGHT, OBESITY AND YOUTH

What is Body Mass Index

- BMI = weight/height²
 - Weight in kilograms
 - Height in meters
- Children and youth (ages 2-20) **BMI percentile** is relative to other children of same sex and age in the U.S. who participated in...
- Cross-sectional, nationally representative surveys
 - National Health Examination Survey II & III (1963-65; 1966-70)
 - National Health and Nutrition Examination Survey I, II, and III (1971-74; 1976-80; 1988-94)

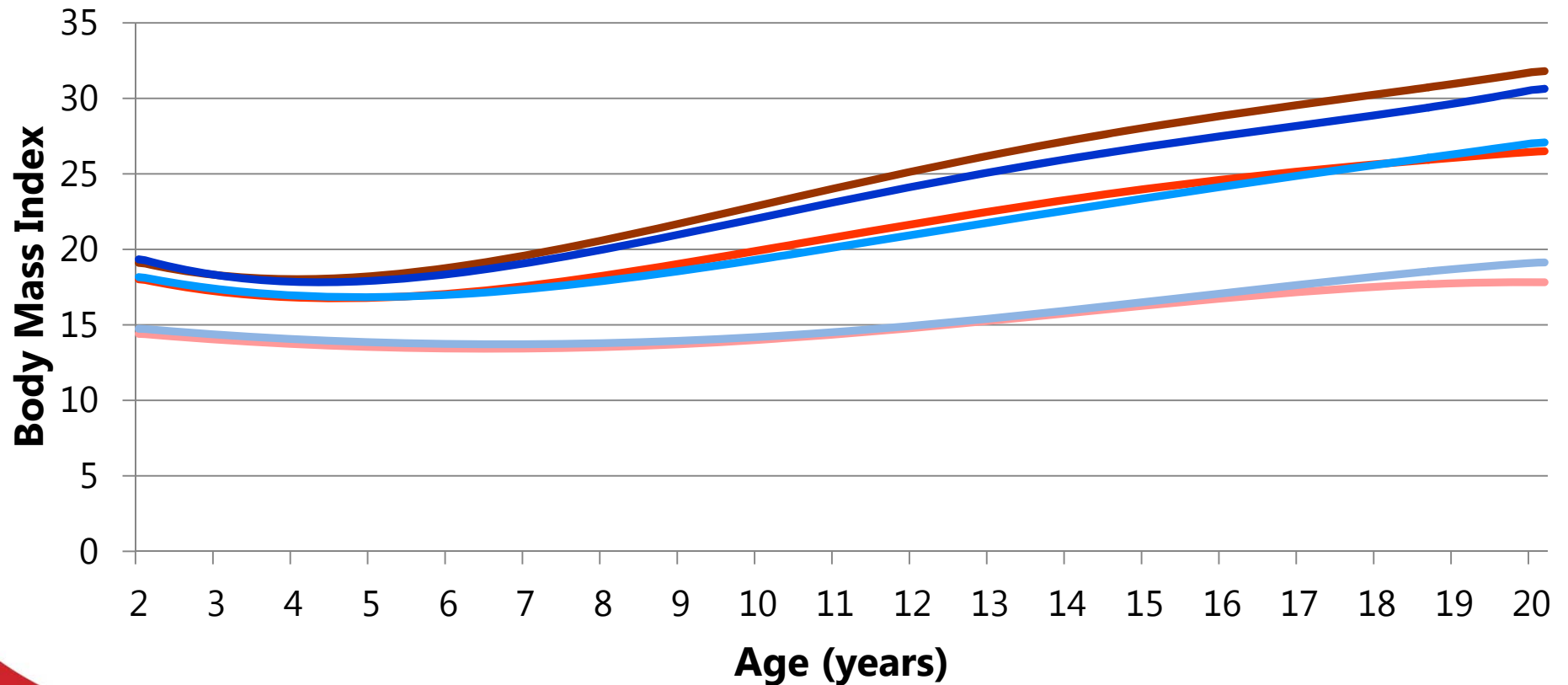
BMI Status by Percentile

- **Underweight** – less than the 5th percentile
- **Normal/Healthy Weight** – 5th percentile to less than the 85th percentile
- **Overweight** – 85th to less than 95th percentile
- **Obese** – equal to or greater than the 95th percentile

Cutoffs based on recommendations from an Expert Committee comprised of professional organizations, experienced scientists, and clinicians

Body Mass Index (BMI) Growth Curve: Females and Males

Female 95th Perc. Female 85th Perc. Female 5th Perc.
Male 95th Perc. Male 85th Perc. Male 5th Perc.

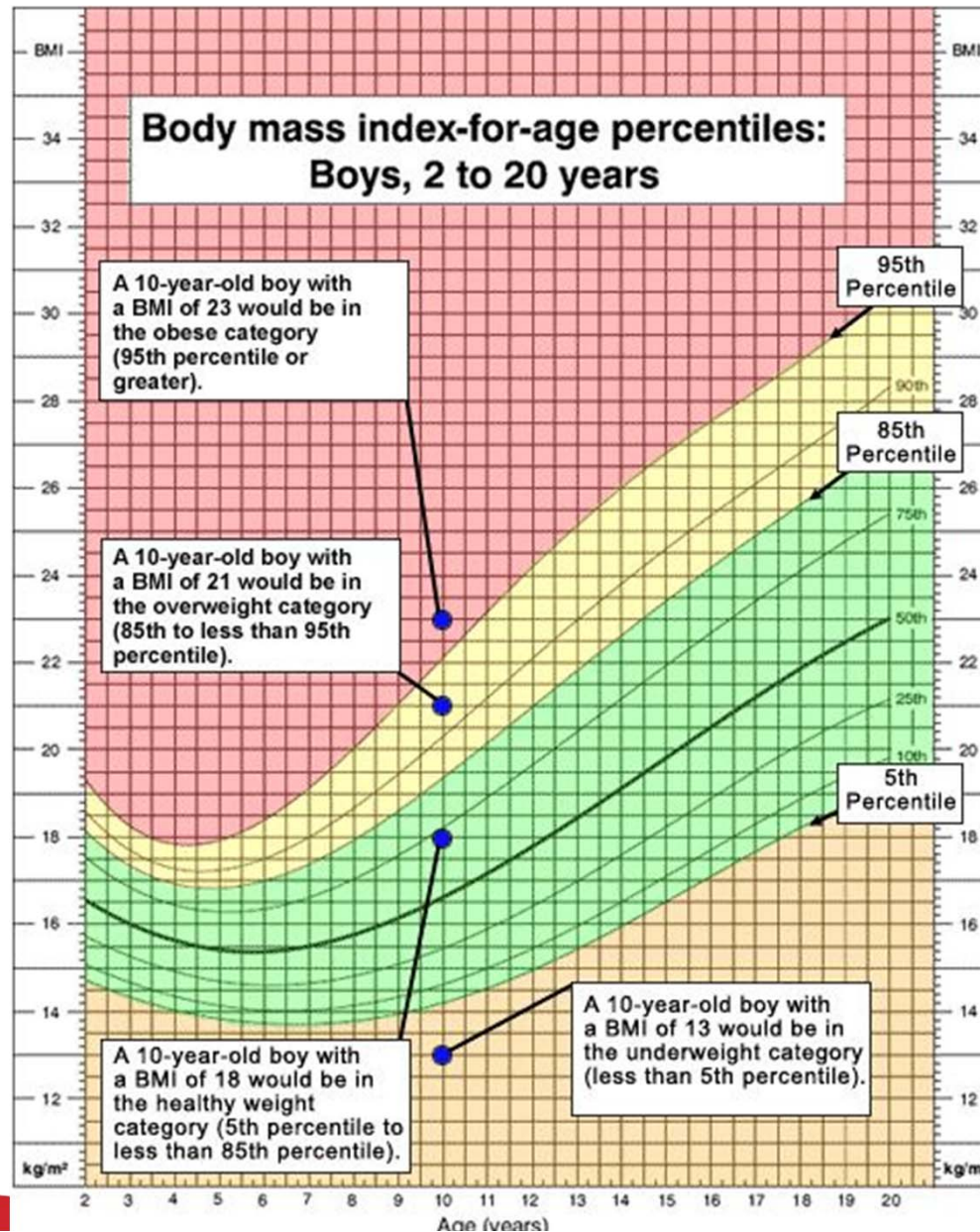


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BMI Example

- What is the BMI Status for a 10 year old Male with a BMI of:
 - 23
 - 21
 - 18
 - 13

BMI Percentile & Status Example



Why Body Mass Index?

- Inexpensive, easy-to-perform method of **screening** for weight categories (read “not a diagnosis”)
- **One indicator/proxy/indirect measure** of body fat
- Correlated with **direct** measures of body fat
 - Skinfold thickness, bioelectrical impedance, densitometry, dual energy x-ray absorptiometry

Youth Self-Reported Height & Weight

- Underestimates prevalence of obesity compared to BMI calculated from measured height and weight
- Useful for tracking BMI trends over time
 - Self-report trends track measured trends

Health Impact of Youth Obesity

NOW

- 70% of obese children had at least one CVD risk factor and 39% had two or more
- Increased risk of impaired glucose tolerance, insulin resistance and type 2 diabetes
- Breathing problems, such as sleep apnea, and asthma
- Joint problems and musculoskeletal discomfort
- Fatty liver disease, gallstones, and gastro-esophageal reflux
- Psychological stress such as depression, behavioral problems, and issues in school
- Low self-esteem and low self-reported quality of life
- Impaired social, physical, and emotional functioning

LATER

- Obese children are more likely to become obese adults
- Adult obesity is associated with a number of serious health conditions including heart disease, diabetes, and some cancers
- If children are overweight, obesity in adulthood is likely to be more severe

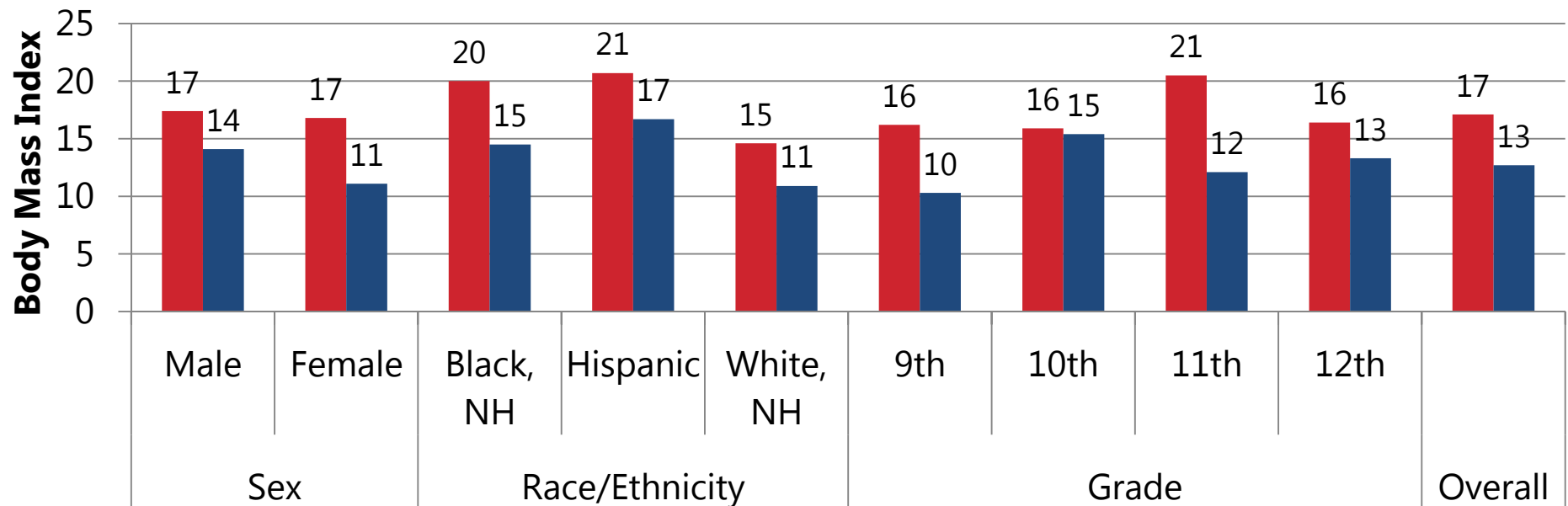
GEORGIA HIGH SCHOOL STUDENT OVERWEIGHT AND OBESITY

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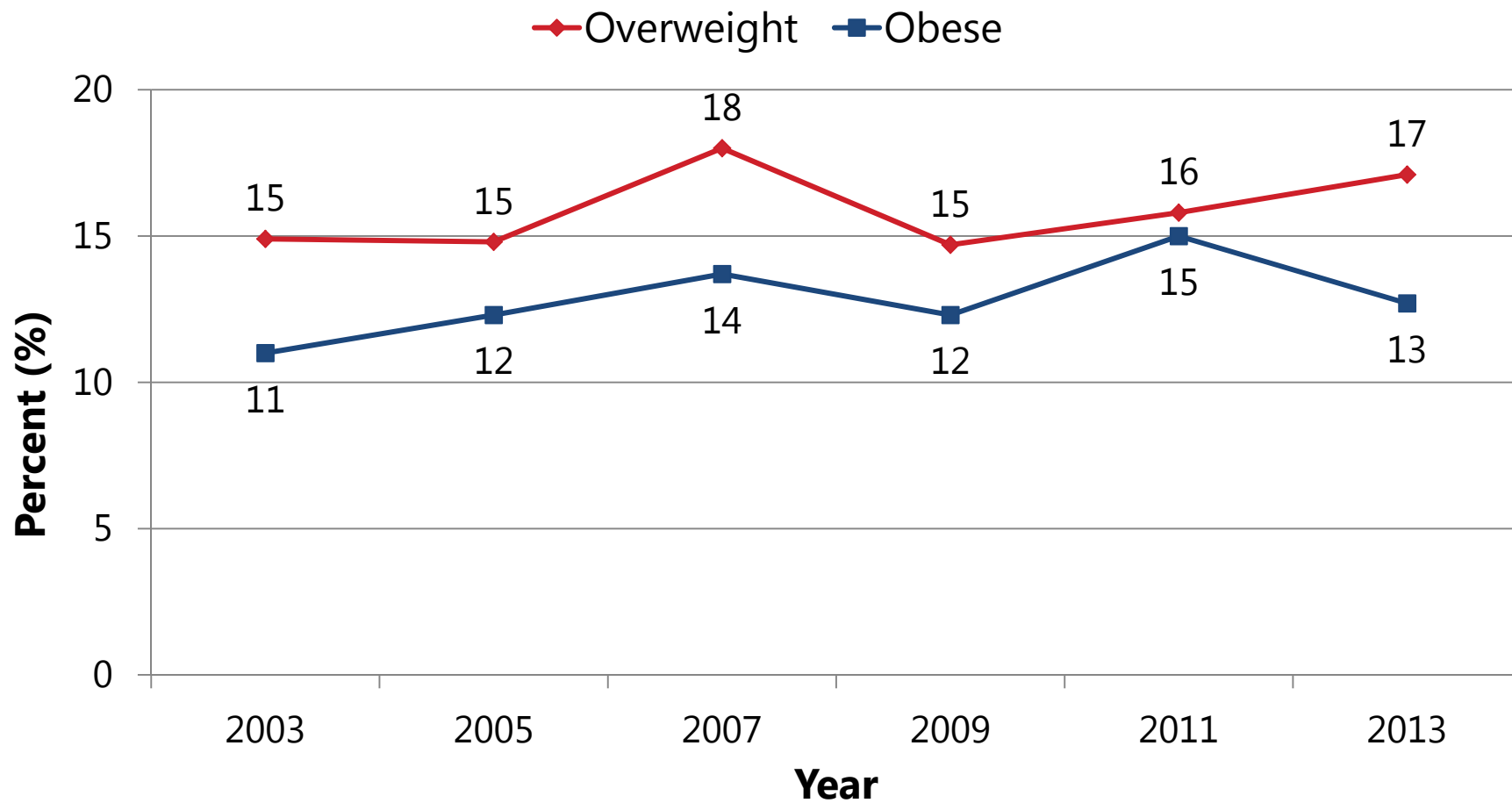
Percentage of Georgia High School Students who were Overweight or Obese by Sex, and Race/Ethnicity, and Grade, 2013

■ Overweight ■ Obese

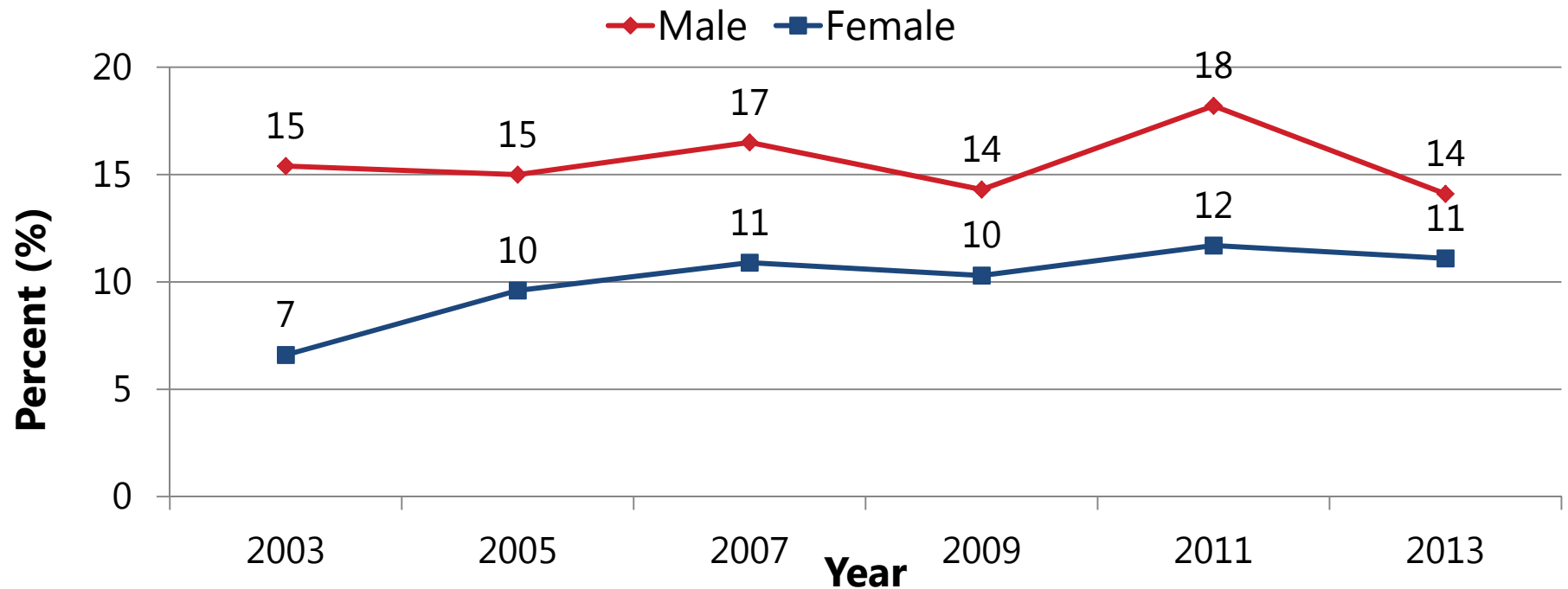


- Male students **more likely** than female students to be obese (no difference in overweight status by sex)
- **No difference** in overweight or obesity percent by grade
- NH Black students were **more likely** to be overweight and obese than NH White students

Percentage of Georgia High School Students who were Overweight or Obese by Year, 2003-2013

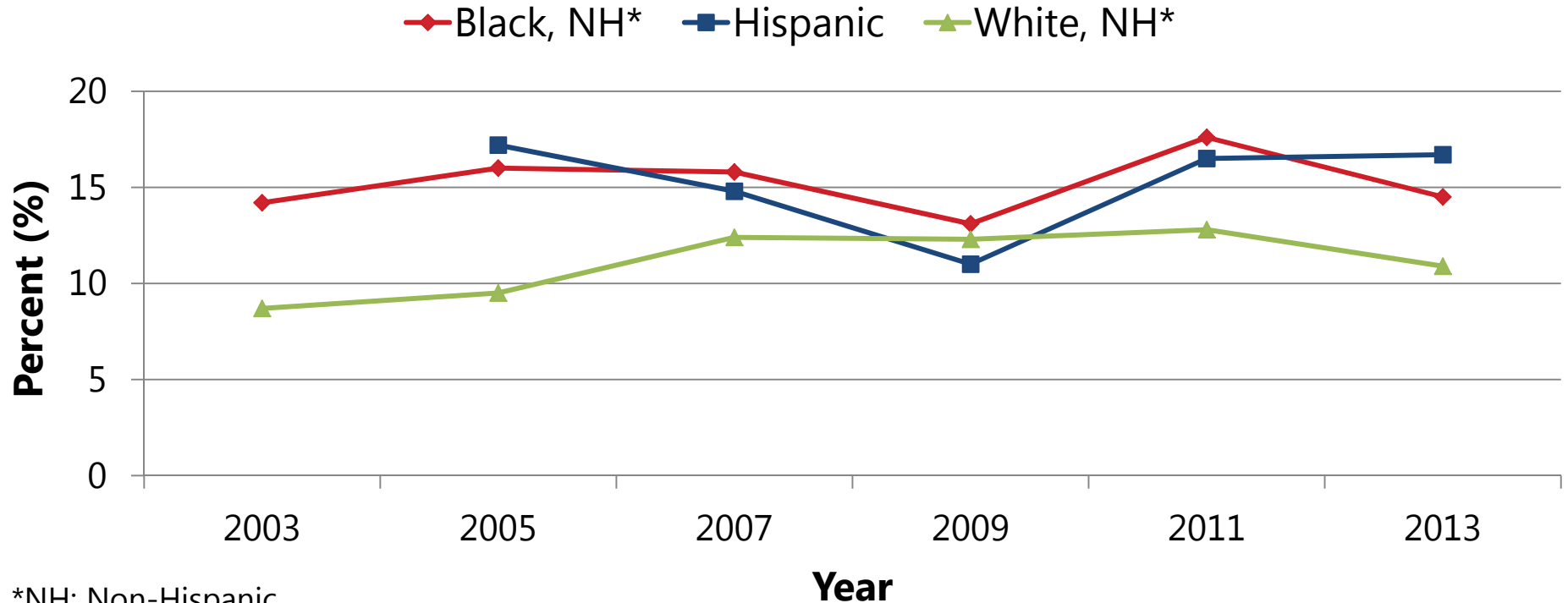


Percentage of Georgia High School Students who were Obese by Sex and Year, 2003-2013



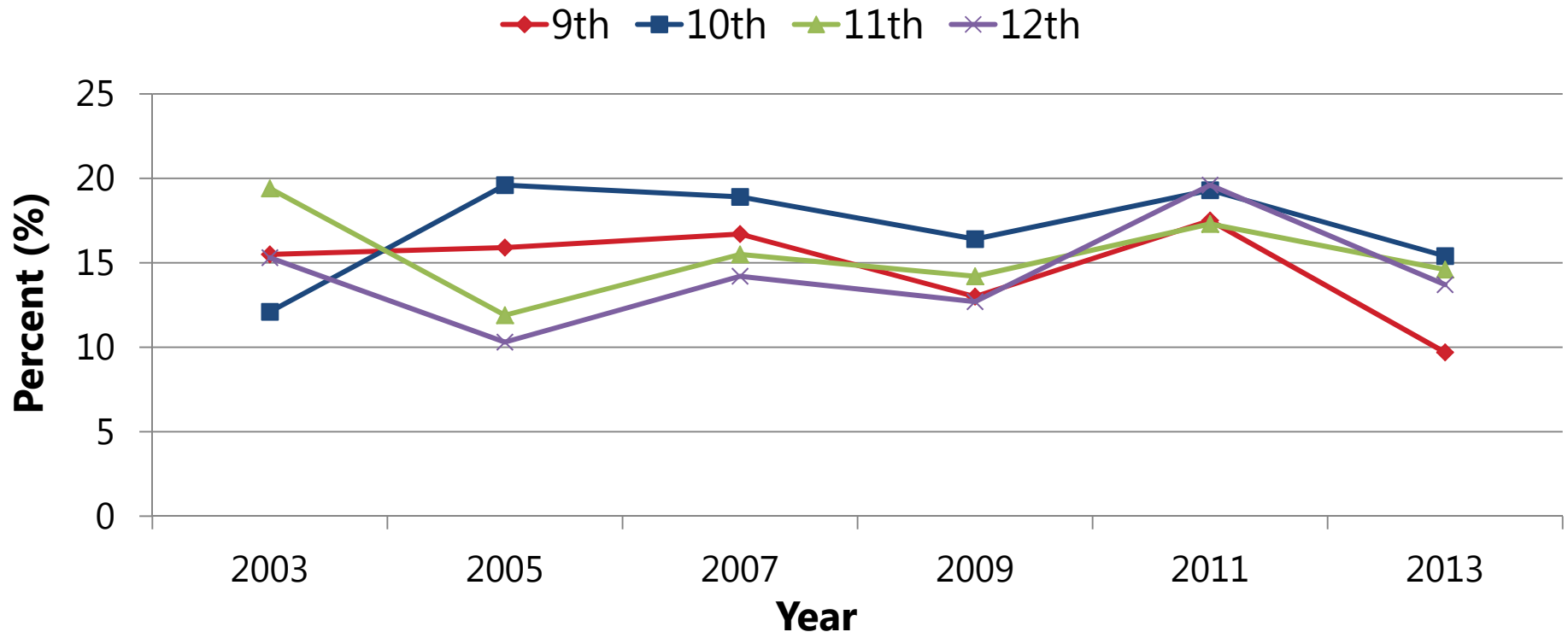
- From 2003-2013, male students **more likely** to be obese than female students
- Females **more likely** to be obese in 2013 compared to 2003

Percentage of Georgia High School Students who were Obese by Race/Ethnicity and Year, 2003-2013



- Beginning in 2011, NH Black students **more likely** than NH White students to be obese
- **No difference** in obesity between NH black and Hispanic students and NH white and Hispanic students

Percentage of Georgia High School Students who were Obese by Grade and Year, 2003-2013



- 10th grade students **more likely** to be obese in 2013 as compared to 2003
- **No difference** in obesity by grade across each year

THANK YOU!

QUESTIONS?

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