

Maternal and Child Health Issue Brief

June 2014 № 4

Obesity in Children and Youth in Colorado

Why is obesity in children and youth an issue?

In Colorado, the prevalence of obese children ages 6-14 years is 14.0 percent (2012).¹ Among high school youth the prevalence is 7.3 percent (2011).² Nationally, 15.7 percent of children ages 10-17 years are obese³ and 13.0 percent of high school youth are obese.²

The rate of childhood obesity has tripled in the last generation.⁴ The current generation of children may be the first to “live sicker and die younger” than older generations because of the serious health complications of obesity.⁵ Obese children have an increased risk of asthma, sleep apnea, fatty liver disease, gallstones, orthopedic and joint problems, abnormal glucose tolerance, insulin resistance, type 2 diabetes, high blood pressure, high cholesterol, and cardiovascular disease. Obesity is also associated with psychosocial problems such as low self-esteem, social exclusion, discrimination, depression, and anxiety.^{4,5}



Definitions

Body Mass Index (BMI) is used to determine overweight and obesity in children and youth. BMI is calculated by comparing weight and height against age- and gender-specific ranges.

- Children and youth are considered **overweight** if their BMI falls between the 85th and 94th percentile for their age and gender.
- Children and youth are considered **obese** if their BMI is at or above the 95th percentile.

Overweight or obese children and youth are more likely to become overweight or obese teenagers. A recent study showed that a child who is overweight at age five years is four times more likely than a child of normal weight to become obese by the age of 14 years.⁶ Obesity is associated with serious health complications such as heart disease, diabetes, and some cancers.⁴ Although Colorado children and youth currently meet the Healthy People 2020 goals, the prevalence of obesity among children is cause for concern.

Figure 1. Prevalence of overweight and obesity in children ages 6-14 years, Colorado, 2005-2012.

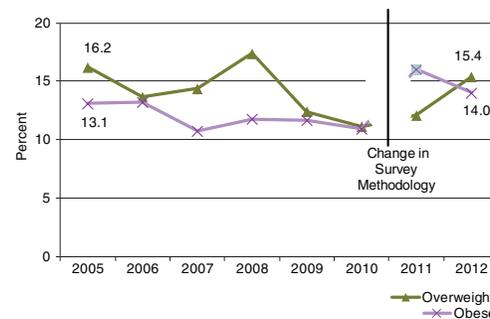
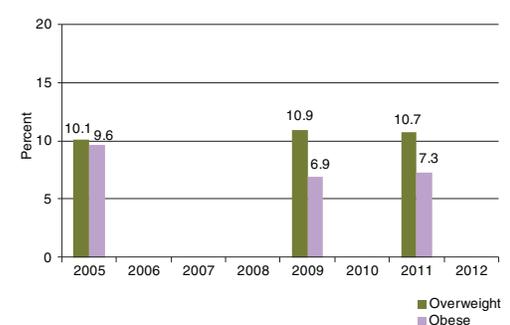


Figure 2. Prevalence of overweight and obesity in high school youth, Colorado, 2005-2011.

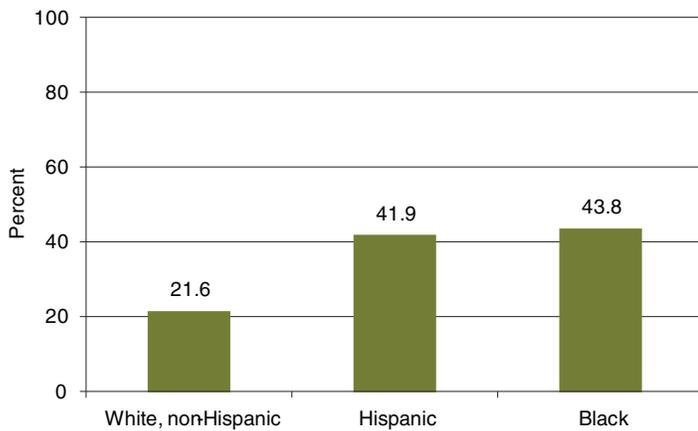


Healthy People 2020 Goals⁷

- Reduce the proportion of children ages 6-11 years who are obese to 15.7 percent.
- Reduce the proportion of children ages 12-19 years who are obese to 16.1 percent.

Social and economic health disparities in Colorado

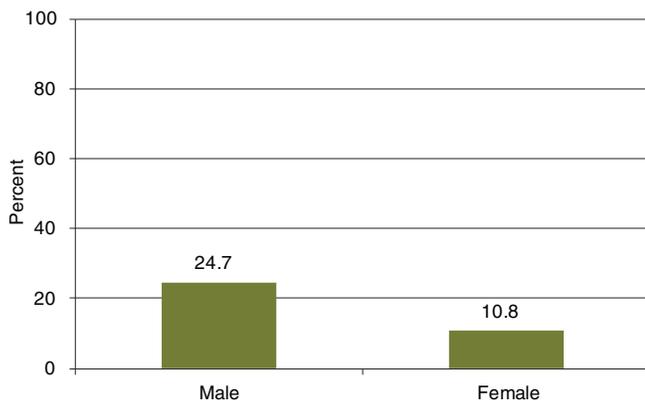
Figure 3. Prevalence of overweight and obesity in Colorado children ages 6-14 by race/ethnicity.



More than two in five Hispanic and Black children ages 6-14 years are overweight or obese. One in five White, non-Hispanic children ages 6-14 years is overweight or obese, this is statistically significant compared to the estimates for Hispanics and Blacks (2011-2012).⁸

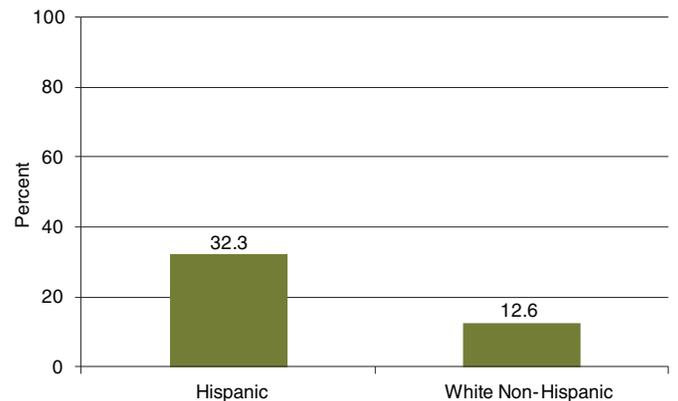


Figure 4. Prevalence of overweight and obesity in Colorado youth by sex.



One in four boys in high school is overweight or obese. Among girls in high school, one in ten is overweight or obese. The difference between the estimate for males is statistically significant compared to the estimate for females (2011).⁹

Figure 5. Prevalence of overweight and obesity in Colorado youth by race/ethnicity.



One in three Hispanic high school students in Colorado is overweight or obese, while one in eight White Non-Hispanics is overweight or obese. The difference between the estimate for Hispanics is statistically significant compared to the estimate for White Non-Hispanics (2011).⁹

Who is more likely to be overweight or obese?

- Males in high school are more likely to be overweight or obese than females in high school, but boys and girls ages 6-14 years are equally likely to be overweight or obese.
- Hispanic youth in high school are more likely to be overweight or obese than White Non-Hispanic youth in high school, but children ages 6-14 years of different race/ethnicities are equally likely to be overweight or obese (not shown).⁸
- Children ages 6-14 years in families with annual household incomes under \$25,000 (41.1 percent) (not shown).⁸

What are the causes of obesity in children and youth?

The Physical Activity Guidelines for Americans issued by the U.S. Department of Health and Human Services recommend that children and adolescents, ages 6-17 years, have 60 minutes or more of physical activity each day. In recent years, national data show that children and youth have lower levels of physical activity, both at home and at school. In Colorado, 53.7 percent of 5-11 year olds, 40.9 percent of 12-14 year olds, and 53.1 percent of high school students met recommended levels of physical activity for their age group.^{10,11} These data suggest nearly half of Colorado's children are not meeting the daily recommended amount of physical activity needed to prevent obesity.

In addition, the majority of children and youth do not consume the recommended amount of fruits and vegetables. In Colorado, 8.6 percent of 5-11 year olds, 7.7 percent of 12-14 year olds and 15.5 percent of high school students met fruit and vegetable consumption recommendations.^{10,11} The availability and consumption of high-calorie convenience foods and sugar-sweetened beverages, more meals eaten away from home, and greater portion sizes all may contribute to childhood obesity.

Obesity is influenced by a complex interaction of environmental, behavioral and genetic factors, as well as demographic factors like socioeconomic status. These factors contribute to health disparities. For example, among low-income children ages 2-14 years in Colorado, the prevalence of obesity is 27.9 percent, significantly higher than the prevalence of obesity among children from higher income families (11.0 percent).¹² Low-income families experience a disproportionate number of barriers including a lack of safe places for physical activity and inconsistent access to healthful food choices, especially fruits and vegetables.

In addition, children and youth spend nearly half their waking hours at school. In 2012, 42.0 percent of Colorado students qualified for free and reduced meals, suggesting that many children are consuming the majority of their daily calories at school.¹³ Schools play an important role in offering nutritious meals and physical activity classes as a way to prevent obesity.

Colorado Youth Are Doing It Right!

- **Eight in ten high school students watch less than three hours of TV per day (CO = 79 percent vs. U.S. = 67 percent)**
- **Nine in ten high school students drink soda/pop less than three times per day (CO = 93 percent vs. U.S. = 89 percent)**



Spotlight on Obesity in Families

Obesity rates in Colorado are lower than the national average; however, the state is experiencing an upward trend among children and youth. Findings from a 2008 Institute of Medicine Report in *Preventing Childhood Obesity: Health in the Balance* suggest that the stress and challenge of daily living significantly influence family healthy eating and physical activity behaviors.

A 2007 analysis linking Colorado adult and child obesity and contributing behaviors found a correlation between parental and child behavior. If a Colorado parent is obese, a child is 2.3 times more likely to be overweight or obese than if the parent is not obese.¹⁴ Interestingly, this association does not hold if the parent is overweight and not obese. As for nutrition, children are 3.1 times more likely to eat fruits or vegetables five times per day if their parents do so and two times more likely to eat fruits and vegetables five times per day if the family eats meals together at least once per day.¹⁴ Similar results are found with physical activity where a child is nearly two times more likely to be on a sports team if the parent meets the recommended guidelines for physical activity.¹⁴ Additional results found that children of obese parents are more likely to consume sugary beverages and fast food.¹⁴ Providing good nutrition at home and at school and ensuring children and youth receive the recommended physical activity can reduce obesity among Colorado children and youth.



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This project was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number H18MC00006, State Systems Development Initiative (SSDI) for \$91,045. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.

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