

Childhood Obesity

DEFINITION

Childhood obesity is the percentage of children entering kindergarten with a body mass index (BMI) at or above the 95th percentile for gender and age. BMI is calculated based on weight and height.¹ Children and youth with a BMI at or above the 95th percentile are considered to be obese. Children and youth with a BMI between the 85th and 95th percentiles are considered to be overweight or at risk for obesity.²

SIGNIFICANCE

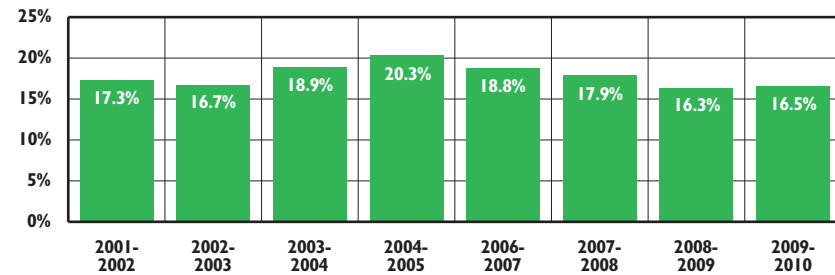
Children and adolescents who are overweight and obese are at an increased risk for type 2 diabetes, asthma, heart disease and other acute and chronic health problems. Aside from obesity's physical consequences, obese children and youth are susceptible to mental health and psychological conditions, such as depression and low self-esteem, and may experience social stigmatization and discrimination.^{3,4} Nationally, the prevalence of childhood obesity has more than tripled in recent decades, increasing from 5% of children in 1980 to 17% in 2008.⁵ Current childhood obesity rates are so high that they may reduce life expectancy and diminish overall quality of life among today's generation of children.⁶

Weight gain occurs when more calories are consumed than expended.

Genes, metabolism, behavior, environmental and cultural factors also play a role in childhood overweight and obesity.⁷ The prevention of obesity requires a balance between energy intake and expenditure over time. Nutritional factors such as skipping breakfast, eating fast food, large portion sizes in meals at home and in restaurants and frequent snacking are associated with increased obesity in children. Rates of physical activity among U.S. children and adolescents generally have decreased over the past decade. Participation in daily physical education classes, and daily walking or cycling to school also have decreased.⁸

In Rhode Island in 2007, 14.4% of children ages 10-17 were obese, and 15.8% were overweight. Nationwide in 2007, 16.4% of children ages 10-17 were obese and 15.3% were overweight, with significant disparities for racial/ethnic minorities. Nationwide, 41.1% of Black children and 41.0% of Hispanic children ages 10-17 were overweight or obese in 2007, compared to 26.8% of White, non-Hispanic children.^{9,10}

Obesity Among Children Entering Kindergarten, Rhode Island, 2001-2010*



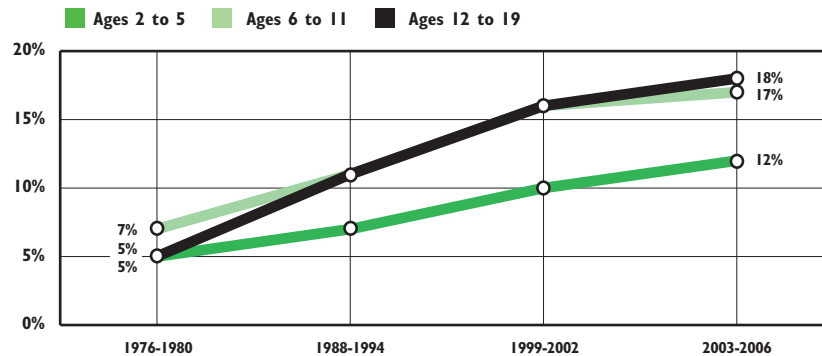
Source: Immunization Program, Center for Child and Family Health, Rhode Island Department of Health, School Years 2001-2002 through 2009-2010. *There are no data available for the 2005-2006 school year. Data are based on a sample of recorded heights and weights at kindergarten entry.

- ◆ Nearly one in six (16.5%) Rhode Island children entering kindergarten during the 2009-2010 school year was obese, down from a high of 20.3% in the 2004-2005 school year.¹¹
- ◆ Maternal excess weight during the prenatal period and gestational diabetes can put children at risk for obesity early in life. Breastfeeding has been found to have significant long-term potential for maintaining a lower BMI.¹² Nationwide, one in seven (14.6%) low-income, preschool-aged children are obese.¹³

Sedentary Behavior

- ◆ Technological advances in television, computers and video games have increased children's overall "screen time," contributing to sedentary lifestyles and increasing risk for obesity. Nationally, children and youth ages 8 to 18 spend over seven hours daily watching television or movies, using the internet and playing video games. Most parents do not set or enforce screen time limitations, but when families establish rules about screen time and implement them, screen time declines by an average of two hours per day.¹⁴
- ◆ In Rhode Island, 29% of high school students reported watching three or more hours of TV on an average school day during the 2008-2009 school year. Twenty-eight percent also reported using computers for non-school work three or more hours per average school day.¹⁵

Prevalence of Obesity Among U.S. Children and Adolescents, Ages 2 to 19



Source: Centers for Disease Control and Prevention. (2009). *NHANES Surveys (1976-1980 and 2003-2006)*. Retrieved February 26, 2010, from www.cdc.gov/obesity/childhood/prevalence.html. The National Health and Nutrition Examination Survey (NHANES) uses measured heights and weights to calculate a body mass index (BMI) for age.

- ◆ Nationally, the prevalence of obesity among children has increased dramatically in recent decades, and has more than tripled among adolescents ages 12-19. Between 2003 and 2007, obesity prevalence increased by 10% for U.S. children overall. During the same time period, the obesity prevalence among children in low-income, high-unemployment and low-education level households increased between 23% and 33%.¹⁶
- ◆ During the 2009-2010 school year, 18.9% of 7th graders in Rhode Island were obese, up from 16.8% during the 2006-2007 school year.¹⁷ Schools can implement health education curriculum for pre-kindergarten through grade 12, helping students to make healthy nutritional choices and meet physical activity recommendations.¹⁸
- ◆ In 2009, 10.4% of Rhode Island high school students were obese and 16.7% were overweight.¹⁹ For adolescents, social stigmatization caused by overweight and obesity can cause low self-esteem and hinder academic and social functioning. Teenagers who are obese have an 80% chance of being obese as an adult.²⁰

Eating Habits of Public High School Students, Rhode Island, 2007 & 2009

	2007	2009
Ate fruit one or more times during the past 7 days	86%	87%
Ate fruits and vegetables 5 or more times per day during the past 7 days	19%	23%
Drank a container of soda one or more times per day during the past 7 days	25%	21%
Drank 3 or more glasses per day of milk during the past 7 days	16%	13%

Source: Rhode Island Department of Health, Center for Health Data and Analysis, *2007 & 2009 Rhode Island Youth Risk Behavior Surveys*.

- ◆ Rhode Island public high school students reported eating increased amounts of fruits and vegetables between 2007 and 2009. Just over one in 10 (13%) reported drinking recommended amounts of milk daily in 2009.^{21,22}
- ◆ Recent changes in school nutrition policy have made Rhode Island school meals among the healthiest in the country. Rhode Island is one of 19 states that implement nutritional standards for school meals and snacks that go beyond existing USDA requirements.^{23,24} The Rhode Island Nutrition Requirements (RINR), which went into effect in September 2009, encourage consumption of more fruits, vegetables, whole grains and legumes in school meal programs such as school breakfast and school lunch.²⁵

References

- Centers for Disease Control and Prevention. (n.d.). *BMI – Body Mass Index: BMI for children and teens*. Retrieved January 23, 2009, from www.cdc.gov/
- U.S. Department of Health and Human Services. (2010). *The Surgeon General's vision for a healthy and fit nation fact sheet*. Retrieved February 1, 2010, from www.surgeongeneral.gov/library/obesityvision/obesityvision_factsheet.html
- U.S. Preventive Services Task Force. (2010). Screening for obesity in children and adolescents: U.S. Preventive Services Task Force recommendation statement. *Pediatrics*, 125(2), 361-367.
- U.S. Department of Health and Human Services. (2010). *The Surgeon General's vision for a healthy and fit nation*. Rockville, MD: U.S. Department of Health and Human Services, Office of the Surgeon General.
- U.S. Institute of Medicine. (2009). *Local government actions to prevent childhood obesity*. Washington, DC: National Academies of Science.
- Davis, M. M., Gance-Cleveland, B., Hassink, S., Johnson, R., Paradis, G. & Resnicow, K. (2007). Recommendations for prevention of childhood obesity. *Pediatrics*, 120, S229-S253.

(continued on page 167)