Obesity

DEFINITION

Obesity is the percentage of high school students who report having a body mass index (BMI) at or above the 95th percentile for gender and age. Adolescents 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.[1]

SIGNIFICANCE

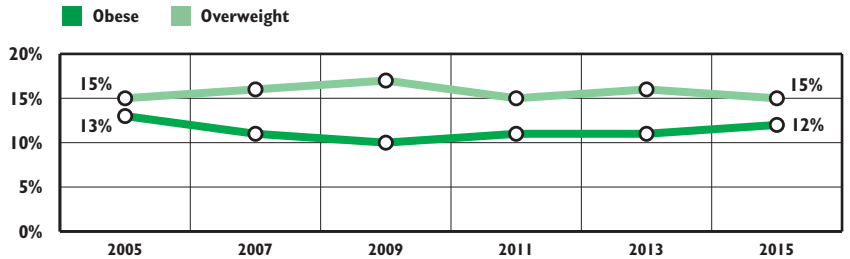
Children and adolescents who are overweight or obese are at immediate and/or long-term risk of many health problems, including type 2 diabetes, cardiovascular disease, asthma, joint pain, sleep apnea, and other acute and chronic health problems. Over time, these conditions may contribute to a shorter lifespan. They may also experience social and psychological problems, including depression, bullying, and social marginalization. Obese children and youth are also more likely to repeat a grade, be absent from school, and have reduced academic performance than their peers.[2,3,4,5]

Over the past four decades, the prevalence of childhood obesity in America has more than tripled, and 17% of U.S. children ages 2-19 were obese and 16% were overweight in 2013-2014.[6] No single factor is driving the increased prevalence of childhood obesity; rather it is the result of complex interactions among many factors, including excess calorie consumption, genes, metabolism, behavior, environment, and culture.[7] Low consumption of healthy foods, high consumption of sugar-sweetened beverages and energy dense foods, low levels of physical activity, and high levels of screen time are all associated with obesity.[8]

The health risks of being overweight and obese can start early and can be long-lasting.[9,10,11] Maternal weight, smoking, and stress during pregnancy increases a baby's risk for being overweight later in childhood.[12] Overweight kindergartners are four times as likely as their healthy-weight peers to become obese by eighth grade, two-thirds of obese fifth graders remain obese in tenth grade, and teenagers who are obese have a greater than 70% risk of being obese as adults.[13,14,15] Prevention and intervention for at risk, overweight, and obese children should occur early and at all ages.[16]

Reducing overweight and obesity will require a comprehensive, multi-system approach. Policy strategies to reduce obesity include improving access to nutritional and affordable foods and beverages, ensuring healthy food in schools, increasing options for physical activity before, during, and after school as well as with early learning programs, and improving access to safe and walkable neighborhoods and recreational areas.[17]

Obesity and Overweight
Among Rhode Island High School Students, 2005-2015



Source: *Youth Risk Behavior Survey,* Rhode Island, 2005-2015. BMI calculated using self-reported student response.

◆ **Rhode Island's overall high school obesity and overweight prevalence has not significantly improved or worsened since 2005. In Rhode Island in 2015, 12% of high school students self-reported as obese and 15% self-reported being overweight. Rhode Island ranks seventh best for the prevalence of obesity and ninth best for the prevalence of overweight among ranked states in 2015. In Rhode Island, Hispanic students (19%), males (16%), and Black, non-Hispanic students (15%) were more likely to report being obese than their peers.[18,19]**

◆ **In October 2016, the BMI values of 10,498 electronic medical health records of children under age 18 residing in Providence who are active patients of a Provide Community Health Center site were examined. The analysis found 26% of Providence children were obese (up from 24% in 2015) and 20% were overweight (same as the prior year). In 2016, obesity varied by age; 24% of children ages two to five, 30% of children ages six to 11, and 25% of children ages 12 to 17 were obese. Among Hispanic children, who accounted for 78% of all patients served, 27% were obese.[20]**

Nutrition and Eating Habits

◆ **Rhode Island's strengthened nutritional standards, which were aligned with federal standards in 2016, have resulted in declines in the availability of unhealthy food and drinks. Between 2006 and 2016 among Rhode Island middle and high schools, chocolate candy (down 92%), salty snacks not low in fat (down 81%), the availability of soda or fruit drinks that are not 100% juice (down 80%), sport drinks (down 78%), and 2% or whole milk (down 68%) declined, as did the number of schools allowing the sales of snack foods and beverages in general (down 24%).[21,22]**

Promoting Increased Physical Activity

◆ **Recess** is an important component in optimizing a child's social, emotional, physical, and cognitive development.[23] In 2016, legislation passed requiring at least 20 consecutive minutes of free-play recess daily for Rhode Island public school children in kindergarten through grade six.[24] Prior to this legislation, only 10 public school districts required 20 minutes or more of daily recess.[25]

◆ **Physical Education (PE)** curriculum and instruction are designed to develop age-appropriate motor skills, knowledge and behaviors of active living.[26] In Rhode Island, students are required to receive an average of 20 minutes per day of health and PE instruction.[27] Nationally, the daily recommended amount of PE alone is 30 minutes in elementary school and 45 minutes in middle and high school.[28]

◆ **Regular physical activity**, including school-based, has been shown to have physical, cognitive and academic benefits, including improved grades and test scores.[29,30] In Rhode Island in 2015, 27% of middle school students and 20% of high school students reported being physically active every day for at least 60 minutes, which is the recommended amount.[31,32] Rhode Island rates are the second (middle school) and third lowest (high school) among ranked states in 2015.[33]

Sedentary Behavior and Physical Activity, Rhode Island Middle School and High School Students by Race and Ethnicity, 2015

	MIDDLE SCHOOL			HIGH SCHOOL		
	BLACK*	WHITE*	HISPANIC	BLACK*	WHITE*	HISPANIC
2 or Fewer Days of Physical Education Weekly	40%	54%	43%	49%	34%	53%
3 or Fewer Days of Physical Activity** Weekly	38%	26%	50%	52%	41%	60%
3 or More Hours of TV on School Days	47%	24%	36%	34%	19%	29%
3 or More Hours of Computer*** Time/Video Games on School Days	60%	45%	51%	39%	39%	47%

Source: *2015 Rhode Island Youth Risk Behavior Survey*, Rhode Island Department of Health. *Non-Hispanic. **Defined as at least 60 minutes per day. ***Non-school related. Hispanic can be of any race. For gender and overall results, see the *2016 Factbook.*

Obesity in Young Children in Rhode Island

Children Enrolled in Head Start

◆ Head Start is a federally-funded comprehensive early childhood program for low-income preschool children and their families.[34] In Rhode Island during the 2015-2016 school year, 2,695 children aged three to five were enrolled in a Head Start program. Of those enrolled, 19% were obese, and 26% were overweight.[35] Comparable national data show that 16% of children enrolled in Head Start were obese and 13% were overweight during that time.[36]

Children Participating in WIC

◆ The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is a federally funded preventive program that provides eligible participants with nutritious food, nutrition education, and access to health care and social services.[37] In Rhode Island in 2016, 12,428 children aged two to four were enrolled in WIC, 18% of whom were obese and 15% were overweight.[38]

◆ Since 2011, there has been a 21% decline in the number of Rhode Island children ages two to four participating in WIC who are obese. This decline is partially attributed to new federally-mandated food standards as well as availability and use of nutrition education and assessments.[39,40]

◆ WIC also tracks the number of children under age five who are at risk for being obese, which is defined as having a biological parent who is obese (i.e., have a BMI over 30). In 2016, 24% of infants (1,674) and 19% of children aged one to four (3,723) enrolled in WIC in Rhode Island were deemed at risk for being obese.[41]

References

[1] Centers for Disease Control and Prevention. (2015). *About child and teen BMI.* Retrieved February 27, 2017, from www.cdc.gov

[2,10] *Overweight children and youth.* (2014). Washington, DC: Child Trends.

[3,11] Centers for Disease Control and Prevention. (2016). *Childhood obesity causes and consequences.* Retrieved February 27, 2017, from www.cdc.gov

[4,17] *Accelerating progress in obesity prevention: Solving the weight of the nation.* (2012). Washington, DC: Institute of Medicine of the National Academies.

[5] Halfon, N., Larson, K., & Slusser, W. (2013). Associations between obesity and comorbid mental health, developmental, and physical health conditions in a nationally representative sample of US children aged 10 to 17. *Academic Pediatrics, 13*(1), 6-13.

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