

Overweight and Obesity among Public High School Students in New York City

In the past 30 years, the number of obese youth in the United States has more than tripled. In 2008, national studies that measured height and weight estimated that one third (34%) of youth aged 12 to 19 years in the U.S. were overweight or obese. Similarly, in New York City 35% of youths were estimated to be overweight or obese during the same time period.

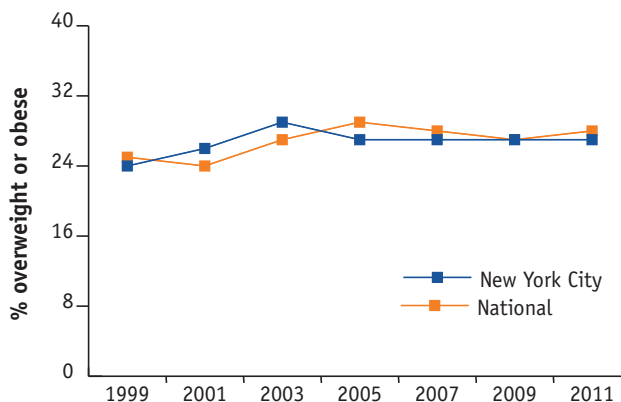
Being overweight or obese can lead to serious health problems such as diabetes, heart disease and cancer. Additionally, overweight or obese youths are more likely to become overweight or obese adults.

To better understand overweight and obesity among youths, this report examines the relationship between weight and health behaviors using self-reported data from the 2009 and 2011 New York City Youth Risk Behavior Surveys (YRBS). It also describes weight status, physical activity, self-perception of weight, weight control efforts and nutrition behaviors among New York City public high school students. Recommendations for supporting healthy eating and physical activity among youth can be found on page four.

More than one in four high school students are overweight or obese

- Overweight and obesity rates among high school students in New York City and in the U.S. have not changed significantly over the past several years, as measured by self-reported data.
- In 1999, 24% of high school students in New York City were overweight or obese, compared with 25% in the U.S.
- In 2011, the percentage of high school students who were overweight or obese remained high (27% NYC, 28% U.S.).

Percent of overweight/obese high school students in NYC and U.S., 1999-2011



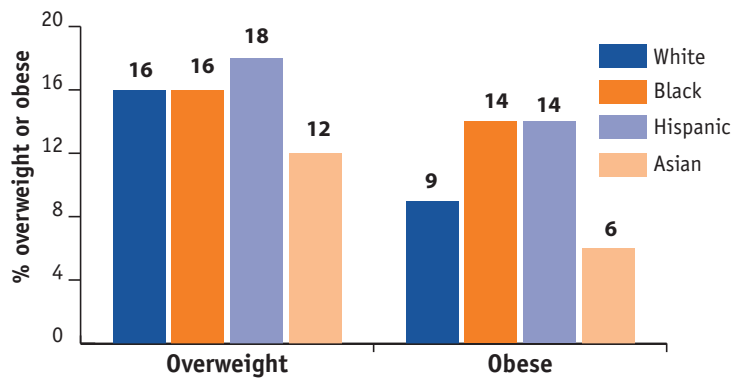
Sources: 1999-2011 NYC Youth Risk Behavior Survey; 1999-2011 National Youth Risk Behavior Survey

Data presented in this report are based on results from the 2009 and 2011 New York City Youth Risk Behavior Survey (NYC YRBS), a self-administered, anonymous questionnaire adapted for New York City from a protocol developed by the Centers for Disease Control and Prevention. The survey has been conducted every other year since 1997 by the NYC Department of Health and Mental Hygiene and the NYC Department of Education. For full survey details, see <http://home2.nyc.gov/html/doh/html/epi/srv/epi/srv-youthriskbehavior.shtml>. Additional data from the national Youth Risk Behavior Survey are presented. For full survey details, see <http://www.cdc.gov/healthyyouth/yrbs/index.htm>. Measured estimates of overweight and obese youth are from the National Health and Nutrition Examination Survey (NHANES) (<http://www.cdc.gov/nchs/nhanes.htm>) and from NYC FITNESSGRAM (<http://schools.nyc.gov/wellness>). Self-reported height and weight data tend to underestimate overweight and obesity rates compared with measured sources. Additional data on school-wide eligibility for free and reduced-cost lunch, used as a proxy for general poverty status, are from the NYC Department of Education (nyc.gov/doi).

Black and Hispanic students are more likely to be obese

- White, black and Hispanic students are more likely than Asians to be overweight (16%, 16%, 18% vs. 12%).
- Black and Hispanic students are more likely than whites and Asians to be obese (14% vs. 9% and 6%).
- Black boys and black girls have similar obesity rates (16% vs. 13%), whereas white and Hispanic boys are more likely to be obese than girls of the same race/ethnicity (white: 13% vs. 4%, Hispanic: 18% vs. 11%).

Overweight and obesity among NYC public high school students, by race/ethnicity

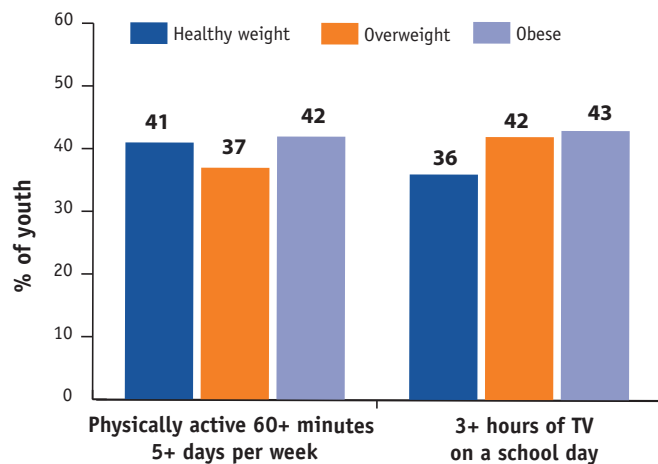


Source: 2011 NYC Youth Risk Behavior Survey

Overweight students exercise less and watch more TV than other students

- Overweight students are less likely than students at a healthy weight and obese students to be physically active 60 or more minutes per day, at least five days a week (37% vs. 41% and 42%).
- Among all students, whites are more likely to be physically active 60 or more minutes per day, at least five days a week, compared with Hispanics and Asians (44% vs. 37% and 35%). There was no difference between blacks and whites (40% and 44%).
- Both overweight and obese students are more likely than students at a healthy weight to watch television for three or more hours on an average school day (42% and 43% vs. 36%).
- Among all students, blacks and Hispanics are more likely to watch TV for three or more hours a day (50% and 43%) than whites and Asians (26% and 19%).

Physical and sedentary activity among NYC public high school students, by weight status



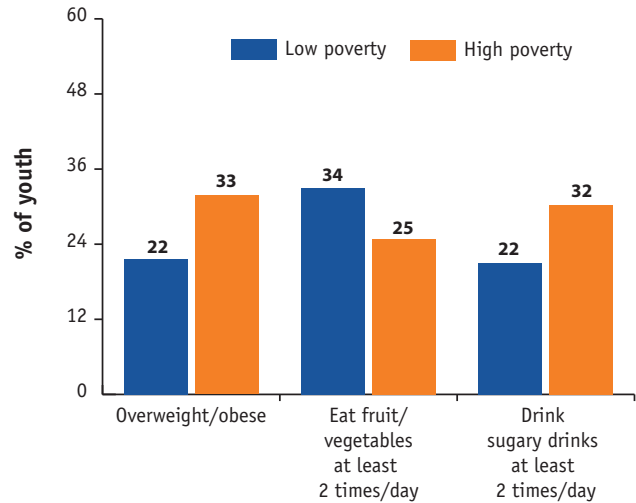
Source: 2011 NYC Youth Risk Behavior Survey

Overweight and obesity in children and adolescents are defined by Body Mass Index (BMI), which is calculated using height, weight, gender and age. BMI provides a measure of body fatness and is gender- and age-specific for those under 20 years old (BMI-for-age). Survey respondents were classified according to BMI-for-age using the Centers for Disease Control and Prevention standardized groups for overweight (BMI-for-age 85th percentile or higher but less than 95th percentile), and obese (BMI-for-age 95th percentile or higher). The standardized groups were developed from data collected in the 1960s and 70s in nationally representative health examination surveys, at which time 15% of measured children had BMI-for-age in the overweight/obese range (85th percentile or higher). In 2012, more than 15% are classified in the overweight/obese range. Students classified as underweight (3.8%) were excluded from analyses presented on pages two and three of this report.

Overweight or obesity varies by school poverty

- Students attending high poverty schools are more likely to be overweight or obese than those attending low poverty schools (33% vs. 22%).
- Only one in four students (25%) attending high poverty schools eats fruits or vegetables at least twice a day, compared with a third of students (34%) at low poverty schools.
- Nearly one in three students (32%) attending high poverty schools drinks at least two sugary drinks a day, compared with one in five students (22%) attending low poverty schools.

Overweight/obesity, nutrition in NYC public high schools with low and high poverty



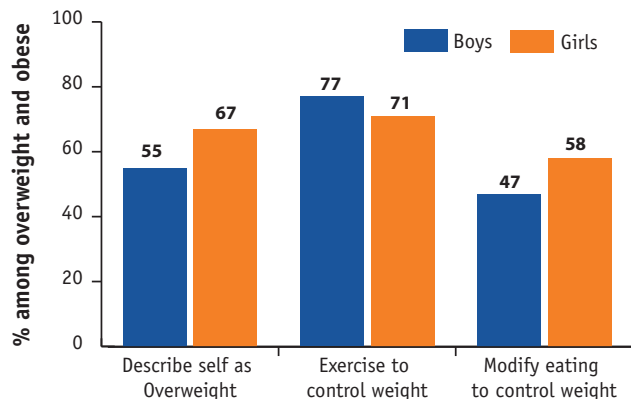
School poverty is based on percent of students eligible for free or reduced-cost lunch (low poverty: 0-50% are eligible; high poverty; >80% are eligible).

Sugary drinks include non-diet soda, sports drinks, fruit punch or other fruit-flavored drinks, and chocolate or other flavored milk.

Source: 2009 NYC Youth Risk Behavior Survey, NYC Department of Education school lunch data

Students who are overweight or obese underestimate their weight

Perception of weight and weight control efforts among overweight/obese NYC public high school students, by sex



Sources: 2009 NYC Youth Risk Behavior Survey

- Only 61% of overweight or obese students describe themselves as slightly or very overweight.
- Overweight or obese girls are more likely than overweight or obese boys to describe themselves as overweight (67% vs. 55%).
- Among overweight or obese students, whites and Asians are more likely than blacks and Hispanics to describe themselves as overweight (78% and 81% vs. 48% and 66%).
- Overweight or obese boys are more likely than girls to report exercising to control their weight (77% vs. 71%), while girls are more likely than boys to report modifying their eating habits to control their weight (58% vs. 47%).

Recommendations

Schools should create a supportive environment for achieving a healthy weight.

- Promote healthy-food or non-food fundraisers.
- Provide all students with opportunities for physical activity during, before and after school.
- Use NYC FITNESSGRAM reports to talk with students, parents and guardians about health-related fitness and ways to maintain or improve health.
- Encourage students and parents to reduce consumption of sugary drinks and snack foods; limit TV, video and internet time; and increase physical activity by walking, bicycling and using stairs.

Parents and guardians should encourage physical activity and good nutrition.

- Review your child's NYC FITNESSGRAM to see if he or she is at a healthy weight and is physically fit.
- Take a copy of your child's NYC FITNESSGRAM report to his or her doctor at your next visit.
- Encourage at least one hour of physical activity every day.
- Limit TV, video game and internet time to no more than two hours a day. Turn off the TV during meals.
- Offer fruits, vegetables and water at all meals. Serve low-fat, non-flavored milk, limit juice drinks and restrict sugary drinks and unhealthy snacks.

Health care providers should play an active role in obesity prevention.

- Assess child's weight status at least once a year. For additional information, go to: <http://home2.nyc.gov/html/doh/downloads/pdf/chi/chi28-5.pdf>
- Ask parents for a copy of their child's NYC FITNESSGRAM report.
- Discuss weight, physical activity and nutrition with all patients and their families.
- Refer obese children to nutrition and physical activity programs and monitor weight.

For more information:

NYC Department of Education School Wellness Programs: <http://schools.nyc.gov/Academics/FitnessandHealth/default.htm>.

NYC Youth Risk Behavior Survey results on EpiQuery: <https://a816-healthpsi.nyc.gov/epiquery/EpiQuery/>

Centers for Disease Control Prevention Info and resources about childhood obesity: <http://www.cdc.gov/healthyyouth/obesity/>

NYC Vital Signs

New York City Department of Health and Mental Hygiene

A data report from the New York City Health Department



October 2012

Volume 11, No. 2

Gotham Center, 42-09 28th Street, CN-6, Queens, NY 11101-4132

Michael R. Bloomberg, Mayor

Thomas A. Farley, MD, MPH, Commissioner of Health and Mental Hygiene

Division of Epidemiology

Carolyn Greene, MD
Deputy Commissioner

Bonnie Kerker, PhD, MPH
Senior Epidemiology and Policy Advisor

Bureau of Epidemiology Services

Tiffany G. Harris, PhD, MS
Assistant Commissioner

Donna Eisenhower, PhD
Leena Gupta, MPH
Kinjia Hinterland, MPH
Christa Myers, MPH

Division of Health Promotion and Disease Prevention

Andrew Goodman, MD, MPH
Deputy Commissioner

Bureau of Chronic Disease Prevention and Tobacco Control

Susan Kansagra, MD, MBA
Assistant Commissioner
Cathy Nonas, MS, RD

Office of School Health

Roger Platt, MD
Assistant Commissioner

Bureau of Communications

Leslie Laurence, MS
Senior Editor

New York City Department of Education

Dennis M. Walcott, Chancellor
Kathleen Grimm, Deputy Chancellor

Office of School Wellness Programs

Lindsey A. Harr
Executive Director