

## Prevalence of Overweight and Obesity Among Children and Adolescents Aged 2–19 Years: United States, 1963–1965 Through 2013–2014

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Results from the 2013–2014 National Health and Nutrition Examination Survey (NHANES), using measured heights and weights, indicate that an estimated 17.2% of U.S. children and adolescents aged 2–19 years are obese and another 16.2% are overweight.

Body mass index (BMI), expressed as weight in kilograms divided by height in meters squared ( $\text{kg}/\text{m}^2$ ), is commonly used to classify obesity among adults and is also recommended for use with children and adolescents. Cutoff criteria are based on the sex-specific BMI-for-age 2000 CDC Growth Charts for the United States (available from: [http://www.cdc.gov/growthcharts/cdc\\_charts.htm](http://www.cdc.gov/growthcharts/cdc_charts.htm)). Based on current recommendations from expert committees, children and adolescents with BMI values at or above the 95th percentile of the growth charts are categorized as obese. This differs from previous years in which children and adolescents above this cutoff were labeled overweight. This change in terminology reflects the labels used by organizations such as the Institute of Medicine and the American Academy of Pediatrics. For more information, see “Changes in Terminology for Childhood Overweight and Obesity,” available from: <http://www.cdc.gov/nchs/data/nhsr/nhsr025.pdf>.

[Table 1](#) shows the prevalence of overweight and obesity among youth aged 2–19 years from 1971–1974 through 2013–2014. The estimates for all children are shown by age in the [figure](#).

Estimates of the prevalence of childhood obesity during the 1960s are available for certain age groups. [Table 2](#) shows the prevalence of obesity among youth aged 2–5, 6–11, and 12–19 years since 1963–1965, by sex and age. The [figure](#) shows trends in obesity by age.

[Table 3](#) shows the prevalence of obesity by race and Hispanic origin among youth aged 2–19 since 1988–1994.

Although BMI is widely used as a measure of body fat, at a given BMI level, body fat may vary by sex, age, and race and Hispanic origin. For example, some research suggests that Asian persons may have more body fat than white persons, especially at lower BMIs, and that health risks may begin at a lower BMI among Asian persons compared with others.

NHANES, conducted by the National Center for Health Statistics, is a stratified, multistage probability sample of the civilian noninstitutionalized population of the United States. A household interview and a

physical examination are conducted for each survey participant. During the physical examination, conducted in a mobile examination center, height and weight are measured as part of a more comprehensive set of body measurements. These measurements are taken by trained health technicians, using standardized measuring procedures and equipment. Observations for persons missing a valid height or weight measurement and for pregnant females were not included in the data analysis.

For additional information on NHANES methods, visit:

[http://www.cdc.gov/nchs/nhanes/survey\\_methods.htm](http://www.cdc.gov/nchs/nhanes/survey_methods.htm).

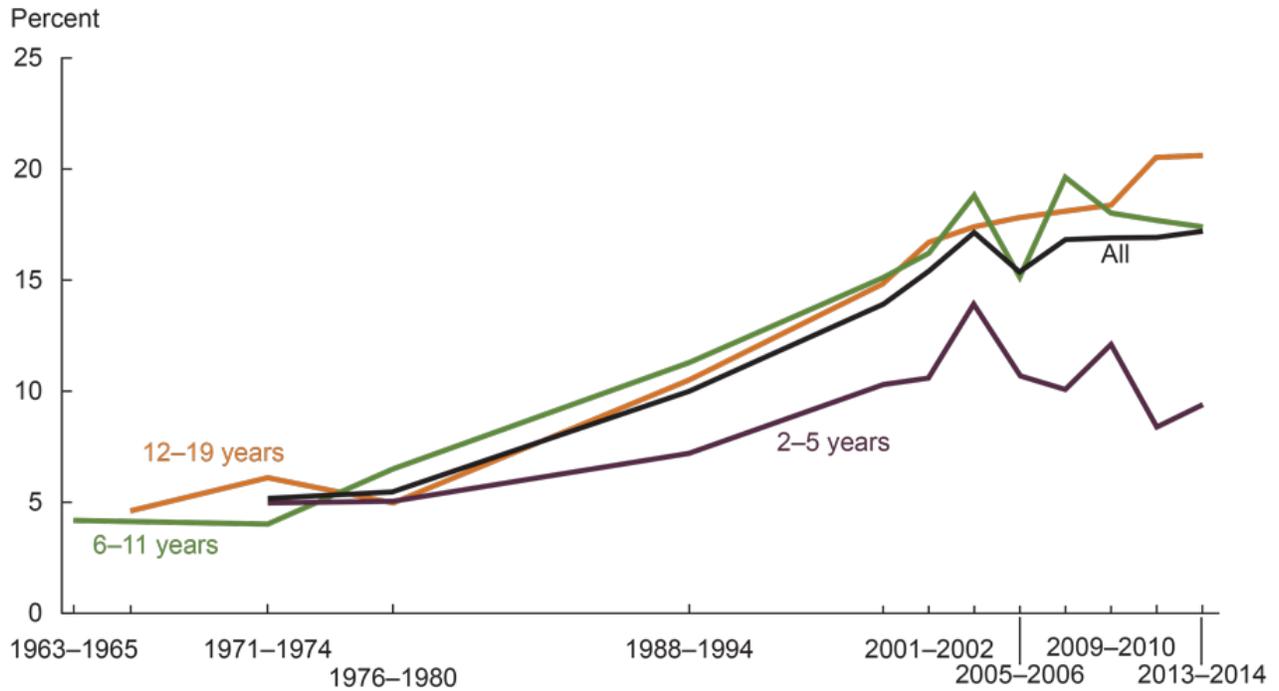
### For more detailed estimates, see:

- Ogden CL, Flegal KM, Carroll MD, Johnson CL. Prevalence and trends in overweight among US children and adolescents, 1999–2000. *JAMA* 288(14):1728–32. 2002.
- Ogden CL, Carroll MD, Curtin LR, McDowell MA, Tabak CJ, Flegal KM. Prevalence of overweight and obesity in the United States, 1999–2004. *JAMA* 295(13):1549–55. 2006.
- Ogden CL, Carroll MD, Flegal KM. High body mass index for age among US children and adolescents, 2003–2006. *JAMA* 299(20):2401–5.
- Ogden CL, Carroll MD, Curtin LR, Lamb MM, Flegal KM. Prevalence of high body mass index in US children and adolescents, 2007–2008. *JAMA* 303(3):242–9. 2010.
- Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of obesity and trends in body mass index among US children and adolescents, 1999–2010. *JAMA* 307(5):483–90. 2012.
- Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of childhood and adult obesity in the United States, 2011–2012. *JAMA* 311(8):806–14. 2014.
- Ogden CL, Carroll MD, Lawman HG, Fryar CD, Kruszon-Moran D, Kit BK, Flegal KM. Trends in obesity prevalence among children and adolescents in the United States, 1988–1994 through 2013–2014. *JAMA* 315(21):2292–9. 2016

### This *Health E-Stat* supersedes the earlier version below:

- Prevalence of Overweight and Obesity Among Children and Adolescents: United States, 1963–1965 Through 2011–2012. Available from:  
[http://www.cdc.gov/nchs/data/hestat/obesity\\_child\\_11\\_12/obesity\\_child\\_11\\_12.htm](http://www.cdc.gov/nchs/data/hestat/obesity_child_11_12/obesity_child_11_12.htm).

**Figure. Trends in obesity among children and adolescents aged 2–19 years, by age: United States, 1963–1965 through 2013–2014**



NOTES: Obesity is defined as body mass index (BMI) greater than or equal to the 95th percentile from the sex-specific BMI-for-age 2000 CDC Growth Charts.  
 SOURCES: NCHS, National Health Examination Surveys II (ages 6–11) and III (ages 12–17); and National Health and Nutrition Examination Surveys (NHANES) I–III, and NHANES 1999–2000, 2001–2002, 2003–2004, 2005–2006, 2007–2008, 2009–2010, 2011–2012, and 2013–2014.

**Table 1. Prevalence of overweight and obesity among children and adolescents aged 2–19 years, by sex: United States, 1971–1974 through 2013–2014**

Survey period	Sample (n)	All <sup>1</sup>		Boys		Girls <sup>1</sup>		
		Overweight	Obesity	Overweight	Obesity	Overweight	Obesity	
		Percent (standard error)						
1971–1974	7,041	10.2 (0.6)	5.2 (0.3)	10.3 (0.8)	5.3 (0.5)	10.1 (0.8)	5.1 (0.4)	
1976–1980	7,351	9.2 (0.4)	5.5 (0.4)	9.4 (0.6)	5.4 (0.4)	9.0 (0.5)	5.6 (0.6)	
1988–1994	10,777	13.0 (0.7)	10.0 (0.5)	12.6 (0.9)	10.2 (0.7)	13.4 (0.9)	9.8 (0.8)	
1999–2000	4,039	14.2 (0.9)	13.9 (0.9)	15.0 (1.9)	14.0 (1.2)	13.4 (0.8)	13.8 (1.1)	
2001–2002	4,261	14.6 (0.6)	15.4 (0.9)	14.2 (0.7)	16.4 (1.0)	15.0 (0.9)	14.3 (1.3)	
2003–2004	3,961	16.5 (0.8)	17.1 (1.3)	16.6 (1.0)	18.2 (1.5)	16.3 (0.9)	16.0 (1.4)	
2005–2006	4,207	14.6 (0.9)	15.4 (1.4)	14.7 (1.2)	15.9 (1.5)	14.6 (1.0)	14.9 (1.6)	
2007–2008	3,249	14.8 (0.7)	16.8 (1.3)	14.3 (0.7)	17.7 (1.4)	15.4 (1.5)	15.9 (1.5)	
2009–2010	3,408	14.9 (0.8)	16.9 (0.7)	14.4 (1.0)	18.6 (1.1)	15.4 (0.9)	15.0 (0.8)	
2011–2012	3,355	14.9 (0.9)	16.9 (1.0)	15.4 (1.3)	16.7 (1.4)	14.5 (1.4)	17.2 (1.2)	
2013–2014	3,523	16.2 (0.6)	17.2 (1.1)	16.4 (0.8)	17.2 (1.3)	16.0 (1.0)	17.1 (1.6)	

<sup>1</sup>Excludes pregnant females.

NOTES: Overweight is body mass index (BMI) greater than or equal to the 85th percentile and less than the 95th percentile from the sex-specific BMI-for-age 2000 CDC Growth Charts. Obesity is BMI greater than or equal to the 95th percentile.

SOURCE: NCHS, National Health and Nutrition Examination Survey.

**Table 2. Prevalence of obesity among children and adolescents aged 2–19 years, by sex and age: United States, 1963–1965 through 2013–2014**

Survey period	All <sup>1</sup>			Boys			Girls <sup>1</sup>											
	2–5 years	6–11 years	12–19 years	2–5 years	6–11 years	12–19 years	2–5 years	6–11 years	12–19 years									
	Percent (standard error)																	
1963–1965	---	---	4.2 (0.4)	---	---	---	---	---	4.0 (0.4)	---	---	---	---	---	4.5 (0.6)	---	---	
1966–1970 <sup>2</sup>	---	---	---	4.6 (0.3)	---	---	---	---	---	4.5 (0.4)	---	---	---	---	---	---	4.7 (0.3)	
1971–1974	5.0 (0.6)	4.0 (0.5)	6.1 (0.6)	5.0 (0.8)	4.3 (0.8)	6.1 (0.8)	4.9 (0.8)	3.6 (0.6)	6.2 (0.8)									
1976–1980	5.0 (0.6)	6.5 (0.6)	5.0 (0.5)	4.7 (0.6)	6.6 (0.8)	4.8 (0.5)	5.3 (1.0)	6.4 (1.0)	5.3 (0.8)									
1988–1994	7.2 (0.7)	11.3 (1.0)	10.5 (0.9)	6.2 (0.8)	11.6 (1.3)	11.3 (1.3)	8.2 (1.0)	11.0 (1.4)	9.7 (1.1)									
1999–2000	10.3 (1.7)	15.1 (1.4)	14.8 (0.9)	9.5 (2.3)	15.8 (1.8)	14.8 (1.3)	11.2 (2.5)	14.3 (2.1)	14.8 (1.0)									
2001–2002	10.6 (1.8)	16.2 (1.6)	16.7 (1.1)	10.7 (2.4)	17.5 (1.9)	17.6 (1.3)	10.5 (1.8)	14.8 (2.3)	15.7 (1.9)									
2003–2004	13.9 (1.6)	18.8 (1.3)	17.4 (1.7)	15.1 (1.7)	19.9 (2.0)	18.2 (1.9)	12.7 (2.5)	17.6 (1.3)	16.4 (2.3)									
2005–2006	10.7 (1.1)	15.1 (2.1)	17.8 (1.8)	10.4 (1.7)	16.2 (2.5)	18.2 (2.4)	11.0 (1.2)	14.1 (2.4)	17.3 (2.1)									
2007–2008	10.1 (1.2)	19.6 (1.2)	18.1 (1.7)	9.3 (1.5)	21.2 (1.6)	19.3 (2.2)	10.9 (2.1)	18.0 (2.1)	16.8 (2.0)									
2009–2010	12.1 (1.2)	18.0 (0.8)	18.4 (1.3)	14.4 (1.8)	20.1 (1.0)	19.6 (2.3)	9.6 (1.7)	15.7 (1.0)	17.1 (1.3)									
2011–2012	8.4 (1.3)	17.7 (1.6)	20.5 (1.7)	9.5 (1.9)	16.4 (1.8)	20.3 (2.4)	7.2 (2.1)	19.1 (1.7)	20.7 (2.0)									
2013–2014	9.4 (1.3)	17.4 (1.7)	20.6 (2.1)	8.8 (2.0)	18.8 (2.4)	19.8 (2.2)	10.0 (1.3)	15.9 (1.9)	21.4 (3.2)									

--- Data not available. National Health and Nutrition Examination Surveys 1963–1965 and 1966–1970 did not include children aged 2–5.

<sup>1</sup>Excludes pregnant females starting with 1971–1974. Pregnancy status not available for 1963–1965 and 1966–1970.

<sup>2</sup>Data for 1966–1970 are for adolescents aged 12–17, not 12–19.

NOTE: Obesity is body mass index (BMI) greater than or equal to the 95th percentile from the sex-specific BMI-for-age 2000 CDC Growth Charts.

SOURCE: NCHS, National Health and Nutrition Examination Survey.

**Table 3. Prevalence of obesity among children and adolescents aged 2–19 years, by sex and race and ethnicity: United States, 1988–1994 through 2013–2014**

Survey period	Boys								Girls <sup>1</sup>											
	Non-Hispanic white		Non-Hispanic black		Non-Hispanic Asian		Hispanic		Mexican American		Non-Hispanic white		Non-Hispanic black		Non-Hispanic Asian		Hispanic		Mexican American	
	Percent (standard error)																			
1988–1994	9.7	(1.1)	10.6	(0.8)	---	---	---	---	14.8	(1.4)	8.6	(1.1)	14.5	(1.1)	---	---	---	---	13.8	(1.9)
1999–2000	10.9	(1.5)	16.4	(1.2)	---	---	---	---	23.5	(1.5)	11.1	(1.8)	21.4	(1.4)	---	---	---	---	16.8	(1.9)
2001–2002	15.0	(1.5)	15.5	(1.3)	---	---	---	---	22.0	(1.3)	12.7	(1.9)	19.5	(1.3)	---	---	---	---	17.0	(1.9)
2003–2004	17.8	(2.2)	16.4	(1.5)	---	---	---	---	22.0	(1.6)	14.9	(1.9)	23.8	(1.4)	---	---	---	---	16.1	(2.3)
2005–2006	13.4	(1.9)	18.3	(1.3)	---	---	---	---	24.3	(2.7)	12.2	(2.2)	24.4	(2.2)	---	---	---	---	20.6	(1.6)
2007–2008	15.6	(1.9)	17.3	(2.2)	---	---	24.5	(1.7)	24.9	(2.3)	14.9	(2.5)	22.8	(2.4)	---	---	17.3	(1.7)	16.6	(2.5)
2009–2010	16.1	(1.8)	24.3	(2.8)	---	---	23.4	(1.4)	24.0	(1.7)	11.7	(1.1)	24.3	(2.6)	---	---	18.9	(1.8)	18.2	(2.5)
2011–2012	12.6	(2.4)	19.9	(1.1)	11.5	(2.1)	24.1	(1.4)	24.2	(1.5)	15.6	(2.1)	20.5	(3.1)	*5.6	(2.4)	20.6	(1.5)	21.1	(1.7)
2013–2014	15.9	(2.0)	16.8	(1.9)	12.1	(3.0)	20.6	(2.0)	19.5	(2.1)	14.6	(2.8)	20.9	(1.6)	5.0	(1.0)	22.1	(2.1)	24.2	(2.8)

--- Data not available.

\* Estimate has a relative standard error of 43% and should be used with caution because it does not meet standards of reliability or precision.

<sup>1</sup>Excludes pregnant females.

NOTE: Obesity is body mass index (BMI) greater than or equal to the 95th percentile from the sex-specific BMI-for-age 2000 CDC Growth Charts.

SOURCE: NCHS, National Health and Nutrition Examination Survey.