

Prevalence of Overweight, Obesity, and Extreme Obesity Among Adults Aged 20 and Over: United States, 1960–1962 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 32.7% of U.S. adults aged 20 and over are overweight, 37.9% are obese, and 7.7% are extremely obese. Body mass index (BMI), expressed as weight in kilograms divided by height in meters squared (kg/m^2), is commonly used to classify overweight (BMI 25.0–29.9), obesity (BMI greater than or equal to 30.0), and extreme obesity (BMI greater than or equal to 40.0).

Age-adjusted trends in overweight, obesity, and extreme obesity prevalence from 1960–1962 through 2013–2014 are shown in [Table 1](#). Because surveys before 1988 did not include persons over age 74, [Table 1](#) shows the prevalence for adults aged 20 and over since 1988 and adults aged 20–74 for all survey periods dating back to 1960. The age-adjusted sex-specific trends of overweight, obesity, and extreme obesity among adults aged 20–74 from 1960–1962 through 2013–2014 are shown in the [figure](#). [Table 2](#) contains the prevalence of obesity by age for men and women since 1988–1994, and [Table 3](#) contains the age-adjusted prevalence of obesity by race and Hispanic origin for men and women since 1988–1994.

The prevalence of obesity as measured by BMI among non-Hispanic Asian adults was much lower than that reported for non-Hispanic white, non-Hispanic black, and Hispanic adults. 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. In particular, 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. The survey began oversampling non-Hispanic Asian persons in 2011–2012 and the total Hispanic population in 2007–2008. Beginning in 2007–2008, Mexican-American persons were no longer oversampled but are included in the oversampled total Hispanic population.

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 comprehensive set of body measurements. These measurements are taken by trained health technicians, using standardized measuring procedures and equipment. Observations for pregnant women and for persons missing a valid height or weight measurement were not included in the data analysis.

For additional information on NHANES methods, visit:

http://www.cdc.gov/nchs/nhanes/survey_methods.htm.

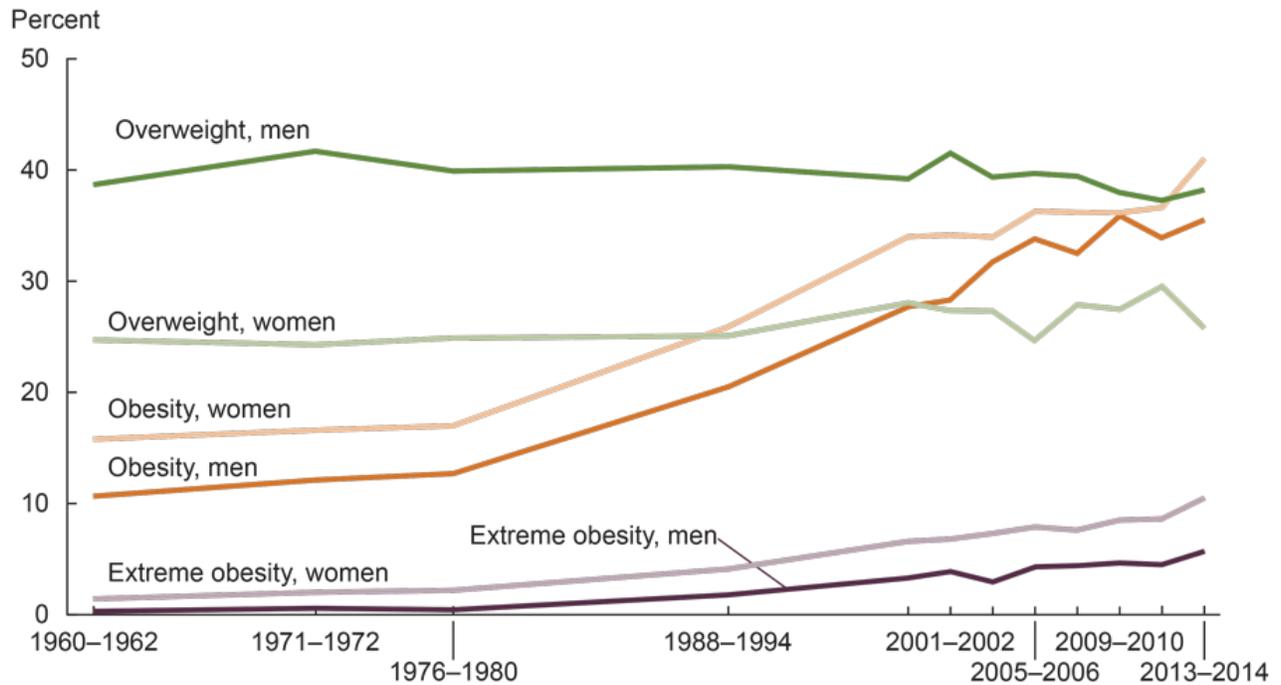
For more detailed estimates, see:

- Flegal KM, Carroll MD, Ogden CL, Johnson CL. Prevalence and trends in obesity among US adults, 1999–2000. *JAMA* 288(14):1723–7. 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, McDowell MA, Flegal KM. Obesity among adults in the United States—No statistically significant change since 2003–2004. NCHS data brief, no 1. Hyattsville, MD: National Center for Health Statistics. 2007. Available from: <http://www.cdc.gov/nchs/data/databriefs/db01.pdf>.
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- Flegal KM, Carroll MD, Kit BK, Ogden CL. Prevalence of obesity and trends in the distribution of body mass index among US adults, 1999–2010. *JAMA* 307(5):491–7. 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.
- Flegal KM, Kruszon-Moran D, Carroll MD, Fryar CD, Ogden CL. Trends in obesity among adults in the United States, 2005 to 2014. *JAMA* 315(21):2284–91. 2016

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

- Prevalence of Overweight, Obesity, and Extreme Obesity Among Adults: United States, Trends 1960–1962 Through 2011–2012. Available from: http://www.cdc.gov/nchs/data/hestat/obesity_adult_11_12/obesity_adult_11_12.htm.

Figure. Trends in adult overweight, obesity, and extreme obesity among men and women aged 20–74: United States, 1960–1962 through 2013–2014



NOTES: Age-adjusted by the direct method to the year 2000 U.S. Census Bureau estimates using age groups 20–39, 40–59, and 60–74. Overweight is body mass index (BMI) of 25 kg/m² or greater but less than 30 kg/m²; obesity is BMI greater than or equal to 30; and extreme obesity is BMI greater than or equal to 40. Pregnant females were excluded from the analysis.
 SOURCES: NCHS, National Health Examination Survey and National Health and Nutrition Examination Surveys.

Table 1. Age-adjusted prevalence of overweight, obesity, and extreme obesity among adults, by sex: United States, 1960–1962 through 2013–2014

Age group	Survey period	Sample (n)	Total population			Men			Women			
			Overweight	Obesity	Extreme obesity	Overweight	Obesity	Extreme obesity	Overweight	Obesity	Extreme obesity	
Percent (standard error)												
20 and over ¹	1988–1994	16,235	33.1 (0.6)	22.9 (0.7)	2.8 (0.2)	40.7 (0.8)	20.2 (0.7)	1.7 (0.3)	25.9 (0.7)	25.4 (0.9)	3.9 (0.3)	
	1999–2000	4,117	34.0 (1.0)	30.5 (1.5)	4.7 (0.6)	39.7 (1.4)	27.5 (1.5)	3.1 (0.7)	28.6 (1.6)	33.4 (1.7)	6.2 (0.7)	
	2001–2002	4,413	35.1 (1.1)	30.5 (1.1)	5.1 (0.5)	42.2 (1.3)	27.7 (1.0)	3.6 (0.6)	28.2 (1.7)	33.2 (1.5)	6.5 (0.6)	
	2003–2004	4,431	34.1 (1.1)	32.2 (1.2)	4.8 (0.6)	39.7 (1.5)	31.1 (1.3)	2.8 (0.4)	28.6 (1.2)	33.2 (1.7)	6.9 (0.9)	
	2005–2006	4,356	32.6 (0.8)	34.3 (1.4)	5.9 (0.5)	39.9 (1.3)	33.3 (2.0)	4.2 (0.5)	25.5 (1.2)	35.3 (1.4)	7.4 (0.7)	
	2007–2008	5,550	34.3 (0.8)	33.7 (1.1)	5.7 (0.4)	40.1 (1.4)	32.2 (1.4)	4.2 (0.5)	28.6 (1.2)	35.4 (1.1)	7.3 (0.6)	
	2009–2010	5,926	33.0 (1.0)	35.7 (0.9)	6.3 (0.2)	38.4 (1.1)	35.5 (1.7)	4.4 (0.3)	27.9 (1.4)	35.8 (0.9)	8.1 (0.5)	
	2011–2012	5,181	33.6 (1.3)	34.9 (1.4)	6.4 (0.6)	37.8 (1.5)	33.5 (1.4)	4.4 (0.9)	29.7 (1.8)	36.1 (1.7)	8.3 (0.7)	
2013–2014	5,455	32.5 (0.8)	37.7 (0.9)	7.7 (0.7)	38.7 (1.2)	35.0 (1.1)	5.5 (0.6)	26.5 (0.8)	40.4 (1.3)	9.9 (0.9)		
20–74 ²	1960–1962	6,126	31.5 (0.5)	13.4 (0.5)	0.9 (0.1)	38.7 (0.7)	10.7 (0.7)	*0.3 (0.1)	24.7 (0.8)	15.8 (0.6)	1.4 (0.2)	
	1971–1974	12,911	32.7 (0.6)	14.5 (0.4)	1.3 (0.2)	41.7 (1.1)	12.1 (0.6)	0.6 (0.2)	24.3 (0.7)	16.6 (0.6)	2.0 (0.3)	
	1976–1980	11,765	32.1 (0.6)	15.0 (0.4)	1.4 (0.1)	39.9 (0.8)	12.7 (0.6)	0.4 (0.1)	24.9 (0.8)	17.0 (0.6)	2.2 (0.3)	
	1988–1994	14,319	32.6 (0.6)	23.2 (0.7)	3.0 (0.3)	40.3 (0.8)	20.5 (0.7)	1.8 (0.3)	25.1 (0.8)	25.9 (1.0)	4.1 (0.3)	
	1999–2000	3,603	33.6 (1.1)	30.9 (1.6)	5.0 (0.6)	39.2 (1.5)	27.7 (1.6)	3.3 (0.7)	28.0 (1.7)	34.0 (1.8)	6.6 (0.8)	
	2001–2002	3,916	34.4 (1.1)	31.2 (1.1)	5.4 (0.5)	41.5 (1.4)	28.3 (1.1)	3.9 (0.7)	27.3 (1.6)	34.1 (1.6)	6.8 (0.6)	
	2003–2004	3,756	33.4 (1.2)	32.9 (1.3)	5.1 (0.6)	39.4 (1.5)	31.7 (1.4)	3.0 (0.4)	27.3 (1.3)	34.0 (1.9)	7.3 (1.0)	
	2005–2006	3,835	32.2 (0.9)	35.1 (1.5)	6.2 (0.5)	39.7 (1.3)	33.8 (2.2)	4.3 (0.5)	24.7 (1.3)	36.3 (1.5)	7.9 (0.8)	
	2007–2008	4,876	33.6 (0.8)	34.3 (1.2)	6.0 (0.4)	39.4 (1.4)	32.5 (1.5)	4.4 (0.5)	27.9 (1.2)	36.2 (1.3)	7.6 (0.6)	
	2009–2010	5,279	32.7 (1.0)	36.1 (0.9)	6.6 (0.2)	38.0 (1.2)	35.9 (1.7)	4.6 (0.4)	27.5 (1.5)	36.1 (0.9)	8.5 (0.5)	
	2011–2012	4,674	33.3 (1.4)	35.3 (1.4)	6.6 (0.6)	37.3 (1.5)	33.9 (1.5)	4.5 (1.0)	29.5 (2.0)	36.6 (1.6)	8.6 (0.7)	
	2013–2014	4,940	31.9 (0.8)	38.2 (1.0)	8.1 (0.8)	38.2 (1.3)	35.5 (1.2)	5.7 (0.7)	25.8 (0.9)	41.0 (1.4)	10.5 (1.0)	

* Estimate has a relative standard error greater than 30% but less than 40% and should be used with caution because it does not meet standards of reliability or precision.

¹Age-adjusted by the direct method to the year 2000 U.S. Census Bureau estimates using the age groups 20–39, 40–59, and 60 and over. Crude estimates (not age-adjusted) for 2013–2014 are 32.7% for overweight, 37.9% for obesity, and 7.7% for extreme obesity categories.

²Age-adjusted by the direct method to the year 2000 U.S. Census Bureau estimates using the age groups 20–39, 40–59, and 60–74. The 1960–1962 National Health Examination Survey included adults aged 18–79, and the 1971–1974 and 1976–1980 National Health and Nutrition Examination Surveys did not include individuals over age 74.

NOTES: Overweight is body mass index (BMI) of 25 kg/m² or greater but less than 30 kg/m²; obesity is BMI greater than or equal to 30; extreme obesity is BMI greater than or equal to 40. Pregnant females were excluded from the analysis.

SOURCES: NCHS, National Health Examination Survey and National Health and Nutrition Examination Survey.

Table 2. Prevalence of obesity among adults aged 20 and over, by sex and age: United States, 1988–1994 through 2013–2014

Survey period	All adults						Men						Women					
	20–39		40–59		60 and over		20–39		40–59		60 and over		20–39		40–59		60 and over	
	Percent (standard error)																	
1988–1994	17.7	(0.7)	27.9	(1.1)	23.7	(0.9)	14.8	(0.8)	25.4	(1.2)	21.2	(1.4)	20.7	(1.3)	30.3	(1.5)	25.6	(1.1)
1999–2000	26.0	(1.3)	33.5	(3.0)	33.5	(1.7)	23.7	(1.6)	28.8	(2.9)	31.7	(2.2)	28.3	(2.0)	37.7	(3.3)	35.0	(2.2)
2001–2002	26.1	(1.4)	33.9	(1.5)	32.8	(1.6)	22.3	(1.5)	32.2	(1.7)	29.9	(2.0)	29.8	(2.1)	35.7	(2.1)	35.0	(2.0)
2003–2004	28.5	(1.5)	36.8	(1.8)	31.0	(1.3)	28.0	(2.2)	34.8	(2.5)	30.4	(1.9)	28.9	(2.3)	38.8	(2.7)	31.5	(1.7)
2005–2006	29.1	(2.0)	40.4	(2.0)	33.4	(1.1)	27.9	(2.8)	39.6	(2.9)	32.2	(2.1)	30.5	(2.3)	41.1	(2.3)	34.4	(2.3)
2007–2008	30.7	(2.0)	36.2	(1.7)	35.1	(1.0)	27.4	(1.9)	34.2	(2.3)	37.0	(2.0)	34.0	(2.5)	38.1	(2.2)	33.5	(1.7)
2009–2010	32.6	(1.7)	36.6	(1.0)	39.7	(1.5)	33.2	(2.7)	37.2	(1.8)	36.6	(2.4)	31.9	(1.6)	36.0	(1.7)	42.3	(1.9)
2011–2012	30.3	(1.9)	39.5	(1.6)	35.4	(2.0)	29.0	(2.6)	39.4	(1.6)	32.0	(2.2)	31.8	(1.7)	39.5	(2.2)	38.1	(2.9)
2013–2014	34.3	(1.5)	41.0	(2.1)	38.5	(1.6)	31.6	(2.1)	37.2	(2.4)	37.5	(3.0)	37.0	(1.3)	44.6	(2.6)	39.4	(1.9)

NOTES: Obesity is body mass index greater than or equal to 30 kg/m². Pregnant females were excluded from the analysis.

SOURCE: NCHS, National Health and Nutrition Examination Survey.

Table 3. Age-adjusted prevalence of obesity among adults aged 20 and over, by sex and race and Hispanic origin: United States, 1988–1994 through 2013–2014

Survey period	Men								Women													
	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	20.3	(0.9)	21.1	(1.0)	---	---	---	---	---	---	23.9	(1.0)	22.9	(1.1)	38.4	(1.4)	---	---	---	---	35.4	(1.4)
1999–2000	27.3	(1.8)	27.9	(1.6)	---	---	---	---	---	---	28.9	(1.9)	30.1	(2.1)	49.5	(3.0)	---	---	---	---	39.5	(3.9)
2001–2002	29.0	(1.3)	27.9	(2.0)	---	---	---	---	---	---	25.9	(2.0)	31.2	(1.6)	48.2	(2.7)	---	---	---	---	37.0	(3.2)
2003–2004	31.1	(1.5)	34.0	(3.5)	---	---	---	---	---	---	31.6	(2.5)	30.2	(2.1)	53.9	(3.0)	---	---	---	---	42.3	(2.7)
2005–2006	33.0	(2.2)	37.0	(2.4)	---	---	---	---	---	---	27.0	(1.9)	32.9	(1.8)	52.9	(2.1)	---	---	---	---	42.1	(2.8)
2007–2008	31.9	(1.9)	37.2	(2.5)	---	---	34.2	(3.0)	35.8	(3.5)	33.0	(1.8)	49.4	(2.0)	---	---	43.0	(2.6)	45.1	(3.1)		
2009–2010	36.2	(2.1)	38.8	(2.3)	---	---	37.0	(2.2)	38.6	(2.4)	32.2	(1.4)	58.5	(2.8)	---	---	41.4	(2.0)	44.9	(1.6)		
2011–2012	32.4	(1.3)	37.1	(1.9)	10.0	(1.6)	40.1	(2.1)	44.0	(2.6)	32.8	(2.7)	56.6	(2.1)	11.4	(2.2)	44.4	(2.1)	49.2	(3.4)		
2013–2014	34.7	(1.6)	38.0	(2.5)	12.6	(1.8)	37.9	(2.8)	42.2	(2.5)	38.2	(1.6)	57.2	(1.7)	12.4	(2.1)	46.9	(2.7)	50.9	(3.1)		

--- Data not available.

NOTES: Obesity is body mass index greater than or equal to 30 kg/m². Age-adjusted by the direct method to the year 2000 U.S. Census Bureau estimates using the age groups 20–39, 40–59, and 60 and over. Pregnant females were excluded from the analysis.

SOURCE: NCHS, National Health and Nutrition Examination Survey.