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Prevalence of overweight, obesity and extreme obesity among adults: United States, trends 1976-80 through 2005-2006

Results from the 2005-2006 National Health and Nutrition Examination Survey (NHANES), using measured heights and weights, indicate that an estimated 32.7 percent of U.S. adults 20 years and older are overweight, 34.3 percent are obese and 5.9 percent are extremely obese as shown in [Table 1](#).

One of the national health objectives for 2010 is to reduce the prevalence of obesity among adults to less than 15 percent. The NHANES 2005-2006 data for persons age 20 years and over suggest an increase, between the late 1980s and today, in obesity in the United States, with the estimated age-adjusted prevalence moving upward from a previous level of 23 percent in NHANES III (1988-94) to approximately 34 percent. The change between 2003-2004 and 2005-2006, however, was not statistically significant. For more information, see [Data Brief No. 1](#) [PDF - 366 KB].

NHANES used a stratified, multistage, probability sample of the civilian, U.S. non-institutionalized population. A household interview and a physical examination were conducted for each survey participant. During the physical examination, conducted in mobile examination centers, height and weight were measured as part of a more comprehensive set of body measurements. These measures were 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.

Body mass index (BMI), expressed as weight/height² (BMI; kg/m²), 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) among adults (age 20 years and over). It is possible to look at trends over a longer time period for adults age 20-74 years (NHANES I & II did not include individuals over 74 years of age). Although the prevalence of obesity has more than doubled since 1980, the prevalence of overweight has remained stable over the same time period ([Table 2](#)).

Tables

Table 1. Age-adjusted* prevalence of overweight, obesity and extreme obesity among U.S. adults among U.S. adults, age 20 years and over

	NHANES III 1988-94 n=16,679	NHANES 1999-2000 n=4,117	NHANES 2001-02 n=4,413	NHANES** 2003-04 n=4,431	NHANES** 2005-06 n=4,356
Overweight (BMI greater than or equal to 25.0 and less than 30.0)	33.1	34.0	35.1	34.1	32.7
Obese (BMI greater than or equal to 30.0)	22.9	30.5	30.6	32.2	34.3
Extremely obese (BMI greater than or equal to 40.0)	2.9	4.7	5.1	4.8	5.9

*Age-adjusted by the direct method to the year 2000 U.S. Bureau of the Census estimates using the age groups 20-39, 40-59, and 60 years and over.

**Crude estimates (not age-adjusted) for 2005-6 are 32.6% with a $25 \leq \text{BMI} < 30$, 34.7% with a $\text{BMI} \geq 30$ and 6% with a $\text{BMI} \geq 40$. Pregnant females were excluded from analyses.

Table 2. Age-adjusted* prevalence of overweight, obesity and extreme obesity among U.S. adults, age 20-74 years**

	NHES I 1960- 62 n=6,126	NHANES I 1971-74 n=12,911	NHANES II 1976-80 n=11,765	NHANES III 1988-94 n=14,468	NHANES 1999- 2000 n=3,603	NHANES 2001-02 n=3,916	NHANES 2003-04 n=3,756	NHANES 2005-06 n=3,835
Overweight (BMI greater than or equal to 25.0 and less than 30.0)	31.5	32.3	32.1	32.7	33.6	34.4	33.4	32.2
Obese (BMI greater than or equal to 30.0)	13.4	14.5	15.0	23.2	30.9	31.3	32.9	35.1
Extremely obese (BMI greater than or equal to 40.0)	0.9	1.3	1.4	3.0	5.0	5.4	5.1	6.2

*Age-adjusted by the direct method to the year 2000 U.S. Bureau of the Census estimates using the age groups 20-39, 40-59, and 60-74 years.

**NHES: National Health Examination Survey; NHES included adults 18-79 years, NHANES I & II did not include individuals over 74 years of age, thus trend estimates are based on age 20-74 years. Pregnant females were excluded from analyses.

For more detailed estimates see:

1. Flegal KM, Carroll MD, Ogden CL, Johnson CL. Prevalence and trends in obesity among US adults, 1999-2000. JAMA 288:1723-7. 2002.
2. Ogden CL, Carroll MD, Curtin LR, McDowell MA, Tabak CJ, Flegal KM. Prevalence of overweight and obesity in the United States, 1999-2004. JAMA 295:1549-1555. 2006.

Figures

