Obesity: Overview of an Epidemic

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• Obesity • Epidemic • Body mass index • Health risks

The obesity epidemic in the United States continues. In the last few years, obesity rates have not increased significantly in some US subpopulations, but it is too soon to tell whether this means that the epidemic has reached maximum levels in these populations.[1,2] There is clear evidence that obesity rates are increasing in much of the rest of the world.[3,4] A large amount of research is now directed toward better understanding and treatment of obesity, and substantial public health efforts are directed toward reducing obesity rates. To date, however, there is little evidence of success in reversing the epidemic in the United States.

PREVALENCE OF OBESITY

In adults, overweight and obesity are defined based on body mass index (BMI), which is determined as weight (kg) divided by height^2 (m). **Table 1** shows the categories of BMI. A healthy BMI range is 18.5 to 24.9 kg/m^2. Overweight is defined as a BMI from 25 to 29.9 kg/m^2, and obesity is defined as BMI of 30 kg/m^2 or greater.[5] Obesity can be further subdivided based on subclasses of BMI as shown in **Table 1**. Waist circumference can be used in combination with a BMI value to evaluate health risk for individuals.

The strongest data on obesity prevalence rates over time in the United States come from results of the National Health and Nutrition Examination Surveys (NHANES). NHANES periodically collect measured heights and weights in representative samples of the population. The most recent NHANES data were collected during 2007–2008.[1]

As shown in **Fig. 1**, obesity rates for adults have been gradually increasing over the past 3+ decades, with the latest statistics showing that in 2007–2008, approximately 68% were overweight or obese, and approximately 34% were obese.[1]

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Table 1
Categories of BMI and disease risk[a] relative to normal weight and waist circumference

	BMI (kg/m^2)	Obesity Class	Men ≤102 cm (≤40 in) Women ≤88 cm (≤35 in)	>102 cm (>40 in) >88 cm (>35 in)
Underweight	<18.5		—	—
Normal[b]	18.5–24.9		—	—
Overweight	25.0–29.9		Increased	High
Obesity	30.0–34.9	I	High	Very high
	35.0–39.9	II	Very high	Very high
Extreme obesity	≥40	III	Extremely high	Extremely high

[a] Disease risk for type 2 diabetes, hypertension, and CVD.
[b] Increased waist circumference can also be a marker for increased risk even in persons of normal weight.
Data from Expert Panel on the Identification, Evaluation, and Treatment of Overweight in Adults. Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity in adults: executive summary. Am J Clin Nutr 1998;68:899–917.

Since the 1970s, the prevalence of obesity has increased throughout the U.S. adult population—among men and women of all ethnic groups, ages, and educational and socioeconomic levels.[6] Although the entire population seems to be getting heavier each year, there is evidence that obesity affects some subgroups in the population to a greater extent than others. For example, African American and Mexican American women have a higher prevalence of obesity (BMI >30 kg/m^2) than Caucasian women or than men of any ethnic background (**Table 2**). Note that obesity prevalence rates increased over time in all gender–ethnic groups (**Fig. 2**). Obesity rates are increasing

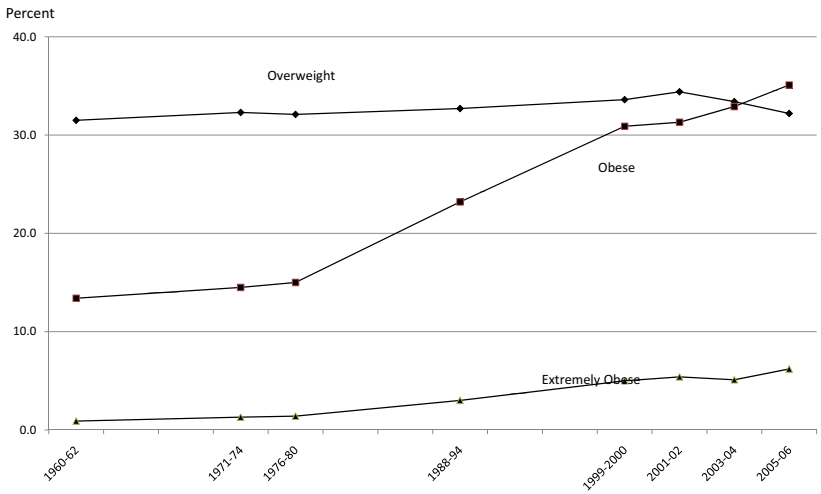

Fig. 1. Trends in overweight, obesity, and extreme obesity, ages 20–74 years. Note: Age-adjusted by the direct method to the year 2000 US Bureau of the Census using age groups 20–39, 40–59, and 60–74 years. Pregnant females excluded. Overweight defined as BMI ≥25 but < 30; obesity defined as BMI ≥30; extreme obesity defined as BMI ≥40.