

Technical Compendium for SHAPE Briefing 14



1998
2002
2006

The obesity epidemic: current status and disparities among Hennepin County adults

This technical compendium provides facts and data that are cited in *SHAPE 2006 Briefing 14, The obesity epidemic: current status and disparities among Hennepin County adults*.¹ Technical notes on BMI calculation and the weight status classifications used in *Briefing 14* are also provided.

Overweight and obesity: national trend

According to the NHANES surveys, where weight status was based on in-person interviews and measured height and weight, 15 percent of adults aged 20-74 years were *obese* in 1976 -1980. This rate increased to 33 percent in 2003-2004, and stabilized in 2005-2006.²⁻⁵

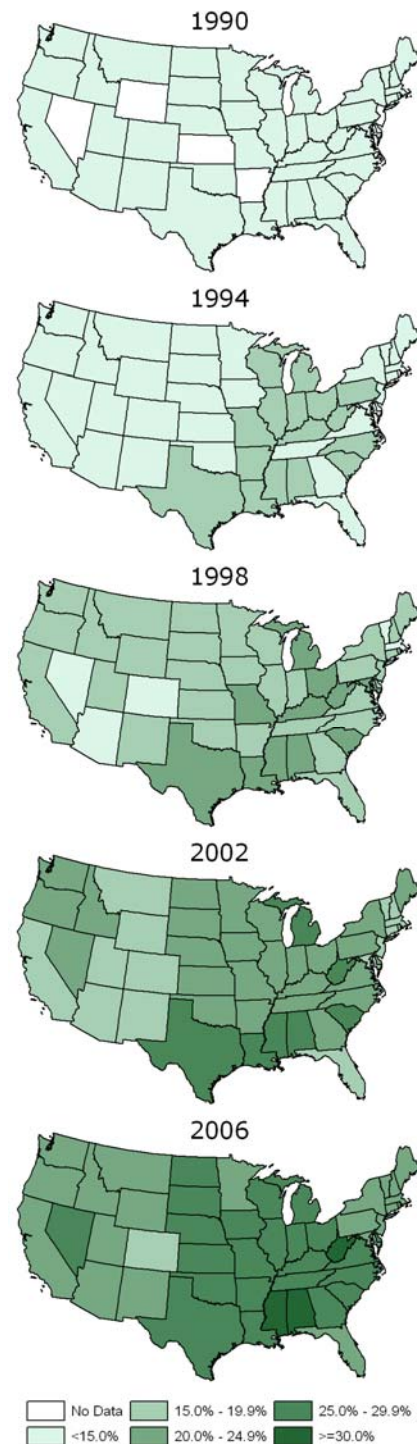
Figure 1 on the left illustrates the dramatic changes in the *obesity* rate by state since 1990, using data from BRFSS.⁶ The weight status in BRFSS was based on self-reported weight and height via phone interviews. In 1990, among states participating in BRFSS, no state had a prevalence of *obesity* equal to or greater than 15 percent. By 2006, only four states had a prevalence of obesity less than 20%. Twenty-two states had a prevalence equal to or greater than 25 percent; three of these states had a prevalence of *obesity* equal to or greater than 30 percent.

Obesity affects too many, costs too much

More than 72 million U.S. adults are currently *obese*. *Overweight* and *obesity* are major contributors to many preventable causes of death. On average, higher body weights are associated with higher death rates. Studies have shown that *obesity* alone is accountable for 120,000 excess deaths each year. Total costs (medical cost and lost productivity) attributable to obesity alone amounted to an estimated \$117 billion in 2002.^{4,5,7,8}

Studies have also shown that *obesity* has more negative health consequences than smoking, drinking or poverty.^{9,10}

Figure 1. Percentage of adults who are obese, by state, United States*



* Source: CDC BRFSS.⁶ Map was created by Hennepin County Human Services and Public Health Department, Minnesota, United States

Obesity rates for Hennepin County adults are likely to have been underestimated

A 2006 study¹¹ on national surveys (BRFSS and NHANES) suggested that there are population-level biases in self-reported weight and height, and such biases are larger in telephone interviews than in-person interviews. Specifically, this study found that when respondents self-report weight and height over the phone:

- Women under age 60 are likely to understate their weight by 10 pounds on average; and
- Men under age 60 are likely to overstate their height by one inch on average.

SHAPE surveys assess weight status by respondents' self-reported weight and height, mostly via phone interviews or mail surveys, and therefore, they are very likely to have underestimated the actual rate of *obesity* and *overweight*.

BMI and weight classification

Body mass index (BMI) is calculated from self-reported weight and height using a standard formula:

$$\text{BMI} = (\text{weight in kilograms}) \div (\text{square of Height in meters}) \text{ or}$$

$$\text{BMI} = 703 * (\text{weight in pounds}) \div (\text{square of height in inches}).$$

When reporting weight, female respondents who were pregnant at the time of the survey were asked to provide their weight before they were pregnant.

Classifications for weight status by BMI according to national guidelines¹² are:

Underweight (BMI < 18.5);
Normal weight (BMI = 18.5 to 24.9);
Overweight (BMI = 25.0 to 29.9) and
Obese (BMI ≥ 30.0).

Reference

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