

## **Obesity and Overweight: American Heart Association Scientific Position**

Obesity is defined simply as too much body fat. Your body is made up of water, fat, protein, carbohydrate and various vitamins and minerals. If you have too much fat — especially in your waist area — you're at higher risk for health problems, including high blood pressure, high blood cholesterol, diabetes, heart disease and stroke.

Obesity is now recognized as a major risk factor for coronary heart disease, which can lead to heart attack. Some reasons for this higher risk are known, but others are not. For example, obesity

- Raises blood cholesterol and triglyceride levels.
- Lowers HDL "good" cholesterol. HDL cholesterol is linked with lower heart disease and stroke risk, so reducing it tends to raise the risk.
- Raises blood pressure levels.
- Can induce diabetes. In some people, diabetes makes these other risk factors much worse. The danger of heart attack is especially high for these people.

Even when there are no adverse effects on the known risk factors, obesity by itself increases risk of heart disease. It also harms more than just the heart and blood vessel system. It's a major cause of gallstones and can worsen degenerative joint disease.

Obesity is mainly caused by taking in more calories than are used up in physical activity and daily life. When people eat too many calories, or too much saturated fat, trans fat and cholesterol, their blood cholesterol levels often rise. That raises their risk of heart disease.

How is body fat measured?

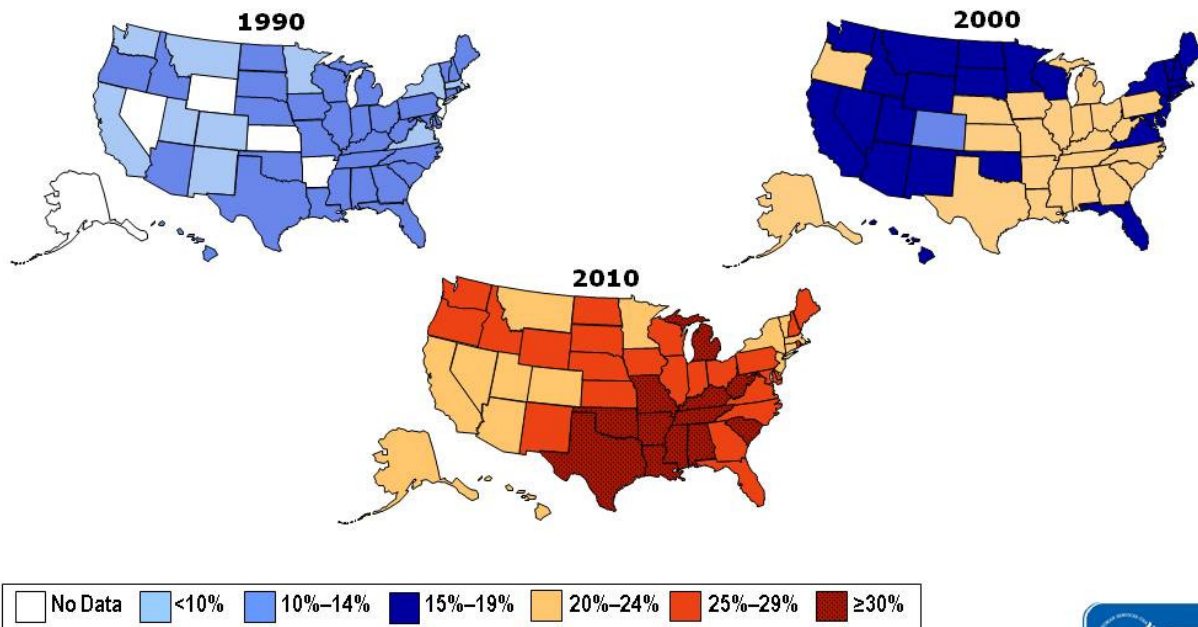
Waist circumference measurement and body mass index (BMI) are the recommended ways to estimate body fat. A high-risk waistline is 35 inches or higher for women, and 40 inches or higher for men.

The body mass index formula assesses body weight relative to height. It's a useful, indirect measure of body composition, because in most people it correlates highly with body fat. Weight in kilograms is divided by height in meters squared ( $\text{kg}/\text{m}^2$ ). Or multiply weight in pounds by 703, divide by height in inches, then divide again by height in inches. In studies by the National Center for Health Statistics,

- BMI values less than 18.5 are considered underweight.
- BMI values from 18.5 to 24.9 are normal.
- Overweight is defined as a body mass index of 25.0 to less than 30.0 (consistent with U.S. Dietary Guidelines for Americans). A BMI of about 25  $\text{kg}/\text{m}^2$  corresponds to about 10 percent over ideal body weight.
- Obesity is defined as a BMI of 30.0 or greater (consistent with criteria of the World Health Organization), or about 30 pounds or more overweight. Extreme obesity is defined as a BMI of 40 or greater.

## Obesity Trends\* Among U.S. Adults BRFSS, 1990, 2000, 2010

(\*BMI  $\geq 30$ , or about 30 lbs. overweight for 5'4" person)



Source: Behavioral Risk Factor Surveillance System, CDC.



- In 1990, among states participating in the Behavioral Risk Factor Surveillance System, 10 states had a prevalence of obesity less than 10% and no state had prevalence equal to or greater than 15%.
- By 2000, no state had a prevalence of obesity less than 10%, 23 states had a prevalence between 20–24%, and no state had prevalence equal to or greater than 25%.
- In 2010, no state had a prevalence of obesity less than 20%. Thirty-six states had a prevalence equal to or greater than 25%; 12 of these states (Alabama, Arkansas, Kentucky, Louisiana, Michigan, Mississippi, Missouri, Oklahoma, South Carolina, Tennessee, Texas, and West Virginia) had a prevalence equal to or greater than 30%.

Source: Behavioral Risk Factor Surveillance System, CDC.

