

REFERENCED FACT SHEET ABOUT BMI, OBESITY & WEIGHT LOSS

About two-thirds of adults in the United States are overweight, and almost one-third are obese, according to data from the National Health and Nutrition Examination Survey (NHANES) 2001 to 2004. This fact sheet presents statistics on the prevalence of overweight and obesity in the United States, as well as the health risks, mortality rates, and economic costs associated with these conditions. To understand these statistics, it is necessary to know how overweight and obesity are defined and measured, something this publication addresses. This fact sheet also explains why statistics from different sources may not match.

Overweight and obesity are known risk factors for:

- diabetes
- coronary heart disease
- high blood cholesterol
- stroke
- hypertension
- gallbladder disease
- osteoarthritis (degeneration of cartilage and bone of joints)
- sleep apnea and other breathing problems
- some forms of cancer (breast, colorectal, endometrial, and kidney)

Obesity is also associated with:

- complications of pregnancy
- menstrual irregularities
- hirsutism (presence of excess body and facial hair)
- stress incontinence (urine leakage caused by weak pelvic floor muscles)
- psychological disorders, such as depression
- increased surgical risk
- increased mortality

What are overweight and obesity?

Overweight refers to an excess of body weight compared to set standards. The excess weight may come from muscle, bone, fat, and/or body water. Obesity refers specifically to having an abnormally high proportion of body fat.[1] A person can be overweight without being obese, as in the example of a bodybuilder or other athlete who has a lot of muscle. However, many people who are overweight are also obese.

How are weight-related health risks determined?

Various methods are used to determine if someone's weight has increased his or her health risks. Some are based on the relationship between height and weight; others are based on measurements of body fat. The most commonly used method today is the body mass index (BMI). BMI is an index of weight adjusted for the height of an individual.

BMI can be used to screen for both overweight and obesity in adults. It is the measurement of choice for many obesity researchers and other health professionals, as well as the definition used in most published information on overweight and obesity. BMI is a calculation based on height and weight, and it is not gender-specific in adults. BMI does not directly measure percentage of body fat, but it is a more accurate indicator of overweight and obesity than relying on weight alone.

BMI is **calculated** by dividing a person's weight in kilograms by height in meters squared. The mathematical formula is **weight (kg)/height (m²)**.

To determine BMI using pounds and inches, multiply weight in pounds by 704.5,* divide the result by height in inches, and then divide that result by height in inches a second time. (You can also use the BMI calculator at www.nhlbisupport.com/bmi or check the chart below.)

** The multiplier 704.5 is used by the National Institutes of Health (NIH). Other organizations may use a slightly different multiplier; for example, the American Dietetic Association suggests multiplying by 700. The variation in outcome (a few tenths) is insignificant.*

An expert panel convened by the National Heart, Lung, and Blood Institute (NHLBI) in cooperation with the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), both part of NIH, identified overweight as a BMI of 25 to 29.9 kg/m², and obesity as a BMI of 30 kg/m² or greater. However, overweight and obesity are not mutually exclusive, since people who are obese are also overweight.[1] Defining overweight as a BMI of 25 or greater is consistent with the recommendations of the World Health Organization (WHO)[2] and most other countries.

Calculating BMI is simple, quick, and inexpensive, but it does have limitations. One problem with using BMI as a measurement tool is that very muscular people may fall into the overweight category when they are actually healthy and fit. Another problem with using BMI is that people who have lost muscle mass, such as the elderly, may be in the healthy weight BMI category (BMI 18.5 to 24.9) when they actually have reduced nutritional reserves. BMI, therefore, is useful as a screening tool for individuals and as a general guideline to monitor trends in the population, but by itself is not diagnostic of an individual patient's health status. Further assessment of patients should be performed to evaluate their weight status and associated health risks.

Prevalence Statistics Related to Overweight and Obesity*

Overweight and obesity are found worldwide, and the prevalence of these conditions in the United States ranks high along with other developed nations.

Below are some frequently asked questions and answers about overweight and obesity statistics. Data are based on NHANES 2001 to 2004. Unless otherwise specified, the figures given represent age-adjusted estimates. Age-adjusted estimates are used in order to account for the age variations among the groups being compared. Population numbers are based on estimates from the U.S. Census Bureau's *Current Population Survey*.

Q: How many adults age 20 and older are overweight or obese (BMI > 25)?

A: About two-thirds of U.S. adults are overweight or obese.[6]

All adults: 133.6 million (66 percent)

Women: 65 million (61.6 percent)

Men: 68.3 million (70.5 percent)

** The statistics presented here are based on the following definitions unless otherwise specified: healthy weight = BMI \geq 18.5 to < 25; overweight = BMI \geq 25 to < 30; obesity = BMI \geq 30; and extreme obesity = BMI \geq 40.*

Q: How many adults age 20 and older are obese (BMI > 30)?

A: Nearly one-third of U.S. adults are obese.[6]

All adults: 63.6 million (31.4 percent)

Women: 35 million (33.2 percent)

Men: 28.6 million (29.5 percent)

Q: How many adults age 20 and older are at a healthy weight (BMI > 18.5 through 24.9)?

A: Less than one-third of U.S. adults are at a healthy weight.[6]

All adults: 65.4 million (32.3 percent)

Women: 38.1 million (36.1 percent)

Men: 27.4 million (28.3 percent)

Q: How has the prevalence of overweight and obesity in adults changed over the years?

A: The prevalence has steadily increased over the years among both genders, all ages, all racial and ethnic groups, all educational levels, and all smoking levels.[7] From 1960 to 2004, the prevalence of overweight increased from 44.8 to 66 percent in U.S. adults age 20 to 74.[6] The

prevalence of obesity during this same time period more than doubled among adults age 20 to 74 from 13.3 to 32.1 percent, with most of this rise occurring since 1980.[6]

Q: What is the prevalence of overweight or obesity in minorities?

A: Among women, the age-adjusted prevalence of overweight or obesity (BMI \geq 25) in racial and ethnic minorities is higher among non-Hispanic Black and Mexican-American women than among non-Hispanic White women. Among men, there is little difference in prevalence among these three groups [6]. Sufficient data for other racial and ethnic minorities has not yet been collected.

Non-Hispanic Black Women: 79.6 percent
Mexican-American Women: 73 percent
Non-Hispanic White Women: 57.6 percent

Non-Hispanic Black Men: 67 percent
Mexican-American Men: 74.6 percent
Non-Hispanic White Men: 71 percent
(Statistics are for populations age 20 and older.)

Studies using this definition of overweight and obesity provide ethnicity-specific data only for these three racial and ethnic groups. Studies using different BMI cutoff points derived from NHANES II data to define overweight and obesity have reported a high prevalence of overweight and obesity among Hispanics and American Indians. The prevalence of overweight and obesity in Asian Americans is lower than in the population as a whole.[1]

Q: What is the prevalence of overweight and obesity in children and adolescents?

A: While there is no generally accepted definition for *obesity* as distinct from *overweight* in children and adolescents, the prevalence of overweight* is increasing for children and adolescents in the United States. Approximately 17.5 percent of children (age 6 to 11) and 17 percent of adolescents (age 12 to 19) were overweight in 2001 to 2004.[6]

** Overweight is defined by the sex- and age-specific 95th percentile cutoff points of the 2000 CDC B growth charts. These revised growth charts incorporate smoothed BMI percentiles and are based on data from NHES II (1963 to 1965) and III (1966 to 1970), and NHANES I (1971 to 1974), II (1976 to 1980), and III (1988 to 1994). The CDC BMI growth charts specifically excluded NHANES III data for children older than 6 years.[8]*

Q: What is the mortality rate associated with obesity?

A: Most studies show an increase in mortality rates associated with obesity. Individuals who are obese have a 10- to 50-percent increased risk of death from all causes, compared with healthy weight individuals (BMI 18.5 to 24.9). Most of the increased risk is due to cardiovascular

causes.[1] Obesity is associated with about 112,000 excess deaths per year in the U.S. population relative to healthy weight individuals.[9]

Economic Costs Related to Overweight and Obesity

As the prevalence of overweight and obesity has increased in the United States, so have related health care cost, both direct and indirect. Direct health care costs refer to preventive, diagnostic, and treatment services such as physician visits, medications, and hospital and nursing home care. Indirect costs are the value of wages lost by people unable to work because of illness or disability, as well as the value of future earnings lost by premature death.

Most of the statistics presented here represent the economic cost of overweight and obesity in the United States in 1995, updated to 2001 dollars.[10] Unless otherwise noted, these statistics are adapted from Wolf and Colditz,[11] who based their data on existing epidemiological studies that defined overweight and obesity as a BMI \geq 29. Because the prevalence of overweight and obesity has increased since 1995, the costs today are higher than the figures given here.

Q: What is the cost of overweight and obesity?

A: Total Cost: \$117 billion
Direct Cost: \$61 billion*
Indirect Cost: \$56 billion

**A recent study estimated annual medical spending due to overweight and obesity (BMI \geq 25) to be as much as \$92.6 billion in 2002 dollars, 9.1 percent of U.S. health expenditures.[12]*

Q: What is the cost of lost productivity related to overweight and obesity?

A: The cost of lost productivity related to obesity among Americans age 17 to 64 is \$3.9 billion. This value considers the following annual numbers (for 1994):

Workdays lost: \$39.3 million
Physician office visits: \$62.7 million
Restricted-activity days: \$239 million
Bed-days: \$89.5 million

Other Statistics Related to Overweight and Obesity

Q: How physically active is the U.S. population?

A: Only 26 percent of U.S. adults engage in vigorous leisure-time physical activity three or more times per week (defined as periods of vigorous physical activity lasting 10 minutes or more). About 59 percent of adults do no vigorous physical activity at all in their leisure time.[13]

About 25 percent of young people (age 12 to 21) participate in light-to-moderate activity (e.g., walking, bicycling) nearly every day. About 50 percent regularly engage in vigorous physical activity. Approximately 25 percent report no vigorous physical activity, and 14 percent report no recent vigorous or light-to-moderate physical activity.[14]

Q: What is the cost of physical inactivity?

A: The direct cost of physical inactivity may be as high as \$24.3 billion.[15]

Q: What are the benefits of physical activity?

A: In addition to helping control weight, physical activity decreases the risk of dying from coronary heart disease and reduces the risk of developing diabetes, hypertension, and colon cancer.[14]

References

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