



## *How to Determine Whether or Not You Are Overweight or Obese*

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The Center for Disease Control determines the healthiness of your weight by calculating your body mass index, or BMI. This is a simple equation that you can even do at home to find out if you are at a healthy weight.

Here is a Step-By-Step way to calculate one's BMI:

1. Determine your weight in pounds.
2. Determine your height and square it (multiply the height in inches with itself).
3. Divide the number you obtained from Step 1 with the number you determined in Step 2.
4. Multiply the number from

Step 3 with 703, and you will have your body mass index.

Example:

Step 1. Weight: 184 pounds

Step 2. Height: 72 inches

Height squared is  $72 \times 72 = 5184$ .

Step 3.  $184/5184 = 0.035$

Step 4.  $0.035 \times 703 = 24.9$

There are 5 weight classifications. They include:

Underweight, which is a BMI of 18.5 or less.

Normal, which is a BMI between 18.5 and 24.9.

Overweight, which is a BMI between 25 and 29.9.



Obese, which is a BMI between 30 and 39.9

Morbidly Obese, which is a BMI of 40 or greater.

In the example, this person is at the top of the normal weight.

**Special points of interest:**

- Calculating BMI
- Being overweight or obese can harm your health
- Health Problems commonly associated with Obesity.

## *The Cost of Convenience*

Convenience has contributed to ready made meals, instant access to shopping via the internet, and 24-hour entertainment in our living rooms. At the same time, many of our jobs involve sitting at a computer most of the day with minimal activity, while children no longer have recess and physical activity in

schools due to increased need for classes on subject matter deemed more important than physical activity.

The convenience factor together with other factors contributes to the rising obesity rates in adults and children.

People can still take advantage

of the conveniences available to us and choose wisely when it comes to food choices. Look for smaller portion sizes and more fresh fruits and vegetables daily. Include 30 minutes of physical activity at least five days a week and make sure the children have 60 minutes of physical activity daily.

## Being Overweight



The majority of kids today are not eating smart. One of every four American children is overweight.

- A BMI between 25 and 29.9 is in the overweight category.
  - According to the World Health Organization, in 2005, there were approximately 1.6 Billion adults that were overweight.
  - Those who are overweight have a 34% greater risk of developing heart failure, when compared to a normal weight person.
  - Higher BMI is a risk factor for hypertension, diabetes mellitus, and dyslipidemia, all of which increase the risk of a heart attack.
  - The overweight and obese have an increased incidence of heart disease.
- This leads to increased risk of heart attack, congestive heart failure, sudden cardiac death, angina, and abnormal heart rhythm.
  - Being overweight and obese has been connected to certain cancers.
  - Women who gain nearly 45 pounds or more after age 18, are twice as likely to be diagnosed with breast cancer after menopause, when compared to those who maintain a stable weight.
  - Approximately 11 percent of heart failure cases among women are attributed to obesity alone.
  - Studies show that the risk

of coronary heart disease is greatest for women who tend to live a sedentary lifestyle, and who have large waist-to-hip ratios.

- Being overweight may be due to poor diet, genetics, overeating, alcoholism, metabolic disorders, poor sleep habits, stress, lack of physical activity, or medication.
- Children (who are overweight or obese) have 80 percent likelihood of being obese if their parents are obese.

**“Those who are overweight have a 34% greater risk of developing heart failure, when compared to a normal weight person”**

## Common Causes of Obesity

The prevalence of energy-dense foods, which are high in sugar and fat, but low in vitamins, minerals, and other micronutrients, contributes to the overall high rates of obesity worldwide.

In addition, reduced physical activity and increased hours of television viewing in both adults and children contribute to a sedentary lifestyle.

According to the World Health Organization, there is a trend toward sedentary lifestyle worldwide. This is due to a many variables, including: sedentary forms of work, changing modes of

transportation, and increasing urbanization.

The decrease in physical activity can lead to harmful physiological changes such as reduced fitness and inability to perform in a stressful physical activity sessions such as climbing a flight of stairs.

Individuals who are active and expend from 500 to 3500 calories per week in physical activity can expect to live longer than people who live a more sedentary lifestyle.

Overall, mortality rates from all causes of death are lower in physically active people than in

sedentary people.

Regular physical activity is a key factor in achieving and maintaining a healthy body weight for adults and children.

Sedentary lifestyle is defined as one with no physical activity or irregular physical activity.



Television and junk food, two gut-busters that have helped 54 percent of all adults and 25 percent of all children become overweight in the United States

## Facts About Obesity

- Obesity is defined as having excessive body fat.
- Obesity effects all body systems, especially the heart, lungs, and the musculoskeletal system.
- According to the World Health Organization, there were at least 400 million adults that were obese in 2005.
- Obesity causes at least 300,000 deaths per year in the United States alone!
- Obesity costs healthcare almost \$100 Billion per year in the US.
- Obesity increases the risk of cardiovascular disease.
- The effects of obesity on the cardiovascular system can begin in childhood. The more obese a child is, the more likely she/he will develop some form of cardiovascular disease as an adult.
- Obesity is not always diet related. It may be a result of genetics, a pre-existing health condition, or due to medication.
- Obesity is associated with hypertension, diabetes, pulmonary hypertension, as well as musculoskeletal difficulties.
- Obese people are more apt to have high blood pressure, which causes the heart to work harder.
- Obesity causes prolonged inflammation of the heart tissue, which increases heart failure risk.
- Increased fat deposits in the waist area can lead to high blood pressure, high blood cholesterol, heart disease, diabetes, and stroke.
- Obesity can lead to reduced HDL (High Density Lipoprotein) levels, the “good” cholesterol. This increases the risk of heart disease and stroke.
- The obese have a 104% greater risk of developing heart failure, when compared to someone who is of normal body weight.
- Obesity is commonly associated with left ventricular hypertrophy and dilation; both are known precursors of heart failure.
- Obese people who live a sedentary lifestyle and smoke, have a higher risk for a coronary heart disease event than a lean, non-smoking person.
- Obesity has been known to be associated with patients who have gallbladder disease.
- Obesity and rapid weight loss in obese people may also cause gallstones.
- The risk for being diagnosed with esophageal cancer rises as BMI rises.
- Postmenopausal women who are obese (BMI= 30=39.9) tend to have a higher risk of developing breast cancer.
- Women who are obese have a three to four times greater chance of being diagnosed with endometrial cancer, in comparison to women with a lower BMI.
- A study, published in the Journal of Occupational and Environmental Medicine, found that obesity increases absenteeism at a cost of \$4.3 billion per year in the United States.
- Obese women are 61 percent more likely to miss time from work, compared to women of healthy weight.
- Treatment of obesity includes getting at least 30 minutes of moderate intensity exercise daily, consuming less calories than is expended, eating a diet high in fiber and low in fat, consuming more fruits and vegetables, as well as whole grains, and using vegetable oils (unsaturated fat) rather than animal fats.
- Individuals who have maintained at least a 30 pound weight loss for one year or longer adhere to the following\*:
  - 78% eat breakfast every day.
  - 75% weigh themselves at least once a week.
  - 62% watch less than 10 hours of TV per week.
  - 90% exercise, on average, about 1 hour per day.

**“Those who are obese, have a 104% greater risk of developing heart failure, when compared to someone who is of normal body weight.”**



Remember:  
 A BMI of 25 to 29.9 is considered overweight.  
 A BMI of 30 to 39.9 is considered obese  
 And  
 A BMI of 40 or greater is considered morbidly obese

\*National Weight Control Registry



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## *About Pennington*

The Pennington Biomedical Research Center is a world-renowned nutrition research center.

**Mission:**

To promote healthier lives through research and education in nutrition and preventive medicine.

The Pennington Center has several research areas, including:

- Clinical Obesity Research
- Experimental Obesity
- Functional Foods
- Health and Performance Enhancement
- Nutrition and Chronic Diseases
- Nutrition and the Brain
- Dementia, Alzheimer's and healthy aging
- Diet, exercise, weight loss and weight loss maintenance

The research fostered in these areas can have a profound impact on healthy living and on the prevention of common chronic diseases, such as heart disease, cancer, diabetes, hypertension and osteoporosis.

The Division of Education provides education and information to the scientific community and the public about research findings, training programs and research areas, and coordinates educational events for the public on various health issues.

We invite people of all ages and backgrounds to participate in the exciting research studies being conducted at the Pennington Center in Baton Rouge, Louisiana. If you would like to take part, visit the clinical trials web page at [www.pbrc.edu](http://www.pbrc.edu) or call (225) 763-3000

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