

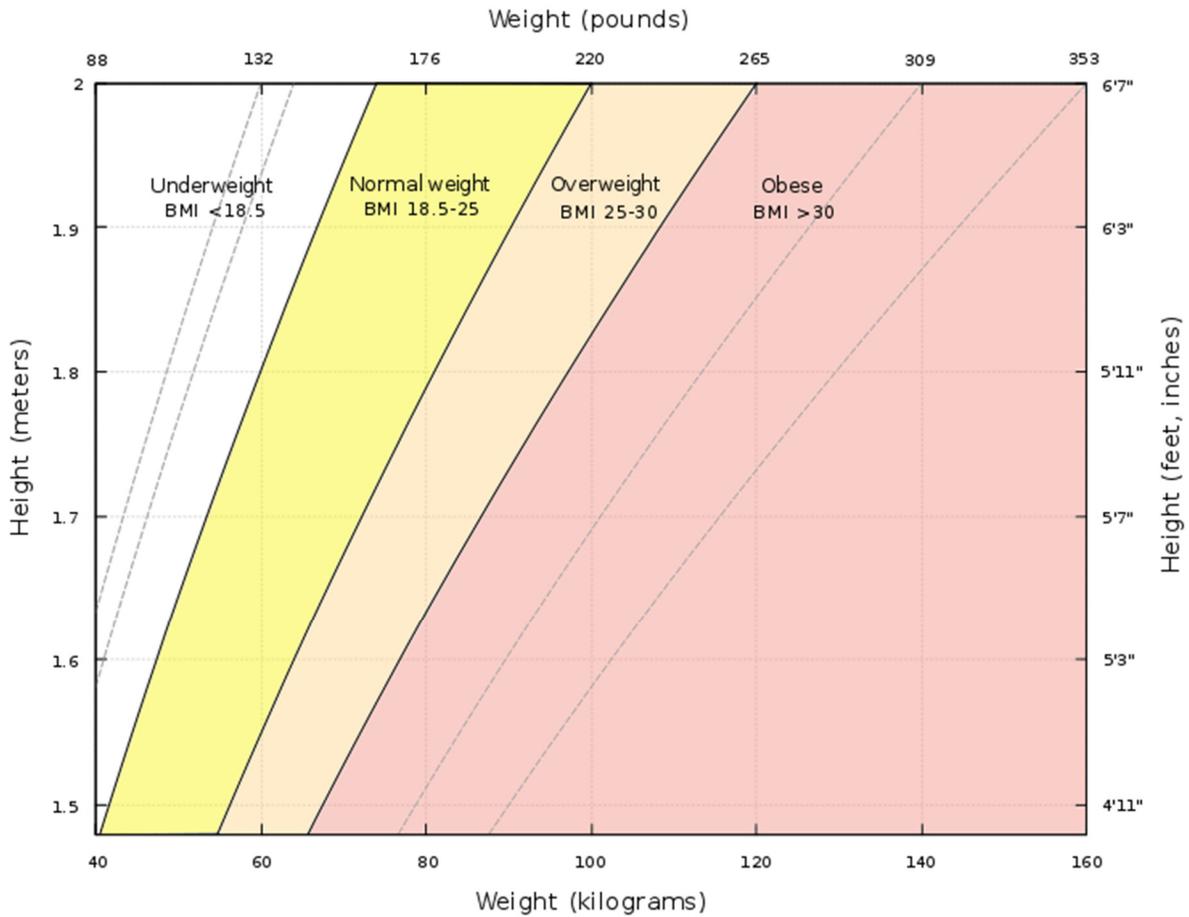
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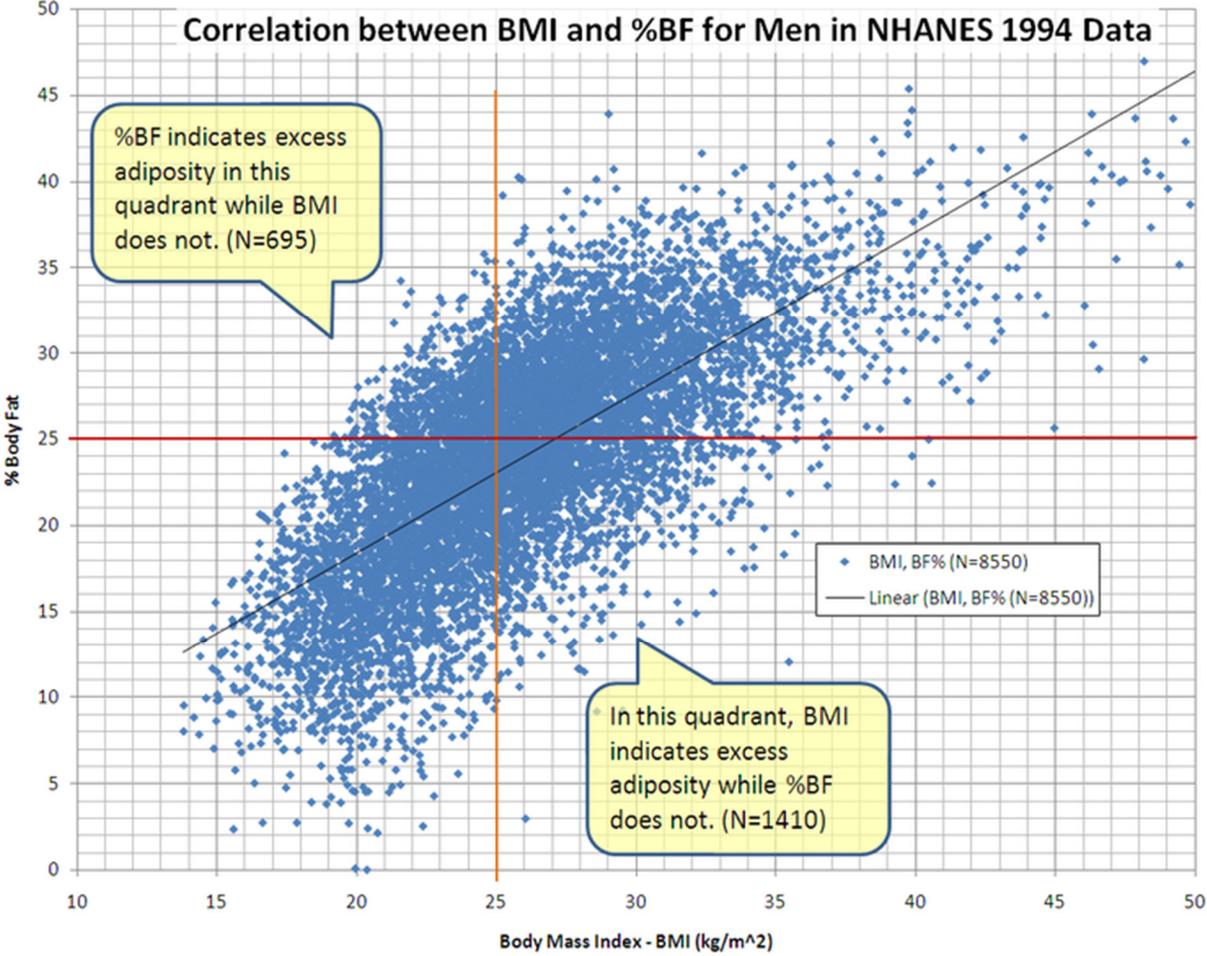
### SS 51020-1'06 – Basic Body Composition

#### Body Mass Index

The body mass index (BMI) is a value derived from the mass (weight) and height of an individual. The BMI is defined as the body mass divided by the square of the body weight, and is universally expressed in units of  $\text{kg}/\text{m}^2$ . The BMI may also be determined using a table or chart.



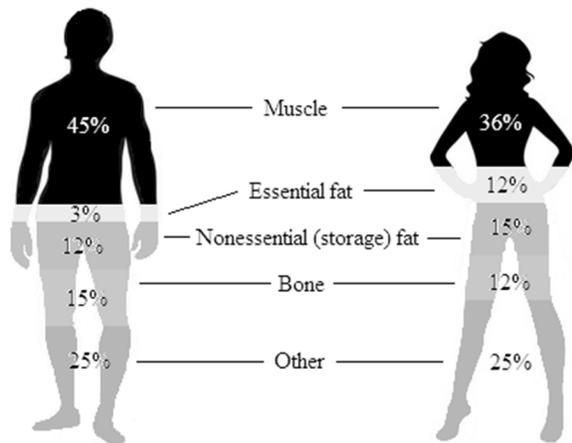
Mathematicians have argued that the error in the BMI is significant and so pervasive that it is not generally useful in evaluation of health. BMI is particularly inaccurate for people who are very fit or athletic, as their high muscle mass can classify them in the overweight category by BMI, even though their body fat percentages frequently fall in the 10-15% category.



## Body Fat Percentage

A certain amount of body fat is essential to bodily functions. It regulates core temperature, cushions and insulates organs and tissues and is the main form of the body's energy storage.

Essential body fat is necessary to maintain life and reproductive functions. Essential fat is 3%-5% in men, and 8%-12% in women. Some regard the body fat percentage as the better measure of an individual's fitness level, as it is the only body measurement which directly calculates the particular individual's body composition without regard to the individual's height or weight.



| General Body Fat Percentage Categories |          |          |
|----------------------------------------|----------|----------|
| Classification:                        | Women:   | Men:     |
| Essential Fat                          | 10 - 12% | 2 - 4%   |
| Athletes                               | 14 - 20% | 6 - 13%  |
| Fitness                                | 21 - 24% | 14 - 17% |
| Acceptable                             | 25 - 31% | 18 - 25% |
| At Risk                                | 32% plus | 25% plus |

## Overweight versus Overfat

**Overweight:** Above a weight considered normal or desirable.

**Overfat:** A condition of having more than a healthy amount of body fat.

You can be overweight, but not overfat. Alternatively, you can be overfat and not overweight.

