

Determining Ideal Body Weight Using Percent Body Fat and the Body Mass Index

Purpose:

There are a number of different ways to compute an ideal body weight. Method A of this laboratory allows you to compute and record your ideal body weight using the percent body fat method. Method B allows you to calculate and record your ideal body weight using the body mass index procedure.

Directions:

Choose one of these techniques and complete the appropriate section.

Method A: Computation of Ideal Body Weight Using Percent Body Fat

Step 1: Calculate fat-free weight

100% - your percent body fat estimated from skinfold measurement = _____% fat free weight.

Therefore,

_____ % fat-free weight expressed as a fraction \times your body weight in pounds = _____ pounds fat-free weight.

Step 2: Calculate optimal weight

Remember: Optimal body fat ranges are 10% to 20% for men and 15% to 25% for women.

Optimal weight = fat-free weight / (1.00 - optimal %fat), with optimal %fat expressed as a fraction.

Therefore,

The low and high optimal weight ranges for your gender are:

For low %fat: Optimal weight = _____ pounds

For high %fat: Optimal weight = _____ pounds

Method B: Computation of Ideal Body Weight Using Body Mass Index

The BMI uses the metric system. Therefore, you need to determine your weight in kilograms (1 kilogram = 2.2 pounds) and your height in meters (1 inch = 0.0254 meters).

Step 1: Compute your BMI.

BMI = body weight (kg) / (height in meters)²

Your BMI = _____

Step 2: Calculate Your Ideal Body Weight Based on BMI *.

The ideal BMI is 21.9 to 22.4 for men and 21.3 to 22.1 for women. The formula for computing ideal body weight using BMI is:

$$\text{Ideal body weight (kilograms)} = \text{desired BMI} \times (\text{height in meters})^2$$

Consider the following example as an illustration of the computation of ideal body weight. A woman who weighs 60 kilograms and is 1.5 meters tall computes her BMI to be 26.7. Her ideal BMI is between 21.9 and 22.4; therefore, her ideal body weight range is:

$$\text{Ideal body weight} = 21.9 \times 2.25 = 49.3 \text{ kilograms}$$

$$\text{Ideal body weight} = 22.4 \times 2.25 = 50.4 \text{ kilograms}$$

Now complete this calculation using your values for BMI.

My ideal body weight range using the BMI method is _____ to _____ kilograms.

*Note: BMI may not be a good method to determine ideal body weight for a highly muscled individual.