**scientific way to calculate quantity of food to increase the body mass.**

To gain a pound, you'll need in excess of 3500 calories above your resting metabolic rate (RMR)

* Calculate your RMR. Your resting metabolic rate is the amount of calories per day that your body requires to maintain your existing weight. Here's how to figure it out with the Mifflin - St. Jeor formula
* Convert your weight from pounds to kilograms. Divide your weight in pounds by 2.2. The result is your weight in kilograms.
* Convert your height from inches to centi meters. Multiply your height in inches by 2.54. The result is your height in centimeters.
* Plug your information into the formula.
* The basic formula is **RMR = 10 \* weight(kg) + 6.25 \* height(cm) - 5 \* age(y) + x**. For men, x = 5; for women, x = -161.
* Understand that the formula calculates how many calories you would burn if you spent the entire day resting. You probably burn a few hundred more than your RMR during the course of a normal day — this is just a rough estimate to get your weight-gain diet started.

**Account for your activity level.**

Since you (hopefully) do not sit still in bed all day, you must account for the calories you burn through activity. Once you have your RMR, use the Harris Benedict Formula below with your RMR as BMR to determine your total daily calorie needs depending on your activity level. To determine your total daily calorie needs, multiply your BMR by the appropriate activity factor:

* If you are sedentary (little or no exercise) : BMR x 1.2
* If you are lightly active (light exercise/sports 1-3 days/week) : BMR x 1.375
* If you are moderately active (moderate exercise/sports 3-5 days/week) : BMR x 1.55
* If you are very active (hard exercise/sports 6-7 days a week) : BMR x 1.725
* If you are extra active (very hard exercise/sports and physical job or 2x training) : BMR x 1.9
* For example, a 19-year-old woman who is 5’5” and 130 pounds would plug her information into the calculator and find out that her BMR is 1366.8 calories. Then, since she is moderately active, exercising 3-5 days per week, she would multiply 1366.8 by 1.55, to equal 2118.5 calories. That is the number of calories that her boded to add to your diet. Now that you have an idea of how many calories your body burns in a day, you can calculate how many more you need to gain weight.
* Aim for one or two pounds per week. More than that could lead to a cycle of crash dieting, in which you gain and lose weight quickly.
* At first, try adding 500 calories a day to your diet. For instance, if you need 2300 calories a day to maintain your current weight, strive to consume 2800 calories daily. This should be an extra 3500 calories over the course of a week, which will lead to one pound of weight gained.