



Q: Dear Coach: I am a 39 year old male and I've been underweight all of my life. I am over 6 foot and I weigh 60 kg. I try to eat solidly but I have a low appetite. I play recreational soccer on and off and I am going to the gym now on a regular basis. What do you advise to help me gain weight? - "Slim Jim"

A: Dear Slim Jim: Sport and activity is the right way to go with regard to improving your overall health. While most people begin a gym program and complain about their need to lose weight, there are a significant amount of people, especially male, that are interested in healthy weight gain. I believe your question to mean "How do I build lean muscle mass?" as this relates to a body composition with high muscle to fat and bone ratio.

First, weight gain requires the application of basic physiological science. One pound of body weight is equivalent to approximately the energy store of 3500 calories. To gain one pound per week, you will need to intake an extra 500 calories per day or 3500 calories per week. This is a reasonable goal for weight gain. Consider that "the maximum muscle mass the human body can add in one week is one pound; this is the upper limit of the muscle fiber's capacity to make protein into muscle; any protein beyond that is simply converted to fat" (Dr. Lemon, 1986, in *Medicine and Science in Sports and Exercise* (19):5, S179-S190).

If you are coupling an increased meal intake with strength training, which is what we recommend for building lean muscle mass, then you will have to assure your caloric intake exceeds your new energy demands! Frequent nutritious meals with adequate protein intake can help. A skilled nutritionist can help monitor and guide you in this. They can help you calculate your basal metabolic rate (your basic energy requirements at rest) and the energy requirements for exercise.

Protein is essential in order to restore and build muscle mass, particularly while exercising. Calculations for protein intake are commonly determined one of two ways:

1. Standard protein calculation:

- i. Calculate your weight in kilograms
- ii. Calculate weight in kg x range of 0.8 - 1.8 g/kg = protein (g) goal

If you are exercising and strength training regularly, a higher protein intake is required (1 - 1.8g per kg of body weight).

For example: 60kg x 1.6g = 96 grams of protein per day.

2. Protein as a percentage of caloric intake:

- i. Determine your Basal Metabolic Rate: the rate of calorie expenditure you need at rest (there are on-line BMR calculators, or work with your nutritionist)
- ii. Multiply by a percentage to determine caloric need; most experts recommend 15 - 30% of your diet to be from protein sources and with body building, aim for 25 - 30%.
- iii. Divide caloric need by protein caloric generation (1g of protein = 4 calories).



For example: A 39 year old male, weighing 60kg, and 186cm in height, may have a BMR of 1564. Multiplied by 25%, the caloric intake from protein = 391. Divide 391 by 4 = 97.75 grams of protein per day.

Your strength training program should be focused on body building and this is a specific form of weight training. This is another article, Slim Jim, but a skilled personal trainer can take you through a customized program. Focus, also, on allowing yourself adequate rest for your body to rebuild muscle! Slim Jim, if these basic strategies do not work for you, a thorough medical assessment may be required to determine whether any other medical factors are interfering with your weight gain. I look forward to hearing about your success!

Yours in health and fitness
The Coach

Guest response - Sara Pazell, director of L'Amour Yoga Institute Pty Ltd, is a strength and conditioning coach, occupational therapist, personal trainer and group fitness instructor. She is a fellow Paradise Training trainer with Coach Tim.