Building Muscle and Lean Mass: How Much Protein Do You Need?

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For many sports, superior muscular strength is an important component of success and performance. As a result most dedicated athletes follow a strength training regime, usually involving weight training equipment, in order to continually increase their muscle power and to guard against muscle atrophy and strength decrements during the off season. Body builders and power lifters are particularly focused on weight training and muscular development as the primary focus of their athletic involvement.

In previous articles, I have explained the key principles of strength training as they apply to various types of sports. There remains little doubt that the most effective way to increase muscular strength and lean mass development is through the implementation of a properly designed weight training program. Weight training stimulates the involved muscles to lay down a increased number of protein contractile bands known as myofilaments. By increasing the number of myofilaments, each muscle fiber can then contract with increased force, thus providing increased strength capacity of the muscle.

A key point is the fact that the new contractile bands (myofilaments) synthesized within each trained muscle fiber are made out of protein. Thus, one of the questions frequently asked by individuals involved in strength training is how much protein should I consume each day to maximize muscle growth and strength? Scientific investigation into this matter has now shown us that the amount of protein one requires is dependent upon their body size and work out program.

As a general rule you can calculate your protein needs by multiplying your weight in pounds by 0.4, 0.5, 0.6, 0.7 or 0.8.

You can estimate your protein need in grams per day by following the steps below:

Step 1 Review the descriptions and values of the following five activity levels and determine which type most accurately reflects your current activity level.
Sedentary No exercise, no heavy manual labour, work or job.
Value: 0.4
Mildly Active 30 minutes of fat burning aerobic exercise 5 to 7 times per week and no heavy manual labour, work or resistance training
Value: 0.5
Moderately Active 30 minutes of fat burning aerobic exercise program 5 to 7 times per week and weight training program 3 or more times per week or heavy manual labour job
Value: 0.6

More Advanced:Activity Level Minimum of 30 minutes of fat burning aerobic exercise 5 to 7 timer per week and 1 hour of high intensity weight training 5 or more times per week
Value: 0.7
Heavy Training More than 90 minutes of weight training 5 or more times per week with additional aerobic participation
Value: 0.8

Step 2 Determine your activity level type from Step 1, and write its assigned value here: (e.g., 0.5)

Step 3 Estimate your protein need in grams per day by multiplying your weight (lbs.) x the assigned value of your activity level type:
Your Weight (lbs.) x Assigned Value =

My protein requirement per day is _____
Now that you have identified your approximate protein needs in grams per day, become familiar with the following low fat, high–protein foods that are available. It is often difficult to attain your protein goal once you factor in your increased requirement imposed by exercise. Thus, many recreational and elite athletes consume low fat, low carbohydrate protein shakes and protein bars to make it easier to attain their protein requirement.

PROTEIN FOODS WITH LITTLE FAT

Food Portion	Gms of Protein	Food Portion	Gms of Protein
Chicken 3 oz.	27	Oysters 6 medium	15.1
Turkey 3 slices: 3 ½ x2 ¾ x 1 ¼	28	Egg white -one	7
Chicken ¼ broiled	22.4	Dairy Cottage Cheese 5-6 tbsp.	19.5
Most fish 3 oz.	20	1% Yogurt or 1% milk 8 oz.	8.5
Tuna ½ cup	15.9	Soy milk low-fat 8 oz.	4
Tuna 3 oz.	24	Soy cheese low-fat 1 oz.	7
Kidney Beans ½ cup	7.5	Rice ½ cup cooked	2.0
Corn ½ cup	2.5	Green beans ½ cup	1.0
Green peas ½ cup	4.0	Baked Potato 1 medium	3.0
White bread 1 slice	2.0	Whole Wheat bread 1 slice	3.0
Typical breakfast cereal 1 serving	2 – 4	Saltines 4 crackers	1.0
Tomatoes 1 medium	1.0	Banana 1 medium	1.1
Most fruits 1 serving	0.3 – 0.8	Bagel 1 medium	7
Pasta 1 cup cooked	7		

You now know how much protein you need per day to optimize your muscle growth and strength development. In a future article I will address the best sources of protein for muscle development, timing of protein intake; and other natural dietary means of creating anabolic drive and maximum muscular strength development.

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