

# Got Protein?

## What is protein?

Protein is an important part of life and nutrition; it is the substance that composes a large portion of your body's structure. Proteins are made up of amino acids arranged in different combinations. Next to water, protein is the most abundant substance in the human body. It is part of all body cells and is a vital building block in the growth, maintenance and repair of the body tissue.

## Why do I need protein in my diet?

Of the 20 amino acids that make up the proteins of the body, 9 are known as essential amino acids. These cannot be made by the body fast enough to meet its needs for growth and maintenance, so they must be obtained through your diet. Therefore, it is important for you to know how much protein you need. When a food contains all 8 essential amino acids, it is referred to as "complete". All animal-derived protein is complete.

## How much Protein do I need?

The amount of activity you exert in a day determines how much protein you need in your daily diet. Below is an equation to help calculate how much protein you should have in your diet.

### 1. Determine your protein activity factor:

Recreation/Sedentary	= 0.4 grams/lb of body weight
Light Daily Muscle Use	= 0.5 grams/lb of body weight
Runners/Heavy Sports	= 0.6 - 0.9 grams/lb of body weight



### 2. Calculate grams of protein needed each day:

(Body weight) x (Protein activity factor) = \_\_\_\_ Ex. 150 lbs. x 0.5 grams/lb. = 75 grams

## Should I use protein supplements?

It is quicker and easier to take a protein supplement than to buy and prepare food sources high in protein. However, protein supplements do not stimulate your body's processes as much as whole foods, and they are not cost effective. For example, a glass of milk contains more amino acids than half a scoop of typical protein powder or a ready to drink "shake", and costs half the price or less.

## What are some examples of foods that are high in protein?

Take a look on the back of this handout for many different protein ideas. Don't forget to take note of the serving size!

## What does a serving look like?

3 ounces of meat is about the size and thickness of a deck of cards. 1 ounce of cheese is about the size of 9-volt battery or piece of string cheese, ½ cup of fruit, vegetable or legumes is about the size of a racquetball.

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Food	Serving Size	Protein (g)
<b>Beef *:</b>		
Ground, lean	3.5 oz	24
Steak and other (lean) cuts	3 oz	23
<b>Poultry *:</b>		
Chicken, no skin	3 oz	26
Turkey, no skin	3 oz	24
Deli chicken/turkey slice	1 oz	7
<b>Seafood *:</b>		
Salmon, other fish	3.5 oz	25
Shrimp	3.5 oz	23
Tuna, water-packed, drained	6 ½ oz can	31
<b>Dairy and Eggs *:</b>		
Milk or skim milk	8 fl oz	8
Yogurt (~5 oz)/Greek yogurt (~5 oz)	1 container	5-14
Egg	1 egg	6
Cheese	1 oz	8
<b>Nuts, Beans and Seeds:</b>		
Tofu *	1/2 cup	7
Soy milk *	1 cup	9
Soy beans (edamame) *	1/2 cup	6
Beans, all types, cooked	1/2 cup	8
Hummus	1Tbsp	1
Lentils, cooked	1/2 cup	9
Almonds, Pistachios, cashews	1 oz	6
Peanuts	1 oz	7
Nut butters	2 Tbsp	8
Sunflower seeds, flax seed meal	1/4 cup	6
Chia seed*	2 Tbsp	4
<b>Grains and Cereals:</b>		
Kashi Go Lean	1 cup	13
Oatmeal, cooked	1 cup	6
Breads (Rye and Whole Wheat)	1 slice	4
Ezekiel bread *	1 slice	8
Quinoa, cooked *	1 cup	8
Brown Rice, cooked	1 cup	5
Buckwheat, cooked *	1 cup	6
<b>Vegetables and Fruits:</b>		
Most fruit	1 medium	1
Peas, carrots, beets, corn	1/2 cup	2
Spinach, cooked	1/2 cup	3
<b>Protein Powder:</b>		
Whey *	1 scoop	18-25
Casein *	1 scoop	20-24
Soy *	1 scoop	20-28
Hemp	1 scoop	12-15
Rice	1 scoop	11-17

\*Complete Protein: has all 9 essential amino acids