Protein has always been the least controversial macronutrient and yet there are many misconceptions surrounding it. Often, it is believed, especially by athletes and body builders, that eating more protein bulks you up. While it is true that in order to build new muscle you need more protein, you also need to increase resistance training, which requires additional carbohydrates for energy. Ideally the carbohydrates should be a combination of whole grains, pastas, beans, starchy vegetables and fruits and certainly an occasional sweet treat if so desired.

How much protein?

• Many factors determine protein needs: activity level, type, duration, intensity as well as frequency of the activity, gender, age, health goals and current health status.

• The protein RDA (Recommended Dietary Allowance) for healthy adults is 0.8 g/kg body weight, daily, but can range from 1.0 to 2.0 grams/kg body weight for athletes, which usually accounts for 10-15% of total calories. Caution: more is not necessarily better.

### Body Weight

<table>
<thead>
<tr>
<th>Pounds</th>
<th>Kilograms</th>
<th>Normal RDA (.8 g/kg)</th>
<th>1.3 g/kg</th>
<th>1.6 g/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td>50</td>
<td>40g</td>
<td>65g</td>
<td>80g</td>
</tr>
<tr>
<td>130</td>
<td>60</td>
<td>48g</td>
<td>78g</td>
<td>96g</td>
</tr>
<tr>
<td>155</td>
<td>70</td>
<td>56g</td>
<td>91g</td>
<td>112g</td>
</tr>
<tr>
<td>175</td>
<td>80</td>
<td>72g</td>
<td>104g</td>
<td>144g</td>
</tr>
<tr>
<td>200</td>
<td>90</td>
<td>80g</td>
<td>117g</td>
<td>160g</td>
</tr>
</tbody>
</table>

1.2-1.7 g/kg for power athletes (strength or speed)
1.2-1.4 g/kg for endurance athletes

### Common Protein Values

Here are general guidelines that can be used to determine protein value of foods. Notice that a “combination” of foods can easily allow you to meet your daily needs.

• **Medium Density Protein Foods** (3-7 grams/serving)
  Vegetables, Bread, Rice, Cereal

• **High Density Protein Foods** (8-30 grams/serving)
  Meat, Poultry, Fish, Soy Food, Eggs, Nuts, Milk, Yogurt, Cheese, Peanut Butter
What about protein supplements?
When possible you should strive to get the protein you need from the diet. Although you can go and buy amino acids (protein building blocks) at the local store, protein from food provides us with many other nutrients versus just supplementing protein alone. The sample meals below show that how you can easily reach higher levels of protein through the diet.

• This diet, although not completely balanced, would be an example of a relatively high protein diet, and would not be intended to be followed by everyone.

<table>
<thead>
<tr>
<th>Breakfast</th>
<th>Lunch</th>
<th>Dinner</th>
</tr>
</thead>
</table>
| • 2 hardboiled eggs (12g)  
• yogurt (6-10g) and fruit  
• 2 slice whole wheat toast with butter (6g)  
• orange juice | • 6 oz tuna sandwich with mayonnaise or other dressing (48g)  
• fruit  
• 1 pint of skim milk (16g) | • 7 oz roasted chicken (49g)  
• 1 cup cooked vegetables (2g)  
• 2/3 cup rice (6g)  
• 1 cup skim milk (12g) |

Add a 1/2 cup snack of nuts (12g) and a soy protein bar (10g), and you have a total of 183 grams of protein. The RDA for an athlete weighing 200 pounds is only 160 grams. As you can see, a balanced diet will give you all the protein you need even if you are a world-class athlete.

More recent research has shown the benefits of having milk or chocolate milk post workout (20 grams of protein) due to it’s unique combination of whey and casein (whey works quickly and casein is a bit more slow acting) to help with cellular repair. Both of these types of protein are found in dairy products.

Athlete’s appetites may be impacted by intensity and/or duration of their workouts thereby impacting their desire to eat. Drinking nutrients/calories is sometimes easier than eating, so protein shakes may be considered a good alternative in these types of circumstances.