

Protein Needs for Athletes

Athletes need protein primarily to repair and rebuild muscle that is broken down during exercise and to help optimize carbohydrate storage in the form of glycogen. Protein isn't an ideal source of fuel for exercise, but can be used when the diet lacks adequate carbohydrate. This is detrimental, though, because if used for fuel, there isn't enough available to repair and rebuild body tissues, including muscle.

Recommended Daily Protein Intake

- The average adult needs 0.8 grams per kilogram (2.2lbs) of body weight per day.
- **Strength training athletes** need about .6 to .8 grams per pound of body weight per day (1.4 to 1.8 grams per kilogram)
- **Endurance athletes need** about .4 to .6 grams per pound of body weight per day (1.2 to 1.4 grams per kilogram)

Example: 150lb athlete needs between 90 and 120 grams per day

How Much Protein is That?

Not much, as it turns out. Here is a list of some high protein foods.

Food, Amount and Protein

	Serving	Protein Amount
Fish	3 oz or 85grams	21 grams
Chicken	3 oz or 85 grams	21 grams
Turkey	3 oz or 85 grams	21 grams
Beef	3 oz or 85 grams	21 grams
Milk	8 oz = or 85 grams	8 grams
Tofu	½ cup (4 oz or 125ml)	10-12 grams
Greek Yogurt	¾ cup (6 oz or 175ml)	25-20 grams
Cottage Cheese	½ cup (4oz or 125ml)	12-15 grams
Cheese	3 oz or 85 grams	21 grams
Peanut butter	2 tbsp	8 grams
Eggs	2 large	13 grams

Strength athletes believe more protein is important to build muscle. It turns out that strength athletes actually require high carbohydrate intake and adequate glycogen stores to fuel their workouts. It is the strength training workout that leads to increased muscle mass and strength. This is because all high intensity, powerful muscle contractions (such as weight lifting) are fueled with carbohydrate. Neither fat nor protein can be oxidized rapidly enough to meet the demands of high-intensity exercise. Adequate dietary carbohydrate must be consumed daily to restore glycogen levels.

Carbohydrates and Strength Training / Snack Choices

TO MINIMIZE FAT STORAGE FOLLOW THESE RULES

1. **Eat complex carbohydrates**

Complex carbohydrates are found in whole foods like **brown rice, potatoes, whole grain cereal and oatmeal**. Complex carbohydrates should make up the bulk of your daily calorie intake because they form muscle glycogen, the long lasting fuel that your body needs to train hard. Complex carbohydrates are slow burning which means you get longer lasting energy. They also help keep your blood sugar levels constant, this reduces fat storage and fatigue and promotes the release of insulin which is essential for muscle development.

2. **Eat carbohydrates directly after training**

When you train hard you reduce your blood sugar level considerably. Eating carbohydrates straight after a training session provides your body with an insulin spike. This insulin spike puts your body into an anabolic (muscle building) state. This is why post workout nutrition is so important.

3. **Eat small amounts of carbohydrates more often**

Eating smaller servings of carbohydrates more often helps keep a steady flow of insulin into the body. If you eat large amounts of carbohydrates in one sitting your body is much more likely to store them as fat.

4. **Eat high fiber carbohydrates**

This goes hand-in-hand with point number 1 because most sources of complex carbohydrates are rich sources of fiber. Fiber helps to build muscle by making muscle tissue absorb amino acids faster and more efficiently.

5. **Limit fruits to 2-4 servings a day**

This may sound strange because we all know that fruit is high in vitamins, low in calories and very good for general health and wellbeing. But, fruit contains fructose which is a very simple sugar. The body converts fructose into glycogen which is used as a building block for fat tissue.

6. **Have carbohydrates and protein in the same meal**

When you mix protein and carbohydrates together in the same meal you minimize the chance of the carbohydrates being stored as fat. Protein is harder for the body to process, so it increases your metabolism. Also, carbohydrates help transport the nutrients from protein to the muscle cells which aids in muscle growth.

SNACK CHOICES TO MAXIMIZE YOUR TRAINING

EAT THIS.....	AMOUNT	WITH THAT...	AMOUNT
<i>Almond or Peanut Butter, Nuts, or Seeds</i>	<i>1 tbsp</i>	<i>Apple</i>	<i>1 medium</i>
<i>Plain Greek Yogurt</i>	<i>$\frac{3}{4}$ cup</i>	<i>Peach</i>	<i>1 large</i>
<i>Ham or Turkey Slices</i>	<i>3 slices</i>	<i>Celery*</i>	<i>5 stalks</i>
<i>Hard Cheese</i>	<i>1 oz/1 slice</i>	<i>Blueberries</i>	<i>1 cup</i>
<i>2% Cottage Cheese</i>	<i>$\frac{1}{2}$ cup</i>	<i>Baby Carrots*</i>	<i>1 cup</i>

** items are very low calorie choices so you can double the serving size of the "eat this" snack that you pair them with.*