Protein's Role As A Team Player

Protein has always been a particularly popular nutrient with athletes because of its role in building and maintaining muscles. Indeed, athletes need to consume a wide variety of high-quality protein foods in their diets. However, while protein is necessary for rebuilding and repairing muscles, it is not the primary fuel, and consuming more protein than what the body can use is not going to give athletes larger and stronger muscles. While research shows that protein requirements are higher for athletes to aid in muscle repair and growth, most athletes are already consuming more protein than the body can use. Use the following formulas as guidelines to ensure proper amounts of protein are included in your dietary intake.

Table 7: *DAILY PROTEIN RECOMMENDATIONS*

Type of Training	Grams (g) of Protein Recommended
Endurance	1.4-1.8 g of protein per kilogram of body weight
Strength (to gain muscle mass)	1.6-2.0 g of protein per kilogram of body weight
Strength (maintenance)	1.6-1.7 g of protein per kilogram of body weight
Weight Restricted	1.8-2.2 g of protein per kilogram of body weight

To calculate protein requirements per pound of body weight, use Table 8.

Table 8: *PROTEIN REQUIREMENTS IN GRAMS PER POUND OF BODY WEIGHT*

To calculate the amount of protein your body needs on a daily basis, simply take your body weight in pounds and multiply it by the appropriate recommendation. For example, the range of protein for a 84.1 kilogram (185 pound) soccer player is 118-143 grams daily.

Weight In Kilograms		Protein In Grams		Daily Protein Intake
84.1	x	1.4	=	118 g
84.1	x	1.7	=	143 g

Calculate your own protein needs. Refer to Table 7 to get the recommended grams of protein for your type of training, and calculate both the low and the high values to get a range of appropriate protein for your daily intake.

Weight In Kilograms		Protein In Grams		Daily Protein Intake
	x		=	
	x		=	

Table 9 provides additional information to translate this information into servings of protein-rich food.

Table 9: *PROTEIN CONTENT OF COMMONLY CONSUMED FOODS*

Food	Serving size	Grams of protein
Chicken breast	3 oz	22 g
Ground beef	3 oz	22 g
Broiled fish	3 oz	20 g
Cottage cheese	1/2 cup	12 g
Greek yogurt	8 oz	25 g
Cooked lentils	1/2 cup	9 g
Cooked black beans	1/2 cup	8 g
Milk	1 cup	8 g
Peanut butter	2 tbsp	7 g
String cheese	1 oz	7 g
Extra firm tofu	3 oz	8 g
Egg	1 large or 2 egg whites	6 g
Mixed nuts	1/4 cup	5 g
Cooked quinoa	1 cup	8 g
Whole wheat bread	1 slice	3 g

Protein After Exercise

The body's ability to recover from games, practices, or intense workouts requires adequate rest and proper nutrition. An important component of the recovery process is consuming both carbohydrates and protein shortly after exercise to restore muscle glycogen and stimulate muscle protein synthesis.

EAT

Keep in mind that food is fuel and athletes should not come to practice or games without having had enough food to support the energy requirements for their sport. To keep athletes properly fueled and have their protein needs met, use the **EAT** guidelines:

Eat breakfast. It is the best way to start the day well fueled. Include foods that contain carbohydrates and protein, such as nonfat milk, yogurt, or eggs.

Add carbohydrates and protein to post-exercise meals. Some energy bars provide carbohydrates to replenish muscle glycogen stores and protein to help build and repair muscles.

Toss the supplements. Athletes should rely on protein from food sources first, instead of supplements. This helps ensure that diets are balanced for health and performance. In addition to meat sources of protein, dairy products, nuts, and seeds are all rich sources of protein and can easily be added to any meal or snack.

Building Body Mass

Many athletes want to add more bulk to their bodies in the form of lean muscle. Many supplement products claim to build muscles. Athletes should take special caution when considering supplementation (please see Supplements and Your Health section for additional information and cautions). Due to the limited regulations of the dietary supplement industry, there is a risk of products being contaminated with sport-prohibited or unknown substances with or without the manufacturer knowing. There is no guarantee that the product contents match with those listed on the label. Taking a lot of extra protein either from supplements or food does not guarantee bigger muscles. If it did, athletes could spend time lounging instead of lifting to build muscle.

The following are healthy ways to build muscle:

- *Follow a strength training program that challenges muscles.*
- *Add 500 to 1,000 more calories each day to current dietary intake, to allow the body to use protein already present in the diet for muscle growth and not be broken down to fuel activity.*
- *Eat foods that are both high in carbohydrates and proteins like grilled chicken sandwiches, peanut butter sandwiches, and Greek yogurt with granola.*
- *Choose low-fat sources of both carbohydrates and protein. For example, choose a baked potato over French fries, or grilled chicken over fried chicken.*
- *Eat protein throughout the day to best support muscle growth. Aim for 0.3 grams/kilogram of body weight, or about 15-20 grams of protein, every 3-4 hours.*