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### NF92-74 Nutrition and the Athlete: Protein Needs

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## Nutrition and the Athlete *Protein Needs*

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*The following information explores some of the misconceptions about athletes' protein needs. In spite of current knowledge about protein use in the body, there is still an improper belief that protein supplements will result in a more well-muscled and efficient body. Please read on for an update on protein needs for athletes.*

**Misconception:** Extra protein from foods or use of protein supplements will help increase muscle strength.

**Response:** Protein is made of small building units called amino acids. In the body amino acids are used to make structural tissue (muscle, bone, skin), enzymes, some of the hormones, and neurotransmitters. Even though amino acids are critical for making these very important body protein elements, extra amounts of amino acids will not build muscle strength. If more protein is provided to the body than needed, the extra will be used as energy or stored as fat. *Training and hard work on the muscles are responsible for building strength.*

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**Misconception:** Because of exercise, athletes need to reinforce their diets with extra protein.

**Response:** The usual recommendation for protein is to provide approximately 0.8 gram of protein per kilogram of body weight for a normal, healthy adult. Children and adolescents who are growing have a slightly higher need for protein than adults. Athletes, due to their regular daily activity that can affect muscle maintenance and repair, may need slightly more protein than non-exercisers. Research suggests endurance athletes may need from 1.2 to 1.4 g protein per kilogram body weight. Athletes who are involved in very intense strength training may need up to 1.7 protein per kilogram of body weight. In the United States, diets contain enough protein to meet these levels, as long as enough energy is consumed to protect protein from being used as an energy source.

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**Misconception:** Since muscle is made of protein, athletes should take protein supplements.

**Response:** Even if an athlete's need for protein is slightly greater than normal needs, protein supplements are not necessary.

Let's put this in perspective. A 150-pound athlete (70 kg) who may need 1.5 grams of protein per kilogram of body weight would want to eat about 105 grams of protein daily. *Four cups of milk, 10 servings of bread, pasta, cereal or starchy vegetables, and two 3-4 ounce servings of lean meat would be one way to meet these protein needs.*

How could this amount of food be eaten in a day? A bowl of cereal and 2 slices of toast in the morning will equal 3 bread or cereal servings. Two sandwiches at lunch equal another 4 servings of bread. Three more servings of bread or its equivalent can easily be eaten as a large serving of pasta and some garlic bread in the evening. You're now at 10 servings of bread or cereal products and we haven't even talked about snacks!

And what about the servings of lean meat and milk? A moderate-sized ground beef patty, half a chicken breast or a medium-sized pork chop are all roughly equal to 3 or 4 ounces. (A 3-ounce portion of meat is approximately the size of a deck of cards.) Four cups of milk can be spread throughout the day. You could select lowfat yogurt or cheeses to replace part of fluid milk intake if you wish.

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**Misconception:** Athletes should get extra protein for insurance. After all, there's no danger in getting too much protein.

**Response:** There are slight risks associated with getting too much protein. Extra protein makes more work for the liver and kidneys, which have to handle the extra nitrogen from the amino acids. This can lead to an increased risk for liver and kidney problems in later years. Also, more water will be needed to help the kidneys handle the workload of excreting nitrogen as urea so there is a greater risk for dehydration.

## Resources

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