

Title: Protein Supplementation for Exercise

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Abstract:

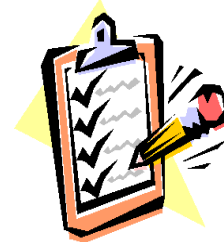
This document addresses protein supplementation for athletes. It covers some of the potential side effects. It also addresses the issue of if and when protein supplementation is helpful, and what benefits a person could expect from using protein supplements. Specifically, protein supplements may be most helpful for people who exercise at a moderate to extreme intensity on consecutive days. Compared to people who don't take protein supplementation, people who use protein supplements during consecutive days of moderate to extreme exercise may have less fatigue, maintain more muscle strength throughout their exercise, and continue their exercise for longer periods of time before exhaustion. They also have less muscle breakdown products in their blood.

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Protein Supplementation for Exercise

What are protein supplements?

Protein supplements are made up of small molecules called “amino acids”. These amino acids provide the building blocks for growing new muscle. They also may



provide an energy source during strenuous or prolonged exercise. Some specific amino acids may even stimulate muscle cells to grow.

Isn't there protein already in the food I eat?

Yes. In fact the American Dietetic Association does not endorse any protein supplementation. They feel that a well rounded diet will provide all the protein a person needs. The average adult will get enough protein with 2-3 servings of protein a day. Even so, many athletes feel that protein supplementation may help provide a slight competitive edge.

Proteins



Interesting Facts

The following are the recommended serving sizes for protein:

- 2 to 3 ounces of cooked lean meat, poultry, or fish (a portion about the size of a deck of

playing cards)

- 1/2 cup of cooked dried beans
- 1 egg, 2 tablespoons of peanut butter, or 1 ounce of cheese

Is protein supplementation dangerous?

Protein supplements are relatively safe in healthy young athletes. Some users may experience diarrhea or stomach cramps from using them though.

Is protein supplementation illegal?

No, unlike anabolic steroids and Human Growth Hormone, protein supplementation is not illegal. In fact no sports governing agencies currently prohibit protein supplements.

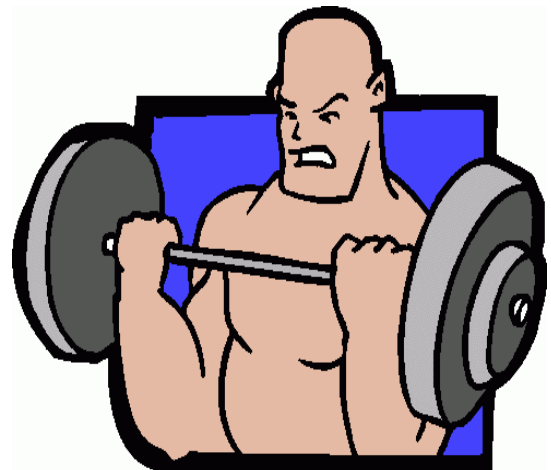
How helpful is protein supplementation?

This is a tough question to answer. Protein supplementation appears to help different people

differently and the benefit depends on how much the person exercises.

It appears that protein supplementation may be helpful in people who strenuously exercise on consecutive days. These people may notice the following benefits with protein supplementation:

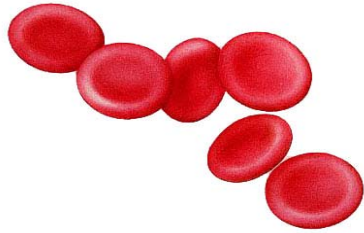
- 1it takes longer to become exhausted while exercising
- 2less fatigue after exercising



3less muscle weakness immediately after exercising.

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On the other hand, many people do not exercise often enough and at high enough levels to notice any benefit with protein supplements. In these people a well rounded diet provides enough protein for muscle recovery.



Interesting Fact

When muscles are damaged they release a molecule called “Creatine Kinase” into the blood. Athletes who take protein supplements release less Creatine Kinase into their blood after exercising. This may be because they have less muscle breakdown!