

Highlands Performance Volleyball Nutrition: Jennifer Egeland, MS, RND, LD

Protein and the Athlete – How Much Do You Need?

Overall Diet

While protein is critical in building muscle mass, more is not necessarily better. Eating large amounts of lean protein will not equate with a toned body. When determining protein requirements for athletes, it's important to look at the athlete's overall diet. During periods of both rest and activity, protein contributes about 10 percent of the total fuel an athlete's body uses. The remaining fuel used is made up of carbohydrates and fat. Athletes who consume diets adequate in both these nutrients end up using less protein for energy than those who consume a higher protein diet. This means that protein can go toward preserving lean body mass (i.e. that lean physique). So in order to retain muscle, athletes need to ensure they are also meeting needs for carbs and fat, not just protein.

Activity

Muscle growth happens only when exercise and diet are combined.

For example, research has shown that timing of protein intake plays a significant role. Eating high-quality protein (such as eggs, dairy or soy) immediately after exercise — either by itself or with a carbohydrate — enhances muscle creation.

Recommendations

The Academy of Nutrition and Dietetics, Dietitians of Canada and the American College of Sports Medicine recommend the following for power and endurance athletes, based on body weight:

- Power athletes (strength or speed): 1.2 to 1.7 grams/kilogram a day
- Endurance athletes: 1.2 to 1.4 grams/kilogram a day

For an adult male athlete, that's about 84 to 119 grams of protein a day; for adult females about 66 to 94 grams.

By comparison, a sedentary adult male needs about 56 grams of protein a day; for females it's about 46 grams.

Are Powders and Supplements Needed?

Most athletes can get the recommended amount of protein through diet alone, without the use of supplements. Protein powders and protein supplements are great for convenience, but are not necessary, even for elite athletic performance. Athletes should only rely on protein powders when they need immediate protein right after a workout and don't have time for a meal. Whole foods are always best, but sometimes it is more realistic for a busy athlete to get a convenient protein shake than not food at all.