

# SportsNutrition

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## The Athlete's Kitchen

Protein is a hot topic among athletes of all sports. They want to know how much protein they need, when they should eat it, what's the best kind of protein, and if they should buy sports drinks with protein. The purpose of this article is to answer some of these questions and leave you with this message: While adequate protein is important in your sports diet, protein should be the accompaniment to carbs (grains, fruits, vegetables) in each meal and snack.

**Q. I've been eating egg whites for breakfast. I've heard they are an excellent source of high quality protein, right?**

**A.** Yes, egg whites offer high quality, muscle building protein. But take note: egg whites are mostly water, and are not "packed with protein." A 3-egg white omelet has only about 10 grams of protein. You could more easily swig 10 ounces skim milk and skip the cooking and dishwashing.

A whole egg has about 6 grams protein, and is rich in vitamins and minerals. The yolk is cholesterol-rich; the debate continues whether or not the cholesterol you eat affects your blood cholesterol and heart-health. Likely not.

Better than eggs or egg whites, choose health-protective oatmeal for breakfast. Cook it with skim milk (instead of water). If you want more protein, add almonds, walnuts and/or a quarter-cup of powdered milk.

**Q. I've been weight lifting for several years. Do I still need a high protein diet?**

**A.** In the early stages of training, your protein needs are higher than when you have established a stable muscle mass. Once you have built muscle, your protein needs return to the standard requirements. Yet, most strength-trained athletes habitually eat a high protein intake, and this becomes a moot point. Research suggests resistance exercise enhances the way your body uses the protein you eat; this actually results in greater efficiency and a reduced protein requirement. (Campbell, 2007)

**Q. How many protein bars per day are too many?**

**A.** To start, you need to determine how much protein your body needs and then assess how much protein you eat via your standard diet. Most athletes eat more than enough protein without supplements! To estimate your daily needs, multiply your weight by 0.5-0.75 g protein/pound (1.0-1.5 g/kg). If you are restricting calories or are a novice exerciser who is building new muscles, your protein needs are a little higher, but 1 g/lb (2 g/kg) is more than enough! Example:

- If you weigh ~120 lbs, target ~60-90 grams protein; 90-120 grams if dieting or starting to lift weights seriously.
- If you weigh ~160-lbs, target ~80-120 grams; 120-180 grams if dieting or starting to lift weights seriously.

To determine how much protein you eat at meals, use the information on food labels and/or analyze your diet at [www.fitday.com](http://www.fitday.com) or [www.sparkpeople.com](http://www.sparkpeople.com).

Once you know how much protein you eat at meals and snacks, you can then determine how many protein bars you need. (Likely none!) That is, if your diet offers 100 g protein and you need only 90 g, there's no need to buy a protein bar. The athletes most likely to benefit from protein bars are dieters who restrict calories (including dancers, runners, wrestlers, gymnasts), vegetarians, and picky eaters.

**Q. I'm a vegetarian and wonder if I am getting enough protein to support my training for a half-Ironman.**

**A.** Many vegetarians who think they eat well are surprised to learn how little protein they consume. For example, a

## Protein for Athletes

petite vegetarian who may need about 55 g protein per day might base her meals on these plant-proteins for the day: a dallop of hummus (4 g protein), a Boca burger (13 g) and a quarter-cake of tofu (9 g). Yes, she gets a bit more protein from the grain foods and veggies that round out her meals, but she would be wise to double those protein portions!

Getting enough protein is particularly important if you are restricting your calories to lose weight. Protein needs jump when calories are low because the protein gets burned for fuel rather than get used for building or repairing muscle. If you are concerned about your protein intake, meet with a certified specialist in sports dietetics for personalized advice. (For a referral network: [www.SCANDpg.org](http://www.SCANDpg.org))

**Q. Should I use a sports drink with protein during my endurance runs that last longer than an hour?**

**A.** If your goal of taking a sports drink with protein (such as Accelerade or Amino Vital) during an endurance event is to enhance your performance, don't bother. Endurance is largely affected by how many calories you consume while you exercise. Studies that look at protein+carbs during endurance exercise indicate when the total calorie intake is similar, the proposed endurance benefits are not there.

A good tactic is to eat a tried-and-true well tolerated carb-protein snack or meal before you embark on a long run or other form of endurance exercise, to get protein into your system. That is, enjoy some pre-exercise cereal with milk, bagel with an egg, a swig of lowfat chocolate milk. Then after the first hour of exercise, consume ~200-300 cal/hour during endurance exercise. Choose the sports beverage that tastes best to you. Soon afterwards, have a wholesome protein+carb snack or meal, to help reduce muscle soreness.

**Q. I know I should eat a 4 to 1 ratio of carbs to protein right after I exercise, but I don't know what that looks like in terms of food. So I buy Accelerade to be sure I get the right ratio. Are there other options?**

**A.** Commercial recovery drinks are more about convenience than necessity. You can enjoyably refuel with chocolate milk, yogurt, a sandwich or pasta with meat sauce. The ratio need not be exact; the concept is your plate or glass should be mostly filled with carbs, with a little protein alongside.

Also, whether or not a protein-carb sports beverage is superior to a carb-only beverage remains debated. In a recent study (Green, 2008) in which athletes drank either a carb or a carb-protein recovery drink immediately after muscle-damaging downhill running, both beverages offered a similar recovery process over the course of three days. The authors conclude the meals in those post-exercise days supplied the protein and carbs needed to recover. Yet, a six-day study with college cross-county runners reported those who took a carb+pro supplement experienced less muscle soreness than those who took only carbs. (Luden, 2007)

*The bottom line:* You won't go wrong by refueling soon after exercise with a carb-protein combination. If you prefer engineered foods for convenience, fine. But if you prefer the wholesome goodness of chocolate milk, go for it!

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### Thick and Frosty Milk Shake

Here's a thick and tasty milk shake recipe from the new *Nancy Clark's Sports Nutrition Guidebook, Fourth Edition* (2008). The shake is a tasty carbo-protein combination and makes a welcomed recovery food.

The instant pudding adds a thick texture; the ice cubes make it frosty and refreshing. It's a healthful alternative to standard milk shakes made with ice cream and an enjoyable way to boost not only your protein and calcium intake, but also reduce post-exercise muscle soreness.

By varying the flavor of the pudding (vanilla, lemon, chocolate), you can create numerous variations. You can also add fruit (preferably frozen chunks) for extra nutritional value.

Note: The shake thickens upon standing; you can add more (or less) pudding mix, depending on how thick you like your shakes. If there are pieces of ice cubes remaining in the shake, worry not-they'll just keep the beverage cool.

1 cup milk, skim or lowfat  
1/4 cup instant pudding  
1/4 cup powdered milk  
3 ice cubes

Optional: 1/2 to 1 cup (frozen) fruit chunks

1. Place all ingredients in a blender, and blend until smooth.

Yield: 1 serving

Nutrition Information

280 total calories; 55 g carbohydrate; 15 g protein; 0 g fat

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