

Athletes: What to Eat and When for Top Performance

By [Nancy Clark](#), MS RD CSSD

For [Active.com](#)

Hot off the press from three prominent nutrition and exercise associations—the American Dietetic Association, American College of Sports Medicine, and Dietitians of Canada—is the 2009 Joint Position Stand on Nutrition for Athletic Performance.

While there is little earth-shattering news in this comprehensive document (available on www.eatright.org), the authors comprehensively reviewed the research to determine which sports nutrition practices effectively enhance performance. Here are a few key points on what and when to eat to perform at your best.

1. Don't [weigh](#) yourself daily! What you weigh and how much body fat you have should not be the sole criterion for judging how well you are able to perform in sports. That is, don't think that if you get to XX percent body fat, you will run faster. For one, all techniques to measure body fat have inherent errors. (Even BodPod can underestimate percent fat by two to three percent.) Two, optimal body fat levels depend on genetics and what is optimal for your unique body. Pay more attention to how you feel and perform than to a number on the scale.

2. Protein recommendations for both endurance and strength-trained athletes range from 0.5 to 0.8 grams per pound (1.2-1.7 g/kg) body weight. For a 150-lb. athlete, this comes to about 75 to 120 g protein per day, an amount most athletes easily consume through their standard diet without the use of protein supplements or amino acid supplements. Vegetarian athletes should target ten percent more, because some plant proteins (not soy but legumes) are less well digested than animal proteins.

If you are just starting a weight-lifting program, you'll want to target the higher protein amount. Once you have built-up your muscles, the lower end of the range is fine.

3. Athletes in power sports need to pay attention to carbohydrates, and not just protein. That's because strength training depletes muscle glycogen stores. You can deplete about 25 percent to 35 percent of total muscle glycogen stores during a single 30-second bout of resistance exercise.

4. Athletes who eat enough calories to support their athletic performance are unlikely to need vitamin supplements. But athletes who severely limit their food intake to lose weight (such as wrestlers, lightweight rowers, gymnasts), eliminate a food group (such as dairy, if they are lactose intolerant), or train indoors and get very little sunlight (skaters, gymnasts, swimmers) may require supplements.

5. If you are vegetarian, a blood donor, and or a woman with heavy menstrual periods, you should pay special attention to your iron intake. If you consume too little iron, you can easily become deficient and be unable to exercise energetically due to anemia. Because reversing iron deficiency can take three to six months, your best bet is to prevent anemia by regularly eating iron-rich foods (lean beef, chicken thighs, enriched breakfast cereals such as Wheaties and Total) and including in each meal a source of vitamin C (fruits, vegetables).

6. Eating before hard exercise, as opposed to exercising in a fasted state, has been shown to improve performance. If you choose to not eat before a hard workout, at least consume a sports drink (or some source of energy) during exercise.

7. When you exercise hard for more than one hour, target 30 to 60 grams (120 to 240 calories) of carbohydrate per hour to maintain normal blood glucose levels and enhance your stamina and enjoyment of exercise. Fueling during exercise is especially important if you have not eaten a pre-exercise snack. Popular choices include gummi candy, [jelly beans](#), dried fruits, as well as gels and sports drinks. More

research is needed to determine if choosing a sports drink with protein will enhance endurance performance.

8. For optimal recovery, an athlete who weighs about 150 pounds should target 300 to 400 calories of carbs within a half-hour after finishing a hard workout. More precisely, target 0.5-0.7 g carb/lb (1.0-1.5 g carb/kg). You then want to repeat that dose every two hours for the next four to six hours. For example, if you have done a rigorous, exhaustive morning workout and need to do another session that afternoon, you could enjoy a large banana and a vanilla yogurt as soon as tolerable post-exercise; then, two hours later, a pasta-based meal; and then, another two hours later, another snack, such as pretzels and orange juice.

9. Whether or not you urgently need to refuel depends on when you will next be exercising. While a triathlete who runs for 90 minutes in the morning needs to rapidly refuel for a three-hour cycling workout in the afternoon, the fitness exerciser who works out every other day has little need to obsess about refueling.

10. Including a little protein in the recovery meals and snacks enhances muscle repair and growth. Popular carb+protein combinations include chocolate milk, yogurt, cereal+milk, pita+hummus, beans+rice, pasta+meat sauce.

11. Muscle cramps are associated with dehydration, electrolyte deficits and fatigue. Cramps are most common in athletes who sweat profusely and are "salty sweaters." They need more sodium than the standard recommendation of 2,400 mg/day. Losing about two pounds of sweat during a workout equates to losing about 1,000 mg sodium. (Note: eight ounces of sport drink may offer only 110 mg sodium.) Salty sweaters (as observed by a salty crust on the skin of some athletes) lose even more sodium. If that's your case, don't hesitate to consume salt before, during and after extended exercise. For example, enjoy broth, pretzels, cheese & crackers, pickles and other sodium-rich foods. The majority of active people can easily replace sweat losses via a normal intake of food and fluids.

Final Words of Advice

If you can make time to train, you can also make time to eat well and get the most out of your training. Optimal sports performance starts with good nutrition!