



# Fueling Ultraendurance Athletes

## Fueling Your Sport

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- For both training and competition in ultraendurance events, athletes need a lot of calories to stay energized. For the Ironman triathlon, an athlete may need 8,500 to 11,500 calories in training and competition. An Ironman triathlete typically spends 18 to 24 hours each week in training, and a typical week includes 7 miles of swimming, 225 miles of biking, and 48 miles of running.
- Ultraendurance athletes need to drink fluids and eat foods during events to avoid "hitting the wall."
- Ultraendurance athletes need to choose foods that will give them energy for the entire competition, including the sprints and the final push to the finish line. The right balance of carbohydrates, protein, and fat is very important.
- Ultraendurance athletes need to eat 3.2 to 4.5 grams of carbohydrate per pound of body weight per day (7-10 g/kg/day). The amount of carbohydrate needed is determined by the level of training:
  - 3.2 grams per pound of body weight (7 g/kg) for 1 hour of training per day
  - 3.6 grams per pound of body weight (8 g/kg) for 2 hours of training per day
  - 4.5 grams per pound of body weight (10 g/kg) for 3 to 4 hours of training per day
- Ultraendurance athletes need 0.55 to 0.8 grams of protein per pound of body weight per day (1.2-1.7 g/kg/day). Good sources of protein include fish, chicken, turkey, beef, low-fat milk, cheese, yogurt, eggs, nuts, and soy foods (tofu, soy nuts, and soy burgers.)
- Ultraendurance athletes need at least 0.45 grams of fat per pound of body weight per day (1 g/kg/day). Choose heart-healthy fats, such as canola oil, olive oil, and nuts.

## Fluid Needs

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- Good hydration allows you to train and compete at a high intensity. It also protects against cramping and heat illness.
- Two hours before exercise, drink 2 cups of fluid.
- When you work out or compete, drink enough to replace fluids lost in sweat.
- To figure out how much fluid you lose in an hour of activity, weigh yourself before and after each training session under simulated race conditions. Each pound of weight loss is equal to 2 cups of fluid. Follow a fluid plan to replace losses on an hourly basis. If you lose 2 pounds per hour, you should drink 1 cup of fluid every 15 minutes.
- After exercise, drink at about 3 cups of fluid for every pound lost.
- You lose 1 gram of sodium for every 2 pounds of sweat loss. To avoid hyponatremia (low blood sodium levels), choose sport drinks instead of water and salt your food at mealtimes.

## Supplements Commonly Used by Ultraendurance Athletes

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- Never use any supplement in competition unless you have tried it first in training.
- Caffeine stimulates your central nervous system and can make exercise seem easier. To get the desired effect from caffeine, try a dose of 2.3 to 2.7 milligrams per pound of body weight (5 to 6 milligrams/kg). For a 150-pound athlete, that equals 340 to 400 milligrams of caffeine. You can get this amount from a large (16-ounce) cup of coffee.

- If you don't normally consume beverages with caffeine, caffeine can make you jittery and anxious, and cause insomnia.
- Glycerol is used by some ultraendurance athletes because it holds water like a sponge. It may increase the body's ability to retain fluids, which is beneficial during long events. However, glycerol can cause nausea, bloating, and headaches.
- Branched-chain amino acids (BCAA) are included in some recovery drinks because it has been suggested that BCAA prevents muscle breakdown and delays fatigue in long-distance events.
- The suggested dose of BCAA is 5 to 20 grams per day, taken in divided portions during exercise.
- BCAA can also be found in some sport drinks. These usually include 1 to 7 grams of BCAA per quart.
- If you try BCAA, start using it in training, not during competition. And remember that eating enough carbohydrate is just as effective as using BCAA.

### Top Three Nutrition Tips for Improving Performance

**1. Eat enough calories and carbohydrates to fuel your body.** Training for an ultraendurance event is grueling. Without proper attention to what you eat, you will not be able perform at your best. A sports dietitian can help you create a food plan to help peak performance.

**2. Stay hydrated.** Figure out how much fluid you lose when you're training or competing, and plan an hourly drinking schedule to replace losses. Drink on schedule, not just when you feel thirsty.

**3. Limit high-fiber foods during the event.** Eating foods too high in fiber immediately before or during an event can cause bloating and cramping, and lead to frequent bathroom stops. Stick to foods that are easy to digest and that you have tested in training.

#### Nutrition Prescription:

\_\_\_\_\_ calories per day  
 \_\_\_\_\_ grams of carbohydrate per day  
 \_\_\_\_\_ grams of protein per day  
 \_\_\_\_\_ grams of fat per day  
 \_\_\_\_\_ cups of fluid per day

Special concerns: