



Fueling Cyclists

Fueling Your Sport

- The amount of calories you need depends on the type of cycling (track cycling, road racing, or mountain biking), the intensity and duration of your training, and your body size. In 1 hour of cycling, you can burn 375 to 600 calories. Competitive cyclists usually train 15 to 24 hours per week.
- Road racing is mostly an endurance event. Racing can last for more than 1 hour to several days. During long periods of activity, the body mostly uses energy systems fueled by oxygen. However, road cyclists also need bursts of speed for sprints or to power up hills. For these short periods of speed, the body calls upon the anaerobic energy system (the system that doesn't use oxygen to fuel muscles).
- Track and mountain cyclists require more power than road cyclists because track and mountain races last only seconds or a few minutes. The calorie needs of track and mountain cyclists are more similar to the needs of strength and power athletes than the needs of endurance athletes.
- Cycling at speeds of 14 to 16 miles per hour requires about 4.5 calories per pound of body weight per hour (10 calories/kg/hour).
- Cycling at 16 to 19 miles per hour requires about 5.5 calories per pound per hour (12 calories/kg/hour).
- Cycling at more than 20 miles per hour requires about 7.3 calories per pound per hour (16 calories/kg/hour).
- Road cyclists burn about 600 to 900 calories per hour of cycling.
- Cyclists should get most their calories from carbohydrate. You need 2.7 to 4.5 grams of carbohydrate per pound of body weight per day (6 to 10 g/kg/day). In the Tour de France, cyclists eat an average of 850 grams (or

3,400 calories) of carbohydrate per day, and they eat half of this amount while they race. Good sources of carbohydrate include whole grain breads and cereals, fruits, vegetables, and sport drinks. Many cyclists find it convenient to choose energy bars or gels when they are on the bike.

- Cyclists need 0.6 to 0.8 grams of protein per pound of body weight per day (1.2 to 1.7 g/kg/day). Good sources of protein include fish, chicken, turkey, beef, low-fat milk, cheese, yogurt, eggs, nuts, and soy.
- Cyclists should eat 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

- It can be challenging to get enough fluids when you race. Road cyclists can only carry two water bottles and can only get additional fluids at special "feed zones" along the course. In road cycling and mountain biking, taking one hand off the bike to drink can lead to disaster! Even so, you need to be sure to drink enough.
- Ask a sports dietitian to help you figure out your sweat rate so you can create a fluid plan that meets your needs.
- As a general rule, drink a standard cyclist's water bottle (20 ounces) before the ride; drink $\frac{1}{4}$ bottle every 15 minutes while you ride; and drink $1\frac{1}{2}$ to 2 bottles after the ride.
- Put four evenly spaced marks on your water bottle to help you judge how much you are drinking.
- Experiment with a back-mounted water system if you sweat a lot and have trouble getting enough fluids as you ride.

Supplements Commonly Used in Cycling

Banned Substances

- Competitive cyclists should know which substances have been banned by the International Olympic Committee (IOC).
- Erythropoietin, a red blood cell-boosting drug, is a banned substance. Experimentation with this drug is dangerous. Many elite cyclists have died from using this drug.
- Steroids are also banned by IOC.
- Diuretics are banned because some athletes use these to mask steroid use. This practice is dangerous as it can lead to dehydration.

Energy Bars, Gels, and Drinks

- Energy bars, gels, and drinks can boost calorie intake and can be eaten on the bike.
- When choosing an energy bar, look for one that gets most of its calories from carbohydrate, not from protein or fat.
- Find an energy bar that tastes good to you, and try eating it in training before competition. Never try anything new during a race.
- If you use gels, remember that they are concentrated carbohydrates that should be washed down with fluids.

Top Three Nutrition Tips for Improving Performance

1. **Choose carbohydrate-rich foods or fluids right after races.** Carbohydrates help your body recover and prepare for the next stage of the competition. Try liquid recovery drinks (for example, Gatorade Energy Drink, Twin Labs Carbo Fuel), an energy bar, or foods like bananas, oranges, crackers, or bagels to refuel your muscles.

2. **Drink sport drinks.** Many cyclists drink de-fizzed cola drinks, but sport drinks provide sodium that soft drinks do not. Sport drinks are also made to quickly move fluid from your gut and into your bloodstream and to your muscles.

3. **Pick a food plan that provides enough calories and nutrients for fuel.** Cyclists like to be lean so they have less mass to move on the bike, but you need to maintain a healthy body weight. Drastic dieting may let you lose weight, but it will also hurt your performance.

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: