

*Questions  
Most  
Frequently  
Asked  
About*

**Sports  
Nutrition**

## *What diet is best for athletes?*

It's important that an athlete's diet provides the right amount of energy, the 50-plus nutrients the body needs and adequate water. No single food or supplement can do this. A variety of foods are needed every day. But, just as there is more than one way to achieve a goal, there is more than one way to follow a nutritious diet.

## *Do the nutritional needs of athletes differ from non-athletes?*

Competitive athletes, sedentary individuals and people who exercise for health and fitness all need the same nutrients. However, because of the intensity of their sport or training program, some athletes have higher calorie and fluid requirements. Eating a variety of foods to meet increased calorie needs helps to ensure that the athlete's diet contains appropriate amounts of carbohydrate, protein, vitamins and minerals.

## *Are there certain dietary guidelines athletes should follow?*

Health and nutrition professionals recommend that 55-60% of the calories in our diet come from carbohydrate, no more than 30% from fat and the remaining 10-15% from protein. While the exact percentages may vary slightly for some athletes based on their sport or training program, these guidelines will promote health and serve as the basis for a diet that will maximize performance.

## *How many calories do I need a day?*

This depends on your age, body size, sport and training program. For example, a 250-pound weight lifter needs more calories than a 98-pound gymnast. Exercise or training may increase calorie needs by as much as 1,000 to 1,500 calories a day. The best way to determine if you're getting too few or too many calories is to monitor your weight. Keeping within your ideal competitive weight range means that you are getting the right amount of calories.

## *Which is better for replacing fluids-water or sports drinks?*

Depending on how muscular you are, 55-70% of your body weight is water. Being "hydrated" means maintaining your body's fluid level. When you sweat, you lose water which must be replaced if you want to perform your best. You need to drink fluids before, during and after all workouts and events.

Whether you drink water or a sports drink is a matter of choice. However, if your workout or event lasts for more than 90 minutes, you may benefit from the carbohydrates provided by sports drinks. A sports drink that contains 15-18 grams of carbohydrate in every 8 ounces of fluid should be used. Drinks with a higher carbohydrate content will delay the absorption of water and may cause dehydration, cramps, nausea or diarrhea. There are a variety of sports drinks on the market. Be sure to experiment with sports drinks during practice instead of trying them for the first time the day of an event.

## *What are electrolytes?*

Electrolytes are nutrients that affect fluid balance in the body and are necessary for our nerves and muscles to function. Sodium and potassium are the two electrolytes most often added to sports drinks. Generally, electrolyte replacement is not needed during short bursts of exercise since sweat is approximately 99% water and less than 1% electrolytes. Water, in combination with a well-balanced diet, will restore normal fluid and electrolyte levels in the body. However, replacing electrolytes may be beneficial during continuous activity of longer than 2 hours, especially in a hot environment.

## *What do muscles use for energy during exercise?*

Most activities use a combination of fat and carbohydrate as energy sources. How hard and how long you work out, your level of fitness and your diet will affect the type of fuel your body uses. For short-term, high-intensity activities like sprinting, athletes rely mostly on carbohydrate for energy. During low-intensity exercises like walking, the body uses more fat for energy.

## *What are carbohydrates*

Carbohydrates are sugars and starches found in foods like breads, cereals, fruits, vegetables, pasta, milk, honey, syrups and table sugar. Carbohydrates are the preferred source of energy for your body. Regardless of origin, your body breaks down carbohydrates into glucose that your blood carries to cells to be used for energy. Carbohydrates provide 4 calories per gram, while fat provides 9 calories per gram. Your body cannot differentiate between glucose that comes from starches or sugars. Glucose from either source provides energy for working muscles.

## *Is it true that athletes should eat a lot of carbohydrates?*

When you are training or competing, your muscles need energy to perform. One source of energy for working muscles is glycogen which is made from carbohydrates and stored in your muscles. Every time you work out, you use some of your glycogen. If you don't consume enough carbohydrates, your glycogen stores become depleted, which can result in fatigue. Both sugars and starches are effective in replenishing glycogen stores.

## *When and what should I eat before I compete?*

Performance depends largely on the foods consumed during the days and weeks leading up to an event. If you regularly eat a varied, carbohydrate-rich diet you are in good standing and probably have ample glycogen stores to fuel activity. The purpose of the pre-competition meal is to prevent hunger and to provide the water and additional energy the athlete will need during competition. Most athletes eat 2 to 4 hours before their event. However, some athletes perform their best if they eat a small amount 30 minutes before competing, while others eat nothing for 6 hours beforehand. For many athletes, carbohydrate-rich foods serve as the basis of the meal. However, there is no magic pre-event diet. Simply choose foods and beverages that you enjoy and that don't bother your stomach. Experiment during the weeks before an event to see which foods work best for you.

## *Will eating sugary foods before an event hurt my performance?*

In the past, athletes were warned that eating sugary foods before exercise could hurt performance by causing a drop in blood glucose levels. Recent studies, however, have shown that consuming sugar up to 30 minutes before an event does not diminish performance. In fact, evidence suggests that a sugar-containing pre-competition beverage or snack may improve performance during endurance workouts and events.

## *What is carbohydrate loading?*

Carbohydrate loading is a technique used to increase the amount of glycogen in muscles. For five to seven days before an event, the athlete eats 10-12 grams of carbohydrate per kilogram body weight and gradually reduces the intensity of the workouts. (To find out how much you weigh in kilograms, simply divide your weight in pounds by 2.2.) The day before the event, the athlete rests and eats the same high-carbohydrate diet. Although carbohydrate loading may be beneficial for athletes participating in endurance sports which require 90 minutes or more of non-stop effort, most athletes needn't worry about carbohydrate loading. Simply eating a diet that derives more than half of its calories from carbohydrates will do.

## *As an athlete, do I need to take extra vitamins and minerals?*

Athletes need to eat about 1,800 calories a day to get the vitamins and minerals they need for good health and optimal performance. Since most athletes eat more than this amount, vitamin and mineral supplements are needed only in special situations. Athletes who follow vegetarian diets or who avoid an entire group of foods (for example, never drink milk) may need a supplement to make up for the vitamins and minerals not being supplied by food. A multivitamin-mineral pill that supplies 100% of the Recommended Dietary Allowance (RDA) will provide the nutrients needed. An athlete who frequently cuts back on calories, especially below the 1,800 calorie level, is not only at risk for inadequate vitamin and mineral intake, but also may not be getting enough

carbohydrate. Since vitamins and minerals do not provide energy, they cannot replace the energy provided by carbohydrates.

## *Will extra protein help build muscle mass?*

Many athletes, especially those on strength-training programs or who participate in power sports, are told that eating a ton of protein or taking protein supplements will help them gain muscle weight. However, the true secret to building muscle is training hard and consuming enough calories. While some extra protein is needed to build muscle, most American diets provide more than enough protein. Between 1.0 and 1.5 grams of protein per kilogram body weight per day is sufficient if your calorie intake is adequate and you're eating a variety of foods. For a 150-pound athlete, that represents 68-102 grams of protein a day.

## *Why is iron so important?*

Hemoglobin, which contains iron, is the part of red blood cells that carries oxygen from the lungs to all parts of the body, including muscles. Since your muscles need oxygen to produce energy, if you have low iron levels in your blood, you may tire quickly. Symptoms of iron deficiency include fatigue, irritability, dizziness, headaches and lack of appetite. Many times, however; there are no symptoms at all. A blood test is the best way to find out if your iron level is low. It is recommended that athletes have their hemoglobin levels checked once a year.

The RDA for iron is 15 milligrams a day for women and 10 milligrams a day for men. Red meat is the richest source of iron, but fish and poultry also are good sources. Fortified breakfast cereals, beans and green leafy vegetables also contain iron. Our bodies absorb the iron found in animal products best.

## *Should I take an iron supplement?*

Taking iron supplements will not improve performance unless an athlete is truly iron deficient. Too much iron can cause constipation, diarrhea, nausea and may interfere with the absorption of other nutrients such as copper and zinc. Therefore, iron supplements should not be taken without proper medical supervision.

## *Why is calcium so important?*

Calcium is needed for- strong bones and proper muscle function. Dairy foods are the best source of calcium. However, studies show that many female athletes who are trying to lose weight cut back on dairy products. Female athletes who don't get enough calcium may be at risk for stress fractures and, when they're older, osteoporosis. Young women between the ages of 11 and 24 need about 1,200 milligrams of calcium a day. After age 25, the recommended intake is 800 milligrams. Low-fat dairy products are a rich source of calcium and also are low in fat and calories.