

Dear parents and athletes,

We thought to provide this information to help student-athletes manage nutritional needs during sports practices and games. The assumption is that the athletes are regularly eating a balanced diet--meats, grains, fruit, vegetables, and dairy (myplate.gov). Food is fuel--teens need to fuel both their normal growth and sports activities.

Your body uses primarily carbohydrates for energy. At rest, 40% of energy comes from carbs; 60% from fat. As activity increases, carbohydrate needs increase and fat needs decrease. Protein is NOT an energy source. Your body finds the carbs it needs in blood sugar, muscle glycogen (only used to fuel muscles), and liver glycogen (replenishes blood sugar). When these sources get depleted, they must be reloaded. Eat!

About 45-60 minutes before a sports activity, the athlete should eat 50-75 g of carbs, in liquid form. Right before the activity, eat another 50-60g of carbs. After the event, another 50-60g is suggested, followed by a nutritious meal within two hours. Continue replenishing by eating another 50g or so two and then four hours later. See the chart below for carbohydrate values of some foods.

Hydration is important, too. Stay well-hydrated day-to-day, then increase hydration for the activity. Don't drink so much that you slosh, however. Note that a 5% loss of body fluid causes a 20-30% decrease in work performance. This includes schoolwork performance. If a practice seems difficult, the athlete may not be properly hydrated. Note, too, that for every liter of water lost, the heart beats 4 beats per minute more. Hydrate to help your heart work better.

It's suggested that an athlete drink 8-16 oz. of water 15 minutes before a sports activity. During the activity, drink 6-12 oz. every 15 to 20 minutes. If the athlete is active for 60-90 minutes, a sports beverage is a good choice, since it contains carbs and sodium. After the activity, drink generously and drink a variety of beverages. Low-fat chocolate milk is highly recommended; juice and sports beverages fill the need, too. Avoid carbonated beverages as they tend to make the athlete feel full, at the expense of proper nutrition. Avoid caffeine as it is a dehydrator.

As always, check with your doctor before changing your diet or eating habits. The well-being of our athletes is important!

Eat, drink, and be healthy athletically!

In His service,

Kim Tomlinson

approx. carb. values, grams
per 8 oz serving:

Gatorade:	14
grape juice:	39
orange juice:	26
apple juice:	28
banana:	27
bagel:	35-39
Chex mix:	33g/cup
oatmeal cookie:	45
5 saltines:	11
Clif bar (peanut butter):	40
4 honey graham crackers:	22

Sources:

"Nutrition and Hydration for Physical Performance." Artis Grady, RD, and Jaimette A. McCulley, RD, LD. webinar sponsored by the American Association of Family and Consumer Studies.

Nutrition: Concepts and Controversies, 12th ed.Sizer and Whitney. c. 2011. Cengage, Manson, Ohio.

myfitnesspal.com is a great resource on-line, and it's free.