

EATING TO WIN





Eating to Win

Objectives

Students will:

- Discuss the importance of pre-game meals and fluids for athletic performance.
- Design a healthy pre-game meal.

Time Needed

50 minutes

Getting Ready

Have:

- A representative of the school nutrition staff available

Read:

- Teacher Background Information

Duplicate:

- *Sports Nutrition: Fact or Fiction?*
- *Eating to Win*
- *Pre-Game Meals and Fluids*

Curriculum Links

- Physical Education
- Health

OVERVIEW OF LESSON—Athletes and physically active teens generally need to follow the same healthy eating guidelines as anyone else, but they need to pay special attention to what they eat and drink while they're in training both before and after game time. In this lesson, some of the common misconceptions about sports nutrition are addressed. Students also work together in groups to plan a pre-game meal.

Activity Steps

1. Distribute *Sports Nutrition: Fact or Fiction?* After students complete it, discuss the answers.
2. Distribute *Eating to Win*. Remind students that all people—including world-class athletes—follow these general healthy eating guidelines. Briefly review them as a class.
3. Divide students into small groups. Distribute *Pre-game Meals and Fluids*. Ask students to create a pre-game meal for their school team. Ask a representative from the school nutrition staff to meet with the students to discuss ways to feature a healthy menu for athletes on game days in the cafeteria.

Extensions

- **Optional School Outreach Activity:** Have students visit school sports teams, physical education classes, and other appropriate classes to offer a student-to-student presentation on what they have learned about sports nutrition.
- **Optional School Outreach Activity:** Invite the school nutrition director, coaches, parents, and teachers of related curriculum areas to participate in a forum on nutrition and sports. Put students in charge of selecting the questions to be addressed, making invitations, handling publicity, and organizing the forum.



Teacher Background Information

Medical experts agree that healthy eating habits will not make an average athlete a champion, but unhealthy eating habits can reduce a potential champion to an athlete of only average ability. So, what constitutes a nutritious diet for an athlete? Surprisingly, the answer is that athletes should follow the same healthy eating guidelines as everyone else, but make sure they get enough calories and fluids to support the extra energy used.

Nutrition experts recommend that athletes eat a well-balanced diet that is high in complex carbohydrates, low in fat, moderate in protein with plenty of fluids. (see *MyPyramid* in **Lesson 1, The ABCs of Healthy Eating** for more information on a well-balanced diet.) Complex carbohydrates, commonly known as starches, include bread, rice, tortillas, cereal, and pasta. Complex carbohydrates are one of the body's energy sources. They are easily digested and reduce the risk of nausea and abdominal cramps during game time/physical activity.

Be careful about the type of carbohydrates you eat. Another form of carbohydrate, called simple sugars, offers fuel to the body but may hinder physical performance. Simple sugars include candy, syrup, jam, jelly, cake, pie, etc. These sweet foods can cause a rapid decrease in the blood sugar level, which can make an athlete feel tired and weak.

The pre-game meal provides the calories needed for energy before and during an event and the liquids needed to replace fluids lost during physical activity. The pre-game meal should be a small meal. It should be eaten two to four hours before competing so the meal is thoroughly digested. Small meals and snacks take two to three hours to digest. Larger meals take four to five hours.

All physically active people, regardless of their sport or level of activity, need plenty of water. Water is especially vital for athletes who compete or work out in endurance events, in hot climates, or at high altitudes. Even swimmers need to drink plenty of water as they cannot gauge how much fluid they are losing when they perspire under water. Athletes/physically active people who rely on thirst to govern their fluid intake can easily become dehydrated, which can decrease performance. During physical activity, thirst becomes detectable only *after* fluid stores are depleted. So the key is not to wait to feel thirsty before drinking.

Caffeinated foods and drinks may increase the risk of dehydration because caffeine is a diuretic, which increases the flow of urine. Caffeinated foods and drinks frequently contain large amounts of simple sugars. Consuming caffeine may result in a weak or tired feeling. Caffeine is found in chocolate and many soft drinks, coffee, and tea. Although sport drinks are promoted as physical activity enhancers, water is still the best choice of fluids. Except for a few world-class athletes whose training regimen demands an extraordinary effort from the body, most of the electrolytes (such as sodium and potassium) and sugars supplied by sport drinks can easily be replenished in a normal post-activity meal. Post-game meals should be the same as pre-game meals, but also include lots of water to replace fluids lost during physical activity.

Sports Nutrition: Fact or Fiction?

Circle your answer.

- True False **1.** Sugar is a great source of long-lasting energy for athletes.
- True False **2.** You should eat a pre-game meal at least two hours before an event.
- True False **3.** An athlete's pre-game meal should be high in protein.
- True False **4.** You should include a lot of fats, such as butter, margarine, and salad dressing, in your pre-game meal because of the high calorie content.
- True False **5.** Liquids are one thing you want to avoid in a pre-game meal.
- True False **6.** Easily digestible complex carbohydrates are found in starchy foods such as unsweetened cereals and rice.

Sports Nutrition: Fact or Fiction?

ANSWERS

- False** **1. Question:** Sugar is a great source of long-lasting energy for athletes.
Answer: Eating sugar may actually lower your energy level. Sweet snacks can result in a short-term energy boost but may ultimately lower blood sugar levels. This can result in fatigue and poor performance.
- True** **2. Question:** You should eat a small pre-game meal at least two hours before an event.
Answer: Eating a meal two to four hours before an athletic event or physical activity gives the body time to digest the food and have energy available by game time.
- False** **3. Question:** An athlete's pre-game meal should be high in protein.
Answer: The pre-game meal should be high in complex carbohydrates such as pasta, bread, and rice. These foods provide readily available energy. Most protein foods also contain fat, which takes longer to digest.
- False** **4. Question:** You should include a lot of fats, such as butter, margarine, and salad dressing, in your pre-game meal because of the high calorie content.
Answer: Fat takes a long time to digest, and the energy is not readily available by game time.
- False** **5. Question:** Liquids are one thing you want to avoid in a pre-game meal.
Answer: Liquids are essential before, during, and after the event. If you wait until you're thirsty to drink, it may be too late. You might be dehydrated by the time your thirst kicks in and your performance may have suffered.
- True** **6. Question:** Easily digestible complex carbohydrates are found in starchy foods, such as unsweetened cereals and rice.
Answer: Complex carbohydrates are one of the body's energy sources. Additional starchy foods are bread, potatoes, pasta, tortillas, bagels, etc.



EAT A VARIETY OF FOODS.

Build your meals around bread, tortillas, cereal, rice and pasta emphasizing whole grain complex carbohydrates and vegetables and fruits. Top your meals off with lean protein such as skinless chicken, lean cuts of meats, fish, beans, or eggs. Athletes need only slightly more protein than sedentary individuals. Most Americans consume more protein than they need, so it is unnecessary to eat extra protein, or supplement with protein powders, etc.

CUT THE FAT.

Foods such as doughnuts, chips, candy bars, butter, margarine, french fries, and salad dressings are high in fat and calories with few other nutrients. Choose 1 percent low-fat or fat-free milk and other low-fat or non-fat milk products such as yogurt, cheese, and ice cream.

HOW MUCH WATER SHOULD I DRINK?

When:	How Much Water:
2 hours before physical activity	About 3 cups (24 ounces)
	2/3 c. to 1 1/2 cups (6 to 12 ounces)
After physical activity	Replace each pound of body weight lost with 2 cups (16 ounces) of water

Physically active people should not wait to feel thirsty before drinking. Dehydration begins before that feeling of thirst occurs. Dehydration decreases performance during physical activity.

Pre-Game Meals and Fluids

A pre-game meal should be small and be eaten two to four hours before you are physically active. The meal should be high in complex carbohydrates, low in fat, and moderate in protein with plenty of fluids. You should feel full after the meal but not stuffed.

Sample Pre-Game Meal

Some lean protein such as one of the following:

- 2-3 ounces of skinless chicken/turkey, lean meat or fish
- 2-3 ounces of turkey or lean lunch meats
- 2-3 ounces of tuna packed in water
- 3/4-1 cup of low-fat/non-fat cottage cheese or cooked dried beans

2 ounces complex carbohydrates

One serving is equivalent to:

- 1/2 cup of rice or pasta
- One medium potato
- One slice of whole grain bread or one medium tortilla

1 serving of fruit or vegetable, such as:

- 1/2 cup of canned fruit or 1 fresh fruit
- 1/2 cup of cooked vegetables or 1 cup of salad greens

8-oz glass of 1% low-fat or fat-free milk

Create a Pre-Game Meal

Protein:

Complex carbohydrates:

Fruit or vegetable:

Drink: