Many casual exercisers and competitive athletes believe they should avoid food for several hours before they exercise or compete. Others wonder if they should snack, perhaps on an energy bar before a soccer game. And a few are so nervous that even the thought of food is nauseating.

Whatever your concerns, experimenting with some of the following preactivity strategies and finding what works best for you can give you top energy and performance.

Is it bad to eat before exercising or competing? Doesn't the food just sit undigested?
As long as your activity is moderate (at a pace you can maintain for more than 30 minutes), your body can digest food during exercise. Preactivity eating can help you significantly by supplying energy for sustained exercise and preventing the lightheadedness, fatigue, and indecisiveness that can result from low blood sugar. The food you eat 5 minutes to 4 hours before activity helps fuel your muscles and brain, and it can help you perform better.

For a few people whose activity is moderately paced, eating causes gastric upset or intestinal problems. If you have these difficulties, you simply have to learn from experience the preexercise eating plan that works best for you.

With intense activities like rowing, sprinting, or speed skating, blood flow is diverted from the stomach to the working muscles. If you'll be exercising or competing intensely, you'll probably want to allow about 4 hours between eating and the event. That's the time needed for a typical meal to empty from the stomach. Otherwise, you may have discomfort or even nausea.

What can I do before a 10 am soccer game?
Carbohydrates are very important for maintaining normal blood sugar (the fuel used by the brain) and glycogen (the fuel used by the muscles). Because your blood sugar drops as you sleep, you need to replenish the depleted stores or your morning performance could suffer.

Plan to eat a carbohydrate-based breakfast between 6 am and 8 am; then, if you're still tired, go back to bed. Cereal, bread, fruit, and fruit juice are excellent choices that may help you concentrate better and respond more quickly during that morning soccer game. Or, be sure to eat extra food the day before: Have an extra-big dinner that's low in fat and a substantial bedtime meal or snack. You'll have a better chance of maintaining a high energy level the next morning.

I get so nervous before a competition that I can't even think about eating. What can I do?
Plan to eat several hours before activity, and eat familiar foods that won't cause a surprise stomach upset.
Many athletes like oatmeal or other hot or cold cereals with low-fat milk. Other soothing, carbohydrate-rich choices are bagels with a little light cream cheese, yogurt, pancakes, or French toast. If the thought of solid food turns your stomach, you may prefer a meal replacement drink.

Any fuel is better than none, so try to consume at least 300 to 500 calories.

I'm so hungry in the afternoon that I buy a candy bar for quick energy before working out. Does sugar hurt sports performance?
Research suggests that candy doesn't hurt most people's sports performance. In one study, reported in the March 1987 Journal of Applied Physiology, athletes who ate a big breakfast 4 hours before and a candy bar 5 minutes before hard exercise improved 20% during the exercise test compared with when they ate nothing. The results of the study also suggest that just candy and no breakfast before exercise improved performance 10% in comparison with eating nothing.

Some people are sensitive to preexercise sugar, however, and have a rebound blood-sugar low that makes them feel weak. Hence, the safest bet is to eat the candy within 5 to 10 minutes of starting activity. This span is too short for the body to respond. (Or, eat the candy more than 45 minutes before exercise to allow insulin levels to drop.)

Candy is better than nothing, but it's not premium fuel. It's better to eat a more wholesome snack like cereal, a banana or apple, yogurt, or pretzels and juice. The urge for a quick energy fix is a sign you've eaten too little food earlier in the day. To prevent cravings, eat a hearty breakfast and lunch.

When we travel to a 7 pm event, I often miss dinner. Any suggestions?
Traveling athletes commonly struggle to fuel properly. Sometimes they simply run out of time. Or they get to the event and expect food to be provided—and find nothing left, or nothing appealing or appropriate.

Your responsibility is to fuel yourself well throughout game day. That means, for example, getting up early enough to have a hearty pancake breakfast, eating a double serving of pasta or two big sandwiches at lunch, drinking water throughout the day for extra fluids, and making time for a pregame dinner. The key: Plan ahead.

The best pregame meals are carbohydrate-based: for example, spaghetti and tomato sauce (a little lean meat in the sauce is fine); or potatoes or rice, vegetables, and dinner rolls with a small serving of chicken or other protein-rich food (see "Timing Your Preactivity Meals," below). As with any pregame meal, choose foods that you know will settle comfortably and digest easily. Be sure to limit fried and high-fat foods like burgers, fried chicken, french fries, and nachos. These and similar fast foods take a long time to digest.

Too many athletes—most of whom know they should have a carbohydrate-rich pregame dinner—fail to plan meals into their schedule. If this sounds familiar, pack emergency food in your gym bag (see "Packable Snacks," below).
Snacks are better than nothing, but a good meal helps mentally, if not physically. Rather than regret improper eating, make time to eat well—perhaps even planning a mandatory team dinner—so you'll have energy to enhance your sports performance.

**Timing Your Preactivity Meals**

The rule of thumb for eating before exercise is to allow 4 hours for a big meal (about 1,200 calories), 2 hours for a light meal (about 600 calories), and an hour or less for a snack (about 300 calories). Sample carbohydrate-rich menus:

<table>
<thead>
<tr>
<th>Large Meal</th>
<th>Light Meal</th>
<th>Snack</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 large bagels</td>
<td>2 c spaghetti</td>
<td>1 medium banana</td>
</tr>
<tr>
<td>2 tbsp peanut butter</td>
<td>1/2 c tomato sauce</td>
<td>1 pkg instant oatmeal</td>
</tr>
<tr>
<td>2 tbsp jam</td>
<td>8 oz low-fat milk</td>
<td>8 oz low-fat milk</td>
</tr>
<tr>
<td>8 oz fruit yogurt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 oz orange juice</td>
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</tbody>
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**Packable Snacks**

So you won't go hungry if you're traveling to a night game, stash 1,000 calories of tried-and-true food in your gym bag. (Never try new foods before an important event.) You might even pack extra snacks for underfed teammates. On game day you can add perishable items such as yogurt, bagels, apples or other fresh fruit, or even a sandwich or two. Some possibilities:

- Granola bars or energy bars (about 200 calories each)
- Trail mix (about 200 calories per 1/2 cup)
- Toaster pastries (about 200 calories each)
- Dried fruit (150 calories per 1.5-ounce box of raisins)
- Animal crackers (about 140 calories per 12 pieces)
- Juice boxes (100 to 150 calories per 8 ounces)

**Remember, you, your physician, and your nutritionist need to work together to discuss nutrition concerns. The above information is not intended as a substitute for appropriate medical treatment.**

Ms Clark is director of Nutrition Services at SportsMedicine Brookline in the Boston area. She is a fellow of the American College of Sports Medicine, a fellow of the American Dietetic Association, and a member of its practice group, Sports, Cardiovascular, and Wellness Nutritionists (SCAN).

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