

FUELING

DURING EXERCISE



“**S**ometimes heading from class directly to practice doesn’t leave me enough time to fuel up. The times I have eaten right before practice, I get stomach cramps that end up slowing me down. And I’ve noticed during the course of the week that I gradually feel weaker and less energetic.”

“What are some strategies that I can use to make sure I’m well-fueled during practice?”

YOU ARE UNDER-FUELED DURING TRAINING IF ...

- You have break-through hunger in the early or middle part of practice.
- You feel that you are working hard, but not making the gains in performance you would expect.
- The quality of your workouts decreases during the course of the week.
- You feel sluggish and are easily frustrated during practice.

As a student-athlete, you have a busy schedule and demanding workouts. In the midst of this balancing act, fueling enough and getting the proper kind of fuel can become an afterthought. If this sounds familiar, consider fueling strategies that will optimize your performance and recovery.

(For tips before, during and after practice, turn the page.)

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When you are under-fueled, you can expect a poor return on your training efforts, and a higher risk of colds and other illnesses. Find out what happens physiologically as your body becomes weak:

- When you experience hunger, your body is in a catabolic (breakdown) state. It will adapt best to training, especially for strength and speed, when in an anabolic (building) state.
- Under-fueled athletes often have inadequate muscle and liver glycogen stores to draw on during training, so they are more prone to dehydration, and are less likely to recover completely between practices.
- In moderate- to high-intensity practices, your body can absorb 30 to 60 grams (g) of carbohydrate per hour. In stop-and-go practices, you may be able to consume a higher amount of carbohydrate per hour.
- Glycogen repletion takes time and multiple doses of carbohydrate. Starting recovery carbohydrates and, if needed, protein intake soon after training will accelerate the recovery process (within 15 to 30 minutes).

DO THIS BEFORE PRACTICE:

- Plan to eat foods low in fat, and moderate in protein and fiber two to four hours before practice.
- Eat a bigger breakfast — double up on wheat toast, oatmeal or yogurt to take a little pressure off of lunch.
- Bring snacks in your back pack: pretzels, trail mix with dried fruit and no nuts (fat content will be too high), dry cereal, oranges/tangerines/bananas/fruit cup, granola bars, baked chips and water, or grab a high-fluid snack on your way: nonfat yogurt or chocolate milk, or low-fat sport shake.
- Fuel with 30 to 60 g carbohydrate, low in fat and fiber, within an hour before practice.

TIP: Don't use energy drinks to make up for under-fueling. These will only accelerate your body's use of glucose (sugar), which moves you more quickly into a catabolic state.



DO THIS DURING PRACTICE:

- Remember that you can consume 30 to 60 g carbohydrate per hour during exercise as well. See the chart below for food options supplying 30 g per serving.
- Sip on two to four eight-ounce cups of a sports drink for real-time fuel, as well as fluids and electrolytes (it may seem like a lot, but you will rapidly use that carbohydrate to fuel your training session).
- Consume any solid foods in small, frequent bites and with water or a sports drink to avoid stomach upset.
- Choose high-carbohydrate foods that contain a mixture of types of carbohydrate (starch, fructose, glucose, maltodextrin).

WHAT'S BEST TO EAT

Consume 30 to 60 grams of carbohydrate per hour during moderate to intense activity, especially if under-fueled. Fluids should always be consumed along with solid foods during training.



2 cups of sports drink*	28 grams
2 ounces of raisins (about two handfuls)	30 grams
1 medium-size banana	30 grams
1 tablespoon of honey	28 grams
Sports / Energy Bar	45 grams
1 serving of sports/energy gels or gummies	23-27 grams
Low-fat granola bar	42 grams
3 fig bars	33 grams

* With 6-8 percent carbohydrate solution and electrolytes

DO THIS AFTER PRACTICE:

- If training has been long and/or of very high intensity, shoot for consuming 0.75 to 1.5 g carbohydrate per kilogram of body weight along with 7 to 20 g of protein within the first hour after exercise.
- If training has been light, eat a well-balanced meal within two to three hours after finishing and consume fluids to replace losses.

TIP: To see how foods and fluids affect your stomach, try them out during practice, not competition, and start with small amounts of food and fluids.

TIP: Tackle weight change during the offseason. Show up well-fueled so that practice results in improved performance.