Is it better to eat before or after physical activity? [1]

(1) Dear Alice,

Is it better to eat before or after exercising? I've recently started a fitness program and am not sure which way is the best.

(2) Dear Alice,

Is it bad to eat before you have practice or a game in basketball?

— Hungry Hoopster

Answer

Dear Reader and Hungry Hoopster,

In order to fuel up for optimal physical performance, the discussion tips in favor of eating prior to getting active. It may also wise to eat something as a means of recovery after a sweat session as well, especially for competitive athletes. For each person determining what to eat and when to top off your tank really depends on any previous meals and snacks eaten in a given day and how much time has passed since the last repast. What’s more, each person’s body and dietary needs are unique — and what’s optimal for each of you is also dependent on additional factors, including the duration, frequency, and intensity of a given activity. For more on the why, what, and when of fueling an active body, read on!

When deciding whether to eat before physical activity, consider this: those who prefer to be active in the morning may be especially tempted to do so on an empty stomach. However, hitting the road without setting aside any time for breakfast may leave a person running on fumes instead of fuel. The effects can be similar for those who are more active later in the day, too, having had their most recent meal several hours previous. Like pumping gas into a car before driving to work, a few gallons will get you a lot farther compared to what you’ll get on an empty tank.

Moreover, eating before physical activity serves several functions, such as:

- Fueling muscles by replenishing glycogen (the body’s carbohydrate storage) and providing
energy to hit the gym or the court.

- Preventing low blood sugar (hypoglycemia [2]), thereby avoiding hunger, shakiness, dizziness, nausea, and headaches, during and after physical activity.
- Enhancing physical performance and focus to get the most out of a workout session or practice.

So, what are some examples of energizing food sources for physical activity? Before moving some muscles, eating foods high in carbohydrates are recommended; they’re more quickly digested and absorbed into the body. Foods that are high in fat, protein, and fiber may take longer to digest and could cause some digestive discomfort. To maximize a workout, practice, or game, consider fueling up with some of these snacks an hour or two beforehand:

- Fresh fruit (e.g., bananas, oranges, apples, or grapes)
- Fruit juices
- Unsalted crackers
- Graham crackers
- Bagels
- Non- or low-fat yogurt
- Pretzels (preferably with little or no salt)
- Low-fat, low-sodium soup

Another factor to consider when choosing food fuel is the intensity of the intended activity — those engaging in high impact or high endurance activities may have different (and likely elevated) energy needs than people participating in lower impact activities. For example, going for a ten-mile run or playing an intense game of basketball (like you, Hungry Hoopster), may require more fuel for high energy, whereas participating in yoga class, tai chi, or going for a brisk walk requires less. It might be helpful to experiment with various options to find what works best for your body and level of activity. If you’re a competitive athlete, it’s wise to experiment with snacks a few weeks before a big event/meet/game, etc. to avoid any digestive discomfort.

Post-physical activity, the body may also need nutrients to repair itself and get ready for the next session. More specifically, carbohydrates help to replace the glycogen stores in the muscles while protein helps promote muscle repair. For competitive athletes, eating a few slices of turkey on a wheat bagel, or having a large glass of protein-fortified milk can help provide a post-workout boost of carbohydrates and protein to facilitate quicker recovery. For those who are moderately active about two to three times per week, there may not be as great a need for post-activity fuel. At that activity level, getting enough rest and eating regular balanced meals will likely afford the body enough time and nutrients to recover adequately. No matter the level of activity though, fluid replacement is essential — drinking water or a carbohydrate-rich sports drink (for endurance activities lasting over an hour) can help replace any electrolytes [3] that are depleted while in action.

With all that said, eating one healthy meal or snack before or after activity can’t make up for typical eating habits that aren’t very nutritious the rest of the time. To get the most mileage out of your physical activity regimen, it’s best to fuel the body with a regular, well-balanced diet throughout each day. This includes drinking plenty of water and creating meals that feature mostly whole grains, fruit, veggies, lean protein, and low-fat dairy. It’s also a good idea to not go
longer than four hours without eating; plan for healthy snacks in-between larger meals to keep energy and blood sugar levels balanced. Changing eating habits (if necessary) can be challenging, but there’s assistance available to help inform those dietary adjustments. Making an appointment to talk with a registered dietician about feeding the body with proper fuel may be worthwhile. They can help design a meal plan that best fits personal needs and enhances performance holistically.

Perhaps this knowledge will serve as the tipping point for topping of your body’s tank with the proper fuel at the right time — and set you both up for a win on and off the court.

Alice!

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- Nutrition & Physical Activity [4]
- Fitness [5]
- Working Out [6]
- Optimal Nutrition [7]

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- Okay to eat sugar-filled foods before sporting activities? [9]
- Half-time snack for second half boost? [10]

Resources

- Columbia Health Nutrition Services (Morningside) [11]
- Student Health Service Nutrition Services (CUIMC) [12]

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