

What to drink before, during, and after physical activity ^[1]

1) Dear Alice,

I am a soccer player who is extremely active and drinks lots of water. I am wondering, for my sake, whether it is better to drink cold water or warm water. While we all like cold water better, I was wondering if because of the fact that your stomach is a lot closer to body temperature than the temperature of most tap water, that it would be better to drink warm water. I thought this because it seemed like your stomach would be able to handle it a lot better. Thank you for your time.

— J

2) Alice,

What's the best thing to drink before a workout? After?

— Thirsty

Answer

Dear J and Thirsty,

When it comes to physical activity, consuming water of any temperature is key to staying hydrated, but research indicates that consuming cold water has some added benefits. With strenuous physical activity, the body slowly becomes dehydrated as its body temperature rises above its optimal point. Cold water is absorbed more quickly from the stomach than warm water, replenishing needed hydration. Additionally, people who drink cold water tend to drink more fluids than their peers who drink warm water, further combatting dehydration. That said, J, if you only have access to warm water, or you simply prefer it, feel free to keep drinking it! You can still get the hydration you need; it just might take an extra glass or two. Keep reading for more about water temperature and staying hydrated before, during, and after a workout!

Before diving into how cold versus warm water may be better for the body, you might want to get your feet wet by first learning what happens to the body during physical activity. While the heart rate rises and endorphins surge through the body, its core temperature slowly rises above its

average of 98.6°F (37°C). This is more likely to occur during hotter or more humid weather, since your sweat — which cools the core body temperature — evaporates more quickly. Sometimes, depending on the amount physical energy that's exerted, or how hot and humid the weather is, the core body temperature may even go as high as 104° F (40°C)!

As it turns out, you can avoid such drastic body temperatures by drinking cold water before and during your physical activity, thereby boosting your overall performance! How's that, you might ask? Well, drinking cold water before you exercise — “pre-cooling” — can lower your core temperature and allow the body to store heat more efficiently. This, in turn, lowers the risk of overheating, allowing you to exert energy longer. For example, some studies have shown that cyclists who pre-cooled experienced lower body temperatures before working out, as well as when their temperatures were taken 25 minutes afterwards. Compared to cyclists who didn't pre-cool (but drank warm water instead), cyclists who pre-cooled went further distances because of their lower core temperature. As you can imagine, pre-cooling can present a potential major benefit to athletes by improving their chances for success in competitions or big games. Similarly to pre-cooling, by drinking cold water during physical activity, your body temperatures can be regulated back to their typical range, improving your endurance. People who drink cold water during physical activity generally experience less effects of heat stress, in part because this water replenishes sweat, which continuously evaporates to cool the body. With all this said, you might wish to try pre-cooling and drinking cold water during practice in an effort to increase your performance during a workout or soccer game.

Thirsty, the recommendations for water consumption before, during, and after physical activity will vary by person, but the [American Council on Exercise](#) [2] has some general guidelines:

- Drink 17 to 20 ounces (oz.) of water 2 to 3 hours before beginning physical activity.
- Drink 8 oz. of fluid 20 to 30 minutes before beginning physical activity or during the warm-up.
- Drink 7 to 10 oz. of fluid every 10 to 20 minutes during physical activity.
- Drink an additional 8 oz. of fluid within 30 minutes of completing physical activity.

So, before, during, or after a workout, you might choose to drink cold water to boost your performance. If either of you are endurance athletes, another option is sports drinks before, during, and after physical activity, which can fuel your muscles and replace [electrolytes](#) [3] (such as salt) that are lost in sweat. These drinks are generally only helpful for someone who is highly active; otherwise, it's just adding additional calories and isn't more beneficial than water. After strenuous exercise, milk has been found to be highly rehydrating as well. Ultimately, when you're looking to hydrate your body, it's better to stay away from drinks with diuretics such as caffeine (which encourage you to pee, and lose more water). The body is smart and often craves what it needs. In fact, if you feel thirsty, your body may be on its way to being dehydrated already. And remember, although drinking cold water before, during, and after physical activity can provide you with more benefits than warm water, warm water is still okay! For more information on how to fuel your body during physical activity, ranging from the latest on hydration, to helpful tips if you feel like you're [not drinking enough fluids](#) [4], check out the [Nutrition & Physical Activity](#) [5] category in the *Go Ask Alice!* archives.

Here's to not letting dehydration dampen your physical activity!

Alice!

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