Do You Need to Drink Electrolytes?

They’re in sports drinks, powders and tablets. But do they really help with hydration?

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There is a large, growing and very competitive market for electrolyte powders, drinks and tablets. In 2024 the [electrolyte drink market](https://www.gminsights.com/industry-analysis/electrolyte-drinks-market?) was valued around $38 billion.

The products are designed to be consumed before, during and after exercise — and manufacturers claim they’ll optimize your hydration, health and performance. There are even options to supplement your daily hydration, whether or not you are exercising.

But do you really need to replenish the electrolytes lost in your sweat? And are sports drinks, electrolyte powders and salty supplements actually the best way to do it?

What do electrolytes do?

Electrolytes are minerals — such as sodium, potassium, calcium and magnesium — that carry an electrical charge that influences how water moves in your body.

“They help maintain the fluid balance,” explained Dr. Amy West, a sports medicine physician at Northwell Health. They help move [fluid into and out of your cells](https://www.ncbi.nlm.nih.gov/books/NBK541123/) and regulate blood pressure, heart rhythm, muscle and nerve function.

While they’re found in supplements and sports drinks, they’re also in the foods we eat every day.

“When we talk about potassium, [it’s in a banana](https://www.nytimes.com/2018/04/04/well/move/banana-sports-drinks-exercise-workout-carbs.html),” said Heidi Skolnik, a nutritionist at the Hospital for Special Surgery. “When you eat a pretzel, there’s sodium on it.”

As you sweat, you lose both fluid and electrolytes and if you lose enough fluid, you can become dehydrated. The volume of blood in your body drops and “your heart has to pump harder to get the same amount of blood circulating,” Ms. Skolnik said.

Do you really need to replace them?

When you lose an exceptionally large quantity of water and electrolytes, as you might if you’re having a serious [bout of diarrhea](https://www.nytimes.com/2022/04/14/magazine/angiotensin-receptor-blockers-diarrhea.html), you need to replace both. In those situations, doctors often recommend a rehydration solution like Pedialyte, which typically has more sodium and potassium than your average sports drink.

But experts say you probably don’t need to reach for a sports drink during your regular workouts. Even if those workouts are strenuous or happen in hotter weather, drinking water when you’re thirsty is enough to keep you hydrated. The sugar and carbohydrates found in many sports drinks certainly may help competitive athletes maintain their energy, but the electrolytes have little impact.

In the 1990s, standard medical advice recommended sodium-rich drinks for athletes during any exercise that lasted more than an hour. But more [recent research](https://pubmed.ncbi.nlm.nih.gov/17414479/) has found that even as you lose sodium through sweat and urine, your body maintains the concentration of sodium in your blood. In [several small studies](https://journals.humankinetics.com/view/journals/ijspp/19/2/article-p105.xml)athletes [didn’t tend to report](https://pubmed.ncbi.nlm.nih.gov/31377851/) a performance difference between working out with water and electrolyte-infused drinks, even after [five hours of running in 86-degree heat](https://pubmed.ncbi.nlm.nih.gov/37944507/).

It’s been well-established for at least a decade that electrolytes don’t do much for performance, said Ricardo Da Costa, an associate professor in sports dietetics at Monash University in Australia. “But the marketing strategies from the sports drinks companies are more potent than the researchers.”

“Everybody thinks that they need to replace lost electrolytes right away,” said Tamara Hew-Butler, a sports medicine scientist at Wayne State University. “You don’t. You will make it up generally in your meals.”

Most of the time, you are fine just drinking water when you’re thirsty. If you’re spending hours outside in the heat for several days and start feeling dehydration symptoms, like lightheadedness, you might reach for a sports drink or supplement, especially if you aren’t getting enough electrolytes in your diet, said Robert Kenefick, a professor of biomedical and nutritional sciences at the University of Massachusetts-Lowell.

In rare cases, you can have too much fluid but not enough sodium in your blood, a condition called [hyponatremia](https://www.nytimes.com/2005/10/20/sports/sportsspecial/marathoners-warned-about-too-much-water.html), which can cause [nausea, fatigue](https://www.ncbi.nlm.nih.gov/books/NBK470386/#_blank) and, in the most severe cases, seizures or death. It’s more likely to happen if you have certain medical conditions such as heart, liver or kidney problems.

For athletes, it can happen if they drink so much fluid before, during and after long workouts that it dilutes the electrolytes in your blood. However, most sports drinks don’t contain enough sodium to [prevent it](https://www.frontiersin.org/journals/medicine/articles/10.3389/fmed.2017.00021/full#_blank), said Dr. Da Costa.

Is There a Downside?

Aside from the cost, experts say there’s little downside to consuming electrolyte drinks. As long as you’re otherwise healthy, they do not have enough electrolytes to overload your system (called hypernatremia), Dr. Kenefick said. And the sweet taste could motivate you to hydrate.

Like most supplements, however, electrolyte products are [not well regulated](https://www.nytimes.com/2023/10/31/well/eat/supplements-health-benefits.html) and can even be contaminated, Dr. Hew-Butler said. In 2015, she and her team found [unsafe levels](https://journals.lww.com/acsm-msse/fulltext/2015/05001/changes_in_urinary_arsenic_in_collegiate_athletes.1030.aspx) of arsenic in Muscle Milk and Gatorade powders that had been provided to college athletes. The athletes showed no signs of having been harmed by the exposure.

You won’t see “arsenic” on a supplement label, but you should check for [the amount of sugar](http://nytimes.com/interactive/2024/10/30/well/eat/sugar-health-effects-risks.html) in the drinks, which can be almost as high as some sodas. As you are reading the label, Dr. Kenefick cautioned buyers to be skeptical of what it promises.

“The beverage market is very competitive and everyone’s looking for an edge,” he said. “A lot of the beverages that are out there are using electrolytes as a marketing tool.”

Emma Yasinski is a freelance science journalist whose work has appeared in National Geographic, Undark and more.