

Energy drinks | Fuel or failure for athletes?

The American College of Sports Medicine (ACSM) [makes clear](#) that energy drinks are “fundamentally different” than sports drinks like Gatorade or Powerade.

But scrolling through social media or strolling through the grocery store aisle, and the lines start to blur a bit. When quarterback Justin Fields was a rookie, he [inked an endorsement deal](#) with C4 – an energy drink brand.

More recently, CELSIUS [signed six Heisman Trophy “hopefuls”](#) to NIL (name, image and likeness) deals. The company’s slogan is “live fit,” a motto many athletes can relate to.

Karan Rai, MD, is a sports medicine physician with OSF HealthCare who works in partnership with Illinois State University to see and treat ISU athletes. He says he’s having a lot of conversations with athletes about these types of drinks, and he always urges caution.

"Quite a few of them are not FDA approved," Dr. Rai says. "The reason that matters is that we often don't know the exact ingredients or mix of ingredients that are in the drinks. Depending on what's in the drink, that can affect your performance and your health. For example, caffeine is commonly involved in making these drinks."

CELSIUS and C4, both have 200mg of caffeine content in a 16 ounce can. In contrast, a can of Pepsi has 38mg in a 12-ounce can, while an average 8-ounce cup of coffee has between 80-100mg of caffeine. Dr. Rai says higher levels of caffeine can have a negative effect on performance.

"It can cause excessive energy, anxiety and jitteriness, which depending on your sport or activity, can affect how you play," Dr. Rai says. "The data is still a little bit mixed on the benefit things like green tea extract or guarana are providing, which are commonly marketed and used in sports drinks."

In terms of what liquids athletes are putting into their bodies, Dr. Rai likes to break down hydration based on the activity.

"In activities that are generally 60 minutes or less, I recommend maximizing your water intake and timing that for at least 30-60 minutes before your activity," Dr. Rai says. "Then as you get into longer duration activities with more endurance, and you're pushing that 60-minute mark or longer, that's when you need to look into the type of electrolytes you're ingesting as well. Looking at drinks or gels out there that have a mix of sodium and potassium. Those typically help with performance during your activity."

Another sign if you’re drinking enough water? The color of your pee.

"I often tell my patients and athletes to consider their urination. Typically, we have various scales we use based on your urine color, the amount you're urinating and how thirsty you feel. That can play a role in deciding if you need to hydrate with water alone or use a sports drink like Powerade or Gatorade. Or if you need to adjust your salt intake, things like that," Dr. Rai says.

If you have an underlying heart condition, are younger than 18 or are pregnant, Dr. Rai urges you to steer clear of these drinks.

"With quite a few of the sports performance drinks nowadays, which CELSIUS is one of them that's more publicized, the amount of caffeine in it, and ingredients like guarana, which has a caffeine component to it, can exacerbate underlying arrhythmias," Dr. Rai says. "This can put someone with a pre-existing risk at a higher risk."

Sports drinks like Powerade and Gatorade have a sugar and electrolyte component that is "fairly safe," Dr. Rai says. But the effects of Celsius, Prime and other drinks out there aren't fully understood yet. So, proceed with caution. Talk with your primary care provider or sports medicine physician to get an individualized take on it.