

## Pulling The Plug On Energy Drinks



By Dave Ellis • Illustrations by Mike Curti

Sports drinks and energy drinks, is there really a difference? You bet there is, and it's time athletes and their parents distinguish between the two.

When we talk about helping hard-working athletes have more energy, we think about supplying them with the sources of fuel they primarily use during training and competition.

So, for example, hockey athletes burn a pretty even mix of carbohydrate and fat during training, and probably a bit more carbohydrate than fat during a game where the rest intervals are based on a three or four line bench. Thus most sports drinks focus on supplying carbohydrates in a fast digesting form to supply energy to hard-working muscles so that you have something in the tank until that last drill or shift.

Sports drinks also supply some of the components we lose in sweat (fluids, sodium, potassium) and intentionally avoid ingredients that could speed the rate of fluid loss, like caffeine.

On the other hand, energy drinks primarily depend on the consumer to feel energy from caffeine more so than carbohydrate, and more and more these beverages don't even contain carbohydrate (diet versions). While carbs supply a source of energy that muscles can use, caffeine makes you feel like you have energy by stimulating your nervous systems. This is entirely different than actually supplying energy that will keep you on the ice.

Caffeine might make someone feel amped up early in the game, but it's not going to give you legs period after period. In fact, caffeine will make you feel fired up right until the minute you crash and burn. The reason is that caffeine will temporarily blunt the feeling of exertion and fatigue, but when it wears off you will feel like a refrigerator jumped on your back.

Another problem with caffeine is that it makes you go to the restroom more often, and that is just the opposite of what we want for athletes when they are sweating. We want to retain as much fluid as we can when we're sweating,

not speed up the fluid loss process.

Athletes who lose fluids quickly during activity can't cool themselves as quickly, and inevitably this will lead to more rapid fatigue. Dehydrated muscles are hot muscles that struggle to neutralize the metabolic by-products you feel in your legs after a hard shift. And a tired muscle not only is a poor performer, it is also vulnerable to a cramp or pull.

The evidence that caffeine can help aging minds stay a bit sharper is offset by the recent research that shows the inflammatory outcomes of caffeine use that can lead to a compromised immune system. And just this past month some new evidence has emerged that older athletes who don't exercise much and who don't use a lot of caffeine might set themselves up for a heart attack by breaking out an energy drink before an adult game.

This is not a joke and when you look at the labels on these energy drinks you might see several sources of caffeine. All of these ingredients supply caffeine: cola nut, guarana, mate leaves, espresso, tea extracts and coco.

It's not uncommon for many energy beverages to have more than one source of caffeine and in some cases the manufacturers are not even sure how much caffeine is in their products.

A strong cup of coffee will come in around 100-120 milligrams of caffeine per 8 ounce (cup). Most of these energy drinks are going to come in at 85 milligrams of caffeine or higher per 8 ounces, and because they are often sweet tasting, consumers are drinking 16 ounces or more at a time. That's a pretty good jolt for any adult and enough to cause a young hockey athlete a positive doping test by previous Olympic standards.

While caffeine was removed from the Olympic banned substances list in January 2004, it is still under review by the World Anti-Doping Association, and with mounting performance and health concerns, caffeine could once again revert back to a banned substance when elevated in the blood in high concentrations.

It's also worth noting that the concentration of caffeine required to create the feeling of being amped up changes over time. Athletes who used to feel one 8-ounce serving of caffeine suddenly don't get the same feeling and begin to drink additional servings.

This is a very slippery slope that often leads athletes to try stronger and stronger stimulants, including sources that are currently banned substances (ephedra, synephrine or amphetamines).

And if an athlete can't get to sleep because of the amount of caffeine or stimulants used before activity, they often resort to use of alcohol as a way to wind down. This is known as the amphetamine-alcohol cycle and always results in trouble.

College and pro athletes with promising careers inevitably crash and burn long before their real playing days were over. It's very predictable and very sad, and it all started with the idea they needed a caffeinated energy drink to compete.

So don't get confused between a sports drink and an energy drink when it comes to fueling your hard work. And adults, please realize that even at the collegiate level we are not allowed to supply caffeine to athletes. Please think twice about supplying any source of caffeine to your child, or someone else's child on the team.

No other generation of young athletes has ever witnessed such a cavalier attitude about using stimulants as the youth we are working with right now.

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