

Do energy drinks smash performance out of the park or hit your health instead?

Energy drinks show no sign of waning in popularity with plenty of brands to choose from. Known for their powerful marketing campaigns, Red Bull are still ahead of the game, achieving a [market share](#) of 26.4 percent in 2018. Sporting heroes endorsing Red Bull's buzz are hard to ignore for high-achievers who want the most from their mind and body.

In the digital age, 24/7 internet means the world is always ready for business. You're the pitcher and the catcher, trying to cover all the bases, and feeling below your best. But rather than looking at sleep, nutrition, exercise or meditation, you might turn to a can of caffeine. It's understandable.

When we need to sharpen our focus for peak performance – whether business executives and entrepreneurs, students cramming for exams or pulling an all-nighter for a thesis deadline, sleep-deprived military or healthcare professionals, sportspeople and the like – we look for a convenient solution with instant results.

But are the claims made by manufacturers a load of old bull and should we steer clear of energy drinks to protect our health?

What are the benefits of energy drinks and why are they so popular?

[Studies](#) have shown that energy drinks can improve alertness, concentration, memory, mood and cognitive performance as well as physical endurance. It's tempting to include energy drinks in your daily routine and easy to become dependent.

There is also confusion over the function of energy drinks, especially among young people. Energy drinks are not sports drinks, so they aren't suitable for hydration. Whereas sports drinks contain sugars and electrolytes to replace carbohydrates and minerals lost during exercise and sweating, energy drinks contain large amounts of caffeine and other stimulants such as guarana, taurine, and carnitine to increase alertness, attention and energy. What's more, the American Council on Exercise says [water is all you need!](#)

The concern is that energy drinks may not be safe. Their ingredients are only regulated by the FDA if the manufacturer decides to label their energy drink as a beverage rather than a supplement. However, companies taking the supplement option to sidestep tighter food and drink regulations must report health incidents involving their products. [Food Safety News reports an increase in deaths](#) and hospitalizations linked to energy drinks, suggesting that any short-term improvements in focus, mood and energy may not be worth the risk.

Why are energy drinks dangerous to our health?

Energy drink consumption has been linked to serious health problems, including diseases and conditions of the **cardiovascular system**, such as irregular heart rhythms, raised blood pressure and heart rate, blood clot formation, and rupture of large arteries, as well as the **nervous system** and **digestive system**.

Energy drinks linked to heart attacks and strokes

Some scientists think the cardiovascular health issues linked to energy drinks may be down to the impact on blood vessel function. John Higgins M.D., Chief of Cardiology at Lyndon B. Johnson Hospital and Professor of Medicine at McGovern Medical School at UTHealth in Houston, led a small [study](#) to find out what effect one 24-ounce energy drink would have on blood vessel function in healthy young adults. They found that just one energy drink reduced the dilation and expansion of participants' blood vessels by around half.

But Higgins says it isn't just about the caffeine in energy drinks. Researchers believe the effect on blood vessels could be due to the combined effect of caffeine, taurine, guarana, sugar and other herbals, and not simply the caffeine. This has far-reaching implications.

"During exercise or under stress, your arteries have to open up because they need to get blood to the muscles, heart and brain," said Higgins, a sports cardiologist. "If there is impairment during exercise or mental stress, it could lead to adverse effects."

Excess caffeine affects our nervous system, sleep and mental health

Coffee contains 80 to 100 mg per 8 fluid ounces, while energy drinks range from 40 mg to 250 mg of caffeine per 8 fluid ounces. For healthy adults, the [FDA says 400 milligrams of caffeine a day](#) is not known to have dangerous effects, although this depends on individual sensitivity. Intake of [200 mg can cause toxicity symptoms](#) such as anxiety, insomnia, muscle twitching, restlessness, sleep and behavioral disorders, and even hallucinations.

Energy drinks can disrupt our digestive system and affect obesity and diabetes

Energy drinks may contain high amounts of sugar, which can [increase the risk of obesity and type 2 diabetes](#). Caffeine can also reduce insulin sensitivity, which is linked to type 2 diabetes, and increase urination, which can cause dehydration in a hot environment, as well as sodium loss, which affects optimal heart function during exercise. Sugary, acidic energy drinks are also associated with dental decay.

Impact of energy drinks on vulnerable people and during exercise

The [American College of Sports Medicine](#) (ACSM) released [new guidelines on energy drinks](#) in the clinical journal *Current Sports Medicine Reports*, highlighting the dangers to at-risk adults, including pregnant or breastfeeding women and people with cardiovascular disease, as well as children and adolescents.

"Our review of the available science showed that excessive levels of caffeine found in energy drinks can have adverse effects on cardiovascular, neurological, gastrointestinal, renal and endocrine systems, as well as psychiatric symptoms. More needs to be done to protect children and adolescents, as well as adults with cardiovascular or other medical conditions," said cardiologist John Higgins.

As well as recommending that children and adolescents don't drink energy drinks at all, the ACSM strongly advises that adults don't use energy drinks before, during or after strenuous exercise. Although a causal link cannot be established without a controlled study, some hospitalizations and deaths have been linked to energy drink use during vigorous activities. While some studies have shown improvements in sports performance with energy drink use, serious health risks have been associated with rapid and excessive consumption.

Preventing addiction in teenagers and young adults

Despite the American Academy of Pediatrics (AAP) advice to adolescents to avoid energy drinks, the Center for Disease Control and Prevention (CDCP) [says](#) that between 30 and 50 percent reported consuming energy drinks in a 2011 study. The AAP also recommends that adolescents aged 12 to 18 years should not exceed 100 mg of caffeine a day, the amount in a cup of coffee.

The CDCP is urging schools in the U.S. not to sell energy drinks in vending machines and snack bars, while in the UK, [the government is considering legislation](#) to ban the sale of energy drinks to children. Over-consumption of caffeine can affect the development of children's brains and nervous system, causing increased anxiety and risk-taking behavior. Until more research is carried out on the long-term impact on adolescent health, the advice to parents, teachers and coaches is to offer water, milk and juice.

The American College of Sports Medicine says children and adolescents are vulnerable to caffeine intake complications due to their small body size and their regular and excessive energy drink consumption. Problems can occur either with acute rapid consumption or chronic, long-term use. The American Heart Association (AHA) says [consumption of energy drinks has been associated with levels of stress experienced by college students](#), but Higgins warns that energy drinks are not a safe answer. Energy drinks are especially dangerous when mixed with alcohol, a worrying trend among young people.

What are the healthy alternatives to energy drinks?

With so many products on the market claiming to boost performance, we often overlook the natural solutions. If you want to be at your best, don't fall for the bull. Rather than gulping down caffeine, taurine and sugar for a quick fix, make sure you get quality sleep, eat a healthy diet, take regular exercise and feel spiritually connected in your life. Be your best by going back to nature!

Get in touch today to find out about healthy energy drinks free from caffeine and sugar that can help you on your path to peak performance. Contact Peak Performance Corner at peakperformancecorner@hushmail.com.