Are Energy Drinks SAFE and EFFECTIVE? Transcript

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Energy Drinks and Cognitive Performance

Red Bull seems to do a poor job of causing brain fog since this study found that Redbull can improve cognitive performance on a number of tests with the sugary version doing even better than the sugar free version.

And no, it wasn't paid for by Big RedBull. Other studies on Red Bull or other energy drinks summarized in this review have also found that they can boost cognitive performance, largely owing to the caffeine.

But other ingredients, including sugar, may also contribute to some degree. So much for the combination of sugar and caffeine causing brain fog based on his Google search.

To further hammer home the point, we can look at this study where participants were provided with an energy drink that was both caffeine-free and sugar- free but contained other common ingredients like taurine, choline, and so on.

and there were no significant improvements in any markers of mood or cognitive function.

Caffeine, Exercise, and Safe Dosage

Just hold on a sec. Beyond cognitive function, energy drinks can also boost athletic performance, with numerous studies demonstrating their effectiveness in improving endurance, power, or strength-related performance.

Once again, largely owing to the caffeine content. The effective dose of caffeine is typically at least 3 milligrams per kilogram of body weight. So for someone who weighs 70 kilograms or 154 pounds, that would be 210 milligrams of Caffeine, which is in the ballpark of what many energy drink contain.

or about one and a half cups of coffee or two shots of espresso. But what are the downsides? Well, the high doses of caffeine may contribute to anxiety, jitteriness, gut upset, or poor sleep in some individuals.

However, those responses will vary person to person. Governing bodies like Health Canada and the FDA recommend no more than 400 milligrams of Caffeine per day for healthy, non-pregnant adults.

Which is one reason that energy drinks will list right on the can not to have more than one per day. Although the most serious adverse effects don't appear to occur until much higher doses.

And if it wasn't clear already, energy drink are not recommended at all in pregnancy or for children or teens. It's also notable that Energy drinks can cause a temporary bump in blood pressure, much like coffee.

Risks of Sugar, Blood Pressure, and L-Carnitine

However, these short-term changes may vary from person to person based on genetics and may not apply to people who regularly consume caffeine. And further, while data is lacking on energy drink intake and long- term health outcomes, we do see that coffee consumption is associated with a lower risk of cardiovascular disease and all-cause mortality despite the ability to produce these shorter bumps in blood pressure.

That further highlights how the short term fluctuations are not necessarily of concern in isolation. However, I would exercise caution around regularly consuming the sugary versions of energy drinks.

Sugar-sweetened beverages are consistently associated with poor health outcomes, while those sweetened with non- sugar sweeteners are not when studies appropriately account for confounding variables, contrary to what many influencers will say.

And finally, one common nutrient additive that I think warrants some caution is L-carnitine. This is a compound we produce some of ourselves and which is involved in energy metabolism.

However, this randomized controlled trial found that supplementing L-carnitine for 6 months led to the progression of atherosclerosis in people with metabolic syndrome.

And studies looking at individuals with genetically higher L carnitin levels also suggested potential cardiovascular risk. While we still need more research to draw more definitive conclusions, that's enough for me not to consume carnitine-containing beverages regularly.

Although this review found that most energy drinks don't even contain enough carnatine to exert any beneficial effects on performance. So what's the point in even adding it other than to be able to smack it on the label?

So to sum up this lengthy video, energy drink can bolster cognitive and exercise performance largely owing to the caffeine content.

Coffee as a Better Alternative

But the high caffeine content can lead to adverse effects in some people, especially those who are sensitive to caffeine or who don't regularly consume caffeine.

While the sugary options may further bolster performance, they may also come with some risks, including an increased risk of cardiovascular disease and other outcomes, so sugar-free alternatives may be a safer bet for regular consumers.

And finally, caution may warrant around L-carnitine-containing drinks. Of course, most of the benefits of consuming energy drinks can also be obtained by drinking coffee, along with a reduction in the risk of cardiovascular disease, certain cancers, and all-cause mortality.

So if you have any concerns around energy drink and still want to boost, coffee is an excellent option.