

THE EFFECT OF ENERGY DRINKS ON TEENS

WIRED AND TIRED

The Science Behind Caffeine and the Teenage Body

By Mikah Schultz

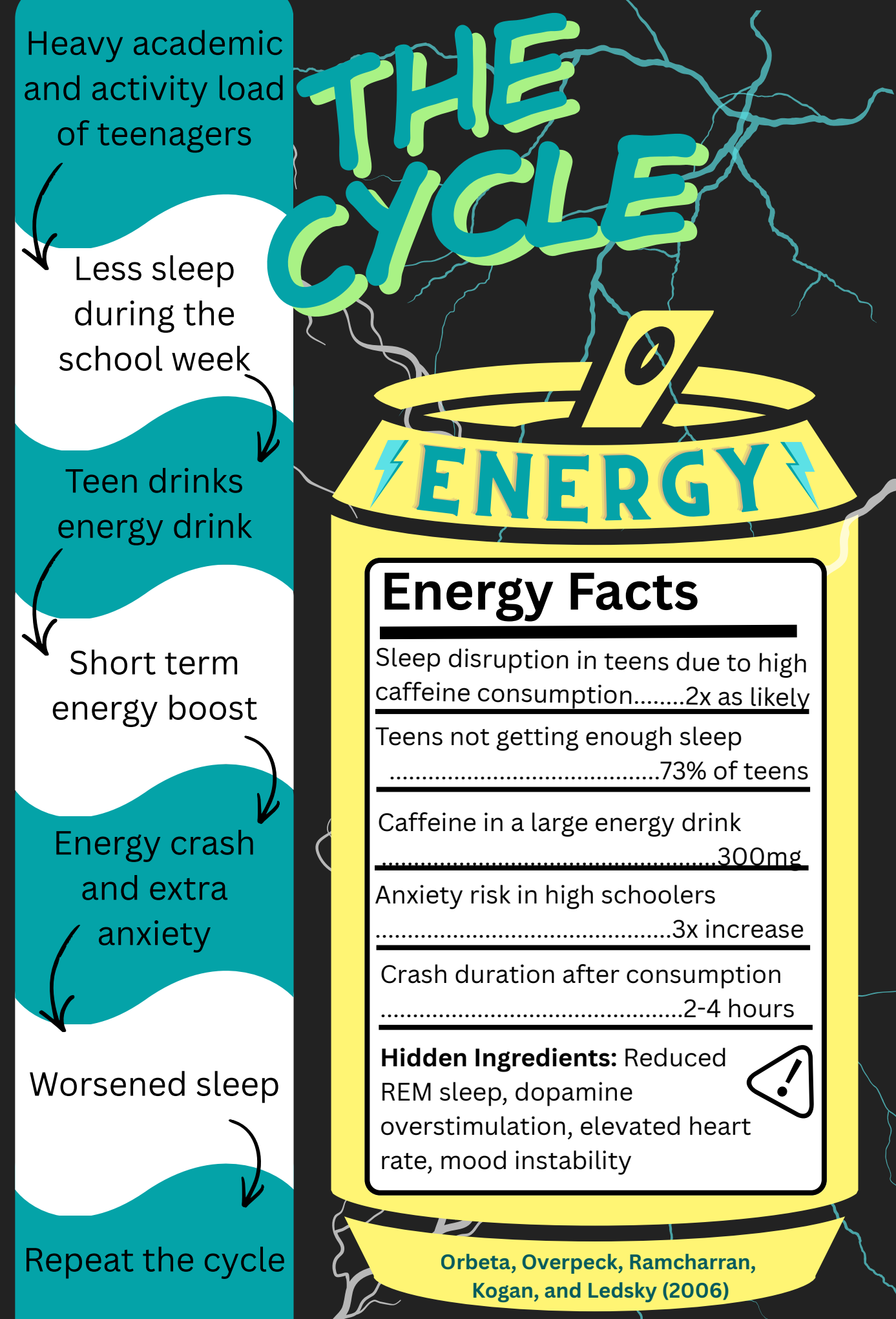
Imagine a teenager juggling mountains of homework, sports practices, extracurriculars, a job, and sleep in the 16 hours they aren't at school. Sports practices take up at least two hours a day, extracurricular practices and projects take up another hour, work takes four hours, and homework takes up another two to three hours. That is 10 hours teenagers can't use to recharge their bodies. So, they drink an energy drink just to make it through the day. The next day, it's the same schedule, and with the lack of sleep from the night before, they need two just to make it through the school day. This becomes a never-ending cycle, otherwise known as an addiction. How does this cycle affect a constantly developing adolescent brain?

Firstly, caffeine use affects sleep cycles across all ages. These effects are then amplified in still-developing children. Orbeta, Overpeck, Ramcharran, Kogan, and Ledsky (2006) studied sleep cycles of adolescents and found that the kids using higher dosages of caffeine were twice as likely to report difficulties sleeping or feeling tired in the mornings. Adolescents are typically at risk of unregulated sleep patterns regardless of their caffeine consumption due to different biological and social factors (Becker, Langberg, & Byars, 2015). Teens with disrupted sleep patterns often fall even deeper into the trap of energy drink addiction. They use their sleep deprivation as an excuse to drink yet another caffeinated drink. Thus, continuing the cycle.

Although disrupted sleep cycles can have a detrimental effect on teens' health, the ingredients of energy drinks can be

even worse. Energy drinks often contain high amounts of caffeine and added sugars, along with other energy-boosting additives like guarana and taurine. Many of these additives have unknown effects on the human body and brain. However, overconsumption of caffeine and added sugars is proven to have negative effects on health. Caffeine can cause anxiety and jitteriness as well as elevated blood pressure and heart rate. Added sugars can cause 'spikes' and 'crashes.' These happen when people have too much sugar, causing a short-term increase in blood glucose, causing you to have extra energy, and later a sharp decrease, causing you to have less energy than before. Stimulants like guarana and taurine can cause an overstimulation of dopamine pathways in the brain when teens' dopamine systems are already running on overdrive. Adolescents are at a much higher risk of being affected by the side effects of energy drinks, since their brains are still developing. Added sugars, caffeine, and stimulants don't just affect energy levels; they interact with the developing adolescent brain in ways that influence sleep, mood regulation, stress response, and long-term mental health.

Energy drinks may feel like a quick solution for exhausted teens, but they often deepen the cycle of poor sleep and anxiety. What starts as one drink to stay awake can quickly become two or three, worsening anxiety, increasing heart rate and blood pressure, and interfering with the deep, restorative sleep that developing brains critically need. Because adolescent brains are still developing, especially in areas that regulate emotion and decision-making, caffeine, added sugars, and other stimulants can have amplified and lasting effects. Instead of restoring energy, they disrupt sleep, mood, and stress regulation. Supporting healthy development means prioritizing rest, balanced nutrition, and realistic expectations over temporary boosts from a can.



COLOREFUL CANS ⚡ COSTLY CONSEQUENCES

By Mikah Schultz

In stores, especially in the drink aisles, teens are bombarded with bright designs of energy drink cans and bottles. Teenagers are often drawn to bold, fun typography, bright colors, and extravagant designs. Energy drink companies know this and have taken advantage of it. Energy drinks are packaged and marketed to look like sweet juices or sodas. These packages blur the lines between stimulated and safe drinks. Many teens don't realize that they're drinking caffeinated or stimulant beverages, which distorts their perception of "mild" drinks. Drinks like Alani Nu and Celsius are often seen as "mild" drinks; however, this is far from the truth. Both drinks contain 200mg of caffeine plus guarana seed extract and taurine. Alani Nu

also contains l-theanine and beta-alanine. These added stimulants can cause cardiovascular strain and other unknown effects, since these additives are so new. Even though these drinks contain dangerous ingredients, they are marketed and packaged to look like drinks for kids. They have bright colors and fun designs. Drinks like Bang, Ghost, and Monster feature labels that say their products are intended for people 18 and older; however, they still display bright colors and fun designs, which draw in teenage consumers. These deceptive marketing techniques can cause caffeine overdoses, cardiovascular strain, and sleep disruption in all age groups, which are amplified in teens and adolescents.

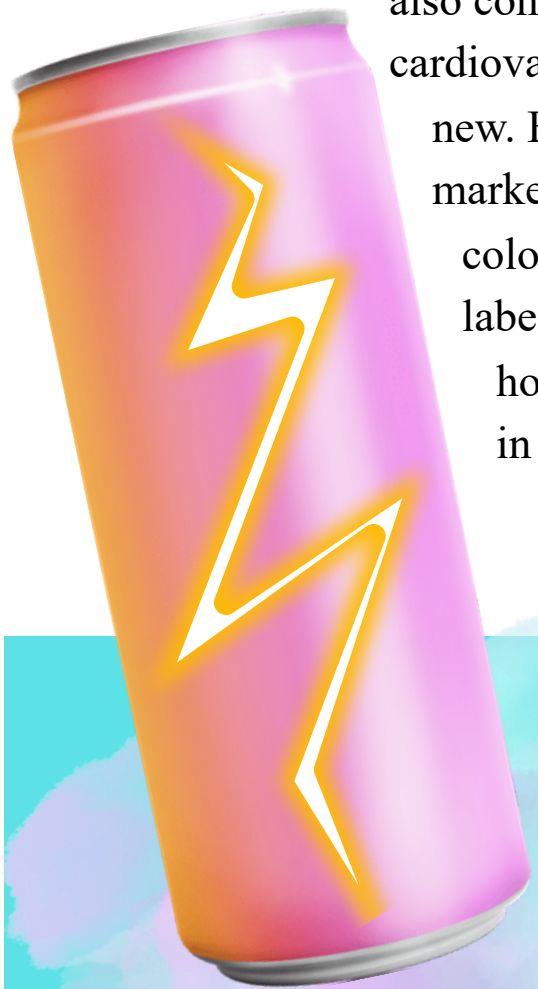
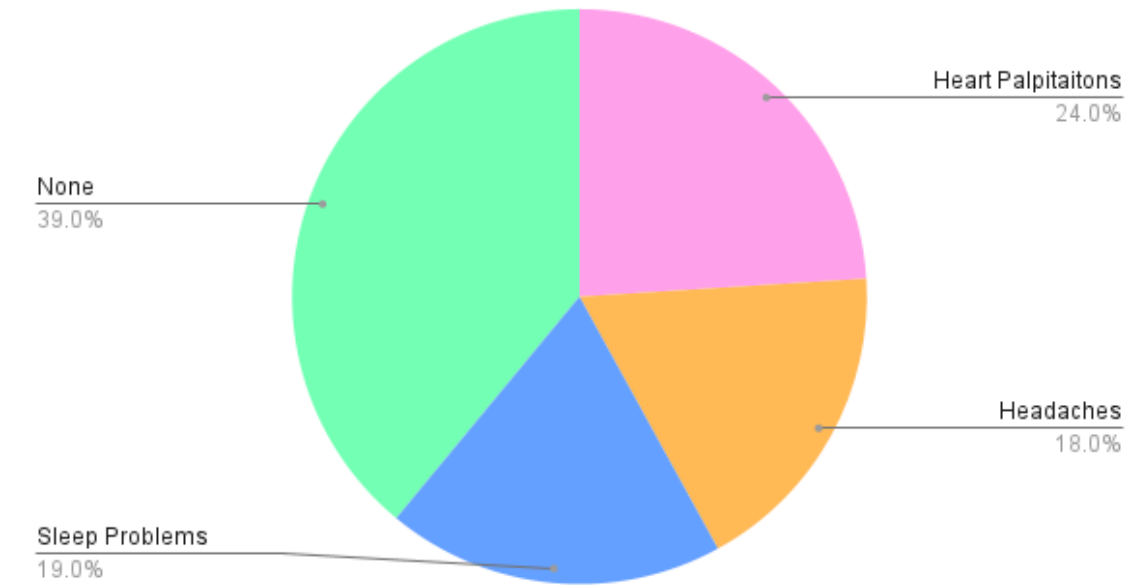


Photo Credit: Alani Nu

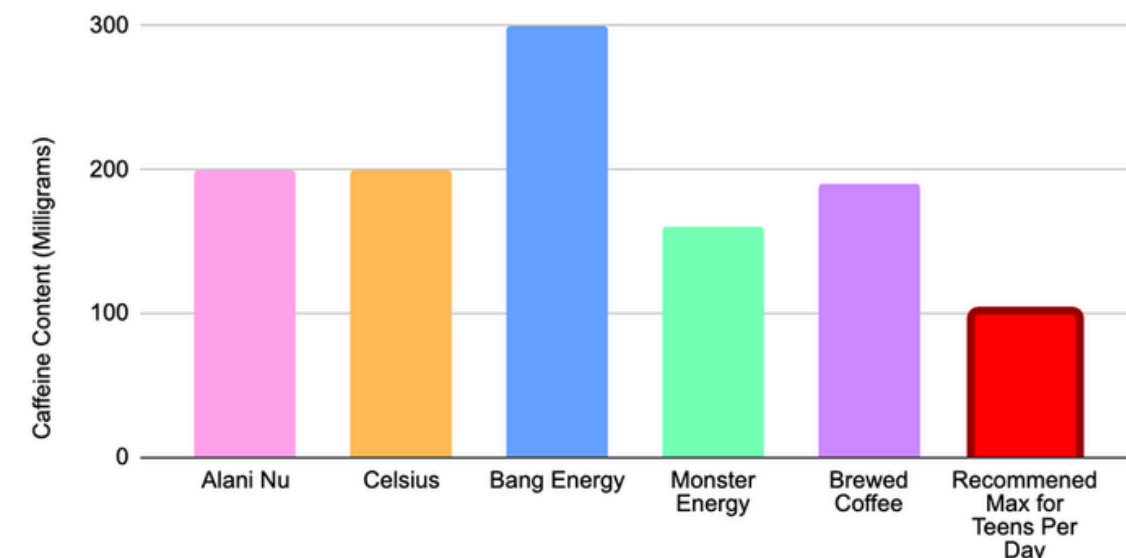


Photo Credit: Celsius

Reported Side Effects of Energy Drink Consumption in Teens



Caffeine Content of Different Energy Drinks Compared to Recommended Max for Teens Per Day



Statistics according to the Centers for Disease Control and Prevention



HEALTHIER ALTERNATIVES

BEYOND THE BUZZ

Other Perspectives and Possible Solutions

ARE ENERGY DRINKS ALWAYS THE PROBLEM?

By Mikah Schultz

Energy drinks have been labeled dangerous, addictive, and harmful to developing brains. But are they entirely to blame for the exhaustion facing today's teens, or is the issue more complicated than a single can?

The exhaustion crisis among teens is often blamed on the consumption of caffeinated drinks.

Although energy drinks can cause sleep disruption, increased heart rate, and other health concerns, the true cause of teen exhaustion runs much deeper than the bottom of a can. In fact, many health professionals argue that caffeine itself is not dangerous in small amounts. The real issue may not be caffeine, but excessive intake. A survey conducted at Southern Valley Jr./Sr. High School found that four out of five students consume more than the recommended daily limit of caffeine for teens (100 mg). This statistic suggests a broader lifestyle pattern rather than a simple preference for energy drinks. Academic pressure, extracurricular activities, part-time jobs, sports, and screen time often reduce the amount of sleep teens get each night. When students are

chronically sleep-deprived, caffeine becomes a quick and accessible solution.

Peer influence also plays a significant role. If teens see their friends regularly drinking energy drinks, they are more likely to do the same. What starts as occasional use can gradually turn into daily dependence, especially when exhaustion becomes the norm rather than the exception. Caffeine can also be used strategically in sports and academics. Athletic trainers often recommend consuming caffeine 30–60 minutes before an event to maximize its effects. However, many athletes wait until they feel tired during practice or competition, which can lead to inconsistent results and higher overall consumption. Similarly, students use caffeine to improve focus during homework, lectures, or exams. These beverages stimulate the central nervous system, increasing alertness, reducing fatigue, and boosting dopamine production (National Institutes of Health). In moderation, caffeine can be a helpful tool for performance and concentration.

However, relying on caffeine to compensate for chronic sleep deprivation creates a cycle. The

more teens depend on energy drinks to stay awake, the harder it becomes to maintain healthy sleep patterns. This leads to greater fatigue, which then encourages even more caffeine consumption.

In conclusion, energy drinks are not entirely responsible for the teen exhaustion crisis. While excessive caffeine intake can certainly contribute to health concerns, the deeper issue lies in lifestyle habits, social pressures, academic demands, and insufficient sleep. Instead of focusing solely on banning or blaming energy drinks, communities should address the root causes of teen fatigue. Promoting better sleep habits, time management skills, and balanced schedules may be far more effective solutions. Energy drinks are not the origin of the problem; they are often a symptom of a much larger issue.

Breaking the Cycle

- Prioritize 7–9 hours of sleep
- Limit caffeine after 2 PM
- Use time-management strategies
- Stay hydrated with water
- Take short movement breaks instead of drinking caffeine



I just drink them when I have them. I like the way they taste! - Erica Ehrke

I drink an energy drink at least once a day. Sometimes in the morning at school, but usually in the afternoon before I go to work. Lillian Zetterberg



This is my second time drinking this kind, but I drink at least one energy drink every day. I have empty Red Bull cans all around the top of my room. - Sophia Cunningham