

Energy Drinks & The Heart: Know the Risks

According to some reports, up to half of children and young adults in the United States consume the beverages known as "energy drinks" or "energy shots," which may contain three to five times the caffeine in a same-size can of soda. Even as their popularity has grown, energy drinks have come under scrutiny for possibly serious health effects, including heart rhythm problems, increased blood pressure, and—in rare cases—cardiac arrest.

A recent report from the Substance Abuse and Mental Health Services Administration found that emergency room visits involving energy drinks doubled from 2007 to 2011 from about 10,000 to over 20,000. These hospital visits resulted from use of energy drinks alone and from energy drinks in combination with pharmaceuticals (including, for example, Adderall and Ritalin), alcohol, or illicit drugs.

Read on to learn more about the potential cardiovascular risks of consuming energy drinks.



Energy drinks are beverages that are marketed for boosting energy levels, improving mental performance, and aiding weight loss. Popular brands contain high amounts of caffeine and sweeteners, vitamins, and herbal supplements.

Because some energy drinks are marketed as "dietary supplements," rather than beverages, the U.S. Food and Drug Administration (FDA) does not regulate the safety of the ingredients. This lack of regulation means that manufacturers are responsible for the safety of ingredients, many of which do not have scientific evidence backing safety or efficacy.

The Main Ingredient: Caffeine

Caffeine is commonplace in diets worldwide. It can be found in coffee, tea, cola, chocolate, as well as other dietary sources. Because caffeine is such a part of daily life,



you may not think of it as a drug; however, caffeine does alter performance, is addictive, and can be toxic—even fatal—at high concentrations.

Though recommendations vary, caffeine is generally considered safe up to 400 milligrams a day for healthy adults. For reference, a typical 8-ounce cup of coffee has about 100–200 mg of caffeine. The guidelines for children are more restrictive. In 2011, the American Academy of Pediatrics recommended that –

- All children should avoid caffeine because of its potential health and developmental effects and addictive nature, and
- Children and adolescents should never consume energy drinks

Energy drinks that are classified as dietary supplements are not legally required to list the total amount of caffeine on the product's label. Even when an energy drink's caffeine level is listed, other sources of caffeine that are popular in the beverages—such as guarana and yerba maté—may not be included in the total.

Note: The information contained herein does not, and is not intended to, constitute comprehensive professional medical services or treatment of any kind. This information should not be used in place of medical diagnosis or medical advice and must be considered as an educational service only.





What Are the Cardiovascular Risks of Energy Drinks?

Medical researchers have more to learn about energy drinks, but the primary cause of serious health problems appears to be the high concentrations of caffeine. Examples of findings related to cardiovascular effects are –

- **Heart palpitations.** According to one study, 19 percent of college students who used energy drinks had experienced heart palpitations.
- Increased heart rate and blood pressure. Energy drinks can increase heart rate and blood pressure, particularly in people who already have heart disease.

The risks associated with energy drinks are believed to be higher for people who have existing medical conditions, such as heart defects or certain heart conditions. For example, people with **hypertrophic cardiomyopathy** should not have caffeine or other stimulants, as they may increase the risk of irregular heart rhythms, high blood pressure, and sudden death from cardiac arrest.

It is important to note that not all heart defects are discovered before or when a child is born. Some people may have structural defects in the heart that go undiagnosed until later childhood or adulthood.

What Should I Be Aware Of, For Myself or My Child?

Be sure to track **all of your dietary sources** of caffeine. While one or two cups of coffee may not create problems

or an energy drink here or there may not cause damage, combining multiple sources of caffeine, leading to high concentrations of the drug in your body, could potentially lead to serious health effects. Also, be aware that the long-term safety of other ingredients in energy drinks is often unknown, and those ingredients could interact with prescription medications that you are taking. Discuss all dietary sources of herbal supplements and vitamins with your healthcare providers.

For your child, stress that doctors do not recommend energy drinks for children. Help your child understand that it can be especially dangerous to gulp energy drinks quickly; drink multiple servings; or combine the drinks with other sources of caffeine, alcohol, or stimulant medications such as Adderall or Ritalin.

If you suspect caffeine intoxication or any other serious reaction from energy drink consumption in yourself or your child, contact a poison control center at 1-800-222-1222 (United States) or dial 911.

What Should I Do If I Have Other Questions?

Ask them. Contact your healthcare provider and ask all of your questions. Any time you have health questions, the conversations you have with your doctor are the key to successful results. Ask every question you have.

We hope you will use <u>SecondsCount.org</u> to learn more about your cardiovascular health and treatment options. <u>SecondsCount.org</u> was developed by the Society for Cardiovascular Angiography and Interventions (SCAI), the medical society for interventional cardiologists.

For supporting reference materials, visit: www.SecondsCount.org.