

Cardiac complications from energy drinks? Case report adds new evidence

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The high levels of caffeine in energy drinks may lead to cardiac complications, suggests a case report in the July/August *Journal of Addiction Medicine*, the official journal of the American Society of Addiction Medicine (ASAM).

The case adds to previous reports of adverse cardiovascular events related to consuming energy drinks, including [abnormal heart rhythms](#) (arrhythmias). The lead author is Dr. Maryam Sattari of University of Florida, Gainesville.

Arrhythmia Sends Energy Drink User to the Emergency Room

The patient was a 28-year-old man seen in the emergency department after developing vomiting with blood. On examination, the only abnormality (other than obesity) was a very fast heart rate—about 130 beats per minute.

An electrocardiogram revealed an abnormal heart rhythm called [atrial fibrillation](#): a common type of arrhythmia that can lead to serious complications if sustained. Further tests showed no other heart problems.

The patient said he routinely drank two Monster energy drinks per day—for a total caffeine content of 320 milligrams—along with two or three beers. No other common causes of his heart rhythm abnormality

were apparent.

With medications, the atrial fibrillation resolved over 48 hours. Endoscopy showed a tear of the stomach and esophagus, probably caused by forceful vomiting. The patient was sent home in stable condition; at one year's follow-up, he had no further symptoms of arrhythmia.

Although several factors might have contributed to the patient's atrial fibrillation, Dr. Sattari and colleagues write, "We believe that energy drink consumption played a key role." They point out the 160 mg caffeine content of a Monster energy drink is about four times higher than in a caffeinated soft drink (The caffeine content of coffee drinks varies widely, but may be even higher).

A review of the medical research identified at least eight cases of cardiovascular events linked to energy drinks, such as Monster or Red Bull. The researchers discuss several mechanisms by which the high caffeine content of these products might lead to [cardiovascular events](#). These include other ingredients, such as taurine, that might heighten the effects of caffeine; using energy drinks along with alcohol or illicit drugs; or high stress levels.

Energy drinks have become increasingly popular in recent years, especially among adolescents and young adults. Marketed as "nutritional supplements," these beverages are not subject to the caffeine limits on soft drinks, or to the safety testing and labeling required for medications.

This and previous reports are "suggestive but not conclusive" that the caffeine in [energy drinks](#) may cause abnormal heart rhythms and other cardiac complications. "We suggest that arrhythmia could be a complication of energy drink consumption," Dr. Sattari and coauthors write. They encourage health care providers to ask about energy drink

intake in otherwise healthy young patients with unexplained arrhythmias.

More information: "Energy Drink Consumption and Cardiac Complications: A Case for Caution" [DOI: 10.1097/ADM.0000000000000234](#)

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