

Energy drinks may be harmful to people with hypertension, heart disease

March 25 2009

People who have high blood pressure or heart disease should avoid consuming energy drinks, according to a Henry Ford Hospital study to be published online Wednesday in the *Annals of Pharmacotherapy*.

Researchers found that healthy adults who drank two cans a day of a popular energy drink experienced an increase in their [blood pressure](#) and [heart rate](#). No significant changes in EKG measurements were reported.

The increases in blood pressure and heart rate were insignificant for healthy adults, but could prove harmful to people with a heart-related condition, says James Kalus, Pharm.D., senior manager of Patient Care Services at Henry Ford Hospital and lead author of the study.

"Based on our findings, we recommend that people who have [hypertension](#) or [heart disease](#) and are taking medication for them to avoid consuming [energy drinks](#) because of a potential risk to their health," Dr. Kalus says.

Researchers believe the caffeine and taurine levels in energy drinks could be responsible for increases in blood pressure and heart rate. The brand of energy drink used in the study is not being identified because most energy drinks on the market boast similar levels of caffeine and taurine, a non-essential amino acid derivative often found in meat and fish. The caffeine levels in energy drinks are equivalent to at least one to two cups of coffee.

Dr. Kalus says energy drinks should not be confused with sports drinks, which aim to replenish the carbohydrates and electrolytes that a body needs.

"Both caffeine and taurine have been shown to have a direct impact on [cardiac function](#)," Dr. Kalus says.

Researchers studied 15 healthy adult participants who abstained from other forms of caffeine for two days prior to and throughout the study. On the first day after a baseline measurement of blood pressure, heart rate and EKG were taken, the adults consumed two cans of the energy drink.

Researchers then measured the participants' blood pressure, heart rate and EKG again at 30 minutes and one, two, three and four hours after consumption. For the next five days, the participants' consumed two cans of the energy drink.

On the study's seventh day, the protocol used on the first day was repeated and the average baseline measurements were compared to the measurements obtained after energy drink consumption. Researchers found that the participants:

- Heart rate increased 7.8 percent the first day and 11 percent the seventh day.
- Blood pressure increased at least 7 percent the first and seventh days.

Dr. Kalus says the participants did not engage in any physical activity during the study, suggesting that the increases could have been higher.

Source: Henry Ford Health System

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