

Effect of Energy Drinks on Your Heart

Energy drinks are marketed as a way to improve concentration and energy. Companies that market these products usually target young adults. In fact, 51% of college students consume at least 1 energy drink per month.

These beverages usually contain many ingredients, including caffeine and an amino acid derivative called taurine. Sugar, vitamins, and other nutritional supplements may also be included. Researchers have studied caffeine and taurine and believe these are the ingredients most likely to improve concentration. Some studies have suggested that taurine may lower blood pressure, while caffeine is known to increase heart rate and blood pressure, cause irregular heart rhythms, and increase the rate of breathing. Although many of the ingredients in energy drinks have been studied individually, until recently no medical study had ever looked at all the ingredients in combination to see if the beverages cause heart rate or blood pressure changes.

Recently, a small study looked at the effects of one particular energy drink on the heart. The study enrolled healthy 18- to 40-year-old indi-



viduals—people who are the most likely to use energy drinks. Study participants were asked to consume 2 energy drinks each day for 7 days, and the researchers measured each person's heart rate and blood pressure on Day 1 and Day 7. The results showed that consuming an energy drink significantly increased both heart rate and blood pressure within 4 hours. Although the energy drinks were well tolerated by the study participants, 47% did experience a side effect such as “shakiness or being jittery,” “more forceful heart beats,” or “upset stomach or abdominal cramping.”

The study proved that energy drinks do have an effect on the heart, causing both heart rate and blood pressure to increase. While the changes were not severe enough to cause any serious

FOR MORE INFORMATION

Mayo Clinic
www.mayoclinic.com/print/caffeine/AN01211/METHOD=print

Nemours Foundation
http://kidshealth.org/teen/food_fitness/nutrition/energy.html

Based on “Effect of Energy Drink Consumption on Hemodynamic and Electrocardiographic Parameters in Healthy Young Adults” by Leah Steinke, David E Lanfear, Vishnuprabha Dhanapal, and James S Kalus, *The Annals of Pharmacotherapy*, April 2009, <http://dx.doi.org/10.1345/aph.1L614>. For Our Patients is provided by *The Annals* to help explain the latest research and information relating to your medications. These summaries are for informational purposes only and are not a substitute for professional advice from your personal medical provider. If you have questions about this material, you should discuss it with your physician or pharmacist. This summary may be reproduced without permission for not-for-profit educational purposes only. Any other use must be approved by the publisher. © Copyright 2009, Harvey Whitney Books Company, www.hwbooks.com. FOPF2 DOI 10.1345/fop.1L614

problems in these healthy individuals, people who have high blood pressure or a heart condition could experience complications if they consume energy drinks. The increases in heart rate and blood pressure caused by energy drinks could also result in medications prescribed for heart conditions being less effective.

Although the increases in heart rate and blood pressure caused by energy drinks are probably completely safe for healthy young adults, the drinks could cause problems for individuals with undiagnosed heart conditions. The

effect of these beverages on people with high blood pressure or other heart conditions is not clear. For this reason, people with high blood pressure or known heart conditions should avoid these drinks until further research is done. The recent study looked at the effects of energy drinks for only 7 days, and longer studies are needed before long-term effects on the heart are understood. However, the changes in heart rate and blood pressure caused by energy drinks appear to have no harmful effects on healthy young adults.