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[American Psychological Association](http://www.apa.org)



'Less is more,' when it comes to sugary, high-caffeine energy drinks, researchers say

Call for more research into caffeine consumption by adolescents

WASHINGTON – Moderate consumption of so-called energy drinks can improve people's response time on a lab test measuring behavioral control, but those benefits disappear as people drink more of the beverage, according to a study published by the American Psychological Association.

With the growing popularity of energy drinks such as Red Bull, Monster, Burn and RockStar, especially among high school and college students, psychologists have been studying the effects of sugary, highly caffeinated drinks on young people. College students in particular have been using these drinks to stay awake, help them study and cut the intoxicating effects of alcohol. The latter use has sent several young people to hospital emergency rooms, leading a handful of state liquor control boards recently to ban the drink Four Loko, which combined caffeine and alcohol.

"Several aspects of cognitive performance that show improvement under the influence of caffeine are attention, reaction time, visual search, psychomotor speed, memory, vigilance and verbal reasoning," said Cecile A. Marcziński, PhD, of Northern Kentucky University and co-author of the study "Acute Effects of a Glucose Energy Drink on Behavioral Control." "The results of the current study illustrate that energy drinks can increase stimulation and decrease mental fatigue, suggesting that they may be used with alcohol to counteract the sedation associated with drinking."

The study, published in the December issue of the APA journal *Experimental and Clinical Psychopharmacology*, included 80 college students (34 men and 46 women) between the ages of 18 and 40. Some were given Red Bull 7, while others were given lower amounts of caffeine added to Squirt, a lemon-flavored decaffeinated soda that looks and tastes like Red Bull. Others were given plain Squirt as a placebo. A half-hour after finishing the drinks, participants took a computerized "go/no-go" test in which they had to respond quickly to targets on a screen. They were instructed to hit the forward slash key when a green target appeared and do nothing when a blue target appeared.

Participants were also asked how stimulated and mentally fatigued they felt after the drinks. The students who were given Red Bull reported feeling more stimulated and less tired than the other participants, but their response rates were slower.

"This finding is of interest given that energy drinks are frequently mixed with alcohol and the acute effects of alcohol impair response inhibition," Marcziński said. "Since regulation of energy drinks is lax in the United States in regard to content labeling and possible health warnings,

especially mixed with alcohol, having a better understanding of the acute subjective and objective effects of these beverages is warranted."

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Articles: "Acute Effects of a Glucose Energy Drink on Behavioral Control," Meagan A. Howard and Cecile A. Marcziński, PhD, Northern Kentucky University. *Experimental and Clinical Psychopharmacology*, Vol. 18, No. 6.

Full text of the articles available from the APA Public Affairs Office. Contact public.affairs@apa.org or 202-336-5700.

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