

Energy Drink Consumption Is Strongly Linked With Risks of Heavy Drinking and Alcohol Dependence

ScienceDaily (Nov. 17, 2010) — Many adolescents and college students innocently ingest large amounts of energy drinks to stay awake. But, new research shows that energy drink over-use is strongly linked with increased risks of engaging in episodes of heavy drinking and developing alcohol dependence.

A hallmark of college life is staying up late to study for an exam the following morning, and many students stay awake by consuming an energy drink. Also increasing in popularity is the practice of mixing alcohol with energy drinks. But these drinks are highly caffeinated and can lead to other problems, in addition to losing sleep. Unfortunately, the contents of energy drinks are not regulated.

New research indicates that individuals who have a high frequency of energy drink consumption (52 or more times within a year) were at a statistically significant higher risk for alcohol dependence and episodes of heavy drinking.

The results will be published in the February 2011 issue of *Alcoholism: Clinical & Experimental Research*.

Amelia M. Arria, the lead author of the study, Director of the Center on Young Adult Health and Development at the University of Maryland School of Public Health, and a Senior Scientist at the Treatment Research Institute, said that prior research has highlighted the dangers of combining energy drinks with alcohol.

"We were able to examine if energy drink use was still associated with alcohol dependence, after controlling for risk-taking characteristics. The relationship persisted and the use of energy drinks was found to be associated with an increase in the risk of alcohol dependence."

The study utilized data from more than 1,000 students enrolled at a public university who were asked about their consumption of energy drinks and their alcohol drinking behaviors within the past 12 months. The researchers found that individuals who consumed energy drinks at a high frequency were more likely to get drunk at an earlier age, drink more per drinking session, and were more likely to develop alcohol dependence compared to both non-users of energy drinks and the low-frequency users.

The results of this study confirm and extend earlier research about the risks of energy drink consumption. A major concern is that mixing energy drinks with alcohol can lead to "wide-awake drunkenness," where caffeine masks the feeling of drunkenness but does not decrease actual alcohol-related impairment. As a result, the individual feels less drunk than they really are, which could lead them to consume even more alcohol or engage in risky activities like drunk driving.

"Caffeine does not antagonize or cancel out the impairment associated with drunkenness -- it merely disguises the more obvious markers of that impairment," says Kathleen Miller, a research scientist from the Research Institute on Addictions at the University at Buffalo. According to her, the next steps in this research include identifying links between energy drinks and other forms of substance abuse, as well assessing the overall prevalence of energy drink use by adolescents and young adults.

"Also needed is research that directly assesses students' reported reasons for mixing alcohol and energy drinks. Anecdotal reports suggest that part of this phenomenon may be driven by the perpetuation of myths (e.g., mixing alcohol and caffeine reduces drunkenness, prevents hangovers, or fools a breathalyzer test) that could be debunked through further education."

Arria agrees, adding that further research and regulations are needed to curb this disturbing trend.

"The fact that there is no regulation on the amount of caffeine in energy drinks or no requirements related to the labeling of contents or possible health risks is concerning."

Editor's Note: This article is not intended to provide medical advice, diagnosis or treatment.

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Journal Reference:

1. Amelia M. Arria, Kimberly M. Caldeira, Sarah J. Kasperski, Kathryn B. Vincent, Roland R. Griffiths, Kevin E. O'Grady. **Energy Drink Consumption and Increased Risk for Alcohol Dependence**. *Alcoholism: Clinical and Experimental Research*, 2010; DOI: [10.1111/j.1530-0277.2010.01352.x](https://doi.org/10.1111/j.1530-0277.2010.01352.x)

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Alcoholism: Clinical & Experimental Research (2010, November 17). Energy drink consumption is strongly linked with risks of heavy drinking and alcohol dependence. *ScienceDaily*. Retrieved November 22, 2010, from <http://www.sciencedaily.com/releases/2010/11/101116181949.htm>

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