



The U.S. Department of Education's

**HIGHER
EDUCATION
CENTER**

for Alcohol,
Drug Abuse, and
Violence Prevention

PREVENTION UPDATE

Energy Drinks

Overview

High-caffeine soft drinks have existed in the United States since at least the 1980s beginning with Jolt Cola. Energy drinks, which have caffeine as their primary “energy” component, began being marketed as a separate beverage category in the United States in 1997 with the introduction of the Austrian import Red Bull. Energy drink consumption and sales have increased dramatically since then, with more than \$3.2 billion in sales in 2006, a 516 percent inflation-adjusted increase since 2001. Energy drinks are commonly used as mixers for alcoholic drinks in bars and nightclubs, such as mixing Red Bull with vodka. One [Web site](#) lists 64 bar drink recipes using Red Bull. According to *Alcohol, Energy Drinks, and Youth: A Dangerous Mix* ([Marin Institute, 2007](#)), “Although Red Bull denies it, the company’s marketing practices suggest otherwise. Red Bull’s director of communications stated in 2001 that Red Bull is perfect for nightclubs and bars.” Premixed alcoholic energy drinks, such as [Four Loko](#) and [Joose](#), which both have up to 12 percent alcohol content, have their roots in those bar drinks. Currently, [more than 25 brands](#) of caffeinated alcoholic beverages (CABs) are sold in a variety of U.S. retail alcohol outlets, including many convenience stores.

What Science Tells Us

According to the [Centers for Disease Control and Prevention \(CDC\)](#), when alcoholic beverages are mixed with energy drinks, a popular practice among youth, the caffeine in these drinks can mask the depressant effects of alcohol. At the same time, caffeine has no effect on the metabolism of alcohol by the liver and thus does not reduce blood alcohol concentration or reduce the risk of alcohol-attributable harms.

A review of the energy drink research literature in a recent study published in [Addictive Behaviors \(April 2010\)](#) found that 73 percent of students in an American college sample had consumed energy drinks mixed with alcohol during the past month. It also found that college students are a major market for energy drinks and the drinks are a ubiquitous feature of recreational events in many campus communities. The major motivations college students cite for using energy drinks are to compensate for insufficient sleep, increase energy, and mix with alcohol while partying. Clinical studies have found that drinking caffeine, a central nervous system stimulant, together with alcohol, a depressant, reduces subjective perceptions of alcohol-induced impairment in comparison with alcohol alone; however, there is less evidence to suggest that combining alcohol and energy drinks reduces objective measures of impairment. “Thus, when mixing energy drinks and alcohol, users may become desensitized to the symptoms of alcohol intoxication, which may increase the potential for alcohol-related harm such as alcohol poisoning, physical injury, impaired driving, and sexual victimization,” the researchers said. One college study in [Academic Emergency Medicine \(May 2008\)](#) found that in comparison with students who consumed only alcohol, students who consumed energy drinks mixed with alcohol had experienced a higher prevalence of alcohol-related consequences, including being taken advantage of sexually, taking advantage of another sexually, riding with a driver who was under the influence of alcohol, being hurt or injured, and requiring medical treatment.



A study of intercollegiate athletes in the [Journal of Applied Sport Psychology \(Vol. 22, No.1, 2010\)](#) found that 37 percent combined alcohol with energy drinks, and 48 percent used energy drinks without alcohol. Sixty-one percent of combined users participated in high-risk “energy binge” drinking episodes (using 3+ energy drinks on one occasion). Results indicated these combined users consumed significantly more alcohol and had riskier drinking habits (e.g., heavy binge drinking) than athletes who used alcohol only.

According to studies in [Nutrition Journal \(October 2007\)](#) and [Journal of Adolescent Health \(November 2008\)](#), “promotional campaigns for energy drinks, which often feature extreme sports, leave little doubt that producers target the young adult market.”

Prevention Efforts

Most of the prevention efforts aimed at reducing harm related to combining energy drinks with alcohol or drinking CABs have focused on measures to educate the public on the negative health consequences associated with these products. For example, in 2008 a student intern at the University of Southern Maine developed a [series of social marketing posters](#) on energy drinks. At Virginia Tech a [21st birthday Web page](#) warns about the dangers of combining energy drinks and alcohol, and Washington State University has developed a [brochure on energy drinks](#). The Idaho RADAR Network Center based at Boise State University has developed [an online energy drinks fact sheet](#).

Other focuses are on regulating the product or the points of sale. According to the [CDC](#) in 2008, 13 state attorneys general and the San Francisco city attorney initiated an investigation of CABs, which resulted in negotiated settlements with two CAB producers, who agreed to remove all stimulants from their products. In addition, because CABs may have higher alcohol content than beer, some states, such as Montana, have classified CABs as liquor, thereby limiting the locations where these beverages can be sold. States and communities are also developing educational strategies to alert consumers to the risks of mixing alcohol with energy drinks and CABs. One community has enacted an ordinance requiring retailers to post signs warning of the risks of CABs. Because cans of nonalcohol energy drinks and CABs are so similar, the [Virginia Department of Alcoholic Beverage Control has developed a poster](#) to educate the public on how to tell the difference.

Higher Education Center Resource

- [Ephedra and Energy Drinks on College Campuses \(2008\)](#)

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