

Evidence and knowledge gaps for the association between energy drink use and high-risk behaviors among adolescents and young adults

MAJOR FINDINGS:

Sales of energy drinks and energy shots have increased rapidly since their introduction to the US in the late 1990s. Public health experts and clinical professionals have expressed concerns related to the health effects of caffeinated energy drinks, especially for adolescents and young adults.

Little is known about the patterns of energy drink consumption—that is, how much and how often they are consumed, and in what contexts. In this article, researchers analyzed data from Monitoring the Future, a national survey of eighth, tenth, and twelfth graders, to estimate the prevalence of energy drink and energy shot consumption by gender and race/ethnicity. The article also contains a review of existing literature on the relationship between energy drink consumption among college students and risk-taking behaviors.

Approximately one in three students surveyed consumed energy drinks recently. Eighth graders were more likely to consume energy drinks than tenth or twelfth graders. Eighth graders also had the highest prevalence of daily consumption and the greatest likelihood of consuming more than one energy drink per day, compared with older students. In all grade levels, males were more likely than females to consume energy drinks. Additionally, consuming energy drinks was most common among Hispanic eighth graders (43%) and least common among Black twelfth graders (19%). Consumption of energy shots was less prevalent than energy drinks, with only one in ten students consuming the smaller, more concentrated products.

The review of research literature concluded that energy drink consumption appears to be more common among college students than younger adolescents, with approximately half of college students consuming more than one energy drink per month. Studies consistently show that young adults who consume energy drinks are more likely to engage in risk-taking behavior, relative to their counterparts who do not consume energy drinks. Other risk-taking behaviors linked to energy drink consumption include new and increased substance use, alcohol-related risky behaviors, sexual risk-taking, participating in extreme sports, seatbelt omission, taking a risk on a dare, drunk driving, and riding in a car with an intoxicated driver.

Of major interest to:

- College Administrators
- Parents
- Educators
- Health Professionals
- Students
- Law and Policy Makers



Practice and Policy Suggestions: The FDA has not established a maximum limit of caffeine for energy drinks or energy shots. However, research shows that energy drink consumption is associated with adverse cardiovascular effects, disrupted sleep patterns, and increased risk-taking behavior. The high prevalence of energy drink consumption documented in this and prior studies highlights the need to establish the safety of these beverages, especially for adolescents between the ages of 13 and 18. In the meantime, a maximum limit of caffeine in energy drinks and energy shots should be established. Additionally, creating restrictions to prevent energy drink marketing to adolescents and energy drink sales to minors may also help to protect children from the potential health problems associated with energy drinks.

The complete publication referenced in this research brief can be found here: Arria, A.M., Bugbee, B.A., Caldeira, K.M., Vincent, K.B. (2014). Evidence and knowledge gaps for the association between energy drink use and high-risk behaviors among adolescents and young adults. *Nutrition Reviews*. 72(S1), 87-97. doi:10.1111/nure.12129; PMC4196711



About the College Life Study (CLS)

The CLS is a longitudinal study of 1,253 college students at a large, public, mid-Atlantic university. This study is one of the first large-scale scientific investigations that aims to discover the impact of health-related behaviors during the college experience. Any first-time, first-year student between 17 and 19 years old at the university in the fall of 2004 was eligible to participate in a screening survey. The researchers then selected students to participate in the longitudinal study, which consisted of two-hour personal interviews administered annually, beginning with their first year of college. A full description of the methods used is available.^{1,2} Inherent to all self-reporting research methods is the possibility for response bias. Because the sample is from one large university, the ability to generalize the findings elsewhere is uncertain. However, response rates have been excellent and attrition bias has been minimal.

For more information about the study, please visit www.cls.umd.edu or contact Amelia M. Arria at the University of Maryland School of Public Health at aarria@umd.edu.

¹ Arria, A.M., Caldeira, K.M., O'Grady, K.E., Vincent, K.B., Fitzelle, D.B., Johnson, E.P., Wish, E.D. (2008). Drug exposure opportunities and use patterns among college students: Results of a longitudinal prospective cohort study. *Substance Abuse*. 29(4), 19-38. doi:10.1080/08897070802418451; PMC2614283

² Vincent, K.B., Kasperski, S.J., Caldeira, K.M., Garnier-Dykstra, L.M., Pinchevsky, G.M., O'Grady, K.E., Arria, A.M. (2012). Maintaining superior follow-up rates in a longitudinal study: Experiences from the College Life Study. *International Journal of Multiple Research Approaches*. 6(1), 56-72. doi:10.5172/mra.2012.6.1.56; PMC3255097

This research brief was prepared with the assistance of Juinell Williams and Kaitlin Hippen.

