



## Energy Drinks:

Where the Science Meets Main Street

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# Energy Drinks, Risky Masculinity and the Toxic Jock

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## PRESENTATION SUMMARY

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Energy drink use has been linked with a number of health-compromising behaviors. Users report higher rates of substance abuse, including problem drinking, prescription stimulant abuse, marijuana use, and smoking (Arria et al., 2010; Miller, 2008a; O'Brien et al., 2008). Frequent energy drink use is also a predictor of risky sexual behavior, interpersonal violence, vehicular risk-taking, and sexual assault or victimization (Miller, 2008a; O'Brien et al., 2008). By examining the linkages among energy drink use, risky masculinity, and “toxic jock” identity, the study presented here explores some possible explanations for these relationships.

Energy drinks are sometimes used to enhance performance in sports competitions, a strategy that may prove harmful in several ways. Caffeine boosts energy and endurance, but it is also a vasoconstrictor (i.e., constricts blood vessels and reduces cardiac blood supply) and a diuretic (i.e., speeds fluid loss and causes dehydration). Also risky are the fat burners and muscle builders often found in sport-oriented energy drinks; for example, bitter orange (synephrine) is pharmacologically similar to the ephedra products removed from U.S. markets a decade ago (Clason et al., 2008). Energy drinks are now regulated in most developed nations (and banned in several), after a series of unexplained deaths that may have been related to energy drink in conjunction with exercise, alcohol, or both (Food Safety Promotion Board, 2002; Reissig et al., 2009).

## Key Concepts

**Risky masculinity.** Traditional masculinity in U.S. culture is bound up with assumptions about how men should think, feel, and act. These cultural norms act as a cheat sheet for “being a man,” especially for teens and young adults still figuring out who they are. Conventional masculine norms (“boys don’t cry” or “no guts, no glory”) have traditionally included a playboy attitude toward sex, focus on winning, and a propensity for violence, dominance, and risk-taking. While women can hold these attitudes too, they are neither compelled nor rewarded for doing so. The presumption that masculinity requires taking chances and confronting danger may promote health-compromising behavior, resulting in elevated rates of injury, disease, and mortality (Connell, 2005).

**Toxic jock identity.** People who play sports often develop sport-related identities. For most, this identity revolves around being an “athlete”; for them, sport is a harmless or beneficial source of health, self-improvement, social engagement, and fun. A hardcore few go further and develop a “jock” identity, a view of the world that intertwines athletic involvement, hypermasculine attitudes, an ego orientation (i.e., measuring personal success in terms of beating opponents rather than personal excellence), and willingness to take excessive risks (Miller, 2009). This identity may be considered toxic because it is often associated with a host of health-compromising behaviors, including problem drinking (Miller et al., 2003), sexual risk-taking (Miller et al., 2005), violence (Miller et al., 2006), delinquency (Miller et al., 2007), and even suicide attempts (Miller & Hoffman, 2009).

## The Energy Drink Study

Toxic jock identity is closely linked with risky masculinity and problem behaviors. The point of this study was to examine where energy drink use fits into this constellation. I sought to address two main research questions. First, is frequent energy drink use a red flag for risky masculinity and toxic jock identity? Second, is energy drink consumption associated with health-compromising behaviors? As a secondary focus of the study, I also examined the role of alcoholic energy drink (AED) use.

As part of a larger 2006 survey of athletic involvement, 795 undergraduate students at a large public university anonymously answered questions about their energy drink use, sport-related identities, gender norms, substance use, and other risky behaviors. Sample characteristics closely resembled those of the overall university population. Forty-eight percent of participants were female. Eight percent were of Hispanic ethnicity. In terms of race, 66% were White, 10% were African American, and 24% self-identified as another race (Asian/Pacific Islander, Native American, or unspecified). Statistical analyses of participants' responses yielded three main findings.

**Finding #1: Energy drink use is quite common, particularly among men and Whites.** In this sample, 39% of students reported energy drink use in the past month, including 46% of men and 31% of women. Whites were more likely than African Americans to consume energy drinks (40% vs. 25%, respectively). One in ten students reported "frequent" use, defined as at least once or twice a week. By the time these 2006 data were collected, AED use was also growing common; 26% of all students reported past-month use (including about two thirds of all energy drink users), and 8% of students used AEDs frequently (Miller, 2008b). The consumption rates in this study were somewhat lower than in other contemporary studies; Malinauskas et al. (2007) found that 51% of Central Atlantic college students were users, and Oteri et al. (2007) estimated 57% in their Italian undergraduate sample. It should also be noted that consumption rates have most likely continued to grow, given the exponential increases in energy drink sales over the past decade.

**Finding #2: Energy drink and AED use are both associated with toxic jock characteristics.** Three characteristics were used to measure "toxic jock" identity: (1) self-identification with the "jock" label; (2) endorsement of conventional masculine norms (i.e., views on sex, violence, domination, winning, and risk-taking); and (3) past-year involvement in risky behaviors such as fighting, unsafe sex, or doing something dangerous on a dare. In this sample, past-month energy drink use was about 1.5 times as common among "toxic jocks." About half of people who scored high on jock identity, masculine norms, and risk-taking were ED users, compared to about a third of those who scored low on these characteristics. AED use was about twice as common among toxic jocks; about 40% of people who scored high on the three measures of toxic jock identity were AED users, compared to about 20% of those who scored low (Miller, 2008b).

**Finding #3: Frequent energy drink users are more likely to risk their health in other ways.** The behavior of frequent energy drink users was compared to that of people who drank less frequently or not at all. Frequent users reported considerably more health-risk behavior, including

- More than three times as much (1) abuse of prescription drugs without a prescription, (2) serious physical fighting, and (3) cigarette smoking;
- More than twice as many (1) instances of doing something dangerous on a dare, and (2) alcohol-related social problems, such as binge drinking, driving while intoxicated, blackout out, or fighting with loved ones about one's drinking;
- More than one and a half times as much (1) total alcohol consumption, (2) marijuana use, (3) sexual risk-taking, and (4) participation in extreme sports.

Except for extreme sports, all of these differences remained statistically significant after controlling for the influence of sex, race, age, parental education, and college grade point average (Miller, 2008b).

## Sensation-seeking: Explaining links between energy drink use and risky behaviors

One possible explanation for these findings is that energy drink use is an indicator of the personality trait of sensation-seeking, a predisposition to seek out novel, varied, intense sensations and experiences (Zuckerman, 1979). Sensation-seekers are more inclined to eat exotic foods, ride roller coasters, or take adventure vacations. In some instances this tendency may lead to illegal or dangerous activities, such as illicit drug use, bareback sex, or shoplifting, in pursuit of a thrill.

Energy drinks are likely to appeal to sensation-seekers for two reasons. First, energy drinks can provide a short-term rush similar to more illicit substances. High-end brands like Spike Shooter or Redline may contain ten times as much caffeine as a soft drink. Users on energy drink review sites enthusiastically describe the sensation as “bouncing off the walls with energy” or “my hair started tingling” (Screaming Energy, 2010). Second, comprehensive and highly effective marketing campaigns have tied energy drinks to a series of themes dear to the heart of the sensation seekers--themes that both reflect and reinforce the original risk-taking tendencies of many energy drink users.

**Theme: Adventure/excitement.** Energy drink branding and advertising invariably emphasize adrenaline and speed, with names like Daredevil, Banzai, Adrenaline Rush, and Velocity. Bright colors and graphic explosions reinforce this imagery.

**Theme: Extreme sports.** Extreme sports are a signature component of the Red Bull brand. The biggest energy drink manufacturer in the world has pioneered this approach to thrill-seeking. Red Bull sponsors dirt racing, drift racing, hang gliding, BASE jumping, skydiving, cliff diving, surfing, snowboarding, skateboarding, Formula One racing, and mixed martial arts competitions. As the centerpiece of this strategy, Red Bull has invented and promoted its own extreme sport: Flugtag (“flight day”). In annual events since 2002, competitors in multiple nations build and then fly homemade, human-powered flying machines off a pier into the sea (Red Bull USA, 2010). Other energy drink brands have imitated this formula by sponsoring X-sport events of their own.

**Theme: Violence/mayhem.** Energy drink manufacturers have sought to harness the angst that stereotypically colors the young male U.S. social landscape. Common brand themes revolve around indiscriminant destruction, menace, and madness, with names such as Anarchy, Throwdown, Havoc, WhoopAss, and FU. One typical example, Freck Energy Drink, comes in five flavors: Psycho, Rage, Evil, Skitzo, and Maniac. Subthemes in this category include military weaponry (e.g., Ammo, C4 Explosive, Semtex, and Bomba) and animal predators (e.g., Mad Croc, Shark, Talon, Pit Bull, and Piranha). The prevailing subtext is simple: Drink this energy drink and feel powerful, dangerous, and exhilaratingly indifferent to the rules.

**Theme: Sex.** Like many other products aimed at a young male audience, some energy drinks use sex as a marketing tool. Most major brands feature “ED Babes” on their websites. Some actively seek applications for brand models; Nitro2Go recently solicited “hotties” to feature in an upcoming swimsuit calendar, while Aphrodite Love Drink advertised for “Aphrodite Love Slaves.” Unsurprisingly, no brand sought male models. Brand candy, it seems, comes in only one flavor: female.

While most brands use sexual imagery in their advertising, a few build sex directly into their brand identity, such as Deep Throat, Red Light Original Seduction, Sum Poosie, and Playboy. Still others go a step farther, claiming sexual

enhancement as a product feature. Allegedly aphrodisiac ingredients (e.g., ginseng, damiana, maca root, muira puama bark, or eleuthero root) fuel the claims of Sex Drive (“Turn On Your Drink!”), Black Pearl High Energy Libido Matrix (“Provides the wood and the fire”), and Extenze Male Enhancement (“May not make a Monster out of you and it won’t make you a Rockstar, but it’s no Bull: It can make you larger!”).

**Theme: Illicit drug use.** Drug-friendly advertising is the only theme in energy drink marketing to date that has gotten manufacturers in trouble. Cocaine Energy Drink, with high caffeine content and a spicy flavor to mimic the head rush and nasopharyngeal numbness of its illegal counterpart, was pulled from U.S. shelves in 2007 after the FDA took issue with its marketing slogans (“liquid cocaine,” “speed in a can,” and “the legal alternative”). After a brief stint as “No Name Energy Drink,” Cocaine is now back on the shelves with its original name and a warning label advising people “too stupid to recognise the obvious” that it does not contain actual cocaine. A second brand, Blow Energy Drink Mix, similarly pushed the envelope; sold as a white powder in a glass vial, and packaged with its own small mirror and fake credit card for cutting, it faithfully mimicked the trappings of cocaine use. Keeping up with newer trends in illicit substance use, a third brand called Xtazy features techno music on its website along with the tentative slogan, “X hits the spot.”

## Conclusion

My research demonstrates that (1) energy drink use and AED use are common among college students, (2) energy drink and AED use are both associated with “toxic jock” characteristics, and (3) frequent energy drink use is associated with a wide range of problem behaviors, including substance abuse. These findings are only a starting point for the growing debate over the nature and implications of energy drink use, a debate which is attracting increasing attention from the public, public health professionals, and policymakers.

The link between energy drink use and health-compromising behavior has not been shown to be causal; that is, there is no indication that drinking Red Bull or Monster (or even Rage or Cocaine) directly leads the user to engage in other risky behaviors like binge drinking, having sex without a condom, or experimenting with hard drugs. Still, there is no question that energy drink use, especially frequent or heavy use, is a red flag for other problems, and the extent to which it exacerbates these tendencies invites closer examination. Sensation-seeking is one possible explanation for the association. Further research is clearly needed in order to examine these relationships more closely.

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