

College Students' Use of Alcohol and Energy Drinks

Kathleen E. Miller, Ph.D.
Research Institute on Addictions
University at Buffalo

Questions of Interest

- Definitions: What is an AED (alcoholic energy drink)?
- Significance: How did this become a public health issue?
- Knowns: What do we know about AED use so far?
- Unknowns: What else do we need to know in order to develop effective interventions?

Definitions:

What is an alcoholic energy drink (AED)?

- AED = alcohol mixed with an energy drink (caffeinated beverage intended to provide a short-term metabolic boost)

- Ready-to-drink AEDs

- Four Loko, Joose, Maxx
- No longer available as AED



- Mix-your-own AEDs

- Red Bull vodka, Jagerbomb
- Still highly popular



Definitions:

Following the caffeine trail

■ Caffeine dosages

- Comparable to coffee, 2-3 times stronger than soft drinks
- Caffeine content is often unclear and/or underestimated

■ Classification as a “dietary supplement”

- No limit on caffeine content (unlike soft drinks)
- Nutritional labels not required (unlike food)
- Health claims or risks not tested or evaluated (unlike drugs)

■ Net result: Caffeine in AEDs

- ...Is unregulated
- ...May go unreported or underreported
- ...May be stronger than anticipated

Significance: A Brief AED Timeline

- 1997: Red Bull hits US store shelves; becomes popular mixer
- 2002: 1st wave of pre-mixed AEDs (Tilt, Sparks, Bud Extra)

- 2008: Safety challenged by CSPI and State Attorneys General

Under pressure, decaffeinated by manufacturers

- 2005: 2nd wave of pre-mixed AEDs (Four Loko, Joose, Max)

- 2009: Four Loko craze sweeps college campuses

- 2010: Multiple hospitalizations lead to media/public attention (Oct)



Cascading bans by campuses, states, retailers (Oct-Nov)

Safety challenged by FDA (Nov)

Under pressure, decaffeinated by manufacturers (Dec)

- 2012: Mix-your-own AEDs remain popular and widely used

Knowns:

Cognitive and Physiological Effects of AED Use

■ Effects of alcohol

- Alcohol myopia
- Impairment of inhibitory control
- Impairment of motor coordination and reaction time
- Sedative effect

■ Moderation of alcohol effects by caffeine

- Reduced drowsiness
- Masked symptoms of intoxication
- Priming effect
- Smaller deficit in reaction time
- Does NOT reduce impairment of executive function

Knowns: Associations with Problem Behaviors

- Links between energy drink use and other behaviors
 - Risk-taking
 - Substance use
 - Problem drinking
- Links among AED, hazardous drinking, and adverse outcomes
 - Heavy drinking
 - Heavy episodic (“binge”) drinking
 - Alcohol-related physical injury
 - Sexual risk-taking (casual and/or intoxicated sex)
 - Interpersonal violence
 - Driving while intoxicated

Unknowns: Contexts of AED Use

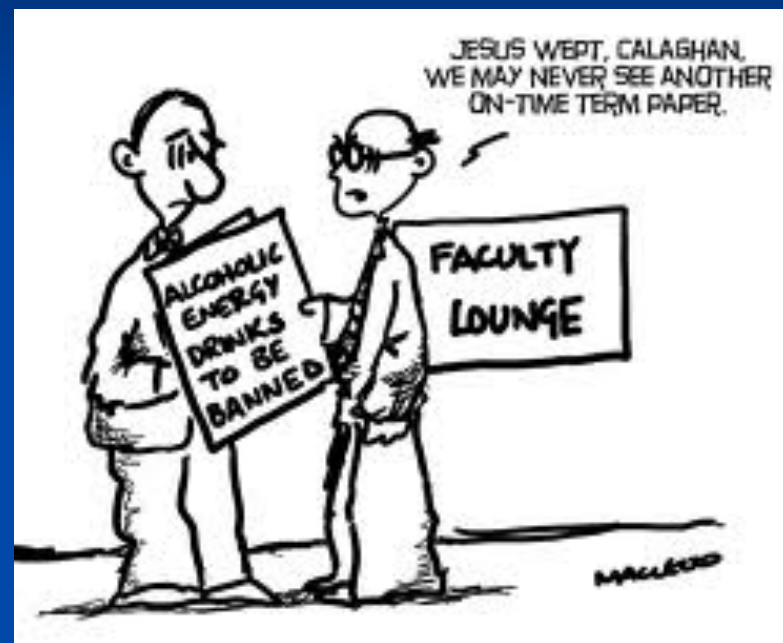
- Demographics: Who consumes AEDs?
 - Young adult, white, male, college-enrolled
- Personality: What traits are associated with consuming AEDs?
 - Sensation-seeking personality trait
- Setting: Where do people consume AEDs?
 - Social activity occurring in bars or at parties
- Timing: When do people consume AEDs?
 - Pregaming

Unknowns: Contexts of AED Use

- Expectancies: What do people expect when they use AEDs?
 - Alcohol-related caffeine expectancies
- Motivations: Why do people consume AEDs?
 - Prolong drinking/dancing club experience
 - Counteract effects of alcohol or manage intoxication level
 - Enhance sensual experience of intoxication
 - Disguise taste of alcohol
 - Avoid hangovers
- Marketing: How does advertising affect patterns of AED use?
 - Narratives/imagery of extreme risk, adventure, living on the edge

Implications: Informing Intervention Policy

- Restrictions on sale or use
 - Legally binding ban on pre-mixed AED products
 - Mandatory alcohol-warning labels on energy drinks
- Interventions
 - Peer-to-peer educational programs
 - Social norms interventions
 - Expectancy challenges
 - Best-practices training for commercial servers



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