College Students’ Use of Alcohol and Energy Drinks

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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
Unkowns: 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
JESUS WERT, CALAGHAN, WE MAY NEVER SEE ANOTHER ON-TIME TERM PAPER.
Key Sources


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