

Health hazards related to energy drinks: Are we looking for them?



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A 14-year-old Caucasian girl presented to the emergency department with a persistent headache lasting 6 h, which was not relieved by acetaminophen and ibuprofen, her fourth similar episode of the month. She worried about having already missed five days of school and wanted medication to prevent further episodes.

She denied any recent illness or drug ingestion. The patient had many friends, as well as a boyfriend, and could not think of any stress factors to explain her new condition. Approximately five weeks previously, a friend introduced her to energy drinks that she believed helped her become more focused on her school work. Additional inquiry revealed the presence of nervousness and insomnia; additionally, she mentioned that on two occasions her heart started to beat very quickly. She then asked, "Do you think that the three energy drinks I had yesterday could be related to my headache?"

LEARNING POINTS

- 'Energy drinks', as they have been called by the beverage industry, are commercially available nonalcoholic, carbonated and noncarbonated drinks that claim to boost energy level, alertness and performance.
- The main active ingredient in energy drinks is caffeine, present in varying amounts; however, guarana, sometimes called herbal caffeine, is considered to be a natural product and is not included in the amount of caffeine identified on the can or bottle.
- In 2006, more than 30% of adolescents reported using energy drinks. Caffeine metabolism slows down during puberty because of the natural surge of growth hormone, potentially increasing the risk of symptomatic effects and complications, especially in combination with other medications such as psychostimulants or amphetamines.
 - Known adverse effects of caffeine are: headache, restlessness, nervousness, insomnia, nausea, vomiting, seizures, cardiac arrhythmia, hypertension, hallucinations, delirium and even death.
 - Caffeine-associated withdrawal symptoms include: headache, tiredness, sleepiness, dysphoric mood, difficulty concentrating, decreased cognitive performance, depression, irritability, nausea, vomiting, muscle aches and stiffness.

- The 2011 CPSP survey on energy drinks revealed that:
 - among 741 respondents, 9% (n=65) reported caffeine-related complications.
 - according to the patients with complications, the three most frequent reasons for consuming these products were: to increase alertness (41%), peer pressure (39%) and sports performance (25%).
- An emerging trend in bars and dance clubs is to combine energy drinks with alcohol, which increases the risk of not realizing one's degree of intoxication and the associated impairment of motor coordination and visual reaction time, as well as the risk of alcohol-related consequences, such as being physically hurt or injured, being taken advantage of sexually or taking advantage of another sexually, and riding with an intoxicated driver.
 - In the CPSP survey, 28% of those who presented with complications associated with energy drinks had also consumed alcohol, and 26% had taken other drugs (psychostimulants 30%, cannabis 20% and amphetamines 10%).
- Paediatricians and other health care providers:
 - can play a very important role in educating children and adolescents about and in screening for energy drinks.
 - must inform the public on the potential health hazards related to excessive intake of caffeine-containing beverages by children and adolescents.
 - should advocate for continued and better regulation of products containing a high concentration of caffeine.

RECOMMENDED READING

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