[IMAGE]

Watch Out for Energy Drinks: 4 Things You Should Know

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The popularity of energy drinks is on the rise among adolescents and young adults, with consumption rateshighest among males 18-34 years of age.[1] The energy drink industry is global and generates astonishing revenues, with 2014 sales reaching nearly $50 billion worldwide according to BeverageDaily.com. Energy drink users notice increased cognitive performance, enhanced mood, more physical energy and heightened wakefulness after consuming them, although these effects are temporary and controversial when mixed with alcohol.[2-3]

On the other hand, there is some evidence pointing to harmful physiological and psychological effects from energy drink consumption.[4] For instance, the caffeine mixed with other ingredients may produce symptoms such as insomnia, hyperactivity, rebound anxiety and risk-taking behaviors. A recent randomized, controlled study in which subjects drank an energy drink or caffeinated control, both containing 320 mg of caffeine, found that ECG and blood pressure measurements were significantly worse in those consuming energy drinks.[5]

Due to the serious nature of this important public health problem, we offer this brief overview to better inform you and promote discussions with your doctor.

1. What Is an "Energy Drink"?

Energy drinks are non-alcoholic beverages containing B vitamins, caffeine in concentrations similar to strong coffee, a variety of herbal ingredients that can have both stimulant and anti-anxiety properties, and often large amounts of sugar. An energy drink typically contains large amounts of caffeine, added sugars, other additives, and stimulants such as guarana, taurine and L-carnitine. These stimulants can increase alertness, attention and energy, as well as increase blood pressure, heart rate and breathing.

energy drinks - Copyright â Stock Photo / Register Mark Although there are hundreds of different types of energy drinks on the market, the top sellers typically include similar contents, with B vitamins, taurine, caffeine, sugar and glucoronolactore the most prominent ingredients.[5-6]

2. Are Energy Drinks Regulated?

In the United States, energy drink companies, at their discretion, label products as either "beverages" or "dietary supplements." If they choose the "beverages" designation, they are required to abide by the Nutrition Labeling and Education Act of 1990 (NLEA) and label their drinks with conventional Nutrition Facts panels. However, if they designate their products as dietary supplements, they must follow the labeling requirements of the Dietary Supplement Health and Education Act of 1994, and the requirements that go with this designation are significantly less stringent than for beverages.

As a result, most energy drink companies have classified their products as dietary supplements, which allows them to bypass the FDA's maximum caffeine limit for beverages (51 mg per 12 ounces). This limit is less than half the amount of caffeine per ounce found in the 10 top-selling energy drinks.

In response to energy drink-related deaths and pressure from lawmakers, most producers now list the main ingredients on each container. These drinks are sold in markets and convenience stores, and advertising promises enhanced performance, often using videos that depict extreme stunts performed by world-class athletes.

To the contrary, there is evidence that athletic performance requiring coordination and fine motor skills may actually be diminished by energy drinks.[5-6] In the United States, unfortunately, they are available in every state and there is no age limit to purchase them.

3. What Are the Potential Harms of Energy Drinks?

Sometimes a quick boost of caffeine and sugar may seem helpful in getting through the day, but there are health risks. Adverse effects related to caffeine include tachycardia, arrhythmia, increased blood pressure, anxiety, headache, insomnia, and nausea.[7] A number of risky behaviors associated with energy drink consumption have been identified, including risky motor-vehicle behaviors (e.g., failure to wear seat belts, choosing to drive while intoxicated), taking risks on a dare, smoking, binge drinking alcohol, sexual risk taking, and illicit drug abuse.[6,8]

In addition to risks caused by even infrequent consumption, other risks include combining energy drinks with other substances (e.g., alcohol, opiates or other stimulants) or binge drinking, which can lead to serious health consequences including death (i.e., thousands of emergency room visits per year are a result of binge drinking energy drinks).

A research analysis of 4,854 calls received by the National Poison Data System reported that 0.2 percent was related to energy drink consumption and 46 percent of cases involved children less than 6 years of age. Moderate or major adverse effects included cardiac arrhythmia, seizures, hypertension and hyperthermia.[9]

Some people may consider the risks of consuming energy drinks acceptable, but the likelihood of experiencing adverse consequences increases as the quantity and frequency of energy drink consumption increases.

4. What Resources Are Available?

Increasingly, efforts are being initiated to regulate and inform the public about the potential harms and abuses of energy drinks. Consider using the following resources to educate yourself:

- The Centers for Disease Control and Prevention (CDC) provides an information page on energy drinks that contains a downloadable infographic: https://www.cdc.gov/healthyschools/nutrition/energy.htm.
- The Caffeine Informer website provides a list of the top 14 dangers of energy drinks: https://www.caffeineinformer.com/top-10-energy-drink-dangers.

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