Volume 2, Issue 2, February 2024 ISSN (E): 2938-3765

THE EFFECTS OF ENERGY DRINKS ON HEALTH

Khazhimatova Guzal Marufzhanovna
Andijan State Medical Institute, Uzbekistan

Abstract
The literature review highlights the prevalence of energy drinks consumption, and describes their main ingredients (caffeine, taurine, guarana, ginseng, sweeteners). Numerous facts are given that testify to the negative impact on human health (including deaths) of the systematic use of large amounts of these beverages, both independently and in mixture with alcohol. It has been shown that the cardiovascular system, central nervous system and liver are most affected.

Keywords: energy drinks; caffeine; taurine; guarana; human health; ecological factors.

Introduction

Although taurine and glucoronolactone have not been shown to be harmful when taken alone, data regarding their synergistic effects when combined with each other or with caffeine and guarana are incomplete. The main health problems associated with the consumption of energy drinks are:
increased heart rate, palpitations,
high blood pressure,
sleep disorders and insomnia
increased urge to urinate,
hyperglycemia (due to the high sugar content in energy drinks), which can be dangerous primarily for those suffering from diabetes and other metabolic disorders.
According to American scientists, energy drinks contain sufficient amounts of stimulants to cause anxiety, insomnia, dehydration, irritation of the digestive system, irritability, nervousness, redness of the skin, increased urination, and palpitations. Drinking energy drinks has also been linked to seizures, manic episodes and hemorrhages. The content of guarana, taurine and ginseng in popular energy drinks is too low to have any therapeutic effect or, conversely, to lead to any negative effects. But the amounts of caffeine and sugar contained in energy drinks can have harmful effects on the body.
Effect on the central nervous system
Adverse effects reported in association with energy drink consumption include headache, anxiety, irritability, tension, dizziness, tremors, confusion, psychosis, seizures and altered mental states. Patients with bipolar disorder and other psychiatric diagnoses have experienced manic episodes, that is, mania.

It has also been noted that excessive consumption of energy drinks can cause hypervigilance (excessive attention and focus on all external and internal stimuli, which is usually a secondary manifestation of delusions or hallucinations) and psychomotor restlessness, followed by a

Web of Medicine: Journal of Medicine, Practice and Nursing
webofjournals.com/index.php/5

deterioration in mental state, especially in people with poorly controlled or undiagnosed mental disorders.

Effect on the cardiovascular system

Cardiovascular conditions that may occur with energy drink abuse include palpitations, chest pain, rapid pulse, abnormal heart rhythms, and hypertension. Energy drinks contain a lot of caffeine, which can change the elasticity of blood vessels and thereby contribute to cardiovascular disease. The risk increases if energy drinks are consumed with alcohol.

Effect on the digestive system

Excessive caffeine intake from energy drinks can lead to gastrointestinal hyperstimulation, nausea, vomiting, diarrhea and abdominal pain. Caffeine can also cause gastroesophageal reflux disease, heartburn and esophagitis. In addition, excess sugar can disrupt the normal balance of intestinal microflora.

Dental health and excess weight

Poor dental health and erosion are common among energy drink drinkers, caused by their high sugar content. Tooth erosion and sensitivity are aggravated by the high acidity of energy drinks. Energy drink-related obesity is also a concern. Energy drinks are high in calories, with one bottle or can containing up to 200 calories or more. If energy drinks are consumed in quantities that exceed the daily energy requirement, this can lead to excess body weight, even in childhood.

Energy drinks and eating disorders

For eating disorders (especially anorexia), people may regularly consume large amounts of caffeine to cope with depression caused by lack of energy, suppress appetite, facilitate bowel movements, and increase urine output. Given that people with eating disorders are already at risk for cardiovascular disease and have electrolyte imbalances, large doses of caffeinated energy drinks may exacerbate these risks.

Energy drinks and physical activity

Energy drinks are often consumed before exercise, during exercise, and during competition. This can lead to very rapid dehydration, heart attack, heatstroke or heart attack. The combination of caffeine's diuresis-enhancing properties, increased sweating, and fluid loss can cause severe dehydration.

Energy drinks and sports drinks are often confused, but they are inherently very different. Sports drinks may contain carbohydrates, minerals, electrolytes (eg, sodium, potassium, calcium, magnesium), flavorings, and sometimes vitamins and other nutrients that are intended to replace the amounts of water and electrolytes lost through sweat during exercise. Energy drinks do not contain electrolytes, but they do contain caffeine and other stimulants.

Physically active people are often unaware that exercise requires them to consume more fluids and nutrients, and they often think that energy drinks are the answer to meeting their increased energy needs. Drinking energy drinks instead of sports drinks results in large amounts of caffeine entering the body, which has the opposite effect in terms of meeting the body's fluid needs. Therefore, it is very important to choose the right drink that can be consumed before or after physical activity, as well as in other cases to replenish fluid loss, while avoiding the intake of high doses of sugar and large amounts of energy.

In some cases, the use of sports drinks by athletes may be justified, but people with normal physical activity do not need to drink sports drinks instead of water.

Energy drinks and alcohol

Web of Medicine: Journal of Medicine, Practice and Nursing
webofjournals.com/index.php/5

There hasn't been a lot of research into the concomitant use of alcohol and energy drinks, but those that have been done have identified three main possible risk factors.

Decreased sensitivity to signs of alcohol poisoning, which increases the likelihood of both poisoning itself and incorrect assessment of the situation, which can lead to accidents (for example, on the road), poor decisions (for example, driving drunk), risky behavior (for example, sexual or associated with violence).

Dehydration, which can cause:

diarrhea, nausea or vomiting,

fatigue and headache,

increase in heart rate,

muscle cramps,

severe hangover syndrome (which in turn interferes with work and driving).

Vastuolulised signaalid närvisüsteemile, mis võivad kaasa tuua kardiovaskulaarseid probleeme (näiteks südamepekslemine või kõrgenenud vererõhk) ning häiritud une.

Conflicting signals to the nervous system, which can lead to cardiovascular problems (such as palpitations or high blood pressure) and sleep disturbances. Mixing energy drinks with alcohol can be dangerous due to the fact that energy drinks have a stimulating effect, while alcohol has a suppressive effect. The stimulant effect of energy drinks can make it difficult for a person to recognize how intoxicated they are, making it unclear how much they have drunk. Both alcohol and energy drinks have a diuretic effect, and together they prevent the body from breaking down ethyl alcohol and can worsen alcohol poisoning.

References

1. Malinauskas B.M., Aeby V.G., Overton R.F., Carpenter-Aeby T., Barber-Heidal K. A survey of energy drink consumption patterns among college students. Nutr J. 2007; 6(6): 35 DOI: 10.1186/1475-2891-6-35

2. Europe Energy Drinks Market [Дата обращения 14.10.2019] [Режим доступа] http://www.micromarketmonitor.com/market/europe-energy-drinks-1139194468.html

3. Шалыгин Л.Д., Еганян Р.А. Энергетические напитки - реальная опасность для здоровья детей, подростков, молодежи и взрослого населения. Часть 1. Состав энергетических напитков и влияние на организм их отдельных компонентов Профилактическая медицина. 2016; 19 (1): 56-63. DOI:10.17116/ PROFMED201619156-63

4. Экспертиза качества безалкогольных энергетических напитков. Маркетинговая компания Академия Сервис. [Дата обращения 11.09.2019]. [Режим доступа] http://www.asmarketing.ru.

5. Higgins J.P., Yarlagadda S., Yang B. Cardiovascular complications of energy drinks. Beverages. 2015; (1): 104-126. DOI: 10.3390/BEVERAGES1020104.