



CHANGES OCCURRING IN THE HUMAN BODY UNDER THE INFLUENCE OF ENERGY DRINKS

Sharipova Madina Akramovna

professor,

Teshaev Shukhrat Zhumaevich

Bukhara State Medical Institute, Uzbekistan

<https://doi.org/10.5281/zenodo.10821186>

ABSTRACT

All energy drinks have a refreshing effect - this property is the main reason why drinks were invented. Naturally, the manufacturers of these drinks note that the effect of their energy drinks on the human body is only positive, does not cause any harm to the body. Drinks containing caffeine (energy drinks) are much more common. However, it has been proven that energy drinks also have a characteristic harmful effect on the human body, in addition, they have a specific effect on the cardiovascular system.

Keywords. Caffeine, psychostimulating effect, carbon dioxide, cardiovascular system, energy drink, taurine, guarana, hypertension.

It's no secret that over the past 10-15 years, the consumption and production of energy drinks worldwide has increased several dozen times. Trofimov N.S. According to the marketing company "Academy Service", the market for the production of energy tonics is growing by 12 percent annually, and in 2015 sales reached \$ 14 billion. Energy drinks are more popular among young people aged 20-24. According to student surveys, it was found that 84% of 100 respondents consume energy drinks to some extent, while 5% consume them constantly.

It was found that the level of consumption of energy drinks by students increases by - 14% during the session. The most responsive students are aware of the negative effects of energy drinks on the human body. First of all, they also know that the cardiovascular system suffers from it.

As you know, all energy drinks have a refreshing effect - this property is the main reason why drinks were invented. Naturally, the manufacturers of these drinks note that the effect of their energy drinks on the human body is only positive, does not cause any harm to the body. Drinks containing caffeine (energy drinks) are much more common. The main characteristics of these products are their composition: the caffeine content does not exceed 30 mg, and the lauric substance does not exceed 399 mg (per 100 ml). Caffeine has a psychostimulating effect, causing addiction. Caffeine is the main active ingredient of any energy drink and stimulates brain activity and thought processes, the activity of the cardiovascular system. A healthy elderly person can drink up to 2 cans of energy a day; a large dose of caffeine improves the functioning of the nervous system and heart, significantly increases blood pressure and causes headaches. That is why it is forbidden to take an energy drink for diseases of the cardiovascular and central nervous system.

Taurine is the second main component of energy drinks. It accumulates in muscle tissues and improves metabolic processes in them. Taurine has anticonvulsant properties, but recent studies have shown that taurine does not have a positive effect on the human body. A

large amount of taurine leads to overexcitation of the nervous system and its exhaustion. In combination with alcohol, its effect increases, and serious malfunctions of the cardiovascular and nervous systems occur. The use of taurine is strictly prohibited for people who drink alcohol, as well as people with increased nervous excitability.

The positive effect of energy drinks on the human body: gives a person a feeling of joy and energetic (assertive) activity; caffeinated drinks help to cope with drowsiness; and with heavy physical exertion, vitamin-carbohydrate drinks increase the endurance of the body. High content of vitamins and glucose (vitamins stimulate vital processes in the body, glucose quickly enters the bloodstream, and also gives strength to muscle tissues and organs, the brain). The effect of energy drinks lasts up to 4 hours, and its strength is enhanced by the presence of carbon dioxide in the drink. In all cases, that is, on the road, in the car, on the dance floor or in the gym, energy drinks are a convenient packaged drink that allows you to drink when it is impossible to have a cup of coffee or tea. In some European countries, energy drinks are sold only in pharmacies, as there have been cases of death after consuming energy drinks. The vitamins contained in energy drinks do not form a balanced complex. Energy does not give strength, but only opens the energy channels of the body. The human body does not receive energy, but rather uses its internal resources. As a result of regular consumption of energy drinks, cases of overexertion, fatigue, insomnia, irritability, and depression occur.

Caffeine and other energy stimulants increase heart rate and blood pressure. Excessive consumption of such drinks can lead to arrhythmia and even cardiac arrest. Refreshing drinks can be harmful even to young people. For example, two healthy teenagers aged 14 and 16 had atrial fibrillation.

In addition to acute cases, energy drinks can also harm the heart in the long run. Scientists have found that drinking invigorating drinks can reduce vascular endothelial function and stimulate platelet aggregation. With prolonged use, they increase the risk of platelet formation in the blood.

It has a negative effect on the nervous system. Drinking several energy drinks in a short period of time can lead to poisoning. Symptoms include restlessness, insomnia, tachycardia, indigestion, tremor, muscle twitching and restlessness. High doses of caffeine can cause chronic headaches.

In addition, the combination of caffeine, taurine and guarana, which are found in energy drinks, can be toxic to the brain and destroy nerve cells. Energy drinks are especially dangerous for teenagers. One study found that adolescents aged 15-16 had a direct link between caffeine consumption and behavioral disorders.

Leads to obesity. Due to the fact that energy drinks are rich in sugar, excessive consumption increases the risk of obesity and type 2 diabetes. For the same reason, invigorating drinks can reduce the diversity of beneficial bacteria in the small intestine, which is also characterized by weight gain and the development of metabolic syndrome.

It damages the liver. Energy drinks in moderation will not harm the liver, but the body's main filter may not be able to withstand if their amount is overestimated or alcohol is added. Doctors believe that the main factor is an excess of vitamin B3, which is found in energy drinks and has hepatotoxicity in large doses.

This causes dehydration and damages the kidneys. Energy drinks are often used in sports competitions because caffeine can improve athletes' performance. However,

this increases the sodium level in the urine, which can lead to dehydration and electrolyte deficiency.

Therefore, you should not consume energy drinks during physical activity for a long time, especially in hot conditions.

Absorbs tooth enamel. Due to the high acidity and high amount of sugar, energy drinks have a bad effect on tooth enamel. Two studies involving American teenagers have confirmed that erosion and tooth decay are directly related to the amount of sugary drinks, including energy drinks.

It is better for children and adolescents, pregnant women, patients with cardiovascular diseases and diabetes mellitus to completely abandon the use of such drinks.

The caffeine content. The U.S. Food and Pharmaceutical Administration recommends no more than 400 mg per day. However, from the point of view of energy value, there should be no more than two, no more, even if this is the only source of stimulant in the diet.

The amount of sugar. The World Health Organization recommends that sugar make up no more than 10% of total calories, and ideally no more than 5%. If the average calorie content per day is 2000 kcal, it will be 50 and 25 g, respectively.

References:

1. Zucconi S, Volpato C, Adinolfi F, Gandini E, Gentile E, Loi A, et al. Gathering Consumption Data on Specific Consumer Groups of Energy Drinks. Parma: Supporting Publications; 2013: EN-394;
2. Nomisma SpA, Areté Srl. 190s. <http://www.efsa.europa.eu/>
3. Breda JJ, Whiting SH, Encarnação R, Norberg S, Jones R, Reinap M, Jewell J. Energy drink consumption in Europe: a review of the risks, adverse health effects, and policy options to respond. *Front Public Health*. 2014 Oct 14; 2:134. doi: 10.3389/fpubh.2014.00134.
4. World Health Organization. WHO Basic Analytical Toxicology (2005). Available from: http://www.who.int/ipcs/publications/training_poisons/basic_analytical_tox/en/index.html
5. European Food Safety Authority (EFSA) Science Strategy 2012–2016. <http://www.efsa.europa.eu/en/corporate/pub/sciencestrategy1239c>.
6. Sharipova Gulnihol Idiyevna. THE EFFECTIVENESS OF THE USE OF MAGNETIC-INFRARED-LASER THERAPY IN TRAUMATIC INJURIES OF ORAL TISSUES IN PRESCHOOL CHILDREN//Academic leadership. ISSN 1533-7812 Vol:21Issue 1
7. Sharipova G. I. The use of flavonoid based medications in the treatment of inflammatory diseases in oral mucus //Asian journal of Pharmaceutical and biological research. India. – 2022. – T. 11. – №. 1. – C. 2231-2218. (Impact factor: 4.465)
8. Sharipova G. I.Changes in the content of trace elements in the saliva of patients in the treatment of patients with traumatic stomatitis with flavonoid-based drugs // Journal of research in health science. Iran. – 2022. – T. 6. – № 1-2. – C. 23-26. (Scopus)
- 9.Sharipova G. I. Paediatric Lazer Dentistry //International Journal of Culture and Modernity. Spain. – 2022. – T. 12. – C. 33-37.

- 10.Sharipova G. I. The effectiveness of the use of magnetic-infrared-laser therapy in traumatic injuries of oral tissues in preschool children //Journal of Academic Leadership. India. – 2022. – T. 21. – №. 1.
- 11.Sharipova G. I. Discussion of results of personal studies in the use of mil therapy in the treatment of trauma to the oral mucosa //European journal of molecular medicine. Germany. – 2022. – T. 2. – №. 2. – C. 17-21.
- 12.Sharipova G. I. Peculiarities of the morphological structure of the oral mucosa in young children // International journal of conference series on education and social sciences. (Online) May. Turkey. – 2022. – C. 36-37.
- 13.Sharipova G. I. Dynamics of cytological changes in the state of periodontal tissue under the influence of dental treatment prophylactic complex in young children with traumatic stomatitis // Multidiscipline Proceedings of digital fashion conference April. Korea. – 2022. – C. 103-105.
- 14.Sharipova G.I. Assessment of comprehensive dental treatment and prevention of dental diseases in children with traumatic stomatitis // National research in Uzbekistan: periodical conferences: Part 18. Tashkent. -2021. - S. 14-15.
- 15.Karshiyeva D.R.,The Importance of Water Quality and Quantity in Strengthening the Health and Living Conditions of the Population//CENTRAL ASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES. Voleme: 02 Issue: 05I Oct 28 2021 Page 399-402
- 16.Абдухафизов С. Н., Наркулова И., ГЛАГОЛАМ В. УЧРЕЖДЕНИЯХ//ORIENSS. 2023.№ 3 //URL: <https://cyberleninka.ru/article/n/spetsifika-obucheniya-glagolam-vospriyatiya-v-vysshih-voennyh-obrazovatelnyh-uchrezhdeniyah> (дата обращения: 22.05. 2023).
- 17.Karshiyeva D.R.,The Role Of Human Healthy And Safe Lifestyle In The Period Of Global Pandemic-Covid 19//The American Journal of Applied Sciences.Voleme: 02 Issue: 11-15I November 28, 2020 ISSN: 2689-0992. Page 78-81
- 18.Karshieva DiloVar Rustamovna. THE EFFECT OF TOBACCO SMOKING ON THE ORGANS AND TISSUES OF THE ORAL CAVITY / / World Bulletin of Public Health (WBPH) Volume-19, February 2023 ISSN: 2749-3644