

Energy drinks may pose danger to public health

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Increased consumption of energy drinks may pose danger to public health, especially among young people, warns a team of researchers from the World Health Organization Regional Office for Europe in the open-access journal *Frontiers in Public Health*.

Energy drinks are non-alcoholic beverages that contain caffeine, vitamins, and other ingredients for example, taurine, ginseng, and guarana. They are typically marketed as boosting energy and increasing physical and mental performance.

João Breda, from the WHO Regional Office for Europe, and colleagues reviewed the literature on the [health risks](#), consequences and policies related to energy drink consumption.

"From a review of the literature, it would appear that concerns in the scientific community and among the public regarding the potential adverse health effects of the increased consumption of energy drinks are broadly valid," write the authors.

Energy drinks first hit European markets in 1987 and the industry has since boomed worldwide. In the US, sales increased by around 10% per year between 2008 and 2012, and almost 500 new brands hit the market in 2006. The European Food Safety Authority estimates that 30% of adults, 68% of adolescents, and 18% of children below 10 years consume energy drinks.

High Caffeine in Energy Drinks

Part of the risks of energy drinks are due to their high levels of caffeine. Energy drinks can be drunk quickly, unlike hot coffee, and as a result they are more likely to cause caffeine intoxication. In Europe, a European Food Safety Authority (EFSA) study found that the estimated contribution of energy drinks to total caffeine exposure was 43% in children, 13% in teenagers and 8% in adults.

Studies included in the review suggest that caffeine intoxication can lead to heart palpitations, hypertension, nausea and vomiting, convulsions, psychosis, and in rare cases, death. In the USA, Sweden, and Australia, several cases have been reported where people have died of heart failure or were hospitalized with seizures, from excess consumption of energy drinks.

Research has shown that adolescents who often take energy drinks are also more likely to engage in risky behaviours such as sensation seeking, substance abuse, and binge drinking.

Mixing Energy Drinks and Alcohol

Over 70% of young adults (aged 18 to 29 years) who drink energy drinks mix them with alcohol, according to an EFSA study. Numerous studies have shown that this practice is more risky than drinking alcohol only, possibly because these drinks make it harder for people to notice when they are getting drunk.

According to the National Poison Data System in the United States, between 2010 and 2011, 4854 calls to poison information centers were made about energy drinks. Almost 40% involved alcohol mixed with energy drinks. A similar study in Australia demonstrated a growth in the

number of calls about energy drinks. Breda and colleagues say a similar investigation would be useful in Europe.

Energy drinks can be sold in all EU countries, but some countries have introduced regulations, including setting rules for sales to children. Hungary introduced a public health tax that includes energy drinks in 2012. In Sweden, sales of some types of energy drinks are restricted to pharmacies and sales to children are banned.

Way Forward

"As energy drink sales are rarely regulated by age, unlike alcohol and tobacco, and there is a proven potential negative effect on children, there is the potential for a significant public health problem in the future," the authors conclude.

They make the following suggestions to minimize the potential for harm from [energy drinks](#):

More information: *Frontiers in Public Health* [DOI: 10.3389/fpubh.2014.00134](https://doi.org/10.3389/fpubh.2014.00134)

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