

OFFICE OF THE CHIEF MEDICAL OFFICER OF HEALTH

Position Statement: Energy Drinks

The Chief Medical Officer of Health does not recommend the consumption of energy drinks by children and adolescents, and strongly discourages retailers from selling, and manufacturers from marketing, energy drinks to these groups. Energy drinks contain moderate to high concentrations of stimulant drugs, including caffeine, which are associated with adverse health effects. Energy drinks should not be used in combination with alcohol and should not be used as a sports drink to enhance athletic performance or to prevent dehydration.

The Chief Medical Officer of Health strongly encourages that adverse reactions to consuming energy drink be reported to the [Canadian Food Inspection Agency](#).

Background

Energy drinks refer to a category of beverages that claim to stimulate and energize the user [1, 2]. Energy drinks contain ingredients such as caffeine, the amino acid taurine, glucuronolactone, B vitamins, Inositol, sugar and herbs [3]. There are many “energy drinks” for sale in New Brunswick such as Red Bull™, Monster Energy™, and RockStar™. They are readily available in grocery stores, convenience stores, and gas stations usually displayed alongside soft drinks and sports drinks [4].

Within Canada, energy drinks are regulated as food and as a result must carry a Nutrition Facts table [2, 4]. There are also regulated limits on the amount of caffeine allowed in energy drinks. The caffeine limit for energy drinks is 400 mg/L or ≤180 mg per single serve container (a container that cannot be re-sealed or if re-sealable is ≤591 mL). Approved energy drinks must provide risk information stating that the product is not recommended for children, pregnant or breastfeeding women, or caffeine sensitive individuals, that it should not be consumed in excess of 500 mL/day and that it should not be mixed with alcohol.

Issue

The problems with energy drinks arise when too many are consumed, when they are combined with alcohol or when used during or after intense exercise.

Energy drinks contain moderate to high concentrations of stimulant drugs, including caffeine. Caffeine is known to cause restlessness, anxiety, nervousness, insomnia and irritability [3, 5]. It can also affect blood pressure and heart rate. At higher doses caffeine can cause delirium, vomiting, neuromuscular tremors and convulsions [5]. Children are at increased risk of experiencing behavioral effects from consuming caffeine [6]. For adolescents and children, Health Canada recommends a maximum daily caffeine intake of no more than 2.5 mg per kg of body weight. For the general population of healthy adults, and older, heavier adolescents, Health Canada advises a daily intake of no more than 400 mg. With the level of caffeine in energy drinks ranging from 50 mg to >200 mg per can, one or two energy drinks can easily result in caffeine intakes in excess of these recommended caffeine limits for children and adolescents.

Mixing energy drinks with alcohol is becoming popular among youth and young adults [3, 7]. Energy drink use in conjunction with alcohol may increase the potential for alcohol related injury by masking the symptoms of alcohol intoxication [3]. Moreover, mixing alcohol with energy drinks is associated with riskier behavior and a higher prevalence of alcohol related consequences [3, 7].

The term ‘energy drink’ implies that its consumption may enhance physical performance, and as a result, energy drinks are often marketed to consumers interested in athletics and an active lifestyle [3]. However, unlike sports drinks which provide a mixture of carbohydrate and electrolytes to enhance athletic performance and prevent dehydration, energy drinks are not suitable for re-establishing normal body function post exercise due to their caffeine content.

Within Canada, numerous adverse reactions have been reported in association with the consumption of energy drinks, many of which were considered serious [3]. About a quarter of the reported adverse reactions involved cardiac events, some of which involved adolescents between the ages of 13 and 17 years. Almost all of the adverse reactions reported were in healthy, young Canadians.

New Brunswick Facts

Energy drink sales are on the rise in Canada [3] and use among youth is widespread [8, 9]. New Brunswick youth consumption data have been collected through the Student Drug Survey and results indicate that 57% of youth have consumed an energy drink at least once in the past year and 12% of youth consume energy drinks monthly [9]. Further, about 20% of Canadian high school students have consumed alcohol mixed with energy drinks in the last year [7]. The Office of the Chief Medical Officer of Health is aware of increased concerns from parents, community groups and healthcare providers in New Brunswick about the use of energy drinks by children and youth.

In October 2013, the Department of Health hosted a one-day stakeholder dialogue to learn about and discuss the risks associated with energy drink use among children and youth [10]. The summary report can be accessed on the [Government of New Brunswick's website](#).

Emerging Issues

Energy shots, which often contain higher amounts of caffeine than energy drinks in approximately 50 ml of liquid, are also being marketed in Canada. Unlike energy drinks, energy shots are regulated as natural health products and are therefore not subject to the same regulatory requirements as energy drinks. Evidence related to the consumption of energy shots is limited and a rigorous review of evidence related to the consumption of energy shots by children and youth and associated harms is needed.

Bibliography

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