



THE BUZZ ON ENERGY DRINKS

Energy drinks have normally been targeted at young men, but these drinks are becoming more popular with the general population. Many energy drink companies make claims that their drinks give you energy to perform and help keep you alert when you're tired. They often have large amounts of caffeine and combinations of herbal ingredients. Energy drinks can be expensive and often cost up to three times more than other caffeinated drinks like pop and coffee.

The market for energy drinks in Canada is growing quickly. In 2006, the market was valued at \$287.2 million and is expected to reach \$375.2 million by 2011. There are over 300 brands of energy drinks in North America (Agriculture and Agri-Food Canada, 2008). Common brands you might recognize include: Red Bull, Rockstar, Monster, SoBe, Full Throttle, and Beaver Buzz, but new brands are being introduced all the time.

What's in Energy Drinks?

Ingredients may be slightly different between brands, but most have the same two main ingredients: sugar and caffeine. Aside from the sugar-free versions, energy drinks have about the same amount of sugar as regular pop (i.e., about 26 g in 240 mL), but they usually have more caffeine.

On average, one cup (240 mL) of cola has about 40 mg of caffeine, whereas some energy drinks have as much as 285 mg of caffeine for the same amount (Health Canada, 2007). In moderation, caffeine can have positive effects, like improving one's alertness and ability to concentrate. Too much caffeine can cause nervousness, headaches, insomnia, and increased heart rate.

Energy drinks may also have natural or herbal ingredients added, with the most common being taurine, ginseng, and guarana. Guarana is a natural form of caffeine, but it's not included in the amount of caffeine listed on a product label. Guarana naturally has about 40 mg of caffeine in every 1 000 mg. Some energy drinks have up to 400 mg of guarana, which adds 16 mg of caffeine to the amount listed on the label. Much like caffeine, herbal ingredients in energy drinks can also cause side effects, depending on your tolerance and the amount consumed. Energy drink companies claim these natural ingredients may increase performance, alertness, or memory. The fact is that there aren't large enough amounts of these ingredients in the drinks to provide any benefit. The table below gives a summary of scientific research for some herbal ingredients commonly found in energy drinks.

Name of Herbal Ingredient	Claim or Intent	What Does the Research Say?	Possible Side Effects*
Taurine	Plays a role in memory function.	No concrete link between taurine and memory function in humans.	Unknown.
Ginseng	Boosts energy, enhances endurance, increases physical and mental performance.	No good evidence has shown that ginseng use in humans enhances performance or reduces fatigue.	Insomnia, headache, high blood pressure, and increased heart rate.
Guarana	Increases alertness and ability to concentrate.	General population is not at risk for adverse effects if intake is limited to 400 mg/day caffeine (i.e., about 10 000 mg guarana).	Insomnia, irritability, nervousness, and headaches.

*Note: these side effects may be caused by taking large doses, commonly found in the form of an herbal supplement rather than in an energy drink.

Are Energy Drinks Regulated?

In Canada, energy drinks are not regulated as a food product, so they're not required to have the Nutrition Facts table that you see on other food and drink products. Instead, the safety of energy drinks is reviewed under the Natural Health Products (NHP) Regulations. Energy drinks have many labelling requirements under the NHP Regulations. The label must list all ingredients, both medicinal and non-medicinal, and the recommended use of the product (Health Canada, 2006). Certain warnings must also appear on the labels of energy drinks. These warnings state that energy drinks shouldn't be:

- Used by children.
 - Used by women who are pregnant or breastfeeding.
 - Mixed with alcohol.
 - Consumed at more than 500 mL/day.
- (Agriculture and Agri-Food Canada, 2008)

Not all energy drinks are regulated, but those that are have an 8-digit code with the letters "NPN" before it. If you use energy drinks, it's best to stick with ones that have this code because it means their safety has been reviewed by Health Canada.

A Dangerous Mix: Energy Drinks and Alcohol

Mixing energy drinks with alcohol has become a common trend among young adults. These mixtures are available both at the bar (e.g., Jäger bomb, made with Jägermeister and Red Bull) and at the liquor store (e.g., Rockstar pre-mixed with vodka).

Research shows that mixing energy drinks with alcohol can make you feel less intoxicated, without increasing your blood alcohol level. One study compared college students who mixed energy drinks with alcohol, to students who drank alcohol alone. It showed that students who mixed energy drinks with alcohol drank 36% more alcohol at one time, and were more likely to be involved in serious alcohol-related behaviours. These behaviours included: riding with an impaired driver, being taken advantage of or taking advantage of someone sexually, getting hurt, and needing medical treatment. Energy drinks should never be mixed with alcohol because it can lead to serious consequences (O'Brien, McCoy, Rhodes, Wagoner & Wolfson, 2008).

Energy Drinks and Your Health

The amount of caffeine in energy drinks may prevent you from getting a good night's sleep, but energy drinks are safe for most people when used in moderation. Health Canada recommends having no more than 500 mL in one day. Because of the large amount of caffeine in energy drinks, they shouldn't be used by children, pregnant or breastfeeding women, and people with diabetes or heart conditions. If you experience a side effect from an energy drink, please report it by calling the Canadian Adverse Reaction Monitoring Program at 1-866-234-2345.

Watching Your Weight?

Keep in mind that the sugar content in energy drinks adds calories to your diet, so if you're watching your weight, the sugar-free versions may be a better option for you.

Key References:

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