

Energy drinks

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Introduction

Sir Isaac Newton was right when he said “ what goes up must come down” . This rings true when talking about energy drinks. These products promise to provide heightened awareness, more energy, more endurance some even reference to the consumer you will have wings. So when consuming these products what are you really drinking? Do they provide the energy boost they promise? Are they harmful? Should the FDA do more investigating into the safety of these so-called energy drinks?

These are questions I had going into this as a consumer of energy drinks myself, I was interested in how harmful they are too the consumer. In this paper I hope to provide a better insight to a product that is popular and in demand; but little is known about. What Are You Drinking? Energy drinks contain most of the same major ingredients caffeine, taurine, glucronolactone, niacin and panax ginseng just to list a few. Let’s start with caffeine it is a central nervous system stimulant that has the effect of temporarily warding off drowsiness and restoring alertness.

As of studies done by (Lovett, Richard) 90% of adults consume caffeine daily in different ways. Most of the energy from these drinks comes from the sugar and caffeine not the unnecessary extras (Suzanne Farrell MS, RD). Taurine another main ingredient is actually an amino acid that is found in the human body it is a natural substance that our bodily systems encounter every day. However in these energy drinks it is a synthetic element.

Then there is Ginseng is known as an adaptogen, which means it increases resistance to physical, chemical, and biological stress and builds energy and

general vitality. These are just a couple of the things in what seems to be in a lot of the energy drinks. The rest of the scientific sounding ingredients came up to be not relevant to the effects these drinks promise.

Most drinks provide some combination of B vitamins (which help convert sugar to energy and help regulate red blood cells, which deliver oxygen), amino acids (e. g. , taurine), antioxidants(milk thistle, vitamin C), and stimulants, ranging from the reliable (caffeine, guarana) to the alleged (horny goat weed). Yes, they do. Smit and colleagues found that energy drinks, as compared to placebo, had energizing effects among 18 to 55 year old participants, with effects being strongest 30 to 60 minutes after consumption and sustained at least 90 minutes. Caffeine was found to be the primary constituent responsible for these effects. Although there is no human requirement for caffeine, even low doses of caffeine (12.5 to 100 mg) improve cognitive performance and mood (Smit HJ).

Because this is still such an understudied topic it is hard to say that these drinks provide the effect they promise. The fact is caffeine affects everyone different due to age, size, tolerance, consumption and lack of sleep all these things contribute to how these drinks will affect you. Are They Harmful? This question was the one I was most interested in there is so much controversy around this question. Many energy drinks have a very high percentage of carbohydrates that can make it more difficult for food and nutrients to be absorbed into the bloodstream from the intestines. In some cases, gastrointestinal problems and distress are a possibility.

When an energy drink has a high sugar content, it can have a laxative effect, as well as causing a sudden " crash" when the sugar leaves the bloodstream

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and the energy high disappears. Researchers found that within four hours of drinking various energy drinks, the 15 participants' blood pressure rates increased approximately 10 percent for the systolic rate, 8 percent for the diastolic rate and heart rates increased 11 percent (Wayne state university study). When given to test rats in an experimental laboratory, it was found that the taurine caused anxiety, irritability, high sensitivity to noise, and self-mutilations. However, this data does not mean that the same effects will occur in humans the differences between rats and people are obviously substantial.

That to me seems sort of scary. The Australian Consumers' Association advises that while energy drinks may be scientifically safe, young people especially need to be aware of their contents. Research shows that children and young people who consume energy drinks may suffer sleep problems, bed-wetting and anxiety. Children who consume two or more cans of energy drinks a day may become irritable and anxious. Women who are pregnant are advised to avoid energy drinks (especially during the first three months of pregnancy), as high amounts of caffeine can increase the risk of miscarriage, difficult birth and delivery of low-weight babies. (Australian Consumers Association)

Drinking these drinks while consuming alcohol can also be very harmful there have been reports of young people dying, possibly as a result of mixing of alcohol and energy drinks. Also Since the absorption of nutrients is slower; there is a large chance that the fluid absorption rate of the body is also slower. Difficulty in natural re-hydration of the body during workouts can cause danger to the person's health. Athletes, who lose great quantities of

fluids during games and practices, should be aware of this circumstance for they are one of the target markets of energy drinks. Should The FDA Do More Investigating As To The Safety Of Energy Drinks? Regulation of foods and drugs in the United States falls under the guidance of the Food and Drug Administration under the Federal Food, Drug, and Cosmetic Act (FDCA).

Functional foods, like energy drinks, may be regulated as foods, dietary supplements, drugs, medical foods or food for special dietary use. Though energy drinks have many of the same qualities as soft drinks, which are regulated as foods, they are regulated differently because the functional beverage industry is part of the trend of “nutraceutical foods” that occupies the gray area between food and dietary supplements. Dietary supplements are generally characterized as foods, despite their drug-like properties and their lack of testing on the market. The U. S. Food and Drug Administration have not conducted any serious investigations into the safety of energy drinks.

As dietary supplements, energy drinks are subject to much less stringent regulations than other foodstuffs. However certain nations limit the locations that can sell energy drinks. Other countries require warning labels on individual cans of energy drinks. Still other countries have issued national statements regarding their safety. Some countries, such as Canada, have not yet approved certain energy drinks for sale. So shouldn't the FDA take a closer look as to how these drinks are labeled and marketed and shouldn't there be more investigating as to its effects on their consumer. Conclusion As a consumer of at least two if not more monster energy drinks a day I found the information was good to know.

I do think that the FDA needs to make it where they do inform the consumer of the risks on the label especially because these drinks are very popular in teens. After all that I found I find it interesting that the public is so misinformed about all the ingredients in these drinks because really the caffeine is what is giving them the boost not all the scientific sounding ingredients. I think that it is most important for consumers to know that when taking in such high levels of caffeine you will go up but you must come down.

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