

energy drinks a fad and a danger

Energy Drinks: A Real Fad A Real Danger?

The Issue

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- Red Bull Energy Drink; Inpulse Energy Drink; Dark Drink; Shark Energy Drink;
- Hype Energy Drink; SoBe Adventure Fuel; EA3 Formula Energy Drink;
- AMO Energy Drink; Red Rain; Red Dragon Energy Drink; Diablo Energy Drink;

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What are energy drinks?

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Energy-Drink Mania

Sales of high-caffeine "energy drinks" like Red Bull are soaring. Why are the beverages so popular?

- ☀ Slightly less expensive than crystal meth
- ☀ Just like Mountain Dew, but healthy because of some Chinese thing called gualooga or something
- ☀ Give users strength of 10 lumberjacks who have also consumed energy drinks
- ☀ Easier to open than a battery
- ☀ Tired of getting energy in pill or powder form
- ☀ Vaguely recall reading something about taurine in June issue of *Men's Health*
- ☀ Want to get in on trend before negative side effects discovered
- ☀ Temporarily endows drinker with sense of drive and purpose
- ☀ Tiny little cans make drinkers feel like giants among men
- ☀ Combines secrets of Eastern medicine and Western marketing



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Excessive drinking of "energy drinks" or mixing them with alcohol can have serious health effects. They are not considered safe for children yet are a new fad in youth. There are many "energy drink" products currently sold in Canada. They are available in corner stores, gas stations and bars, usually displayed alongside soft drinks, juices and sports drinks. Some of the brand names include:

- Red Bull Energy Drink; Impulse Energy Drink; Dark Dog; Shark Energy Drink;
- Hype Energy Drink; SoBe Adrenaline Rush; EAS Piranha Energy Drink;
- AMO Energy Drink; Red Rain; Red Dragon Energy Drink; Diablo Energy Drink;

Every month new products are on the market. There are no age restrictions on buying these drinks even though they have not been tested and they are not safe for children.

What are energy drinks ?

•"Energy drinks" claim to "make you more alert and give you energy". Most have ingredients like caffeine, sugar, taurine, vitamins and herbs that supply mental and physical stimulation for a short period of time. Taurine is an amino acid, one of the building blocks of protein and glucuronolactone is a carbohydrate.

•"Energy drinks" should not be confused with sports drinks such as Gatorade or Powerade, which re-hydrate the body. These sports drinks also provide sugars, which the body burns to create energy and replenish electrolytes. Electrolytes maintain salt and potassium balances in the body. Energy drinks can be found anywhere you buy beverages, right beside the pop, juices and sports drinks.

What are the dangers of energy drinks ?

Caffeine (and also sugar) are the main ingredients in energy drinks the feeling of more energy. The amount of caffeine in most 250 ml sized cans of energy drinks is 80 mg, which is less than a typical cup of coffee. The amount of caffeine in an energy drink is more than what is recommended for children. Health Canada says that children under 12 years of age should have much less than 85 mg of caffeine a day. One energy drink can easily put children over their caffeine limits. Too much caffeine causes irritability, nervousness and sleeping problems.

Sugar: Sugar (like caffeine) provides energy, but in the form of calories. A small can (250 ml) is likely to have at least 100-130 calories. However, many energy drinks are sold in 500 ml can sizes contributing to more unneeded calories.

Taurine: This is a naturally occurring compound found in the body's tissues and in meat and dairy products. It has been claimed that adding taurine to energy drinks will make you more alert, but there is no scientific evidence to support this. The long term health effects of consuming taurine in energy drinks on a regular basis are now known.

Medicinal herbs: Energy drinks contain herbs like Ginseng and Gingko Biloba claiming that these herbs improve performance. There is no scientific evidence to support this.

• Another problem with "energy drinks" arises when too many are consumed or when they are mixed with alcohol. For example, they have become popular at all-night dance parties, bars and clubs. People drink them to keep up their energy during periods of intense physical activity or drink them after exercise to quench their thirst. But rather than re-hydrating their bodies, these drinks may actually lead to dehydration.

Health Risks of Energy Drinks

In the reports of adverse reactions involving "energy drinks," symptoms included:

- Electrolyte disturbances;
- Nausea and vomiting; and
- Heart irregularities.
- The label on these drinks warn that they should not be used by children, pregnant or breastfeeding women. No more than 500 ml of energy drinks should be consumed per day and they should not be mixed with alcohol.
- May cause irritability, nervousness and sleeping problems.

In the adverse reaction reports, it is not possible to tell if symptoms reported were due to the effect of combining "energy drinks" with alcohol, or the alcohol itself.

Minimizing Your Risk

If you drink "energy drinks," be aware of the following.

- Only Red Bull Energy Drink is considered a health product in Canada and should be used according to the label instructions.
- Do not drink excessive amounts of Red Bull Energy Drink. The limit on Red Bull Energy Drink is 500 mL or **two cans a day**, as indicated on the product label. With the condensed concentrated cans, it is easy to drink too much of this product.
- Do not mix Red Bull Energy Drink with alcohol.
- If you engage in intense physical activity or exercise, drink enough water to help re-hydrate your system.

The safety profiles of other "energy drinks" have not been evaluated by Health Canada. Don't drink excessive amounts of any energy drink or mix with alcohol.

How Much Is Too Much?

Children are at greater risk from caffeine. Health Canada has developed additional guidelines for kids. Children should have no more than 2.5 milligrams of caffeine per kilogram of body weight. Four- to six-year-olds should have no more than 45 milligrams of caffeine each day; Seven- to nine-year-olds should limit consumption to 62.5 milligrams and; 10- to 12-year-olds should consume no more than 85 milligrams of caffeine a day (equal to a 250-millilitre energy drink).

- Another concern is the epidemic of childhood obesity and how these drinks are adding empty calories to kids' diets. Instead of water, juice or milk, kids who drink energy beverages add loaded sugar and caffeine.
- Lastly, teens are mixing energy drinks with alcohol, despite warnings on the cans. The

caffeine keeps teens awake and they reportedly do not feel the full effects of the alcohol. This poses a danger of alcohol poisoning.

Can I use an energy drink during exercise?

Water is the best choice to drink during most types of activity. When you need something more for long or intense exercise, choose a sports drink. Sports drinks have specific amounts of sugar and salts (such as sodium and potassium). The sugar helps to keep you exercising longer and harder while the salts help replace some of the nutrients you lose when you sweat. Energy drinks are not the same as sports drinks. They tend to be higher in sugar, which can make them harder to absorb during exercise and could cause stomach upset. They also are often carbonated which makes it harder to drink enough to stay hydrated. Best to avoid energy drinks when exercising.

<http://www.eatrightontario.ca/en/ViewDocument.aspx?id=196>

The Health Dangers of Energy Drinks

Side effects from drinking energy drinks are possible. While moderate use by adults is generally safe, side effects can happen if energy drinks are abused, such as when they are mixed with alcohol or when too many are consumed at one time. Side effects that have been reported are nausea, vomiting and irregular heartbeats.

Are all energy drinks regulated?

Most energy drinks are classified as supplements (natural health products) and fall under Canada's Natural Health Product regulations because they contain higher levels of ingredients like caffeine and vitamins than are usually allowed in foods. However, not all energy drinks on the market have been approved for sale yet under NHP regulations. If the energy drink has a natural health product number (NPN) on the side of the can then it has been approved for sale. However, this does not mean it is safe for use by all groups. Follow the warnings on the label. While none of the common active ingredients in energy drinks seem to be particularly harmful alone, there has been limited research studying the combination of these ingredients on health.

Energy drinks' stimulating properties have been anecdotally reported to increase heart rate and blood pressure, dehydrate the body, and prevent sleep. These effects may be particularly harmful if the drinks are used in sporting contexts. Sports drinks, such as Gatorade and Vitamin Water, have certain compositional requirements with regard to carbohydrates, electrolytes, and osmolarity. Energy drinks, on the other hand, do not have these requirements and because they contain caffeine, a known diuretic, they can greatly dehydrate an individual, whereas in sporting events or exercise, they would be needed to rehydrate. In addition, socially energy drinks are now used as mixers for alcoholic cocktails. The danger in this lies in the fact that energy drinks are stimulants and alcohol is a depressant. The stimulant properties of the energy drinks can mask the feeling of intoxication and can lead a person to drink well beyond the safe limit. Though not

necessarily dangerous, energy drinks contain loads of sugar, and contains numerous calories. Consuming energy drinks, especially in place of water, can lead to weight gain.

Healthier Alternatives

Instead of relying on energy drinks to wake you up, there are numerous lifestyle changes you can make to boost your energy naturally.

1. Eat breakfast. Eating something in the morning can rev up your metabolism and start your day out right.
2. Eat every few hours. Oftentimes we get tired because our blood sugar drops too low. To prevent the drop, try and eat a healthy meal or snack every few hours.
3. Drink water. If you're dehydrated, you will feel fatigued. Get your 8-10 8 oz glasses to keep you awake.
4. Decrease sweets. Consuming products high in sugar will lead to a peak in blood sugar and then a major drop. The drop is what leads to feelings of fatigue. If you cut out sweets, you'll avoid the blood sugar swings.
5. Exercise! Getting your blood flowing and getting into shape will increase your metabolism and stamina.
6. Sleep. You'll always feel tired if you don't get your Z's. Try to slow down and aim for at least 7 hours of sleep per night.

This information comes directly from:

http://www.mezediet.com/2007/06/the_health_dang.html





The promotions for energy drinks are very appealing to youth with colourful packaging, catchy names and the emphasis on energy and strength. Names like Monster Mash, Rock Star, Shark Energy, and Hype Energy all attract young people. Studying all night for an exam, driving for many hours at a time, mixing with other drugs or alcohol, drinking energy drinks while attending an all night raves all increase both the use of and risks associated with these products.

The energy drinks and shots are readily available, relatively inexpensive and there are no restrictions on age for purchasing these products. There's also a fierce competition between the energy drinks and the energy shots. New products are appearing monthly.

The caffeine, sodium, and energy blend substances especially are risks to health.

Note: the following is a Promotion for 5 hr. energy shot

You don't need energy drinks. You just need energy. Sixteen ounces is a lot to drink when all you want is energy, but that's the size of many energy drinks. It's too much fizzy liquid, and 12 teaspoons of sugar, 200 calories and herbal stimulants. Instead drink a 5-Hour Energy shot. Two ounces goes down fast. It has zero sugar, zero herbal stimulants and only four calories. It's packed with B-vitamins, amino acids, nutrients and as much caffeine as a cup of coffee.

	Original 5-Hour Energy	Extra Strength 5-Hour	Decaf 5-Hour Energy	Energy Drinks
Energy shots/drinks				
Serving Size	2oz	2oz	2oz	8oz
Calories	4	4	4	100
Sugar	0	0	0	27g
Carbohydrates	0	0	0	27g
Sodium	18mg	18mg	18mg	180mg
<u>Niacin</u> (Vitamin B3)	30mg	40mg	0mg	20mg
<u>Vitamin B6</u>	40mg	40mg	40mg	2mg
<u>Folic Acid</u> (Vit. B9)	400mcg	400mcg	400mcg	0mg
<u>Vitamin B12</u>	500mcg	500mcg	500mcg	6mcg
<u>Energy Blend</u>	1870mg	2000mg	2106mg	2500mg
Herbal Stimulants	No	No	No	Yes
Caffeine	Yes	Yes	Yes	Yes

How are 5-Hour Energy shots different from canned energy drinks?

Lasts Longer: When you have a lot to do and can't afford a letdown 5-Hour Energy shots can help you feel, bright and alert for hours with no sugar crash. Since it's a 2-ounce energy shot and not a 16-ounce carbonated energy drink, you can slam it down in seconds. You can feel it start working in minutes. You can carry a 5-Hour Energy shot with you. It fits neatly in your pocket, purse, desk, locker, car or truck cab. Best of all, you don't have to nurse a big 16-ounce energy drink. One quick sip and 5-Hour Energy is in your system and out of your hand. When it comes to convenience, 5-Hour Energy has it all over canned energy drinks. While they go bigger and bigger – as much as 32 ounces – 5-Hour Energy is only two ounces. Think about it – you get more energy and have less to drink. That means the energizing ingredients get into your system faster. It also means you don't have to carry a big can of sugary soda with you.

5-Hour Energy contains a blend of B-vitamins, amino acids and essential nutrients. It contains zero sugar, zero herbal stimulants and only four calories. The amount of caffeine varies depending on the energy shot. Original 5-Hour Energy contains as much caffeine as a cup of premium coffee. Extra Strength contains as much as 12 ounces of premium coffee, while Decaf 5-Hour Energy contains only as much caffeine as a half cup of decaffeinated coffee.

RECOMMENDED USE: Drink one half (1/2) bottle (one ounce) for moderate energy. Drink one whole bottle (two ounces) for maximum energy. Do not exceed two bottles of 5-Hour Energy shots daily, consumed several hours apart. Use or discard any remainder within 72 hours (three days) after opening. Refrigeration not required. **CAUTION:** Contains caffeine comparable to a cup of the leading premium coffee. Limit caffeine products to avoid nervousness, sleeplessness, and occasional rapid heartbeat. You may experience a Niacin Flush (hot feeling, skin redness) that lasts a few minutes. This is caused by Niacin (Vitamin B3) increasing blood flow near the skin. *Do not take if you are pregnant or nursing, or under 12 years of age*

Supporting documents against the use of energy drinks and shots

Youth, alcohol and energy drinks a dangerous combination, warns MADD Canada

Oakville, Ontario - Mothers Against Drunk Driving (MADD) Canada is warning about the increasing consumption by young people of energy drinks in combination with alcohol. These drinks, such as Red Bull, Venom and Adrenalin Rush, typically contain large quantities of caffeine and other stimulants, and are aggressively marketed to youth.

Caffeine and alcohol are both diuretics that can result in life-threatening cases of dehydration, while the energy drink ingredient ephedrine, in combination with caffeine, can trigger heart palpitations and other cardiac problems. However, MADD Canada says the more prevalent concern is that the stimulant in energy drinks masks the patron's level of impairment; the energy drinks offset some of the symptoms of impairment, but not the impairment itself - creating "wide-awake drunks who believe they are still sober."

Patrons may stay in the bar and continue to drink alcohol, or may be encouraged to drive, attempt to cross a busy street, or engage in other high-risk activities. A recent study of almost 4,300 American college students reports that a quarter of all students reported having energy drink cocktails in the previous 30 days; compared to those who did not combine energy drinks with alcohol, they were twice as likely to be hurt or injured, to require medical attention, or to travel with a drunk driver.

Spiked energy drinks a dangerous cocktail: study

Last Updated: Monday, November 5, 2007 | 9:29 AM ET *The Canadian Press*

Mixing alcohol with energy drinks is a popular but dangerous habit among U.S. college students, according to new research that found those who combine the two tend to drink more, take more risks and are more likely to get hurt while drinking.

The research, by investigators at Wake Forest University School of Medicine in North Carolina, found students who mix energy drinks with alcohol were twice as likely to be injured during a bout of drinking, to need medical attention or to ride with a driver who was drunk.

'So you're drunk. But you just don't know that you're drunk.'—*Dr. Mary Claire O'Brien.* They were also twice as likely to take advantage of someone sexually and nearly twice as likely to be taken advantage of sexually by someone else. The researchers believe the problem is the high caffeine levels in the energy drinks mask the effects of excess alcohol — the stumbling, slurred speech or sleepiness that signal intoxication.

"What I would describe it as is a person for whom the symptoms of drunkenness are reduced, but the drunkenness is not," lead author Dr. Mary Claire O'Brien said in an interview. "So you're drunk. But you just don't know that you're drunk." O'Brien presented the findings of the study Sunday at the annual meeting of the American Public Health Association in Washington, D.C. Mixing energy drinks with alcohol is a popular phenomenon, with websites devoted to rating the effectiveness of various combos, said O'Brien, a professor of emergency medicine and public health sciences. The beverage industry has twigged to the potential, producing pre-mixed versions of popular energy drinks which sell in some locations for less than the non-spiked original, according to a report on energy drink cocktails published in August by the Marin Institute, a California-based alcohol industry watchdog. O'Brien's study — one of the first to look at the implications of this trend — is based on an internet survey of 4,271 students from 10 U.S. universities. Randomly selected students take part in the survey and were paid a token sum for

answering roughly 300 questions on health risk behaviours that focused heavily on alcohol use.

Caffeine functions as override, researchers suggest

Twenty-four per cent of participants reported imbibing energy drinks laced with alcohol in the previous 30 days. Consumption of the combo was more common among students who were male, white, athletes, fraternity member or pledges, and students who were older. The caffeine in the energy drinks — some contain three times as much as a regular-sized cup of coffee — seems to work as an override. It appears to trick the brains of people who are drinking into thinking they are much less impaired than they actually are. Dr. Karen Leslie, a pediatrician with the substance abuse program of adolescent medicine at Toronto's Hospital for Sick Children, said the combination exacerbates the already dangerous pattern of binge drinking favoured by teenagers — drinking quickly and to excess. "So it's entirely not surprising that if young people are taking in more alcohol because they're not noticing the effects of it earlier on because of the caffeine, these are not surprising things at all."

Johns Hopkins scientists who have spent decades researching the effects of caffeine report that a slew of caffeinated energy drinks now on the market should carry prominent labels that note caffeine doses and warn of potential health risks for consumers.

The caffeine content of energy drinks varies from 50 to more than 500 milligrams. "The caffeine content of energy drinks varies over a 10-fold range, with some containing the equivalent of 14 cans of Coca-Cola, yet the caffeine amounts are often unlabeled and few include warnings about the potential health risks of caffeine intoxication," Dr. Roland Griffiths, Ph.D. author of an article in the Journal Drug and Alcohol Dependence.

The market for these drinks is an estimated \$5.4 billion in the United States and is expanding at a rate of 55 percent annually. Advertising campaigns principally targeting teens and young adults, promote the performance-enhancing and stimulant effects of energy drinks and appear to glorify drug use. researchers warn just one can of Red Bull raises the risk of heart attack or stroke in young people. A study of university students found drinking one 250ml can of the sugar-free version of the energy drink that 'gives you wings' increased the 'stickiness' of the blood and raises the risk of life-threatening clots. Researcher Dr Scott Willoughby said: 'One hour after they drank Red Bull, their blood systems were abnormal. <http://www.dailymail.co.uk/health/article-1045195/Red-Bull-gives---increased-risk-heart-disease-say-scientists.html#ixzz0doqnc4cN>