Energy Drinks

The physical and psychological effects of the stimulants cocaine or methamphetamine are significantly more severe than those of energy drinks. However, excessive long-term use of energy drinks can produce negative physical and psychological effects. Energy drinks should be used with caution.

Major international and national beverage manufacturers have developed new and potentially dangerous beverages called “energy drinks.” Major companies, such as Coca-Cola, Pepsi Cola, Cadbury-Schweppes, and Anheuser-Busch, have recently produced their own version of energy drinks, which provide consumers a dose of quick energy. Energy drinks are the fastest growing portion of the beverage market with sales growing more than 102% in the past year (representing at least $140-150 million in sales).

In order to increase sales of energy drinks, beverage companies have begun saturating the market with energy drink advertisements directed mainly at young adults, especially college students. For instance, one energy drink company contends that its product can be used before “demanding athletic activities,” “tests and exams, when there’s no time to sleep,” or “as first-aid after a long party night.” Furthermore, Wet Planet Beverages produces beverages like Jolt, Martinelli’s, Pirate’s Keg, and a new energy drink called XTC. Their advertisements try to capture the attention of young adults with product slogans, like: “XTC: a carbonated slap in the face! XTC replenishes your natural resources! XTC adds to your performance, improves endurance, adds speed, reaction time and power!” These ads capitalize on our fast paced society and the tendency of youth wanting to be different from older generations.

Beverage companies insist their energy drinks are safe for workouts, but experts warn that consumers must read the drink labels and be cautious about the claims of any company’s advertisements. It has been reported that in 1998, after drinking an energy drink containing ephedrine and then lifting weights, a Kansas man suffered a heart attack that left him with permanent brain damage. While there may be a temporary increase in activity, it is followed by an equal period of decreased activity and low energy levels. The Food and Drug Administration is considering restricting the sale of products containing the combination of ephedrine, caffeine, and other ingredients like ginseng.

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“Energy Drinks” continued...

Besides a false impression of increased energy, energy drink producers may mislead consumers by advertising products that contain “mystical herbs, vitamins, caffeine, and amino acids,” or say their product “increases muscle tone.” Unfortunately, the amount of vitamins and amino acids are not significant enough to make a person more healthy or develop muscle. The Food and Drug Administration has given warnings to beverage companies not to claim health benefits of herbal food additives if those benefits are unfounded.

The Swedish manufacturer, Nordic Drinks, produces the energy drink Niagara, which contains caffeine, ginseng, guarana, mate, and schizandra. Each of these ingredients have a stimulant effect on the body. Nordic Drinks advertise their product will increase sexual feelings, but this claim is scientifically unfounded. However, the company does have a disclaimer on their product stating “Niagara is not suitable for children, pregnant women or persons sensitive to caffeine or with high blood pressure.”

While some energy drinks are non-carbonated versions of sodas and are loaded with sugar, other energy drinks contain both sugar and caffeine. This combination tends to create the sense of an energy rush. A few energy drinks contain high levels of caffeine combined with guarana. Guarana has similar physiological effects to caffeine, and both act as stimulants on the body. (See inside and back pages for more information on caffeine and guarana.) Caffeine and guarana produce stimulant-like effects by giving someone an artificial sense of increased energy and heightened awareness. However, energy drinks also create negative physical effects, such as loss of coordination, decreased appetite, delayed sleep, nervousness, anxiousness, and an increase in blood pressure.

Energy drink companies often encourage consumers to drink their product on any occasion and to combine it with alcohol. Sales reports show that bar and restaurant patrons consume a large portion of energy drinks that are used as mixers with alcohol. Energy drink manufacturers promote ways to mix energy drinks with alcohol to create a new kind of mixed drink. Websites from various beverage companies even provide recipes on how to make new alcoholic drinks by mixing their particular product with alcohol.

People who combine alcohol and energy drinks at bars or dance clubs like the idea of being able to drink without experiencing the drowsiness one feels after drinking alcohol alone. However, doctors and nutritionists explain that being exhaust from drinking alcohol is a message that the body has had enough alcohol. Continuing to consume energy drinks combined with alcohol may suppress the body’s natural signs that it has had too much, and an alcohol overdose could occur before the person or others recognize the warning signs or symptoms. Suppression of the body’s natural sign of exhaustion can also allow someone to feel normal enough to drive home. However, experts warn that it is dangerous for someone to drive after consuming alcohol, even if the person feels alert.

Attempting to counteract the depressive effects of alcohol with a stimulant can wreak havoc on the body. The liver and kidneys, the central-nervous system, and the cardiovascular system try to maintain a balance in the body. With a depressant like alcohol, the body slows down and then, once stimulants in an energy drink take effect, the body speeds up. This can have a roller-coaster-type effect on the body. With continual usage of alcohol mixed in energy drinks, the body may experience significant damage. While the energy drinks may provide a temporary energy boost, it is not a substitute for sleep, water, or time—any of which are necessary to revitalize the body.
Caffeine

Caffeine is one of the world's most popular drugs. Caffeine is a white, slightly bitter, crystal-like substance found in coffee, tea, cocoa, cola, and now energy drinks. Other less well-known places caffeine is found include aspirin, diet pills, nonprescription cough/cold remedies, and some street drugs.

As a stimulant, caffeine usually increases alertness and physical activity.

The effects of caffeine on the body depend on many factors, such as the amount taken, level of tolerance, body weight, diet, and the individual. Drinking two cups of coffee (15-500 mg of caffeine) produces effects within 15-30 minutes. Caffeine increases a person's metabolism, body temperature, and blood pressure. Other effects include an increase of urine production, higher blood sugar levels, hand tremors, a loss of coordination, decreased appetite, and delayed sleep.

After drinking too much caffeine, some people experience headaches, nausea, trembling, an irregular heart beat, and nervousness. Ingesting large amounts of caffeine can lead to convulsions and breathing failure. Deaths linked to misuse of tablets containing caffeine have been reported.

Developing a tolerance (i.e., needing a larger dose to achieve the same effects) for caffeine starts occurring after regularly ingesting 4-6 cups of coffee per day (500-600 mg of caffeine). A regular caffeine drinker may have cravings for the drug's effects (e.g., "a jump start" in the morning).

Some caffeine researchers have found withdrawal-like symptoms among regular caffeine users who try to quit or reduce drinking caffeine. These symptoms include headaches, fatigue, muscle pain, depression, irritability, and mood changes. To minimize caffeine withdrawal symptoms, health professionals usually recommend gradually reducing caffeine intake over a period of several weeks.

FYI

The "lift" many people feel when they roll out of bed and slurp their first cup of coffee may not result completely from caffeine's stimulant effect. In fact, the perceived high may be the actual suppression of low-grade withdrawal symptoms.

CAFFEINE & PREGNANCY

Since caffeine enters the bloodstream and crosses the placenta to the fetus, many doctors recommend that pregnant women avoid caffeine. Caffeine has been linked to low birth weight and miscarriages. As the intake of caffeine intake increases, the risk of miscarriages also increases. Doctors advise mothers who breast-feed to reduce or eliminate their caffeine intake. Using caffeine also appears to decrease fertility among women trying to become pregnant.

CAFFEINE CONTENT

<table>
<thead>
<tr>
<th>Type</th>
<th>Milligrams</th>
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<tbody>
<tr>
<td>5 oz. Coffee</td>
<td></td>
</tr>
<tr>
<td>decaffeinated</td>
<td>1-5</td>
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<tr>
<td>instant</td>
<td>30-105</td>
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<tr>
<td>brewed</td>
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<tr>
<td>Tea</td>
<td></td>
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<tr>
<td>instant</td>
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</tr>
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<td>12 oz. iced tea</td>
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<tr>
<td>brewed</td>
<td>20-110</td>
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<tr>
<td>12 oz. Soft Drinks</td>
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<tr>
<td>Diet Pepsi</td>
<td>5</td>
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<tr>
<td>6</td>
<td></td>
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<tr>
<td>Pepsi</td>
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<tr>
<td>Dr. Pepper</td>
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<td>Coca-Cola</td>
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Guarana

Originating from South America, guarana (pauncha cupana) is natural caffeine. Native South American tribes have been using guarana for centuries to combat fatigue, cramps, obesity, and flatulence. European explorers used guarana as a diuretic, as an astringent, and to treat headaches and menstruation problems. The syrup form of guarana is the main ingredient in the national beverage of Brazil known as Guarana Soda.

South Americans harvest guarana after the fruit partially opens revealing its seeds. After several days of allowing the seeds to ferment, the shells are removed, and the seeds are dried. Some guarana seeds are roasted to eliminate the remaining moisture, which is known as guaranam nana. Businesses or consumers can buy the roasted seeds or dried seeds. The dried seeds are sold to produce guarana powder, guarana sticks, or guarana syrup (the syrup is used for making beverages).

Beverage companies world-wide seem to be capitalizing on the popularity of guarana by adding it to many of their drinks. The main chemical components of guarana are caffeine and traces of theophylline and theobromine, which belong to the chemical family of caffeine. Therefore, possible effects of guarana are similar to caffeine: increase in blood pressure, increase in heart rate, increase in metabolic rate, increase in urination, nervousness, upset stomach, insomnia, severe headaches, and rapid heart beat.

Some beverage companies produce energy drinks with caffeine and guarana, which may multiply the stimulant effect in their drinks. Consumers of guarana with heart problems may experience cardiac complications, such as hypertension, increased heart rate, stroke, heart attack, or seizures. Also like caffeine, there may be a link to higher rates of infant mortality and fertility problems for those who ingest guarana.

Guarana also contains tannic acid. Some researchers report that ingesting a high amount of tannic acid may be associated with esophageal cancer, and tannic acid may interfere with the body's ability to use protein.

In the 1700's, a German botanist was one of the first scientists to study guarana and its chemical components and reputed effects. Recent studies on the positive effects of guarana have been inconclusive. Further studies on the specific effects of guarana need to be done. However, it seems the negative effects of using guarana, especially in combination with caffeine or alcohol, outweigh the reported benefits.

CAMPUS RESOURCES

University Counseling Services
Lafene Health Center - 2nd Floor
(Sherry Benton) Phone: 532-6927

Alcohol & Other Drug Education Service
Director: Bill Arck
214 Lafene Health Center
Phone: 532-6927

Alcoholics Anonymous
Open Noon Meeting (Mon.-Fri.)
Ecumenical Campus Ministry
1021 Denison
Phone: 357-9542
776-8306

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Lafene Health Center - Room 214
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