

THINK BEFORE YOU DRINK



Nour Shams

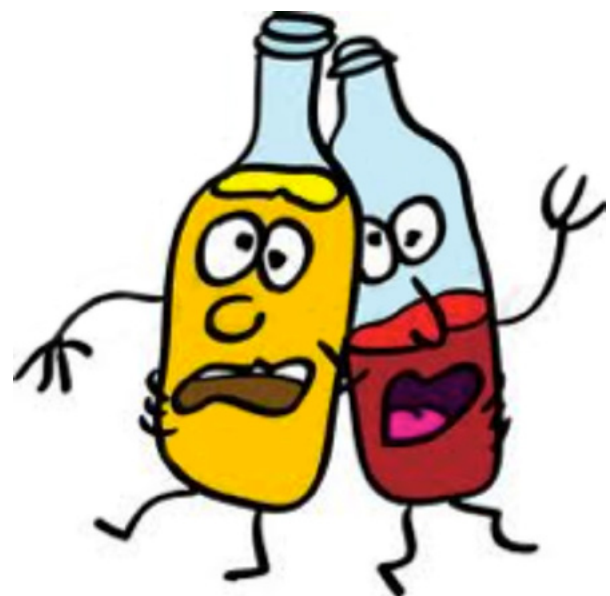


Sana Shams



Inaya Abdallah

& Skye Sayegh



There's an ongoing increase in the number of young adults seeking to boost their energy in a short period of time. Whether an athlete, a college student, or a socially active young adult, the consumption of energy drink is sufficient to boost one's energy and increase alertness. 'Red Bull' is currently the most consumed and widespread energy drink among young adults of different classes. Energy drinks are beverages that contain a high content of stimulants mainly caffeine and sugars in addition to B vitamins which are the chief components required to increase one's intake of energy and are responsible for the physiological and psychological effects of the energy drink.

Even though manufacturing companies might not include the exact dose used for every ingredient in the energy drinks, nevertheless, most energy drinks contain mainly caffeine and sugars in addition to Guarana, Taurine, Ginseng, B vitamins (role in processing food to get energy) and Glucuronolactones.(1)

Starting with the most important to least important ingredient:

- **Caffeine:** (approx. 75-80mg/8ounce-serving) is responsible for the stimulating effect in energy drinks since it is a psychoactive stimulant of the central nervous system, heart and skeletal muscles. Caffeine can readily cross the blood-brain barrier due to its lipophilic nature and acts as an antagonist of adenosine receptors in the brain.(2) This reduction in adenosine transmission in the brain leads to the subsequent release of dopamine and also responsible for the high levels of epinephrine accounting for the caffeine's stimulating effects in increasing alertness/awareness and decreasing fatigue. Guarana or Brazilian cacao with its active component caffeine is responsible for the following adverse effects: insomnia, nervousness, restlessness, tachycardia, tremors and anxiety. Energy drinks can have up to 250mg of caffeine per serving, so according to Kent A. Sepkowitz, "to reach a possibly lethal dose of 3g of caffeine, a person would need to ingest at least 12 of the highly caffeinated energy drinks within a few hours." (3)
- **Sugar:** It is a major source of energy for most of the

cells in the body including the brain. Caffeine and sugars work synergistically to enhance behavioral performance and concentration.

- **Taurine:** can be found in some energy drinks and mainly in 'Red Bull' and is the most abundant intracellular amino acid in the human body having important physiological functions with positive inotropic, chronotropic and antidysrhythmic effects. As studied by R. Seidl, A. Peryl, R. Nicham, & E. Hauser, "the mixture of three key ingredients of Red Bull Energy Drink used in the study (caffeine, taurine, glucuronolactone) has positive effects upon human mental performance and mood. These effects may be mediated by the action of caffeine on purinergic (adenosinergic) receptors and taurine modulation of receptors." (4)

- **Ginseng:** which is known for its therapeutic use in improving cognitive function, concentration and memory if taken in prescribed doses that are much higher than those found in certain energy drinks. However, adverse effects and interactions associated with energy drinks ingredients may include insomnia, tachycardia, palpitation, hypertension, headache, etc.

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Red Bull



CAFFEINE INTOXICATION:

Hence, certain ingredients may have positive effects, however, when interacting with the rest of the ingredients may lead to adverse effects that can be dangerous to one's health. Energy drinks can stand up for their reputation for boosting one's energy and increasing one's alertness and concentration, nonetheless, excess intake of these drinks can and will lead to physiological and psychological problems and in

some cases death due to 'caffeine intoxication'.

Energy drinks are reaching their peak in the market nowadays. Energy drinks such, as "Red bull" the drink that claims to give you wings due to its boosting energy effect is one of the best selling drinks ever. A recent research done in Australia highlighted the most important side effects of energy drinks which include: tachycardia, tremor, insomnia, restlessness, gastrointestinal and respiratory problems, chest pain, headaches, nausea, and in some cases it can lead to various allergic reactions. (5) In 2012 a research done in the USA claimed that: "energy drinks have been cited in the death of five people in the past year". The energy drink consumed by these five victims is called "Monster". (6) In 2012 the magazine New York Times stated that: "Federal officials have received reports of 13 deaths over the last four years that cited the possible involvement of 5-Hour Energy drink, a highly caffeinated energy shot." (7)

MIXING WITH ALCOHOL:

Regarding their various disadvantages, their dangerous effects arise when mixing these drinks with alcohol.

Drinking alcohol alone induces a feeling of happiness, and when you drink too much you'll start to feel tired and sleepy and this is your body telling you to take it to bed in order to rest.

A study released by an official journal dealing with alcoholism: clinical & experimental found that: "the combination of the energy drink enhanced feelings of stimulation in participants. However, the energy drink did not change the level of impairment for impulsive behavior" which is caused by alcohol alone. (8) These findings suggest that mixing energy drinks with alcohol **does not** cancel the alcohol effect on your body. Energy drinks may make u feel alert and awake and less impaired or sleepy, but in reality the alcohol is doing its normal effect on your body and you are feeling just the opposite of the real condition your body is in. The caffeine in energy drinks does not counteract the effect of alcohol toxicity. This detachment between your real conditions and how you are feeling is a major problem here.

Vodka mixed with red bull became the new trend for all the partygoers who want to get high but stay alert at

the same time. This is dangerous for it allows you to get involved in tasks you can't handle such as driving, or partying and drinking more without realizing that your body needs to rest.

BEIRUT:



Beirut bars and pubs are drowning in energy drinks such as Buzz, red bull, XXL, Monster and many others. According to news offered by Lebanon's Economy Ministry: "Caffeinated alcoholic beverages are banned in Italy, Ireland,

Poland, Romania, Spain, and Sweden as well as a few states in the United States. In Australia as well as 26 states in the U.S., efforts are afoot to ban the drinks completely." (9) While in Lebanon these drinks are increasing more and more every year due to wrong advertisements and lack of awareness and knowledge.

It's a very important step that Lebanon should consider before these caffeinated alcohol drinks get out of control and deliver the young youth a wrong message regarding their dangerous effects. Many steps can attenuate the usage of these drinks such as awareness campaigns, and labels attached on the energy drinks warning of the side effects of mixing it with alcohol or consuming it in a large amount.

As the famous quote by Sophocles, Antigone says "Let men be wise by instinct if they can, but when this fails be wise by good advice." So having a second thought regarding mixing energy drinks with alcohol is ever wiser.

References

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