



Illustration by Randy Dean

Energy Drink Breakdown

Sugar:	14g	28g	39g	27g	31g	27g	57g
Caffine:	present	present	present	present	present	present	present
Taurine:	present	present	present	present	present	present	present
Guarana:	present	present	none	present	present	none	present
Ginseng:	present	present	none	present	present	present	present
Serving Size:	8 fl oz	8 fl oz	1 can	8 fl oz	8 fl oz	8 fl oz	1 can
Servings Per Container:	2	about 2	1	2	2	2	1

Are energy drinks just designer sodas?

RAYNIE ANDREWSSEN
Editor in Chief

Energy drinks have become a \$4 billion a year industry. With slogans such as “Red Bull gives you wings,” Monster “is a lifestyle in a can,” “Party like a Rock star” and “Human Horsepower” as touted by NOS, it is no wonder the industry has exploded, however, not without controversy.

Let’s take a closer look at the labels. The ingredients found in energy drinks do not vary much except in dosage. The two main ingredients found in all energy drinks are sugar and caffeine. Other notable ingredients found in the majority of the drinks are taurine, guarana and panax ginseng. The dosages vary slightly between drinks, some list each ingredient and its dosage, others lump the ingredients together labeling it as “energy blend” and give one dosage for the group, which tells the consumer nothing.

A number of manufacturer labels state that consumers can drink up to three cans per day. Consider also that a serving size is 8 ounces and there may be two or three servings in one can, how is this labeling responsible? Venom’s Black Mamba lists “energy blend” 3000mg, consuming a whole can would equate 6000mg, but how much of that is Caffeine? How much is taurine? The consumer has no idea.

Disclosure of ingredients is one thing, to know what they are, how

much is too much and how they might affect consumers health involves a little research.

Sugar is the number one ingredient in energy drinks. As the body metabolizes sugar it “temporarily raises serotonin levels in the brain which can improve mood,” according to a 2007 study published in “Fit and Well”. However, it is also well documented that the added sugars are a key factor in the development of obesity and Type 2 diabetes. According to the USDA, based on a 2000 calorie diet the RDA for added sugars is 32g. The sugar content of energy drinks ranges from 17g to 57g. Let’s not forget that there are two to three servings in one can and according to some manufacturers labels consumers can drink up to three cans per day. How much sugar is that?

Caffeine is a central nervous system and metabolic stimulant. Some energy drink manufacturers, namely Monster, Full Throttle and Venom, group caffeine into its “energy blend” so it is unclear how much caffeine is in the product. Rock star, No Fear and Starbucks do list caffeine which ranges from 80mg to 146mg. According to the FDA the average cup of coffee contains 115mg of caffeine. “As much as 500mg of caffeine daily (5 cups of coffee) spread out over the day are toxicologically harmless for healthy adults accustomed to drinking coffee,”

according to the PDR for Herbal Medicines. However, also listed were the side effects, hyperacidity, stomach irritation, diarrhea and reduced appetite? Doses exceeding 1.5 g (1500mg) additionally cause restlessness, irritability, sleeplessness, palpitations, dizziness, vomiting, and headache and can lead to arrhythmic tachycardia. Caffeine can also lead to dependency and withdrawal.

Taurine is found in almost every tissue of the human body. The highest levels are in the pineal gland and retina of the eye. Research on taurine has labeled it as an essential amino acid, a preventive medicine, and a vitamin-like molecule. “Taurine is used to treat alcoholism, heart problems, cystic fibrosis, high blood pressure, diabetes, and epilepsy,” according to the PDRHealth Web-site. Is the added taurine in energy drinks too much of a good thing? “It is a sulfur-containing small amino acid which is highly soluble in water. Chemically, it is amino ethane sulphonic acid and it is not toxic. It is found in our body, a normal adult human contains about 70 gm of Taurine. Humans are unable to synthesize more than minor quantities of taurine. Thereafter the demand must be met by an exogenous source. People who eat a non-vegetarian diet, receive considerable quantities in their diet, anything between 30-300 mg/day,” according to the Indian Journal of Pharmacology.

Guarana is a caffeine-containing herbal medicine that has been used as a stimulant, aphrodisiac, and appetite suppressant. The problem is that energy drinks already contain caffeine, adding another source of caffeine makes the dosage much higher than a consumer thinks they are getting. Taking large amounts of guarana (over 400 mg) or taking it for too long can lead to anxiety, diarrhea, headache, irritability, nausea, vomiting, heart problems, and seizures.

panax ginseng is another herbal medicine used for fatigue but excessive amounts can lead to overdose and “Ginseng Abuse Syndrome” characterized by edema, insomnia, hypertension and hypertonia. An average dose is one to two grams. Side effects of panax ginseng are lower blood pressure.

Both Guarana and Panax Ginseng have side effects and interact with many different medications and other herbs. In addition these herbs are contraindicated for consumers who have pre-existing conditions such as diabetes. Herbs should not be taken for granted simply because they are natural.

The labels are misleading. Energy drinks are marketed as dietary supplements. As defined by the Dietary Supplement Health and Education Act of 1994, a dietary supplement is a product that contains a “dietary ingredient” which can

include: vitamins, minerals, herbs or other botanicals, amino acids, and enzymes, to name a few. Dietary supplements are marketed in a special category under the general umbrella of food products. Dietary supplements are not considered drugs which mean that the FDA is not required to approve the products before they are marketed. It is up to the energy drink companies to self regulate in areas of safety and product representation. A company cannot make false claims on their labels, but manufacturers do not need to register their company or products with the FDA before producing or selling them, so how far can they go before they are caught?

“Currently, there are no FDA regulations that are specific to dietary supplements that establish a minimum standard of practice for manufacturing. The manufacturer is responsible for establishing its own manufacturing practice guidelines to ensure that the dietary supplements it produces are safe and contain the ingredients listed on the label,” according to the FDA Web site.

A few, but not all, carry the warning: “Not recommended for children, pregnant or nursing women, or those sensitive to caffeine.”

Energy drinks are simply soft drinks on steroids.