

What Am I Drinking?

INSTRUCTIONS: Examine the nutrition information panel on your energy drink and fill in the information below:

PRODUCT NAME:

CARBONATED WATER

SWEETENERS

SODIUM (salt)

EXOTIC INGREDIENTS

OTHER ADDITIVES

- **CARBONATED WATER**

Quantity – millilitres(ml)? _____

- **SWEETENERS**

What sweeteners have been used? (Refer: Information supplied below)

Name	Nutritive or Non-nutritive

How many grams of Sugar/Sucrose have been used? _____

1 teaspoon = 4 grams

How many teaspoons of Sugar/Sucrose? _____

- **ENERGY**

Per Serve	Per 100ml

- **SODIUM [SALT]**

How many milligrams (mg)? _____

1000 mg = 1 gram

Approximately how many grams of Sodium/Salt? _____

- **EXOTIC INGREDIENTS**

What exotic ingredients have been used? (Refer: Information supplied below)

Name	Amount (mg)

- **OTHER ADDITIVES**

List 3 other additives

--	--	--



Sweeteners

Nutritive

This group of sweeteners are called 'nutritive' because our body recognises them as a source of energy.

NOTE: natural sweeteners have no nutritional benefit other than providing energy.

Sucrose/Sugar: Derived from sugar cane or sugar beet. Crystalline Sucrose comes in four domestic forms

Raw – unbleached and minimally processed

White – bleached and processed

Castor Sugar – bleached and highly processed

Brown Sugar – White Sugar with added Molasses (boiled Sugar).

Sucrose/Sugar has developed a bad reputation that it does not deserve. It is unfortunate because, if you want to sweeten your food or drinks, Sugar - in its least unprocessed form (raw) - is actually the most natural and healthy choice.

Honey: It is the natural product of bee enzymes changing the structure of plant nectar from Sucrose to free Fructose and free Glucose (hydrolysis).

Corn Syrup: 40-90% Fructose. Significantly cheaper than Sugar and just as sweet. Does not crystallise when frozen so can be used in food products like soft drink, ice cream and a variety of frozen foods etc.

Maple Syrup: Derived from boiling down the sap from the Sugar Maple Tree. Genuine Maple Syrup is very expensive. There are many imitation food products that are just caramel flavoured Sugar syrup.

Golden Syrup: A thick, amber-coloured treacle. It is a by-product of the sugar cane or sugar beet refining process that used to be discarded. It is sometimes found in baking recipes and is delicious on pancakes.

Agave: Derived from the Agave succulent plant. The sweet, thick liquid is taken from the core of the plant and processed to form a syrup (or fermented to make Tequila). It tastes like caramel and makes a popular sweetener for cakes, cookies, energy drinks and teas. Agave Syrup delivers more energy than Sucrose. It contains traces of nutrition, but not enough to provide any significant benefit when used as an additive to drinks or food products.

Non-Nutritive

This group of sweeteners are called 'non-nutritive' because our body does not recognise them as a source of energy.

Stevia: Comes from the leaves of *Stevia rebaudiana*, a South American plant that has been used as a natural sweetener for hundreds of years. Stevia is 25-30 times sweeter than Sucrose but is not wholly recognised by the body as a source of energy.

Phenylalanine: Found naturally in the breast milk of mammals. It is made synthetically by genetically engineering the bacterium *Escherichia coli* (E. coli). It is used in food and drink products and sold as a nutritional supplement for its reputed analgesic (pain relief) and anti-depressant effects.

Aspartame (951): 200 times sweeter than Sugar and goes by various brand names including Equal®, NutraSweet® and AminoSweet®. Aspartame is a by-product of the synthesis of Phenylalanine and is commonly found in diet soft drinks, diet yoghurts and chewing gums. When our body metabolizes Aspartame, it breaks down into Methanol and Formaldehyde (used for preserving dead bodies) - both toxic substances. Health problems associated with Aspartame include headaches, anxiety, joint problems and insomnia. Artificial sweeteners containing Aspartame are usually found in **BLUE PACKAGING**.

Sucralose (955): Produced by adding Chlorine to Sucrose, which creates a new chemical that your body does not recognise as Sucrose. Sucralose is commonly branded as Splenda®. It can be up to 1000 times sweeter than Sugar and is often used in jams, jellies, sweet sauces and toppings. Over-consumption of food products containing Sucralose may cause cumulative health problems. Artificial sweeteners containing Sucralose are usually found in **YELLOW PACKAGING**.

Saccharin (954): An artificial sweetener with a history of over 100 years. Saccharin is commonly found in baking products, diet drinks and sweets. Artificial sweeteners containing Saccharin are usually found in **PINK PACKAGING**.



Exotic Ingredients

We have been using herbal extracts to sharpen awareness and manipulate mood for thousands of years. Energy drinks are not a new phenomenon; they are just a modern incarnation of the same ancient recipes that brought us the humble cup of tea.

Caffeine is the most widely used drug on the planet. A cup of coffee contains between 80-180mg of caffeine. The recommended maximum per day is 250mg. Most energy drinks contain between 70-200mg of caffeine. Caffeine raises the heart rate and blood pressure while dehydrating the body. Caffeine in small doses will not do you any harm; however there can be side effects from drinking too much including sleeplessness, heart palpitations, headaches, nausea and, most commonly, the 'jitters'.

Taurine is an organic acid that our body derives naturally from food – particularly seafood and meat. Our bodies use taurine to regulate heartbeat and muscle activity and help in the development and function of our retinas and central nervous system. Taurine has no stimulant effect and, because we get it from food, we don't need to supplement it with energy drinks.

Guarana is a stimulant derived from a South American plant. It might be called other things such as guaranine or mateine, but it is all the same thing. Guarana has a greater concentration of caffeine than coffee beans but has exactly the same stimulating properties and side effects. It is unnecessary for an energy drink to have both Caffeine and Guarana.

Vitamin B is a summary term for the B Group vitamins that are involved in the metabolism of every cell of the human body. They help maintain healthy brain and nervous system function and are involved in the formation of blood. We derive the B vitamins from digesting and metabolising food. It is less effective when taken orally as a supplement, so B vitamins in energy drinks deliver very little benefit.

Ginseng is classed as an adaptogenic herb i.e. it can regulate our metabolism to increase our ability to adapt to, and avoid damage from, environmental factors. Ginseng is known to increase energy and reduce fatigue and, some say, relieve stress and increase memory. Energy drinks usually only have a small amount of Ginseng – usually not enough to provide any significant benefit.

The **Ginkgo Biloba** tree (or just Ginkgo) is a living fossil! It is a unique and tenacious species that can survive inhospitable conditions. A famous example of the Ginkgo's resilience is the six trees growing in Hiroshima, Japan 1–2 km from the site of the 1945 atom bomb explosion. Though charred, they survived the blast and are still alive today. Products from the Ginkgo are believed to help with memory, concentration and circulation. Ginkgo can act as an anti-depressant and is reputed to help people with dementia. The amount in energy drinks is negligible and any benefit is overshadowed by excessive sugar. A cup of Ginkgo tea is a good alternative.

Antioxidants help to prevent cellular damage that can cause cancer and a variety of other diseases. They also help slow the aging process. The main antioxidants are Vitamin E, Beta-carotene and Vitamin C. The body cannot manufacture these micronutrients so they must be included in the diet. There are a huge variety of foods that contain antioxidants including nuts, whole grains, vegetable and fish oils, citrus fruit, eggs, milk and broccoli. The quantity in energy drinks is negligible; you will get significantly more antioxidants from eating an orange.

Acai Berry comes from Central and South America. Since 2004, Acai has been aggressively marketed as a miracle treatment for a variety of ailments including cancer. However these claims are not scientifically supported. Acai juice does contain antioxidants, protein and healthy omega fats, however these nutrients are not offered in sufficient quantities in energy drinks to deliver any measurable benefit.

Inositol is required for the formation of healthy cells – especially in the brain, bone marrow, eyes and intestines. Inositol also plays an important role in promoting the export of fat from the liver, and promotes healthy new hair growth. Inositol can be derived from both plant and animal sources. The body can manufacture it and food manufacturers can produce it in a laboratory. Although Inositol is often classified as a B group vitamin (B8) it is not actually a vitamin. Adverse interactions can occur when combining Inositol with caffeine, alcohol and certain antibiotics.

