

Guarana Benefits for Memory, Energy, and Overall Health

By Ross Phan, PharmD, BCACP, BCGP, BCPS | Updated on February 11, 2025

✓ Medically reviewed by Elizabeth Barnes, RDN

Guarana (*Paullinia cupana*) is a plant extract said to help increase energy, improve memory, and defend the body against disease. It also contains caffeine, which makes it a popular ingredient in energy drinks.

Caffeine is well-known for stimulating your central nervous system, waking you up, and helping you focus. Guarana also contains several beneficial plant-based compounds that may protect your body from harmful free radicals (unstable atoms that damage cells) and reduce some side effects caused by cancer treatments.

Supplement Facts

- **Active Ingredient(s):** Caffeine, theophylline, theobromine
- **Alternate Names(s):** Guarana, *Paullinia cupana*, *P. cupana*, Brazillian cocoa, cacao Brésilien, guarana seed extract, guaranine, zoom
- **Legal Status:** Food, substances added to food, and dietary supplement
- **Suggested Dose:** May vary based on the dosage form and medical condition
- **Safety Considerations:** Possible side effects, interactions, and special considerations for children, in pregnancy, and while breastfeeding

Antioxidants

A review article analyzed a small clinical trial in which healthy participants took 3 grams (g) of guarana daily. This short-term study's results suggested that guarana lessened the damage from free radicals (unstable atoms made during normal cell metabolism). As a result, guarana may have some antioxidant effects.

In general, antioxidants attack free radicals. Free radicals can damage components and systems within the body, including the hereditary material DNA.

Since this was a small and short-term study, further extensive research with more significant and longer-term clinical trials is necessary to assess guarana's effects better.

Energy Boost

Guarana contains about four times as much caffeine as coffee, which makes it a popular ingredient in energy drinks. The beverage industry in the United States uses approximately 70% of the guarana seeds produced annually.

The energy boost you get when you consume an energy drink containing guarana comes from its high caffeine content. Consuming large amounts of caffeine in any form can lead to adverse effects such as:

- Shaking
- Dizziness
- Heart palpitations
- Trouble sleeping

There is also some evidence that overconsumption of energy drinks can cause more serious problems such as:

- Electrolyte imbalance
- Heart problems, including abnormal heart rhythm and heart attack

Guarana's Sexual Benefits

Guarana is often included in products said to enhance sexual function or improve libido, however, there is no scientific evidence to suggest that it is effective for this purpose. More research is needed before scientists will know if there's any validity to these claims.

Memory and Brain Function

A review article showed that guarana helped with memory, attention, alertness, and reaction time. While the results were positive, some studies combined guarana with vitamins, minerals, other dietary supplements, and exercise.

Another review article found that guarana might help improve response time during cognitive tasks without impacting accuracy, however, the improvement was small and

researchers were unsure if the effect was related to the caffeine content of guarana or other plant compounds.

For these reasons, it might be challenging to quantify guarana's effects. Future high-quality clinical trials should study more standardized guarana products and dosages.

Cancer Protection

Some studies have found that certain compounds found in guarana such as polyphenols and caffeine may help reduce cancer risk and inhibit the growth of cancer cells. In laboratory studies and animal studies, the extract has been found to have antitumor and anticarcinogenic effects.

Because some of these effects may be related to the caffeine found in guarana, the anticancer benefits may not be specific to guarana itself but may also be present in caffeine obtained from other sources.

Some clinical trials have found that guarana may also help relieve some of the side effects of cancer-targeted treatment.

Although promising, more clinical trials are warranted, as guarana seemed to have positive results in people with only certain types of cancer.

Heart Health

One study in a review article observed the effects of drinking guarana at least twice weekly in older adults.

Per the results of the study, consuming guarana was associated with fewer side effects and decreased disease severity as a result of preexisting metabolic syndrome (a group of medical conditions that increases your risk of heart disease).

While the results are promising, additional research with high-quality clinical trials is still needed to quantify further to what extent guarana lessens the effects of metabolic syndrome.

Weight Loss

Animal studies suggest that guarana seed powder may help with weight loss.

Researchers found that supplementation with guarana seed powder prevented weight

gain, insulin resistance, and the dysregulation of adipokines, proteins that are important for regulating metabolism.

The results of animal studies don't always translate well to human beings, however, and more research is needed to confirm that guarana seed powder has the same effect on human beings.

Eye and Vision Health

Age-related macular degeneration is an eye condition that affects people as they get older. It affects the central part of the retina, the light-sensitive tissue located at the back of the eye. Age-related macular degeneration can lead to irreversible vision loss.

One study found that guarana extract could help reduce retinal cell damage caused by oxidative stress. The study also found that guarana consumption seemed to be correlated with self-reported good vision.

Side Effects and Precautions

As with many medications and natural products, guarana can have side effects.

Common Side Effects

Common side effects of guarana include:

- Tachycardia (rapid heart rate)
- Sleeping problems
- Stomach upset

Severe Side Effects

Severe side effects are possible, especially with large doses of guarana.

Examples of severe side effects include:

- **Serious allergic reaction:** A severe allergic reaction is a profound side effect possible with any medication or natural product. If you're having a severe allergic reaction, your symptoms may include breathing difficulties, itchiness, and rash.
- **Abnormal heart rhythm and rate:** Large amounts of guarana may look similar to a caffeine overdose with symptoms of heart arrhythmia (abnormal heart rhythm and rate).

If you're having a severe allergic reaction or if any of your symptoms feel life-threatening, call **911** and get medical help right away.

Supplement use should be individualized and vetted by a healthcare professional, such as a registered dietitian, pharmacist, or healthcare provider. No supplement is intended to treat, cure, or prevent disease.

Precautions

A healthcare provider may advise against guarana use for certain people:

- People with health conditions that are adversely affected by caffeine consumption, such as a heart condition or a seizure disorder.
- People with liver problems should also avoid guarana since it contains plant substances that might have a role in liver toxicity. While there are no reports of liver injury with guarana, long-term guarana use at high doses isn't recommended in people with liver problems.
- Children and people who are pregnant or breastfeeding should avoid guarana because of its high caffeine content.
- Avoid guarana if you have a known allergy to it or other ingredients or parts of the supplement. If you need clarification on whether it's safe, ask a registered dietitian, pharmacist, or healthcare provider for more information.

Toxicity

More information about the safety, toxicity, and overdose of guarana in humans is needed. However, guarana toxicity likely resembles that of a caffeine overdose.

Signs of a potential overdose include:

- Heart arrhythmia
- Tachycardia

Per a systematic review, side effects might be less of an issue with maximum daily guarana doses of between 500 and 1,000 mg.

Interactions

Guarana might interact with the following medications:

- **Amiodarone:** Amiodarone is a medication for heart arrhythmia. But guarana may reduce amiodarone levels, decreasing amiodarone's effectiveness. For this

reason, healthcare providers may recommend against guarana if you take amiodarone.

- **Anti-seizure medications:** Guarana might work against anti-seizure medications. For example, guarana may lower Lamictal (lamotrigine) levels and increase your risk of seizures. Healthcare providers may recommend avoiding guarana if you take lamotrigine for seizures.

Sources of Guarana

Guarana is naturally available as a native Amazonian *Paullinia cupana* (*P. cupana*) plant from the soapberry family called *Sapindaceae*. The U.S. Department of Agriculture (USDA) generally categorizes guarana or *P. cupana* as food.

In the United States, guarana is a common ingredient in energy drinks. This tends to be the most popular way to consume it.

Guarana is also available as a powder, which can be used to prepare tea. It's sometimes also used as a flavoring agent. In fact, the FDA placed guarana on its approved list of substances added to food.

Guarana supplements are available in several different forms, with capsules being the most common.

Other supplement forms include:

- Food bars
- Gummies or chewables
- Liquid
- Lozenge
- Powder
- Tablets
- Wafers

Vegetarian and vegan options might also be available. You may also see guarana in combination with other ingredients.

While some studies on guarana in humans exist, more research with high-quality clinical trials is still necessary. For this reason, there are no guidelines on the appropriate dosage to use of guarana for any condition.

The specific dose may vary based on the dosage form and any medical conditions you may have. To safely take natural products like guarana, inform your healthcare

providers and pharmacists about any medication changes. This includes over-the-counter (OTC), herbal, natural medicines, and supplements.

In the United States, the Food and Drug Administration (FDA) does not regulate dietary supplements the way it regulates prescription medications. As a result, some supplement products may not contain the ingredients listed on the label.

When choosing a supplement, look for products independently tested or certified by organizations such as the National Sanitation Foundation (NSF), United States Pharmacopeia (USP), or ConsumerLab. For personalized guidance, consult your healthcare provider, registered dietitian nutritionist (RD or RDN), or pharmacist.

Summary

Guarana is naturally available as a native Amazonian plant from the soapberry family. It may have antioxidant effects, brain health support, heart health support, and relief from the side effects of cancer or its treatments. But like any medication or natural product, side effects and interactions are possible.

Because no conclusions have been made regarding the efficacy and safety of guarana, it should not be taken in place of getting an accurate diagnosis and treatment for any symptoms or conditions you may have. Before using guarana, involve a registered dietitian, pharmacist, or healthcare provider to help you safely achieve your health goals.

18 Sources

Verywell Health uses only high-quality sources, including peer-reviewed studies, to support the facts within our articles. Read our editorial process to learn more about how we fact-check and keep our content accurate, reliable, and trustworthy.

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