

DIET AND NUTRITION

The Health Benefits of Green Tea

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Green tea has a long history in China, where it has been enjoyed as a richly flavored beverage and used for medicinal purposes for thousands of years. ^[1] Today, green tea has gained popularity and is consumed worldwide thanks to its many acclaimed health benefits.

Green tea is made from the leaves of the *Camellia sinensis* 🗣️ plant. Though all varieties of tea come from the same plant, green tea is considered the healthiest because of how it is processed. ^[2]

This article covers the known and potential health benefits of green tea, possible side effects, and what to look for when buying green tea for consumption or use as a dietary supplement.



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What Are the Benefits of Green Tea?

For green tea, young leaves of the plant are harvested, withered, steamed, or pan-fried and then dried.^[2] This process helps prevent fermentation and preserves many of the beneficial compounds found in tea leaves.

Green tea has a high concentration of [antioxidants](#), which is responsible for the beverage's health benefits. Tea is rich in [polyphenols](#)—natural compounds that reduce inflammation, protect against oxidative stress, and prevent cell damage.^[3]

Green tea contains high levels of natural phenols and antioxidants called catechins (a family of chemicals). Epigallocatechin-3-gallate (EGCG) is the most abundant catechin in green tea. EGCG has been shown to improve cardiovascular health, enhance cognitive function, promote weight loss, regulate blood sugar levels, support digestive health, and protect against certain types of [cancer](#).^[4]

Below are the health benefits of green tea, according to research.

Drinking green tea might protect against [cardiovascular diseases](#) and lower the risk of [heart attack](#) and [stroke](#). A review of 31 research studies found that green tea is associated with significant reductions in total cholesterol and [low-density lipoprotein \(LDL\)](#), or "bad" cholesterol. ^[5]

Anti-inflammatory compounds in green tea, like EGCG, have proved to relax blood vessels and reduce [vascular inflammation](#) (inflammation of the blood vessels). ^[6]

The optimal amount of daily green tea intake for heart health benefits is unknown. Still, evidence suggests that drinking three to five cups of green tea daily, alongside a healthy diet, is associated with a 41% lower risk of dying from cardiovascular disease. ^[7]

Boosts Brain Health

Green tea benefits brain health by: ^[8]

Improving mood

Reducing stress

Enhancing cognitive function

Protecting against [age-related cognitive decline](#) and [neurodegenerative diseases](#).

Green tea contains [caffeine](#), a stimulant that boosts mood, energy levels, reaction time, and memory. ^[9] Along with caffeine, green tea contains [L-theanine](#), an amino acid that positively affects mood, lowers stress, and boosts dopamine and serotonin production. ^[10] Caffeine and L-theanine work together to improve mood, reaction time, attention, and memory. ^[8]

Research shows that the catechins in green tea, such as EGCG, fight free radicals, protect neurons (brain cells) from damage, and delay or prevent the death of these cells. Catechins may protect against neurodegenerative diseases such as [Alzheimer's disease](#), [dementia](#), and [Parkinson's disease](#). ^[11]

One study found that drinking green tea may lower the risk of age-related cognitive decline by 64% after adjusting for risk factors that can impact cognitive function, like age, lifestyle behaviors, and underlying disease. ^[12]

Several studies investigating the connection between green tea consumption and weight loss have found that the caffeine and catechins in green tea may speed up metabolism and help burn fat. ^[13]

One study exploring the effects of green tea extract (GTE) on weight loss found that 12 weeks of GTE supplementation led to significant weight loss and lower [body mass index \(BMI\)](#) for study participants. ^[14]

Regulates Blood Sugar Levels

[Type 2 diabetes](#) is associated with elevated blood sugar levels, which occurs when the body doesn't produce enough insulin or use it correctly. Studies show that green tea may protect against type 2 diabetes by regulating blood sugar levels and improving [insulin resistance](#). ^[15]

A review and analysis of 19 studies involving over 1 million adults across eight countries found that drinking at least four cups of black, green, or oolong tea per day over 10 years may contribute to a reduced risk of type 2 diabetes. The review and analysis researchers noted that the study's data was subjective and potentially skewed by additional lifestyle factors. ^[16]

A study on Chinese adults showed that daily green tea consumption is associated with a lower risk of type 2 diabetes and a reduced risk of diabetes-related health complications and mortality in people with diabetes. ^[17]

Protects Against Certain Types of Cancer

Green tea is rich in polyphenols, which help fight free radicals and may help protect cells and [DNA](#) from damage. ^[18] The antioxidant properties in green tea also play a role in cancer prevention.

Oxidative damage is linked to chronic inflammation, which can lead to cancer development. ^[19] Research shows that antioxidants in green tea may help lower the risk of certain types of cancers, including:

[Breast cancer](#): Drinking green tea may reduce the risk of breast cancer by 15%. ^[20]

Oral cancer: Research suggests long-term tea consumption is associated with a lower risk of developing oral cancer. ^[22]

Remember that green tea alone does not reduce your risk of these cancers. Maintaining healthy lifestyle behaviors is essential to improving your overall health.

What Are the Side Effects of Green Tea?

It is OK to drink green tea every day. In fact, drinking up to eight cups of green tea per day is considered safe. Drinking more than the recommended amount may cause side effects associated with too much [caffeine](#), such as: ^[23]

Jitteriness/restlessness

[Insomnia](#)

[Headache](#)

Dizziness

[Rapid heart rate](#)

[Dehydration](#)

[Frequent urination](#)

Talk to your healthcare provider before consuming green tea or green tea extracts if you: ^[24]

Are pregnant. [Pregnant](#) people can safely consume up to six cups of green tea daily. However, green tea may increase the risk of congenital disorders in infants whose pregnant parent has a [folic acid deficiency](#).

Have [liver disease](#). There are some reports that green tea can cause liver injury. Signs of liver injury can include abdominal pain, dark-colored urine, and jaundice.

Take [beta-blockers](#). At high doses, green tea may reduce blood levels and inhibit the effectiveness of a prescription drug called Corgard (nadolol)—a beta-blocker prescribed to treat high blood pressure and some heart diseases.

Selection, Preparation, and Storage

Select a high-quality tea from a reputable company. Look for information on the product label about when and how the tea was processed and packaged. Visiting a tea shop and speaking to the staff is an excellent place to start if you're unsure which type would be best for you.

Green tea is available in bags, sachets, loose-leaf, or a powder form known as matcha. Tea bags and sachets come with a standard amount of leaves, and loose-leaf is typically sold in tin canisters or resealable sacks. Some people may purchase green tea in bags or sachets for ease of use. You can choose how many leaves you use with loose-leaf green tea based on your flavor preferences.

Preparation

You can enjoy green tea as an iced or hot beverage. It is typically prepared by brewing the tea in hot water at 90 degrees Celsius or 194 degrees Fahrenheit (just below boiling). ^[25]

You can steep the tea for as long as you'd like; the longer you steep it, the stronger the flavor. For a lighter-tasting tea, two minutes should be sufficient. For a more robust flavor, steep it for three to five minutes.

Adding milk, sugar, or honey may enhance the flavor of green tea; however, these additions may alter the tea's nutritional content. Some studies suggest that adding milk to green tea may reduce its antioxidant benefits. ^[26]

Storage

When storing green tea, you'll want to avoid air, heat, light, moisture, and odor. Store your tea in a sealed, airtight container in a dark cupboard at room temperature. Some research suggests that storing tea at a low temperature may help prolong its shelf life and protect it from oxidation. ^[27]

[28]

Carefully read the ingredients label on the product packaging, which should list all ingredients, amounts of each, and nutrients in the supplement.

Check the label to look for a Certificate of Analysis (COA), indicating that an accredited third-party lab has tested it, it does not contain harmful ingredients, and the nutrition label is accurate.

Summary

Green tea provides several science-backed health benefits. The antioxidants in green tea can help protect your heart, improve brain health, promote weight loss, regulate blood sugar, and protect against certain types of cancer. Green tea is generally safe in moderation, and most adverse side effects are related to its caffeine content. Pregnant or breastfeeding people, people with liver disease, or those taking beta-blockers should consult their healthcare provider before adding green tea to their daily routines.

A Word From Verywell

The benefits of green tea can impact various areas of your health. Though regularly consuming brewed green tea or green tea supplements can contribute to your health, remember that green tea alone does not reduce your risks. Maintaining healthy lifestyle behaviors is essential to improving your overall health.

28 Sources

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