# Benefits of Coffee and Tea 

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## STORY AT-A-GLANCE

> Tea, particularly green tea, has been linked with a reduced risk of stroke, diabetes and depression, and improved blood pressure, abdominal obesity and glucose levels
> Coffee consumption is associated with reduced risk of premature death and cardiovascular death, heart disease, cancer, nonalcoholic fatty liver disease, cirrhosis and diabetes
> Coffee should be organic and shade-grown; drink it black or with added coconut oil or MCT oil
> Tea should be organic and grown in a nonpolluted environment to avoid contamination with heavy metals or fluoride; drink it without milk, with lemon added if you like
> Pregnant women should not drink coffee or tea due to its caffeine content, which has been linked to low birth weight, heart problems and behavioral problems later in life

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Just as you can make or break your health via the foods you choose at each meal, you can support or sabotage your well-being one beverage choice at a time. At one end of the spectrum would be soda - one of the absolute worst choices to drink. At the other, pure water - arguably the best for quenching your thirst and supporting optimal health.

For those times when you're looking for something to savor and sip, an excellent alternative is coffee or tea, both of which have earned a solid spot among healthy
beverages, with some caveats, however.

After water, coffee and tea are the most commonly consumed beverages worldwide, and they're also top sources of both caffeine and antioxidant polyphenols for Americans. Tea, particularly green tea, has been linked with a reduced risk of stroke, diabetes and depression, and improved blood pressure, abdominal obesity and glucose levels, while coffee consumption is associated with reduced risk of premature death and cardiovascular death, for starters. ${ }^{1}$
"Coffee is a complex beverage containing hundreds of biologically active compounds," researchers wrote in the Journal of the American College of Cardiology, ${ }^{2}$ and this is why it, and tea, have such far-reaching health potential. From your heart to your vision to your brain, there are many reasons to enjoy a cup (or a few) of coffee or tea daily - organic, preferred.

## Health Benefits of Coffee From Your Heart to Your Brain

Research presented at the American Heart Association's Scientific Sessions 2017 found that compared to non-coffee drinkers, coffee drinkers had a 7\% lower risk of heart failure and an $8 \%$ lower risk of stroke for each additional cup of coffee consumed per week. ${ }^{3}$ Separate research linked coffee consumption to a lowered risk of heart disease, cancer, nonalcoholic fatty liver disease, cirrhosis and diabetes. ${ }^{4}$

In the latter study, the largest risk reduction came from drinking three to four cups daily, but they suggested drinking more would likely benefit health, not harm it.

As for your brain health, increased coffee (and tea) consumption was linked to a lower risk of glioma brain tumor, such that people in the top category of coffee consumption were $91 \%$ less likely to have glioma compared with those in the bottom category. ${ }^{5}$

It may help your brain function as well, with research showing that drinking one to two cups of coffee daily may lower your risk of Alzheimer's disease and other forms of dementia, cognitive decline and cognitive impairment compared to drinking less than one cup. ${ }^{6}$

Drinking coffee may even enhance long-term memory consolidation7 and, if you drink the caffeinated variety, improve attention and alertness while decreasing your risk of depression. ${ }^{8}$ Caffeine can be a double-edged sword, with excess consumption causing adverse effects, and everyone's tolerance to caffeine is unique.

However, most people naturally adjust their coffee consumption to avoid the jittery feeling that comes from too much caffeine. Researchers wrote in the Archives of Internal Medicine: ${ }^{9}$
> "At low to moderate doses, caffeine has well-known psychostimulant effects such as improved psychomotor performance, increased vigilance, elevated arousal (lesser somnolence and greater activation), and increased sensations of well-being and energy.

> The known effects of caffeine are dose-dependent, but typically biphasic, i.e. low doses are perceived as pleasant and stimulating whereas a reverse effect is observed with higher doses. Most individuals seem to adapt their caffeine consumption to their own tolerance, so that the habitual is within the range between reinforcing and aversive effects."

## Tea Offers Many Health Benefits, Too

Many of the health benefits offered for coffee consumption can also be gained by drinking tea, so a case can be made for adding either (or both) to your daily diet. For instance, drinking green tea is associated with reduced mortality due to all causes, as well as mortality due to heart disease. Research also shows holistic benefits to green tea consumption, including lower blood pressure, oxidative stress and chronic inflammation. ${ }^{10}$

In terms of heart health, green tea improves both blood flow and the ability of your arteries to relax, with research suggesting a few cups of green tea each day may help prevent heart disease. ${ }^{11}$ One of green tea's claims to fame is the catechin epigallocatechin-3-gallate (EGCG).

Studies show EGCG can be helpful for the prevention of arteriosclerosis, cerebral thrombus, heart attack and stroke - in part due to its ability to relax your arteries and improve blood flow. ${ }^{12}$ In addition, tea may also benefit:

- Type 2 diabetes - One study found people who consume six or more cups of green tea daily had a $33 \%$ lower risk of developing Type 2 diabetes than those who consumed less than one cup per week. ${ }^{13}$
- Weight loss - There is some evidence that long-term consumption of green tea catechins is beneficial for burning fat and may work with other chemicals to increase levels of fat oxidation and thermogenesis.
- Bone health - Green tea polyphenols combined with a form of vitamin D called alfacalcidol could boost bone structure and strength, according to a study in mice. The mixture may reverse damage to bones caused by lipopolysaccharide (LPS)induced chronic inflammation, which could in turn reduce the risk of osteoporosis. ${ }^{14}$
- Vision health - Catechins in green tea could help protect you against glaucoma and other eye diseases, as research found that the compounds travel from your digestive system into the tissues of your eyes. During the study, the catechins found in green tea were absorbed into various parts of the eyes anywhere from 30 minutes to 12 hours after rats were given tea. ${ }^{15}$
- Cancer - Green tea components have been shown to downregulate the expression of proteins involved in inflammation, cell signalization, cell motility and angiogenesis, while an association between green tea intake and decreased risk of cancers (including ovarian and breast ${ }^{16}$ ) has been reported. ${ }^{17}$

Previous research has shown that green tea polyphenols act on molecular pathways to shut down the production and spread of tumor cells. ${ }^{18}$ They also discourage the growth of the blood vessels that feed the tumors. EGCG even acts as an antiangiogenic and antitumor agent, and helps modulate tumor cell response to chemotherapy. ${ }^{19}$

## Different Types of Tea May Offer Different Benefits

Much of the fanfare surrounding tea goes to green tea, but there are many different varieties to consider. Black and green tea (as well as oolong, dark and white teas) come from the same plant, an evergreen called Camellia sinensis. It is the processing method and degree of oxidization (exposure to oxygen) that create the different tea types. While black tea is oxidized, green tea is not oxidized at all after the leaves are harvested.

This minimal oxidation may help to keep the beneficial antioxidants in green tea intact, although both green and black teas have beneficial effects. Generally speaking, the less the tea is oxidized, the lower its caffeine content and higher its antioxidants. White tea is actually the least processed of all teas, while oolong is semi-oxidized, placing it between green and black teas in terms of caffeine and antioxidant levels. ${ }^{20}$

There are also herbal teas, which vary quite dramatically in flavor and health effects (herbal teas are actually not considered "true" teas, as they do not come from Camellia sinensis, but they can be beneficial and enjoyable nonetheless). What types of benefits do different types of tea offer?

- Green and black tea for your gut - Both green and black tea may alter gut microbes in a way that's beneficial for preventing weight gain and obesity. ${ }^{21}$
- Oolong tea for weight management and heart health - The polyphenols in oolong tea help control fat metabolism in your body by activating certain enzymes. A 2001 study published in the Journal of Nutrition found that participants who ingested either full-strength or diluted oolong tea burned 2.9 to $3.4 \%$ more total calories daily. ${ }^{22}$
- Hibiscus tea for overall health - High in vitamin C, minerals and antioxidants, studies suggest hibiscus tea may improve blood pressure, help prevent metabolic syndrome, protect your liver and even provide anticancer effects. ${ }^{23}$
- Matcha for an antioxidant boost - Matcha is a type of green tea, but unlike regular green tea, in which you steep and discard the leaves, when you drink matcha you consume the entire leaves, which are ground micron fine. Studies indicate that 1
cup of matcha may provide the antioxidant equivalent of 3 cups of regular green tea and as much as 137 times more antioxidants than low-grade green tea. ${ }^{24}$


## Coffee and Tea Caveats: Choose Organic and Ditch the Dairy

The health potential of your coffee and tea depends on several factors, beginning with quality. Coffee, which is a heavily pesticide-sprayed crop, should always be organic, as well as shade-grown. Coffee is a shade-loving plant, but growers often strip forests to make growing and harvesting easier.

This destroys the ecological habitat of many natural pest deterrents, such as birds and lizards, while the pests flourish, resulting in additional pesticide use in nonshade-grown varieties.

It's equally important to choose organic tea, when available, as well as choose varieties grown in nonpolluted areas, as tea plants readily absorb lead and fluoride from the soil. Selecting organic will help you avoid pesticides, while choosing tea grown in a pristine environment will ensure that the least amount of fluoride, heavy metals and other toxins from soil and water possible leaches into the leaves. A clean growing environment is essential to producing a pure, high-quality tea.

You'll also want to avoid adding health-busting additives like sugar to your coffee or tea. Even milk is best avoided, as the proteins in milk may bind to and neutralize the antioxidants in tea, such that its health benefits are significantly reduced. For instance, one study found, "Milk counteracts the favorable health effects of tea on vascular function." ${ }^{25}$

Similar effects have been noted in coffee, with one study revealing that the antioxidant capacity of coffee was "significantly decreased by milk addition."26

Further, while most people can safely consume coffee and tea, if you're pregnant, I believe you should avoid both due to the caffeine. Not only has coffee consumption during pregnancy been linked to low birth weight babies, ${ }^{27}$ but also to heart problems in a mouse study ${ }^{28}$ and to behavioral disorders in later life, if the mother consumes
caffeine at 15 weeks gestation, a key point when the fetal brain seems most susceptible to caffeine exposure. ${ }^{29}$

## Tricks to Boost the Health Benefits of Your Coffee or Tea

All you need to do to enjoy the health benefits of coffee and tea is slowly sip and savor your organic unsweetened brew. However, if you want to kick the benefits up a notch higher, there are a couple of tricks to do so. For tea, add a squeeze of fresh lemon juice, which may help to stabilize its beneficial catechins so you can absorb more of them. ${ }^{30}$

For coffee, adding in coconut oil or medium-chain triglyceride (MCT) oil may help you to burn fat and improve your mitochondrial function. Start with a small amount, such as 1 teaspoon of MCT oil, working your way up to 1 or 2 tablespoons, to avoid gastrointestinal side effects. You can also blend in a pat of raw grass fed butter. This recipe is a favorite among those following a ketogenic diet.

In fact, many consider MCTs "the ultimate ketogenic fat," as it allows you to eat slightly more net carbs while still staying in nutritional ketosis. Without MCTs, you'd have to cut carbs more drastically in order to maintain ketosis, and hot coffee is an ideal carrier for MCT oil.

Ultimately, whether you prefer your coffee black or with MCT oil, or your tea with or without lemon, these beverages represent a simple way to increase your intake of antioxidants and other disease-fighting compounds daily.

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