12 Medications That Can Negatively Interact With Green Tea

By Allison Forsyth • Updated Oct 13, 2023 • Reviewed by Nam Tran, PharmD

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Some compounds in green tea can interact with prescription medications.
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In This Article

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Green tea has many nutritional benefits, so it may come as a surprise when your doctor tells you to avoid drinking it with your medications or before surgery.

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Turns out, some compounds in green tea can negatively interact with some medications. And some medications can increase the effects of the caffeine in green tea.

Here, learn about the ingredients in green tea, who should not drink green tea and how the drink interacts with certain drugs and supplements.

> ⚠ **Warning**
>
> To be safe, always talk to your doctor about whether you can drink green tea with any medication. They can let you know about any possible side effects and drug interactions before starting the medication.

First, What Are the Ingredients in Green Tea?

Green tea comes from the leaves of the Camellia sinensis plant. It's sold in many forms, including liquid extract, capsules, tea bags and powder. The main active ingredients in green tea are polyphenols — i.e., natural compounds found in plants — including epigallocatechin gallate, theaflavins and thearubigins, per the University of Rochester Medical Center (URMC).

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Green tea also has tannins and catechins, which are polyphenols that have antioxidant properties, per the URMC. Antioxidants are substances found in fruits and vegetables that help protect your cells from damage by free radicals, which could contribute to heart disease, cancer and many other diseases, per the Mayo Clinic. (In other words, green tea is a great drink for longevity.)

Another main ingredient of green tea is caffeine. One 8-ounce cup has anywhere from 20 to 50 milligrams of caffeine, depending on the brand, according to the Center for Science in the Public Interest.

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Medications That Can Interact With Green Tea

There are a few kinds of medication that can negatively interact with the polyphenols and caffeine in green tea. While some only cause a mild interaction, others may cause serious health complications, so talk to your doctor before drinking green tea with any new prescription.

Some medications that can interact with green tea include the following:

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1. Blood Thinners

People who take anticoagulant medications (aka, blood thinners) like warfarin should not eat drink green tea, per Mount Sinai. Green tea contains vitamin K, which can make the medication ineffective, and it has other compounds that might increase the blood-thinning effect of these meds, which can be dangerous.

2. Statins

Statins are a group of medicines that help reduce low-density lipoprotein (LDL, or "bad" cholesterol) in your blood, per the NHS.

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Drinking green tea can possibly reduce the absorption of some statins, like Lipitor (atorvastatin), according to a June 2020 study in the *European Journal of Drug Metabolism and Pharmacokinetics*.

Green tea can affect other cardiovascular drugs, too. For example, an April 2018 review in the *Jounal of Food and Drug Analysis* found that EGCG (a component of green tea) decreased the concentration of the drug rosuvastatin in one study's volunteers. It also found green tea extract increased the concentration of the drug sildenafil, and increased the levels of the drug tacroliumus (in a kidney transplant patient).

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That said, more studies surrounding green tea's effect on statins are needed to further confirm these findings.

3. Aspirin

Both aspirin and certain compounds in green tea can prevent your blood from clotting, and together, they may increase your risk of bleeding, according to Mount Sinai.

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4. Acetaminophen

Green tea, especially caffeinated green tea, may interact with a number of medications, including acetaminophen (Tylenol), per Mount Sinai.

When taken in large amounts or with alcohol, acetaminophen may cause liver damage, per the FDA. Similarly, some preclinical data suggests that the ingredient catechin in green tea extract may also contribute to hepatoxicity (or medication-induced liver damage), per the National Library of Medicine. But, more research is needed to confirm this connection.

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Another medication that can similarly have a negative interaction with caffeinated green tea is methotrexate — for rheumatoid arthritis, per Mount Sinai. Talk to your doctor before drinking caffeinated beverages while taking these medications.

5. Birth Control Pills

It may come as a surprise that green tea interacts with birth control, but it can. And it's all because of green tea's caffeine content.

Turns out, oral contraceptives can actually prolong the amount of time that caffeine stays in your body, which can increase its stimulating effects, per Mount Sinai.

So, you may not need to avoid green tea completely while taking birth control, but you might want to limit how much you drink and pay attention to when you drink it (more on that in a minute).

6. Phenylpropanolamine

This is an ingredient that was once used in cold medications and certain weight-loss products, but is now considered "not generally recognized as safe and effective" by the FDA, for its small chances of causing hemorrhagic stroke.

When combined with the caffeine of green tea, phenylpropanolamine can cause a severe spike in blood pressure and mania in some people, per Mount Sinai.

Most drugs that used to include phenylpropanolamine have been reformulated without it, though, per Mount Sinai. Still, it's worth checking the label of your cold meds or any weight-loss supplements you're using, just in case.

7. Certain Mental Health Medications

Green tea can reduce the blood levels of lithium in those who take the medication for mania or bipolar disorder. And if you stop drinking green tea abruptly while on lithium, it can cause your lithium levels to spike, per Oregon State University's Linus Pauling Institute.

The caffeine in green tea can also reduce the sedative effects of certain benzodiazepines to treat anxiety, like Valium and Ativan, per Mount Sinai.

When taken with green tea, MAOIs (monoamine oxidase inhibitors) for depression can cause an abnormal spike in blood pressure, leading to a "hypertensive crisis," per Mount Sinai. Some of these medications include Marplan and Nardil.

And because green tea acts as a mild stimulant, you shouldn't drink it alongside other stimulants — like Adderall for ADHD, for example, per the URMC.

8. Weight-Loss Drugs

Ephedra (aka, ephedrine) is an ingredient that was once often found in weight-loss supplements. However, the FDA prohibited the sale of dietary supplements that have ephedra in 2004, because it presents an unreasonable risk of illness, per the National Institutes of Health. (There are still forms of it sold outside of the U.S., per Mount Sinai.)

The combination of ephedra and caffeine can increase your risk of serious side effects like high blood pressure or irregular heartbeat, per Mount Sinai. If you just so happen to take a weight-loss product that has ephedra, taking it with caffeine (like green tea) can cause agitation, tremors and unhealthy weight loss, per Mount Sinai.

And like the URMC states, green tea is a stimulant and shouldn't be taken alongside other stimulants, which can sometimes include the ingredients in weight-loss drugs.

9. Certain Antibiotics

Green tea may make a certain class of antibiotics called quinolone antibiotics (which treat a variety of bacterial infections) more effective and increase the risk of side effects while taking them, per Mount Sinai. Always talk to your doctor before taking antibiotics with caffeine, to make sure there are no interactions.

Some examples of these types of antibiotics include the following, per Mount Sinai:

- Ciprofloxacin (Cipro)
- Enoxacin (Penetrex)
- Grepafloxacin (Raxar)
- Norfloxacin (Chibroxin, Noroxin)
- Sparfloxacin (Zagam)
- Trovafloxacin (Trovan)

10. Beta Blockers and ACE Inhibitors

The caffeine in green tea may increase blood pressure in people who take beta blockers for high blood pressure or heart disease, per Mount Sinai. Some of these medications include propranolol and metoprolol.

A small March 2021 study in *Clinical and Translational Science* also found that drinking green tea could reduce the absorption and effectiveness of the ACE inhibitor lisinopril (which is prescribed to reduce blood pressure).

11. Iron and Folic Acid

Talk to your doctor if you take iron supplements and want to drink green tea. Green tea can affect the way iron is absorbed in your body, per the Memorial Sloan Kettering Cancer Center. The flavonoids in tea can bind to nonheme iron, keeping it from absorbing in your intestines, per Oregon State University's Linus Pauling Institute.

Likewise, caffeine can also reduce the absorption of folic acid and may reduce your folic acid levels, especially in people who are pregnant, according to a small October 2018 study in the *Journal of Epidemiology*.

12. Certain Herbs

While there isn't much information available online, there is some evidence to suggest that drinking caffeine while taking bitter orange extract can increase blood pressure and heart rate, per the National Center for Complementary and Integrative Health.

Talk to your doctor about any herbs or natural supplements you are taking. They can let you know whether you can drink green tea while using these substances.

Does Green Tea Interact With Metformin?

There is no reliable evidence to suggest that metformin (a common diabetes medication) negatively interacts with the caffeine from green tea.

That said, drinking tea has been associated with a reduced risk of developing type 2 diabetes in large prospective cohort studies. But more research is needed to understand this possible association, per Oregon State University's Linus Pauling Institute.

And keep in mind that while some people with diabetes can drink caffeine without it affecting their blood sugar, others may notice a spike or dip after drinking it, per the Mayo Clinic.

If you're unsure whether you can drink green tea on metformin, talk to your doctor. They can offer some guidance.

Can You Drink Green Tea Before Surgery?

While some sources say you should stop drinking green tea before surgery, these sources are not all research-backed and qualified. These sites claim that green tea can interact with anesthesia and thin your blood, which can put you at greater risk for bleeding out during surgery. But there is not enough research to support these claims.

In your consultation appointment for your surgery, let your doctor know if you drink green tea, and ask if you should refrain from drinking it before your surgery. They can help you figure out what you can and can't drink beforehand.

When you're recovering from surgery, doctors may suggest you limit caffeine (including from green tea) because it can disrupt the fluid balance in your body and lead to low blood volumes. This can slow your healing process, per the URMC.

How Long After Taking Medicine Can You Drink Green Tea?

There isn't a specific timeframe laid out by experts regarding how long to wait after taking medicine to drink green tea.

The amount of time you wait to drink green tea will depend on the medication. If you take blood thinners or lithium, for example, you may want to avoid green tea altogether, because green tea can lower (or harmfully increase) the effectiveness of the drugs.

If you're unsure about how long to wait after taking medication to drink green tea (or any caffeine source, for that matter), talk to your doctor. They can offer tips depending on what you're taking.

When Is the Worst Time to Drink Green Tea?

The worst time to drink green tea will depend on how caffeine affects your body. If you're sensitive to caffeine, for example, you may want to avoid drinking green tea before bed, as it can keep you awake. If you take any of the medications mentioned above, it would be best to wait awhile before sipping on a cup of green tea.

Who Should Not Drink Green Tea?

Besides people on the medications listed above, there are a few groups of people who should avoid drinking green tea altogether. These groups include the following, per Mount Sinai:

- People who are pregnant
- People who breastfeed or chestfeed
- Children
- People with kidney disorders
- People with heart conditions
- People with stomach ulcers
- People with liver problems

Also, people with the following conditions should talk to their doctor before drinking green tea, per Mount Sinai:

- Glaucoma
- Anemia
- Osteoporosis
- Diabetes

The Bottom Line

Green tea is an antioxidant-rich beverage that can have benefits for your overall health. But if you take certain medications or have certain health conditions, the caffeine, vitamins and polyphenols in green tea may cause negative side effects or interactions.

Talk to your doctor about whether you should avoid green tea or adjust the time of day (or frequency) that you drink it.

Common Questions

What happens if I drink green tea every day?

Drinking green tea every day can have positive effects on your body, if you don't take medication (or have a health condition) that negatively interacts with the beverage. The antioxidants in green tea (particularly flavonoids) can improve your heart health by lowering cholesterol, blood pressure and triglycerides. It may also help reduce your risk of certain cancers. It's also a great drink for inflammation because it has anti-inflammatory properties, per Penn Medicine.

Is green tea a diuretic?

While not advertised as a diuretic tea, green tea may have a mild diuretic effect (reducing fluid buildup in the body), per the URMC. Green tea has also been used as a diuretic in several traditional Chinese and Indian medicine practices, per Mount Sinai. If you have water retention or fluid buildup in your body, talk to your doctor about whether drinking green tea could help.

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