

Are You Getting Too Much Caffeine?

It's not just in your coffee. Here are five things you need to know.

Caffeine has become synonymous with energy, and about 90 percent of adults around the globe consume it in one form or another on a daily basis. But the stimulant is showing up in some pretty unusual places, including energy bars, jelly beans, mints, and peanut butter.

Market research firm Mintel estimates that about 14 percent of new beverages and foods (about 14,000 products) added to store shelves in the past five years contain added or natural caffeine. It's fine to have a cup or two of coffee to ease into the day, but should you pair it with a spread of caffeinated peanut butter on your morning toast? Caffeine isn't the health villain it was once believed to be, but getting too much can still have its downsides. We outline some key health-related facts about this ubiquitous compound:

1 Caffeine in moderation is okay for most people, but overdoing it can be dangerous. According to the Department of Agriculture's latest Dietary Guidelines for Americans, up to 400 mg of caffeine per day—the amount in two to four 8-ounce cups of coffee—can be part of a healthy diet for adults. The Food and Drug Administration says 600 mg per day is too much.



A 12-ounce cup of typical brewed coffee has 142 mg of caffeine. Black tea has 72 mg and green tea has 43 mg in 12 ounces.

“It varies from individual to individual, but consuming more than your normal amount of caffeine could make you feel nervous, anxious, irritable, or jittery, and may cause excessive urine production or irregular heartbeat,” says caffeine researcher Maggie Sweeney, Ph.D., postdoctoral research fellow at the behavioral pharmacology research unit at Johns Hopkins University School of Medicine. “That could be the case even for people used to caffeine. And for those who have anxiety or insomnia, it could worsen their symptoms.”

Your caffeine intake can easily add up if you drink coffee and also consume several caffeinated products in a day. For example, have a Starbucks coffee in the morning, a water with added caffeine in the afternoon, and a few caffeinated mints during the day and you could easily exceed 600 mg. And at extremely high doses, caffeine can lead to coma, convulsions, heart attack, vomiting, and even death. For instance, in 2014 two young, healthy men died after overdosing on pure, powdered caffeine they bought online. Just 1 teaspoon contains the amount of caffeine in about 28 cups of coffee. That's a rare example, but it's a reminder of the potential risks of excess caffeine.

2 Where you get it from matters. Caffeine is naturally present in the seeds, leaves, and fruit of many plants, including cacao, coffee, and tea. Packaged foods containing ingredients such as coffee and green tea extracts, guarana, kola nut, and yerba mate will add to your daily dose. But synthetic versions of the stimulant may also be infused into food and drink. And though there's no chemical difference between natural and synthetic caffeine, Sweeney says, the other ingredients in the product may interact with the caffeine. For example,

The Caffeine Count

Caffeine can be found in a number of foods and beverages—even where you wouldn't expect it—sometimes in doses higher than in coffee. Consuming too many of those foods and drinks can quickly put you over the 400-mg daily limit.

					
200 mg per 1.9 ounces 5-hour Energy Regular Strength	195 mg per 12 ounces Starbucks Dark Roast, Tall	160 mg per 16 ounces HiBall Energy Sparkling Energy Water	150 mg per 2 tablespoons Steem Caffeinated Peanut Butter	125 mg per 1/2 cup Bang Caffeinated Ice Cream	100 mg per 1 mint Foosh Energy Mints

the sugars or the amino acid taurine in many caffeinated energy drinks produce different effects on mood and attention than caffeine alone. And sweet, tasty drinks or foods may cause you to consume more caffeine than you realize, Sweeney says.

3 We still don't know everything about caffeine. Caffeine is speedily and completely absorbed through the intestines, so you can get that eye-opening pop in as little as 10 minutes. Once in the brain, it targets and blocks a cascade of neurotransmitter signals that would normally make you sleepy. But it can also have other effects on your body, both positive and negative. Though more research is needed, studies have indicated that caffeine could both precipitate and alleviate headache, boost athletic performance and memory, protect against type 2 diabetes, prevent constipation, and exacerbate menopausal hot flashes.

4 You shouldn't get all of your caffeine in a single shot. Pairing a cup of java with caffeinated versions of yogurt and peanut butter at breakfast may sound like a boon, but it may be too much caffeine for you to handle at once. There's a difference between getting 400 mg of caffeine over the course of a day and consuming that amount or more in one sitting, notes Neal Benowitz, M.D., professor of medicine at University of California, San Francisco. "With drugs that affect mood or behavior such as caffeine, the faster the rise in the drug level in the

body, the more intense the response," Benowitz says. To prevent a big punch, Sweeney advises being mindful of your own tolerance. If you start to feel nervous or jittery, you've probably had too much.

5 It's not always easy to find out how much caffeine a product contains. Currently, the FDA requires manufacturers to note on the label that a product has added caffeine, but not the amount. And if a product is made with a naturally containing source, such as guarana or cocoa, it will be listed in the ingredients list, but no mention of caffeine on the label is required. The FDA has explicitly approved added caffeine in just one product, colas, but based on that manufacturers began adding it to other foods and beverages. The agency is concerned about the increase in caffeinated products, especially those marketed to kids,

The Scoop on Coffee Flour

You may have heard some buzz about a new ingredient called CoffeeFlour. One company makes it by grinding the typically discarded skin and pulp that surrounds coffee beans into a powder. Though it has roughly the same number of calories as regular white flour, according

to the manufacturer it has 5 grams of fiber per tablespoon and is a rich source of antioxidants and protein.

The company suggests using it to replace up to 25 percent of the regular flour in a recipe. We tried it with blueberry muffins and brownies. Our tasters found that it added a



If you're looking for a little boost, CoffeeFlour contains about 70mg of caffeine per tablespoon.

notably bitter taste to the muffins, but the differences were less noticeable in the brownies.

and is investigating the potential health consequences of consuming too much. In December 2015, the FDA asked the makers of Steem caffeinated peanut butter, which had been on the market since 2014, to provide data on the product's safety. In 2013, Wrigley announced that it would stop production of a line of caffeinated gum after it received questions from the FDA. The maker of Perky Jerky reformulated its caffeinated beef jerkies after the USDA raised concerns in 2010.

But for now caffeinated products are plentiful, and if the trend sticks, you might see more of them on supermarket shelves in the future. To keep your intake in line, check labels and watch out for hidden sources of caffeine.



WANT MORE? Get the lowdown on how to sleep well at ConsumerReports.org/sleepbetter.



80 mg
per 8.4 ounces
Red Bull



50 mg
per 1 ounce
Extreme Sport Beans



50 mg
per 1 bar
Cliff Cool Mint Chocolate



46 mg
per 16.9 ounces
Honest Tea



46 mg
per 12 ounces
Diet Coke



30 mg
per 6 ounces
Dannon Coffee Yogurt



20 mg
per 1.45 ounces
Hershey's Special Dark Chocolate