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# What to know about new research on coffee and heart risks

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A worker prepares a coffee drink at a shop in Overland Park, Kan., Thursday, Aug. 14, 2008. In a study published in the New England Journal of Medicine on Wednesday, March 22, 2023, healthy volunteers who were asked to drink coffee or skip it on different days showed no signs of an increase in a certain type of heart rhythm after sipping the caffeinated drinks, although they did walk more and sleep less. Credit: AP Photo/Orlin Wagner

Coffee lovers—and their doctors—have long wondered whether a jolt of java can affect the heart. New research published Wednesday finds that drinking caffeinated coffee did not significantly affect one kind of heart hiccup that can feel like a skipped beat.

But it did signal a slight increase in another type of irregular heartbeat in people who drank more than one cup per day. And it found that people tend to walk more and sleep less on the days they drank coffee.

Coffee is one of the most common beverages in the world. In the U.S., two-thirds of Americans drink coffee every day, more than bottled water, tea or tap water, according to the National Coffee Association, a trade group. Coffee contains caffeine, a stimulant, which is widely regarded as safe for healthy adults at about 400 milligrams per day, or roughly the equivalent of four or five cups brewed at home.

Coffee has been associated with multiple health benefits and even a lower risk of dying, based on large studies that observed participants' behavior. Despite research that has shown moderate coffee consumption doesn't raise the risk of heart rhythm problems, some professional medical societies still caution against consuming caffeine.

The latest research:

## THE EXPERIMENT

Researchers outfitted 100 healthy volunteers with gadgets that continuously monitored their heart function, daily steps, sleep patterns and blood sugar. The volunteers, who were mostly younger than 40, were sent daily text messages over two weeks instructing them to drink or avoid caffeinated coffee on certain days. The results were reported Wednesday in the New England Journal of Medicine.

This type of study, which directly measures the biological effects of drinking or not drinking caffeinated coffee in the same people, is rare and provides a dense array of data points, said study co-author Dr. Gregory Marcus, a cardiologist at the University of California, San Francisco, who specializes in treating heart arrhythmias.

## THE FINDINGS

Researchers found that drinking caffeinated coffee did not result in more daily episodes of extra heartbeats, known as premature atrial contractions. These extra beats that begin in the heart's upper chambers are common and typically don't cause problems. But they have been shown to predict a potentially dangerous heart condition called atrial fibrillation.

They also found slight evidence of another kind of irregular heartbeat that comes from the lower heart chambers, called premature ventricular contractions. Such beats are also common and not usually serious, but they have been associated with a higher risk of heart failure. The researchers found more of these early beats in people on the days they drank coffee, but only in those who drank two or more cups per day.

The volunteers logged about 1,000 more steps per day on the days they drank coffee—and they slept about 36 minutes less, the study found. There was almost no difference in blood sugar levels.

One interesting result: People with genetic variants that make them break down caffeine faster experienced less of a sleep deficit, while folks with variants that lead them to metabolize caffeine more slowly lost more sleep.

## WHAT IT MEANS FOR YOU

Because the study was performed in a small number of people over a short period of time, the results don't necessarily apply to the general population, said Dr. Dave Kao, a cardiologist and health data expert at the University of Colorado School of Medicine, who was not involved in the study. However, the study is consistent with others that have found coffee is safe and it offers a rare controlled evaluation of caffeine's effect, Kao added.

Co-author Marcus cautions that the effects of drinking coffee can vary from person to person. He said he advises his patients with heart arrhythmias to experiment on their own to see how caffeine affects them.

"They're often delighted to get the good news that it's OK to try coffee and drink coffee," he said.

**More information:** Gregory M. Marcus et al, Acute Effects of Coffee Consumption on Health among Ambulatory Adults, *New England Journal of Medicine* (2023). DOI: 10.1056/NEJMoa2204737