Coffee drinkers reap health boost – but only if they do it in the morning

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People who get their coffee hit in the morning reap benefits that are not seen in those who have shots later in the day, according to the first major study into the health benefits of the drink at different times.



Analysis of the coffee consumption of more than 40,000 adults found that morning coffee drinkers were 16% less likely to die of any cause and 31% less likely to die from cardiovascular disease during a 10-year follow-up period than those who went without.

But the benefits to heart health appeared to vanish in people who drank coffee throughout the day, the researchers found, with medical records showing no significant reduction in mortality for all-day drinkers compared with those who avoided coffee.

"It's not just whether you drink coffee or how much you drink, but the time of day when you drink coffee that's important," said Prof Lu Qi, an expert in nutrition and epidemiology at

Tulane University in New Orleans. "We don't typically give advice about timing in our dietary guidance, but perhaps we should be thinking about this in the future."

The study drew on the dietary habits of 40,725 adults – including the amount of coffee they consumed and when they had it – who participated in the US National Health and Nutrition Examination Survey between 1999 and 2018. About 36% were morning coffee drinkers, while 16% drank coffee later into the day.

According to the study, morning coffee drinkers had a lower risk of death whether they were moderate drinkers on two to three cups a day, or heavy drinkers who consumed more. The health benefit was smaller for those who drank only one cup in the morning.

The risks were assessed by analysing medical records for the participants for nine to 10 years after they enrolled in survey.

The results, published in the European Heart Journal, were verified in a smaller group of 1,463 people who completed detailed week-long food and drink diaries.

The study suggests that a morning dose of coffee is better for the heart than an evening one, but it does not explain why. One possible explanation is that drinking coffee later in the day can disrupt circadian rhythms and levels of hormones such as melatonin. This in turn affects sleep, inflammation and blood pressure, all of which can harm heart health.

In an accompanying editorial, Prof Thomas Lüscher, a consultant cardiologist at the Royal Brompton and Harefield hospitals in London, notes that many all-day drinkers sleep poorly, adding that coffee seems to suppress melatonin, a hormone that is important for inducing sleep in the brain.

The effects are driven largely by
caffeine, but coffee contains hundreds of other bioactive compounds that affect our physiology. The researchers say some substances in the blood that drive inflammation often peak in the morning and could be countered by anti-inflammatory compounds in a morning coffee. "This explanation applies to both caffeinated and decaffeinated coffee," they write.

The latest work builds on a 2022 UK Biobank study which found that people who drank up to three cups of coffee a day had a healthier heart than those who went without. The NHS advises against drinking more than four cups a day because large amounts can increase blood pressure. Pregnant women should have no more than 200mg of caffeine a day to avoid a greater risk of low birth weight and miscarriage. A mug of filter coffee contains about 140mg.

"Overall, we must accept the now substantial evidence that coffee drinking, particularly in the morning hours, is likely to be healthy," Lüscher writes. "Thus, drink your coffee, but do so in the morning!"