

Moderate coffee consumption offers protection against heart failure

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While current American Heart Association heart failure prevention guidelines warn against habitual coffee consumption, some studies propose a protective benefit, and still others find no association at all. Amidst this conflicting information, research from Beth Israel Deaconess Medical Center attempts to shift the conversation from a definitive yes or no, to a question of how much.

"Our results did show a possible benefit, but like with so many other things we consume, it really depends on how much coffee you drink," says lead author Elizabeth Mostofsky, MPH, ScD, a post-doctoral fellow in the cardiovascular epidemiological unit at BIDMC. "And compared with no consumption, the strongest protection we observed was at about

four European, or two eight-ounce American, servings of coffee per day."

The study published June 26 online in the Journal *Circulation: Heart Failure*, found that these moderate [coffee drinkers](#) were at 11 percent lower risk of heart failure.

Data was analyzed from five previous studies – four conducted in Sweden, one in Finland – that examined the association between [coffee consumption](#) and heart failure. The self-reported data came from 140,220 participants and involved 6,522 heart failure events.

In a summary of the published literature, the authors found a "statistically significant J-shaped relationship" between habitual coffee consumption and heart failure, where protective benefits begin to increase with consumption maxing out at two eight-ounce American servings a day. Protection slowly decreases the more coffee is consumed until at five cups, there is no benefit and at more than five cups a day, there may be potential for harm.

It's unclear why moderate coffee consumption provides protection from heart failure, but the researchers say part of the answer may lie in the intersection between regular coffee drinking and two of the strongest risk factors for heart failure – diabetes and elevated blood pressure.

"There is a good deal of research showing that drinking coffee lowers the risk for type 2 diabetes, says senior author Murray Mittleman, MD, DrPH, a physician in the Cardiovascular Institute at Beth Israel Deaconess Medical Center, an Associate Professor of Medicine at Harvard Medical School and director of BIDMC's cardiovascular epidemiological research program. "It stands to reason that if you lower the risk of diabetes, you also lower the risk of heart failure."

There may also be a blood pressure benefit. Studies have consistently shown that light coffee and caffeine consumption are known to raise blood pressure. "But at that moderate range of consumption, people tend to develop a tolerance where drinking coffee does not pose a risk and may even be protective against elevated [blood pressure](#)," says Mittleman.

This study was not able to assess the strength of the coffee, nor did it look at caffeinated versus non-caffeinated coffee.

"There is clearly more research to be done," says Mostofsky. "But in the short run, this data may warrant a change to the guidelines to reflect that coffee consumption, in moderation, may provide some protection from heart failure."

Provided by Beth Israel Deaconess Medical Center

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