

Light-to-moderate coffee drinking associated with health benefits

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Sophia Antipolis, France – 28 Aug 2021: Up to three cups of coffee per day is associated with a lower risk of stroke and fatal heart disease, according to research presented at ESC Congress 2021.^{1,2}

“To our knowledge, this is the largest study to systematically assess the cardiovascular effects of regular coffee consumption in a population without diagnosed heart disease,” said study author Dr. Judit Simon, of the Heart and Vascular Centre, Semmelweis University, Budapest, Hungary.

“Our results suggest that regular coffee consumption is safe, as even high daily intake was not associated with adverse cardiovascular outcomes and all-cause mortality after a follow-up of 10 to 15 years,” she continued. “Moreover, 0.5 to 3 cups of coffee per day was independently associated with lower risks of stroke, death from cardiovascular disease, and death from any cause.”

Even though coffee is among the most consumed beverages in the world, little is known about the long-term impact of regular consumption on cardiovascular health.

This study investigated the association between usual coffee intake and incident heart attack, stroke and death. The study included 468,629 participants of the UK Biobank with no signs of heart disease at the time of recruitment. The average age was 56.2 years and 55.8% were women.

Participants were divided into three groups according to their usual coffee intake: none (did not consume coffee on a regular basis, 22.1%), light-to-moderate (0.5 to 3 cups/day, 58.4%) and high (more than 3 cups/day, 19.5%).

The researchers estimated the association of daily coffee consumption with incident outcomes over a median follow-up of 11 years using multivariable models. The analyses were adjusted for factors that could influence the relationship including age, sex, weight, height, smoking status, physical activity, high blood pressure, diabetes, cholesterol level, socioeconomic status, and usual intake of alcohol, meat, tea, fruit and vegetables.

Compared to non-coffee drinkers, light-to-moderate consumption was associated with a 12% lower risk of all-cause death (hazard ratio [HR]=0.88, $p<0.001$), 17% lower risk of death from cardiovascular disease (HR=0.83, $p=0.006$), and 21% lower risk of incident stroke (HR=0.79; $p=0.037$).

To examine the potential underlying mechanisms, the researchers analysed the association between daily coffee intake and heart structure and function over a median follow-up of 11 years. For this, they used data from 30,650 participants who underwent cardiac magnetic resonance imaging (MRI), which is considered the gold standard for the assessment of cardiac structure and function.

Dr. Simon said: “The imaging analysis indicated that compared with participants who did not drink coffee regularly, daily consumers had healthier sized and better functioning hearts. This was consistent with reversing the detrimental effects of ageing on the heart.”

She concluded: “Our findings suggest that coffee consumption of up to 3 cups per day is associated with favourable cardiovascular outcomes. While further studies are needed to explain the underlying mechanisms, the observed benefits might be partly explained by positive alterations in cardiac structure and function.”

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Notes to editor

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This press release accompanies both an abstract and an ESC press conference at ESC Congress 2021. It does not necessarily reflect the opinion of the European Society of Cardiology.

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References and notes

¹Abstract title: Association of daily coffee consumption with cardiovascular health - Results from the UK Biobank.

²Press conference: "Heart health made easy" on Thursday 26 August from 17:00 to 18:00 CEST.

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