

 RISK FACTORS

Moderate coffee drinking is associated with lower risk of death from CVD

“
coffee consumption can be incorporated into a healthy lifestyle”

Drinking moderate amounts of coffee regularly is associated with lower risk of all-cause death and of death from cardiovascular disease (CVD), neurological diseases, and suicide. These findings come from a large, prospective study that included 208,501 participants and had a follow-up duration of nearly 30 years.

Ming Ding and colleagues analysed data from three large, ongoing studies — the Nurses' Health Study (NHS), the NHS 2, and the Health Professionals Follow-up Study — that provided measures of caffeinated and decaffeinated coffee consumption assessed every 4 years, and data on known confounding factors, such as smoking. The results showed a nonlinear association of consumption of total, caffeinated, and decaffeinated coffee with all-cause mortality.

Consumption of 1–5 cups per day was associated with reduced risk of death compared with nondrinkers, but heavy coffee drinking (>5 cups per day) was not associated with risk of death.

In the three cohorts, the proportion of smokers was higher in the group of heavy coffee drinkers. To avoid the confounding effects of smoking, the investigators analysed the data only in nonsmokers and found that the association between coffee and mortality changed to an inverse linear association. After restricting to nonsmokers, the inverse associations between coffee consumption and risk of all-cause death and of death from CVD and neurological diseases became more evident.

When analysed separately, caffeinated and decaffeinated coffee showed similar inverse associations with all-cause and CVD mortality, indicating that components other than caffeine mediate the beneficial effects of long-term coffee consumption. Several coffee components, such

as chlorogenic acid, lignans, quinides, and magnesium, reduce systemic inflammation and insulin resistance, and the investigators propose that these or similar mechanisms might mediate the inverse association between coffee and CVD.

“Results from this and previous studies indicate that coffee consumption can be incorporated into a healthy lifestyle,” conclude the investigators, but caution that their study was not designed to establish a direct cause-and-effect relationship between coffee and mortality. Another limitation of the study is the homogeneity of the participants, the researchers point out. These findings might not be generalizable to other populations because the majority of study participants were white, and all were medical and health-care professionals.

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ORIGINAL ARTICLE Ding, M. *et al.* Association of coffee consumption with total and cause-specific mortality in three large prospective cohorts. *Circulation* doi:10.1161/CIRCULATIONAHA.115.017341



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