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## Coffee Drinkers Have Lower Mortality Risk



According to a pooled analysis of three large cohort studies ( Nurses' Health Study, Nurses' Health Study II and Health Professionals Follow-Up Study) people who drink coffee - whether its caffeinated, decaffeinated, or overall—have a lower mortality risk than coffee nondrinkers. The study is published in Circulation.

The positive impact of coffee is not just true for all-cause mortality but specifically mortality from cardiovascular or neurologic causes. It is important to note that this association was more pronounced in people who had never smoked.

Nearly 200,000 participants were part of this analysis and the researchers followed them for up for 20 to 30 years. The evidence is thus solid and the large sample size allowed the researchers to also gauge the impact on never smokers.

The researchers initially found a higher-all cause mortality for drinkers of coffee across the three cohorts but when they adjusted the data for smoking, the results changed significantly. The pooled hazard ratio for mortality relative to non-consumption of coffee was:

- 0.95 ( $95 \% \mathrm{CI} 0.91-0.99$ ) among subjects who drank one cup of coffee per day.
- 0.91 ( $95 \% \mathrm{Cl} 0.88-0.95$ ) for those who drank 1.1 to three cups per day.
- 0.93 ( $95 \% \mathrm{Cl} 0.89-0.97$ ) for those who drank 3.1 to five cups per day.
- $1.02(95 \% \mathrm{Cl} 0.96-1.07)$ for those who drank more than five cups of coffee per day.

See also: Coffee Increases Cardiovascular Risk in Young Adults with Mild Hypertension
Overall, that comes to a 0.98 ( $95 \% \mathrm{Cl} 0.97-0.99$ ) risk per one-cup increase ( $P<0.001$ for the linear trend). When this analysis was repeated among never-smokers, the association of coffee consumption with risk of all-cause mortality changed from a nonlinear to a linear inverse association. In addition, in never-smokers, coffee consumption was found to be inversely associated with the risk of mortality due to cardiovascular disease, neurological disease and suicide.

The pooled hazard ratio for mortality for cardiovascular disease was:

- 0.95 ( $95 \% \mathrm{Cl} 0.85-1.07$ ) for no more than one cup per day.
- $0.94(95 \% \mathrm{Cl} 0.84-1.05)$ for more than one to three cups per day.
- 0.81 ( $95 \% \mathrm{Cl} 0.70-0.95$ ) for more than three to five cups per day.
- 0.91 ( $95 \% \mathrm{Cl} 0.71-1.17$ ) for more than five cups per day.

This association may be explained by the chlorogenic acid and lignans in coffee as they have antioxidant effects, and reduce insulin resistance and systemic inflammation in animal models. These nutrients may be responsible for inverse association between coffee and mortality, explains Dr Ming Ding, Harvard School of Public Health, Boston, MA and lead author of the study.

Source: Circulation<br>Image Credit: Prexels.com

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