RECOMMENDED ARTICLE OF THE MONTH

Comment on ''Association of coffee drinking with total and cause-specific mortality''

Comentário a «Associação entre a ingestão de café e a mortalidade global e de causas específicas»

Association of coffee drinking with total and cause-specific mortality.
Freedman ND, Park Y, Abnet CC, Hollenbeck AR, Sinha R. N Engl J Med. 2012;366:1891–904.

Abstract

Background: Coffee is one of the most widely consumed beverages, but the association between coffee consumption and the risk of death remains unclear.

Methods: We examined the association of coffee drinking with subsequent total and cause-specific mortality among 229 119 men and 173 141 women in the National Institutes of Health – AARP Diet and Health Study who were 50–71 years of age at baseline. Participants with cancer, heart disease, and stroke were excluded. Coffee consumption was assessed once at baseline.

Results: During 5 148 760 person-years of follow-up between 1995 and 2008, a total of 33 731 men and 18 784 women died. In age-adjusted models, the risk of death was increased among coffee drinkers. However, coffee drinkers were also more likely to smoke, and, after adjustment for tobacco-smoking status and other potential confounders, there was a significant inverse association between coffee consumption and mortality. Adjusted hazard ratios for death among men who drank coffee as compared with those who did not were as follows: 0.99 (95% confidence interval [CI], 0.95 to 1.04) for drinking less than 1 cup per day, 0.94 (95% CI, 0.90 to 0.99) for 1 cup, 0.90 (95% CI, 0.86 to 0.93) for 2 or 3 cups, 0.88 (95% CI, 0.84 to 0.93) for 4 or 5 cups, and 0.90 (95% CI, 0.85 to 0.96) for 6 or more cups of coffee per day (P < 0.001 for trend); the respective hazard ratios among women were 1.01 (95% CI, 0.96 to 1.07), 0.95 (95% CI, 0.90 to 1.01), 0.87 (95% CI, 0.83 to 0.92), 0.84 (95% CI, 0.79 to 0.90), and 0.85 (95% CI, 0.78 to 0.93) (*p* < 0.001 for trend). Inverse associations were observed for deaths due to heart disease, respiratory disease, stroke, injuries and accidents, diabetes, and infections, but not for deaths due to cancer. Results were similar in subgroups, including persons who had never smoked and persons who reported very good to excellent health at baseline.

Conclusions: In this large prospective study, coffee consumption was inversely associated with total and cause-specific mortality. Whether this was a causal or associational finding cannot be determined from our data.

Comment

Coffee is the most widely used stimulant beverage in the world. Caffeine is the active substance of coffee and belongs to the methylxanthine pharmacological group.

Coffee is a complex mixture of thousands of chemical components, including carbohydrates, nitrogenates, lipids, minerals, vitamins, alkaloids and phenols.

Due to its widespread consumption, coffee constitutes a major concern for many people, and, it must be admitted, does not have a good reputation: some of my students, when presenting a case at the bedside, include coffee alongside smoking as a major cardiovascular risk factor.

This myth – because it really is a myth – is very hard to contradict, even though there are many studies showing that coffee prevents type 2 diabetes mellitus,[1] dementia,[2] Parkinson's disease[3] and liver cancer.[4] With regard to cardiovascular disease, coffee seems to have very little effect on normal individuals but may slightly increase blood pressure in hypertensive patients[5], and probably increases atrial fibrillation incidence[6].

The present study[7] looks at the relationship between coffee intake and subsequent total and cause-specific mortality among 229 119 men and 173 141 women in the National Institutes of Health AARP Diet and Health Study. Analyzing a total of 5 148 760 person-years of follow-up between 1995 and 2008, the author found that the risk of death was increased among coffee drinkers but, after adjustment for tobacco-smoking status and other potential confounders, there was a significant inverse association between coffee consumption and mortality, with hazard ratios between 1.01 and 0.84, i.e. ranging from a small increase of 0.1% to a decrease of 16%. Inverse associations were observed for deaths due to heart disease, respiratory disease, stroke, injuries and accidents, diabetes, and infections, but not for deaths due to cancer.

This study, by showing that coffee consumption was inversely associated with total and cause-specific mortality, should put to rest fears about this beverage, which, like anything else, should be taken in moderation.

Conflicts of interest

The author has no conflict of interest to declare.

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António Vaz Carneiro
Membro do Corpo Redatorial da Revista Portuguesa de Cardiologia, Portugal
E-mail address: avc@fm.ul.pt