

Hydrate with...coffee? Maybe. New study says it's not a diuretic.

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Coffee and its caffeine content have been associated with

numerous health effects, not the least of which is diuresis, or loss of body water. Thus, some have advised that caffeinated beverages not be included when estimating how much water a person should be drinking. A [new study](#) ^[1] led by Dr. Sophie C. Killer from the University of Birmingham, UK, however, undermines this concept.

The investigators recruited 50 male coffee drinkers, between 18-46 years old to participate in their study. The men were all healthy, and typically consumed moderate amounts of coffee. Habitual coffee and caffeine intake of each man was determined from weighed dietary intake diaries, and ranged from 3-6 cups/day containing 300-600 mg of caffeine.

During the 2 weeks before the actual experiment started, participants kept a 3-day diary of their weighed food and beverage consumption, and these data were used to determine the food and fluid intakes during the trial. Then, for 3 days, the men drank a specified amount of either coffee or tap water. At the end of this first trial period, they resumed their usual diets for 10 days a so-called washout period. After this period, they resumed their experimental status, and consumed whichever beverage they had not consumed in the first trial.

During the experimental periods the researchers determined the men's total body water (TBW), which would be expected to decrease when they drank coffee if it were indeed a diuretic. They also collected their urine for two 24-hour periods under each experimental condition to determine if coffee increased the volume excreted.

At the end of the study, the results indicated that the amount of caffeine consumed (4 mg/kg) did not significantly decrease participants TBW, compared to when they drank water. In addition, urine volume was not significantly increased when the men drank coffee compared to when they drank water.

In discussing their data, the authors commented Results suggest that coffee did not result in

dehydration when provided in a moderate dose. They added These data suggest that coffee, when consumed in moderation by caffeine-habituated males contributes to daily fluid requirement and does not pose a detrimental effect to fluid balance.

ACSH s Dr Ruth Kava added, Although this study was relatively small, it was well-designed. It strongly indicates that coffee, and likely other caffeine-containing beverages, contribute to maintenance of a normal body water balance, at least for men. We look forward to independent replication by other scientists in the same field, as well as awaiting similar studies in women.

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Links

[1] <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0084154>