

# Research finds caffeine increases soft drink consumption

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Taste testing in Deakin's sensory lab.

Researchers from Deakin University's Centre for Physical Activity and Nutrition Research (C-PAN) have found that caffeine increases the consumption of soft drinks.

In a study published in the *British Journal of Nutrition*, researchers measured the influence [caffeine](#) had on the consumption of sugar sweetened soft drinks. They found that people drinking [caffeinated drinks](#) consumed much more than those who drank the non-caffeinated equivalents.

"This research supports the ongoing need for caffeine to be tightly regulated as an additive in the food supply, as it appears an ingredient for overconsumption," said the study's senior author Associate Professor Lynn Riddell.

"The increasing consumption of nutrient poor, high energy foods and drinks is a major contributor to the continuing problems of overweight and obesity."

Caffeine is a widely consumed, mildly addictive chemical that occurs naturally in coffee, tea and chocolate, but is an additive in soft drinks—mostly cola flavoured and [energy drinks](#). It is estimated that more than 60 per cent of soft drink consumption is of the caffeinated variety.

The C-PAN study involved 99 participants, aged 18—30, who were randomly assigned to either a caffeinated or non-caffeinated soft drink group. The participants were masked to the true purpose of the study, being told that it was about testing the palatability and liking of a lemon flavoured soft drink. Over the 28-day intervention they consumed as much of the soft drinks as they wanted. The amount of soft drinks consumed was monitored daily while their liking of the drinks was assessed at the beginning and the end of the study.

The results of the study showed that the participants in the caffeinated drinks group drank 419ml (785 kilojoules) per day, significantly more than those in the non-caffeinated group who drank 273ml (512 kilojoules).

"Our findings clearly show that caffeine as an additive in soft drinks increased consumption and with it sugar calories, and that is a significant public health issue given the prevalence of obesity," Associate Professor Riddell said.

As with previous CPAN research, a separate group of trained flavour testers found no difference in the flavour between the caffeinated and non-

caffeinated drinks.

Large soft-drink manufacturers claim that caffeine is added as a flavour enhancer however this claim is challenged by this research.

"Participants cannot taste the difference between the caffeinated soft drink and the non-caffeinated soft drink; if you can't tell a difference in flavour there is no flavour activity," said the study's lead author Professor Russell Keast.

"It is also important to note that the level of caffeine in the soft drinks used in the study was the same as in commercially available cola flavoured beverages.

"That caffeinated soft drinks were also more liked than the non-caffeinated [soft drink](#) at the end of the intervention, supports previous studies that suggest caffeine promotes liking and consumption via sub-conscious influences that may be related to reversing caffeine withdrawal symptoms.

"Additive compounds such as caffeine that promote consumption via sub-conscious effects work against efforts to minimise energy [consumption](#). The research provides evidence in support of the need for strong regulation of caffeine as an additive to foods."

**More information:** "Caffeine increases sugar-sweetened beverage consumption in a free-living population: a randomised controlled trial." *British Journal of Nutrition* / FirstView Article DOI: [dx.doi.org/10.1017/S000711451400378X](https://doi.org/10.1017/S000711451400378X)

Provided by Deakin University

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