

Study shows a hit of caffeine can boost your information-processing skills

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Credit: AI-generated image ([disclaimer](#))

(Medical Xpress)—That cup of coffee you have each morning could be doing more than giving you a wake-up jolt; it may actually improve your ability to process information. That's according to a study by two Tufts psychologists who found that caffeine seems to make people perform better in a proofreading test compared to those going without the java.

"[Coffee](#) is the most widely used psycho-stimulant in the world," says Holly Taylor, a professor of psychology in the School of Arts and Sciences. The study was part of a larger research program looking at arousal and [cognitive behavior](#).

The general idea is that arousal, such as that associated with caffeine, makes people better at processing information, both the fine details and the bigger picture.

Taylor co-authored a paper published in the *Journal of Experimental Psychology: Applied* earlier this year that describes a study in which participants were tested on their proofreading skills after consuming differing amounts of caffeine. The lead author is Thaddeus T. Brunyé, G04, G07, a lecturer in the psychology department and senior cognitive scientist at the U.S. Army Natick Soldier Research, Development and Engineering Center in Natick, Mass.

The researchers performed two experiments. In the first, 36 participants who normally drink just a half a cup of coffee a day were asked to read a one-page news story and to identify and correct as many spelling and grammatical mistakes as they could find in five minutes. Forty-five minutes before the test, the study subjects were randomly given a capsule containing one of four doses of caffeine: 0 milligrams, 100 milligrams (equal to eight ounces of coffee), 200 milligrams (equal to 16 ounces of coffee) or 400 milligrams (equal to 20 ounces of coffee).

The second study was the same, except this group of participants drank more caffeine on a regular basis, about three 8-ounce cups of coffee a day.

The [caffeine consumption](#) made no difference in the participants' ability to find spelling errors, but it did help them find what Taylor describes as "complex global errors," such as mistakes in subject and verb agreement

and verb tense. Those who were low caffeine consumers to begin with did best with 200 milligrams of caffeine, while the heavy coffee drinkers needed more caffeine, or 400 milligrams, to improve.

"These results support the notion that central nervous system stimulants may enhance global processing of language-based materials," the researchers wrote.

The researchers are conducting further studies on caffeine, including one examining the effects of [caffeine](#) on memory.

More information: psycnet.apa.org/journals/xap/18/1/95/

Provided by Tufts University

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