

Could coffee reverse Alzheimer's?

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Courtesy University of South Florida Health and [World Science](#) staff

Coffee drinkers may have another reason to pour that extra cup. When aged mice bred to develop symptoms of Alzheimer's disease were given caffeine – the equivalent of five cups of coffee a day – their memory impairment was reversed, report University of South Florida researchers.

Two studies published online July 5 in the *Journal of Alzheimer's Disease* found caffeine significantly decreased abnormal levels of the protein linked to Alzheimer's disease, both in the brains and in the blood of mice exhibiting symptoms of the disease. Both studies build upon previous research by the Florida group showing that caffeine in early adulthood prevented the onset of memory problems in mice bred to develop Alzheimer's symptoms in old age.

"The new findings provide evidence that caffeine could be a viable 'treatment' for established Alzheimer's disease, and not simply a protective strategy," said lead author Gary Arendash, a neuroscientist at the university. "That's important because caffeine is a safe drug for most people, it easily enters the brain, and it appears to directly affect the disease process."

Based on the findings in mice, researchers at the Florida group hope to begin human trials to evaluate whether caffeine can benefit people with mild cognitive impairment or early Alzheimer's disease, said Huntington Potter, director of the Alzheimer's Disease Research Center at the university and an investigator for the caffeine studies. The group has already determined that caffeine administered to elderly non-demented humans quickly affects their blood levels of beta-amyloid protein, just as it did in the Alzheimer's mice.

"These are some of the most promising Alzheimer's mouse experiments ever done showing that caffeine rapidly reduces beta amyloid protein in the blood, an effect that is mirrored in the brain, and this reduction is linked to cognitive benefit," Potter said. "Our goal is to obtain the funding needed to translate the therapeutic discoveries in mice into well-designed clinical trials."

If larger, more rigorous clinical studies confirm that caffeine staves off Alzheimer's in humans, as it does in mice, this benefit would be substantial, Arendash said. Alzheimer's disease attacks nearly half of Americans age 85 and older, and Alzheimer's and other dementias triple healthcare costs for those age 65 and older, according to the Alzheimer's Association.