

# Cannabis use consistently leads to increase in susceptibility to false memories

February 11 2020, by Bob Yirka

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A team of researchers from The Netherlands, Belgium, Australia, Germany and the U.S. has found evidence showing that the use of cannabis consistently leads to an increase in susceptibility to false

memories. In their paper published in *Proceedings of the National Academy of Sciences*, the group describes double-blind, randomized, placebo-controlled trials that they used to test the impact of cannabis use on memory recall, and what they found.

Prior research has shown that smoking cannabis can lead to [memory loss](#), and in some cases, memory distortion. In this new effort, the researchers wanted to know if THC, the active ingredient in cannabis, can also lead to an increase in susceptibility to false or implanted memories.

To find out whether people smoking a vaporized form of THC are more susceptible to suggested [false memories](#), the researchers enlisted the assistance of 64 people who self-described as occasional users of cannabis. Each was given a dose of the drug (except those in a [control group](#)) and were then given [memory tests](#). One of the memory tests involved reading and reciting a list of words. Another involved answering questions after watching a [virtual reality](#)-based fake fight between two people on a train. In the third, each volunteer took part in a virtual reality simulation where they assumed the role of a character who steals money from an unknown person's purse. In each scenario, the memory tests were phrased in ways meant to influence the recall of the volunteers. And some questions introduced false information. In testing the volunteers, the researchers went to great lengths to assure the subjects that they were not being influenced themselves and were not influencing the volunteers in unknown ways.

After analyzing the results of the tests, the researchers claimed that their study showed smoking THC very clearly increased the subjects' susceptibility to forming false memories based on false information provided to them during a memory testing process. They suggest that their findings be taken into consideration by law enforcement when interviewing witnesses to a crime. They next plan to look into the

possibility of misinformation leading to false confessions in criminal interrogations in which an accused person is under the influence of cannabis.

**More information:** Lilian Kloft et al. Cannabis increases susceptibility to false memory, *Proceedings of the National Academy of Sciences* (2020). [DOI: 10.1073/pnas.1920162117](https://doi.org/10.1073/pnas.1920162117)

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