

# New evidence pot may harm the teen brain

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(HealthDay)—Teens who stop smoking pot can think and learn better afterward, even if they are only light users, a new study reports.

Compared to teenagers and young adults who continued using marijuana, those who abstained for a month displayed a "modest but reliable improvement in their ability to learn," said lead researcher Randi Schuster.

"Most of this improvement surprisingly happens rather quickly, within the first week of abstinence," added Schuster, director of neuropsychology at Massachusetts General Hospital's Center for Addiction Medicine.

The results show that kids need to be kept from using pot, Schuster said. This is a growing concern as recreational marijuana becomes legal in more U.S. states, she added.

"As we as a country move toward widespread legalization, we should pay attention to smart prevention programming for children," Schuster said.

The researchers cited a 2016 survey that found almost 14 percent of middle and [high school students](#) had used pot in the prior month. It also showed daily use doubling between eighth and 12th grades.

Maturation of critical parts of the brain occurs in adolescence, and regular pot use in those years may cause more harm than later use, the researchers said in background notes.

Marijuana legalization proponents countered that the new study supports their contention that the effects of pot are temporary.

"These conclusions are consistent with those of prior studies finding that cannabis exposure is not likely to be associated with any sort of permanent adverse impact on the brain or cognitive performance," said Paul Armentano, deputy director of NORML.

"These findings dispute the long-standing 'stoner-stupid' stereotype and should help to assuage fears that cannabis' acute effects on behavior may persist long after drug ingestion, or that they may pose greater potential risks to the developing brain," Armentano said.

For their study, Schuster and her colleagues asked two-thirds of a group of 88 marijuana users ages 16 to 25 to drop pot for a month.

The Boston-area participants were not all heavy users, but did use regularly. "We have kids using a minimum of one day a week or more," Schuster said.

Urine tests revealed that 9 out of 10 participants did follow through on their promise to stop using pot for the study period.

Once a week, the young people took part in computerized brain games that tested their attention and memory, to see if stopping their pot use would help improve their brain function.

The computer tests showed that memory—specifically the ability to learn and recall new information—improved only among those who stopped using cannabis. The improvement occurred largely during the first week.

The study only showed an association between quitting pot and better learning ability, not a direct cause-and-effect relationship. Still, specialists are taking note of the findings.

"Cannabis use impacts learning and memory, and this study showed improvement in these domains after quitting," said Dr. Scott Krakower, assistant unit chief of psychiatry at Zucker Hillside Hospital in Glen Oaks, N.Y.

"This research may motivate practitioners to encourage their patients to quit using marijuana and maintain abstinence," Krakower said.

However, quitting marijuana did not appear to affect the participants' ability to pay attention. Both groups performed similarly in that area.

Future studies will test whether this memory recovery brings [marijuana](#) quitters back to full function by comparing them with teens who've never used in the first place, Schuster said.

"What we don't know is, by that one week are they back to the levels of their non-using peers, or is there a deficit that's still measurable?" Schuster said.

The study appears in the Oct. 30 *Journal of Clinical Psychiatry*.

**More information:** Randi Melissa Schuster et al, One Month of Cannabis Abstinence in Adolescents and Young Adults Is Associated With Improved Memory, *The Journal of Clinical Psychiatry* (2018). [DOI: 10.4088/JCP.17m11977](https://doi.org/10.4088/JCP.17m11977)

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