Residents of states where cannabis has been legalized use marijuana 24% more frequently than those living in states where it remains illegal, according to new research published today in the journal *Addiction*.

The study of more than 3,400 adult twins, by researchers at University of Minnesota and University of Colorado, constitutes some of the strongest evidence yet that legalization causes increased use.

It comes at a time when cannabis use is rising nationwide, including during adulthood—a phase of life when individuals have historically tended to cut back.

"Across America, there is a trend toward using more marijuana but we found that the change is bigger in states where it is legal," said lead author Stephanie Zellers, a recent University of Minnesota graduate who began the research while a Ph.D. student at CU Boulder's Institute for Behavioral Genetics (IBG).

For the study, Zellers and co-authors at CU Boulder, CU Anschutz Medical Campus and University of Minnesota analyzed data from two large longitudinal twin studies, which have tracked twins since childhood in both states: one housed at IBG and another at the Minnesota Center for Twin Family Research.

Participants were asked how frequently they used cannabis before and after 2014 when Colorado became one of the first states to commence legal sales of recreational marijuana. Recreational cannabis remains illegal in Minnesota. Before 2014, there was little difference in use between states, the study found. After 2014, across all participants, residents of states where recreational use of marijuana was legalized used cannabis 24% more frequently than those in illegal states.

When specifically comparing identical twins in which one now lives in a state where marijuana is legal and the other lives in a state where it is illegal, those living in the state with legal marijuana used cannabis 20% more frequently, the researchers found.

Because twins share their genes and tend to share socioeconomic status, parental influences and community norms, they provide well-matched controls for each other, enabling researchers to minimize alternative explanations for results and get at what causes what.

"This is the first study to confirm that the association between legal cannabis and increased use holds within families in genetically identical individuals," said co-author John Hewitt, a professor in the Department of Psychology and Neuroscience and faculty fellow at IBG. "This makes it much more likely that legalization does, in itself, result in increased use."

More than 141 million Americans now live in a state with recreationally legal cannabis and, according to
the National Institute on Drug Abuse, use among young adults age 19 to 30 is at an all-time high, with 43% reporting use in the past year and 29% in the last month.

"Typically, what we would expect to see is that people tend to increase use as adolescents and then reduce it as they transition into adult roles, family life and stable jobs," said Zellers. "Interestingly, we saw escalation, not reduction, in adults."

The authors note that it is unlikely that legalization would cause those who abstained from marijuana before to pick up the habit.

And preliminary results from their broader ongoing research project suggest increased use may not necessarily be a bad thing.

"In other analyses, we are finding that this increased use is not accompanied by increased problems, may be associated with less alcohol-related problems, and otherwise does not, in general, seem to have adverse consequences," said Hewitt.


Provided by University of Colorado at Boulder

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