

# Marijuana users substitute alcohol at 21

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A recent study looked at marijuana and alcohol use in people between the ages of 18 and 24. It's probably not surprising that the results show a drastic increase in alcohol consumption in people just over 21; after all, that's the minimum legal age to drink. What University of Illinois economist Ben Crost found remarkable is that, at the same age, there was an equally dramatic drop in marijuana use.

"Alcohol appears to be a substitute for marijuana. This sudden decrease in the use of marijuana is because they suddenly have easy access to alcohol," Crost said.

Crost and Santiago Guerrero used five years of data from the National Survey on Drug Use and Health. Survey participants estimated how many days in the past 30 that they had alcoholic drinks or used

marijuana. Because the precise age of each respondent was not known, data on the averages of substance use by month of age was obtained from the U.S. Department of Health and Human Services' Substance Abuse and Mental Health Services Administration.

The minimum legal [drinking age](#) provided a threshold for comparison.

"Whenever there is a discontinuous threshold where something changes, it provides a way to identify a causal effect," Crost said. "You can compare people right above and right below the threshold. They should be very similar in all other respects, except for that one difference.

"In this case, we looked at the cutoff that occurs when people, overnight get much easier access to alcohol. People who are 20 years and 11 months old are basically the same as people who are 21 with that one exception. Nothing should change about people's preference because people don't overnight lose their preference for marijuana. They use it or lose it over the long run but not from one month to the next."

Crost said that all of the costs and benefits from policies designed to reduce [alcohol consumption](#), such as the minimum legal drinking age or liquor taxes, need to be assessed.

"We need to take this possible substitution behavior into account," Crost said. "Marginally lowering the minimum legal drinking age would decrease the probability of [marijuana consumption](#) in young adults by about 10 percent. So, policies aimed at restricting alcohol consumption among [young adults](#) are likely to have the unintended consequence of increasing the use of illegal drugs, such as marijuana.

"If you think alcohol is much more harmful to people's health, then you should probably restrict alcohol use. If you think marijuana is more harmful, then you might want to consider loosening the restrictions for

alcohol," he said.

The study also analyzed men and women separately. Although men have higher baseline use levels of both alcohol and marijuana, the effect of the minimum legal drinking age is larger for women. For example, the frequency of marijuana use for men decreased 7.5 percent. Women's frequency of use decreased 15 percent.

"The effect of [alcohol](#) availability on [marijuana](#) use: Evidence from the minimum [legal drinking age](#)" by Benjamin Crost and Santiago Guerrero was published in the *Journal of Health Economics*.

Provided by University of Illinois at Urbana-Champaign

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