

U.S. News & World Report

# Pot Use Could Double Risk of Car Crash, Research Shows

**No reliable roadside test available to identify drugged drivers, experts say**

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**By Steven Reinberg**  
*HealthDay Reporter*

THURSDAY, Feb. 9 (HealthDay News) -- Getting behind the wheel within three hours after using marijuana nearly doubles a driver's risk of having an accident, a large new research review finds.

The risk is especially high for fatal crashes, and the risk is only a little less than that of people who drive drunk, Canadian researchers say.

"On the whole, alcohol increases the risk of a crash at a higher level than cannabis [marijuana]," said lead researcher Mark Asbridge, an associate professor in the community health and epidemiology department at Dalhousie University, in Halifax.

But marijuana makes it harder to judge distance and drivers often tailgate and swerve from lane to lane, which cuts down their reaction time and leads to crashes, he explained.

Although the extent of the problem isn't known, some studies have found that 5 percent of people report driving after using marijuana; and for those under age 25, as many as 20 percent, Asbridge said.

Studies on the effect of driving under the influence of marijuana have had mixed results, he said.

"There were some studies finding that cannabis actually had a negative association with crash risk, so people were actually safer using cannabis driving than when they weren't, but these were poorly designed studies," Asbridge said.

"So our study gives some clarity to the issue in showing a doubling of the risk in the very best studies that are out there and adds some level of justification to existing policies that restrict drug-impaired driving," he said.

The report was published in the Feb. 10 online edition of the *BMJ*.

To see how marijuana affected driving, Asbridge's team reviewed nine studies that included more than 49,000 people. This process -- called a meta-analysis -- looks for patterns across studies.

The researchers found that those driving under the influence of marijuana were nearly twice as likely to have a car crash as those who were not under the influence.

Studies outside the review have shown that drivers aged 35 and younger are more likely to have car accidents after using marijuana, the authors noted.

"These findings reaffirm many of our accepted understandings regarding acute cannabis intoxication and psychomotor performance," said Paul Armentano, deputy director of NORML (the National Organization for the Reform of Marijuana Laws). "That is why operating a motor vehicle while acutely impaired by cannabis is presently a criminal offense in all 50 states."

This risk appears to be greatest in less-experienced cannabis users, younger drivers, and among those who combine the use of cannabis and alcohol, Armentano pointed out.

"That said, it should further be noted that cannabis-induced changes in performance are typically subtle, short-lived and less dramatic in more experienced cannabis consumers, who appear to develop tolerance to some of the drug's behavioral effects," he added.

"Further, this overall elevated risk is far less than the elevated risk of accidents associated with the consumption of alcohol, including its use in legal quantities," Armentano said.

While some suggest that drivers should be tested for marijuana, so far, no effective test exists that can be done at a traffic stop to accurately pinpoint when a driver used the drug.

"This evidence makes a case for introducing policies to reduce cannabis-impaired driving," said Wayne Hall, from the University of Queensland Centre for Clinical Research in Brisbane, Australia. He wrote an accompanying editorial for the journal.

He said that roadside drug testing, such as that used for alcohol, may be a useful approach.

But there are no handy devices, such as a breathalyzer, to tell if someone has recently used marijuana, Asbridge noted.

"The challenge is defining a level that equates with impairment. A number of countries have already introduced roadside testing by deciding that any detectable evidence of recent use constitutes impaired driving. However, we do not know how effective testing has been because the policy has not been evaluated," Hall said.

Another expert outlined the problems with such tests.

"Because THC, the active ingredient in marijuana, can be detected several weeks after use of marijuana, it is hard to determine with certainty if a driver testing positive for marijuana is indeed impaired by the substance at the time of testing," said Dr. Guohua Li, a professor of epidemiology at Columbia University in New York City.

So more research is needed. "This issue is especially urgent and important in light of the ongoing epidemic of drugged driving and increased permissibility and availability of marijuana worldwide," Li said.

While recognition that driving under the influence of marijuana is a problem is a first step in finding ways to curb it, Jan Withers, national president of Mothers Against Drunk Driving (MADD), stated that "drunk driving remains the primary threat to our families on the road."

However, she added, "this study underscores the importance of the work that MADD is doing to support people who have been victimized by drugged driving and recognize law-enforcement's efforts to pioneer effective strategies to stop drugged driving. Notably, it shows the increased danger posed by those drivers using both alcohol and drugs."

### **More information**

For more about drugged driving, visit the [U.S. National Institute on Drug Abuse](#).

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Calgary Herald

# Driving on pot doubles crash risk, study finds

## Psychomotor skills impaired by cannabis

BY SHARON KIRKEY, POSTMEDIA NEWS FEBRUARY 10, 2012

Driving under the influence of marijuana nearly doubles the risk of a serious or fatal car crash, a Canadian study finds.

Cannabis is the most widely consumed illicit substance in the world, and the number of Canadians confessing to driving within an hour of using pot is growing, researchers from Dalhousie University write in this week's issue of the British Medical Journal.

In addition, "surveys of young drivers have also shown that rates of driving under the influence of cannabis have surpassed rates of drinking and driving in some jurisdictions," the Halifax team reports.

Not only is cannabis relatively easy to get, "many young people really don't believe that cannabis impairs," said lead author Mark Asbridge, an associate professor in the department of community health and epidemiology at Dalhousie.

Past studies into cannabis and crash risk have been mixed. Some have found an increased risk of being involved in a collision after using marijuana, while others have found either no association whatsoever, or even a lower risk, suggesting people were actually safer driving while intoxicated by pot than not.

The Halifax team set out to disentangle the evidence. They performed a "systematic" review, scouring the literature for the best-designed studies they

could find. In the end, they pooled data from nine studies that, combined, involved 49,411 drivers from Australia, New Zealand, the United States, France and the Netherlands.

All the crashes involved in the analysis took place on public roads and involved one or more moving vehicles such as cars, vans, trucks, buses and motorcycles.

The researchers found a 92 per cent increased risk - a near doubling - of a driver being involved in a collision resulting in serious injury or death, to themselves or others, if they used marijuana within two to three hours of getting behind the wheel.

The strongest association was with fatal crashes.

The study wasn't designed to answer the question: How much pot does it take before the crash risk increases?

Most studies in the analysis used any amount greater than zero as the cut-off for a positive test result. But, "for cannabis, there's not necessarily a cut-off that we can identify where risk was most heightened," Asbridge said.

Still, studies have shown that cannabis impairs the psychomotor skills needed for safe driving, he said. Marijuana affects perception and spatial awareness. Drivers have difficulty staying in their lanes, Asbridge said. "There's actually a psychological process where people often believe that they're driving safer than they really are and they don't recognize that they're following too closely, or making these lane violations."

Earlier studies that suggested it might be safer driving under the influence of cannabis often relied on urine samples. The problem there, Asbridge says, is that markers for cannabis in urine "can stay in your body for weeks or even over a month so that's not a measure of recent use at all."

His team only included studies that measured active THC metabolites from blood samples, which is a more accurate way of measuring whether someone has smoked up within the last few hours.

In 2004, four per cent of Canadian adults reported driving within one hour of consuming cannabis, up from 1.9 per cent in 1996-97.

According to the 2009 Canadian Alcohol and Drug Use Survey, 11.4 per cent of Canadians overall, and 33 per cent of 15-24 year olds reported using marijuana at least once in the previous year, the Halifax researchers note in the journal.

Governments in Australia, western Europe and the U.S. have introduced roadside testing for cannabis that uses a saliva test, instead of a breath test, to detect recent pot use, Wayne Hall, of the University of Queensland Centre for Clinical Research in Australia, writes in an accompanying editorial.

In Canada, specially trained police use a 12-step test that looks for "biomarkers" - dilated pupils, for example, or sweaty palms and elevated heart rate - to detect drug-impaired drivers, Asbridge said.

Some jurisdictions in Europe have a zero tolerance approach. "So if any measured level is in your system, you're guilty," Asbridge said.

Nearly two-thirds of Canadians are open to the idea of decriminalizing or legalizing marijuana, according to the results of a recent poll. At its recent biennial policy convention in Ottawa, the federal Liberal party voted overwhelmingly to support legalization of the drug.

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