

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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