

CAPITOL RESEARCH

● ● ● PUBLIC SAFETY POLICY

DRIVING UNDER THE INFLUENCE OF CANNABIS

Twenty-five states and the District of Columbia currently allow marijuana use either for medicinal and/or recreational purposes.¹ As marijuana use becomes more prevalent in states and legalization gains more popular support, states are addressing the myriad issues arising out of marijuana legalization, such as banking, environmental impacts and driving.² In light of a new report by the AAA Foundation for Traffic Safety that found drivers who recently used marijuana were involved in twice as many fatal car accidents in Washington after the state legalized cannabis, states are wrestling with the question: How high is too high to drive?³

Regulating the use of marijuana while using an automobile is not straightforward and presents a host of problems. Unlike alcohol intoxication, where the risk of having an accident increases significantly as blood alcohol levels increase, there is no scientific evidence that the same holds true for marijuana use. In fact, according to research by the AAA Foundation for Traffic Safety, there is no scientific evidence that a specific level of THC (delta-9-tetrahydrocannabinol—the primary mind-altering constituent found in marijuana) in a person's bloodstream is associated with an impaired ability to drive.⁴

In addition, the AAA research found that marijuana can affect people differently and some people with high blood levels of THC may not be impaired, while a person with lower levels may be too impaired to safely operate a vehicle. Because marijuana can have a variety of effects depending on the person, developing consistent and fair guidelines for its use while driving presents a challenge for policymakers. Ultimately, the AAA study concluded that a per se quantitative threshold for THC in blood tests is not scientifically supported.

Another challenge in using blood tests to regulate marijuana use and driving is that in some cases THC can be detectable in a person's blood hours or days after use, or in the case of a chronic user detectable THC levels could persist for weeks. In a study that monitored blood concentrations of THC in 25 chronic users, only nine users had no measurable THC over a seven-day period of not using the drug. After seven days of non-use, six of the 25 participants

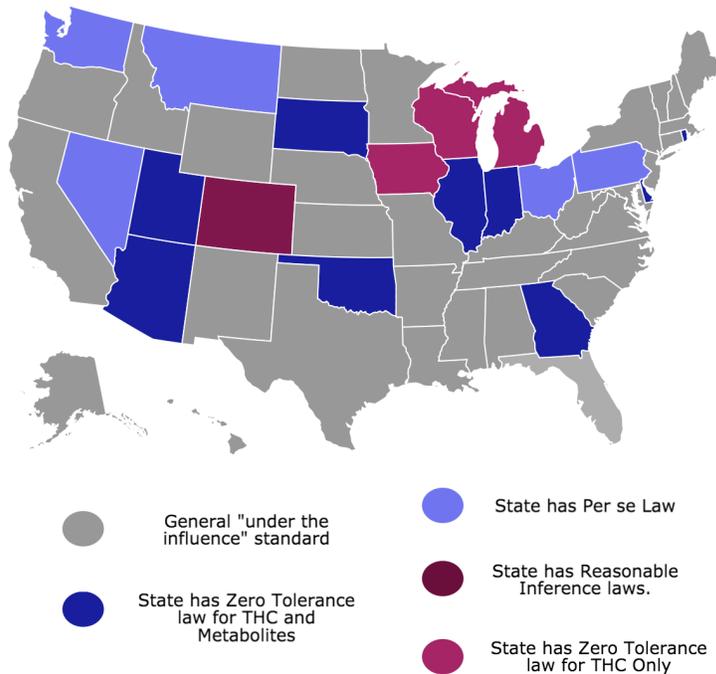


still had detectable concentrations of THC in their blood and five participants, all of whom were female, had detectable levels over all seven days.⁵

Similarly, the use of urine tests in determining the level of intoxication of a driver also can be problematic.⁶ Instead of testing for THC, the psychoactive component of marijuana, urine tests only detect the THC metabolites, most commonly carboxy-THC (THCC), which do not have any psychoactive components. While the presence of THC metabolites is accepted evidence of marijuana use, drug levels of these metabolites do not necessarily correlate with the amount of marijuana used or the time of the last usage.

In addition, while the AAA study found that car crashes increased after marijuana was legalized in Washington state, 39 percent of the study subjects who tested positive for THC in their blood also had detectable levels of alcohol.⁷ Research has shown

Driving Under the Influence of Cannabis



Source: Governors Highway Safety Association, available at http://www.ghsa.org/html/stateinfo/laws/dre_perse_laws.html

that alcohol used in combination with marijuana has very different impacts than the use of marijuana alone. In a study that compared drivers impaired by alcohol compared to drivers impaired by marijuana, researchers found that although rates of intoxication were similar between alcohol and marijuana, 10 times as many crashes were linked to alcohol over marijuana.⁸

While every state has laws addressing drug-impaired driving which generally prohibit driving while impaired by a substance, many states do not have marijuana-specific laws. The laws in states with marijuana-specific laws are based solely on the amount of THC or a metabolite in a person's bloodstream. The most common is a "zero tolerance" policy, in which it is illegal to operate a vehicle with any amount of THC and/or a THC metabolite in a person's blood or urine. Another approach is to adopt per se laws, in which specified amounts of the drug or particular amounts of metabolites are set as the legal standard. Drivers who are impaired over this limit are considered compromised drivers and are prosecuted.

The Governors Highway Safety Association reports that as of June 2016, 18 states had zero tolerance or non-zero per se laws for marijuana-impaired drivers.⁹ Arizona, Delaware, Georgia, Illinois, Indiana, Oklahoma, Rhode Island, South Dakota and Utah make it illegal to drive with any measurable amount of THC or its metabolites in a person's bloodstream. Marijuana is illegal in all of these states except for Arizona, Illinois and Rhode Island, which have legalized marijuana for medicinal purposes.

In Iowa, Michigan and Wisconsin, it is illegal for a person to drive with any measurable amount of THC in his or her body. However, these states do not set limits on THC metabolites. Medicinal marijuana is legal in Michigan, but marijuana remains illegal in Iowa and Wisconsin.

Other states make it illegal to drive when a specified level of THC in the blood is exceeded. Montana and Washington set the limit at 5 nanograms per milliliter (ng/ml), Nevada and Ohio set the limit at 2 ng/ml, while Pennsylvania, which recently legalized the medicinal use of marijuana, sets the limit at 1 ng/ml. For comparison, a THC concentration of 4 ng/ml corresponds to a blood alcohol content of 0.04 percent by weight.¹⁰

Colorado is unique in that if a driver's blood contains more than 5 ng/ml of THC, the driver is presumed to be under the influence, but can rebut this presumption with other evidence of sobriety. All other states define drugged driving while using cannabis in terms of whether the totality of the circum-

stances show that the driver was impaired. Under this standard, drug test results are considered, but are not the sole indicator of intoxication or impairment.

While zero tolerance laws are present in several states, some courts are rejecting these zero tolerance laws. In 2015, the Arizona Supreme Court ruled that the presence of marijuana in a driver's body is not per se proof that the driver was impaired.¹¹ Those charged can still be considered in violation of the law, but can escape prosecution if they convince the court that the concentrations of metabolites found in their test was insufficient to distract them from driving. Similarly, the Michigan Supreme Court held that drivers approved for using medical marijuana in accordance with the state's medical marijuana act could not be prosecuted under the state's zero tolerance policy unless they were "under the influence" of marijuana.¹²

As marijuana legalization becomes more prevalent in the United States, legislation to regulate impaired drivers on the road will continue to be assessed. However, as described above there remain challenges to fairly regulating the use of marijuana while driving. "There is understandably a strong desire by both lawmakers and the public to create legal limits for marijuana impairment, in the same manner as we do with alcohol," said AAA President and CEO Marshall Doney. "In the case of marijuana, this approach is flawed and not supported by scientific research."



- ¹ Governing, State Marijuana Laws Map, (May 25, 2016), available at: <http://www.governing.com/gov-data/state-marijuana-laws-map-medical-recreational.html>.
 - ² Christopher Ingraham, Support for Marijuana Legalization Has Hit an All-Time High, (March 25, 2016), available at: <https://www.washingtonpost.com/news/wonk/wp/2016/03/25/support-for-marijuana-legalization-has-hit-an-all-time-high/>.
 - ³ Michael Green, Fatal Road Crashes Involving Marijuana Double After State Legalizes Drug, (May 10, 2016), available at: <http://newsroom.aaa.com/2016/05/fatal-road-crashes-involving-marijuana-double-state-legalizes-drug/>.
 - ⁴ Michael Green, Fatal Road Crashes Involving Marijuana Double After State Legalizes Drug, (May 10, 2016), available at: <http://newsroom.aaa.com/2016/05/fatal-road-crashes-involving-marijuana-double-state-legalizes-drug/>.
 - ⁵ Karschner EL et al. "So Delta9-tetrahydrocannabinol concentrations indicate recent use in chronic cannabis users?" (Oct. 5, 2009), available at: <http://www.ncbi.nlm.nih.gov/pubmed/19804462>.
 - ⁶ Norchem, Urine Drug Test Information Sheet, available at: <http://www.norchemlab.com/wp-content/uploads/2011/10/marijuana.pdf>.
 - ⁷ Brian C. Tefft, "Prevalence of Marijuana Involvement in Fatal Crashers: Washington, 2010-2014," (May 2016), available at: <http://publicaffairsresources.aaa.biz/wp-content/uploads/2016/04/Prevalence-of-Marijuana-Involvement-Report-FINAL.pdf>.
 - ⁸ R. Andrew Sewell et al., "The Effect of Cannabis Compared with Alcohol on Driving," (May 1, 2010), available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2722956/pdf/nihms115730.pdf>.
 - ⁹ Governors Highway Safety Association, Drug Impaired Driving Laws, (June 2016), available at: http://www.ghsa.org/html/stateinfo/laws/dre_perse_laws.html.
 - ¹⁰ Grotenhermen, Franjo, et al. "Developing Science-Based Per Se Limits for Driving Under the Influence of Cannabis", (September 2005), available at: <http://www.canorml.org/healthfacts/DUICreport.2005.pdf>.
 - ¹¹ Howard Fischer, 'Affirmative Defense' Established for Drugged-Driving Cases, (Nov. 21, 2015), available at: <http://verdenews.com/main.asp?SectionID=1&SubSectionID=1&ArticleID=68177>.
 - ¹² People v. Koon, Michigan Supreme Court (May 2013), available at: <http://courts.mi.gov/Courts/MichiganSupremeCourt/Clerks/Recent%20Opinions/12-13-Term-Opinions/145259%20Opinion.pdf>
- Governors Highway Safety Association, Drug Impaired Driving Laws, (June 2016), available at: http://www.ghsa.org/html/stateinfo/laws/dre_perse_laws.html.