



Talking Points for Driving after Using Cannabis

Traffic Safety

- More than 35,000 people die annually on our roadways.ⁱ
- Motor vehicle crashes are the leading cause of death for young people (aged 8 to 24 years).ⁱⁱ
- Years of life lost from dying prematurely in a motor vehicle crash total more than 1.3 million years.ⁱⁱ
 - That is the equivalent of the working careers of more than 40,000 doctors.
 - Imagine what diseases could be cured with these medical resources.
- To reach our vision of zero traffic fatalities, we need to examine all crash factors including impaired driving.ⁱⁱⁱ

Driver Impairment

- Driver impairment involving alcohol and other drugs is a significant risk factor in fatal motor vehicle crashes.^{iv}
- While the prevalence of drivers testing positive for alcohol is decreasing, the prevalence of drivers testing positive for other drugs is increasing – especially driving after using cannabis (DUIC).^v
- Much more is known about the effects of alcohol on driver impairment and crash risk than for cannabis.^{vi}
- Cannabis is a different type of drug than alcohol; it is more difficult to predict its effects on an individual driver and resulting crash risk.^{vi}

Cannabis

- Cannabis is a plant-based drug, which changes neurological functioning and psychological state – either for recreational or medicinal purposes.^{vii}
- The primary active ingredient of cannabis is delta-9-tetrahydrocannabinol (THC).^{vii}
- Many factors determine the effect of THC, and there is variability in the conclusions made across different studies.^{viii}
- To overcome this variability, special analytic methods that combine results from multiple studies to estimate the “true” (average) effects can be used.^{ix}
- THC is absorbed in the blood and transported to the brain where it alters brain activity and impairs cognitive functions – especially the capacity to direct attention and control behavior appropriately.^x
- Safe driving depends on many of these cognitive functions, so when these functions are impaired, the ability to drive safely is also impaired.^{xi}
- Some users may report that they can compensate for the effects of cannabis. However, evidence suggests that it is not possible to compensate successfully for all forms of impairment that impact driving and safety.^{xii}

Driving Under the Influence of Cannabis and Crash Risk

- Most drivers (>90%) do not DUIC and have negative attitudes about this behavior.^{xiii}
- Drivers with detected levels of THC make more unsafe acts while driving that result in crashes.^{xiv}
- Drivers with detected levels of THC are over-represented in crashes related to inattention and speeding.^{xv}
- Drivers with detected levels of THC are more often responsible for the crashes in which they are involved.^{xvi}
- Drivers with detected levels of THC are twice as likely to die in a crash (even higher when combined with other drugs such as alcohol).^{xvii}
- Currently, evidence that legalization of cannabis increases the number of fatal crashes is neither consistent nor sufficient.^{xviii} There is a need to examine this question in more states over longer post-legislation periods.



VISION ZERO
zero deaths · zero serious injuries

M MONTANA
STATE UNIVERSITY

Western
Transportation
Institute

Center for Health & Safety Culture

References

- ⁱ <https://www.ihs.org/ihs/topics/t/general-statistics/fatalityfacts/state-by-state-overview>
- ⁱⁱ <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812499>
- ⁱⁱⁱ <https://www.towardzerodeaths.org/strategy/background/>
- ^{iv} <https://www.nsc.org/road-safety/safety-topics/impaired-driving>
- ^v <https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/11388b-roadsidesurvey-execsummary.pdf>
- ^{vi} <https://www.ghsa.org/resources/DUID18>
- ^{vii} Quickfall, J. & Crockford, D. (2006). Brain neuroimaging in Cannabis Use: A review. *Journal of Neuropsychiatry and Clinical Neuroscience*, 18(3), 318 – 332.
- ^{viii} Capler, R., Bilsker, D., Van Pelt, K., & MacPherson, D. (2017). Cannabis Use and Driving: Evidence Review. Canadian Drug Policy Coalition.
- ^{ix} Hostiuć, S., Moldoveanu, Negoii, I., & Drima, E. (2018). The association of unfavorable traffic events and cannabis use: A meta-analysis. *Frontiers in Pharmacy*, 9(99), 1 – 14.
- ^x Broyd, S.J. van Hell, H.H., Beale, C., Yucel, M., & Solowitz, N. Acute and chronic effects of cannabinoids on human cognition – Systematic review. *Biological Psychiatry*, 79, 557 – 567.
- ^{xi} Hartman, R.L. & Huestis, M.A. (2013). Cannabis effects on driving skills. *Clinical Chemistry*, 59(3), 478 – 492.
- ^{xii} Ramaekers J.G, Kauert G, Theunissen E.L, Toennes S.W, & Moeller M.R. (2009). Neurocognitive performance during acute THC intoxication in heavy and occasional cannabis users. *Journal of Psychopharmacology*, 23(3), 266-77.
- ^{xiii} <https://www.mdt.mt.gov/research/projects/cannabis-use.shtml>
- ^{xiv} Dubois, S., Mullen, N., Weaver, B., & Bédard, M. (2015). The combined effects of alcohol and cannabis on driving: Impact on crash risk. *Forensic Science International*, 248, 94-100.
- ^{xv} Romano, E., & Voas, R. B. (2011). Drug and alcohol involvement in four types of fatal crashes. *Journal of studies on alcohol and drugs*, 72(4), 567-76.
- ^{xvi} Drummer O.H. (2009) Epidemiology and traffic safety: culpability studies. In: Verster J.C., Pandi-Perumal S.R., Ramaekers J.G., de Gier J.J. (eds) *Drugs, Driving and Traffic Safety*. Birkhäuser Basel.
- ^{xvii} Li, M-C, Brady, J.E., DiMaggio C., Lusardi, Tzong, K.Y., & Li, G. (2011). Marijuana use and motor vehicle crashes. *Epidemiological Reviews*, 34, 65 – 72.
- ^{xviii} <https://www.ghsa.org/resources/MarijuanaImpacts18>

This document is printed at state expense. Information on the cost of producing this publication may be obtained by contacting the Department of Administration. Alternative accessible formats of this document will be provided on request. Persons who need an alternative format should contact the Human Resources and Occupational Safety Division, Department of Transportation, 2701 Prospect Avenue, PO Box 201001, Helena, MT 59620. Telephone 406-444-9229. Those using a TTY may call 1(800)335-7592 or through the Montana Relay Service at 711.