



## Alcohol, Drugs & Impairment Division

### Alcohol, Drugs and Impairment Division - NATIONAL SAFETY COUNCIL

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#### Position Statement

#### **Performance Impairment in Safety-Sensitive Positions Related to Cannabis and Other Cannabinoids**

The Alcohol, Drugs and Impairment Division (ADID) of the National Safety Council (NSC) supports policies that substantially reduce or eliminate safety risks from the use of cannabis (marijuana), other products with delta-9-tetrahydrocannabinol ( $\Delta^9$ -THC), its isomers and derivatives, and other impairing cannabinoids by persons in safety-sensitive positions. Some examples are  $\Delta^8$ -THC,  $\Delta^{10}$ -THC,  $\Delta^9$ -THC acetate (THC-O, THC-O acetate),  $\Delta^9$ -tetrahydrocannabiphorol (THC-P) and hexahydrocannabinol (HHC). *"A safety-sensitive position can be defined as one that, if not performed in a safe manner, can cause direct and significant damage to property, and/or injury to the employee, others around them, the public and/or the environment."*<sup>1,2</sup> Examples include pilots, police, military personnel, health care personnel, commercial drivers and nuclear facility staff.

Cannabis and related products can impair numerous aspects of human performance to include cognitive and psychomotor functions such as alertness, reaction time, estimating distance, decision-making, and memory. The National Academies of Sciences, Engineering and Medicine, (NAS) concluded in 2017, *"There is substantial evidence of a statistical association between cannabis use and increased risk of motor vehicle crashes"*.<sup>3</sup>  $\Delta^9$ -THC has sites of action in the human brain associated with cognitive and psychomotor functions that are not reflected in its concentration in blood.<sup>4</sup> Therefore, when assessing impairment associated with cannabis use,  $\Delta^9$ -THC concentrations in biological fluids do not correlate with the degree of human performance impairment. There is no support from the literature for a  $\Delta^9$ -THC threshold concentration in biological fluids to ensure that there is no performance impairment in safety-sensitive positions.

Recent studies proposed various wait-times depending on the route of consumption. For example, 5 hours<sup>5</sup> or 8-12 hours<sup>6</sup> after inhalation, and 12 hours<sup>6</sup> after ingestion prior to performing in a safety-sensitive position. However, these proposals are not rigorous enough to ensure public safety, as almost all the studies reviewed involved single acute dosing and inhaled route of administration. There are large research gaps regarding vaping, oral, high doses, and multiple dosing of all routes of administration. Clear, robust scientific evidence from published studies is lacking to support persons working in safety-sensitive positions within 24 hours after last use of cannabis and/or related products.<sup>7,8,9,10,11,12,13,14</sup> Some scientific evidence exists to support that some persons can safely perform safety sensitive duties 1 week after last cannabis use.<sup>15,16</sup> The bulk of scientific evidence reviewed would support most persons performing in a safety-sensitive position 1 month after last cannabis use.<sup>17,18,19,20,21,22,23,24,25</sup> Employers need to assess each job function and associated risk for accidents when defining cannabis use policies.

A large body of research indicates that the use of cannabis and related products is more likely than not incompatible with the performance of safety-sensitive functions. NSC advised in 2019, *"We urge employers to implement policies stating no amount of cannabis consumption is acceptable for those who work in safety sensitive positions"*.<sup>26</sup> NSC maintains the safest policy that cannabis and related product use is incompatible with those persons engaged in safety-sensitive tasks and positions. NSC supports transferring workers to non-safety sensitive positions when using cannabis and other impairing cannabinoid products for recreational and/or medical purposes.

Approved by ADID Membership Vote: September 6, 2024

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- <sup>2</sup> “Safety Sensitive” refers to jobs that impact safety of the employee and the safety of others as a result of performing that job. For example, 49 CFR §382.107 defines safety sensitive for commercial motor vehicle operators.
- <sup>3</sup> National Academies of Sciences, Engineering, and Medicine (2017). The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research. The National Academies Press, Washington, DC. [https://www.ncbi.nlm.nih.gov/books/NBK423845/pdf/Bookshelf\\_NBK423845.pdf](https://www.ncbi.nlm.nih.gov/books/NBK423845/pdf/Bookshelf_NBK423845.pdf) Accessed June 11, 2024
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- <sup>9</sup> Leirer, V.O., Yesavage, J.A. & Morrow, D.G. (1991). Marijuana Carry-Over Effects on Aircraft Pilot Performance, *Aviation, Space, and Environmental Medicine*, 62(3), 221-227.
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