



Improving the Detection of Drivers Impaired by Cannabis: Supplementing the Standardized Field Sobriety Test

Based on a study by the Canadian Centre on Substance Use and Addiction in collaboration with the Royal Canadian Mounted Police

Key Findings

- After alcohol, cannabis is the most frequently detected substance among drivers arrested for impaired driving.
- There's a need for a brief field test that could be easily used by law enforcement at roadside to identify drivers whose ability to operate a vehicle may be adversely affected by cannabis use.
- Sensitivity of the Standardized Field Sobriety Test (SFST) to detect cannabis impairment is considerably lower than that for detecting alcohol impairment.
- Adding the finger-to-nose (FTN) test and assessing (1) head movements and jerks and/or (2) eyelid tremors during the SFST produced a test battery with enhanced sensitivity to cannabis impairment.

RECOMMENDATION

Use the finger-to-nose test and additional observations with the Standardized Field Sobriety Test (SFST) protocol to better detect potential cannabis impairment.

Enhanced Roadside Test for Cannabis Impairment

1. If a police officer has a reasonable suspicion that a driver has consumed alcohol or drugs, they can demand the person perform the three tests included in the SFST while making these additional observations:
 - Head movements and jerks — jerking of the head while following the stimulus during the Horizontal Gaze Nystagmus test
 - Eyelid tremors — the presence of distinct tremors of the eyelids
2. Conduct the Finger-to-Nose (FTN) test



The additional observations and test are already known to practitioners in the field of drug-impaired driving, particularly officers trained as Drug Recognition Experts (DREs) and *require little additional training*.

Details on Study Findings

(Beirness et al., 2024)

- In the sample of study participants who had used cannabis:
 - Supplementing the SFST with the **FTN test and observations of eyelid tremors** increased the percentage of those who met the threshold score for possible cannabis impairment to **86%** (up from 67% from the SFST alone).
 - Supplementing the SFST with the **FTN test and observations of head movements and jerks** increased the percentage of those who met the threshold score for possible cannabis impairment to **88%** (up from 67% from the SFST alone).
- Rebound dilation (the return to dilation after constriction while still in the presence of light) had some of the best results for identifying the highest proportion of participants meeting the threshold score for possible cannabis impairment; however, additional training in the administration and scoring of rebound dilation is required and may not always be practical given inconsistent roadside lighting conditions.
- Given the results of this study, combined with practical considerations of training and test administration, **the battery of tests best suited to be used by law enforcement officers at roadside to detect drivers impaired by cannabis is the SFST combined with the FTN test and observations of (1) head movements and jerks and/or (2) eyelid tremors.**

For more information on cannabis use and driving, see [Clearing the Smoke on Cannabis: Cannabis Use and Driving – An Update](#). (Canadian Centre on Substance Use and Addiction, 2022)

References

Beirness, D. J., Smith, D., & Brubacher, J. R. (2024). Enhancing the Standardized Field Sobriety Test to detect cannabis impairment: An observational study, *Traffic Injury Prevention*, 25(1), 1–7. <https://doi.org/10.1080/15389588.2023.2262658>

Canadian Centre on Substance Use and Addiction. (2022). *Clearing the smoke on cannabis: Cannabis use and driving – an update*. Ottawa, Ont.: Author. <https://www.ccsa.ca/clearing-smoke-cannabis-cannabis-use-and-driving-update-0>

Suggested citation: Wood, S. W., & Beirness, D. J. (2024). *Improving the detection of drivers impaired by cannabis: Supplementing the Standardized Field Sobriety Test*. Ottawa, Ont.: Canadian Centre on Substance Use and Addiction and Royal Canadian Mounted Police.

