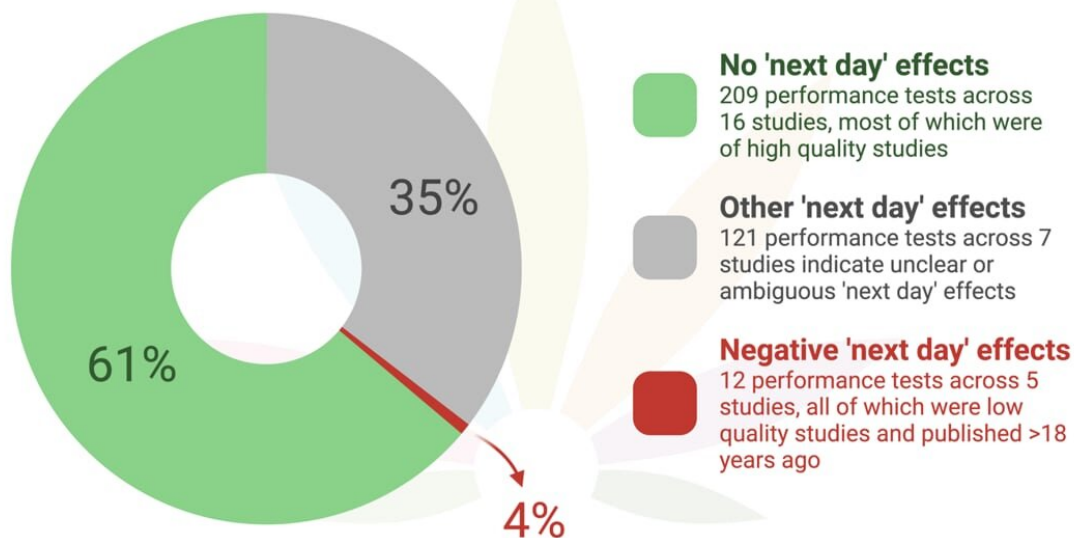


# Limited evidence that cannabis 'hangover' blunts performance

February 7 2023, by Philip Ritchie

## Review of 20 studies examining the 'next day' effect of cannabis use



Credit: Lambert Initiative for Cannabinoid Therapeutics

The first systematic review examining the phenomenon of a "next day" hangover caused by cannabis has found scant evidence impairment exists hours after consumption.

The research, due to be published in an upcoming issue of *Cannabis and Cannabinoid Research*, is available online ahead of print.

Dr. Danielle McCartney, a research fellow with the University of Sydney's Lambert Initiative for Cannabinoid Therapeutics, led the analysis with colleagues Ms. Anastasia Suraev, a Research Fellow, and Professor Iain McGregor, the Academic Director.

While cannabis has been known to impair cognition and safety-sensitive task performance immediately after use, the question of impairment many hours or days after use has been unclear.

To find out, the researchers evaluated 20 published studies investigating the effect the intoxicating component of cannabis, called tetrahydrocannabinol (THC), leaves on users more than eight hours after use.

This window known as the "next day" effect encompasses any impact, including cognition or safety-sensitive task performance, beyond that eight-hour threshold.

"Most studies didn't detect 'next day' effects of cannabis use, and the few that did had significant limitations," Dr. McCartney said.

"Overall, it appears that there is limited scientific evidence to support the assertion that cannabis use impairs 'next day' performance.

"Though, further research is still required to fully address this issue."

Among the 345 performance tests administered across the studies, just 12 performance tests (representing 3.5% of the total) conducted across five papers demonstrated significant "next day" deterioration following THC use.

However, none of those five studies used randomized double-blind placebo-controlled designs and all were dated by more than 18 years.

"We can't really comment on the magnitude of these effects because they weren't all that well reported," Dr. McCartney said.

"They didn't appear to be associated with a specific dose of THC, route of THC administration or type of assessment."

## **Present day consequences**

THC "next day" effects are of significance to drug driving laws and safety-sensitive workplaces, which are strict and lack the nuances of an alcohol breath test, for example. The presence of the THC biomarker is enough to fail a test.

"THC can persist in blood and oral fluid for an extended period of time," Dr. McCartney said.

"So it is important to find out whether impairment can persist, too.

"People are being advised not to drive or perform other safety-sensitive tasks for 24 hours after cannabis use. However, we found little evidence to support this recommendation."

However, as the researchers point out in their review, any "next day" effect from THC is unlikely to be more impairing than a hangover caused by alcohol.

"Policy makers should bear in mind that the implementation of very conservative workplace regulations can have serious consequences, such as termination of employment with a positive drug test," the study authors said.

"They can also impact the quality of life of individuals who are required to abstain from medicinal cannabis used to treat conditions such as

insomnia or [chronic pain](#) for fear of a positive workplace or roadside drug test.

"Studies involving medicinal [cannabis](#) users are strongly recommended."

**More information:** Danielle McCartney et al, The "Next Day" Effects of Cannabis Use: A Systematic Review, *Cannabis and Cannabinoid Research* (2022). [DOI: 10.1089/can.2022.0185](https://doi.org/10.1089/can.2022.0185)

Provided by University of Sydney

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