Roadside Marijuana Tests Called 'Pseudoscientific' by Law Expert

WIDELY USED ROADSIDE CANNABIS IMPAIRMENT TESTS ARE SCIENTIFICALLY INADEQUATE, ACCORDING TO LAW PROFESSOR

A newly published academic commentary is raising red flags over the reliability and scientific integrity of roadside marijuana impairment tests frequently used by U.S. law enforcement. The critique—penned by William J. McNichol of Rutgers University's Camden School of Law—calls for an overhaul in how the country detects marijuana-related impairment, urging policymakers to shift control away from police practices and toward science-based protocols.

PAPER PUBLISHED IN LEADING ADDICTION JOURNAL CALLS CURRENT METHODS "PSEUDOSCIENCE" AND "INCONSISTENT"

McNichol's research, published in the *Journal of Studies on Alcohol and Drugs*, argues that most current methods—ranging from bodily fluid tests to behavioral observations by police officers—lack the scientific rigor required to accurately identify cannabis impairment. The problem, he notes, stems from the fact that these methods often imitate alcohol-based testing strategies without considering the fundamental biochemical and behavioral differences between alcohol and cannabinoids.

Rather than establishing new standards rooted in medical and biochemical science, McNichol contends that U.S. drug enforcement policy has settled into outdated, pseudoscientific practices. He writes that law enforcement-developed protocols, such as Drug Recognition Expert (DRE) programs, are based more on "police science" than actual science.

BLOOD THC LEVELS FAIL TO PROVIDE A RELIABLE MEASURE OF IMPAIRMENT—AND TESTING IS OFTEN IMPRACTICAL

Unlike alcohol, where blood alcohol concentration (BAC) is a well-validated indicator of impairment, THC does not correlate consistently with behavioral or motor impairment. THC and its metabolites can linger in the body for days or even weeks—long after intoxication has worn off.

In fact, the article notes, "the presence per se of cannabinoids in bodily fluids provides little, if any, information concerning behavioral impairment." Attempts to use THC blood levels as a proxy for impairment often lead to unreliable results. Field testing for THC is also technically challenging and costly, with many departments abandoning the practice after poor outcomes and high expenses.

DRUG RECOGNITION EXPERTS USE SUBJECTIVE AND SCIENTIFICALLY UNSUPPORTED METHODS TO DETERMINE IMPAIRMENT

One of the most troubling aspects highlighted by McNichol is the reliance on DREs and Workplace Impairment Recognition Experts (WIREs), who are trained to identify drug impairment based on physical and behavioral cues.

These cues include muscle tone checks, eye movement tests, and vital signs like blood pressure and heart rate—all of which can vary for many reasons unrelated to drug use. Notably, DRE training instructs officers to check whether a suspect's muscles feel "rigid" or "flaccid," an assessment method that would not be recognized or used by any medical professional.

Studies referenced in the article show that these tests perform barely better than random guessing. In one 1998 controlled study, the DRE protocol yielded false results nearly 46% of the time.

PUBLIC POLICY AND IMPAIRMENT DETECTION SHOULD BE GUIDED BY SCIENCE NOT LAW ENFORCEMENT

McNichol argues that the responsibility for developing impairment detection standards should shift to the scientific and medical communities, rather than remaining with law enforcement organizations.

He calls for the creation of new psychomotor tests and the identification of valid biochemical markers that indicate actual functional impairment—not merely presence of cannabinoids in the system.

The professor notes that reliance on current methods will continue to produce unfair, inconsistent outcomes and could contribute to criminalizing non-impaired individuals simply because of lingering metabolites or flawed observations.

FEDERAL AGENCIES AND RESEARCHERS HAVE ALSO QUESTIONED THC IMPAIRMENT TESTING ACCURACY

McNichol's conclusions echo findings from multiple federal agencies. For instance, Frances Scott of the U.S. Department of Justice's National Institute of Justice stated on a government podcast that "per se" THC limits may never be scientifically viable due to varying effects between chronic and infrequent users.

Other studies, including a 2023 review published in *The Lancet*, analyzed 12 peer-reviewed papers and concluded that there is no linear relationship between THC levels and impaired driving. Ten of those studies found no meaningful correlation at all between THC and driver performance metrics such as speed, reaction time, or lane discipline.

FEDERAL GOVERNMENT AND CONGRESS HAVE FAILED TO DELIVER ON PROMISES TO ESTABLISH OBJECTIVE STANDARDS

Although Congress has expressed interest in developing better testing methods—especially through provisions in transportation and infrastructure bills—the efforts have failed to deliver timely results. The Department of Transportation missed a mandated deadline to report on marijuana impairment testing strategies, leaving the issue unresolved as cannabis legalization expands.

Similarly, a 2023 congressional report reiterated the importance of field-ready, objective testing standards but did not offer any concrete path forward.

DRUG TESTING POLICIES IN TRANSPORTATION INDUSTRY FACE GROWING BACKLASH AND DRIVER SHORTAGES

The transportation industry, particularly commercial trucking, continues to suffer from labor shortages exacerbated by rigid drug testing policies. Current federal law prohibits commercial drivers from using cannabis, even off-duty and even in legal states.

Reports by the American Transportation Research Institute (ATRI) have highlighted the disconnect between THC blood tests and impairment, arguing for a new approach that focuses on actual driving ability rather than past cannabis use.

A 2022 ATRI survey showed that 72% of licensed U.S. truck drivers supported loosening cannabis laws and testing rules, while 66% favored federal legalization.

SCIENTIFIC CONSENSUS GROWS: BLOOD THC CONCENTRATIONS DO NOT EQUAL IMPAIRMENT

Several federal and academic institutions have echoed the need for more nuanced testing. A 2015 report by the National Highway Traffic Safety Administration (NHTSA) stated: "It is inadvisable to try and predict effects based on blood THC concentrations alone."

In 2023, NHTSA reiterated this position, noting that "drug concentration in blood does not correlate to driving impairment" in the same way BAC does. Their reports call into question the very laws that define "impairment" based on nanogram thresholds in a driver's bloodstream.

REFORM ADVOCATES CALL FOR AN END TO 'DISCRIMINATORY' TESTING PRACTICES AND A MOVE TOWARD EVIDENCE-BASED POLICY

Advocates across the cannabis policy spectrum are urging federal officials to replace outdated and discriminatory drug testing practices. They argue that these tests disproportionately affect responsible users, particularly in industries like transportation, healthcare, and public safety.

Policy experts, public health researchers, and even some members of Congress believe that true safety lies in detecting real impairment—not chemical presence. They emphasize the need to develop tools that test for psychomotor performance, cognitive function, and decision-making ability in real time.

TIME TO END THE ERA OF GUESSWORK: THE ROAD AHEAD FOR MARIJUANA IMPAIRMENT TESTING

As more states legalize recreational and medical marijuana, the need for accurate, science-based impairment testing is urgent. McNichol's paper, along with mounting scientific consensus, makes it clear that continuing to rely on outdated or pseudoscientific methods is no longer tenable.

Whether through development of advanced psychomotor assessments, new biomarkers, or portable lab technology, the future of cannabis-related impairment detection must be grounded in objective, replicable science—not subjective roadside observations.

Without serious reform, the legal system risks convicting drivers and workers not because they are impaired, but because the tests meant to protect public safety simply don't work.