

Researchers to Study CBD's Impact on Driving Ability

West Virginia University Researchers Study How CBD Influences Driving Performance, with a Focus on Gender Differences

As **cannabidiol (CBD) products** become more widely available, researchers at **West Virginia University (WVU)** are delving deeper into how the substance affects [driving performance](#) and whether its impact differs between men and women. With the use of CBD on the rise, understanding its potential effects is crucial, particularly for activities like driving, where performance and safety are key concerns.

The new study, which includes **300 participants**, expands on WVU's earlier work in a **2021 pilot trial**, aiming to explore the relationship between CBD use and driving in greater depth. Supported by a **\$2.2 million grant** from the **National Institute on Drug Abuse**, this five-year project is expected to yield some of the most comprehensive data on the subject to date.

Investigating Gender Differences in Driving Performance

One of the main focuses of the study is to determine whether CBD's effects on driving differ between **males and females**. Preliminary data from the 2021 pilot trial hinted at some differences in how men and women responded to CBD while driving, but the small sample size limited the researchers' ability to draw definitive conclusions. With a larger pool of participants, this new study is poised to take a closer look at these potential gender-based variations.

"We want to dive into that more to see if that relationship truly exists," said **Toni Rudisill**, assistant professor in the **WVU School of Public Health Department of Epidemiology and Biostatistics**. She noted that this will be one of the largest studies on **CBD** in terms of participant numbers, offering valuable insights that could guide future research and policy.

How CBD Impacts Driving

CBD is a **hemp-derived compound** that was removed from the list of federally controlled substances with the passage of the **2018 Agriculture Improvement Act**. It is now widely available and sold over-the-counter in various forms, such as **gummies, oils, and beverages**. Although users often turn to CBD for its reported benefits—like reducing **anxiety, pain**, or promoting **relaxation**—its effects on cognitive functions, particularly those related to **driving**, remain underexplored.

"There is still much we don't know about how CBD affects individuals," said Rudisill, who also serves as a scholar at the **West Virginia Clinical and Translational Science Institute**. Some research suggests that CBD can cause **drowsiness** or **sedation**, which raises concerns about its potential impact on **driving safety**. This is why the WVU team is keen on investigating how CBD affects **reaction times, stimuli lapses**, and other key aspects of **psychomotor function** that are essential for safe driving.

The Study: Testing Cognitive and Driving Performance

To assess the effects of CBD on driving performance, participants will be monitored in a controlled lab environment. The study will compare the cognitive and psychomotor function of individuals who consume CBD with those who take a **placebo**. Before any CBD is administered, participants will undergo **baseline cognitive tests** and practice driving simulations.

The driving simulator, which Rudisill describes as a “**very fancy video game**,” will be used to evaluate participants’ reaction times and responses to various driving scenarios. Participants will then be given either a **300-milligram** or **150-milligram** dose of CBD, or a placebo, after which they will spend two hours completing cognitive and psychomotor tests, followed by a longer driving simulation.

By analyzing the differences between the placebo and CBD groups, the researchers hope to determine whether CBD affects critical driving functions and whether those effects are more pronounced in men or women. The study will also look at how different dosages of CBD influence driving performance.

Collaboration and Future Implications

This multidisciplinary project brings together a team of experts from various fields. In addition to Rudisill, key collaborators include **Dr. Gordon Smith**, the **Stuart M. and Joyce N. Robbins Distinguished Professor** in the WVU School of Public Health, as well as **James Mahoney**, an associate professor in **Behavioral Medicine and Psychiatry and Neuroscience** at the **WVU School of Medicine**. Other contributors include **Dr. Treah Haggerty** and **Sijin Wen**, professors with expertise in **Family Medicine** and **Biostatistics**, respectively.

Through their combined expertise, the research team aims to provide both the scientific community and consumers with a clearer understanding of CBD’s potential impacts on driving. By investigating the **gender differences** and psychomotor effects of CBD, the study could help inform public health guidelines and ensure safer consumption practices, especially in situations where driving is involved.

The results of this study are anticipated to have broad implications, not just for consumers of **CBD products**, but also for regulatory bodies seeking to implement more informed policies about **cannabis-derived substances** and their impact on public safety.

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