Medical Xpress

Even low doses of synthetic cannabinoids can impair cognitive performance

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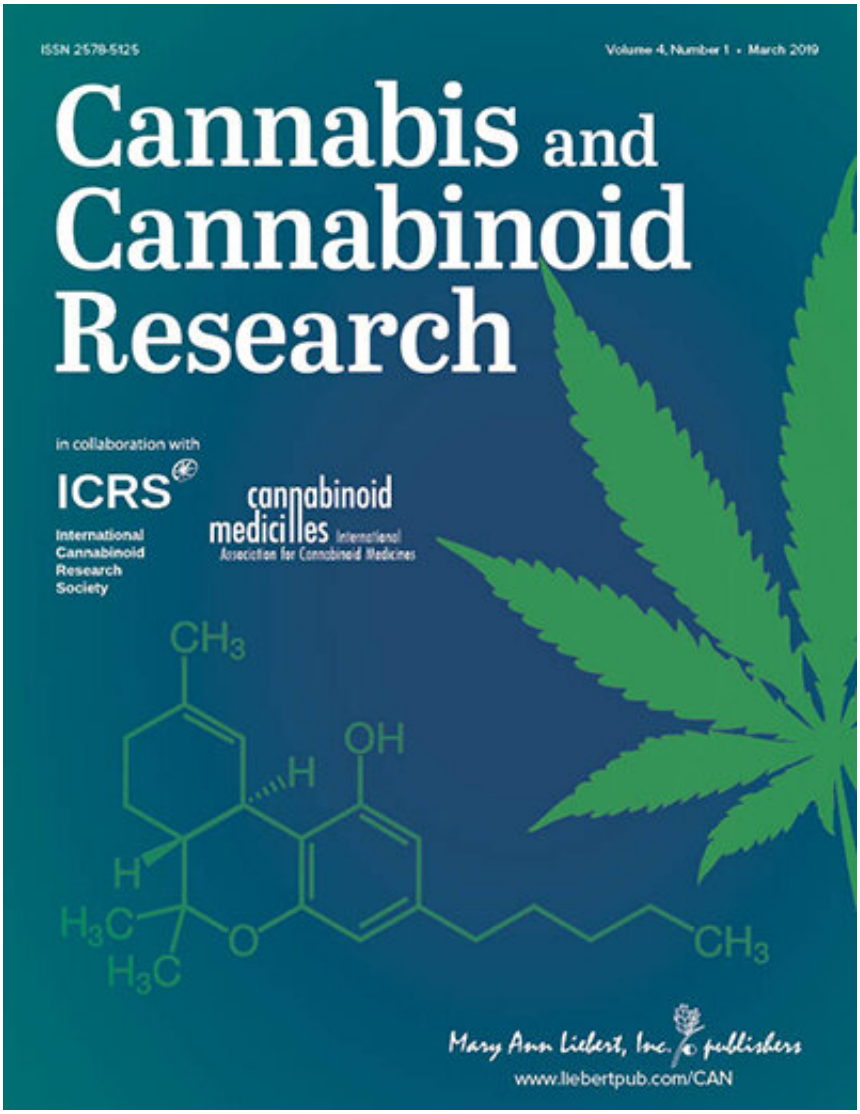

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A new study shows that inhaled doses of as little as 2 mg of the synthetic cannabinoid JWH-018 can significantly impair critical thinking and memory, slow reaction times, and increase confusion and dissociation. The results of this placebo controlled, cross-over study are published in *Cannabis and Cannabinoid Research*.

Seventeen healthy participants inhaled the vapor of JWH-018 in doses ranging from 2-6.2 mg. The article entitled "Neurocognition and Subjective Experience Following Acute Doses of the Synthetic Cannabinoid JWH-018: Responders Versus Nonresponders" describes the highly variable subjective intoxication of the participants. Coauthors Eef Theunissen, Nadia Hutten, Natasha Mason, Kim Kuypers, and Johannes Ramaekers, Maastricht University (The Netherlands) and Stefan Toennes, Goethe University of Frankfurt (Germany), concluded that the serious adverse effects seen in overdose cases are the result of either higher doses or mixtures of synthetic cannabinoids.

"This is incredibly important as it is the first controlled human laboratory study of synthetic cannabinoids that have been found in illicit drug products such as Spice and K2," says Associate Editor Dr. Ryan Vandrey, John Hopkins School of Medicine. "Demonstrating safety and providing initial dose-effects on key outcomes will hopefully inspire additional research in this area."

More information: Eef L. Theunissen et al, Neurocognition and Subjective Experience Following Acute Doses of the Synthetic Cannabinoid JWH-018: Responders Versus Nonresponders, *Cannabis and Cannabinoid Research* (2019). DOI: 10.1089/can.2018.0047

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