Does Cannabis Use Impair Treatment Adherence?

People with HIV who recently used marijuana were twice as likely to miss taking their meds.

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Older people living with HIV who used cannabis within the past month were about twice as likely to sometimes miss doses of their antiretroviral medications, according to a study published in Open Forum Infectious Diseases.

"[O]ur findings suggest that regular cannabis use by older people with HIV is associated with a greater risk of imperfect ART [antiretroviral therapy] adherence" compared with not using cannabis, the study authors concluded.

Estimates suggest that one quarter to one half of people living with HIV use cannabis, substantially higher than the proportion in the general population. Marijuana is commonly used to improve appetite, manage pain or relieve depression or anxiety. Whether cannabis use affects treatment adherence is an important question, as missing meds can lead to drug resistance, disease progression and HIV transmission. Some prior research has shown that people who report heavy cannabis use have poorer adherence and worse treatment outcomes, but less is known about infrequent users.

Kristine Erlandson, MD, of the University of Colorado Anschutz Medical Campus, and colleagues aimed to characterize associations between cannabis use and antiretroviral adherence in a cohort of older people with HIV.

The analysis included 1,011 participants in the ACTG A5322 trial, a long-term follow-up study of HIV-positive adults at more than 30 clinical research sites in the United States and Puerto Rico. Between November 2013 and December 2021, participants were ask about their HIV treatment and adherence twice yearly and surveyed about their substance use annually.

All participants were ages 40 or older, with a median age of 51. About 80% were men, half were white, one third were Black and about 20% were Latino. All were currently on antiretroviral treatment and most had an undetectable viral load, but many had previously had AIDS, and the median nadir (lowest-ever) CD4 count was below 200.

Within this group, 18% reported current cannabis use (defined as use during the past month), 6% reported intermittent use (during the past year but not the last month) and 76% said they either had not used cannabis within the past year or had never done so. However, current users were not broken out further by those who used marijuana only occasionally and those who did so every day. The study also did not ask about reasons for cannabis use (for example, medicinal or recreational). The groups were generally similar in terms of demographics and HIV status, but people who used cannabis were also more likely to drink alcohol, smoke tobacco and use other substances.

Treatment adherence was categorized as 100%, meaning no missed doses during the past week, or less than 100%, meaning at least one missed dose. Current cannabis users were 53% more likely to report less than perfect adherence compared with nonusers, the researchers reported. Among people who had missed a dose during the past week, 21% were current users, 19% were intermittent users, and 10% had not used cannabis during the past year or ever. When the data were broken out by sex, the association between cannabis use and less than 100% adherence was statistically significant for men but not for women.

“These findings have important clinical implications as suboptimal ART adherence is associated with ART drug resistance, virologic failure and elevated risk for mortality,” the study authors wrote. They noted that even a small reduction is adherence has been linked to greater inflammation and a higher risk for drug resistance, less effective viral suppression and higher mortality. However, they also noted that some research suggests that cannabis may be associated with reduced inflammation in people with HIV.

“Further research is needed to elucidate the mechanisms by which cannabis use decreases ART adherence in older people with HIV and advance the development of more efficacious methods to mitigate nonadherence in this vulnerable population,” the researchers added. “[F]uture work is needed to elucidate how the adverse effects of cannabis use on ART adherence could be balanced against the potential beneficial uses of cannabis to reduce inflammation and immune activation in older people with HIV.”

Click here to read the study.
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