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Working to Reform Marijuana Laws

Human Immunodeficiency Virus (HIV)

The human immunodeficiency virus is a retrovirus that invades cells in the human immune system, making it highly susceptible to infectious diseases.

Survey data indicates that cannabis is used by as many as one in three North American patients with HIV/AIDS to treat symptoms of the disease as well as the side effects of various antiretroviral medications.[1-4] A study published in 2007 reported that more than 60 percent of HIV/AIDS patients self-identify as "medical cannabis users."[5] Patients living with HIV/AIDS frequently report using cannabis to counter symptoms of pain, anxiety, appetite loss, and nausea.[6] HIV patients with a history of cannabis use are less likely than nonusers to consume prescription drugs such as opioids.[7] A pair of recent studies also report that HIV patients who use cannabis exhibit better neurocognitive performance compared to matched controls[8-9] — a result that is likely because of the anti-inflammatory properties of cannabinoids.[10] Another study has reported that patients who use cannabis therapeutically are more than three times more likely to adhere to their antiretroviral therapy regimens than non-cannabis users.[11]

A 2008 longitudinal analysis of both HIV-positive and HIV-negative men reported that cannabis use does not adversely impact CD4 and CD8 T cell counts.[12] Other studies indicate that cannabis use may boost immune function in some HIV patients.[13-14] A 2018 study of 198 HIV-infected patients by investigators at the University of California, San Francisco reported, "Heavy cannabis use … in HIV-infected, ART-treated individuals was associated with lower frequencies of activated CD4 and CD8 T cells compared to frequencies of these cells in non-cannabis-using individuals. [… O]ur work suggests that cannabinoids may have an immunological benefit in the context of HIV infection, as lowering the frequency of activated T cells could limit the risk of development of non-AIDS-associated comorbidities."[15]

Among patients co-infected with HIV and hepatitis C, a history of cannabis use is associated with several beneficial outcomes – including lower odds of fatty liver disease[16] and insulin resistance.[17] Cannabis use in HIV patients has not been negatively associated with mortality[18] In fact, a recent five-year longitudinal trial reported that co-infected HIV/hepatitis C patients with a history of cannabis use possess a reduced mortality risk compared to nonusers.[19]

The benefits of cannabis and cannabinoid use in HIV patients have been documented in clinical trials. For example, the results of a 2007 study determined "Smoked marijuana also has clear medical benefit in HIV-positive marijuana smokers by increasing food intake and improving mood and objective and subjective sleep measures."[20]

Separate clinical data has reported that inhaling cannabis significantly reduces HIV-associated neuropathy compared to placebo. Authors of a study published in 2007 reported that inhaling cannabis three times daily reduced patients' pain by 34 percent. They concluded, "Smoked cannabis was well tolerated and effectively relieved chronic neuropathic pain from HIV-associated neuropathy [in a manner] similar to oral drugs used for chronic neuropathic pain."[21]

Researchers at the University of California at San Diego reported similar findings in 2008. Writing in the journal *Neuropsychopharmacology*, they concluded: "Smoked cannabis … significantly reduced neuropathic pain intensity in HIV-associated … polyneuropathy compared to placebo, when added to stable concomitant analgesics. … Mood disturbance, physical disability and quality of life all improved significantly during study treatment. … Our findings suggest that cannabinoid therapy may be an effective option for pain relief in patients with medically intractable pain due to HIV."[22]

Additional studies are ongoing and some researchers have suggested that cannabis-based medicines may one day "provide a beneficial intervention" and a “novel means to reduce morbidity and mortality in PLWH” [people living with HIV].[23-24]

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