

Parkinson's Disease

Parkinson's disease (PD) is a progressive disorder of the central nervous system that results in uncontrolled tremors, slowness of movement, and muscle rigidity. There is no cure for PD, but some conventional medications are available to treat various symptoms of the disease.

Patients with PD commonly report using cannabis therapeutically,¹⁻⁵ and one recent survey finds that nearly 25 percent of US patients with the disease acknowledge having consumed cannabis within the past six months.⁶ Survey respondents typically report that their cannabis use substantially mitigates their PD symptoms, including the relief of pain, depression, stiffness/akinesia, and improved sleep.⁷

A limited number of human studies support their claims. In a study published in 2017, investigators affiliated with Israel's Tel Aviv University evaluated Parkinson's disease symptoms in subjects at baseline and then again 30 minutes after inhaling cannabis. Researchers reported that inhaled cannabis was associated with "significant improvement after treatment in tremor, rigidity, and bradykinesia (slowness of movement). No significant adverse effects of the drug were observed."⁸

In another Israeli study published that same year, investigators reported that cannabis inhalation – both short-term and long-term – was associated with improved pain relief in 20 patients with PD.⁹

In yet another study published in 2017, researchers assessed the daily use of cannabis in 47 patients with Parkinson's disease over a period of several months (ranging from three months to 84 months). Most (82 percent) of the patients reported that medical cannabis "improved their overall symptoms." Specifically, cannabis administration was associated with reductions in pain, stiffness, and tremor as well as with improvements in mood and sleep quality. Participants were also less likely to report suffering from falls after initiating cannabis use. Authors concluded, "[T]he results of our study demonstrate that most of the users had found MC (medical cannabis) to improve their condition, and that MC treatment was safe, without major side effects."¹⁰

Human studies also indicate that CBD administration may provide improvements in PD patients' quality of life. A series of case summaries published in the *Journal of Clinical Pharmacy and Therapeutics* in 2014 reported that daily cannabidiol treatment reduced symptoms of REM sleep behavior disorder (RBD) in patients with Parkinson's.¹¹ The results of a 2014 randomized placebo-controlled clinical also concluded that CBD administration is associated with improved "quality of life" and "well-being" in PD patients.¹² A more recent placebo-controlled trial determined that acute CBD administration (300mg) was associated with a statistically significant reduction in experimentally-induced anxiety and tremor in PD patients.¹³

The compound has also been shown to mitigate symptoms of psychosis in patients with PD.¹⁴

Some experts in the field have speculated that "various cannabinoids or other compounds targeting the endogenous cannabinoid system might be useful in the treatment of PD symptoms"¹⁵ – with one recent literature review opining, "Cannabinoids could influence the development and manifestations of PD."¹⁶

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