

CANNABIDIOL (CBD)

Cannabidiol (CBD) is a chemical component of the *Cannabis sativa* plant, commonly known as marijuana. While tetrahydrocannabinol (THC) is a major psychoactive chemical component of the marijuana plant, CBD is void of such properties.¹ CBD does not contribute to psychoactive effects that can be experienced by the user, but it is currently listed as a Schedule I substance under the Controlled Substances Act (CSA) since it is part of the cannabis plant.²

CBD has been shown to possess a wide variety of therapeutic properties including antiepileptic, antipsychotic, analgesic, anticonvulsant, anti-inflammatory and antioxidant properties.³ However, the lack of research providing solid evidence of CBD's pharmacokinetics (what the body does to the drug) and pharmacodynamics (what the drug does to the body) has made it difficult to introduce CBD as a valid option for treatment of these conditions.⁴ Still, CBD legalization is growing across the country for patients with certain medical conditions.

Recently, the Food and Drug Administration (FDA) has approved the first drug that contains a derivative from marijuana, Epidiolex. Epidiolex is a CBD-containing oral solution used for the treatment of two rare and serious forms of epilepsy, Lennox-Gastaut syndrome and Dravet syndrome.² Clinical studies have shown Epidiolex to be effective in reducing the frequency of seizures in patients suffering from these forms of epilepsy.²

Although there has been reported efficacy in reviews and studies of CBD, it is important to note that not all CBD is created equally. Differences in quality and potency result from variance in sources, extraction methods, and manufacturing processes.⁵ FDA-approved Epidiolex delivers a reliable, consistent dose, purified to contain 99% CBD.² In contrast, non-regulated CBD products, which come in many forms including topical creams, oil drops and syrups, can consist of unpurified extracts containing unknown percentages of CBD along with contaminants such as THC, other cannabinoid derivatives and more.⁶ Additionally, there are differences between CBD studies performed in labs targeting particular conditions versus those performed (if performed) on CBD products found online, in cannabis stores, and in other stores marketed to consumers for "general well-being."⁵

Precision Diagnostics offers testing for the psychoactive compound tetrahydrocannabinol (THC) in both urine and oral fluid. Considering the growing interest in CBD products, variability in their production and the changing state regulations regarding THC and CBD, monitoring for THC may serve as an identifier for CBD use in cases where the CBD product used is not from a regulated source.

**A Precision Diagnostics trained Clinical Support Specialist can
assist with further review of your patient's results**

(800) 635-6901 Option 2

References:

1. Szaflarski, J. P., Bebin, E. M. (2014). Cannabis, cannabidiol, and epilepsy – From receptors to clinical response. *Epilepsy & Behavior*, 41: 277-282.
2. U. S. Food and Drug Administration (2018, June 25). FDA approves first drug comprised of an active ingredient derived from marijuana to treat rare, severe forms of epilepsy. FDA News Release. Retrieved from <https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm611046.htm> on August 21, 2018.
3. Blessing, E. M., Steenkamp, M. M., Manzanares, J., Marmar, C. R., (2015) Cannabidiol as a potential treatment for anxiety disorders. *Neurotherapeutics*, 12:825-836.
4. Lucas, C. J., Galettis, P., Schneider, J. (2018) The pharmacokinetics and pharmacodynamics of cannabinoids. *British Journal of Clinical Pharmacology*, 84(11): 2477-2482.
5. Miller, Anna (2018, March 1). What is CBD Oil – and Should You Use It? U. S. News. Retrieved from <https://health.usnews.com/wellness/articles/2018-03-01/what-is-cbd-oil-and-should-you-use-it> on August 10, 2018.
6. U. S. Food and Drug Administration (2017, November 1). FDA warns companies marketing unproven products, derived from marijuana, that claim to treat or cure cancer. FDA New Release. Retrieved from <https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm583295.htm> on August 10, 2018.

Precision Diagnostics is a leader in clinical laboratory testing and medication adherence monitoring. Specializing in qualitative and quantitative drug testing, our innovative state-of-the art technology provides new levels of data visibility and pricing transparency.

Precision’s role is to ensure each participant, from the patient to the provider and the payor, benefits from our continued commitment to the principles of value-based care and medically necessary test utilization.

Precision Diagnostics

4215 Sorrento Valley Blvd.

San Diego, CA 92121

(800) 635-6901

info@precisiondxlab.com

precisiondxlab.com



innovation



integrity



insights



outcomes