



The Lex Line

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CBD Special: Introduction

Recently, along with increased promotion of CBD products, there have been mounting concerns relating to this drug. The following is important information assembled from nationally recognized CBD studies and other reputable publications. We hope this article may shed light on some questions we have received.

CBD Oil and Drug Testing:

According U.S. Government Definitions “The term ‘hemp’ means the plant *Cannabis sativa* L. and any part of that plant, including the seeds thereof and all derivatives, extracts, cannabinoids, isomers, acids, salts, and salts of isomers, whether growing or not, with a delta-9 tetrahydrocannabinol concentration of not more than 0.3 percent on a dry weight basis” (Agricultural Marketing Act, p. 59).

In common language, Hemp is a Cannabis plant which contains .3% or less of THC. To further describe, the only sizable legal distinction between Hemp and Marijuana is the amount of THC, as they are all the same “type of plant”, or genus.

DEA comments on CBD Oil (cannabidiol): “For practical purposes, all extracts that contain CBD will

also contain at least small amounts of other cannabinoids (THC). Although it might be theoretically possible to produce a CBD extract that contains absolutely no amounts of other cannabinoids (THC), the DEA is not aware of any industrially-utilized methods that have achieved this result” (Drug Enforcement Administration, 2016).



This means that there are no CBD-only products on the market nor any way to make CBD products completely devoid of THC- even if they are advertised as such. When a product makes the claim “0% THC” or “THC Free”, this can still include “small” amounts of THC- the actual percentage does not need to be defined. Additionally, there currently aren’t any laws in place to define terms such as “Pure”, “CBD Isolate”, or “Natural”. With this information, please be aware that CBD oil may still result in a positive drug test, especially in “large doses”. Ironically, according to the World Health Organization, doses of CBD oil are also not standardized (White, p.11). For more information, please consult your health care professional.



Recent studies have found that CBD alters liver function, although the exact dose at which this occurs is unclear (White, p. 12). According to the Medical Marijuana Program, CBD is a “potent inhibitor” of vital enzymes which break down drugs and other toxins (p. 11). But why is this important?

A Quick Science Lesson: The two essential enzymes hampered by CBD are Cytochromes P3A4 and P2D6. CYP3A4 metabolizes about a quarter of all drugs, while CYP2D6 metabolizes many antidepressants (Medical Marijuana Program, p. 11). This means that CBD effects bodily drug concentrations including but not limited to: antihistamines, opioids, beta blockers, antipsychotics, tricyclic antidepressants, calcium channel blockers, and antiretrovirals (HIV medicines) - to name a few (Lynch and Price, p. 394).

Medicines which are metabolized by these enzymes:

Clarithromycin, Telithromycin, Erythromycin
 Restasis, Sandimmune, Neoral, Gengraf
 Celexa, Lexapro, Prozac, Paxil
 Progesterone, Testosterone
 Dayquil, Nyquil, Theraflu
 Xanax, Valium, Ambien
 Lipitor, Zocor, FloLipid
 Codeine, Oxycodone
 Buspirone
 Tramadol
 Fentanyl
 Viagra

(Flockhart DA., 2007)

Observed from the list above, a wide range of medications are affected by CBD. Most of these medications can have serious side-effects in incorrect concentrations. Some of these drugs also

have the potential to produce severe toxicity in the blood if not metabolized by the body correctly.

Despite these risks, the absence of scientific consensus and standardized dosing has slowed regulation of CBD. This means, currently, there is no legal need to provide a drug interaction warning on CBD products.

However, CBD is not the only substance which hinders these enzymes. Grapefruit juice is also a known CYP3A4 inhibitor, while medications like Benadryl and Paxil both inhibit CYP2D6 (Bailey et al., p.101; Lynch and Price, p. 393). Look at the warning labels on your medications to see if they advise against grapefruit or Benadryl. This reading is intended to be general information, please check with your health care professional for further drug interaction information.

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