

**What About CBD?**  
*A Collection of Readings*



CBD or Cannabidiol seems to be everywhere these days, and like THC, CBD comes in many forms.

You can find CBD in pill form, capsules, oils, tinctures, edibles, and topical creams. CBD is not only being marketed to us for a variety of purposes, it is being touted as a valuable elixir for our pets to treat stress, separation anxiety and symptoms related to aging.



CBD may not be psychoactive like THC, however just because it does not produce the high that THC does, does not mean it is safe, or without risk.

In a Forbes article; *Marijuana Study Finds CBD Can Cause Liver Damage*, Mike Adams reports:

“A new study suggests that CBD may spawn its fair share of health issues. Specifically, scientists have learned that this substance could be damaging our livers in the same way as alcohol and other drugs.

Researchers at the University of Arkansas for Medical Sciences recently rolled up their sleeves to investigate CBD hepatotoxicity in mice. What they found was while this cannabis derivative is gaining significant recognition as of late in the world of wellness, people that use CBD are at an elevated risk for liver toxicity. The findings, which were published earlier this year in the [journal \*Molecules\*](#), suggest that while people may be using CBD as a safer alternative to conventional pain relievers, like acetaminophen, the compound may actually be just as harmful to their livers”

Online: ( [Marijuana Study Finds CBD Can Cause Liver Damage](#) )

**What is it?**

“CBD is a chemical compound from the cannabinoid family that naturally occurs in the cannabis plant. There are 108 different types of cannabinoids in cannabis. Delta-9-tetrahydrocannabinol, or THC, is probably the best-known thanks to its psychoactive properties -- it's the one that gets you "high" -- but CBD is quickly gaining ground due to its potential therapeutic benefits.

The cannabis plant comes in many different varieties. For decades though, the US Drug Enforcement Administration (DEA) treated them all the same,



classifying cannabis as a Schedule I substance. Schedule I drugs are considered to have "no currently accepted medical use and a high potential for abuse" and are thus illegal to produce or possess.

However, the [Agriculture Improvement Act of 2018](#) (aka the Farm Bill) changed all that. The Farm Bill legalized "hemp," which the legislation defined as cannabis that contains no more than **0.3% THC**, nationwide. Cannabis that contains higher levels of THC is now listed as "marijuana" and remains a Schedule I drug.

In other words, if a **CBD product comes from a hemp plant, it's legal; if it comes from a marijuana plant, it's federally illegal, despite local laws**. And even if it does come from a hemp plant, there's often **no guarantee it won't contain THC**, thanks to things like cross-pollination and the absence of industry regulation”  
Online: ([What is CBD and why is it so popular right now?](#)).

### **Psychoactive?**

“CBD does not get you high, but [in an article published through Harvard Medical School], Dr. Levy says the idea that it's not psychoactive is something of a misconception in his opinion. “It does change your consciousness. You feel mellow, experience less pain, and are more comfortable," he says. In addition, some CBD products do contain small amounts of THC”  
Online: ([CBD products are everywhere. But do they work?](#))

Ryan Vandrey, an associate professor of psychiatry and behavioral sciences at the Johns Hopkins University School of Medicine commented, “There's this perception that CBD is not psychoactive, but I think that's inaccurate. Research from our lab and others shows that CBD can produce subjective drug effects. CBD drug effects are different from THC and do not seem to produce intoxicating effects where performance or cognition is impaired. While that's not a bad thing, impacting mood and behavior *is* a psychoactive drug effect. For example, caffeine is a psychoactive drug because it affects brain function and mood. Online: ( [What is CBD and What are its Health Benefits?](#) )

### **Health Benefits**

The Federal Food and Drug administration (FDA) cautions, “You may have noticed that cannabidiol (CBD) seems to be available almost everywhere, and marketed as a variety of products including drugs, food, dietary supplements, cosmetics, and animal health products. Other than [one prescription drug product](#) to treat two rare, severe forms of epilepsy, the U.S. Food and Drug Administration (FDA) has not approved any other CBD products, and there is very limited available information about CBD, including about its effects on the

body... The FDA is concerned that people may mistakenly believe that trying CBD “can’t hurt.” The agency wants to be clear that we have seen only limited data about CBD’s safety and these data point to real risks that need to be considered. As part of the drug review and approval process for the prescription drug containing CBD, it was determined that the risks are outweighed by the benefits of the approved drug for the particular population for which it was intended. Consumer use of any CBD products should always be discussed with a healthcare provider. Consumers should be aware of the potential risks associated with using CBD products. Some of these can occur without your awareness, such as:

- **Liver Injury:** During its review of the marketing application for [Epidiolex](#) — a purified form of CBD that the FDA approved in 2018 for use in the treatment of two rare and severe seizure disorders — the FDA identified certain safety risks, including the potential for liver injury. This serious risk can be managed when an FDA-approved CBD drug product is taken under medical supervision, but it is less clear how it might be managed when CBD is used far more widely, without medical supervision, and not in accordance with FDA-approved labeling. Although this risk was increased when taken with other drugs that impact the liver, signs of liver injury were seen also in patients not on those drugs. The occurrence of this liver injury was identified through blood tests, as is often the case with early problems with the liver. Liver injury was also seen in other studies of CBD in published literature. We are concerned about potential liver injury associated with CBD use that could go undetected if not monitored by a healthcare provider.
- **Drug Interactions:** Information from studies of the FDA-approved CBD drug Epidiolex show that there is a risk of CBD impacting other medicines you take — or that other medicines you take could impact the dose of CBD that can safely be used. Taking CBD with other medications may increase or decrease the effects of the other medications. This may lead to an increased chance of adverse effects from, or decreased effectiveness of, the other medications. Drug interactions were also seen in other studies of CBD in published literature. We are concerned about the potential safety of taking other medicines with CBD when not being monitored by a healthcare provider. In addition, there is limited research on the interactions between CBD products and herbs or botanicals in dietary supplements. Consumers should use caution when combining CBD products with herbs or dietary supplements.
- **Male Reproductive Toxicity:** Studies in laboratory animals showed male reproductive toxicity, including in the male offspring of CBD-treated pregnant females. The changes seen include decrease in testicular size, inhibition of sperm growth and development, and decreased circulating testosterone, among others.

Because these findings were only seen in animals, it is not yet clear what these findings mean for human patients and the impact it could have on men (or the male children of pregnant women) who take CBD. For instance, these findings raise the concern that CBD could negatively affect a man's fertility. Further testing and evaluation are needed to better understand this potential risk.

In addition, CBD can be the cause of side effects that you might notice. These side effects should improve when CBD is stopped or when the amount ingested is reduced. This could include changes in alertness, most commonly experienced as somnolence (sleepiness), but this could also include insomnia; gastrointestinal distress, most commonly experienced as diarrhea and/or decreased appetite, but could also include abdominal pain or upset stomach; and changes in mood, most commonly experienced as irritability and agitation.

The FDA is actively working to learn more about the safety of CBD and CBD products, including the risks identified above and other topics, such as:

- **Cumulative Exposure:** The cumulative exposure to CBD if people access it across a broad range of consumer products. For example, what happens if you eat food with CBD in it, use CBD-infused skin cream and take other CBD-based products on the same day? How much CBD is absorbed from your skin cream? What if you use these products daily for a week or a month?
- **Special Populations:** The effects of CBD on other special populations (e.g., the elderly, children, adolescents, pregnant and lactating women).
- **CBD and Animals:** The safety of CBD use in pets and other animals, including considerations of species, breed, or class and the safety of the resulting human food products (e.g., meat milk, or eggs) from food-producing species.”

Online: ( [What You Need to Know \(And What We're Working to Find Out\) About Products Containing Cannabis or Cannabis-derived Compounds, Including CBD](#) )

## Keep in Mind

“It is important to be aware of the presence of synthetic cannabinoids available on the market, such as “spice.” These substances have severe adverse effects and have led to hospitalizations following ingestion. As to the labeling of concentrations in products, a 2017 survey reported that of 84 online CBD and hemp oil products examined, only 26 were accurately labeled for CBD and THC content, with **CBD often being over labeled** and **THC under labeled**, consistent with the statements made by the FDA. There have also been documented cases of pediatric THC intoxication related to CBD product ingestion, likely due to this noted variation in products, signaling the need for more regulation of the market” Online: ([Clinicians’ Guide to Cannabidiol and Hemp Oils](#) )

*For Comments on this, newsletter or suggestions for future articles please contact:*

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