

# **CBD oil: all the rage, but is it really safe and effective?**

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(HealthDay)—Cannabidiol (CBD) oil has become the hot new product

in states that have legalized medical marijuana.

The non-intoxicating marijuana extract is being credited with helping treat a host of medical problems—everything from epileptic seizures to anxiety to inflammation to sleeplessness.

But experts say the evidence is scant for most of these touted benefits.

Worse, CBD is being produced without any regulation, resulting in products that vary widely in quality, said Marcel Bonn-Miller, an adjunct assistant professor of psychology in psychiatry at the University of Pennsylvania School of Medicine.

"It really is the Wild West," Bonn-Miller said. "Joe Bob who starts up a CBD company could say whatever the hell he wants on a label and sell it to people."

Cannabidiol is extracted from the flowers and buds of marijuana or hemp plants. It does not produce intoxication; marijuana's "high" is caused by the chemical tetrahydrocannabinol (THC).

CBD oil is legal in 30 states where medicinal and/or recreational marijuana is legal, according to *Governing* magazine.

Seventeen additional states have CBD-specific laws on the books, according to *Prevention* magazine. Those are Alabama, Georgia, Indiana, Iowa, Kentucky, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Wisconsin and Wyoming.

## **Strong Evidence for Treating Epilepsy**

Only one purported use for cannabidiol, to treat epilepsy, has significant

scientific evidence supporting it.

Last month, a U.S. Food and Drug Administration advisory panel unanimously recommended approval of the CBD medication Epidiolex to treat two rare forms of childhood epilepsy.

"That's really the only area where the evidence has risen to the point where the FDA has said this is acceptable to approve a new drug," said Timothy Welty, chair of the department of clinical sciences at Drake University's College of Pharmacy and Health Sciences, in Des Moines, Iowa.

For the rest of CBD's potential uses, there is simply too little evidence to make a firm conclusion.

For example, some human clinical trials suggest that CBD could be effective in treating symptoms of anxiety, particularly social anxiety, Bonn-Miller said.

This is the potential use for CBD with the most evidence after usefulness in epilepsy, but "there's a decent gap between those two," he said.

"There have been clinical trials in adults, but a lot smaller than the epilepsy studies that have been done in kids," Bonn-Miller said.

CBD's usefulness as an anti-inflammatory medication is the next most promising, but those results come mostly from animal studies, experts said.

## **Most Other Uses Largely Unproven**

The rest of the potential uses—as an antipsychotic, antidepressant or sleep aid "have all been studied in animals, with only one or two

examples of studies in humans," Bonn-Miller said.

And Welty said the studies that have featured humans for these other CBD uses have either been case reports or studies that did not compare results against a control group that did not use the oil.

"There's no control, so it's basically how do you know if we're dealing with the true effect of the drug or just simply a placebo effect because somebody thinks they've been given a drug that will be beneficial?" Welty said.

There also are concerns about both the quality of CBD oil being produced and its potential side effects, the experts added.

## **Lack of Regulation Also Concerning**

Because of the legally murky nature of marijuana, the FDA has not stepped in to regulate products like CBD oil, Bonn-Miller said. States are struggling to put regulations in place, but they don't have the deep pockets of the federal government.

Meanwhile, a 2017 study led by Bonn-Miller found that nearly 7 of 10 CBD products didn't contain the amount of marijuana extract promised on the label.

Nearly 43 percent of the products contained too little CBD, while about 26 percent contained too much, Bonn-Miller said.

"CBD is kind of a tricky drug because it's not very well absorbed orally," Welty explained. "Less than 20 percent of the drug is absorbed orally. If it isn't made in the right way, you may not be getting much [drug](#) into your systemic circulation."

Worse, about 1 in 5 CBD products contained the intoxicating pot chemical THC, Bonn-Miller and his colleagues found.

"That's a problem because THC can increase anxiety. It can actually make seizures worse. Those are the sorts of things you need to be careful about," Bonn-Miller said.

"If I were a consumer, purchasing it for myself or my kid, I would want to test it so that I knew what it actually had in it, because I couldn't trust what was on the label," Bonn-Miller concluded.

## **Potential Interactions With Other Meds**

Studies on CBD also have raised concerns about possible interactions with other drugs.

For example, epilepsy studies found that "there were very clearly increases in the blood levels of some other anti-epileptic drugs when people were on CBD," Welty said.

This could mean that people taking anti-epilepsy drugs alongside CBD will need to adjust their dosage downward to avoid side effects, Welty noted.

There also is some indication that CBD might harm the liver. About 10 percent of people taking CBD in studies had increases in liver enzymes, which would indicate possible liver damage, Welty said.

"About 2 to 3 percent of individuals taking CBD actually had to discontinue because their liver enzymes went so high it was of concern to the people running the study," he said.

Welty recommends that people interested in CBD seek out a doctor who

has read up on the extract and its potential uses.

"My bottom-line advice is people really need to be under the care of a health care provider who understands CBD. They need to be monitored and managed by that individual, and not just go out and buy CBD thinking it's going to be the answer," Welty said.

**More information:** Marcel Bonn-Miller, Ph.D., adjunct assistant professor, psychology in psychiatry, University of Pennsylvania School of Medicine, Philadelphia; Timothy Welty, Pharm.D., chair, department of clinical sciences, College of Pharmacy and Health Sciences, Drake University, Des Moines, Iowa

The U.S. National Institutes of Health has more about [cannabidiol](#).

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