

Reaching a Tipping Point

UNDERSTANDING THE LEGAL LANDSCAPE OF HEMP AND CANNABIDIOL

by Deborah Parker Wong

IN 2013, A HEMP STRAIN known as Charlotte’s Web drew national attention to the therapeutic benefits of cannabidiol (CBD), especially for children suffering from health issues that make them prone to seizures. Developed by six siblings known as “the Stanley Brothers”—the founders of Colorado-based CW Hemp—Charlotte’s Web represents one of hundreds of commercial CBD products now sold throughout the U.S. that contain THC levels of less than 0.3 percent.

The efficacy of Charlotte’s Web and similar hemp strains paved the way for Epidiolex, a hemp-derived CBD solution approved by the U.S. Food and Drug Administration (FDA) June 25. Developed by London-based GW Pharmaceuticals to treat patients as young as 2 who suffer seizures caused by two rare epileptic syndromes, Epidiolex is referred to by the federal government as “Cannabidiol Oral Solution” (CBD-OS) and could be legally available as soon as this fall.

Historically, hemp has played an important role as a utilitarian plant; widely deemed a “super-food” today, it’s also consumed as a nutritional supplement. Once the regulatory floodgates are opened, consumer adoption of hemp-derived CBD as a plant-based medicine seems like an obvious and natural next step.

The FDA’s approval of Epidiolex, as well as the recent introduction of the Hemp Farming Act of 2018 in Congress, will help pave the way for the legal sale and distribution of CBD across the United States. This would be viewed as a boon for the entire cannabis category, as it establishes a precedent for the medicinal value of cannabis and should further the acceptance of CBD as a safe and therapeutic treatment option.



CBD Products Proliferate in Legal States

Human utilization of industrial hemp can be traced back 10,000 years. It was one of the earliest crops cultivated by our ancestors, and despite playing a vital role in the economy of the southern U.S.—where it was grown side by side with cotton and used to produce rope, clothing, and canvas—hemp was criminalized by the Marihuana Tax Act of 1937.

Imported hemp, however, has been legal to use in food products since 2000. Hemp-based food brands line the shelves at natural grocers like Whole Foods, Sprouts, and Trader Joe's, as well as big-box retailers like Sam's Club, Costco, and Target. Derived from hemp seeds, products like hemp milk, hemp energy bars,

Domestic Hemp Makes a Comeback

In Colorado, one of the nation's first two states to legalize recreational cannabis, you'll find roughly 100 CBD products on the shelves of the natural health food store Alfalfa's Market in Boulder. Earlier this year, the retailer introduced its own private-label brand of hemp extracts sourced from a local manufacturer. Colorado is one of several states operating an industrial hemp pilot program, which currently serves as a legal loophole for the production and sale of CBD products.

The Agricultural Act of 2014, known as the "Farm Bill," paved the way for hemp cultivation in states that have legalized the production of hemp under state ag-

consumers to start treatment with small doses and work their way up to reach their desired outcome.

The effects of CBD on the body depend on blood concentration levels. Like alcohol, which acts as a stimulant until blood alcohol levels reach 0.05 percent, CBD's initial effect is stimulating. At low doses, it has been shown



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and hemp seed oil are high in protein and full of antioxidants, amino acids, and other essential nutrients.

But they don't contain CBD, which is derived solely from the flowers, leaves, and stalks of the hemp plant. This means you won't yet find CBD products on the shelf next to the hemp milk at multi-state retailers and national pharmacy chains, even in legal states. Many companies opt out of selling these products, as the murky legal status of cannabidiol from state to state makes interstate shipping too risky.

But visit any independently owned health food store in one of the nine states (along with Washington, D.C.) where recreational cannabis is legal, and you'll find a wide range of hemp-based CBD products to choose from, including foods, tinctures, salves, lotions, beverages, capsules, and patches. A search for hemp products at San Francisco's Rainbow Grocery, a specialty retailer founded in 1975, returns more than 40 hemp-based products, including Charlotte's Web Extra Strength Capsules.

gricultural pilot programs. As of 2017, at least 34 U.S. states have industrial hemp programs in place, and hemp research pilot programs have been launched at several universities in New York. The recently introduced Hemp Farming Act of 2018 should also help clarify some of the legal issues suppliers of CBD products have faced since the 2014 Farm Bill opened the door to domestic hemp as a source of CBD.

While industrial hemp is once again a legal crop—albeit one regulated by the federal government—the U.S. Drug Enforcement Administration (DEA) still ranks CBD as a Schedule 1 drug alongside its THC-based cousins.

Improving Accurate Dosing

According to a 2017 study conducted by Brightfield Group and HelloMD, most of the demand for CBD comes from people seeking relief from anxiety, insomnia/sleep problems, joint pain, inflammation, and depression. A key concern for consumers is the accuracy of dosing, which in most cases is done by trial and error. Most products advise

to increase wakefulness and alertness, but at higher doses, it has a sedating effect.

As manufacturers rush to capitalize on growing consumer interest in CBD, a factor regarding efficacy—namely the low bioavailability of oils and extracts—has been conveniently overlooked. Due to the way we process oil, only about 10 percent of a dose of CBD extract is actually viable. That constraint alone makes accurate dosing with oils and extracts incredibly difficult, if not technically impossible.

The importance of bioavailability is why the vast majority of medication is water-soluble. Water-soluble CBD has been developed that increases its bioavailability to roughly 90 percent, helping to enable more accurate dosing. As the regulatory environment eases around the sale and distribution of CBD products, consumers can expect to see water-soluble forms of CBD in a broad range of beverages and food products. ■**cr**

