Unpacking The CBD Craze: What Does Science Actually Say?

Cannabidiol is everywhere, but scientists are calling for more research and regulation so consumers know exactly what they're getting.

By Audrey Carleton • Apr 25, 2019

Cannabidiol, or CBD, is all the rage these days — especially in the health, wellness and beauty industries. The compound is available in everything from lip balm, mascara and bath bombs to coffee and hamburgers, marketed as a treatment for inflammation, sore muscles, insomnia, and more.

But cannabis researchers say the buzz around CBD as a health supplement can be foolish if not founded in hard science and regulated by government bodies such as Health Canada and the U.S. Food and Drug Administration (FDA).

“CBD is an active medicinal agent and should be regulated by the FDA,” says Jonathan Rothbard, PhD, CEO of San Francisco-based Katexco Pharmaceuticals. “Its safety is being tested daily by consumers, but detailed studies on characteristics of approved drugs have not been published.”

Research limited by laws and funding

Rothbard, a former Stanford University professor, is working alongside a team of researchers at Katexco to produce a CBD-based treatment for inflammation caused by multiple sclerosis, an autoimmune disease of the central nervous system, and Crohn’s disease, an inflammatory bowel disorder.

“These compounds have profound abilities to change your metabolic profile of cells in the immune system, which are central to inflammation,” he explains of CBD.

Rothbard and his team are in the process of seeking out FDA approval for their treatment, a process he anticipates will take another five to 10 years and require USD$40-100 million in research funds. Time, cost and bureaucracy create significant barriers to entry that only one other

company in the U.S. has overcome: GW Pharmaceuticals, the manufacturer of Epidiolex, a prescription CBD treatment for seizures associated with two types of childhood epilepsy.

Is CBD legal?

There are dozens of CBD-based cosmeceuticals on the market today, including eye creams, anti-aging products and makeup.

It's perfectly legal — in the U.S., at least — for health supplements to bypass FDA approval before being sold, as per legislation introduced by former senator Orrin Hatch (R-Utah). In 1994, Hatch passed the Dietary Supplement Health and Education Act of 1994, a law Los Angeles Times writer Michael Hitzik called the senator's "deadliest."

The act deregulated the dietary and herbal supplements industry in the U.S., allowing supplements to reach the market without FDA testing or approval, only allowing the administration to step in if the product was deemed a threat to public health and safety after the fact.

Numerous supplements were sold to U.S. consumers without undergoing proper safety and efficacy testing, including a dietary supplement called OxyElite, which was linked to 47 hospitalizations, three liver transplants and one death between 2013 and 2014.

This legislation, which Rothbard considers "very silly," made it difficult for the FDA to regulate supplements, especially those with cannabis compounds in them, which the DEA has always had trouble regulating. So CBD-based products marketed as health supplements have reached consumers for years, without being proven safe or effective. In 2017, for example, the FDA issued a warning to four companies selling CBD products wrongfully marketed as "cancer treatment."

"Selling these unapproved products with unsubstantiated therapeutic claims … can put patients at risk as these products have not been proven to be safe or effective," the warning reads. "The deceptive marketing of unproven treatments may keep some patients from accessing appropriate, recognized therapies to treat serious and even fatal diseases."

CBD regulations in Canada

Canada is in a slightly different position than the U.S., but the compound is viewed similarly in the public eye as a cure-all for everything from aches and pains to signs of aging. Before recreational cannabis was legalized on Oct. 17, products with CBD in them were illegal to use and market unless approved for medicinal purposes by Health Canada.

Post-legalization, CBD is treated the same as other cannabis products. While cannabis edibles are not yet legal, the Canadian Health Food Association is calling on Health Canada to lighten the restrictions on CBD products so they're regulated as health supplements. This could pave the way for sales of CBD-infused health food products, but requires a stringent testing process to receive Health Canada's stamp of approval.

Regardless of legality in either country, CBD products remain extremely easy to get, so filtering its scientifically proven medicinal uses from its uses as an extra ingredient in lotions, shampoos, and "cancer treatments" is essential.

CBD and medicine

Rothbard is emphatic that CBD does have many true, scientifically proven medicinal uses, including as a treatment for fibrosis, dermatitis, gastrointestinal diseases, and chronic autoimmune myocarditis, a major cause of heart failure. In fact, CBD has been found not to cause adverse side effects that other nonsteroidal anti-inflammatory drugs cause, making it a better alternative to many treatments for inflammation on the market today.

However, Rothbard remains steadfast about the necessity of FDA approval before consumers use CBD to treat serious conditions — and he anticipates that the majority of these treatments won't be approved for a while.

"You're only going to see CBD in mixtures with THC on the market for the next five years," he says.

In the meantime, he warns to be wary of the disconnect between products with regulatory approval and those without — consumers may not know exactly what they're getting.

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