True Health Benefits of CBD Oil Explained
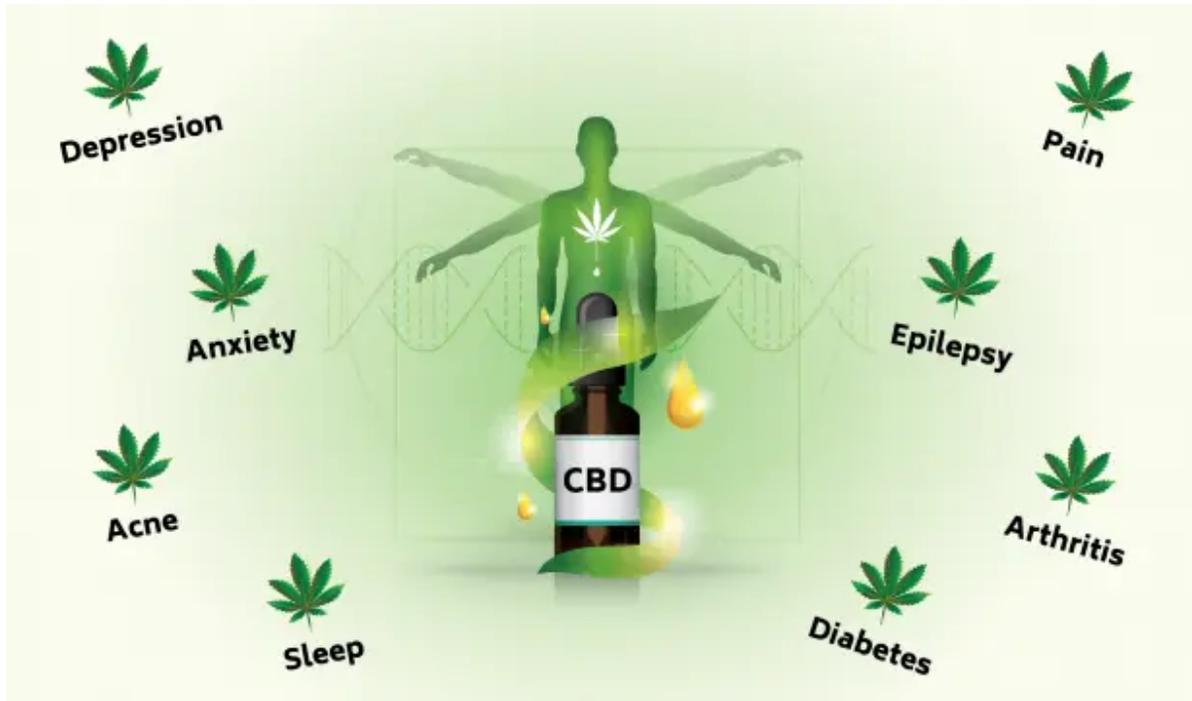
Cannabidiol, or CBD, is already a $1 billion industry, with <u>research indicating</u> it could reach up to $20 billion by the middle of the next decade. Roughly, <u>one-fourth</u> of Americans have tried CBD. One out of seven uses CBD daily and these numbers are rising. In 2018, the US passed the <u>Farm Bill</u>, making it legal to grow industrial hemp, a primary source of CBD. The other is cannabis, which is also legal to some degree in 33 states. In the United States, the results of the 2020 election will likely end with even more states legalizing cannabis.

On top of its newfound legality, CBD has become mainstream because of claims citing its potential health benefits. People use CBD to treat epilepsy and seizures, anxiety, depression, sleep disorders, chronic pain, arthritis and inflammation, skin diseases, opioid withdrawal, and the list goes on. Additional clinical research is necessary to provide conclusive evidence of CBD's health benefits. However, what research has been done so far looks promising. In fact, one CBD-based drug has already been approved by the FDA for the treatment of severe forms of epilepsy after performing careful scientific studies.

What is CBD?

CBD is one of two primary, active molecules (called cannabinoids) found in marijuana. The other is THC. However, unlike THC, CBD is non-psychoactive and non-intoxicating, meaning it does not get you "high." CBD is also an active cannabinoid in hemp. Both marijuana and hemp are <u>cannabis plants</u>, but marijuana, commonly has between five and twenty percent THC, whereas hemp contains .3 percent or less THC. CBD is extracted from either marijuana or hemp. When extracted from marijuana, CBD may have some THC in it, but not enough to intoxicate you.

How CBD works

When different substances enter the body, they interact with the body's receptors and create physiological responses. The human body contains <u>cannabinoid receptors</u>, which are part of our endocannabinoid system. Our nervous system includes the cannabinoid receptors CB1 and CB2. These are the ones to which THC binds to alter our memory, concentration, and perceptions, making us feel intoxicated. CBD does not only bind to CB1 and CB2. Instead, it binds to and interacts with many other of the body's receptors.

For example, CBD binds to our <u>serotonin receptors</u>. Serotonin controls our mood, sleep, and experience of pain. It also binds to our vanilloid receptors, which impact pain perception and inflammation. Our orphan receptors are involved with bone reabsorption and density, blood pressure regulation, and cancer cell migration and can be impacted by CBD.

CBD's impact on the body is much more complex and extensive than these functions alone, which is why CBD may be able to help treat so many conditions. So far, research has shown CBD to target more than <u>65 areas of the body</u>. Because the body's mechanisms often overlap, these compounds the potential health benefits CBD may have.

The health benefits of taking CBD

CBD has been used for its medical benefits for thousands of years, long before it registered on our contemporary radar. It can affect an abundance of our body's receptors and systems, making the list of potential therapeutic uses of CBD so long. The word "potential" should be taken seriously; however, as more research needs to be done before any of the health benefits of CBD can be confirmed. That research is largely underway, so perhaps it will not be long before we get confirmation showing CBD's abilities to affect our health in a positive manner. The information below should never replace a physician's order. CBD users should consult their physician before taking it.

Anxiety

CBD is touted and used to treat anxiety because it binds to serotonin receptors in the brain, which help regulate mood. Low levels of serotonin are linked to anxiety. A small <u>NCBI study</u> concluded that the use of CBD decreased anxiety in a large majority of sample patients, 57 out of 72 patients total, or 79 percent. The National Institute of Drug Abuse (NIDA) found CBD to be an effective treatment for <u>generalized anxiety</u> in rats. A study published in the Journal of Psychopharmacology found that CBD reduced anxiety levels in those with <u>social anxiety disorder</u>. Several studies have also positively reported CBD's ability to treat <u>PTSD symptoms</u>. On top of this, anecdotal evidence at large suggests CBD is highly effective in reducing anxiety.

Depression

CBD's impact on the body's serotonin receptors would indicate CBD to have a high potential for treating depression. However, not much research has been done on CBD as a potential depression treatment. One <u>NCBI study</u> on mice showed CBD can induce anti-depressant effects because of how CBD acts on the serotonin receptor 5-HT (2A). Another <u>NCBI rodent study</u> found CBD only to be effective in the treatment of depression depends on existing serotonin levels in the brain. This comes in addition to many anecdotal reports on the use of CBD to treat depression effectively.

Pain

Research shows that the most common use of CBD for therapeutic health reasons is to treat pain. Studies on animals have shown CBD to be effective as an analgesic and anti-inflammatory, but not much has been done on humans. CBD's pain-relieving properties are thought to be related to how CBD binds to endocannabinoid receptors. Most reports for CBD's effectiveness in treating pain and chronic pain are anecdotal at this point.

Sleep

More and more research out there indicates that CBD can help treat sleep issues, such as insomnia and trouble falling asleep. Its interaction with serotonin and GABA receptors seems to be a contributing factor. Serotonin regulates sleep directly and GABA receptors reduce brain activity, which can help with relaxation. Anxiety can play a large role in a person's inability to sleep, so indirectly, any assistance CBD provides to ease anxiety can also have a positive influence on sleep disorders.

Epilepsy

Conclusive research shows that CBD greatly reduces epileptic seizures in both quantity and intensity. People who have epilepsy display abnormal movement in their sodium channels, causing their brain cells to fire erratically, which can lead to seizures. CBD prevents this erratic firing, making it effective in treating epilepsy. On CBD-based drug, called Epidiolex has been approved by the FDA to treat severe forms of epilepsy. More research is underway potentially to expand how CBD can be used to treat other forms of epilepsy as well.

Neurodegenerative disease

Neurodegenerative diseases such as Alzheimer's, Parkinson's, and Huntington's disease could be prevented with CBD largely thanks to its anti-inflammatory functions. CBD has anti-oxidative and neuroprotective properties that can aid in the prevention of these diseases as well. As more research is concluded, the more promising CBD looks as a reliable way to ward off neurodegenerative diseases.

Arthritis

CBD's promising ability to treat pain and inflammation is linked to its potential as an effective treatment for arthritis. One study found that CBD applied topically reduced the instance and intensity of arthritis pain in rats. Another animal study found that topical CBD may block the early inflammation that leads to the development of osteoarthritis. Clinical studies on humans are still needed to confirm how CBD can help those suffering from arthritis.

Diabetes

According to the Diabetes Council, research indicates that CBD's anti-autoimmune properties may help to decrease the occurrence and delay the onset of type I diabetes. CBD can prevent damage to insulin-forming cells to allow normal glucose metabolism, clinical studies show. In addition, studies in mice found that CBD has been able to reverse early-stage type I diabetes. As far as type II diabetes goes, CBD's anti-inflammatory effects could help decrease resistance to insulin, as the resistance occurs because of chronic inflammation and causes the disease to advance. Additionally, CBD might be able to correct an endocannabinoid imbalance that makes it difficult to lose weight, and losing weight is imperative to treating type II diabetes. Further clinical studies are needed to fully understand and utilize CBD in the treatment of diabetes.

Skin

At the root of many skin issues and disorders is inflammation. CBD's potential anti-inflammatory properties may then be used as a topical treatment for <u>inflammatory skin diseases</u> like psoriasis, eczema, and acne. Anecdotal reports support these claims, but once again, the need for more research to confirm how CBD might provide relief to those suffering from skin disorders is crucial.

Bones

A <u>study</u> from Tel Aviv University and Hebrew University researchers show that CBD helps heal bone fractures in a significant way. While the study was conducted on rats, the healing process improved after a mere eight weeks. Other research by the same team found that CBD could promote bone formation and reduce bone loss, processes that would help to combat osteoporosis as well as bone-related diseases at large. This is largely related to CBD's anti-inflammatory properties and the fact that the skeleton is regulated by cannabinoids. Human clinical research is still necessary to verify these preliminary studies.

Multiple Sclerosis

Multiple Sclerosis (MS) is a central nervous system disease that includes muscle spasticity, inflammation, pain, fatigue, and depression and often leads to significantly decreased mobility. The lack of effective treatment options has led to the use of cannabis as an alternative medicine for managing the symptoms of MS. However, a recent <u>study</u> found that CBD alone has the potential to reduce many MS symptoms including, pain, spasticity, and fatigue, leading to improved mobility. There is also substantial anecdotal evidence that points to CBD as an effective treatment for MS.

Other preventative applications of CBD

Preclinical <u>studies</u> show that CBD may contain anticancer properties that can prevent cancer due to antioxidant, anti-inflammatory, and inhibition of immune cell migration.

Obesity causes the body's cannabinoid receptor CB1 to become widespread throughout the body, particularly in the fatty tissues. CBD does not directly interact with CB1 receptors, but it does <u>play a role</u> in both blocking and activating those receptors. As a result, CBD can help with metabolic functions, reducing the appetite and weight loss to prevent obesity in the first place by deactivating the CB1 receptor.

CBD has antioxidant and anti-inflammatory effect that might help to reduce the risk of cardiovascular disease and related conditions. A <u>2009 study</u> on rats found that CBD can reduce high blood pressure, and a <u>2017 study</u> on healthy humans showed CBD to reduce blood pressure as well. Both of these studies were performed under highly stressful conditions. However, a <u>2017 review</u> showed that CBD was not effective at lowering blood pressure under normal conditions.

CBD as an alternative to current medications

Many people consider CBD to be a promising alternative to current prescription drugs that have proven dangerous, addictive, or contain other serious, unwanted side effects. For instance, the global opioid crisis negatively affects <u>millions of people per year</u>, many of them dying, and it stems largely from the use of addictive opioid drugs as an

analgesic. Those with sleep and anxiety disorders are also prescribed drugs that unfortunately tend to come with their own bundle of potentially dangerous side effects. With further studies, CBD has the potential to be a safe and effective alternative to these drugs that are currently on the market.

Adverse effects and risks

CBD use does not come without some risks, although they are relatively minor. This is especially true considering the fact that many current prescription drugs have much more serious effects. CBD can cause <u>side effects</u> like drowsiness, fatigue, dry mouth, diarrhea, irritability, and decreased appetite. It also can potentially interact with other medications such as blood thinners.

The most problematic issue with CBD current is that it remains unregulated by the FDA. That puts the safety and purity of CBD in jeopardy, as CBD manufacturers can introduce unknown and possibly dangerous elements and contaminants in the product. In 2017 in Salt Lake City, <u>several people entered an emergency room</u> unconscious, with seizures, and just generally agitated or confused after consuming Yolo CBD. A test revealed the product to contain no actual CBD, just a synthetic cannabinoid called 4-CCB. Other tests done on CBD products revealed other dangerous synthetic cannabinoids that caused paranoia and panic attacks. Those examples are extreme cases, but they are not the end of the story.

Tests on CBD products around the US revealed others issues that main one being that the label on CBD products indicated more or less CBD than what was actually there. Another prominent risk is that CBD will contain chemical contaminants like heavy metals and pesticides, according to <u>FDA tests</u>.

The fact that there are no known effective therapeutic dosages for CBD at this point for medical use is another potential risk to take into consideration.

How to choose a CBD product

Considering the lack of regulation of CBD products, it is of utmost importance to find a reliable and safe brand to use. There are trustworthy brands out there, but some research is necessary in order, whether or not a source is quality. Consult this list of major parameters to look for before buying CBD.

a. Is the CBD clean?

Only lab tests can indicate whether your CBD is pure. Pure means it is free of pesticides, herbicides, solvents, and anything else that is not listed on the label, like synthetic cannabinoids or other drugs.

b. How strong is it?

The label should provide the strength of the CBD no matter if you are buying it as an oil, edible, pill, or otherwise. For instance, if you are buying CBD gummies, the label should say how many milligrams of CBD are in each gummy. If you are buying CBD oil, the label should indicate the concentration so you know how many milligrams of CBD comes in each drop.

c. Is it pure?

Some CBD products are derived from marijuana rather than hemp, and in that case, there may be THC in your product. The source of the CBD, hemp or marijuana, should be indicated on the label.

d. Is it third party tested?

Some companies have in-house labs to test their products. Third party testing provides the most transparency. If a CBD product comes with a label that says, "third-party tested," it means an outside lab tested their products to determine their cleanliness. These are the most trustworthy CBD brands.

e. Is the company reputable?

The more listed on a company's website and label about the CBD product, the better. Aside from the "third-party tested" label, reputable companies will list the ingredients, will provide the source (as in, which country it came from, even down to the specific farm, if it is organic, etc.), as well as how the product is made. Generally speaking, if the label does not say organic, it is probably best to find one that is.

f. How is it extracted?

The production method of your CBD product is also important. There are several extraction methods possible. Whole-plant extract, also known as "full spectrum" means that you are buying CBD from a marijuana plant that has some amount of THC in it as well. It also contains other cannabinoids and terpenes from the plant. Some research indicates that full-spectrum CBD is more effective because of how the different parts of the plant work together in your body.

Isolate method extraction means the CBD is isolated, so there is nothing but CBD in your product. There is no THC in CBD that has been extracted using the isolate method.

The purest way to extract CBD is also the most expensive, and it is CO_2 extraction. The process uses fluid CO_2 as its solvent instead of chemicals.

The most common method for CBD extraction is ethanol extraction. Ethanol is the solvent used to get the CBD out of the cannabis plant. It is a fast and less expensive method, but there could be traces of ethanol in your product.

The bottom line

While the internet, as well as CBD companies, may try to lure you in with promises of the health benefits of CBD, the only certified one so far is for the treatment of certain kinds of epilepsy. That being said, the amount of preliminary studies and anecdotal evidence out there for the numerous health benefits of CBD is extensive and promising. The best thing to do if you want to use CBD is to be informed. Know why you want to use it, research dosage guidelines and brands, be aware of the risks involved, and consult your doctor before use.

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