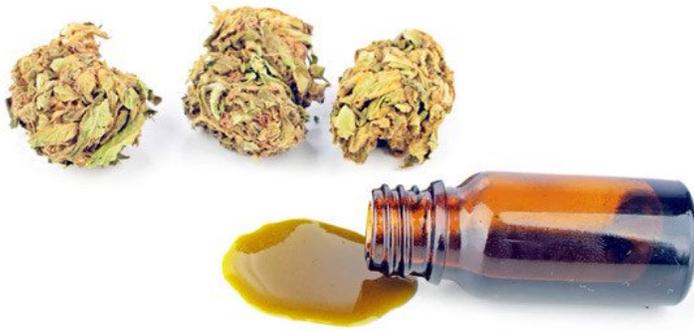


CBD Oil Benefits: 10 of the Most Widespread Health Benefits



There are numerous wonderful resources on (but not restricted to) the web regarding CBD, the major phytocannabinoid which has added a whole extra dimension to cannabis-related studies, medication, and dietary supplementation. On the other hand, as is often the case with a novel matter, there is also a great deal of misinformation regarding its benefits.

Our aim is to clarify the place that cannabidiol (CBD) currently holds from a scientific, legal (official or politically-sanctioned), terminological points of view and its main benefits. This will only be the build-up to the discussion around the much-touted health benefits of CBD – proven, presumed, and even questioned.

(CBD) Cannabidiol – Clarifying Frequent Confusions

Cannabis, marijuana, medical marijuana, cannabinoids, CBD, THC, etc. Let's face it; it can get a bit confusing for even the most meticulous reader, as is usual for new designations in fields that have not quite penetrated the mainstream. Nevertheless, it does not have to be this way.

The current trend in the cannabis-related area of research started in the late sixties and early seventies when products derived from cannabis (especially marijuana) were placed on the list of controlled substances in the US, under the Nixon administration. This move was retroactively interpreted as being part of the conservative reaction to the liberalizing spirit of the sixties.

Although cannabis had become a dangerous substance to possess (not to mention cultivate), the fact that the three variations of the cannabis plant (*sativa*, *ruderalis* and *indica*) have a multi-millennial history of use (in many parts of the world for purposes varying from recreational to medicinal to textile) still intrigued scientists.

This led to the chemical isolation of *tetrahydrocannabinol* (THC), the chief psychotropic substance in the cannabis plant. Subsequent research confirmed that THC has a number of applications in the treatment (or at least the alleviation) of certain disorders, leading to the development of the concept of *medical marijuana*.

The inquiry upon the manner in which THC produces its psychoactive effects on the human body led, in the 1980's, to the discovery of the *endocannabinoid system* – a rather loose complex of nerve receptors which under the influence of compounds called **cannabinoids** trigger many physiological and psychological reactions. Because cannabinoid receptors are present in almost every tissue of a mammal's body (although they are not limited to mammals), it has wide-ranging influences on the well-being of an organism. Therefore cannabinoids are definitely substances that deserve further attention from scientists.

What are the main cannabinoids?

At present, we have the following classification of cannabinoids: endocannabinoids (produced naturally in the body, mainly from fatty acid precursors), phytocannabinoids (compounds that have a plant origin, with the cannabis plant being the best-studied source of phytocannabinoids though not the only one), and artificial cannabinoids (created while studying THC, to garner the benefits of marijuana without the recreational component).

The list of cannabinoids currently comprises 113 entries, with more and more additions each year. Of these 113, by far the best documented are tetrahydrocannabinol and cannabidiol (in this order), with the two also being the most abundant constituents of the cannabis plant. In a typical chemical isolation process, cannabidiol makes up a little under half of the entire extract.

- [CBD](#)
- [THC](#)
- [CBDA](#)
- [CBN](#)
- [CBG](#)
- [THCV](#)
- [CBDV](#)
- [CBC](#)

Cannabidiol Benefits

- Antibacterial
- Neuroprotective
- Promotes bone growth
- Reduces seizures and convulsions
- Reduces risk of artery blockage
- Can help eliminate nightmares
- Reduces blood sugar levels
- Inhibits cancer cell growth
- Reduces function in the immune system
- Reduces inflammation
- Reduces small intestine contractions
- Reduces vomiting and nausea
- Relieves pain
- Relieves anxiety
- Slows bacterial growth
- Suppresses muscle spasms
- Reduces the effects of psoriasis
- Can help people trying to cut back on drinking

- Reduces some of the pain and nausea from chemo, and stimulates appetite
- Vasorelaxant

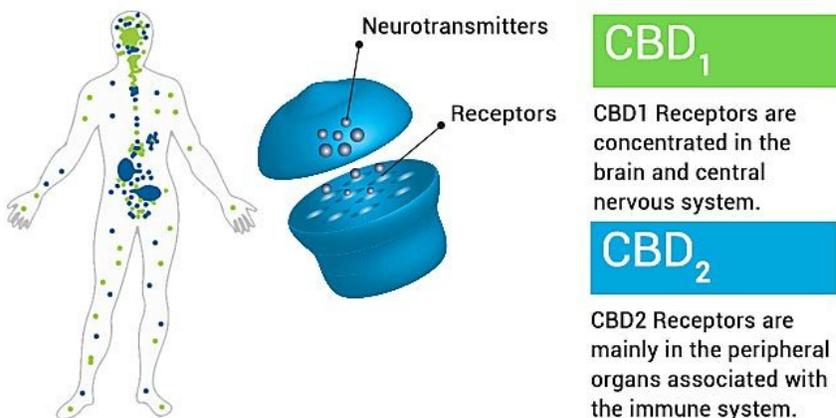
* Please note that the majority of studies were done mainly on rats and are still inconclusive

As is the case with any plant that constitutes a crop, cannabis plants have been selectively bred over the years to bolster one or another desired characteristic. This means that some plants provide a more potent psychotropic effect, others possess more prominent seeds (used in the production of cooking oil traditionally), while others may make for sturdier textile fibers.

Then there is the matter of which part of the plant is used. THC tends to be more concentrated in the leaves of the plant, while CBD in its stem and seeds. It should be noted that these aspects are relative. Some degree of agreement exists that for the purest CBD, the stalk of a hemp plant (varieties of cannabis generally grown for fiber manufacturing, low in THC), or much less often the seeds. Taking into account the fact that CBD supplements are usually in an oil form, one may fathom the origins of the nearly ubiquitous hemp oil dietary supplements.

How Does CBD Work?

For the past couple of years, the field has been experiencing a boom in cannabidiol-related research. What has permeated the scientific consensus stems from efforts undertaken to explain effects of THC, with descriptions of cannabidiol just a by-product of the initial purpose. For example, CBD was thought to have been simply a precursor of THC, mainly due to the structural similarities between the two.



CBD₁

CBD1 Receptors are concentrated in the brain and central nervous system.

CBD₂

CBD2 Receptors are mainly in the peripheral organs associated with the immune system.

Within the endocannabinoid system, two types of receptors are affected by cannabinoids – cannabinoid receptors type 1 (CB₁), and type 2 (CB₂). By and large, receptors of the first category are more often encountered in cells the nervous system, while those of the second type in cells of the immune system.

Positive effects of cannabinoids

The immediate and powerful effects of THC are explained because of the special affinity it has with the CB₁ type receptors, which mediate crucial processes in the brain. The less prominent (but no less important) action of CBD was explained, at least for a while, by hypothesizing that it binds to CB₂ type receptors, hence its more diffuse manner of exercising changes in the body. Early on, the antipsychotic effects of cannabidiol were observed, an aspect which seemed to be in consonance with this initial hypothesis.

More recent experiments, involving the administration of a part CBD part THC solution, have yielded results that contradict the first supposition. At present, on the evidence that cannabidiol reduces some of the psychoactive effects of tetrahydrocannabinol (acting as a *de facto* antidepressant), scientists argue that cannabidiol has a holistic but indirect influence on all cannabinoid receptors in the endocannabinoid system. The main consequence of this impact seems to be an increase in the production of endocannabinoids. This is now the prevailing idea that accounts for the mountains of empirical evidence of how the benefits of cannabidiol are expressed at the cellular level.

Cutting-edge studies on the biochemistry of cannabidiol have revealed three other receptors (which are still awaiting their classification as cannabinoid receptors) upon which CBD act – GPR55, GPR18, and GPR119 – whose physiological roles are undetermined but are widely present in the cerebellum of studied mammals.

The Official Position on Cannabidiol

As one might expect from the information presented in the previous sections of this article, the position of cannabidiol (both from a medical and from an institutional point of view) is one of uncertainty. To add insult to injury, private companies (especially those targeting immediate profit with a minimum of investment) take advantage of the loopholes in legislation to gain from the media exposure that CBD has had in the past few years.

According to WebMD.com, cannabidiol is listed as being helpful in a handful of disorders: multiple sclerosis^[12], schizophrenia^[13], epilepsy^[14], dystonia^[15], bipolar disorder^[16], and anxiety^[17]. The manner in which CBD helps with the symptoms these diseases generate is unclear, though we will lay out a few suppositions in the next section.

The **disturbing problem** regarding the current status of cannabidiol is expressed in the same source. Institutional endeavors by the Food and Drug Administration to classify it as a drug are in its infancy. Nevertheless, this should mean that CBD could no longer be marketed as a dietary supplement, as that class of products is subject to ridiculously lax regulation. However, there are countless companies (some no larger than a newsstand, while others are listed on the stock exchange) that sell supplements containing cannabidiol (as oil, capsules, sprays, etc.) unencumbered by either state or federal authorities.^[18]

This situation is a problem because the dosage and interactions cannabidiol may have are not well documented. Still, there are strong hints that they could pose serious (though not life-threatening) threats to the well-being of consumers. Doses of up to 3 mg of cannabidiol per day have proven to be feasible for your average healthy adult.

Even in this realm of eternal promises (that manufacturers make), scientists have suggested that the phytocannabinoid is not without its side effects and interactions:

- **Drowsiness** – it is unclear how high doses of CBD affect alertness, as there is equal anecdotal evidence to suggest that it causes drowsiness and that it is an agent that induces sudden watchfulness.
- **Low Blood Pressure** and Lightheadedness – an effect of CBD that may seem somewhat counterintuitive, an almost immediate (though small) decrease in blood pressure has been reported at the exposure to high doses, causing the associated lightheadedness, albeit not for long periods. Nevertheless, it could be significant for individuals taking blood pressure medication.
- **Aggravation of Symptoms in Parkinson's Disease** – increase in tremor frequency for patients with Parkinson's has been reported in some cases, but should not be extrapolated.
- **Dry Mouth** – it is almost a certainty that the endocannabinoid system has some role in the production of Therefore cannabidiol affecting saliva production is not a huge logical leap.
- **Encumbrance of Liver Metabolism** – cannabidiol encourages the secretion of certain enzymes associated with the endocannabinoid system, possibly at the expense of others, such as *cytochrome P450*, which is the main target of many liver pharmaceuticals.

Not departing from the official register, the societal importance of cannabidiol has been acknowledged in 2015, at a *United States Senate Caucus on International Narcotics Control* hearing regarding the state of cannabidiol research and possible (ethical, legislative, social, and institutional) barriers to cannabidiol research.^[19]

On the initiative of the (then) US senators from California, a panel of experts attested to the importance of including CBD on official medication lists, as sufficient preliminary evidence exists to benefit people suffering from a host of medical conditions:

- **Joseph Rannazzisi** from the Drug Enforcement Administration reviewed the proof which holds CBD as non-psychoactive and with a very low susceptibility to abuse, thereby signaling the agency's willingness to stop being a hindrance for future serious cannabis-related research, as it has sometimes been in the past.
- **Douglas Throckmorton** from the *Food and Drug Administration* reviewed the long and complicated procedure for a drug to be added to the official list of medications, adding that the agency is actively considering cannabidiol for the addition, although, for the safety of the public, it should not be expedited.
- **Nora Volkow** from the *National Institute on Drug Abuse* reiterated the decision of (then) two dozen states to allow medical marijuana to be used in one way or another in their jurisdictions. This should open everyone's eyes to the sanctioning of a non-addictive, non-psychoactive substance which has been linked to benefits for patients suffering from seizure disorders, quite a few neurodegenerative disorders or pain resulting from cancer.
- **John Ingram**, a pediatric neurologist at the *University of Mississippi Medical Center*, testified to the reliability of anecdotal evidence regarding cannabidiol's potential in treating medically refractory epilepsy, declaring the facility's desire to pursue a pilot program to treat patients who give their consent.
- **Thomas Minahan**, an emergency room doctor from a Californian hospital, attested to the positive effects frequent CBD oil ingestion had in some of the epilepsy cases he encountered.
- **Kevin Sabet**, a psychiatrist at the *University of Florida's Drug Policy Institute*, presented a six-point plan whose purpose is accelerating officially sanctioned serious research in the properties of cannabidiol and relaxing barriers for private actors interested in the matter, who would nevertheless pursue this avenue in a grayer area and thus, less safe.

10 Compelling Health Benefits of CBD Oil

Naturally, the testimonies of these experts were based on a comprehensive literature review, an endeavor which we have also undertaken, albeit in a less official capacity. While many new products have been hailed as a panacea in their times, and many web sources certainly allude to this status for CBD, our objective was more modest – presenting ten possible benefits of cannabidiol where sufficient evidence exists to back up the claims.



1 Cannabidiol, Cancer, and Chemotherapy

The anti-emetic and anti-nausea effect of marijuana is a centuries-old known fact. Nevertheless, as early as twenty years ago, the effect was attributed to the actions of THC. Continuous research into other cannabinoids has proven that many other phytocannabinoids produce the same desired effect. At present, the FDA recommends two drugs featuring cannabinoids, in which CBD has the highest concentration, in the treatment of nausea induced by chemotherapy – *nabilone* and *dronabinol*. Though in its infancy, promising studies exist which suggest that one day CBD may be incorporated into cancer therapies.

A group of specialists at the *National Cancer Institute* reviewed some experiments rhesus monkeys and rodents whose results implied that CBD has the capacity to inhibit the division of cancerous cells (especially in types of leukemia and lymphoma), to lower the probability of affected tissue to spread to neighboring tissues, and to increase the effectiveness of macrophage cells to attack cancerous cells.^{[20][21]}

2 Diabetes and Heart Disease

Due to the anti-inflammatory properties of cannabidiol, insulin resistance (the chief metabolic problem for patients with type 2 diabetes) is reduced, leading to a better prognosis thanks also to the lower incidence of dead tissue. Ever since the discovery of CBD in the 1990's, speculation existed to its effect on other types of receptors (not just cannabinoid receptors) which could be manipulated and included in the treatment of some cardiovascular diseases like atherosclerosis. In light of these speculations, researchers at the *University of Tel Aviv* (walking in the footsteps of the "father" of cannabinoid research, Dr. Raphael Mechoulam) demonstrated a 30 percent blood flow increase in rodents with areas of dead tissue in the heart muscle.^[22]

3 Seizures and Muscle Spasms

The information presented in the previous section relate chiefly to epilepsy, with the FDA permitting epilepsy centers in the whole of the United States to prescribe products containing cannabidiol to patients who do not respond to "classical" medication since that Senate hearing in 2015.^[23]

This turn is due to a comprehensive 2015 study aimed at two notoriously difficult manifestations of epilepsy – Dravet syndrome and Lennox-Gastaut syndrome – most often encountered in children. Seizure frequency was found to decrease between 54 percent and 67 percent for the six months cannabidiol medication was used, although a small part of individuals did not continue after three months, as their condition did not improve.

4 Chronic Pain

The already (relatively) widespread legal provision for medical marijuana to be used for pain relief proves that cannabinoids have a particular effectiveness in this field.

Nevertheless, as populations age all across the globe, constant pain brought on by chronic illnesses in the elderly will surely become a matter of public health and compassion. A 2008 study inquired on the efficacy of cannabinoids other than THC in pain management. Painkillers with cannabinoids proved to be well tolerated, with minimum side-effects, and a prospect for low long-term toxicity. Furthermore, a combination of cannabidiol and opioids is thought to be the breakthrough of the future in palliative care.^[24]

5 Anxiety Management

The anxiolytic effect of THC is well documented, with other cannabinoids (especially CBD) also providing relief (if less potent). The exact pathways of the process have not been identified. A preliminary study published in 2013 in the *International Neuropsychopharmacology Journal* has set the foundations for further research linking CBD to future treatments for depression and psychosis.^[25]

6 Autoimmune Disorders

CBD's singular mechanism of reducing inflammation with negligible side effects suggests a new horizon in the treatment of a host of autoimmune diseases by moderating the immune response. This aspect is also closely linked to another benefit of cannabidiol:

7 Antibacterial Action

A study performed at the Italian *Piemonte University* and published in 2008 implied that all cannabinoids help the immune system to fight bacteria. Especially potent are five cannabinoids (including CBD), with the study focusing on antibiotic-resistant strains of the *Staphylococcus Aureus*, a relevant example of the antibiotics abuse the last few decades have witnessed.

8 Anti-Inflammatory Effects

This effect of CBD has been recurrent in this article. Patients suffering from the following conditions may benefit from a thoroughly developed CBD-based medication: multiple sclerosis and other neurodegenerative diseases, chronic liver inflammation, traumatic and diffuse axonal brain injuries, experimental colitis or rheumatoid arthritis.^[26]

9Bone Growth

The already cited pioneers at the *University of Tel Aviv*, discovered that rats given CBD supplementation recovered from similar fractures up to 40 percent faster.

10Cachexia and Anorexia

Cachexia is a disorder involving dangerous weight loss brought on by diseases as diverse as AIDS, cancer or Alzheimer's. A 2011 German study involving more than 100 people proved that patients on the placebo lost about 80 percent more weight weekly than those administered a cannabinoid cocktail. This, along with the mood-elevating properties of cannabidiol implies future applications for the treatment of widespread eating disorders such as *anorexia nervosa*.

If you are interested in buying CBD oil call 204-588-8639

Free delivery within Winnipeg city limits

Shipping to other areas in Canada available