

Larry and Oksana Ostrovsky

# CBD EXPLAINED

Discover Important Cannabidiol  
Facts And See What It Can For You.



*This Book contains information that is intended to help you, the reader, be a better informed consumer of Cannabidiol and Cannabis in general. It is presented as general advice. Always consult your doctor for your individual needs.*

**Feel free to share with family and friends.**

**This book is brought to you as a complimentary gift from:**



Bringing Your Body Back To Health

vist us at: [www.solcbd.com](http://www.solcbd.com)

***There's no question...***

***...Mother Nature has all the answers!***

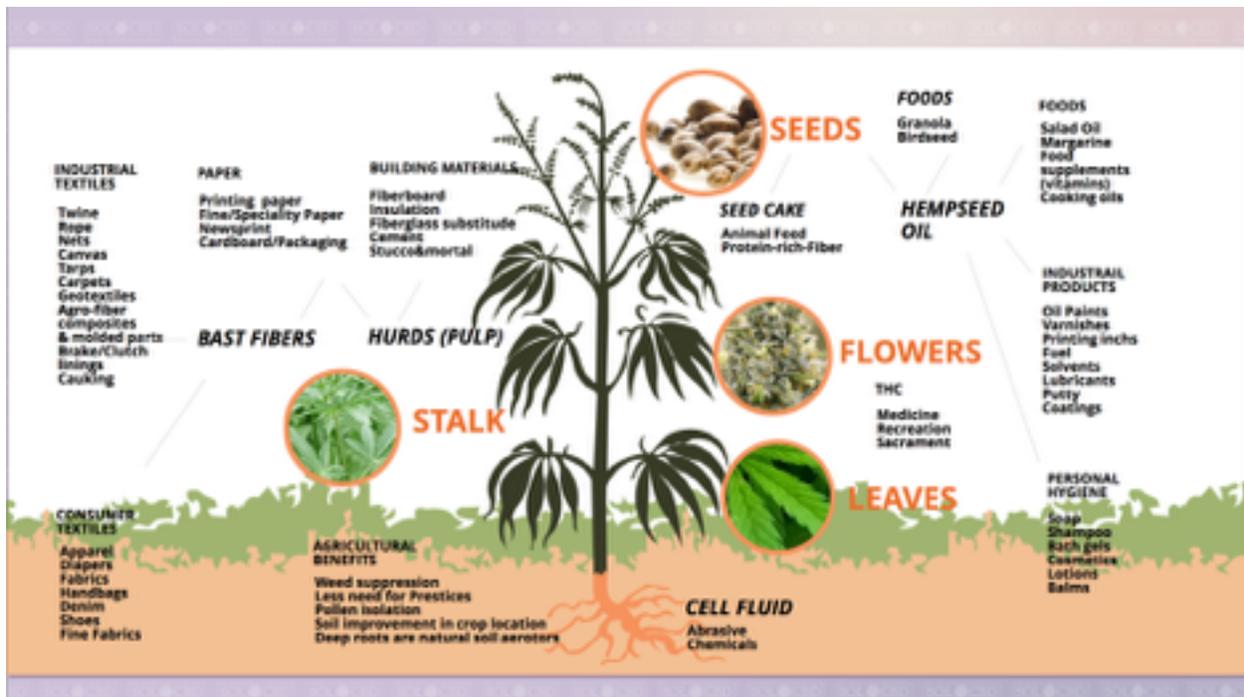
The verdict is in. One of the strong answers to many of humanity's problems is Cannabis.

The word represents powerful medicine, and industrial powerhouse and at the same time a demonized plant.

Greed, politics, racism has taken this gem of a plant and vilified it.

Time and time again we turn our back to the gifts nature provides, only to realize one day that we've been doing it all wrong?!

Look at all the amazing things Cannabis has to offer:



Most people would find it hard to believe a recreational (and very illegal) drug that made Cheech and Chong famous in the 1970s would be touted as a miracle cure for certain medical conditions in the 2000s?

What happened in the ensuing 40 years to change the infamous Mary Jane from a public health threat to a ray of hope for cancer treatments, pain management, and more?

**The answer is simple**, the public got smarter, and less susceptible to propaganda, and medical researchers got braver and more assertive. We've come a long way from the ridiculous mindset of "Reefer Madness".

New research has shown that at least some of the components in the Cannabis sativa plant, commonly referred to as marijuana, may be effective in the treatment of tumors, some cancers, chronic pain, spasms, seizures, and psychoses.

Clinical trials are underway at this moment studying the use of pure cannabinoid in the treatment of epileptic seizures in children. A whole new class of medical treatments may be possible, as soon as the US government gives up its Neanderthal views on Cannabis.

This is a slow moving tide that is changing. There are a lot of industries that will be shaken up as a result.

Think about the industries currently profiting from Cannabis being illegal...

- Prison Industrial Complex (did you know prisons are for profit centers?)
- DEA
- Police (most arrests are for petty cannabis "crimes" to fill the jails)
- Pharmaceutical companies (the real "drug dealers")
- Paper industry
- Fabric industry
- Drug cartels

## Let's Explore The History of Cannabis As Medicine



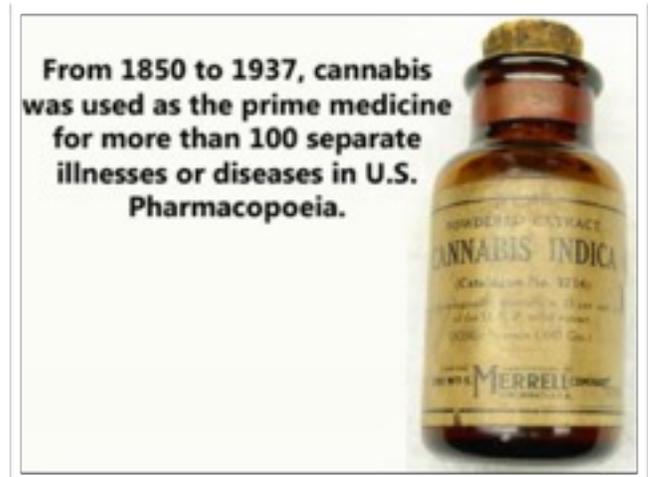
It wasn't always so in America. One of the dirty little secrets that they keep out of the history books is that America's first colony, in 1619, by decree of King James I, used hemp (the other common name for *Cannabis*) as their main cash crop for export to Europe. Hemp was (and still is, outside the U.S.) used to make the best ropes in the world, as well as great clothing, and paper.

In the 19th Century, marijuana emerged as a mainstream medicine in the West.

Studies in the 1840s by a French doctor by the name of Jacques-Joseph Moreau [a French psychiatrist] found that marijuana suppressed headaches, increased appetites, and aided people to sleep.

### 1850 - Marijuana Added to US Pharmacopeia

By 1850, marijuana had made its way into the United States Pharmacopeia [an official public standards-setting authority for all prescription and over-the counter medicines], which listed marijuana as treatment for numerous afflictions, including: neuralgia, tetanus, typhus, cholera, rabies, dysentery, alcoholism, opiate addiction, anthrax, leprosy, incontinence, gout, convulsive disorders, tonsillitis, insanity, excessive menstrual bleeding, and uterine bleeding, among others.



Here is a fact that will pin most American History teacher's ears back. George Washington, the Father of our Country, grew *Cannabis* as his main crop at Mt. Vernon. Bet they didn't teach you that in High School.

So what makes Cannabis so powerful that it was banned in US and many other countries around the world?

### **1933 - William Randolph Hearst Plays Role in Denouncing Marijuana**

In 1933, marijuana became the target of government control. Sensationalistic stories linked violent acts to cannabis consumption... Many of the most outlandish stories appeared in newspapers published by William Randolph Hearst. Hearst reportedly had financial interests in the lumber and paper industries. He may have sought to eliminate competition from hemp.

The first laws against cannabis in the United States were passed in border towns with Mexico... William Randolph Hearst was an up-and-coming newspaper tycoon, owning twenty-eight newspapers by the mid-1920s... Hearst then dropped the words cannabis and hemp from his newspapers and began a propaganda campaign against marijuana.

### **1936 - New Medications Supplant Marijuana as Treatment for Pain**

By the end of 1936... all 48 states had enacted laws to regulate marijuana. Its decline in medicine was hastened by the development of aspirin, morphine, and then other opium-derived drugs, all of which helped to replace marijuana in the treatment of pain and other medical conditions in Western medicine.

But the research didn't stop.

### **1964 - THC, Main Psychoactive Component of Cannabis, First Identified and Synthesized**

In 1964 Dr. Raphael Mechoulam, Professor of Medicinal Chemistry at the Hebrew University of Jerusalem, is the first to identify delta-9-

tetrahydrocannabinol (THC), as the main psychoactive component of cannabis. He is also the first to synthesize THC.

"GW to Develop New Cannabinoid Opportunities with Professor Raphael Mechoulam," GW Pharmaceuticals website, Jan. 21, 2003

## **1968 - University of Mississippi Becomes Official Grower of Marijuana for Federal Government**

Since about 1968 the University of Mississippi has held a registration from the DEA or its predecessor agency to cultivate marijuana for government use and research activities... [as] the only DEA-registered cultivator of marijuana. The University of Mississippi... supplies marijuana to researchers for studies ranging from chemical research to preclinical toxicology in animals to clinical work on humans.

Mary Ellen Bittner, JD [Ruling in the Matter of Lyle E. Craker, PhD](#)  (6.5 MB), Feb. 12, 2007

## **1974 - NIDA Established, Placed in Charge of Contracts to Grow Marijuana for Research Purposes**

Since its inception in 1974, NIDA [National Institute on Drug Abuse] has been the sole administrator of a contract to grow cannabis (marijuana) for research purposes and the only legal source for cannabis in the United States.

NIDA also supplies cannabis to seven patients under single patient so-called 'compassionate use' Investigational New Drug Applications (IND). In 1978, as part of a lawsuit settlement by the Department of Health and Human Services, NIDA began supplying cannabis to patients whose physicians applied for and received such an USID from the FDA.

"Provision of Marijuana and Other Compounds For Scientific Research - Recommendations of The National Institute on Drug Abuse National Advisory Council," NIDA website, Jan. 1998

## **Nov. 24, 1976 - Federal Court Rules Robert Randall's Use of Marijuana a "Medical Necessity"**

In November, 1976, a Washington, DC man [Robert Randall] afflicted by glaucoma employed the little-used Common Law Doctrine of Necessity to defend himself against criminal charges of marijuana cultivation (US v.

Randall). On November 24, 1976, federal Judge James Washington ruled Randall's use of marijuana constituted a 'medical necessity...'

Judge Washington dismissed criminal charges against Randall. Concurrent with this judicial determination, federal agencies responding to a May, 1976 petition filed by Randall, began providing this patient with licit, FDA-approved access to government supplies of medical marijuana. Randall was the first American to receive marijuana for the treatment of a medical disorder.

"Significant Legal Cases," [www.druglibrary.org](http://www.druglibrary.org) (accessed July 15, 2010)

## **May 1985 - Marinol Approved by FDA**

Made by Unimed, Marinol is the trade name for dronabinol, a synthetic form of delta-9 tetrahydrocannabinol (THC), one of the principal psychoactive components of botanical marijuana. It was approved in May 1985 for nausea and vomiting associated with cancer chemotherapy in patients who fail to respond to conventional antiemetic treatments. In December 1992, it was approved by FDA for the treatment of anorexia associated with weight loss in patients with AIDS.

CRS Report for Congress: "Medical Marijuana: Review and Analysis of Federal and State Policies"  (515 KB)

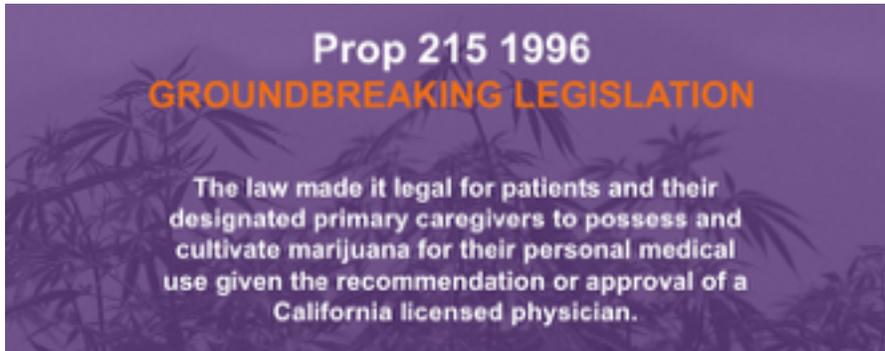
## **1992 - Scientists Discover First Endocannabinoid**

Twenty-eight years after discovering THC, in 1992, Dr. Mechoulam, along with Dr. William Devane and Dr. Lumir Hanus, identified the brain's first endogenous cannabinoid (or endocannabinoid) - the brain's natural version of THC -which they called 'anandamide,' from the Sanskrit word 'ananda,' which means 'eternal bliss' or 'supreme joy.'

Vigorous exercise stimulates the release of anandamide, and the sense of euphoric well-being that comes with a healthy workout - what jogging enthusiasts refer to as a 'runner's high' - is due to elevated levels of endocannabinoids. The endocannabinoid system in the brain is also believed to help mediate emotions, consolidate memory, and coordinate movement.

"The New Science of Cannabinoid-Based Medicine: An Interview with Dr. Raphael Mechoulam," *Mavericks of Medicine*, 2006

## **Nov. 5, 1996 - California Becomes First State to Legalize Medical Marijuana**



Voters in California [pass] a state medical marijuana initiative in 1996. Known as Proposition 215, it permits patients and their primary caregivers, with a

physician's recommendation, to possess and cultivate marijuana for the treatment of AIDS, cancer, muscular spasticity, migraines, and several other disorders; it also protects them from punishment if they recommend marijuana to their patients.

## **Oct. 7, 2003 - US Government Receives Cannabinoids Patent**

The US Department of Health and Human Services receives a patent (US 6,630,507 B1) (1.5 MB) for the therapeutic use of "cannabinoids as antioxidants and neuroprotectants."

The abstract says in part: "Cannabinoids have been found to have antioxidant properties... The cannabinoids are found to have particular application as neuroprotectants... in the treatment of neurodegenerative diseases such as Alzheimer's disease..."

[US patent 6,630,507 B1](#)  (1.5 MB), Oct. 3, 2007

## **Aug. 8, 2013 - Dr. Sanjay Gupta Comes out in Favor of Medical Marijuana**

"I mistakenly believed the Drug Enforcement Agency listed marijuana as a schedule 1 substance because of sound scientific proof. Surely, they must have quality reasoning as to why marijuana is in the category of the most

dangerous drugs that have 'no accepted medicinal use and a high potential for abuse.'

They didn't have the science to support that claim, and I now know that when it comes to marijuana neither of those things are true. It doesn't have a high potential for abuse, and there are very legitimate medical applications...

We have been terribly and systematically misled for nearly 70 years in the United States, and I apologize for my own role in that."

Sanjay Gupta, MD "Why I Changed My Mind on Weed," CNN.com, Aug. 8, 2013

## Sanjay Gupta



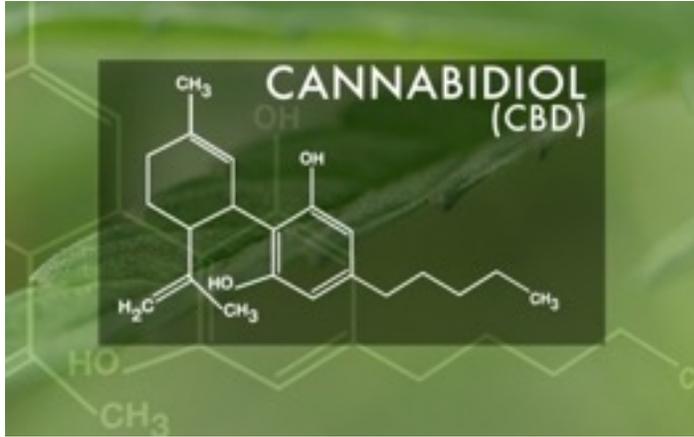
"I AM NOT BACKING DOWN ON MEDICAL MARIJUANA;  
I AM DOUBLING DOWN."

In his conversation with Seahawks Coach Pete Carroll regarding assistance in NFL with concussions, United States already holds a patent on medical marijuana for that very purpose: (Patent No. 6630507). Cannabis recognized as a neuroprotectant, benefitting recovery from ischemic stroke, concussion, or neurological disorders.

Fast forward to today and **23 states in US have legalized medical marijuana!** The power of this plant is coming back!

Most people have heard of a chemical called THC, which is the ingredient in cannabis that gets users high. But recently, attention has shifted to another compound, called CBD, and has been causing quite a buzz among medical and scientific community, and for good reason.

## ***What is Cannabidiol?***



Cannabidiol or CBD is one of at least 80 active cannabinoids identified in both cannabis and industrial hemp. It is present in both plants although the prevalence or total composition of CBD can vary greatly from strain to strain.

Unlike THC (the other prevalent cannabinoid), Cannabidiol is non-psychoactive while having the potential to possess a variety of therapeutic properties for many medical conditions including cancer, epilepsy, anxiety, pain and many others. THC and CBD have an inverse relationship, the more CBD, the less THC and the reverse also holds true.

Scientific and clinical studies continue to underscore CBD's potential as a possible treatment for a wide range of conditions, including rheumatoid arthritis, diabetes, alcoholism, MS, chronic pain, schizophrenia, PTSD, antibiotic-resistant infections, epilepsy, and other neurological disorders. CBD has demonstrated neuroprotective and neurogenic effects, and its anti-cancer properties are currently being investigated at several academic research centers in the United States and elsewhere.

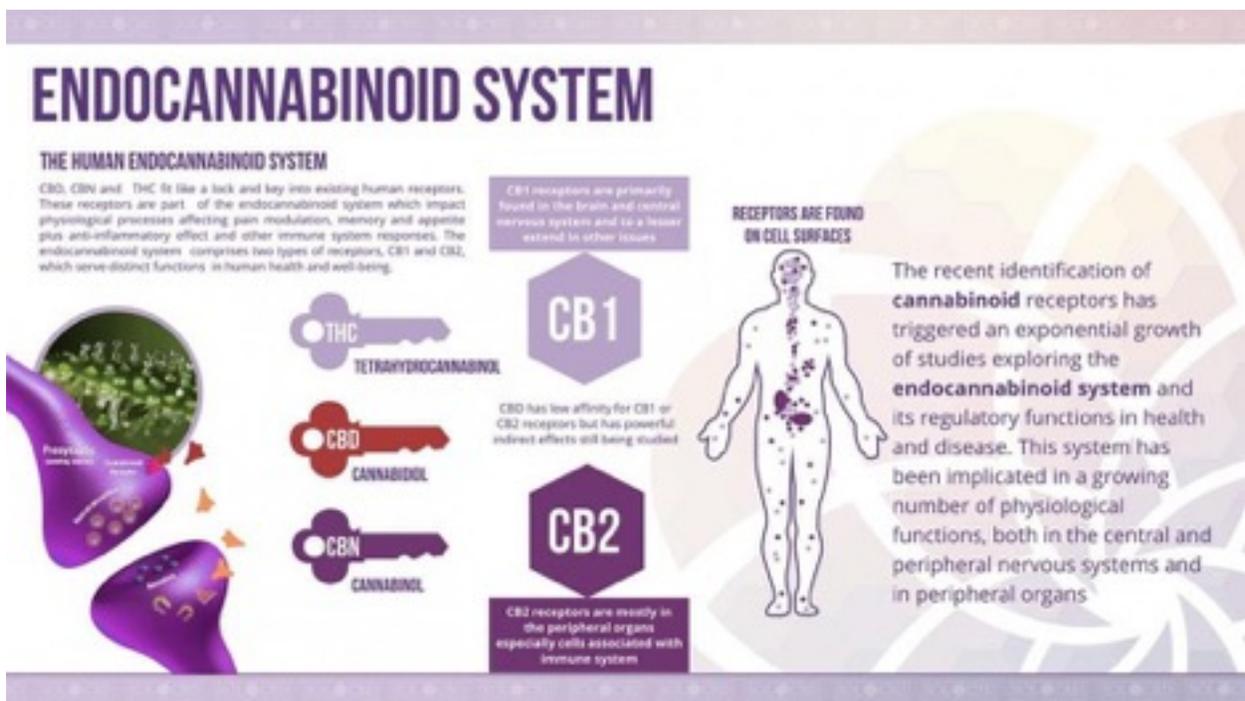
CBD works well for such a wide variety health challenges because it enhances your Endocannabinoid system. This is the system within your body which regulates proper functioning of your cells, and so much more! Let's take a closer look at this important body system.

## What Is An Endocannabinoid System?

Endocannabinoid system (ECS) is one of the regulatory systems in our body. It controls everything from relaxation, to eating, sleeping, inflammation and even cognitive function. In a nutshell, your ECS is responsible for making sure your entire body is working optimally. There are two types of cannabinoid receptors found throughout your body (CB1 and CB2), but they are most abundant in your brain and immune system. This system wants to maintain balance, called homeostasis.

In order to create homeostasis, our body leverages tools in the form of nutrients and compounds from everything we ingest (including the air we breath and water we drink).

A special set of nutrients called Cannabinoids promote homeostasis at every level of biological life, from the sub-cellular, to the organism, and perhaps to the community and beyond. And CBD works as a switch that turns on our Endocannabinoid system.



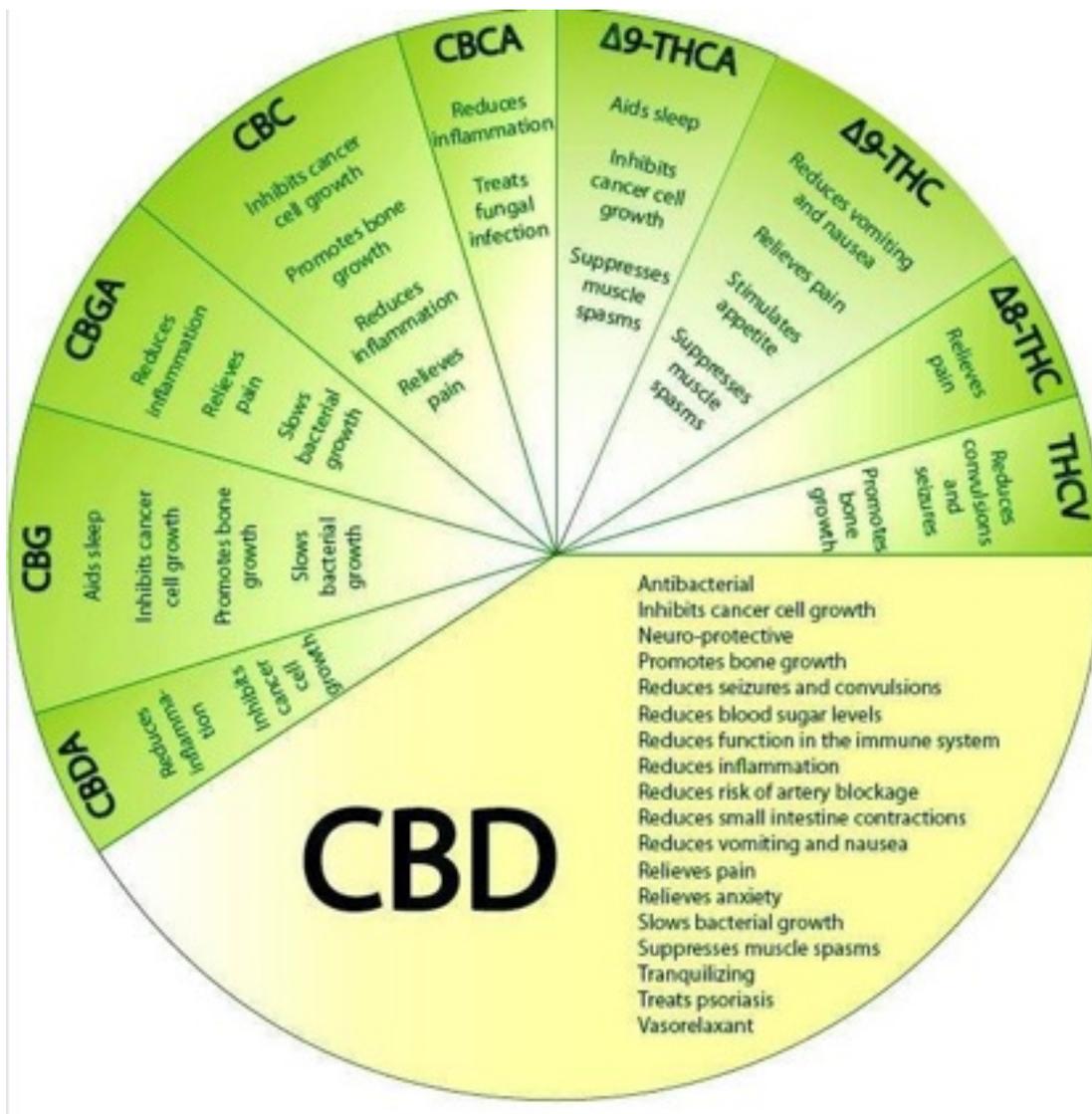
Did you know that your body produces its own cannabinoids similar to CBD and THC? These endogenous cannabinoids are a part of a system that acts as the “master control” of the body. That same system is designed to work with CBD! The endogenous cannabinoid system, or endocannabinoid system (ECS), is a recently discovered system of naturally occurring cannabinoids and cannabinoid receptor sites throughout your entire body!

CBD’s ability to interact with multiple organ systems, combined with its remarkable safety profile and extremely low toxicity, could signify a bright future for this 5,000 year old botanical superstar.

## Healing Compounds In This Amazing Plant

Of the 483 chemical compounds found in the Cannabis Sativa plant, every single one help with healing but only one will get you high. The compound responsible for the high is THC or Tetrahydrocannabinol.

Below is a list of the more important compounds in cannabis and their effects. What's interesting is it has been shown CBD counters the psychoactive effects of THC.



## ***Important Cannabidiol Facts***

There's a lot of misinformation about this medicinal compound, so let's talk about facts and clear the confusion...

As [CBD's](#) medicinal qualities continue to make waves across the country, more states are starting to look into limited medical marijuana legalization laws so their residents can get access to [CBD products](#) to treat their debilitating medical conditions. If a patient is unlucky enough to live in a state with no laws in place or no legal access to CBD products, he or she may feel as if there's no viable alternative that can provide the same relief.

Here's where [hemp-derived CBD products](#) come in. There's been much debate suggesting that CBD derived from industrial hemp has the same properties as cannabis-derived CBD, making it a potential alternative for patients who can't legally access medical marijuana but can legally acquire hemp-derived CBD products. A lot of people aren't entirely familiar with hemp-derived CBD, however. What exactly is there to know?

- CBD is the 100% legal and non-psychoactive form of marijuana, and can actually combat unpleasant effects of smoking weed, such as paranoia or over-excitability.
- CBD is non-psychoactive because it does not act on the same pathways as THC. These pathways, called CB1 receptors, are highly concentrated in the brain and are responsible for the mind-altering effects of THC.
- CBD acts on completely different receptors and enzymes than THC, resulting in a significant decrease in anxiety, depression and stress.
- CBD is completely safe and non-addictive.
- Pharmaceutical companies can't patent CBD unless they turn it into a synthetic chemical first.

- There are shocking demonstrations of the potency of CBD for several serious neurological conditions such as epilepsy, MS and cerebral palsy.
- CBD can also be used to balance hormones, reduce anxiety, lower inflammation and chronic pain, combat metabolic syndrome, and reduce obesity.
- You can legally purchase hemp-based CBD anywhere in America and in most countries of the world.

**Word of caution - if you use CBD before you smoke medical marijuana, it will increase the high.**

**Here are a few facts about CBD derived from industrial hemp:**

- Agricultural hemp and medical marijuana both come from the Cannabis Sativa L. plant.
- Agricultural hemp, which is often referred to as "hemp stalk," grows differently than THC-containing cannabis, and looks similar to bamboo.
- THC-producing marijuana plants are grown to an average of five feet in height, spaced six to eight feet apart. Agricultural hemp is grown to a height of 10 to 15 feet or more before harvest, placed three to six inches apart.
- Hemp has little potential to produce high-content THC when pollinated.
- As long as agricultural hemp plants are pollinated by members of their own crop, the genetics will remain similar with low levels of THC.

You might be wondering if CBD can help you improve your health, battle health challenges,

## **2 Common myths about Cannabidiol**

### **1. “CBD is medical. THC is recreational.”**

Project CBD receives many inquiries from around the world and oftentimes people say they are seeking “CBD, the medical part” of the plant, “not THC, the recreational part” that gets you high. Actually, THC, “The High Causer,” has awesome therapeutic properties. Scientists at the Scripps Research Center in San Diego reported that THC inhibits an enzyme implicated in the formation of beta-amyloid plaque, the hallmark of Alzheimer’s-related dementia. The federal government recognizes single-molecule THC as an anti-nausea compound and appetite booster, deeming it a Schedule III drug, a category reserved for medicinal substances with little abuse potential. But whole plant marijuana, the only natural source of THC, continues to be classified as a dangerous Schedule I drug with no medical value.

### **2. “CBD is most effective without THC.”**

THC and CBD are the power couple of cannabis compounds—they work best together. Scientific studies have established that CBD and THC interact synergistically to enhance each other’s therapeutic effects. British researchers have shown that CBD potentiates THC’s anti-inflammatory properties in an animal model of colitis. Scientists at the California Pacific Medical Center in San Francisco determined that a combination of CBD and THC has a more potent anti-tumoral effect than either compound alone when tested on [brain cancer](#) and [breast cancer](#) cell lines. And extensive clinical research has demonstrated that CBD combined with THC is more beneficial for [neuropathic pain](#) than either compound as a single molecule.

**DOWNSIDE OF THC:** It’s still illegal in many states and for many, the high makes it hard to function.

Now that you are empowered with the truth about the healing benefits of this powerful plant, let’s explore how it can help improve your health.

## ***Powerful Health Benefits Of Cannabidiol***

If you go to PubMed and do a search on on Cannabinoid you will find almost 20,000 studies. That's an average of more than two scientific publications per day over the last 20 years!

### ***Literally 1000's Of Clinical Studies Show Amazing Benefits...***

- 221 Studies: Cannabidiol displays anti-seizure properties
- 533 Studies: Regulation of nausea and vomiting by cannabinoids
- 1784 Studies: CBD suppresses pain
- 1168 Studies: CBD improves brain function
- 295 Studies: CBD improves sleep
- 2042 Studies: CBD Fights Cancer and Tumors
- 1368 Studies: Cannabidiol protects from inflammation
- 413 Studies: Anxiety relief with CBD
- 802 Studies: CBD helps fight neurodegenerative diseases

Larry and I have been stewards of Cannabidiol and the plant it comes from, and we have committed to bring the best CBD products in the marketplace.

We do not compromise on quality, and do our best to keep our prices as low as possible so that more people can access this incredible plant.

Our top priority is always our readers and customers, that's why our customer service is committed to provide the smoothest buying experience possible.

## 7 IMPORTANT SOL♣CBD FACTS

1. The content of THC in SOL♣CBD products is less than .1% (approximately 1/3 of one/tenth of a percent).
2. All of our hemp is organically grown and processed in the ideal hemp cultivation climate of Scandinavia, where it is tested twice, before the CBD-rich oil is sent to our labs.
3. Hemp derived SOL♣CBD products are legal in EVERY state, can cross all state lines, no consumptive legal restrictions.
4. SOL♣CBD products are tested multiple times before and after the manufacturing process for potency and purity. When taking our products, you know you are getting a safe and more effective product.
5. SOL♣CBD products do not contain tetrahydrocannabinol (THC) and will not cause a failed drug test. Standard drug tests do not test for CBD, and CBD is not on any federal drug schedules, nor a watch list.
6. All SOL♣CBD products are vegan, gluten free, non-GMO, soy free, nut free, and free of artificial color and flavoring
7. SOL♣CBD products are non-toxic and as a result cannot cause patients to over-dose.

**CBD Explained:** Discover Important Cannabidiol Facts & See What It Can Do For You

Whether you're interested in learning how industrial hemp-derived CBD is made, how it can help with various conditions, or what the future holds for CBD products, don't hesitate to reach out to us here.

Your questions are important not just for your benefit, but to enrich the minds of patients all around the world. By spreading knowledge and information about cannabis, hemp, CBD, and other cannabinoids, we're supporting safe growth of the cannabis industry while at the same time educating the masses about a misunderstood plant.



And to show our appreciation and as a thank you for putting your trust in SOL☼CBD, we would like to offer you 15% off your first order. Simply use “cbdexplained15” as a coupon code during checkout.