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THE TRUTH ABOUT CANNABIDIOL

Discover Little Known Cannabidiol Facts And See What It Can Do For You!



Updated 11/2017

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.

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THERE'S NO QUESTION...

...Mother Nature has all the answers!

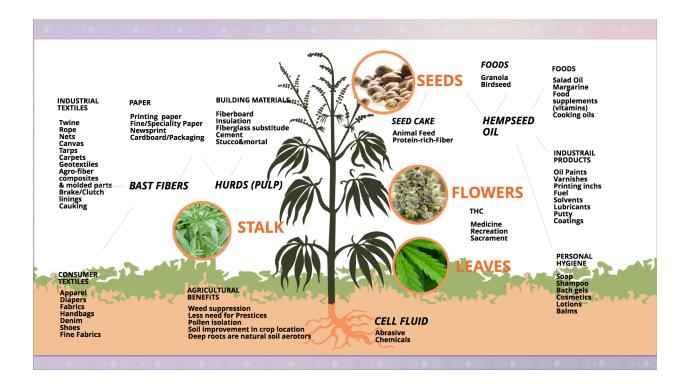
The verdict is in. One of the strong answers to many of humanity's problems is Cannabis.

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

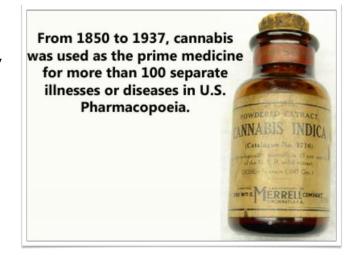


It wasn't always so in America. One of the dirty little secrets that they keep out of the history books is that America's first colony, in 1619, by decree of King James I, used hemp (the other common name for *Cannabis*) as their main cash crop for export to Europe. Hemp was (and still is, outside the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

1970 - Congress Passes the Controlled Substances Act Temporarily Labeling Cannabis as a "Schedule I substance"

This illegal status was pending congressional confirmation that cannabis was indeed a dangerous substance and needing the Schedule I status. A presidential commission led by Republican Pennsylvania Governor Raymond Shafer was created to review the research and recommend a long-term strategy.

1971 & 1972 - President Richard Nixon & Administration Officially Schedules Cannabis

The Shafer commission unanimously recommended decriminalizing the possession and distribution of marijuana for personal use. Nixon ignored the report and rejected its recommendations. Nixon launched a misinformation

campaign against cannabis and begins the war on drugs. He saw cannabis as part of the culture war that was destroying the United States, and claimed that Communists were using it as a weapon. "Homosexuality, dope, immorality in general," Nixon fumed. "These are the enemies of strong societies. That's why the Communists and the left-wingers are pushing the stuff, they're trying to destroy us." His approach drug education was just as simplistic: "Enforce the law. You've got to scare them."

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.

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

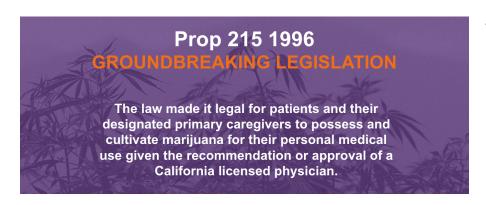
Twenty-eight years after discovering THC, in 1992, Dr. Mechoulam, along with Dr. William Devane and Dr. Lumir Hanus, identified the brain's first endogenous cannabinoid (or endocannabinoid) - the brain's natural version of THC -which they called 'anandamide,' from the Sanskrit word 'ananda,' which means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

[&]quot;Significant Legal Cases," www.druglibrary.org (accessed July 15, 2010)

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



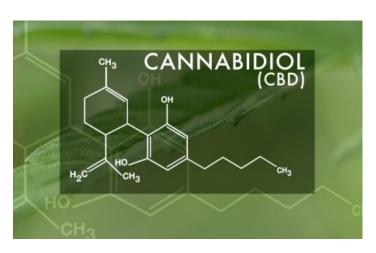
"I AM NOT BACKING DOWN ON MEDICAL MARIJUANA; I AM DOUBLING DOWN."

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 **30 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 113 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 anticancer properties are currently being investigated at several academic research centers in the United States and elsewhere.

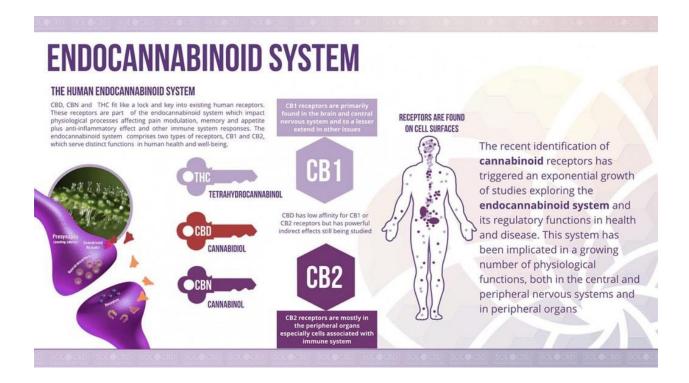
CBD works well for such a wide variety health challenges because it enhances your Endocannabinoid system. This is the system within your body which regulates proper functioning of your cells, and so much more! Let's take a closer look at this important body system.

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.



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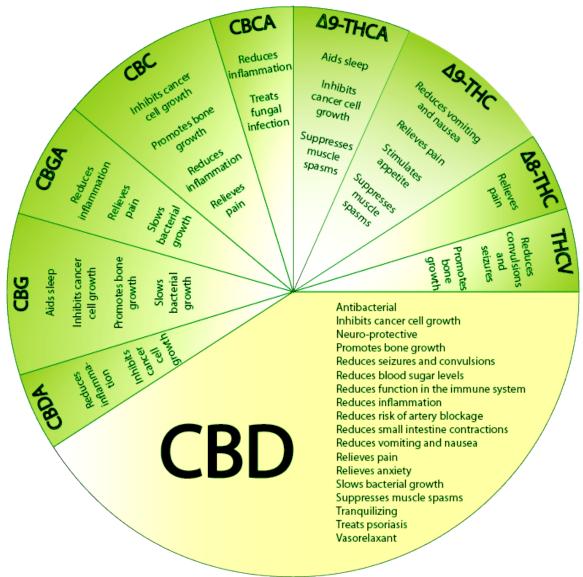
Did you know that your body produces its own cannabinoids similar to CBD and THC? These endogenous cannabinoids are a part of a system that acts as the "master control" of the body. That same system is designed to work with CBD! The endogenous cannabinoid system, or endocannabinoid system (ECS), is a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

As the science of medical cannabis develops, we're discovering more and more about the 483 chemical compounds found in the Cannabis Sativa plant. Cannabis contains at least 113 types of cannabinoids, many of which have documented medical value, but only one gets you intoxicated. The compound responsible for the high is THC or Tetrahydrocannabinol.

Below is a graphic of important Cannabinoids 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 <u>CBD</u>'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 <u>CBD products</u> 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.

IMPORTANT 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 almost no levels of THC.

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-tumor 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.

THE DIFFERENCE BETWEEN HEMP OIL AND CBD OIL

Knowing the difference between hemp oil and CBD oil is vitally important because their use varies drastically.

With names seemingly used interchangeably, it can be hard to distinguish the true difference between hemp oil and CBD oil. However, the fact is, while they both are derived from the same plant, the two oils differ greatly in composition and use. Knowing the key differences between the two oils will help you, as a consumer, to be better educated about your purchases and to find the product that truly will meet your needs.

CBD OIL

Cannabidiol (CBD) is one of two main cannabinoids found in cannabis and hemp plants, the other being tetrahydrocannabinol (THC). Unlike THC, CBD is not psychoactive, which means there are no psychological effects and no 'high.'

Depending on the product, the CBD is extracted from either hemp or cannabis plants. Cannabis-derived CBD typically also contains THC as well, which can affect its legal status. On the other hand, hemp-derived CBD contains very little THC, and is legal when harvested from industrial hemp, grown overseas.

CBD products come in many forms, including tinctures, oils, and balms.

EXTRACTION METHODS

Several extraction methods commonly are used for harvesting CBD. The best method is extraction by carbon dioxide (CO2). This method does not use heat, which allows the integrity of product to remain intact.

Lower quality CBD oils may be extracted using a solvent. This can be very dangerous, as the solvent may end up in the final product. In addition, high

levels of heat destroy many of the nutrients and medicinal properties found in CBD.

MEDICINAL BENEFITS

CBD works with a major regulatory system known as the endocannabinoid system (ECS). It primarily affects two receptors: CB1 and CB2. By working within the body to stimulate the body's naturally occurring cannabinoids, CBD shows promising evidence as an effective treatment for a multitude of health conditions, such as cancer, arthritis, multiple sclerosis, epilepsy, and more. In addition, CBD often is used to combat the negative effects of THC, for those who desire the benefits of both cannabinoids with little to no side effects.

Initial <u>studies</u> have shown that CBD oil may have numerous health and medicinal properties, including:

- Antiemetic (reduces nausea and vomiting)
- Anti-inflammatory
- Antioxidant
- Antipsychotic
- Anticonvulsant (suppresses seizure activity)
- Anti-tumoral/anti-cancer
- Antidepressant
- Anxiolytic (combats anxiety)
- Analgesic (relieves pain)

HEMP OIL





Hemp oil, also known as hempseed oil, is derived by pressing hemp seeds. Typically, the oil is extracted using a cold-press method. This helps keep the majority of the nutrients intact. When left unrefined, the oil is green and has a nutty taste. Because hemp oil is derived from the seeds of hemp plants, rather than the stalks and leaves, it contains only trace amounts of CBD.

HEALTH BENEFITS

Hemp oil, while not truly 'medicinal', still offers many health benefits to consumers. Because it is so nutritious, it is a popular cooking oil. Hemp oil is a healthier alternative to other unhealthy oils, such as vegetable, palm, and canola. In addition, hemp oil is much lower in saturated fatty acids than other oils.

Hemp oil is comprised of roughly 80 percent essential fatty acids, such as linoleic acid, stearidonic acid, alpha-linolenic acid, and gamma-linolenic acid. In fact, up to 50 percent of the weight of hemp seeds is oil. Just one tablespoon of hemp oil is enough to provide most healthy adults with an entire day's serving of essential fatty acids.

In addition, unrefined hempseed oil contains a 3:1 ratio of omega-6 and omega-3 essential fatty acids.. This ratio typically is thought to be the best for the human body. Hemp oil also contains a large amount of vitamin E, among other nutrients.

Due to these components, hemp oil may have the following health benefits:

- Balancing hormones
- Increasing immunity
- Reversing aging
- Improving cardiovascular health
- Fighting skin conditions, such as psoriasis and eczema
- Neutralizing free radicals
- Repairing and rejuvenating cell health

ALTERNATIVE USES

Hemp oil commonly is used in a variety of household and cosmetic products. Many companies incorporate hempseed oil's moisturizing properties into products such as shampoos, facial cleansers, and soaps. In addition, hemp oil can be used to make plastics, fuel and act as a base for non-petroleum paint products.

CONCLUSION

While both hemp oil and CBD oil are derived from the same plants, their composition and use varies greatly. CBD oil primarily is used in a medicinal sense, while hempseed oil is used for cooking and other household applications. Both contain numerous health benefits.

Now that you are more familiar with the differences between CBD and hemp oil, you will be able to make an informed decision on which product will best suit your needs.

POWERFUL HEALTH BENEFITS OF CANNABIDIOL

If you go to PubMed or <u>scholar.google.com</u> and do a search on on Cannabidiol 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

Being long-term supporters of Hemp and seeing its powerful health benefits, we have committed to bring the best CBD products into 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 compound.

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

HOW TO CHOOSE A HIGH QUALITY CBD PRODUCT?

There is a gold rush going on and high quality CBD is a rare commodity because most companies operate solely looking at dollar signs.

We don't care whether you get CBD from us or another company but we want you to not be fooled by huckster looking to take your money. This industry is too important to us and we want high quality maintained.

That being said, here's what you should look for to ensure you are getting a quality CBD oil:

- Because hemp pulls toxins from the ground you want to be sure that the supplier is growing hemp organically in low pollution environments just like ours.
- **ZERO heat extraction methods**. Heat kills nutrients but it's an inexpensive way to extract CBD so many use this method. Look for a CO2 extraction method that maintains whole plant integrity. You want all terpenes intact because the synergy of all the nutrients in the plant work as intended TOGETHER. It's something called the "entourage effect".
- **Avoid CBD isolates**. Many products marketed are made from Isolates, because it's cheaper to produce. For the reason mentioned in number 2, a CBD isolate has been proven to be less effective and in some cases even harmful. You want a whole plant extract.
- Be careful with companies who focus on percentage of their **CBD oil vs** actual **CBD mg per dose** and/or bottle. Because the quality of CBD is paramount as mentioned before, a higher percentage of low quality CBD will be less effective than a lower percentage of high quality CBD. For example, a 10% extract that has been extracted with CO2 and processed without heat so it maintains a full cannabinoid and terpene profile is much better than a 50% extracted with butane and heated

excessively so it has no more terpenes.

- Always make sure the **company discloses lab test results** to ensure there is no heavy metals or contaminants in the oil.
- Who are the people behind the company you are purchasing from. Look at the about us page and see if the people running the business truly care about your health and not just what's in your wallet.

INTERACTIONS

Serious drug interactions have not been seen with Cannabidiol (CBD) in combination with any other drug.

However, CBD and other plant cannabinoids can potentially interact with many pharmaceuticals by inhibiting the activity of cytochrome P450, a family of liver enzymes.

Cyto... P-who-what-huh???

Things are about to get a bit geeky but please stick with me...

It's important and you'll want to read on.

This key enzyme group metabolizes most of the drugs we consume, including more than 60 percent of marketed meds.

When a compound is metabolized (this means broken down), the body uses it or gets rid of it. This metabolism can also involve breaking down a compound into a more basic molecule that the body then uses.

Takeaway: Cytochrome P450 is important in how our body utilizes certain compounds (including some pharmaceuticals)

Now that we understand what this enzyme does, let's move on explore its interaction with CBD.

Deep breath... OK...

At sufficient dosages, CBD will temporarily **deactivate** cytochrome P450 enzymes, thereby altering how we metabolize a wide range of compounds, including tetrahydrocannabinol (THC), which causes the high that cannabis is famous for.

By inhibiting this enzyme the metabolism of the drug is <u>reduced</u> which <u>increases the effects of the prescription drug</u> you are taking.

Because your body can't metabolize the drug at a normal rate, over time this drug will accumulate in your body.

Imagine this enzyme as a trash compactor and if the speed of the trash compactor is slowed or turned off then the trash will accumulate.

Make sense?

Good, let's move on.

THE BOTTOM LINE:

CBD will allow you to reduce the pharmaceutical drugs intake that are metabolized by P450.

Here is a list of drugs that this enzyme metabolizes

Another consideration is taking CBD with a P450 inducer like:

- Carbemazepines
- Rifampicin
- Alcohol (chronic)
- Phenytoin
- Griseofulvin
- Phenobarbitol
- Sulphonylureas

The anticonvulsant potency of phenytoin was significantly increased when combined with phenobarbital, CBD and phenobarbital plus CBD. Additionally, CBD reliably reduced the anticonvulsant potencies of chlordiazepoxide, clonazepam, trimethadione and ethosuximide. These data indicate that CBD is an effective anticonvulsant with a specificity more comparable to drugs clinically effective in major than minor seizures. Furthermore, it appears that

CBD enhances the anticonvulsant effects of the former and reduces the effects of the latter types of antiepileptic drugs.

If you are taking any prescription meds listed we strongly advise you consult with a medical professional.

Additional reading on the topic can be found here:

https://www.projectcbd.org/article/cbd-drug-interactions-role-cytochrome-p450

https://www.researchgate.net/publication/22305086 Cannabidinol - antiepileptic drug comparisons and interactions in experimentally induc ed seizures in rats J Pharmacol Exp Ther

HOW TO DOSE CORRECTLY

Depending on your current source of CBD oil, the strength and bioavailability will vary greatly. Because the research is still in its early stages, it's therefore difficult to provide a specific dosage for each individual case.

Afterall, some medications go by weight, some by age, and all will be affected by the strength of the medication itself. With this in mind, there are two rules to keep in mind when determining the correct CBD oil dosage for your specific body type.

First, always start off with a small dosage. Second, maintain the same dosage for at least a few days prior to increasing to confirm the results. By starting off gradually, and slowly increasing the amount over time you will ensure you are not overdosing and wasting valuable CBD.

You will also ensure to find the exact dose that works for your situation, rather than simply relying on information passed along from someone else.

You might be asking, where to start? More general recommendations for any CBD treatment begin at 40 mg per day.

As you will see from the above scientific studies, the dosage tended to be quite a bit higher than recommended here (300-600mg), however less is more when treating with all forms of cannabis and it is important to start off small.

Plus, there is a likelihood that by beginning small, you will maybe not even need to reach the levels tested in the studies. With slow increases in dose and/or frequency, you should be able to find a perfectly personalized dose that provides you with a sense of calm, relaxation and alleviates overlying phobias.

Now that you have a good understanding about Cannabis and it's powerful component, CBD. We'd like to introduce you to our brand...

ABOUT SOL&CBD



The brand was born from a passion of providing the highest quality. We believe in ethics over dollars.

As health coaches, researchers, and advocates of natural health for many years, we LOVE products that deliver BIG benefits.

We have yet to come across anything as substantial as Cannabis Sativa L.

We are believers that when the body has the right tools it does what is does best - heal itself. Cannabinoids are nothing more than nutritional agents that allow your body to function more efficiently.

In 2015 after seeing the science, reading the history, and hearing about all the success stories, we felt compelled to create a superior CBD and bring it to market.

We, of course, hope you'll try our brand, but at the end of the day, our biggest goal is to provide the most accurate and helpful information possible, so you can make smart choices when it comes to health.

The right to use this plant was taken from us. But now the truth is starting to surface once again and we are confronted with the power locked inside.

With that said, here are....

8 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.
- 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.
- 8. We believe so strongly about our CBD that we offer a unconditional, industry leading, **60-Day Money Back Guarantee.** The risk is entirely on us.

Rest assured that our products meet all the recommendations above.

Whether you're interested in learning how 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 us via email - support@solcbd.com or call us at 1-800-413-5420.

Your questions are important to us and we will do our best to answer them and support you along the way. We always welcome your feedback and recommendations.

Thank you in advance for helping us spread knowledge and information about cannabis, hemp, CBD, and other cannabinoids.

A SPECIAL GIFT

And to show our appreciation and as a thank you for putting your trust in SOL&CBD, we would like to offer you 10% off your first order. Simply use "cbdexplained10" as a coupon code during checkout.



>> Check out our selection of CBD Products here <<

We hope this information provided valuable information that will help you make a wise buying decision.