



CBD 101

KNOW THE FACTS

Hal Lewis



TABLE OF CONTENTS

What is Hemp	3
The Difference Between Hemp & Marijuana	3
The History of CBD	5
What is CBD?	7
Check with your state for legality	8
Where Does CBD Come From?	9
Types Of CBD	11
Isolate CBD	13
How To Use Isolate CBD	14
Creating Your Own CBD Oil & Custom Products	15
Full-Spectrum CBD	17
The Extraction Process of Full-Spectrum CBD	19
The Entourage Effect	20
How To Take Full-Spectrum CBD Products	23
Broad-Spectrum CBD	25
Benefits Of Broad-Spectrum CBD	27
References	29



WHAT IS HEMP?

“Hemp” is a term used to classify varieties of Cannabis Sativa that contain 0.3% or less THC content by dry weight (Cadena, 2020).

THE DIFFERENCE BETWEEN HEMP & MARIJUANA



In September of 2018, the Farm Bill was signed into law. It became the Agriculture Improvement Act of 2018. It removed hemp, defined as cannabis (*Cannabis sativa* L.) and derivatives of cannabis with low concentrations of the psychoactive compound delta-9-tetrahydrocannabinol (THC) (no more than 0.3 percent THC on a dry weight basis), from the definition of marijuana in the Controlled Substances Act (CSA) (Abernethy, 2019).



In this eBook, we are referring to the Cannabis Sativa L plant, better known as “industrial hemp” or just “hemp”. The main difference between this plant and its more well-known cannabis cousin (marijuana) is the percentage of THC. THC is the cannabinoid responsible for the psychotropic effects most associated with cannabis. With the Agriculture Improvement Act, it became legal to grow hemp or cannabis containing less than 0.3% THC. It also became legal to process all its derivatives. Anything over that percentage is classified as Marijuana. Marijuana is bred to have high levels of THC and low levels of CBD while Hemp is bred to have low THC levels but high CBD levels. This is what makes it the best source for the extraction of CBD supplements (Kc hemp co, 2019).



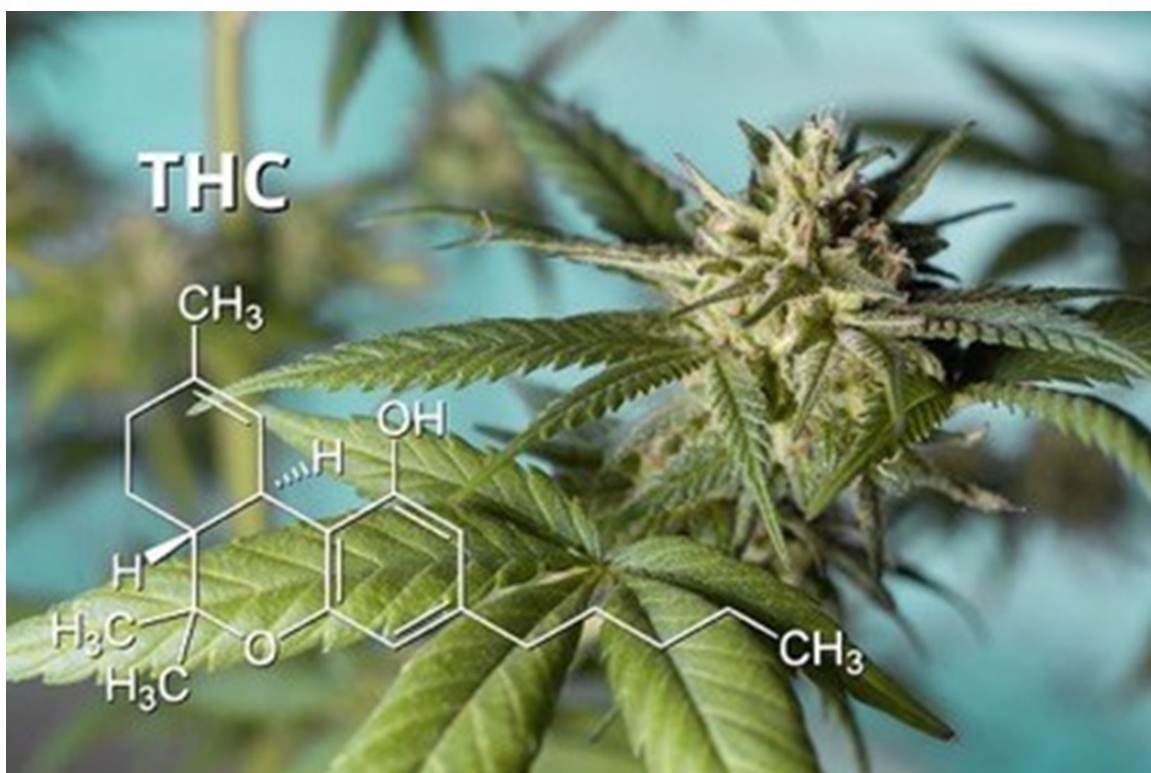


THE HISTORY OF CBD

It is a common misunderstanding of many that CBD and its therapeutic uses and effects are a fairly new discovery due to its sudden popularity surge. However, because of the numerous years of cannabis prohibition, CBD was grossly overlooked (Cadena, 2019).

The use of cannabis-related treatment was documented first in 2737 BC. A Chinese Emperor by the name of Sheng Nung is the first person recorded to have used tea infused with cannabis to treat several illnesses like malaria, gout, and rheumatism. Queen Victoria also used CBD while reigning over England until 1901; she used it to alleviate menstrual cramps (Cadena, 2019).

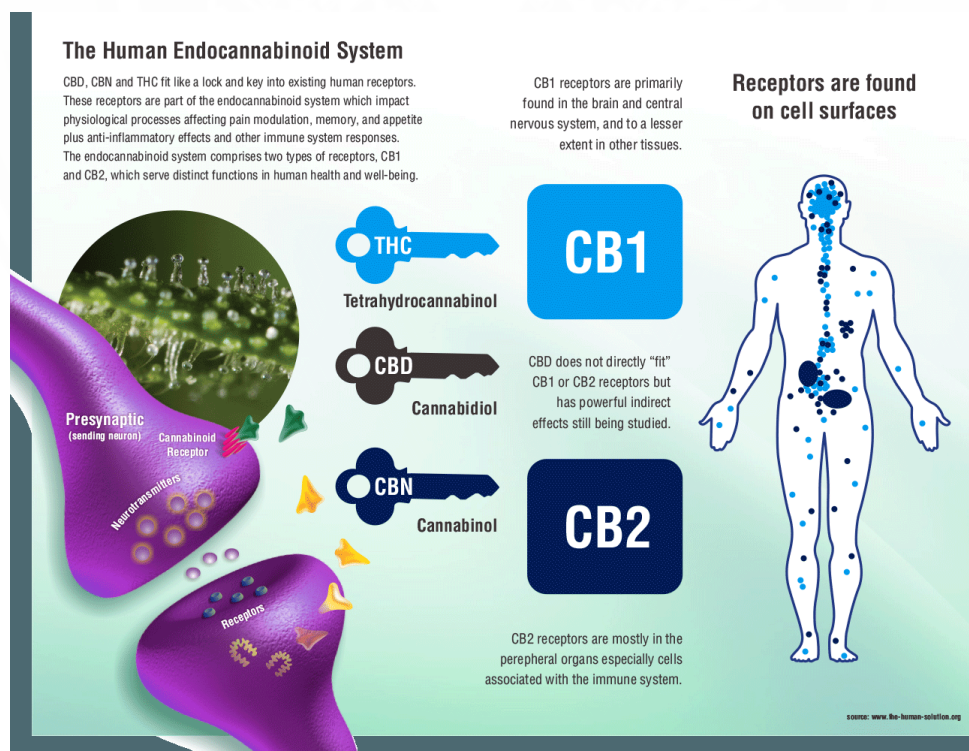
In 1938, William B. O'Shaughnessy, an Irish doctor and medical researcher, published a study that he conducted on the therapeutic effects of cannabis plants. This move led more researchers to explore the medical possibilities of the plant (Cadena, 2019).





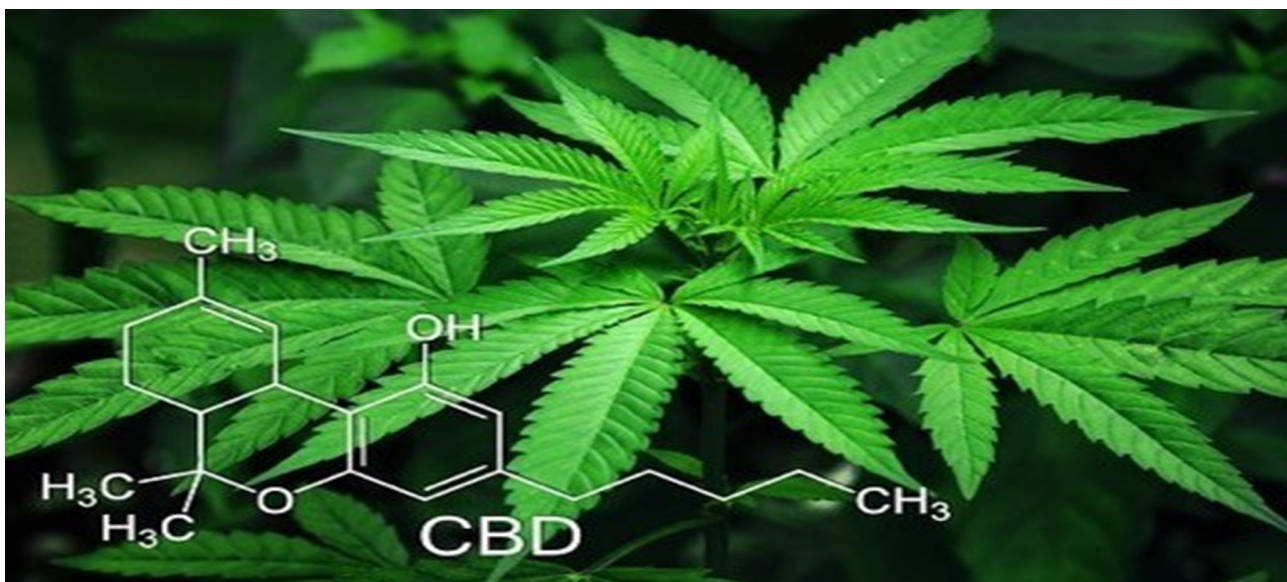
About a century passed after O'Shaughnessy's publication that revealed compounds in the cannabis plant before other recorded advancements were made. One such is the discovery of an individual cannabinoid by Robert S. Cahn, a British chemist. After, an American chemist by the name of Roger Adams was able to successfully and historically isolate the first cannabinoid, known as Cannabidiol (CBD). Adam's research is credited for the identification of more cannabinoids such as Tetrahydrocannabinol (THC) (Cadena, 2019).

Fast Forward to these last few years, where we see a massive increase in the research, awareness, and use of CBD for medical purposes. These growing studies have now provided us with more information to support and encourage the use of CBD for the relief of pain and other disease- related ailments. These researches also fuel the well-deserved popularity that CBD has been gaining over the last couple of years. There has also been a great discovery; researchers have found that our body has a system named the Endocannabinoid System (ECS). This system consists of a group of receptors that interact with the receptors found in cannabinoids (Cadena, 2019).





WHAT IS CBD?



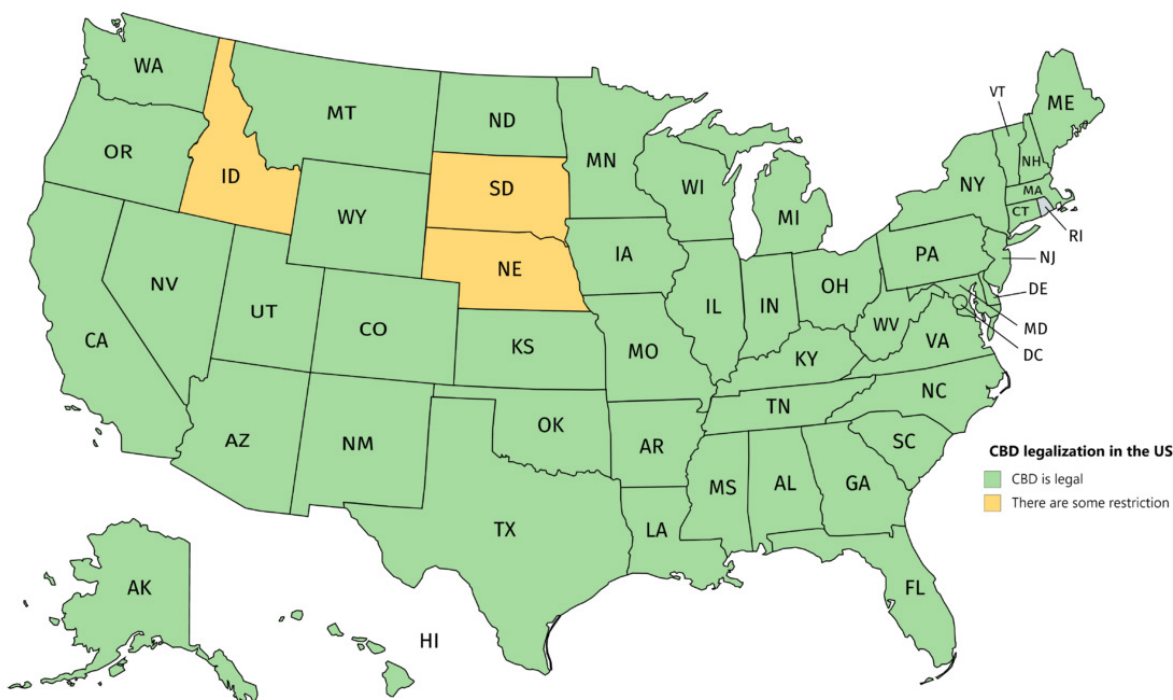
Cannabidiol, which is popularly known as CBD, is now a quite common natural and alternative remedy for many illnesses, or just to keep persons in good health. CBD is one of the most prevalent chemical compounds or cannabinoids that is found in and extracted from the hemp plant. CBD can be acquired straight from the hemp plant, which is a cousin of the marijuana plant (Kubala, 2018).

Tetrahydrocannabinol (THC) is a psychoactive cannabinoid in cannabis that causes the “high” feeling linked to the use of marijuana or its products. But, CBD does not have psychoactive properties. For this reason, CBD stands as a better option for individuals who need relief from the many symptoms of various conditions without the mind-bending effects of marijuana (Kubala, 2018).

According to a report from the World Health Organization, “In humans, CBD exhibits no effects indicative of any abuse or dependence potential.... To date, there is no evidence of public health- related problems associated with the use of pure CBD” (Grinspoon, 2018).



CHECK WITH YOUR STATE FOR LEGALITY



Created with mapchart.net ©

In a lot of areas in the United States, CBD can be readily accessed. This is because the fifty (50) states have now put in place laws that legalize CBD. These laws allow the legalization of CBD with some restrictions. The FDA in December of 2015, loosened its grip on some regulatory requirements, facilitating many CBD related trials by researchers. CBD's legality will undergo reformation because currently, there is much bipartisan agreement in Congress for making hemp plants legal. This would result in making it quite hard for the prohibiting of CBD (Grinspoon, 2018).



WHERE DOES CBD COME FROM?



To go directly to the point, CBD comes from the female group of the cannabis plant, for both hemp and marijuana. CBD, however, is found more in hemp than in marijuana. To be specific, CBD is located in the trichomes (small hair-like growth from the skin of plants) on the hemp plant and flowers. CBD can commonly be extracted from the stalk, seed, and leaves of the hemp plant. The CBD in these parts of the plant tends to be very expensive and proves challenging to extract (Anavii, 2020).

A lot of persons are not clear on exactly where CBD comes from; this is due to the difference in the growth technique used by Europeans versus those used by Americans. Europeans grow hemp to be used as fiber; these crops are grown to have thin stalks.



When the fiber extends past its peak strength, the nutrients that are within the plant will begin to produce trichomes and blossom flowers as well. The flowers and trichomes house multiple cannabinoids such as CBD. Before the male plant has the opportunity to pollinate its female counterpart, they are harvested (Anavii, 2020).

In America, the hemp that is grown resembles that of the marijuana plant. This is the main reason that both are often mistaken for the other. But the reason they so closely resemble each other is that they fall under the cannabis species. Both the hemp and marijuana plants are sources of CBD (Anavii, 2020).

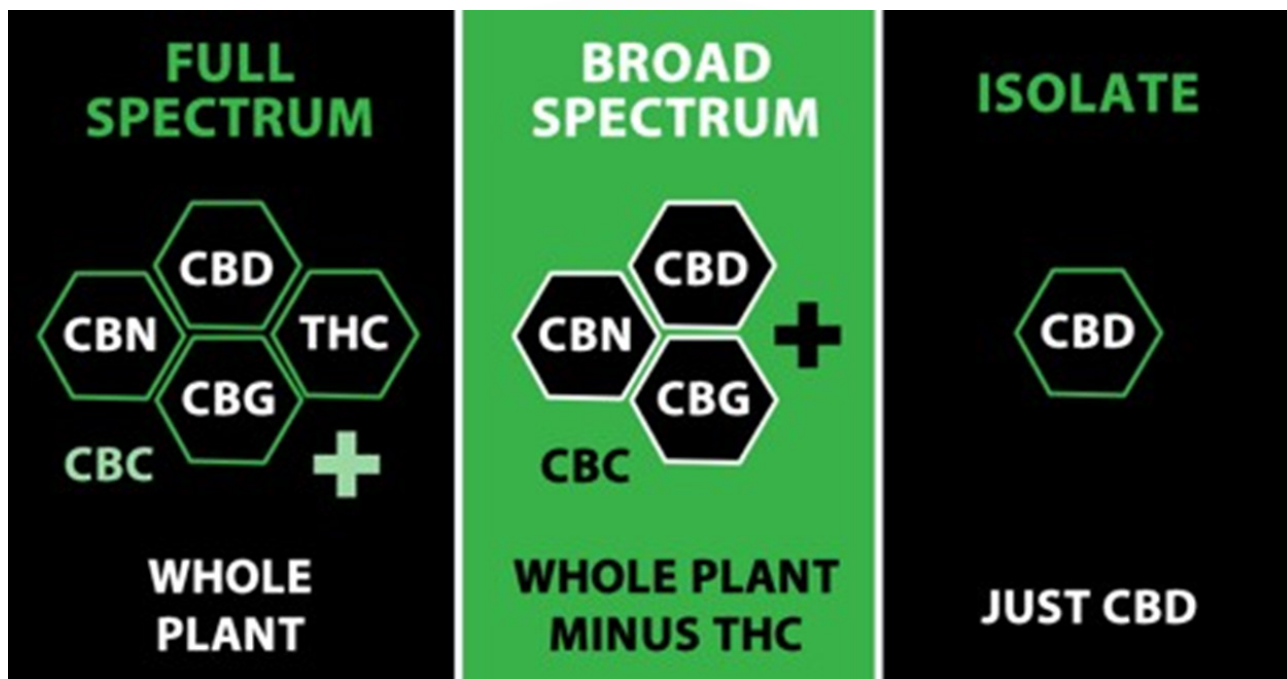
On the plants being grown in the US for the use of extracting CBD, you will not see thin stalks with small flowering buds; instead, you will witness a bushy plant that boasts thick stalks to support their female flowers which tend to be big and heavy. When hemp is grown using this technique, a greater amount of CBD concentrations is in the plants. This is usually between 8% to 15% (Anavii, 2020).

To conclude, CBD is mainly found in the flowers and the trichomes of hemp plants. It is known to be quite plentiful in the female plants. CBD's concentration in the plant relies greatly on the farming technique used by the cultivators. Also, the THC concentration in the plants is a major determinant to say whether or not the plant is legal or illegal for medical or recreational use in certain states. If the product has more than 0.3% THC, then it is declared federally illegal, regardless of its CBD content (Anavii, 2020).



TYPES OF CBD

Isolate, Full spectrum, Broad Spectrum



SOURCE: Quality of Life CBDs

CBD is a cannabinoid. Cannabinoids are naturally occurring compounds found in the Cannabis sativa plant. There are over 480 different compounds present in the plant; only approximately 66 are termed cannabinoids. Cannabidiol (CBD) makes up about 40% of the plant's resin extract.

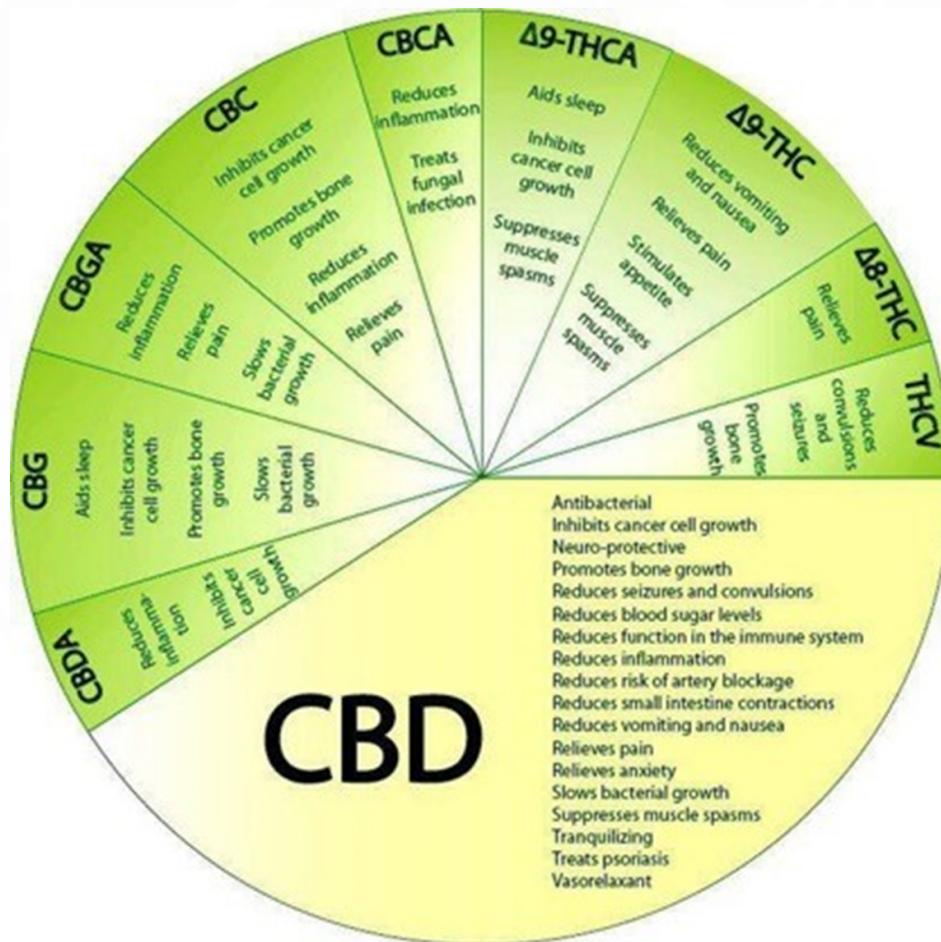
Cannabinoids are grouped into the following subclasses:

- Tetrahydrocannabinol (THC)
- Cannabidiol (CBD)
- Cannabigerol (CBG)
- Cannabichromene (CBC)
- Cannabinol (CBN)
- Cannabidiol (CBDL)



- Other cannabinoids including cannabicyclol (CBL), cannabielsoin (CBE) and cannabitriol (CBT)

The primary way of differentiating cannabinoids is based on their degree of psychoactivity. For example, CBG, CBC, and CBD are not known to be psychologically active agents but, THC, CBN, and CBDL with some other cannabinoids are known to have varying degrees of psychoactivity. CBD is thought to have anti-anxiety effects, possibly counteracting the psychoactive effects of THC. These different types of CBD refer to a plant's cannabinoid profile (Royal CBD, 2020).



SOURCE: Canna CBD Health



ISOLATE CBD

Isolates are exactly how they sound, a single isolated compound from the plant. Accomplishing this is done through a supercritical CO₂ extraction or winterization process. Through this process, the oils, chlorophyll, flavonoids, waxes, terpenes, other cannabinoids, plant material, and all other compounds are removed, leaving behind a 99% pure CBD product. Isolate CBD is from hemp, due to its low to non-existent THC-content. Based on these facts, you would not be surprised to learn that Isolate CBD is the purest form of CBD.

The exciting thing about isolates is that you can now find other cannabinoids isolated like CBG and CBN. As more research is conducted on the hundreds of known cannabinoids, we will be able to specifically target their interactions with the body and all health benefits associated with them. It will be exciting to be able to customize cannabinoid profiles by combining isolated cannabinoids to form a new product based on your health and wellness needs (KC hemp co, 2019).

Isolate CBD usually comes in two different forms;

Powder or Crystals Crystal

Isolate is not as refined as the powder isolate and is better when consumed by dabbing i.e. inhaling cloud vapors of the crystals. The powder isolate has a variety of uses. A cross-sectional study performed on several CBD consumers examined how and why these people included CBD in their lives. The study concluded that CBD had been used therapeutically for several ailments including, “chronic pain, to balance sugar levels, stabilize blood pressure, anxiety, insomnia, and depression” (Kats,2020).



HOW TO USE ISOLATE CBD

The powder form of isolate CBD is easy to use. It does not require any specialized equipment or tools. The CBD Professor describes it is a tasteless, odorless, fine white powder. Some of the easiest ways to get your daily dose of CBD using isolate CBD include:

Sublingually by placing the powder directly under your tongue, creating your own CBD oil and custom products, mixing it into your morning juice, or smoothie, or to make a CBD sweetener.

Placing isolate CBD powder directly under your tongue is, by far, the easiest way to use it. Hold it there for about 60 seconds. The CBD will then be delivered to the bloodstream via the mucus membranes to provide the relief you desire.

Isolate Dosage Chart
This information is for reference only.

	Bodyweight in lbs (pounds)			
ANXIETY / STRESS / DEPRESSION PAIN / LONG TERM CONDITION	50 - 100lbs	100 - 150lbs	150 - 230lbs	230+ lbs
Mild	5-10mg	10-40mg	40-80mg	70-100mg
Average	10-20mg	20-70mg	70-150mg	100-150mg
Intense	20-40mg	40-100mg	100-200mg	150mg+

Supplied serving spoon is equal to 60mg. Take at least twice a day to achieve the most desired benefits. Always consult your doctor before taking any type of supplement.
www.LegalCBDIsolate.com

SOURCE: Legal CBD Isolate



CREATING YOUR OWN CBD OIL & CUSTOM PRODUCTS

You can infuse CBD isolate into a carrier oil (for example, MCT oil, grapeseed, or olive oil) to create your own CBD oil that is measured precisely.

This CBD oil is taken sublingually. You can also use this CBD-infused oil when cooking or baking, but keep in mind that CBD will lose its potency at higher temperatures. Isolate CBD can also be mixed with skin oils to create a topical that can be used on sore muscles or to ease inflammation and joint or arthritis pain. One of the easiest ways of using isolate CBD is by adding it to a glass of juice or a smoothie. It will blend seamlessly with liquid, offering an extra boost of benefits to an already healthy way to start the day. If juices or smoothies are not your thing, CBD isolate will work just as good when mixed with your morning cup of coffee or tea (Zamnesia, 2020).

Another popular method of using CBD isolate involves making it into sort of a sweetener, though -as we mentioned above CBD should be tasteless. To make your own CBD “sweetener”, heat honey or agave in a double boiler (or something similar), and then mix in your CBD isolate until thoroughly dissolved. Use this infused sweetener on top of toast, in your tea or coffee, or even by the spoonful (Zamnesia, 2020).

According to Zamnesia (2020), the advantage of CBD crystals is that they dissolve in food and drinks, applied sublingually, or as a topical salve like many regular CBD products, or they can be vaporized or dabbed. Crystals lack the strong and bitter taste that most consumers find unpalatable about other CBD products. Of course, CBD crystals also contain 0% THC, which means they are non-psychoactive (Zamnesia, 2020).



Pros and Cons of CBD Isolate	
Pros	Cons
Purest form of CBD	Does not deliver the enhanced benefits of the entire Cannabis plants
No Risk of Psychoactive Effects	Specialized equipment may be required for consumption of CBD Isolate crystals
Generally Considered to be Safe	
It is Odorless and Tasteless	
User will not test positive for THC	

Isolate CBD is best for:

- Individuals recommended to take high doses of CBD
- Individuals with sensitivity to THC or other cannabinoids
- Individuals who regularly undergo drug screening tests
- Individuals who prefer light flavors or no flavor
- Individuals living in states that have strict THC-laws
- First-time users that may be hesitant about other cannabinoids (Cadena, 2019)



FULL-SPECTRUM CBD

American chemist, Roger Adams, made history when he successfully isolated the first cannabinoid, cannabidiol (CBD) in 1942. His research is also responsible for the discovery of Tetrahydrocannabinol (THC) (Cadena, 2020).

According to Cadena (2020), Dr. Raphael Mechoulam made several vital breakthroughs toward understanding the effects of individual cannabinoids and THC in the 1960s. It was his research that disassociated CBD from consideration as a mind-altering drug. He was, therefore instrumental in the eventual establishment and regularization of the CBD industry.

His work has impacted the lives of millions as today CBD is used in the treatment of over 50 conditions, including epilepsy, sickle cell, fibromyalgia, glaucoma, autism, bipolar disorder, Crohn's disease, and the eventual modernization of CBD (Cadena, 2019).

Full-spectrum CBD extracts a full profile of beneficial cannabinoids and terpenes from the cannabis plant. Sometimes referred to as the whole plant, full-spectrum CBD will contain trace amounts of THC, but not enough to get you “high” (Williams, 2019).

KC Hempco (2019), describes full-spectrum CBD as a product derived from the whole hemp plant matter. That means taking the roots, stems, flowers, and leaves and pressing, pulverizing, or power washing them to extract the oils from the plant. This leaves a full-spectrum of cannabinoids (CBD, CBG, CBN, THC, etc.), terpenes. These are chemicals that give things their odor (limonene, myrcene, etc.) The resulting oil will have a strong “hempy” taste and be dark in color. It will also contain 0.3% or less THC.

All of the various cannabinoids, including THC, work symbiotically to create an “entourage effect”. This entourage effect suggests that when all of the cannabinoids are present, they work best together. A full-spectrum CBD product is going to cast the widest net when it comes to balancing out our endocannabinoid system. Simply put, full-spectrum CBD oil is the same concentration of cannabinoids found in the original plant. There are over 113 other



cannabinoids in hemp and marijuana, plus the trichomes and buds on the cannabis flowers contain a range of terpenes, flavonoids, vitamins, and minerals (Higdon, 2020).

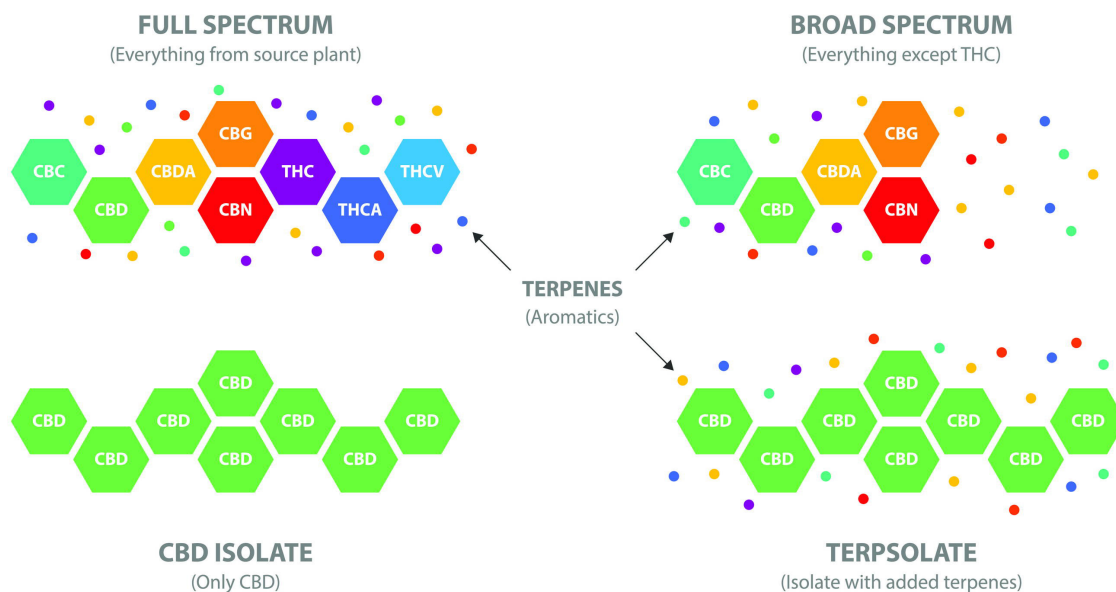
Here is a list of additional compounds available in full-spectrum CBD extracts:

- Omega-3 fattyacids
- Vitamins E, A, andC,
- Zinc andphosphorus
- Iron andcalcium
- Magnesium andpotassium

THE DIFFERENCE OF CANNABINOIDS SPECTRUM OPTIONS



THERE ARE DIFFERENT CANNABINOID SPECTRUM OPTIONS TO CHOOSE FROM WHICH ARE FULL-SPECTRUM, BROAD-SPECTRUM CBD, CBD ISOLATE AND TERPSOLATE. WHILE THESE FOUR TYPES OF PRODUCTS MAY SOUND SIMILAR BUT THERE ARE ACTUALLY APART FROM EACH OTHER.





THE EXTRACTION PROCESS OF FULL-SPECTRUM CBD

Of the three main CBD types, full-spectrum is the one that uses the least amount of processing. Comparing the CBD production process to that of making orange juice allows for a greater comprehension of the process. The first squeezing of an orange provides juice that is rich in highly concentrated vitamins that are also natural. The pulp is filtered out by some manufacturers. This is comparable to broad-spectrum CBD. Removal of the fiber and many nutrients will result from filtering the pulp from the juice (Higdon, 2020).

Isolate CBD can be comparable to juice that is filtered so many times that it loses most of its nutrients; only vitamin C remains. Even though this vitamin is a daily requirement, it would be good to have received the other natural nutrients from the orange juice (Higdon, 2020).

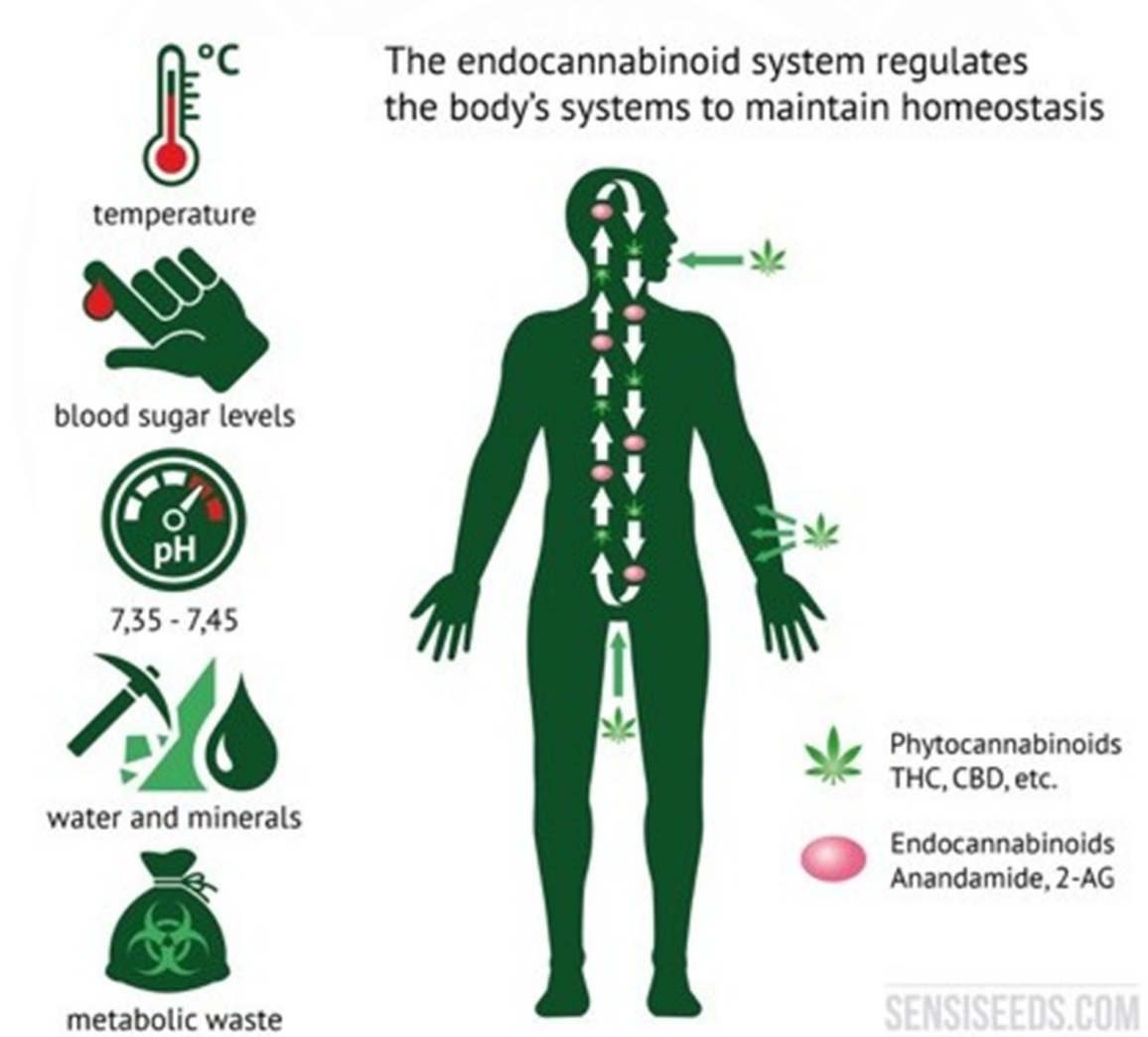
All the natural elements are extracted when making full-spectrum CBD. The compound's purity, even though squeezed from the plant, is maintained. The full-spectrum CBD product will be composed of many cannabinoid compounds that the body will most truly benefit from (Higdon, 2020).



THE ENTOURAGE EFFECT

To fully understand why full-spectrum CBD interacts better with the body than isolate CBD, let's have a look at CBD's and other cannabinoids interaction with the body.

The cannabinoids extracted from hemp interact with the receptors within the endocannabinoid system. The endocannabinoid system helps the body to manage many processes, such as appetite and mood. This system also aids with the inflammatory response (Royalcbd, 2020).



SOURCE: *Sensiseeds.com*



Higdon (2020) tells us that when there is an imbalance in our endocannabinoid system, we are likely to experience some side effects. Cannabidiol (CBD) can help the body re-balance the endocannabinoid system and return it to homeostasis on its own. However, a 2015 study concluded that CBD is only effective at a certain dose. If you take too little or too much CBD, the product becomes significantly less effective. This conundrum is referred to as the “bell-shaped response curve.”

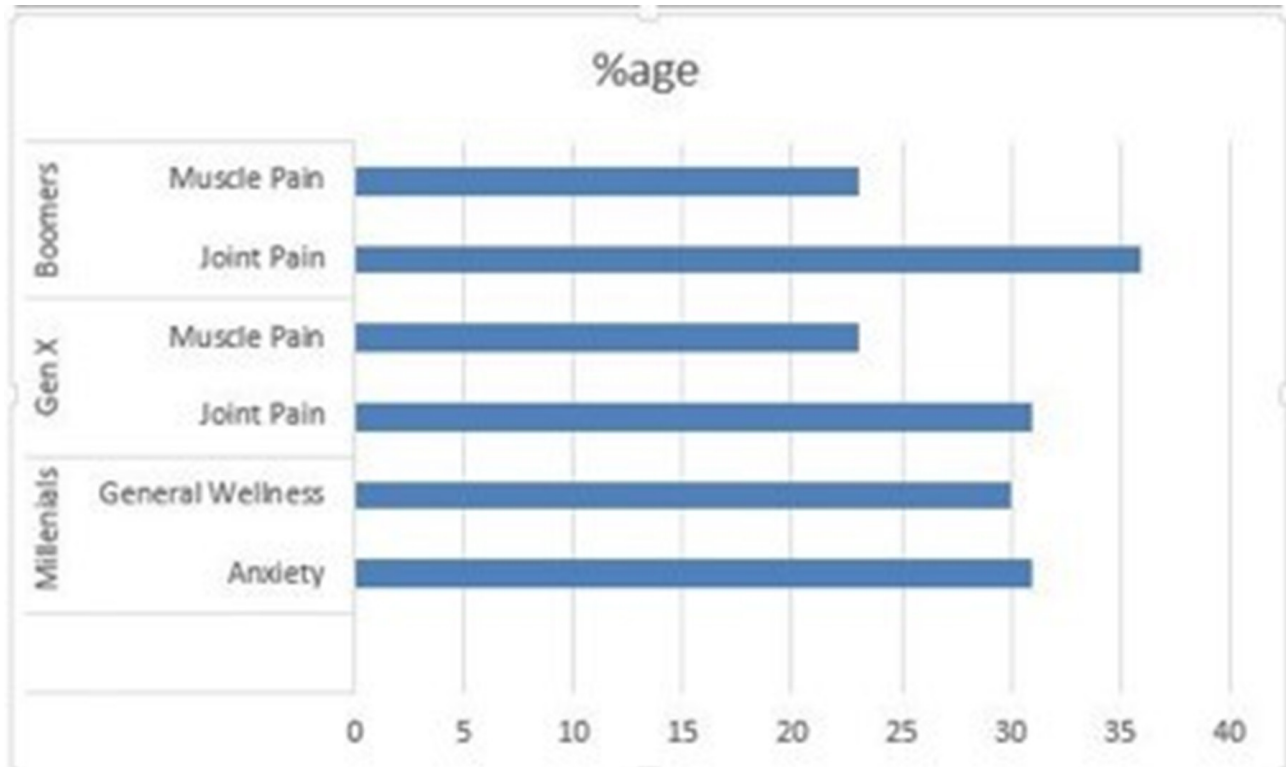
When comparing CBD isolate to full-spectrum CBD, the researchers found that the range of effective doses increased when other naturally-occurring compounds were present in tandem with CBD. This finding suggests that, compared to CBD isolate, full-spectrum hemp products are more effective (Higdon, 2020).

This phenomenon is called the entourage effect. The way the entourage effect works explains why hemp CBD products make you more comfortable without side effects when you take cannabinoid components in their whole and natural state (Higdon, 2020).

To drive this point home, we will use another analogy.

Let’s say it is Friday night, and you are getting ready to go to a party. While you might have fun at the party all on your own, you will have more fun if you invite your friends with you. Your friends lift your spirits and increase your humor, and you have the same effect on them. Together, your “entourage” makes it easier for all of you to have a great night at the party.

While CBD might be a great gal on her own, she becomes the life of the party when all of her cannabinoid and terpene friends are with her. That is why full-spectrum CBD is better. The concept of the entourage effect is based on the theory that the cannabinoids, terpenes, and other compounds of the source plant can amplify each other’s effects (Higdon, 2020).



Reason For Use By Various Age Groups SOURCE: The cannabis radar



HOW TO TAKE FULL-SPECTRUM CBD PRODUCTS

Cronkleton (2020), discusses the variety of ways that any CBD oil, whether full-spectrum or broad-spectrum can be absorbed by the body. CBD can be absorbed through digestion or the skin. It can be mixed into foods and drinks (edibles), absorbed sublingually (placed under the tongue), made into tinctures, capsules, tablets, gummies, inhaled as a vapor, lotions, or salves. The author, therefore, indicates limitless options available to consumers of CBD; however, the effectiveness with which the product is absorbed may vary depending on the means of absorption.

Oils and tinctures are very effective ways of absorbing both full-spectrum and broad-spectrum CBD. A tincture is created by dissolving CBD in alcohol. The alcohol is safe for consumption and since only a few drops are required, there is no need to fear intoxication or any other harmful side effects of alcohol consumption. Cronkleton (2020), recommends that the bottle be shaken before use to ensure the ideal consistency. Use a dropper (many products will come with one), to place the liquid under your tongue. For maximum absorption, hold it under your tongue for 30 seconds to a few minutes before swallowing. To determine how many drops to take, follow the recommended dose from the manufacturer or your doctor.

Appropriate serving sizes for full-spectrum and broad-spectrum CBD vary greatly depending on individual factors, such as intended use, body weight, metabolism, and body chemistry.

Doses should be taken at least 4 to 6 hours apart. You can take CBD at any time of day. If you are using it to improve sleep, take it before bed.

The immediate effects of CBD usually take effect within 30 to 90 minutes, but long-term results may take several weeks to achieve.

You can also mix CBD oil into drinks and food, but this may affect absorption.



Store CBD oils and tinctures in a dry, cool place away from direct heat and sunlight. The heat factor is also important to note during vaping or making edibles as CBD starts to degrade between 320 and 356 degrees Fahrenheit. Make sure the cap is closed tightly after each use. It is not necessary to refrigerate the product, but it may help to prolong shelf life.

There is no need to wash off lotions, salves, or other CBD infused skin care products. These products can be absorbed into the skin (Cronkleton, 2020).

Full-spectrum CBD is generally well-tolerated and safe to use, though adverse reactions such as fatigue and digestive issues are possible.

Talk to your doctor before taking CBD if you are pregnant or breastfeeding, have any medical conditions, or take any over the counter or prescription medications or supplements. CBD has the potential to interact with medications, including those that also interact with grapefruit (Cronkleton, 2020).

Carefully read the ingredient list if you are allergic to coconut oil or have any other possible allergies. CBD is legal in the United States, but most manufacturers require you to be at least 18 years of age to purchase their product. Since full-spectrum CBD products can contain trace amounts of THC, it is still possible for it to show up on a marijuana drug test. Avoid taking full-spectrum CBD products if this is a concern. Researchers do not yet know all of the benefits or risks of CBD use. Results may be slow and subtle, and they may vary from user to user. You may wish to track your progress using a journal so you can see the effects over time (Cronkleton, 2020).



BROAD-SPECTRUM CBD

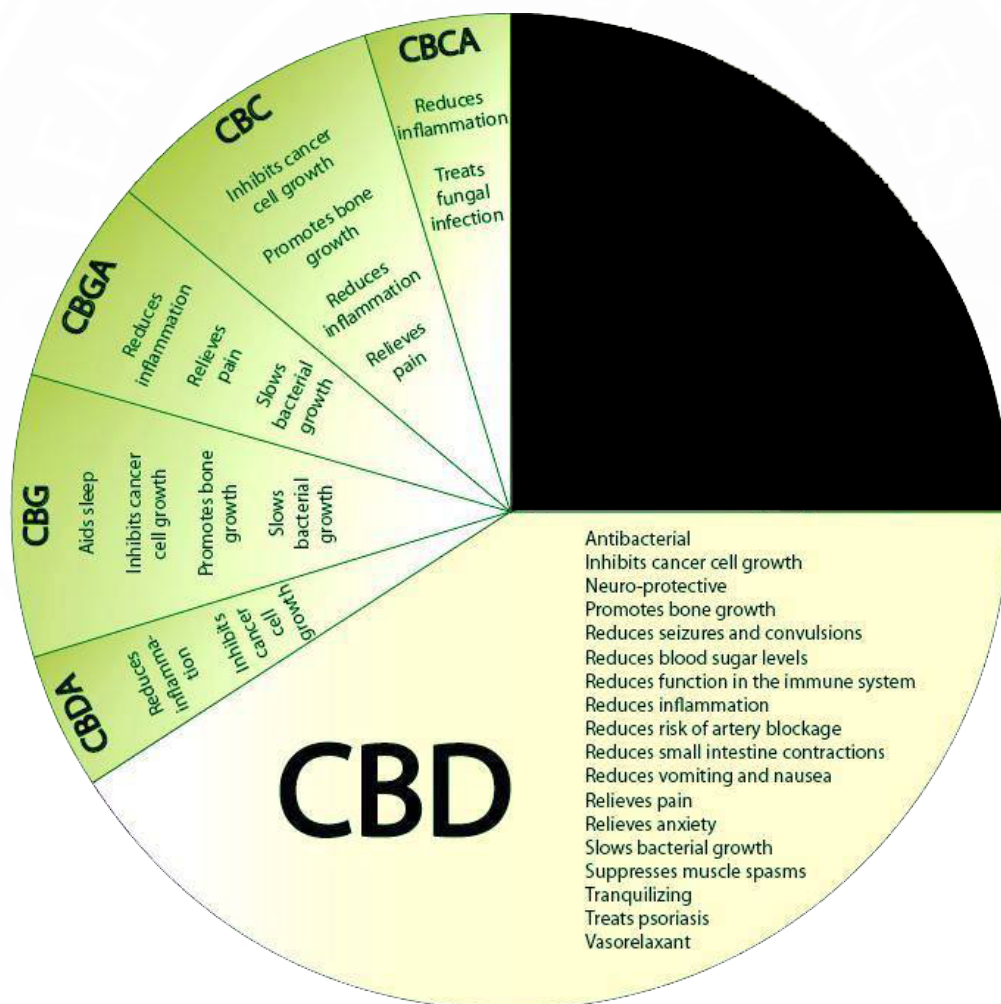
Broad Spectrum CBD is the best form of CBD to use for a holistic and impactful treatment experience. We will go on to see why Broad Spectrum CBD is the most versatile, valuable, and effective form of CBD. Broad-spectrum CBD is the middle ground option between isolate and full-spectrum CBD. It begins as a full-spectrum oil, with the full range of beneficial cannabinoids, nutrients, and terpenes, but it then goes through a refinement process to remove all THC compounds (Williams, 2019).

According to KC Hemp Co (2019), a broad-spectrum CBD product is created from the same process as the full-spectrum CBD product by taking the roots, stems, flower, and leaves. There is also another similar process of using the flower only as this is the most potent part of the cannabis Sativa or hemp plant. The flower contains concentrated amounts of all the cannabinoids. The difference is, after extraction, the THC compound is separated and removed entirely. This still leaves us with a great range of cannabinoids beyond CBD. Many people find themselves in a situation where they cannot have any THC in their system, so broad-spectrum products are becoming the most valued form of CBD. A true broad-spectrum will have no trace amounts of THC but will give you an otherwise full cannabinoid profile that will include CBD, CBG, CBN, CBDV, and other potential cannabinoids, allowing you to maintain the “entourage effect”. For many people looking to get the health benefits without the concern of the psychotropic component of the plant, broad-spectrum CBD products are the most effective choice.

Another reason why someone might want to choose a broad-spectrum CBD product would be due to having a job or are in a position for drug screens. Many people fall into this category from bus drivers, construction workers, nurses, and government employees. All have to be careful when choosing the right CBD products. When choosing a broad-spectrum product for this reason, always make sure you are purchasing from a company that supplies third party labtesting or a COA (certificate of analysis) to verify there is no detectable THC within the product (Kc hemp co,2019).



Based on the data provided, we see why broad-spectrum CBD is ideal for so many different types of users. Ideally, you benefit from the best of both worlds. This is achieved as you retain the complete CBD experience of the full-spectrum CBD products, including the “entourage experience”. You also have the benefit of the completely removed THC, which is a prime benefit of CBD isolate. It is non-toxic, so there are no risks of overdose; parents can feel at ease administering broad-spectrum CBD to children and pets because of the absence of THC. There is also no risk of failing drug tests, all while still being able to experience the full, positive effects of CBD full-spectrum (Kc hemp co,2019).



Broad Spectrum



BENEFITS OF BROAD-SPECTRUM CBD

As we learned earlier, broad-spectrum CBD, which is one of the newer forms of CBD extract, is like a midline between full-spectrum and isolate CBD. Broad-spectrum CBD starts as a full-spectrum extract; that is, containing all of the hemp's natural terpenes and cannabinoids. It then passes through a process that refines it to have its THC component removed. To put it simply, broad-spectrum CBD (BSH CBD) is basically full-spectrum CBD without THC (Leonard, 2020).

Many studies have revealed exactly how beneficial broad-spectrum CBD is to our health in the treatment of many infirmities and conditions. There are many broad-spectrum CBD products available that allow for topical, aromatherapy, and oral uses to maximize the benefits of broad-spectrum CBD (Leonard, 2020).

An article in JCI Insight, has shown that BSH CBD can be effective in assisting with the decrease of elevated blood pressure and its adverse response to stress.

“The Epilepsy Foundation indicates that CBD might help treat the seizures associated with certain epilepsy syndromes. A study published in Frontiers of Pharmacology suggested that CBD oil may reduce pain sensations in rats. A review in Molecules note show CBD may treat a variety of disorders, including pain and inflammation” (Leonard, 2020).

These properties of BSH CBD products, especially the oil, allow for it to be a possible remedy in cases of:

- Fibromyalgia
- Irritable bowel syndrome (IBS)
- Menstrual cramps
- Multiple sclerosis (MS)
- Neuropathic pain
- Sciatica

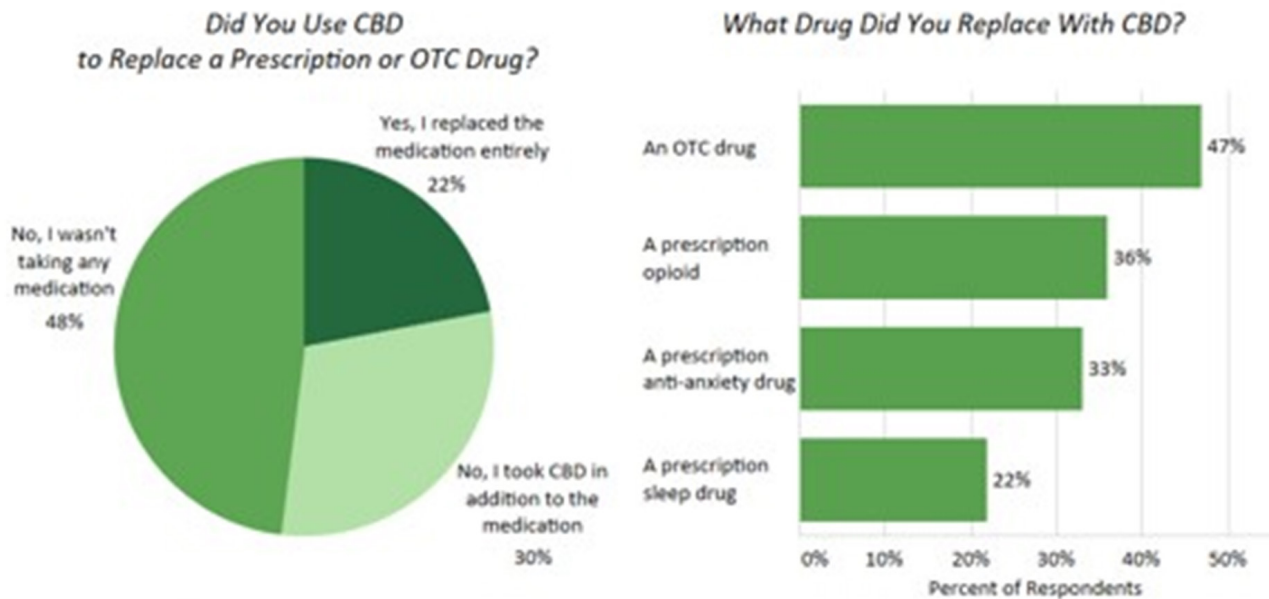


Plus many more types of pain and pain conditions (Leonard, 2020)

Broad-spectrum CBD is also popularly used in the treatment of insomnia and anxiety. Research indicates it can be effective in assisting individuals to fall asleep and remain asleep for the desired period.

According to the European Journal of Pain, BSH CBD provides an alternative option to treat many various types of acute and chronic pains. The study that was carried out by this journal used an animal model. It revealed that the topical application of CBD helps to reduce inflammation and pain that is caused by arthritis. More studies, particularly in humans, are required if we are to fully understand and utilize the benefits of broad-spectrum CBD (Grinspoon, 2018).

Survey: Consumers Replace Prescription & Over-the-Counter Drugs With CBD



Source: Consumer Reports

Copyright 2019 Hemp Industry Daily, a division of Anne Holland Ventures Inc. All rights reserved.

SOURCE: Consumer Reports



REFERENCES

Mandal, D. (2019, February 26). What are Cannabinoids? Retrieved August 25, 2020, from <https://www.news-medical.net/health/What-are-Cannabinoids.aspx>

Abernethy, A. (2019, July 25). Hemp Production and the 2018 Farm Bill. Retrieved

August 25, 2020, from <https://www.fda.gov/news-events/congressional-testimony/hemp-production-and-2018-farm-bill-07252019>

Anavii. (2020). Where does CBD come from? Retrieved 24/08/2020, from <https://www.anaviimarket.com/blogs/news/where-does-cbd-come-from> Cadena, A. (2019). The History of CBD: A Brief Overview. Retrieved 08/24/20, from [https://medium.com/cbd-origin/the-history-of-cbd-a-brief-overview-68545c05ccc9#:~:text=The%20Early%20Discovery%20of%20Cannabinoids&text=Cahn%20reported%20the%20partial%20structure,cannabinoid%2C%20Cannabidiol%20\(CBD\).](https://medium.com/cbd-origin/the-history-of-cbd-a-brief-overview-68545c05ccc9#:~:text=The%20Early%20Discovery%20of%20Cannabinoids&text=Cahn%20reported%20the%20partial%20structure,cannabinoid%2C%20Cannabidiol%20(CBD).)

Cadena, A. (2019, June 11). Research Shows CBD Benefits 50 Conditions. Retrieved August 27, 2020, from <https://cbdorigin.com/cbd-benefits-many-conditions/>

Cadena, A. (2019, March 19). Full Spectrum vs Broad Spectrum vs CBD Isolate: The Difference Explained. Retrieved August 26, 2020, from <https://medium.com/cbd-origin/full-spectrum-vs-broad-spectrum-vs-cbd-isolate-the-difference-explained-a09e415bf235>

Cadena, A. (2020, May 27). Hemp vs Marijuana: The Difference Explained. Retrieved August 25, 2020, from <https://medium.com/cbd-origin/hemp-vs-marijuana-the-difference-explained-a837c51aa8f7>

Citiva. (n.d). GREAT NEWS! Retrieved August 25, 2020, from <https://citiva.com/types-of-cannabinoids/>

Cronkleton, E. (2020, March 24). 10 CBD Oils to Try. Retrieved August 27, 2020, from <https://www.healthline.com/health/best-cbd-oil>

Grinspoon, P. (2018). Cannabidiol (CBD) — what we know and what we don't.

Retrieved 08/24/20, from <https://www.health.harvard.edu/blog/cannabidiol-cbd-what-we-know-and-what-we-dont-2018082414476>

Higdon, J. (2020, February 03). How is Full Spectrum CBD Oil Made? Retrieved August 27, 2020, from <https://www.cornbreadhemp.com/how-is-full-spectrum-cbd-oil-made/>



Kats, J. (2020, March 17). CBD Isolate and the Science Behind It. Retrieved August 26, 2020, from <https://katsbotanicals.com/cbd-bible/cbd-isolate-science-behind-it/>

Kchempco. (2019, September 26). Types of CBD. Retrieved August 25, 2020, from <https://kchempco.com/blogs/news/types-of-cbd>

Kubal, J. (2018). 7 Benefits and Uses of CBD Oil (Plus Side Effects). Retrieved 08/24/20, from <https://www.healthline.com/nutrition/cbd-oil-benefits>

Leonard, J. (2020). What are the top CBD oils? Retrieved 08/25/2020, from <https://www.medicalnewstoday.com/articles/best-cbd-oil>

Professor, T. (2020, August 26). Everything You Need to Know About CBD Isolate.

Retrieved August 26, 2020, from <https://www.cbdschool.com/how-to-use-cbd-isolate/>Williams, K. (2019, October 02). Types of CBD: Full Spectrum vs Broad Spectrum vs

Isolate. Retrieved August 25, 2020, from <https://hempsey.com/learn/full-spectrum-vs-isolate>
Zamnesia. (2020). 6 Easy Ways To Use And Dose CBD Crystals. Retrieved August 26, 2020, from <https://www.zamnesia.com/content/587-best-ways-to-dose-and-use-cbd-crystals>