

CBD: What, Why, & How





The topic of CBD is gaining awareness and attention throughout the world. Even so, there is still much confusion regarding this product and navigating through the information can become quite overwhelming for potential users. CBD was not something that I intended to work with in the initial phases of my practice. As I began my work, I made a conscious effort to listen to what people were asking for and respond to those needs. When three people approached me about CBD within one week, I knew it was time to really dive into understanding this fascinating supplement. Rather than place random CBD product(s) on my shelf, I took the time to research and study CBD. I wanted to make sure I fully understood for myself what exactly CBD is and why it works in our bodies to support such a variety of symptoms. It was also important for me to offer high quality sources of CBD products through my practice. I took the time to ensure I was choosing pure, clean, effective CBD supplements to offer to my clients. The following information is what I've discovered. It is my pleasure to offer this introductory guide to understanding CBD to my viewers! My goal is to provide clarity on this complicated subject. The information is basic and comprehensive. Please reach out with specific questions to see if, and how, a CBD supplement may support you.

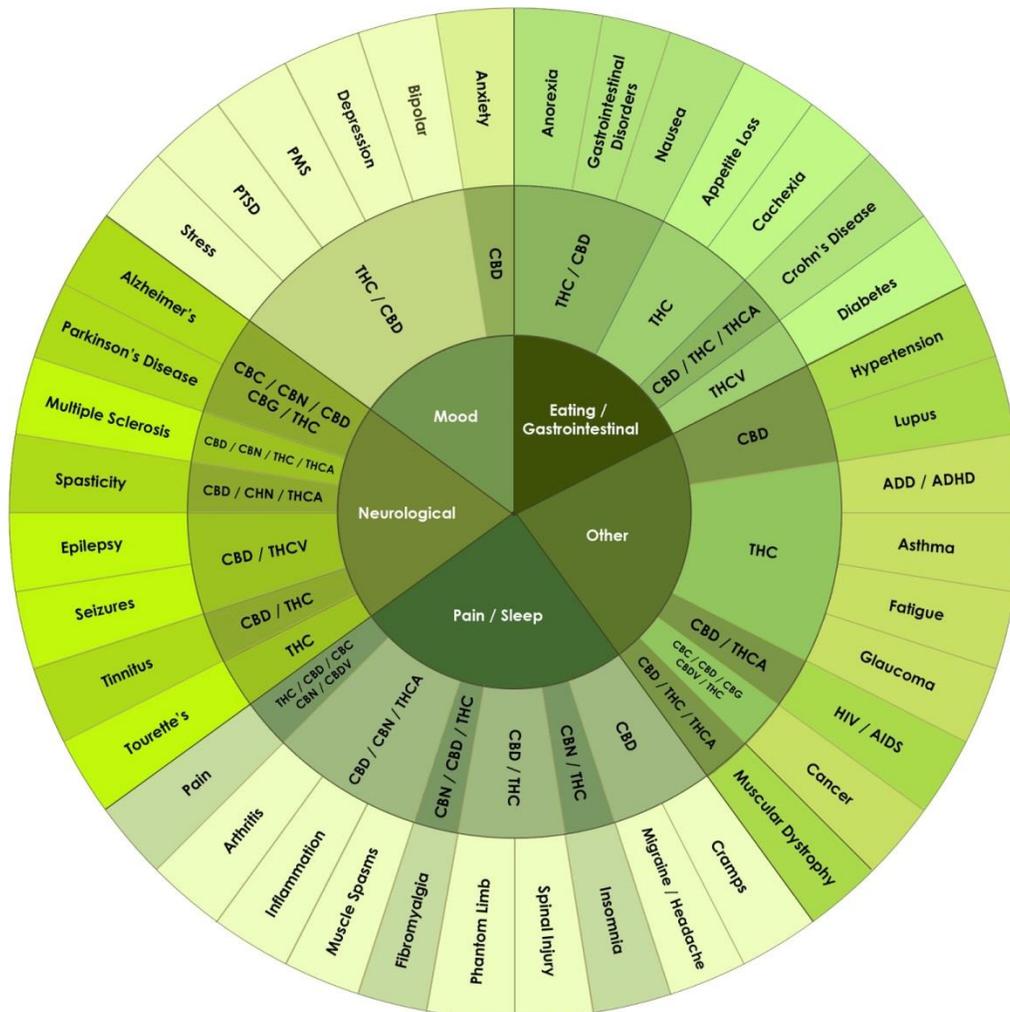
CBD is the abbreviated term for a cannabinoid known as cannabidiol. CBD is derived from the hemp plant which is one species of cannabis. The marijuana plant, which is often mistaken for hemp, is its own unique plant. The marijuana plant produces high levels of THC (tetrahydrocannabinol). THC has psycho-active properties and is responsible for giving its users the sensation of being 'high', or euphoric, and recreational marijuana is typically grown for this purpose. On the other hand, the hemp plant produces naturally high levels of the cannabinoid known as CBD. THC levels in the hemp plant tend to be very low and contain too little of this compound to produce a psycho-active effect. In fact, CBD is quite the opposite, carrying 'calming' characteristics which contradict the mind-altering influence of THC. CBD is often associated in supporting those who may feel anxious or have trouble sleeping.



CBD and THC are just two types of cannabinoids. The hemp plant actually contains upwards of 100 different cannabinoids along with a number of other nutritional elements such as terpenes, flavonoids and more. In the US, CBD is packaged and marketed as a supplement. For any CBD product to be sold in the US, it must contain .3% or less of the THC element. Many producers offer CBD supplements that contain 0% THC and may be labeled as THC Free. THC Free products are beneficial for those who may have a stigma attached to this psychoactive element or, perhaps are concerned that it may show up in drug testing, which would be unlikely, but cannot be guaranteed.

The most common form of a CBD Supplement is known as full-spectrum. This means that the product will contain trace elements of all the wonderful nutrients and compounds found in the hemp plant. Full-spectrum supplements tend to pack a little more power because they are utilizing all of the complimentary synergies of hemp. Yes, naturally high in CBD, this is the main component of the supplement as will be represented by total milligrams on the label, ie: CBD 100mg, CBD 500mg, CBD 1200mg and so forth. Along with focused concentration of CBD, full-spectrum products will contain trace amounts of all the other cannabinoids, terpenes, flavonoids and so forth, utilizing the powerful synergy of hemp’s medicinal properties. *Broad-spectrum* products are the same, but eliminate all THC levels offering a product that is THC Free (0% of the THC cannabinoid). Some companies produce CBD supplements referred to as *isolates*. In this case, the CBD cannabinoid is ‘isolated’, separated, from the other compounds of the hemp plant and offered in pure form. GW Pharmaceuticals was one of the first to develop an isolate product which was approved, in 2015, by the FDA for clinical trials in conjunction with a rare form of childhood epilepsy known as Lennox-Gastaut Syndrome. This product is known as an Epidiolex and is 98% pure CBD as its active ingredient.

The graph below demonstrates some of the cannabinoids found in the hemp plant along with a representation of various symptoms and conditions they have been found to support. The graph is not inclusive by any means, as more and more findings continue to be discovered and revealed. Research regarding CBD is still in early stages, but the results are indeed promising.



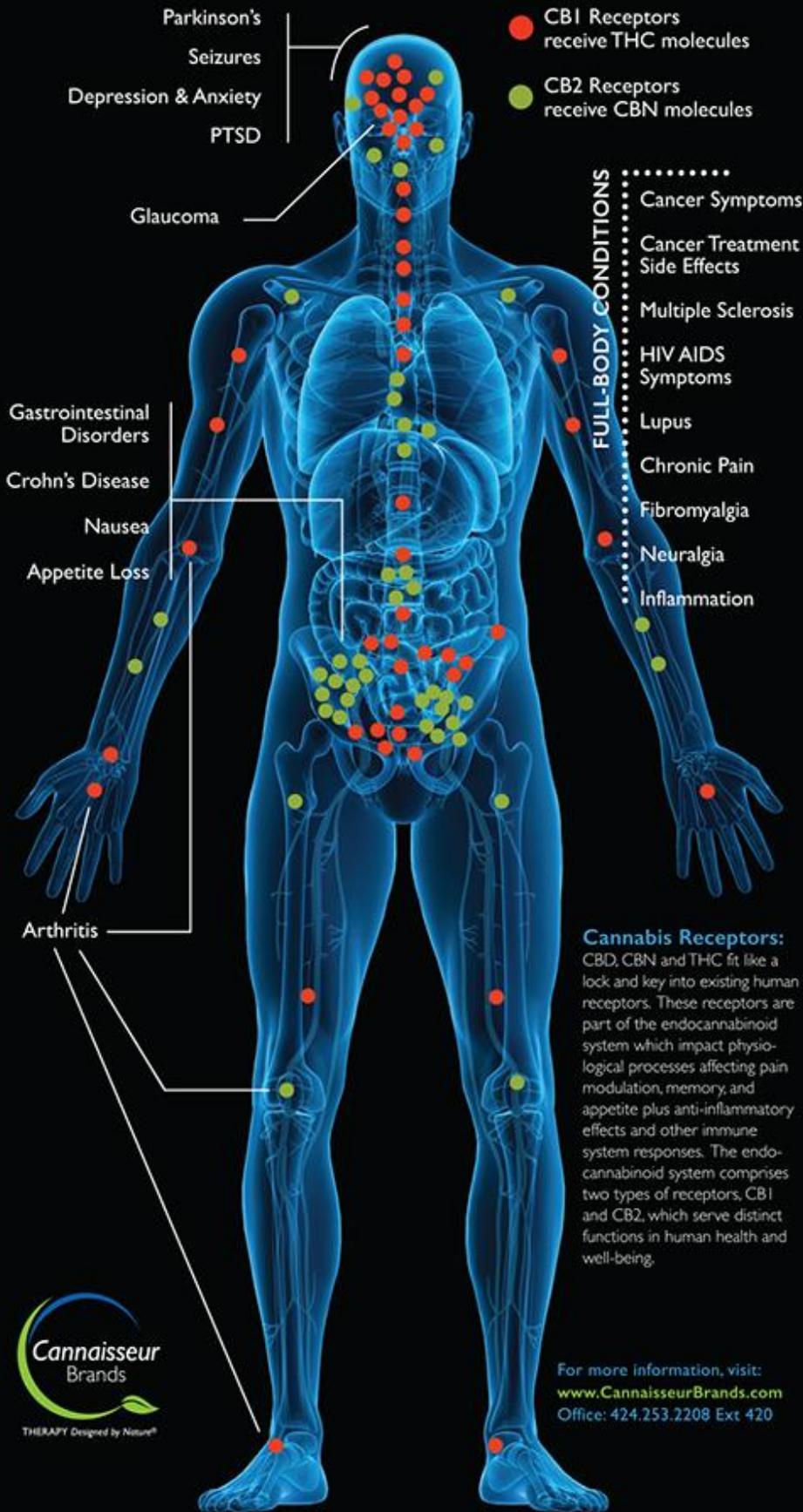


Misconceptions and lack of understanding regarding the safety measure of potential users is common. And even though the FDA has not yet approved the use of CBD in conjunction with treating certain conditions, the US Department of Health, in 2003, filed a patent in regards to “cannabinoids as antioxidants and neuroprotectants”. The last claim made in this document states that “CBD does not have toxicity issues or serious side effects in large acute doses.” Known side-effects are minor,

minimal, and typically do not outweigh the benefits of using CBD. Although overall uncommon, the most common effect is dry mouth. This is not a grave concern and easily quenched with water. The occurrence of diarrhea or loose bowels can easily be corrected and most likely associated with a dose that is too high or one’s overall intolerance of cannabidiol. Due to CBD’s anxiolytic affects, drowsiness may be experienced when taking high doses at once, or throughout the day. It is interesting, however, that in most cases the use of CBD improves alertness and energy. For those taking medication for hypertension, be aware that CBD has a natural tendency to reduce blood pressure. If you experience lightheadedness, it could be perhaps of a dip in blood pressure. If this happens, sit to regain composure and perhaps drink a cup of hot tea or coffee. Not of high concern is CBD’s ability to alter the metabolizing of certain pharmaceuticals by inhibiting particular liver enzymes. Although the medical opinions and amount of understanding of CBD will vary from physician to physician, those under the care of a doctor should always consult before making additions or changes to routine protocol.

So exactly how and why does CBD support our health and well-being? We have in our body what is now referred to as the Endocannabinoid System (ECS). It is a network of cell receptors, molecules, and enzymes found in the brain and nervous systems that work together to perform specific functions. It runs all throughout our body in the central and peripheral nervous systems and is full of receptors that are fueled and supported by cannabinoids. CB1 and CB2 are the two main receptors of the ECS, but there are others that play significant roles in the function of our body. We actually make cannabinoids naturally! These are referred to as endocannabinoids. I think this is imperative for users to understand that when we take a CBD supplement; we are just using a plant-based source (known as phytocannabinoids) to ‘supplement’ our body with something that is naturally occurring to our physiology. When we introduce CBD, we are not putting something into our system that our body doesn't know what to do with. The main function of the endocannabinoid system is to help promote and maintain homeostasis - healthy balance. Even though CBD is the main cannabinoid and ingredient found in supplement form, trace amounts of the other cannabinoids contained in hemp have also been researched to understand how they each uniquely interact and support our ECS as well.

The Endocannabinoid System



CBD is found in a wide-range of supplemental products. Pure CBD extract is a thick honey-like substance. Some companies do offer CBD in its pure, unadulterated form in what is called an oral applicator. These products are able to offer high concentration of CBD for users who may need a stronger dose. The most common form of a CBD supplement is in oil. Here the pure extract is combined with a carrier oil (MCT) such as coconut oil or hemp oil. Two prominent terms associated with the use of CBD are bioavailability (absorption) and bioactivity (effectiveness). Oils enter the blood stream sublingually – meaning the product is set in the mouth, under the tongue, and allowed to absorb directly into your system through the tissues there. This allows for a faster absorption and also the ability to utilize a bit more of the potency of the dose. CBD is also utilized through capsule form. Because capsules need to travel through your digestive tract before reaching your ECS systemically, the effect will be delayed and a bit of the potency may be lost. Capsules can be a great vehicle, however, to offer more long-term support rather than short-term relief. It is also an option for those who have an aversion to the taste of CBD oil. Natural CBD will have an herbal 'plant' taste. The strength of the taste may be dependent on the concentration level of the product. Some formulas may mask the taste by including a natural flavoring like vanilla, mint, or lemon. You can also find oral CBD supplements in the form of gummies, sprays, vapes, and powders, and even infused in chocolates, teas, and more. CBD topical formulas are very popular and highly effective to target area specific pain locations as well as skin conditions such as eczema and psoriasis. Although found as just CBD, it is most likely that topicals will include additional ingredients for targeted relief of pain or area specific healing.



CBD is offered in various product types and found just about anywhere! I do encourage you, however, to seek out CBD products through someone who is well-versed and offering quality sourced products. Each day there are more and more CBD products being offered on the market. It can be mind-boggling to sift through all that is available. Reading a label is imperative, but some products are, sadly, vague and misrepresented. Be aware that Cannabis Oil, Hemp Oil, Hemp Seed Oil, and even CBD Hemp Oil are not necessarily the same as CBD Oil. Pay special attention to the origin of hemp that the CBD product you're choosing is cultivated from. It is important, too, that the hemp is free of toxins, herbicides, and pesticides. All quality CBD companies should be able offer third-party lab testing results. There should not be any added and unnecessary ingredients unless it is a specialized formula supporting a specific condition. I am a big fan of utilizing the synergy of CBD to create powerful supplements formulated for pain, sleep, digestive issues, and more, by combining other natural herbs and botanicals. In fact, there is some substantiated research to suggest that the bioavailability (absorption) into the ECS is improved when CBD is combined with active ingredients such as turmeric.

One should always be aware of the total milligrams (mg) of CBD offered in the product. CBD supplements come in a wide range of in potency! Please take note that the 'recommended serving size'

listed on any CBD supplement does not mean that is how each individual should be taking the product. For example, CBD oils could range from 100mg to 3000mg in the same size (30ml) bottle. That is a BIG difference! Understanding the potency of CBD to use and how to dose that particular product is key. Proper dosing depends on many factors, including the reason why it is being taken, the condition it is being used, along with the user's weight and overall health. Someone choosing CBD just to maintain the ECS as a well-oiled machine and promote overall well-being would use a much different dose than someone looking to support specific conditions such as anxiety, pain, or in conjunction with a chronic illness. In the case of pain, the level of discomfort would factor into dosing as well. As a supplement, the use of CBD is somewhat subjective. Although there are parameters regarding use for various conditions, everyone's ECS is at a unique state of dysfunction and everyone responds differently. There is also what is known as a 'sweet spot'. This is the dose that gives the user the benefit desired. The rule of thumb when beginning CBD is to 'start low and go slow' when administering doses. Not because it is harmful, but so the user can zero in on the amount of product that is needed to best support them. It is helpful to keep a journal and record the dose and frequency. Because we are each uniquely designed and response varies, it is ideal to really tune into your body to monitor CBD's effects. CBD can also reach a saturation level. Our ECS can only utilize so much CBD at a time. It then is stored up and released as needed. As a supplement, the body needs time to build up the ECS. Even though some users may notice great benefit in the early stages of beginning a CBD supplement, the advantages are likely to increase over weeks and even months. I highly recommend that users really stick with a consistent CBD regiment for a few months to consider the full range of benefits that could be experienced.

Through my work, I am constantly researching the products I choose to offer my client base to insure effective, high-quality, pharmaceutical grade CBD supplements. All producers of CBD products claim they have the best and superior product. Do your research. Consider where the hemp is grown, how it is extracted, and the facilities where the products are made. Also check out the mission of the company and their commitment to excellence.

There are organizations that now rank CBD companies based on certain standards and criteria such as quality, safety, innovation, charity and mission. For example, the main products I work with are made in FDA approved facilities even though the product itself is not FDA approved for use to support specific conditions. One US based company supplies CBD products for health care systems and physicians in countries (Mexico, Brazil, Bermuda, Argentina...) where CBD is approved and being used to treat a number of different conditions. This same company is also the FIRST to offer an approved CBD supplement in the US and also became the

FIRST to have a CBD product listed in the PDR (the Prescribers Digital Reference formerly known as the Physicians Desk Reference). There is still a lot of grey area regarding the legalization of where hemp is grown and how it is produced. State laws can vary from each other as well as from the US Government. I have already seen new and upcoming manufacturers close business due to increased regulations and the high cost of those regiments. CBD production is still a bit turbulent and it will take some time to regulate the industry. The movement is promising and the potential is great.



Knowledge is power! Although I continue to strive to educate my clients on CBD to the best of my ability, I encourage everyone to do their own research. CBD is still in the early stages of development. New and updated research becomes available almost daily. I hope this information has provided a foundation of understanding the basics regarding CBD (cannabidiol). I have witnessed CBD alter and benefit the healing paths of many. It has the potential to be a valuable addition to one's protocol and a powerful alternative to the opioid crisis and heightened increase in prescription medications that attach a whole host of negative and harmful side effects. If you are considering a CBD supplement, I highly encourage you to sign up for a consultation. Here I will guide you through choosing, and using, a CBD supplement to best support ... Simply You!



US Government Patent #6,630,507: "Cannabinoids as Antioxidants & Neuroprotectants"

- CBD's ability as an anti-epileptic (anti-seizure)
- CBD as a powerful antioxidant that can be used in the prophylaxis and treatment of oxidative associated diseases. (Alzheimer's, Parkinson's, Cancer, Autism)
- CBD's ability to lower intraocular pressure in the treatment of glaucoma
- CBD is protective to the brain from ischemic damage (helping blood & oxygen flow)
- CBD is a naturally occurring constituent; hence cannabinoid of the Hemp plant ... supports the nutritional health of aging bodies.
- CBD has an anxiolytic affect which means anti-anxiety.
- CBD has neuro-protective properties protecting the cells of the nervous system, the brain and nerves of the body
- CBD – protects against cellular damage
- CBD does not have toxicity issues or serious side effects in large acute doses

CANNABIDIOL (CBD) CRITICAL REVIEW REPORT (June 2018)

World Health Organization

Summary

- Cannabidiol (CBD) is one of the naturally occurring cannabinoids found in cannabis plants. It is a 21-carbon terpenophenolic compound which is formed following decarboxylation from a cannabidiolic acid precursor, although it can also be produced synthetically.
- In experimental models of abuse liability, CBD appears to have little effect on conditioned place preference or intracranial self-stimulation. In an animal drug discrimination model CBD failed to substitute for THC. In humans, CBD exhibits no effects indicative of any abuse or dependence potential.
- CBD has been demonstrated as an effective treatment of epilepsy in several clinical trials, with own pure CBD product (Epidiolex) with completed Phase III trials and under current review for approval in the US. There is also preliminary evidence that CBD may be a useful treatment for a number of other medical conditions.
- There is unsanctioned medical use of CBD based products with oils, supplements, gums, and high concentration extracts available online for the treatment of many ailments.
- CBD is generally well tolerated with a good safety profile. Reported adverse effects may be as a result of drug-drug interactions between CBD and patients' existing medications.
- Several countries have modified their national controls to accommodate CBD as a medicinal product.
- To date, there is no evidence of recreational use of CBD or any public health-related problems associated with the use of pure CBD.