

EntheoNation

# CBD BUYER'S GUIDE

Everything you need to know
when shopping for CBD products

# Introduction

If you're new to the world of healing with CBD, welcome! This buyer's guide is meant to:

- Get you up to speed on what this incredible cannabinoid is and how it works;
- Clear up some common misconceptions and confusions;
- Provide a layout of its therapeutic properties with scientific backing;
- Explain which forms CBD comes in, how to use it, and how much to apply;
- Shed light on some important things to consider when shopping for CBD products.

We hope you'll find the information presented here valuable and that you'll be ready to tap into CBD's potential and start improving your mental and physical health.

# About the Author



**Xavier Francuski** was born in India, grew up in Serbia, and lived and traveled throughout the world – his uprooted existence fuels his instinct for exploration. With a Masters degree in research psychology, he is a passionate educator on the topic of psychedelics, trying to reconcile the astounding nature of the realms beyond, with what sense we can make of them in this one. Currently living in Southeast Asia and working as a staff writer for several major psychedelic websites, Xavier has extensive knowledge about the science of CBD and the ways it can be used to improve your life.

## What is CBD?

Cannabidiol, or CBD, is a cannabinoid extracted from the *Cannabis sativa* (or hemp) plant. This is the same plant that is grown worldwide for its psychoactive effects. It's also the same plant grown since ancient times for its nutritional and medicinal value, as well as for its durability (it's commonly used to produce rope and fabric).

Most commercially grown *Cannabis sativa* plants are cross-bred to maximize the concentration of THC (the psychoactive cannabinoid), while the CBD levels take a back seat. This is done because the demand for cannabis comes mostly due to its psychoactive effects.

But, for the last decade or so, the medicinal benefits of CBD have been coming into light and changing the entire outlook on the therapeutic value of the cannabis plant. Science has been ramping up research efforts as hundreds of thousands of people have been finding incredible relief in treating various health conditions with CBD products.

## What are the therapeutic benefits of CBD?

Some of the main CBD oil benefits scientific research has backed so far include:

- **Reducing nausea and vomiting** – studies on rodents have reported that CBD can suppress nausea when ingested in low quantities; it's assumed that the indirect activation of the 5-HT1A serotonin receptor is behind this process. Cannabidiolic acid (CBDA), the raw form of CBD, has shown even stronger antiemetic effects.

- **Treating cancer and tumors** – no human studies have been performed, but *in vitro* and animal model studies indicate that both THC and CBD may inhibit the proliferation of cancer cells and stimulate their self-destruction, as well as train the immune system to recognize tumors and fight them. For now, using CBD for cancer is only recommended to alleviate symptoms like pain and anxiety.

- **Breaking addictions** – a study conducted by the Society of Cannabis Clinicians has shown that it's possible to use CBD oil to quit smoking cigarettes safely and effectively. Several other studies have demonstrated the interruptive effects CBD use has on various addictions.

- **Treating acne and other skin disorders** – topical CBD products are ideal for maintaining and healing skin conditions. CBD's anti-inflammatory properties are effective against acne, psoriasis, dermatitis, scleroderma, dermatomyositis, and epidermal scarring. Topical application of CBD also mitigates any side effects, as the compound doesn't enter the bloodstream.

- **Reversing type-2 diabetes and preventing type-1 diabetes from forming** – Study results indicate that CBD can help quell type-2 diabetes by optimizing insulin secretion and protecting blood vessels from glucose damage, as well as preserve the functioning of pancreatic β-cells, thus delaying the effects of pancreatic damage to prevent type-1 diabetes from developing. It should only be used as a supplement to lifestyle changes.

- **Protecting against neurodegenerative diseases** – numerous studies have reported that using CBD may help preserve neurological function and protect from brain damage after a stroke, as well as manage the symptoms of a variety of neurological disorders such as Alzheimer's disease and dementia, Parkinson's disease, Huntington's disease, multiple sclerosis, and others.

- **Reducing epileptic seizure frequency** – the FDA-approved oral solution Epidiolex has been shown to significantly reduce frequency of seizures in three randomized, double-blind, placebo-controlled clinical trials involving over 500 patients with either Lennox-Gastaut syndrome or Dravet syndrome. Side effects were relatively frequent and concerning – the high CBD dosages caused abnormal liver functioning, diarrhea, drowsiness, vomiting, fatigue, fever, decreased appetite. However, similar effects were noted in a substantial portion of the placebo group participants as well. Studies are pending on whether it may be effective with other forms of epilepsy and seizures stemming from other kinds of medical disorders.

- **Treating autism** – recent research from Israel showed dramatic improvements on numerous symptoms of ASD in the majority of children who were treated. Side effects were infrequent and mild.

- **Pain and inflammation suppression** – cannabinoids have almost five decades of scientific scrutiny and medical use as analgesics and anti-inflammatory agents. These are some of the most well-documented and tested benefits of CBD.

- **Anxiety and depression relief** – by inhibiting the sympathetic and stimulating the parasympathetic nervous system, CBD brings generalized calming effects. Its indirect action on the 5-HT1A serotonin receptor further regulates mood, energy levels, behavior, and digestion. Combined, these two processes have been shown in numerous studies to induce anxiolytic and antidepressant effects. These two are also among the most common reasons for CBD product use.

- **Treating Post Traumatic Stress Disorder (PTSD)** – a study on a small group of PTSD patients reported that the overwhelming number of participants had experienced a significant decrease in symptom severity after eight weeks of CBD therapy. Another review of research conducted on rodents noted that CBD is able to extinguish aversive memories and inhibit their reconsolidation. It's also assumed that CBD's indirect action on the 5-HT1A serotonin receptor is responsible.

- **Regulating sleep and suppressing insomnia** – it's important to note that the effects of using CBD for improving sleep are dose-dependent and highly idiosyncratic. Generally speaking, low dosages seem to keep users more alert, while higher ones can induce drowsiness. However, it seems that various factors are at play as some users report benefits while others don't. No studies are currently available.

- **Treating arthritis** – a study conducted on rodents reported that CBD gel was effective in reducing the pain and swelling in the animals' joints. The researchers found that the effectiveness has a hockey stick correlation with the dosage, and that the plateau already begins at quite low amounts. Many users have been reporting success on online forums. Further studies are needed, but topical CBD products seem to be effective due to the compound's anti-inflammatory properties.

- **Reducing psychoticism – p**sychotic symptoms are consequences of highly complex mental dysfunctions and are often comorbid with many other disorders. A recent research review presented both positive and non-significant effects of various dosages and lengths of treatment affect the psychotic symptoms of schizophrenic, bipolar, and Parkinson's Disease patients, as well as those in clinical high-risk states for psychosis (CHR-P). Further research is needed.

- **Fighting autoimmune diseases** – while CBD has shown unequivocal anti-inflammatory, antioxidant and neuroprotective effects, which should theoretically aid against autoimmune diseases, it's important to note that these disorders are highly complex and often mysterious in origin. One study, which looked into the relationship of the dysregulation of the endocannabinoid system and systemic lupus erythematosus, found promising results from CBD use. Another rodent study found an increase in suppressor cells which countered autoimmune encephalomyelitis in the subject animals. More research is needed.

- **Alleviating IBS and IBD (Crohn's Disease and Ulcerative Colitis) symptoms** – there is emerging evidence suggesting that cannabinoids may play a role in the management of patients with IBS and IBD. CBD may help relax the tissues in the gastrointestinal tract, which can lead to fewer episodes of bloating, gas, constipation and diarrhea. It can also alleviate the nausea, pain, and gastric inflammation, as well as reduce gastrointestinal motility, or stop the food from moving too quickly through the system. The network of endocannabinoid receptors, with which CBD indirectly interacts, is thoroughly connected with the functioning of the GI tract.

- **Vasorelaxation and general cardiovascular protection** – *in vitro* studies conducted on isolated rodent arteries indicate that CBD enhances vasorelaxation and reduces vascular hyperpermeability in high-glucose environments. It has also been shown to reduce infarct size and increase blood flow in animal models of stroke, which is attributed to its action on the 5-HT1A receptor.

- **Alleviating conditions in dogs and cats** – there are no studies available confirming the purported therapeutic effects of CBD on pets, but numerous pet owners are reporting benefits from CBD products on symptoms such as pain, anxiety, gastric issues, inflammation, arthritis, and seizures. Even many vets endorse the use of CBD on pets, although we're not sure if it works in the same way as it does on humans.

It's important to keep in mind that human clinical trials have not been performed for all of the above, but there are animal models and/or *in vitro* studies supporting each and every one of CBD's therapeutic properties in humans.

## How Does CBD Work?

CBD has numerous mechanisms of action. Here are some of the better-understood processes of CBD:

- Stimulates the parasympathetic nervous system (responsible for promoting rest, healing, rejuvenating and regenerating) and inhibits the sympathetic nervous system (responsible for eliciting stress responses and triggering the fight-or-flight mechanism).
- Activates 5-HT1A serotonin receptors (thought to be responsible for regulating levels of anxiety and happiness, and the quality and intensity of experienced moods).
- Activates TRPV1 receptors, reducing pain sensation and inflammation.
- Activates alpha-3 glycine receptors, suppressing chronic inflammatory and neuropathic pain associated with dysfunction in these receptors.
- Activates glutamate NMDA receptors, lowering the levels of glutamate in the brain and spinal cord, and reducing sensations of pain.
- Indirectly interacts with the endocannabinoid system (one of the key internal systems responsible for pain sensation, inflammation, and numerous other processes which science is still exploring).
- Activates TRPV2 receptors (which play a role in signaling to the body to fight against cancerous cells).

These are just a few of the internal processes that follow the ingestion of CBD; science is still working on understanding the full scope of its biochemical action.

## Is CBD safe?

CBD has no consciousness-altering effects whatsoever and it does not cause physiological nor psychological dependence; although it does create a tolerance, so its effects may diminish if it's used too frequently.

CBD as a chemical is very well-tolerated by the vast majority of people, as well as animals. Rare, mild side effects in humans include dry mouth, diarrhea, reduced appetite, drowsiness, and fatigue. Taking high amounts of CBD usually yields a hockey-stick effect, with diminishing returns above optimal dosages.

From all we know, **CBD is entirely safe to use in low doses**, with minimal risks and potentially great benefits.

High doses of CBD, however, which are needed for more complicated health conditions such as for managing epileptic seizures, seem to incur more considerable levels of toxicity. The FDA warns of potential for this cannabinoid to cause abnormal liver functioning, as was reported in the Epidiolex (oral CBD solution approved by the FDA for therapeutic use for epilepsy) clinical trials.

However, this research was performed on children, and such adverse effects were not found in adults, even on higher dosages. Still, immunocompromised individuals need to be highly cautious and always consult their primary healthcare provider before adding CBD to their regimen.

Aside from the potential side effects of CBD itself, the cannabinoid has been shown to inhibit certain enzymes (CYP2D6 and CYP3A4) responsible for the metabolism of drugs. This can affect how the compounds are metabolized and either reduce their efficiency or make them more harmful. This includes all the pharmaceuticals which the FDA warns shouldn't be mixed with grapefruit juice (grapefruit inhibits the same enzymes).

## Is CBD legal?

In the US, until the end of 2018, CBD was only available in states which had legalized the medicinal use of cannabis. Since the passing of the 2018 Farm Bill, however, CBD products are legal to purchase in all 50 states.

In the rest of the world, laws regarding CBD vary dramatically. Some countries prohibit all products of the cannabis plant (regardless of whether they are psychoactive or not), while others allow for CBD oils but not THC-containing products.

Some notable countries where CBD oils are legal include:

- The UK (as long as products contain no THC)
- Spain (only if used as a cosmetic)
- The Netherlands (decriminalized)
- Italy (as long as THC is less than 0.6%)
- Germany (with medical prescription)
- France (as long as products contain no THC)
- Brazil (with medical prescription)
- Canada (for medical purposes)
- Mexico (with less than 1% THC)

Always check your local laws before purchasing CBD products, and keep in mind that cannabis laws change quickly these days!

## How is CBD different from THC?

THC and CBD are both phytocannabinoids found in the same plant, *Cannabis sativa*, and they are both therapeutic in their own ways. However, while THC has psychoactive properties, CBD doesn't.

In fact, when consumed together, CBD actually reduces the negative psychoactive side effects of THC, such as paranoia and anxiety. This is referred to as the "entourage effect" in cannabis.

## What is a full-spectrum CBD product?

Full-spectrum hemp extracts contain the complete profile of the plant's healing ingredients, and are not just CBD isolates. Aside from CBD, they are comprised of various other cannabinoids, terpenes, flavonoids, and cannaflavins, which add their own therapeutic and aromatic effects. Based on the strain in question, these ingredients and their levels will vary, yielding products which can be used to alleviate different conditions.

## Do CBD products contain THC?

CBD products either come from specially grown CBD-rich cannabis plants (which also contain moderate levels of THC) or from hemp plants (which legally must have less than 0.3% of THC content). The former can be purchased only in medical marijuana dispensaries, while the latter are often fully legal and can be purchased from many online retailers.

CBD products extracted from hemp contain a negligible amount of THC. However, because this market is still not regulated, the THC concentration can sometimes be a bit above 0.3%; still, it's never substantial enough to cause psychoactive effects.

If you are looking for a CBD product which is completely THC-free, they also exist. Special methods, such as supercritical CO2 extraction, are used to remove THC, but preserve the CBD and all the other desirable cannabinoids, terpenes, and flavonoids.

## How is CBD oil different from hemp seed oil?

The oil extracted from hemp seeds is loaded with nutrients such as omega-6 and omega-3 essential fatty acids and vitamins, and other healing components. Aside from its nutritional value, it is also an excellent moisturizer which doesn't clog the pores, so it's especially good for maintaining skin health.

However, hemp seeds don't contain CBD (or contain negligible amounts of it). So, as beneficial as it is as a dietary supplement and a cosmetic product, hemp oil does not have as many therapeutic applications as CBD oil (which is extracted from the flowers, leaves, and stalks of the hemp plant).

## Is hemp-derived CBD as effective as CBD from medical marijuana?

While CBD products extracted from hemp can be incredibly beneficial, CBD extracts which contain THC can be even more so. THC has its own numerous therapeutic benefits, which work in synergy with those of CBD. The two compounds balance each other out, while also harmonizing their effects with the effects of other cannabinoids and terpenes which are present in the extract in lesser quantities.

So, the short answer is: if you intend to use CBD as a dietary supplement and to improve overall health and wellness, reduce stress, anxiety, depression, and PTSD symptoms, manage pain and inflammation, regulate your appetite and sleep, and even wean off certain addictions, hemp-derived CBD products should serve you well. However, for treating more serious illnesses, medicinal cannabis-derived CBD extracts may prove more effective.

Unfortunately, medical marijuana is still on its path to full legalization, and is only available in authorized dispensaries to individuals with approval for medicinal use. Be sure to be acquainted with your local laws when considering your options.

## What are the different forms of CBD products and how are they used?

There are many types of CBD products which can be consumed in different ways. Here is a list of the various forms CBD comes in and the explanations on their use, alongside some of EntheoNation's favorite product recommendations:

- **CBD Tinctures:** Tinctures are probably the most common and well-known form of CBD, and are administered through a dropper bottle. To create the tincture, CBD extract is mixed with glycerin, alcohol, or a carrier oil such as grapeseed oil, MCT oil, olive oil, or hemp seed oil, which all have their own unique health benefits. The tincture is applied sublingually and takes 5 to 20 minutes to start working, as they have direct access to the bloodstream through the mouth.

  EntheoNation recommends these two companies for high-quality CBD tinctures. Both offer a wide range of tincture types and strengths. Click the images to visit their shops:






- **CBD Spray Tinctures:** Spray tinctures are a more convenient way to administer CBD sublingually. They are commonly infused with other flavors and ingredients.

- **CBD Vaping Oil**: CBD oil for vaporizing is usually made by mixing a CBD concentrated extract with a carrier oil. Flavorings are also commonly added. Vaporizing is a less harmful alternative to smoking that doesn't burn the product but heats it up just enough to dissolve it into an aerosol, which is then inhaled. It provides an almost immediate effect.

- **CBD Edibles:** There are many varieties of CBD edibles such as chocolates, cookies, gummies, chewing gums, and other candies. They offer a delicious and discreet way to consume CBD. However, they take a while to work (30min to 1h) because the CBD needs to go through the digestive tract and reach the liver, where it gets metabolized. CBD capsules can also be considered as edibles.

  EntheoNation recommends CBDfx for high-quality CBD edibles. Click on the images below to visit their shop:






- **Topical CBD:** Topical CBD products come in the form of lotions, balms, salves, and oils, and are great for treating skin conditions, joint inflammations, or exercise-induced muscle strain. These products can help reduce inflammation, but the topical absorption rate of CBD is low, so it doesn't get into the bloodstream to provide more comprehensive neuropathic pain-relieving effects this way.

  EntheoNation recommends CBDfx for high-quality topical CBD products. Click the image below to visit their shop:




- **BHO:** This is one of the purest and most concentrated forms of CBD, anywhere from 55% to 80% CBD. These waxy extracts are highly potent and great for people who need to consume high doses of CBD everyday. They can be vaporized for rapid effects.

- **RSO:** Rick Simpson Oil is also a highly concentrated CBD extract. It is commonly sold in syringes to be administered to cancer patients.

## What to look for when shopping for CBD?

Due to the lack of regulation in the CBD product market, products available to purchase can contain active concentrations that vary from those indicated; this applies both to CBD and THC. In addition, CBD extracted from industrially-grown hemp may also contain various toxins, such as pesticides and heavy metals. **Full-spectrum** CBD products made from CBD-rich cannabis plants are generally considered 'cleaner' and more effective.

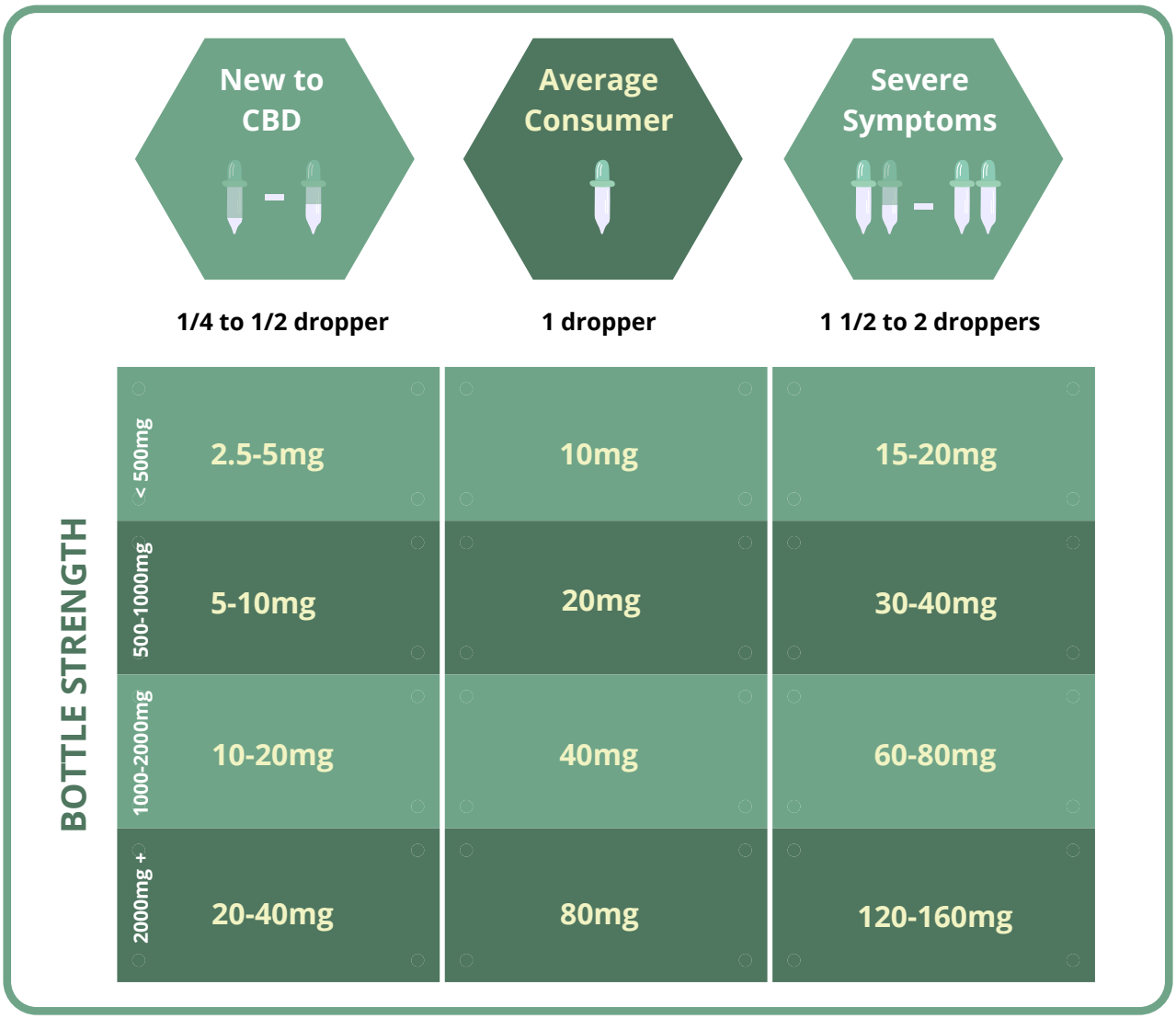
When reviewing CBD product providers, you should look for a **certificate of analysis (CoA)** from third-party laboratories, which are available for inspection. Ideally, these certificates should come from one of these reputable organizations: the Association of Official Agricultural Chemists (AOAC), the American Herbal Pharmacopoeia (AHP), or the U.S. Pharmacopeia (USP).

Finally, if you want to ensure that no THC content is present in the product (this goes especially if administering CBD to children), you can consider either full-spectrum **THC-free CBD extracts** (which have had THC removed upon extraction, ideally by a clean process such as supercritical CO2 extraction) or **CBD-only isolates**. Full-spectrum products are generally better because they contain other cannabinoids, terpenes, and flavonoids, which all work in synergy to provide expansive therapeutic effects.

## What are adequate CBD dosages?

**For adults,** depending on the severity of the condition, body weight, individual body chemistry, and various other factors, the dosage range for a single serving of CBD is generally **between 15mg (low) and 45mg (moderate)**. Beginners should start with as low as 2.5mg and slowly increase until the dosage matches the desired effect.

See the table on the next page for a guide to the doses contained within droppers of CBD tinctures:




For **children**, as for other supplements, the dose can be calculated in one of the following ways:

- Ausberger's Rule: [1.5 x weight of child in kg] + 10 = percentage of adult dose
- Salisbury's Rule:
    - For children under 30 kg (66 lbs): [weight of child in kg x 2] = percentage of adult dose
    - For children over 30 kg (66 lbs): [weight of child in kg + 30] = percentage of adult dose

CBD gummies are perfect for children, as they can easily and precisely be cut to contain appropriate doses.

# High-quality CBD products from Amma Healing!

## Recommended by EntheoNation




SALVE: SOOTHE

SHOP NOW




SOFT GELS: FOCUS

SHOP NOW




SOFT GELS: REST

SHOP NOW



HEMP OIL: BALANCE

SHOP NOW




ELEVATE: ELIXIR

SHOP NOW



AMMA STARTER PACK

SHOP NOW