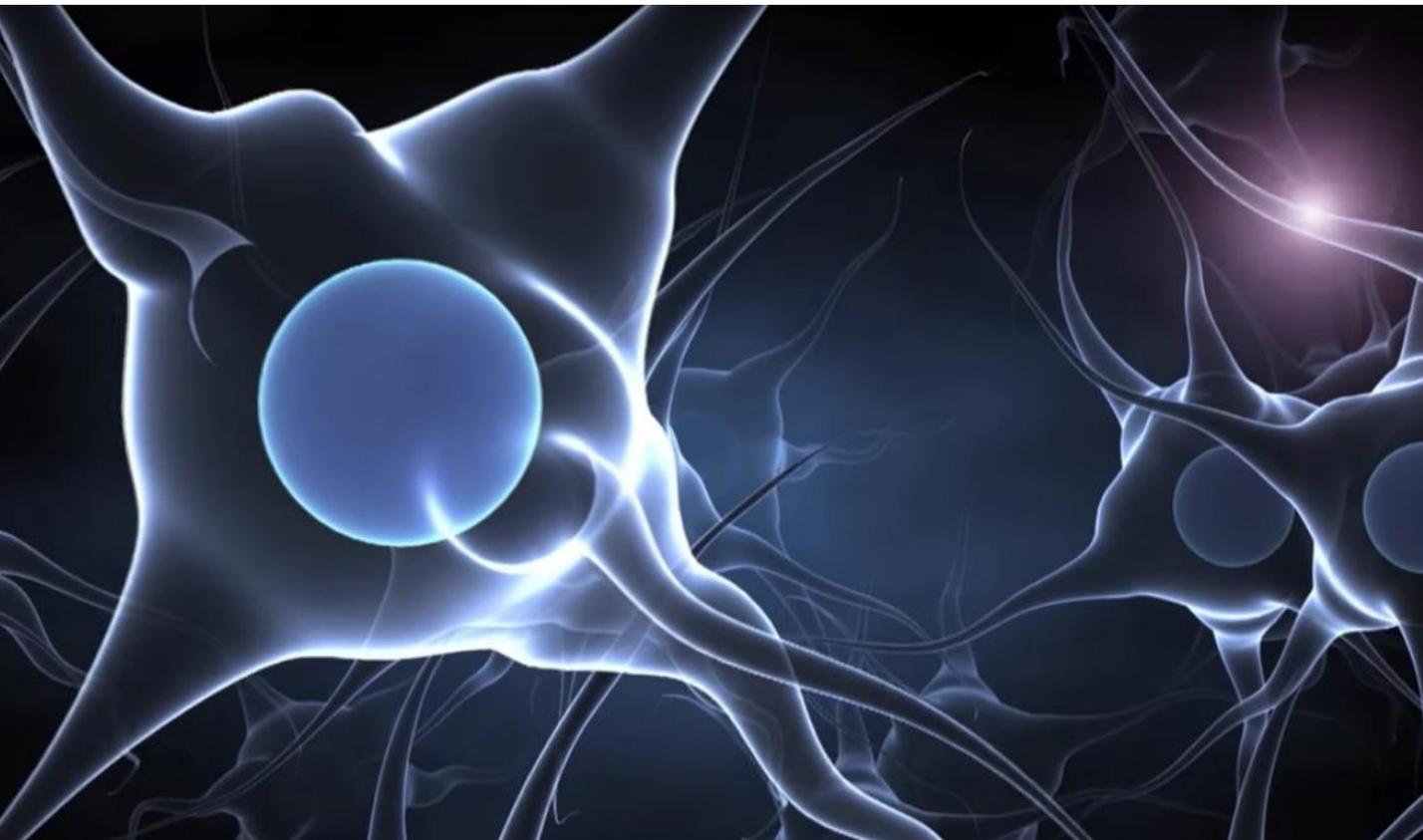


THE COMPLETE CBD RESOURCE



NOV 2016

MINISTRY
OF HEMP

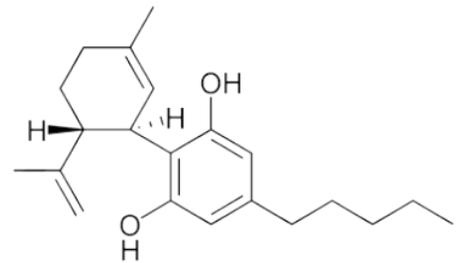


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WHAT IS CBD (CANNABIDIOL)?

Cannabidiol (CBD) is a chemical compound that comes from the hemp plant. It is one of over 85 unique compounds found in hemp, known as cannabinoids. While its exact benefits and effects are still being researched, it is interesting to note that the United States Department of Health and Human Services holds a patent titled '**Cannabinoids as Antioxidants and Neuroprotectants**', which claims that:



“Nonpsychoactive cannabinoids, such as cannabidiol, are particularly advantageous to use because they avoid toxicity that is encountered with psychoactive cannabinoids at high doses useful in the method of the present invention.”

Cannabinoids, which can be either consumed (phytocannabinoids) or produced naturally by the body (endocannabinoid), are chemical compounds that interact with the body's central regulatory system (the endocannabinoid system). This system is known to manage homeostasis and affect bodily processes such as appetite, mood and sleep.

CBD is an example of a phytocannabinoid. Although our bodies can naturally produce its own endocannabinoids that bind to cannabinoid receptors in both the central nervous system and the peripheral nervous system, phytocannabinoids help to kickstart our central regulatory system and provide powerful benefits.

WHERE DOES CBD COME FROM?

CBD is extracted and separated from specific varieties of cannabis. It is the second most abundant compound in cannabis, typically representing up to 40% of its extracts. CBD is a compound that can be found in both psychoactive cannabis (marijuana) and non-psychoactive cannabis (hemp). However, most legal CBD products that you find on the market will be extracts from hemp.

In contrast to marijuana, federal law allows for the cultivation, processing and marketing of hemp and hemp products, which would include cannabinoids derived from industrial hemp. Passed by Congress and signed into law by the President in 2014, the Farm Bill permits the growth and cultivation of industrial hemp in states where hemp is legal to grow. (Section 7606 of the Agricultural Act of 2014)

HOW DOES CBD WORK?

Our body's endocannabinoid system was found to be directly involved in the processes that keep our bodies balanced day to day, including: appetite, pain sensation, mood, memory, immune system functions, and inflammation control. Essentially, the system helps to manage homeostasis, balancing our body's natural conditions. This system is made up of receptors that are located in the brain and nervous systems throughout the body.



The body creates its own cannabinoids, called endocannabinoids, to help support this regulatory system. CBD supplements these naturally created endocannabinoids to keep the receptors working at optimal capacity. Similar to how we use vitamin C to kick start our immune system, CBD acts as a kick starter to help the functions of the body's central regulatory system.

DOES CBD GET YOU HIGH?

CBD often gets mixed up with THC, which is another cannabinoid found in cannabis. CBD and THC are the two most abundant compounds found in cannabis. Yet, they have fundamentally different properties and benefits.

THC, an intoxicating and illegal substance, is responsible for causing marijuana users to get “high.” Unlike THC, CBD does not cause a high. CBD is non-psychoactive because it does not act on the same pathways as THC. A 2011 review published in [Current Drug Safety](#) concludes that CBD “*does not interfere with several psychomotor and psychological functions.*”

While CBD can be completely separated from THC and CBD cannot get you “high,” there is still a lot of stigma as many people tend to mistake the two compounds. Just know this:

It is impossible to get “high” by smoking or ingesting CBD extracted from industrial hemp plants, as they only have miniscule traces of THC (<0.3%).

IS CBD LEGAL?



Yes, CBD oil made from industrial hemp plants are legal to be sold and bought in the United States. In 2014, Congress and President Obama signed into law the Agricultural Act of 2014 (also known as the “Farm Bill”). Under Section 7606, federal law does allow for the cultivation, processing and marketing of hemp and hemp products, which would include cannabinoids derived from industrial hemp.

Under U.S. federal law, industrial hemp products (containing less than 0.3% THC) can be commercially shipped to all 50 states.

TOP THINGS TO CONSIDER WHEN SHOPPING FOR CBD

The CBD market is still a very young and immature market, with a lack of transparency and regulations.

Why the CBD market is still shady

- Nature of the customer demographic: sick patients (and their friends and family)
- Businesses still have to import most (if not all) of their CBD oil from other countries.
- Regulations and quality control behind the production are very grey
- It is easy for companies to mislead clients with their labeling

**Read more in-depth about this issue on our blog:*

[Be Careful When You Buy Your Next CBD Oil](#)

What to look out for when buying CBD

1. Always request third party lab results

Customers should always request third party lab results that test for potency, pesticides, residual solvents, and mycotoxins of the CBD hemp oil. If a company is reluctant to share these results with you, it should automatically be a red flag and indicate that they have something to hide.

2. Pay attention to the product labeling. What is the dosage of the actual active CBD?

Pay particular attention to the product labeling. Is the dosage (mg) listed on the bottle the actual active CBD in that product? Or is it the dosage (mg) of the CBD hemp oil? These are two clearly different measurements that could make a strong difference in the potency of the product.

3. Ask for advice

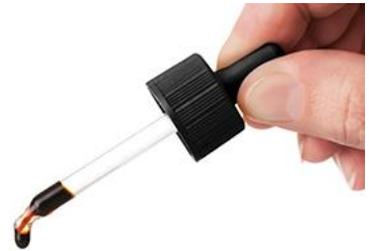
Don't be shy to ask for expert advice when you're buying CBD oil products. The CBD oil market is young and immature, where the regulations and quality control practices are still subpar at best. Don't just trust a product because it's a "known brand" (we've found many reports of bigger CBD brands having dubious quality control). You can even reach out to us reach out to us if you have any questions or concerns while shopping for CBD oil.

DIFFERENT TYPES OF CBD PRODUCTS

We highly recommend that you do your own research on CBD and hemp CBD oil with reputable clinical publications before deciding which product and concentration to buy

1. Tinctures

Tinctures are taken by dropping a couple drops on or under your tongue. Dosage can range from 100mg-1000mg. Tinctures is the most common usage of CBD application available on the market.



How to Use

A tincture is known to be most effective by not swallowing the liquid right away. You want to ingest as much as you can sub-bilingually. Place the drops under your tongue and along the cheeks for as long as you can

DIFFERENT TYPES OF CBD PRODUCTS

2. Capsules

CBD capsules are a great way to add CBD to your diet as a daily supplement. It is much easier to take than tinctures. Capsules typically offer 10-25mg of CBD.



How to Use

Capsules are great as it's the easiest to take in your daily regimen. Just take one capsule (or as needed) daily with water.

3. Concentrates

CBD concentrates typically contain the strongest dosage of CBD compared to any other CBD products. It can contain up to 10 times the average CBD products. Concentrates are also convenient in that it only takes a few seconds to consume.

Overall, CBD concentrates seem to be most popular among customers who are extremely busy, yet seek high potency CBD.



How to Use

Similar to tinctures, Place the concentrate under your tongue and along the cheeks and ingest it slowly.

DIFFERENT TYPES OF CBD PRODUCTS

4. Topicals

More brands have started to add CBD onto topicals, such as lotions, salve, and lip balms, for its skin benefits. CBD topicals are known to help with chronic pain, inflammation, acne, psoriasis, cancer treatment, anti-aging, and so many more.



For topical products, always look for keyword on the product labels that indicate that the product uses nano technology, encapsulation, or micellization of CBD. This shows that their solution can carry CBD through the dermal layers, rather than just staying on the skin.

How to Use

CBD infused topicals are recommended to be used as other similar body care products – use it when you deem necessary or when you have certain skin conditions. Apply generously to body areas that could benefit from the topical solution.

DIFFERENT TYPES OF CBD PRODUCTS

5. Sprays

CBD sprays are typically the weakest in concentration among the different type of CBD products. Typical concentration of CBD sprays ranges from 1-3mg.



How to Use

Spray one serving of the bottle into your mouth. Serving size should be labeled on the bottle (typically 2-3 sprays). Use daily or as needed

6. Vapes

Based on reviews, smoking or vaporizing CBD vape oil seems to have less effects when compared to other methods of administering CBD, such as tinctures, capsules and sprays.



On the flip side, others argue that smoking or vaporizing has less drawbacks than taking CBD orally, since ingesting CBD orally could result in inconsistent absorption and a delayed effect.

How to Use

In order to use CBD vape oil, you will need an e-cigarette, vape pen, or vaporizer. Add, heat and inhale the appropriate amount of vape oil to your choice of device.

BENEFITS OF CBD

Since CBD oil has not been FDA approved as a cure or treatment for any disease, CBD companies do not make or support any medical claims related to hemp CBD oil.

Many reputable clinical publications have published their findings on CBD, so we highly recommend that you do your own research on cannabidiol and hemp CBD oil.

Although FDA has not come out with an official statement, the United States Department of Health and Human Services does hold a patent called '**Cannabinoids as Antioxidants and Neuroprotectants**' (Patent # 6,630,507). This patent states:

Cannabinoids have been found to have antioxidant properties, unrelated to NMDA receptor antagonism. This new found property makes cannabinoids useful in the treatment and prophylaxis of wide variety of oxidation associated diseases, such as ischemic, age-related, inflammatory and autoimmune diseases. The cannabinoids are found to have particular application as neuroprotectants, for example in limiting neurological damage following ischemic insults, such as stroke and trauma, or in the treatment of neurodegenerative diseases, such as Alzheimer's disease, Parkinson's disease and HIV dementia.

Cannabidiol has been studied as an antiepileptic (Carlini et al., J. Clin. Pharmacol. 21:417S-427S, 1981; Karler et al., J. Clin. Pharmacol. 21:437S-448S, 1981, Consroe et al., J. Clin. Pharmacol. 21:428S-436S, 1981).

Nonpsychoactive cannabinoids, such as cannabidiol, are particularly advantageous to use because they avoid toxicity that is encountered with psychoactive cannabinoids at high doses useful in the method of the present invention.

Another prominent institution that has published their research on CBD and hemp is Mayo Clinic. Click on the link below to learn more about Mayo Clinic's studies:

[Drugs and Supplements: Cannabis Sativa](#)

WHAT THE PRESS SAYS

Although CBD oil is pending FDA approval as an official cure or treatment, there has been plenty of coverages of CBD in the media. Check out some of the most in-depth articles:

WIRED

"For the first time in a decade, he is living like a normal boy."

CNN

"His quality of life now is a 1000X better than when he was on pharmaceuticals"

Forbes

"[CBD] is a critical regulator of normal neuron activity and important for many brain function"

CBS

"The plant also contains another chemical known as cannabidiol (CBD) that may have seizure-fighting properties."

Click on icons to read full article

FREQUENTLY ASKED QUESTIONS (FAQs)

- **I've found CBD products called "Hemp Extract oil", "Phytocannabinoid oil", "Hemp Oil" – Is there a difference?**

No, these are just different terminologies that brands in the CBD industry use. If you're unsure whether it's a CBD oil or not, you should always check to see if the product has any descriptions about 'dosage' or 'concentration'. However, do not confuse CBD oil with hemp seed oil, which are fundamentally different.

- **What is the difference between CBD Hemp Oil and Hemp Seed Oil?**

Hemp Seed Oil is derived from the hemp seeds and are mainly used for dietary purposes (imagine something similar to coconut oil). Refined hemp seed oil can also be used in beauty care products, as they have amazing skin care properties. CBD Hemp oil is not the same thing as hemp seed oil, as it is extracted from one of hemp's many cannabinoids and have fundamentally different properties.

- **Can I give CBD oil to my pets?**

Yes, there are CBD oil brands that offer pet tinctures, which has been known to help with animals that suffer from anxiety. Again, we advise that you do your own research on CBD before trying it out.

FREQUENTLY ASKED QUESTIONS (FAQs)

- **Do I need a doctor's' prescription or medical marijuana card (Red Card)?**

No. Since hemp-derived CBD products are dietary supplements, there is no need to obtain a doctor's recommendation or to live in a medical marijuana state to have our products delivered to your door.

Please note that there are CBD oil products that are derived from medical marijuana, in which case, you will need to either have a doctor's prescription or live in a medical marijuana state.

Before beginning any new supplement routine, it is suggested you consult your doctor.

- **What's the difference between marijuana CBD oil and industrial hemp CBD oil?**

The main difference between marijuana CBD and hemp CBD are the differences in levels of THC the oil contains. Marijuana CBD oil typically contains a high level of THC along with CBD, which means that it is psychoactive. Hemp CBD, on the other hand, has high level of CBD with minimal amount of THC (<0.3%).

FREQUENTLY ASKED QUESTIONS (FAQs)

- **Do cannabidiol (CBD) and other natural hemp based constituents show up on a drug test?**

Most workplace drug screens and tests target delta9-tetrahydrocannabinol (THC) and do not detect the presence of cannabidiol (CBD) or other legal natural hemp based constituents. However, studies have shown that eating hemp foods and oils can, in rare cases, cause confirmed positive results when screening urine and blood specimens.

Accordingly, if you are subject to any form of drug testing, we recommend (as does the United States Military) that you do not ingest our products before consulting with your healthcare, drug screening/testing company, or employer.

- **How much CBD should I take?**

This is a difficult question to answer because our customers find differences in their personally optimal serving size. We suggest you start low and ease your way up to larger servings if desired until you find the daily CBD levels that work best for you.

If you have questions about which CBD product may fit your needs, please contact our customer service department.

FREQUENTLY ASKED QUESTIONS (FAQs)

- **What's the difference between CBD hemp oil and the hemp products I buy at the grocery store?**

Hemp products sold in grocery and health food stores are most often created using hemp seed oil, which can contain only trace amounts of CBD. While it has been noted that hemp seed oil can be a great source of nutrition, its marginal quantity of CBD per weight makes it unfeasible as a CBD supplement.

Our CBD hemp oil, however, is extracted from the stalk of specifically selected hemp cultivars, offering higher percentages of CBD by weight and additional nutritional benefits from the contents of our oil.

MORE RESEARCH BEHIND CBD

- [Endocannabinoid signaling in the etiology and treatment of major depressive illness.](#)
- [The endocannabinoid system and the treatment of mood and anxiety disorders.](#)
- [Cannabinoid modulation of fear extinction brain circuits: a novel target to advance anxiety treatment.](#)
- [Cannabinoids suppress inflammatory and neuropathic pain by targeting \$\alpha 3\$ glycine receptors.](#)
- [The Endocannabinoid System, Cannabinoids, and Pain](#)
- [The effectiveness of cannabinoids in the management of chronic nonmalignant neuropathic pain: a systematic review.](#)