



# EVERYTHING YOU ALWAYS WANTED TO KNOW ABOUT CBD\*

\*(BUT WERE AFRAID TO ASK)



BY WISDOM ESSENTIALS



# TABLE OF CONTENTS

<a href="#">Introduction</a> .....	3
<a href="#">CBD Used as Medicine Throughout History</a> .....	4
<a href="#">What is the Endocannabinoid System?</a> .....	5
<a href="#">10 Reasons to Use CBD</a> .....	8
<a href="#">Why You Should Consider Using CBD for Pain</a> .....	12
<a href="#">How to Use CBD for Anxiety</a> .....	15
<a href="#">All You Need to Know About CBD Dosage</a> .....	17
<a href="#">8 Possible Reasons CBD Is Not Working for You</a> .....	20
<a href="#">Who is the Modern Midlifer?</a> .....	27
<a href="#">Who We Are</a> .....	30
<a href="#">CBD Buyers Guide and Checklist</a> .....	33
<a href="#">Our Products</a> .....	35
<a href="#">CBD Glossary</a> .....	38
<a href="#">Resources</a> .....	42



# INTRODUCTION

**CBD: It's the new buzzword everyone keeps talking about that you just *don't* get.**

From relieving aches and pains to promoting a sense of calm and relaxing all those millions of thoughts swimming around in your head, it certainly sounds promising. But, here's the thing: You don't know anything about it.

You can't understand how it's different from the "weed" kids smoke behind a dumpster or who to ask without embarrassing yourself.

Don't worry.

In this guide, we'll go over everything you've ever wanted to know about CBD; things like:

- Definitions of all the fancy words people use when they're talking about CBD
- How CBD works in your body
- The amount of CBD you need to take when you're just starting out

...and so much more!

Keep reading and feel free to reach out to us if you have any unanswered questions. We won't judge.

*Best,  
Tom & Denis*





# CBD USED AS MEDICINE THROUGHOUT HISTORY

People have been using hemp for thousands of years.

Some of the first mentions of the use of hemp and cannabis began in Asia. [The oldest known record of the use of hemp is from the Chinese Emperor Shen Neng in 2737 BC](#), who used hemp infused tea to aid with a variety of ailments including memory, malaria, rheumatism, and gout. The Chinese doctor Hua Tuo is the first person to be credited for using hemp as an anesthetic. He reduced the plant to powder and mixed it with wine to administer prior to performing surgery. [In pre-colonial India \(and even today\), bhang, a drink made with raw cannabis](#), was considered to be a healthy wellness drink. Steam baths throughout the Middle East used hemp to help with pain and inflammation.

It doesn't just stop there. The history of hemp cultivation in America dates back to the early colonists who grew hemp for textiles and rope. Hemp fiber was used to make clothing, paper, sails and more and its seeds were used for food. As a fast growing and easy to cultivate plant with many uses, hemp was widely grown throughout colonial America. In fact, [in the early 1600's the Virginia, Massachusetts and Connecticut colonies required farmers to grow hemp](#). George Washington even grew hemp at Mount Vernon.



Tinctures were considered everyday health aids in the United States and were widely available at pharmacies until the 1930's, when the plant became criminalized as part of a post alcohol prohibition era, and its healing properties were largely forgotten.

Check out [this book recommendation, Cannabis & CBD for Health and Wellness by Aliza Sherman and Dr. Junella Chin](#), to learn more about how to have conversations that help move past the old and outdated stigmas around the plant.



# WHAT IS THE ENDOCANNABINOID SYSTEM?

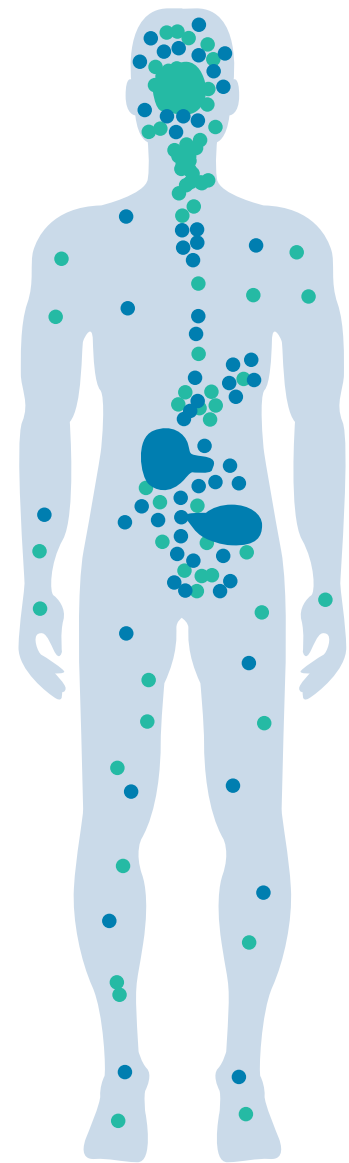
Ever wonder how CBD could be so helpful to healing your body? It can be difficult to wrap your mind around how it works, but the answer involves the endocannabinoid system.

The endocannabinoid system, or ECS for short, is a system within our bodies that's responsible for homeostasis. That is, a body's ability to maintain itself and function properly. Think of the ECS as a control mechanism that works through chemical communication in your body to achieve general well-being.

It regulates many of the body's physiological processes, such as pain, inflammation, as well as the cardiovascular, gastrointestinal and respiratory systems, metabolism, and immunity. The system also affects other body processes, like memory, mood, appetite, and sleep. Pretty fascinating stuff, right?

The endocannabinoid system is located in the central nervous system as well as on immune cells and in connective tissue. It's made up of chemical receptors that interact with cannabinoids, which are signaling molecules, or neurotransmitters, that act on the endocannabinoid system.

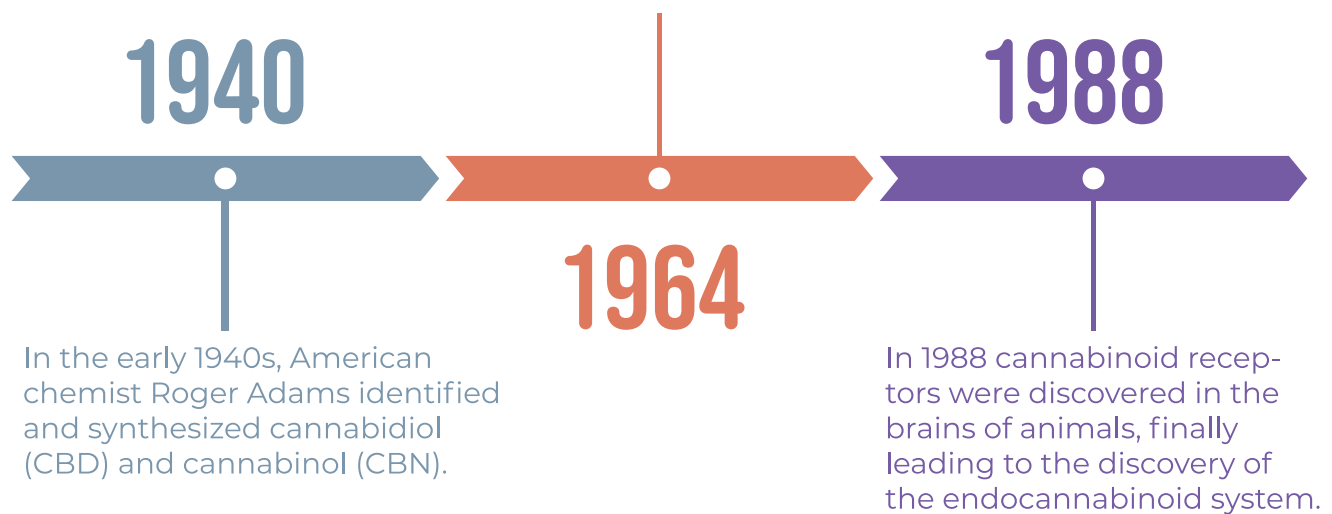
Cannabinoids are produced by both the human body (endogenous cannabinoids or endocannabinoids) and by the hemp or cannabis plant (phytocannabinoids). There are many different phytocannabinoids, but two of the most abundant are CBD and THC. Therefore, we can use CBD and THC to successfully interact with the endocannabinoid system in the body.



## THE PATH TO DISCOVERY

The ECS was discovered in the 1990s, and some scientists describe it as one of the most important scientific discoveries ever.

In 1964, the psychoactive cannabinoid, tetrahydrocannabinol, or THC, was identified by Dr. Raphael Mechoulam, an organic chemist at the Hebrew University of Jerusalem, a man responsible for much of the groundbreaking work on the endocannabinoid system.



While at first it was thought that the endocannabinoid system was limited to the brain and nerves, [according to an article in UCLA Health](#), it's now known that endocannabinoid receptors are found throughout the body, including in the skin, bone, fat tissue, liver, pancreas, skeleton muscles, heart, blood vessels, kidney, GI tract, and immune cells.

The purpose of receptors in the endocannabinoid system is to respond to endocannabinoids produced by our own bodies. However, scientists also discovered that the endocannabinoid system also responds to cannabinoids produced by plants, or phytocannabinoids, such as CBD.

While much is still being learned about the endocannabinoid system, [research shows](#) that CBD strengthens the endocannabinoid system, allowing your body to correct irregularities.



CBD binds with receptors, activating them for therapeutic effects. It reduces stress, produces a sense of calm, and helps people focus. It can also reduce inflammation and support healthy sleep cycles. It's also thought that manipulating the system through the use of CBD can help treat or prevent diabetes, cancer, and heart ailments.

[According to the National Institutes of Health](#), CBD affects the endocannabinoid system in ways that may be useful in treating a number of ailments. These include:

- Pain
- Epilepsy
- Heart Disease
- Diabetes
- Anxiety
- Depression
- Inflammation
- And much more.

Research is ongoing, and scientists are learning more about CBD and the endocannabinoid system every day. It's thought by many that an increased understanding of the endocannabinoid system will lead to new therapies and important health breakthroughs in the years to come.

Check out these resources below for more research, articles, and information on CBD:

- [Cannabidiol in Anxiety and Sleep: A Large Case Series](#)
- [The Health Effects of Cannabis and Cannabinoids](#)
- [World Health Organization's Review of CBD](#)



# 10 REASONS TO USE CBD

CBD –or cannabidiol– has been getting a lot of attention because of its health benefits. It's known for being used as an organic or natural remedy for pain, but it can also be of use in helping a number of conditions including severe joint pain, sleep, and anxiety.

## 1. PAIN

CBD is most commonly used and most widely recognized for treating pain. Cannabidiol is excellent for reducing inflammation which causes most body and joint pains. It is considered a better alternative to over-the-counter pain medications because CBD does not cause liver or kidney damage.

## 2. HEART HEALTH

CBD's anti-inflammatory and antioxidative properties may be able to reduce risk factors that can lead to heart disease, like high blood pressure. It may also be able to reduce the risk of related conditions, like stroke.

High blood pressure is the leading risk factor for hypertensive heart disease. Your blood pressure can rise under stress, but [research is showing](#) that even a single dose of CBD can lessen that spike.



## 3. IMPROVES COORDINATION

Coordination loss is a disorder of the nervous system that affects a person's movement. Although CBD is not a definitive cure for loss of coordination, it can help manage its symptoms.





It offers relief to users by relaxing the body and reducing tremors. Many studies have shown that CBD has neuroprotective properties. This means that in cases of mobility problems due to neurodegenerative disease, [CBD could reduce the symptoms of loss of mobility and motor skills](#).



## 4. IMPROVED IMMUNE SYSTEM

[CBD possesses anti-inflammatory properties](#) that could prevent dormant cells from developing into tumors. It regulates immunity and the production of white blood cells as well, helping your immune system work smarter and keeping you healthy.

## 5. MENTAL HEALTH AND STRESS REDUCTION

[Studies have shown](#) that CBD may help lower feelings of isolation and reduce the effects of PTSD. It can calm the brain and support the hippocampus, which is the area of the brain that is important for memory and healthy emotion.

There has also been [research indicating that](#) CBD can reduce anxiety behaviors relevant to multiple disorders beyond PTSD, including GAD, PD, OCD, and SAD, with a notable lack of anxiogenic effects without many of the negative side effects as pharmaceutical drug solutions, such as valium.

## 6. THE OPIOID CRISIS

[According to new research](#), we Baby Boomers and Gen X-ers –or as we like to say around here, Modern Midlifers– have lower metabolisms which makes us more susceptible to addiction partly due to a decreased ability to break down drugs like opioids. CBD, on the other hand, has analgesic effects and helps reduce inflammation which can be a great alternative to potentially addictive opioids.



## 7. BRAIN HEALTH

There are three ways CBD can help improve brain health: by reducing inflammation in the brain, by reducing too much oxygen buildup, and as a neuroprotectant and brain stimulant. [CBD may, therefore, help reduce the decline of memory and other brain functions.](#)



## 8. IMPROVED SLEEP

Researchers have discovered that the endocannabinoid system plays a pivotal role in maintaining body functions including regulating circadian rhythms. [CBD attaches to these receptors in the body](#) and helps the sleep/wake cycles. It can also help decrease anxiety and pain which can both interfere with a restful night's sleep.

## 9. SAFE

[According to a report by 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 CBD.”

In other words, despite the concern for developing a dependence on this alternative treatment, CBD is not an addictive substance.

## 10. NO 'HIGH' EFFECT

Lastly, we know about the taboo surrounding cannabis and, by extension, CBD. However, unlike THC or tetrahydrocannabinol, CBD does not get you 'high' or have psychoactive effects.



Although both compounds are found in the cannabis plant, CBD has been used for centuries as a form of alternative medicine for healing and soothing. In fact, the first documented use of cannabis-derived medicine dates back to 2737 BC when Chinese Emperor Sheng Nung used a cannabis-infused tea to aid with a variety of ailments including memory, malaria, rheumatism, and gout.

Ultimately, CBD offers a range of benefits that are incredibly helpful to people embarking on their Second Act. Being able to begin new adventures and learn new things is empowering, but doing so on pharmaceutical drugs hardly feels the same.

It is important to remember that when using [CBD topicals for pain](#) or [CBD tinctures for sleep](#) for whatever ailment you are looking to address, you should be looking for high-quality products.

Wisdom Essentials strives to keep our fellow Modern Midlifers in mind when formulating [our line of CBD products](#) so you can continue on this journey of life without a worry.

*\*Disclaimer: If you are currently taking any prescription medications, please speak to your health care provider before trying CBD.*



# WHY YOU SHOULD CONSIDER USING CBD FOR PAIN

[According to the National Academies' Institute of Medicine](#), 100 million Americans live with chronic pain every day. In addition to drastically reducing a person's quality of life, chronic pain increases health care costs and has a detrimental effect on productivity at work.

In fact, it can often lead to depression, anxiety, and sleep deprivation with nearly half of those who suffer from chronic pain reporting having trouble sleeping, and [a quarter being diagnosed with clinical insomnia](#).

## OTC MEDICATIONS AND PRESCRIPTIONS VS. CBD FOR PAIN

Over-the-counter (OTC) and prescription pain medications or even opioids are often recommended or prescribed to treat this type of pain. However, using these types of medications involves a number of risks, such as:

- Incorrect self-diagnosis
- An increase of drug-drug interactions and adverse effects
- Developed tolerance
- Dependence or addiction
- The potential for misuse and abuse
- And more

Particularly after the increasing severity of the [Opioid Crisis](#), many people are seeking out alternative natural forms of relief such as plant-based therapies or more recently, cannabidiol (CBD).

## WHY SHOULD I USE CBD FOR PAIN?

The use of CBD for pain relief actually dates back to ancient China. [In 2900 B.C.](#), many civilizations have documented their use of cannabis for a variety of conditions, from joint pain and muscle spasms to conditions such as gout and malaria.





Using CBD for pain is actually just going back to the methods that withstood the test of time. For those who are still skeptical, a balanced review of clinical and preliminary studies showed that the use of CBD is context-specific.

The review concludes that when examining trial results in which CBD is used as a treatment for chronic pain, there are promising results to suggest that its benefits provide a pain solution that does not have the negative effects that are associated with other drugs. When it comes to arthritis pain, it is no different. [Another study](#) indicates that CBD efficiently reduces inflammation and pain-related behaviors in the body.

In other words, for many people experiencing pain, CBD is steadily gaining popularity as an all-natural solution to pain relief.

## HOW DOES CBD HELP PAIN?

The short answer is that CBD works with the body's endocannabinoid system. Along with contributing to brain functions like memory, mood, and sleep, the endocannabinoid system influences how we experience pain. Think of your endocannabinoid system as a spider web of receptors that promote homeostasis, or balance, within your body.

In this way, CBD eases pain by reducing inflammation and [helping promote sounder and better sleep](#) which, in turn, helps with sleep disruption commonly experienced by people with pain.

[Research also indicates](#) that topical CBD can reduce joint swelling and reduce pain and inflammation. Applying CBD topically works in the area of pain because it is absorbed in the body transdermally –through the skin– which makes topical CBD a great option for localized pain.

The best part of all this? [There is no clinical evidence](#) that



CBD causes any serious side effects. It doesn't cause stomach issues, itching, or constipation the way anti-inflammatories and opioids can. It is proven not to be addictive in any way and has no intoxication or psychoactive effects.

## THERE IS ONE CATCH WITH CBD...

Be careful to verify the source, potency, and credibility of the CBD you are taking. Unfortunately, CBD, like many supplements, is not highly regulated.



**IN OTHER WORDS, IT DOES NOT MAKE YOU 'HIGH'  
OR IMPAIR YOU IN ANY WAY.**

Whether you are a CBD pro or a beginner, you should be aware that many CBD products for pain may not contain what is promised and may even include harmful substances in their formulation.

Make sure you only buy from companies that provide third-party lab-tested products (like us!) so you can be sure you receive legitimate CBD and get what you are paying for.

All in all, using CBD for pain has been effective for centuries and science is catching up as well. From topical CBD balms to calming tinctures, there is something out there for everyone.



# HOW TO USE CBD FOR ANXIETY

[A study by Harvard Medical Center](#) states that “CBD is commonly used to address anxiety, and for patients who suffer through the misery of insomnia, studies suggest that CBD may help with both falling asleep and staying asleep”.

Moreover, it is commonly understood that CBD interacts with the endocannabinoid system, and therefore, thought to affect CB1 receptors found in the central nervous system. While the exact interaction of CBD with these receptors needs to be studied further, [initial research indicates](#) that it is possible that CBD alters serotonin signals.

Lower levels of serotonin are commonly found in those who suffer from depression and in many cases, not having enough serotonin also causes anxiety.

The conventional treatment for low serotonin is a type of prescription medication known as selective serotonin reuptake inhibitors, also known as SSRIs. These include medications such as sertraline (Zoloft) or fluoxetine (Prozac).

## HOW DO I TAKE CBD FOR ANXIETY?

Researchers and healthcare professionals have yet to establish standardized dosing recommendations for CBD therapy. There are specific recommendations for CBD dosage per brand, but the truth is, until the FDA rules on the efficacy of cannabidiol themselves, it is a matter of trial and error.

With that being said, a number of studies have shown that the dosage that a person takes to relieve anxiety with CBD depends on the product and how they administer it.



## IS CBD BETTER THAN MEDICATION FOR ANXIETY?

Well, that's tricky. While a combination of therapy and medication may be used to treat anxiety and depression (please talk with your doctor!), there may be other lifestyle options and behaviors that can lessen anxiety. For instance:

- Getting a better night's sleep
- Limiting caffeine and alcohol
- Eating well and consistently
- Using relaxation techniques
- Taking up relaxing hobbies

[In 2015](#) and [again in 2019](#), the NIH reported on studies that showed CBD to have benefits for anxiety and anxiety-related disorders. They wrote that “Current evidence indicates CBD has considerable potential as a treatment for multiple anxiety disorders, with need for further study of chronic and therapeutic effects in relevant clinical populations”.

[Another study, quoted in University Health News in Neurotherapeutics showed](#) that “pre-clinical evidence conclusively demonstrates CBD’s efficacy in reducing anxiety behaviors relevant to multiple disorders, including generalized anxiety disorder (GAD), panic disorder (PD), post-traumatic stress disorder (PTSD), social anxiety disorder (SAD), and obsessive-compulsive disorder (OCD)... with a lack of anxiogenic (anxiety-producing) effects, minimal sedative effects, and an excellent safety profile”.

## THE BOTTOM LINE ABOUT CBD

The anecdotal evidence and literature are developing a strong picture that CBD has promising effects in treating mental health disorders in a more natural way. But the bottom line is that the only expert on your personal mental health treatment will be your doctor.

If you have concerns about taking prescription SSRIs, talk with your doctor about plant-based alternatives such as CBD to get a professional recommendation that works for you.





# ALL YOU NEED TO KNOW ABOUT CBD DOSAGE

No matter what you are looking to treat with CBD, taking the correct dosage is key to get the results you want. Figuring out how to include CBD in your daily routine is not as complicated as it sounds, we promise. Here is all you need to know about figuring out how much CBD to take:

## LEARN HOW TO ADMINISTER CBD.

The beauty of alternative wellness is that there are so many different CBD supplements available on the market. From tinctures and oils to edibles and topicals, each form of CBD requires different considerations to determine optimal CBD dosage.

The most common form of CBD to relieve your ailments is a tincture or oil. To get the full benefit of the tincture, use the oil dropper to place drops underneath your tongue. Holding it here is the best way to experience the full effect of the formula and understand what dosage works best for you.

## KNOW YOUR CBD DOSAGE WILL BE AS UNIQUE AS YOU ARE.

Dosage is going to vary from person to person. Your height, weight, medical history, body chemistry, the severity of the condition being treated, and so much more, factors into the optimal CBD dosage for your body. In fact, a [2017 review of clinical data on CBD](#) emphasized that different people respond to different dosages of CBD. The majority of the human studies cited used dosages anywhere between 20 and 1,500 milligrams (mg) per day.

To start, try a smaller dosage and gradually increase it by about 5-10mg until you feel the product treating your symptoms.

---

**THE FEELING WILL BE MORE ABOUT  
WHAT YOU NO LONGER  
EXPERIENCE – PAIN, SORENESS,  
ANXIETY, ETC. – THAN ANYTHING ELSE.**

---



For instance, suppose you experience frequent body aches and [purchase our CALM](#) formula to help ease the pain. Start with about  $\frac{3}{4}$  of the dropper (which contains approximately 22.5 mg of CBD dosage) a day and note how you feel with each dosage.

After a week, if you feel that your pain has not subsided enough, increase the dosage to the full CBD oil dropper (which contains approximately 30mg of CBD) and continue this in quarter-dropper increments until you feel that the dosage is optimal for your needs.

Alternatively, you could go for an infused edible, like our [CALM Gum Drops](#). With edibles, you can start with the serving size recommendation as listed on the nutrition label. Our CBD Gum Drops are specifically formulated to be naturally flavored, vegan, and tasty!

Regardless of the CBD product you choose to try, we recommend that you keep track of how much CBD you're taking and whether your symptoms are getting better. Write everything down in a notebook or in the Notes app of your phone.

## UNDERSTAND THE BASICS OF HOW CBD WORKS IN YOUR BODY.

The most effective dosage will not only depend on the individual but also the condition being treated. Different CBD products may be better than others depending on what your needs are.

For instance, to combat physical pain, a CBD topical for pain relief, like our [Soothe balm](#), applied directly may prove to be more beneficial to you than a tincture or oil. In a [2016 study](#), researchers found that topical CBD may be more effective when it comes to treating inflammation or pain in a specific area, such as arthritis or muscular aches.

That is why we intentionally craft our products with a proprietary blend of CBD and all-natural botanicals. With added ingredients like lion's mane, ginkgo biloba, myrcene, and more, we ensure that you are nourishing your mind, body, and spirit, regardless of which product you select. So now, you can take your CBD the way that makes your heart happy without losing any benefit.



Additionally, it can take a little time for the CBD to build up in your endocannabinoid system. So, we recommend that you give CBD at least 30 days to work, using it daily for the best results.

## **IF POSSIBLE, CONSULT YOUR DOCTOR.**

It is always worth speaking to your physician about recommended dosages for your needs. While not all doctors will be able to provide information on CBD, it is a good idea to speak with your doctor before trying CBD for the first time, especially if you are currently taking any prescription medications.



# 8 REASONS CBD MAY NOT BE WORKING FOR YOU



1 You purchased a poor-quality CBD product

2 You're taking the improper CBD dosage

3 You haven't used CBD long enough

4 CBD can't fix an unhealthy lifestyle

5 You have unrealistic expectations

6 You're not using the proper consumption method

7 You may have a tolerance to CBD

8 Your endocannabinoid system is adjusting

By now, you know a handful of ways CBD has been used and can help you improve your overall wellness. Maybe you've even given it a try already.

So, you do your research and find that CBD may reduce inflammation, ease painful muscles and joints, help you sleep, relieve anxiety, and even give you a sense of calm. So, there, you've decided. You want to see what all the buzz is about and experience the magic for yourself.

You find a brand, you buy the product, you get that package on your doorstep, and then... NOTHING.

Now, you're thinking, is all this CBD hype just a scam? Is it just "snake oil"? You're wondering if you just wasted your money. Sound familiar?

If you have tried CBD without getting the desired effect, know that you are not the only one. However, that does not mean CBD is fake and the industry nothing but a scam. Before you give up completely and think people who are into CBD are just full of it, consider that there may be a reason the CBD supplement you bought may not be working for you.





## 1. YOU PURCHASED A POOR-QUALITY CBD PRODUCT.

As it grows in popularity, CBD supplements are popping up everywhere, from gas stations to quick-service retailers. You may have even been offered free samples if you just pay shipping.

Unfortunately, scammers are taking advantage of people and not labeling products honestly or accurately. In fact, many of these products are very low quality and may not even have any CBD in them!

One group of researchers did a study of 84 CBD products and found that only 31% of them contained the amount of CBD that had been advertised. The FDA actually sends warning letters to these companies, and that is just the tip of the iceberg.

The next time you are looking for a CBD product, the number one thing you need to check for is third-party lab results. If a company does not share lab results of their products, it's very possible their products are not trustworthy and they may be misrepresenting the amount of CBD contained or have harmful contaminants like heavy metals and pesticides.

CBD companies should be fully transparent and share a certificate of analysis for every product they have so consumers don't have to blindly trust their CBD products contain the promised amount of CBD and are free from harmful contaminants. In fact, the best brands typically have a QR code on their products to make it easy to see these lab results.

## 2. YOU'RE TAKING THE IMPROPER CBD DOSAGE.

There are many misguided expectations about what the effect of CBD is and how long it takes to experience these feelings. While it's true that some users feel noticeable effects right away, this is not usually the case. Like most nutritional products, it usually can take a few weeks of consistent daily use to observe a real impact.

The misconception that CBD is a miracle cure and works immediately is damaging because many first time users find themselves disappointed when they don't get the desired effect right away. When using CBD supplements for health benefits, it's important to set realistic expectations and recognize it takes time, patience, and awareness.

CBD is very individual and trial and error is required.



Many people report that a good starting CBD dosage is somewhere between 20 to 50mg per day, while others take upwards of 100mg a day. This brings us to the question of bottle potency. Many products contain around 10mg per dropper, so trying to take an effective dose is challenging, expensive, and overall ineffective.

In other words, that cheap bottle containing 250 to 500 mg of CBD is giving you what you pay for. To work out the dose of the product you are looking to purchase is fairly simple. Take the full CBD value and divide it by however many milliliters is in the bottle.

For example, Wisdom Essentials CBD tinctures all have 1000 mg of Cannabidiol in a 30ml bottle:  $1000 / 30 = 33\text{mg}$  of CBD per dropper.

### 3. YOU HAVEN'T USED CBD LONG ENOUGH.

Give yourself time. Adjust your doses and try to keep a journal of your daily doses and any changes. You will find your sweet spot once your endocannabinoid system, or ECS, is in balance. Again: one size does not fit all. Patience is key, and while it may be frustrating to keep trying with little results, you may end up feeling very grateful that you didn't give up.

The fact is, the long term effects of CBD, such as its anti-inflammatory properties, require daily use for two to four weeks for the benefits to be felt. It takes a little time for CBD to interact with your body's cannabinoid receptors and the immune system to trigger a response from your cells creating pain-killing, anti-inflammatory effects.

[According to Dr. Gabriella Gobbi, MD, Ph.D. Professor of Neurobiological Psychiatry](#), "The most effective neuropathic pain relief occurs after



#### Supplement Facts

Serving Size: 1 Dropper (1ml)  
Servings Per Container: 30

**Amount Per Serving % Daily Value**

Calories .....	10
Total Fat 1g .....	2%*
Cannabidiol (CBD) ....	33mg**

\*Percent Daily Value based on a 2,000 calorie diet. \*\*% Daily Value (DV) not established.

**OTHER INGREDIENTS:**  
Limonene, Terpinolene,  
Linalool, Geraniol



at least one week of daily CBD treatment”. In other words, even though some people have quick reactions and success, CBD supplements take a little time to affect balance in our bodies.

## 4. CBD CAN'T FIX AN UNHEALTHY LIFESTYLE.

Harsh, but true. CBD supplements, as the name implies, build on top of your diet and lifestyle. It's not a cure-all.

It helps support your bodily balance, but it can't make up for everything, especially a bad diet, lack of exercise, over-drinking, and so on. In order to get the full benefits of CBD and maintain true wellness, you need to take care of all the pieces of the puzzle.

## 5. YOU HAVE UNREALISTIC EXPECTATIONS.

Are you expecting to feel a buzz? You may be mistaking CBD for its cousin, THC. CBD is non-psychoactive and, therefore, will not give you a “buzz” or make you feel “high”. CBD is not intoxicating in any way. Instead, it can give you a sense of calm, or relaxation which some people may equate to a “body high”, but you will not get “stoned”.



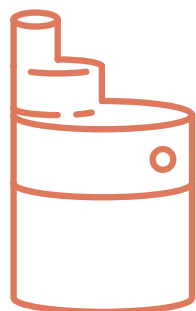
**MOST REPORT THAT CBD DOESN'T MAKE YOU FEEL ANYTHING, AND THAT IT'S MORE OF WHAT YOU DON'T FEEL. IT TAKES AWAY FEELINGS OF STRESS, DISCOMFORT, OR ANXIETY. IT LEAVES YOU WITH LESS TENSION, INFLAMMATION, AND PAIN, WHICH RESULTS IN A SENSE OF WELLBEING AND RELAXATION. IT MAY BE SUBTLE FOR SOME BUT PROFOUNDLY IMPACTFUL.**



## 6. YOU'RE NOT USING THE PROPER CONSUMPTION METHOD.

It seems like there is a new CBD product coming out every day. You can find everything from CBD toothpicks, pillows, coffee, and lube. So, if you have been trying a consumption method with lackluster results it's possible a different form may work better for you.

**Here are some common forms of CBD:**



Vape Oils



Topicals



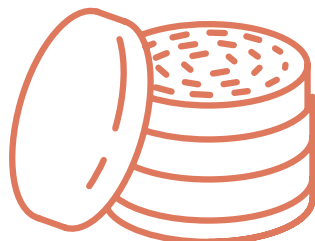
Capsules



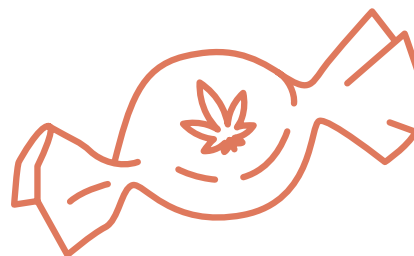
Drinks



Tinctures



Powders



Edibles

A factor to consider is bioavailability which refers to how much of the CBD you take actually gets into your bloodstream. For example, if you eat or drink a CBD product, it has to go through your digestive tract and liver before you absorb it and the amount that ends up in your system is going to be low.

On the other hand, if you take a CBD tincture sublingually (which means under your tongue), you're absorbing it directly into your bloodstream. This way, you will get a higher dose which will affect your body quicker and get more noticeable results with a tincture than a product that has to go through your digestive system to process it.



The most effective method also varies on what type of relief you are looking for. For instance, a topical balm won't help you with stress or anxiety where a tincture could but that same topical balm could give you great relief for your sore muscles or aching joints.

## 7. YOU MAY HAVE A TOLERANCE TO CBD.

As with dosage, timeline and strength, you may have a high tolerance to CBD naturally. This could be because of genetics or metabolism. In fact, [a psychiatry professor](#) noted as many as 20% of people may have a genetic mutation that makes them naturally produce more endocannabinoids which is similar to cannabinoids but produced by your body. If this is you, you will likely want to increase your dose a little more.

If you've been taking CBD for some time and it suddenly stops working, you may possibly have hit your tolerance level. You can fix this by taking a short break for a few days and then going back to your regular dosing routine. Reset breaks have been reported as a beneficial strategy for those who often use CBD.

## 8. YOUR ENDOCANNABINOID SYSTEM IS ADJUSTING.

Just like a fingerprint, each person has a unique endocannabinoid system (ECS) that responds differently to CBD. The ECS is one of the largest systems in the human body and is made up of millions of cannabinoid receptors throughout your central and peripheral nervous systems. It supports your body in maintaining equilibrium in response to environmental changes including stress.

Scientists around the world are still studying to understand the ECS fully. Nevertheless, studies show that our ECS is responsible for vital human functions and processes such as:

- Stress response and sleep regulation
- Cardiovascular system
- Mood, memory and social behavior
- Digestive processes
- Neuroprotection and muscle movement
- Inflammation and pain





Our bodies are filled with neurotransmitters and receptors (CB1 and CB2) mostly primed to interact with cannabinoids. However, for many reasons some people have deficient ECS that take time to “activate” to a level where cannabinoids and the ECS interact at a high enough level to create change.

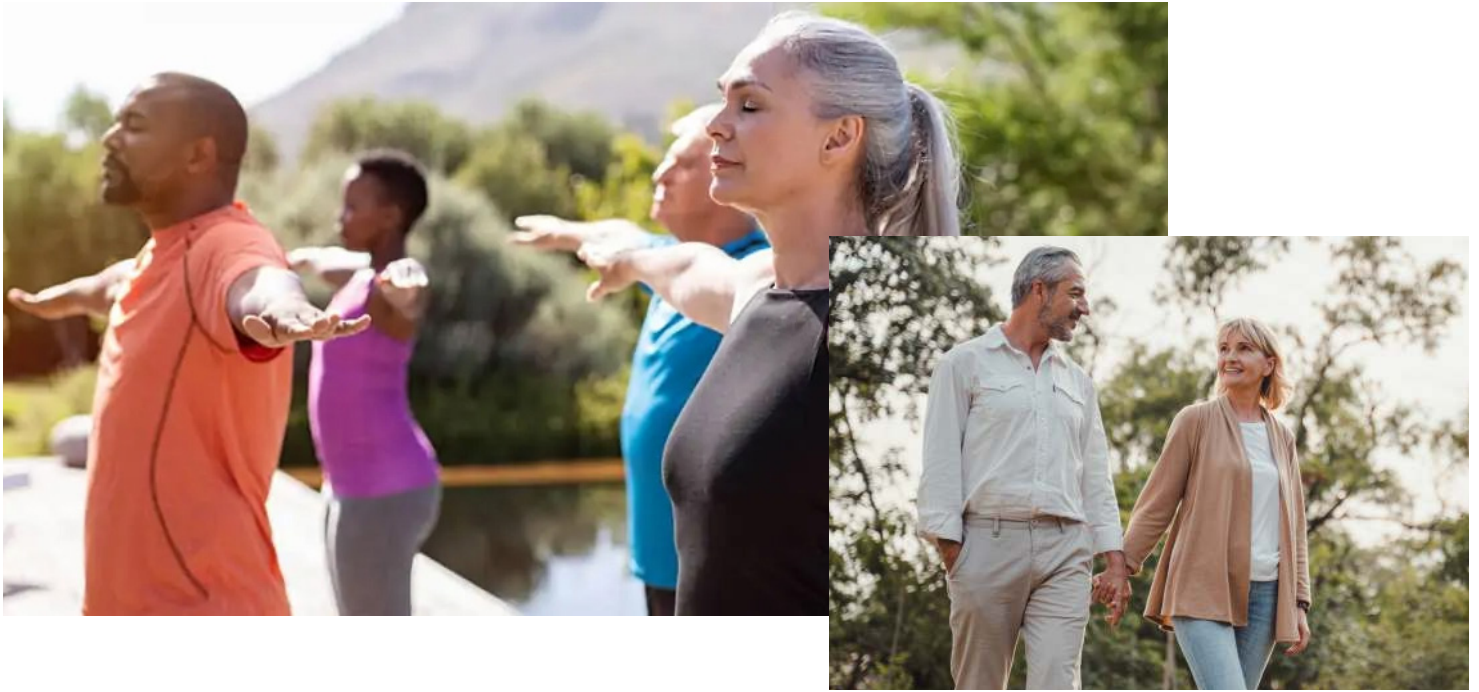
In other words, everyone’s ECS is unique in its makeup and functionality. Just like anything else in your body, you may have more or less receptors than the person next to you and those receptors may even function differently as well.



**OVERALL, YOU CAN HAVE THE WONDROUS EFFECTS OF CBD THAT EVERYONE ELSE IS RAVING ABOUT. IF YOU HAVE YET TO EXPERIENCE IT, JUST BE PATIENT. GIVE YOUR BODY TIME, ADJUST YOUR DOSAGE, AND KEEP TRACK OF ANY CHANGES. YOU WILL FIND YOUR SWEET SPOT ONCE YOUR BODY IS IN BALANCE WITH YOUR NEW REGIMEN.**



# WHO IS THE MODERN MIDLIFER?



“The best years of your life”: What does that really mean? Most people associate their ‘prime’ with health, wealth, happiness, and infectious energy for living life. Those same people would say that the prime of your life is your twenties. We say otherwise.

Embarking on your second act means you get a second prime too: the modern midlife. We talk a lot about Modern Midlifers™. It’s not a term you’ll find in the dictionary, or on Wikipedia. It’s a term we use to describe our community, so we thought we’d take a stab at explaining what it means to us.

## ARE YOU A MODERN MIDLIFER?

Being a Modern Midlifer™ means that health, wealth, happiness, and energy is part of our lifestyle. Paula Span of the New York Times terms it “The New Old Age” and Journalist Susan Flory calls it “The Big Middle”. These terms don’t just define a demographic group or describe an age range. They also capture our attitudes, priorities, goals, and values.

There is still much for us to contribute to society in these aspects and while midlife might unsettle us, we are more informed than ever before. Resources like The Frameworks



Institute, the [Stanford Center on Longevity](#), the Longevity Economy Outlook, and more conducted groundbreaking research to keep us learning and understanding this Second Act of our lives.

As Modern Midlifers, we consider this time to be a new beginning. From being grateful to our bodies for all they have done and continue to do for us to using our increased free time to explore and discover new passions, we are not the type to back down from a challenge. You are a Modern Midlifer if:

- You have a growth mindset.
- Modern Midlifers are active people in all ways. We don't feel old. We have a youthful mindset. The best is yet to come, and we want to get the most out of it.

As Modern Midlifers, we've learned a lot and we've achieved a lot, but we don't plan to stop there. We are drawn to challenges that test our wisdom and allow us to continue exploring opportunities for growth. It makes us believe that anything is possible. It allows us to keep learning and keep achieving so we can share our ever-growing wisdom with others.

To that end, it's not just about us. Modern Midlifers™ are highly social. Our friends aren't confined to any one generation; they're all ages and that brings us joy and even more space to explore new perspectives and passions.

We believe in whole-person wellness.

We believe everything we do is connected in a holistic way and that true wellness comes from the integration of physical, psychological, and emotional health. We call it whole-person wellness.

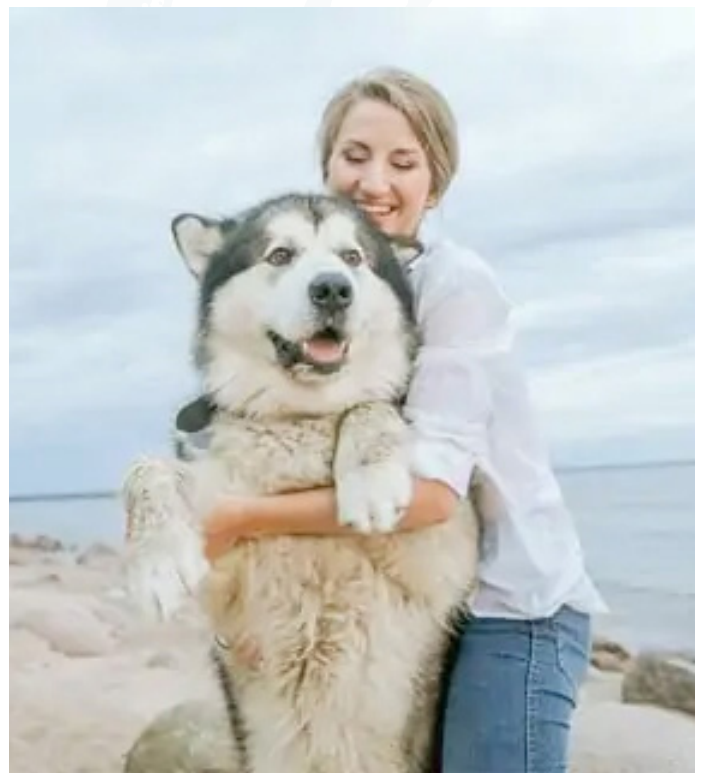


Whole-person wellness is a natural, proactive approach to health that emphasizes self-care and using natural therapies for our mind, body, and spirit. We exercise regularly, eat healthily, use natural supplements, and proactively pursue our wellness. To do all that we do, it is important that we take care of ourselves, our whole selves.

So, if you are always looking to infuse meaning into your life and learn more about your interests, your passions, and yourself; if you believe in whole-person wellness and engage your mind, body, and spirit in adventure, we'd say you are a fellow Modern Midlifer™. Welcome to the club. Our midlife is not a crisis, but a second act. In fact, Maya Angelou said it best:

**“My mission in life is not merely to survive, but to thrive; and to do so with some passion, humor, and some style.”**

With all that we have experienced with our families and careers, we have gained invaluable wisdom. We are pursuing our purpose with that passion, humor, and style. And that sounds like the best years of our lives to us.





# WHO WE ARE

We're Tom Lamb and Denis Keane. We went to college together, so as Modern Midlifers™, we set out as a team to pursue wellness regimens to maintain and preserve the health we have today and future-proof it for years to come. After quite some study, we threw away the pharmaceuticals and started replacing them with nutraceuticals, nootropics and CBD to support our "second act." We also saw that the optimism, excitement and vitality we felt didn't fit with society's idea of growing older and being a "senior."



We're at an exciting time in life. What's our competitive advantage? We're wise. We've achieved wisdom from success, failure and walking the walk for quite some time. And we're ready to use it to live our best lives. This may just be the half-way point!

We ride bikes. We BBQ. We love our friends, and we're learning how to play Pickleball. We're living life fully. We sleep better. We're managing our pain much better, and with plant-based products with few if any side-effects.

We started Wisdom Essentials to share this journey and the wisdom gained along the way. We're offering the natural botanical products with CBD we developed based on our own needs and experiences. Then we formulated these products with an extra layer of science through the input of doctors and chemists who combined historically-recognized botanical ingredients and CBD into lab-tested products with precise dosing to support every part of you – mind, body and spirit.





The CBD industry is unregulated on the national level. Many companies are operating with a lack of ethics, using ingredients and methods that are not necessarily in your best interests. We are leading by example and want to help shape this industry as it grows. CBD has so much potential to do good in the world. We hold ourselves to a higher standard through our actions and products.

We hope you'll share your wellness knowledge and experiences using our products. We need your wisdom to make this journey easier, and the world a better place.

*Please join us,  
Tom & Denis*



Tom - [tom@wisdomessentials.com](mailto:tom@wisdomessentials.com)

Denis - [denis@wisdomessentials.com](mailto:denis@wisdomessentials.com)



# CBD BUYERS GUIDE AND CHECKLIST

On the following page is a checklist for purchasing CBD oil and other CBD products. This checklist gives you guidelines to follow when you are looking at different CBD brands.

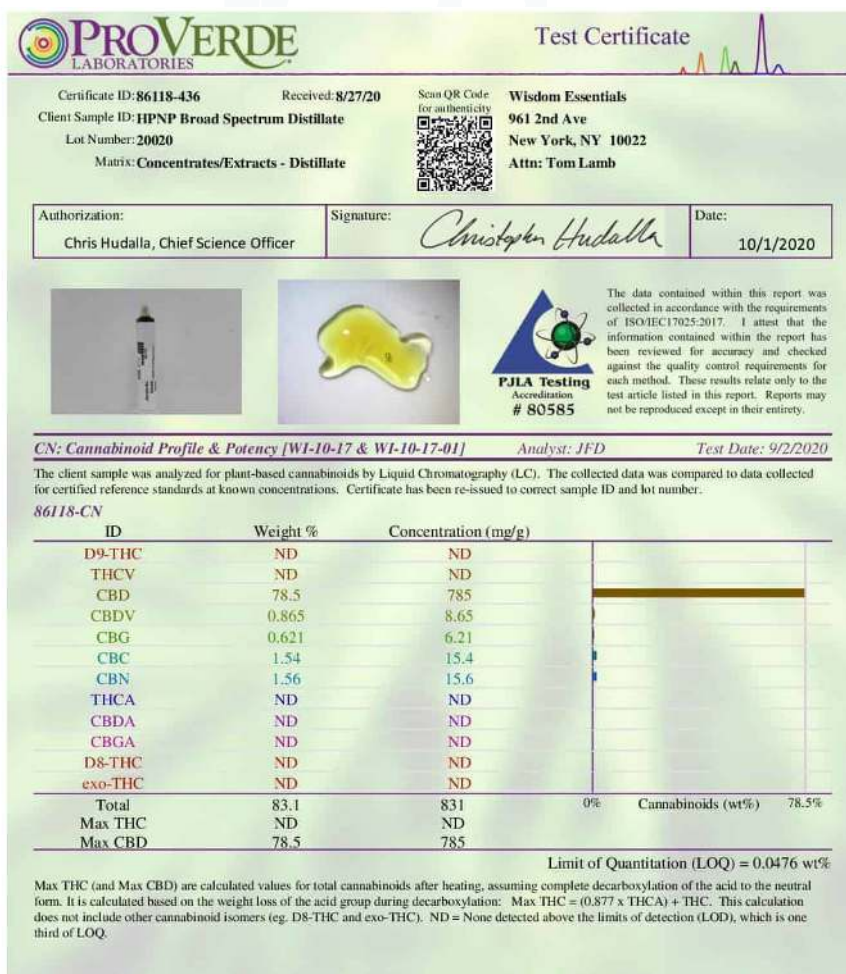
If nothing else, any CBD brand you purchase from should have this:

## CERTIFICATE OF ANALYSIS (COA)

This is a must! Any reputable brand will have a COA readily available on its website and many brands will have a QR code right on the packaging. This is one of the most important tools you have to determine the quality and purity of the CBD and to make sure bad things like pesticides and heavy metals are not present.

The COA should come from a 3rd party accredited laboratory. Every batch that is manufactured should be tested to protect their customers.

You should be aware that anecdotally, more than one-third of CBD on the market is total garbage, not providing the CBD advertised on the label (for many brands there is almost no CBD) so you do not get any benefits and waste your money. Worst case they have toxins that do your body harm.



# CBD BUYER'S CHECKLIST

## Certificate of Analysis

- Name of independent 3rd party lab
- Lab Testing Accreditation Number
- Name of Company/Brand
- Name of Product
- Date Sample was tested
- No Delta 9/THC present
- Heavy Metal Analysis-All should show ND (non detected)
- Pesticide Analysis- All should show ND

## Company Website

- Website- Do not purchase if they don't have one
- Accurate description of products
- Support phone number- You want to know real people are behind the company
- Support email available
- COA readily available
- Does website look professional and trustworthy
- Shipping policy and returns
- Is there a money back guarantee- any reputable brand will stand behind their products. Ideally you can return anytime for any reason.
- Educational resources available

# CBD BUYER'S CHECKLIST

## Product Labeling

- Supplement Facts
- Ingredient List
- QR code to Certificate of Analysis
- Suggested Serving Size
- Servings per container
- How many MG of CBD per container
- FDA disclaimer
- Suggested usage instructions
- Made in the USA

# OUR PRODUCTS



## DREAM Formula

### *Botanical Therapy with CBD & Melatonin*

After experiencing some sleepless nights, we were on a mission to create the best natural sleep aid anywhere. And then we developed DREAM!

It's a simple but powerful formula that may help you to fall asleep, stay asleep and wake up rested.

Our custom formula includes melatonin, CBD and a proprietary terpene blend that may have a calming and relaxing effect on the body that promotes a deep sleep.

It works for us and we know you'll love it as much as we do!



## CALM Formula

### *Botanical Therapy with CBD & Limonene*

We started the company with a goal to create the best products and to lessen our anxiety with everything that is going on in the world. Then we created CALM.

Our CALM tincture is custom formulated and contains natural CBD and a terpene blend that helps create a sense of well-being. It includes Terpinolene, an aromatic oil with a lemon-pine aroma. Limonene which is an essential oil found in citrus fruit peels and has many healing qualities and has shown anti-stress properties. Linalool which has been used since ancient times to help aid in reducing stress and combat depression, and Geraniol which is found in essential oils and is great for relaxation.

The overall effect may act as a mild sedative that can help to maintain well-being, it may reduce anxiety and give voice to your inner wisdom.







## FOCUS

*Botanical Therapy with CBD, Lion's Mane, and Ginkgo Biloba*  
It's more than just CBD in a bottle. A lot more.

We went the extra mile to create a formula that blends CBD with mushroom extracts, terpenes, herbs and natural compounds that may help to provide an extra boost of clarity to your day. It does this with Humulene, an anti-inflammatory; Pinene, which protects the molecules that improve memory; Lion's Mane which may help protect against dementia, Ginkgo Biloba which improves brain function and Limonene, which research indicates increases attention and mental focus.

This custom formulation may help increase your mental attention and focus.

---



## CALM Gum Drops

*Botanical Therapy with CBD & Limonene*

Find a greater sense of balance and well-being with Wisdom Essentials CALM Gum Drops.

They are naturally fruit flavored, vegan and taste delicious! Best of all, our proprietary blend of CBD and all natural botanicals may help reduce stress and anxiety to quiet your mind and give voice to your inner wisdom.





## SOOTHE

*Topical Relief Balm made with CBD, Arnica and Menthol Crystals*

This is a beautiful product. A muscle rub like no other, SOOTHE is an artisanal blend of CBD, essential oils, vitamins, minerals and natural ingredients that you won't find anywhere else.

It smells great, goes on smooth, and massages into your aching muscles like you were in a spa. From the first tingle of the menthol crystals on your skin, you'll want to use this everyday.



# CBD GLOSSARY

## **Bioavailability**

The degree and rate at which cannabis (CBD and/or THC) is absorbed by the body's circulatory system. Smoking and vaping are the most immediate because it goes into your lungs; tinctures and sublingual may take about ten minutes; edibles (capsules, gummies, etc.) can take up to several hours because it has to get through your digestive system which is dependent on how much food you've eaten.

## **Botanicals**

Botanicals are plants or plant parts valued for their medicinal or therapeutic properties, flavor, and/or scent. They come from herbs, flowers, and seeds. Products made from botanicals that are used to maintain or improve health may be called herbal products, botanical products, or phytomedicines. Botanicals can have many healing and anti-aging properties.

## **Broad-spectrum**

Products labeled "broad spectrum" typically have more than one cannabinoid, but not all that occurs naturally within the hemp plant. An example might be a product that has had the THC removed is considered broad-spectrum. For those who cannot have or do not want any traces of THC in their system, broad-spectrum products are the best choice, though they are not as effective as full-spectrum products.

## **Cannabidiol (CBD)**

Known more affectionately as CBD, cannabidiol is one of the naturally occurring cannabinoids found in cannabis plants. Unlike marijuana or THC, CBD does not produce psychoactive effects.

## **Cannabigerol (CBG)**

A cannabinoid found in cannabis that is the chemical precursor to both THC and CBD. It is known as the 'parent cannabinoid' from which other cannabinoids are synthesized and may assist with inflammation, pain, nausea.



## **Cannabinol (CBN)**

A mildly psychoactive phytocannabinoid found only in trace amounts in cannabis. It is produced when THC is metabolized and is, therefore, mostly found only in aged cannabis. CBN has little to no intoxicating effects.

## **Cannabinoid**

One of the diverse chemical compounds found in cannabis that act on the endocannabinoid receptors found throughout the human body. These molecules include the endocannabinoids, which are produced naturally in the body, and phytocannabinoids, which are produced naturally from cannabis. The two most notable cannabinoids in cannabis are THC and CBD, but there are at least 144 different cannabinoids isolated from cannabis, exhibiting varied effects.

## **CBD oil**

A natural essential oil extracted from the flowers and leaves of the cannabis plant. This is the ingredient we use to infuse CBD into our products and formulas.

## **Endocannabinoid system**

Also known as the ECS, this system in the human body maintains homeostasis. In other words, it keeps the body balanced even when there are environmental changes. Receptors for this system are found throughout the entire body and play a part in many bodily functions and responses, such as appetite, stress, sleep, pain, memory, and immune function. Scientists believe that cannabis is effective because phytocannabinoids (or cannabinoids that occur naturally in the cannabis plant) mimic these naturally occurring endocannabinoids.



## Essential Oils

Essential oils are the essence of a plant. Inside many plants hidden within the roots, seeds, flowers and bark are concentrated, highly potent chemical compounds. These natural compounds are called essential oils. Essential oils give a plant its scent, protect it from hazardous environmental conditions, and even assist it with pollination, among other important functions and benefits. Essential oils have been used for thousands of years by ancient civilizations across the globe for:

- Aromatherapy
- Personal care
- Healthcare practices
- Beauty treatments
- Food preparation

Some examples of essential oils are lavender, rose, lemon, geranium, chamomile and rosemary.

## Full-spectrum

Products labeled “full-spectrum” contain all of the terpenes, cannabinoids, flavonoids, and fatty acids found in hemp. Full-spectrum CBD provides every potential benefit the plant has to offer.

## Hemp

A distinct strain of the Cannabis sativa plant that is often grown for industrial use. The hemp that is used in CBD products must contain less than 0.3% THC.

## Hemp seed oil

Derived from industrial hemp, hemp seed oil is created by pressing the plant’s seeds. It has no therapeutic benefits but is often used as a dietary supplement and low-saturated-fat cooking oil.

## Industrial hemp

Hemp that is grown specifically for the industrial uses of its products. This includes textiles, clothing, biodegradable plastic, food, and medicinal uses (including CBD). Hemp and





its products are legal in the U.S. under the Farm Bill as long as they contain less than 0.3% THC.

## **Marijuana**

Female Cannabis sativa plants that produce flowers containing phytocannabinoids which are used for their medicinal and psychoactive properties.

## **Nootropics**

These are supplements that may improve cognitive function. They are a class of substances that can boost brain performance. They are sometimes called cognition enhancers or memory enhancing substances. They do not treat diseases but may have some effects on thinking, memory, or other mental functions.

## **Nutraceuticals**

Nutraceuticals are supplements derived from food sources that are thought to provide health benefits. A nutraceutical product may be defined as a substance, which has physiological benefit or provides protection against chronic disease. Nutraceuticals may be used to improve health, delay the aging process, prevent chronic diseases, increase life expectancy, or support the structure or function of the body. These ingredients are not tested or regulated like pharmaceutical drugs.

## **Terpenes**

Terpenes are aromatic oils that give cannabis (and other plants) their particular aromas and taste. Cannabis terpenes exist in varying proportions based on the strain, giving each its own 'terpene profile'. The effects of any given terpene may be amplified when it interacts with other compounds (also known as the entourage effect).

## **Tetrahydrocannabinol (THC)**

A phytocannabinoid found in cannabis shown to have some effects on humans and animals. It is responsible for the intoxicating effects –or the 'high'– associated with marijuana use.

## **Tincture**

A delivery method of cannabis product, typically administered sublingually, that quickly absorbs and distributes throughout the body.



# RESOURCES

Bitencourt, Rafael M., and Reinaldo M. Takahashi. 2018. "Cannabidiol as a Therapeutic Alternative for Post-traumatic Stress Disorder: From Bench Research to Confirmation in Human Trials." *Frontiers in Neuroscience* 12 (July): 502. 10.3389/fnins.2018.00502.

Blessing, Esther M., Maria M. Steenkamp, Jorge Manzanares, and Charles R. Marmar. 2015. "Cannabidiol as a Potential Treatment for Anxiety Disorders." *Neurotherapeutics* 12, no. 4 (September): 825–836. 10.1007/s13311-015-0387-1.

Bonn-Miller, Marcel O., Mallory J. Loflin, Brian F. Thomas, Jahan P. Marcu, Travis Hyke, and Ryan Vandrey. 2017. "Labeling Accuracy of Cannabidiol Extracts Sold Online." *JAMA Network Open* 318, no. 17 (November): 1708–1709. 10.1001/jama.2017.11909.

Freidman, Richard A. 2015. "The Feel-Good Gene." *New York Times*.  
<https://www.nytimes.com/2015/03/08/opinion/sunday/the-feel-good-gene.html>.

Grinspoon, Peter. 2018. "Cannabidiol (CBD) — what we know and what we don't." Harvard Health Publishing.  
<https://www.health.harvard.edu/blog/cannabidiol-cbd-what-we-know-and-what-we-dont-2018082414476>.

Gumbiner, Jann. 2011. "History of Cannabis in Ancient China." *Psychology Today*.  
<https://www.psychologytoday.com/us/blog/the-teenage-mind/201105/history-cannabis-in-ancient-china>.

Hammell, D. C., L. P. Zhang, F. Ma, S. M. Abshire, S. L. McIlwrath, A. L. Stinchcomb, and K. N. Westlund. 2016. "Transdermal cannabidiol reduces inflammation and pain-related behaviours in a rat model of arthritis." *European Journal of Pain* 20, no. 6 (July): 936–948. 10.1002/ejp.818.

Iffland, Kerstin, and Franjo Grotenhermen. 2017. "An Update on Safety and Side Effects of Cannabidiol: A Review of Clinical Data and Relevant Animal Studies." *Cannabis and Cannabinoid Research* 2, no. 1 (June): 139–154. 10.1089/can.2016.0034.



Institute of Medicine, Board on Health Sciences Policy, and Committee on Advancing Pain Research, Care, and Education. 2011. *Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research*. Washington D.C.: The National Academies Press. 10.17226/13172.

Jadoon, Khalid A., Garry D. Tan, and Saoirse E. O'Sullivan. 2017. "A single dose of cannabidiol reduces blood pressure in healthy volunteers in a randomized crossover study." *JCI Insight* 2, no. 12 (June). 10.1172/jci.insight.93760.

Kittredge, Jack. n.d. "A History of Cannabis." The Natural Farmer. <https://thenaturalfarmer.org/article/a-history-of-cannabis/#:~:text=In%20the%20early%201600s%2C%20the,well%20as%20Pennsylvania%20and%20Maryland.>

Kogan, Natalya M., and Raphael Mechoulam. 2007. "Cannabinoids in Health and Disease." *Dialogues in Clinical Neuroscience* 9, no. 4 (December): 413–430. 10.31887/DCNS.2007.9.4/nkogan.

Kwiatkoski, Marcelo, Francisco S. Guimarães, and Elaine Del-Bel. 2012. "Cannabidiol-treated rats exhibited higher motor score after cryogenic spinal cord injury." *Neurotoxicity Research* 21, no. 3 (April): 271–80. 10.1007/s12640-011-9273-8.

Lee, Martin A. 2020. "Endocannabinoid Discovery Timeline." Project CBD. <https://www.projectcbd.org/science/endocannabinoid-discovery-timeline.>

Maroon, Joseph, and Jeff Bost. 2018. "Review of the Neurological Benefits of Phytocannabinoids." *Surgical Neurology International* 9. 10.4103/sni.sni\_45\_18.

McNamara, Damian. 2018. "Repeated CBD Doses Required for Effective Pain Relief." Medscape. <https://www.medscape.com/viewarticle/904290.>

McVean, Ada. 2020. "Getting More Bhang for Your Buck: Cannabis in India." McGill University. <https://www.mcgill.ca/oss/article/health/getting-more-bhang-your-buck-cannabis-india#:~:text=Despite%20India%27s%20rich%20cannabis%2Dhistory,what%20bhang%20is%20made%20from.>



- Nagarkatti, Prakash, Rupal Pandey, Sadiye A. Rieder, Venkatesh L. Hegde, and Mitzi Nagarkatti. 2009. "Cannabinoids as novel anti-inflammatory drugs." *Future Medicinal Chemistry* 1, no. 7 (October): 1333–1349. 10.4155/fmc.09.93.
- Palastro, Matthew D., Brian Johnson, and Joseph W. Ditre. 2017. "Cannabis and Pain: A Clinical Review." *Cannabis and Cannabinoid Research* 2, no. 1 (May). 10.1089/can.2017.0017.
- Rhodes, Leonaura. 2019. "What Is CBD Oil? A New Look at the Potential Benefits of Cannabidiol." University Health News.
- Shannon, Scott, Nicole Lewis, Heather Lee, and Shannon Hughes. 2019. "Cannabidiol in Anxiety and Sleep: A Large Case Series." *The Permanente Journal*, no. 23 (Winter), 18-41. 10.7812/TPP/18-041.
- Tang, Nicole K. 2008. "Insomnia Co-Occurring with Chronic Pain: Clinical Features, Interaction, Assessments and Possible Interventions." *Reviews in Pain* 1 (September): 2-7. 10.1177/204946370800200102.
- UCLA Cannabis Research Initiative. n.d. "Human Endocannabinoid System." UCLA. <https://cannabis.semel.ucla.edu/endocannabinoid/>.
- U.S. Department of Health and Human Services. 2021. "Opioid Crisis Statistics." U.S. Department of Health and Human Services. <https://www.hhs.gov/opioids/about-the-epidemic/opioid-crisis-statistics/index.html>.

