

THE SCIENCE BEHIND CBD



MISSION FARMS
CBD

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Introduction

CBD is not a strange new ‘drug’. Neither is it a ‘snake oil’ with magical healing properties. CBD is a natural compound found in the oils of the hemp plant. It has many health benefits without the “high” of cannabis. While there is a lot of buzz surrounding CBD, many people don’t understand what it is and how it works. This e-book will equip you with the knowledge you need to make informed decisions that benefit your health.





What is CBD?

CBD (short for cannabidiol) is the primary organic compound found in the essential oil of hemp plants. It is similar to organic compounds that your body naturally produces for its own benefit, called endocannabinoids, which is why our bodies are able to use CBD. It is also similar to the compounds found in most other essential oils, called terpenoids. Terpenoids give plants their unique aroma, flavor, and color.

CBD comprises about 75% - 85% of the essential oil of hemp. The rest is other terpenoids, flavonoids, and natural compounds that give different hemp varieties their unique flavors and aromas. As you can see, CBD is not a mysterious drug. It is an all-natural compound found in the hemp plant, similar to other essential oils.

However, CBD also has unique properties that can benefit your health...



How does CBD work in your body?

While CBD is similar to the terpenoids produced by other plants, it has some special qualities. To understand what makes it unique, we need to understand how these all natural compounds work in our bodies.

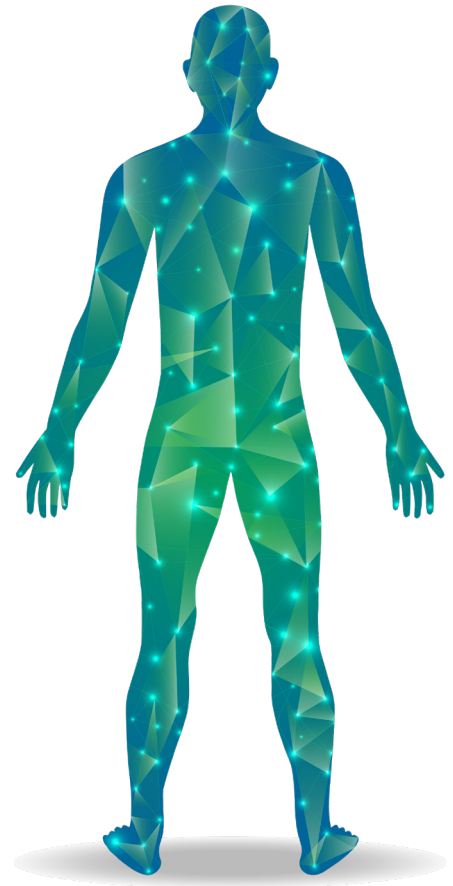
Terpenoids connect to cellular receptors throughout your body, achieving different effects. They are used as neurotransmitters, sending signals from one part of your body to another. One of the things that makes CBD unique is the fact that it connects with over 65 different receptors in your body! That is amazing for a single compound. As a result, CBD is able to impact many different body systems and functions, from sleep, to pain, to mood. This is why CBD offers so many treatment options.



CBD — A Master Key

CBD is like a master key. Some buildings have many different locks, each with a unique key. But a master key can be used to open any one of the locks. CBD is like a master key that can connect with many different cellular receptors throughout the body, unlocking their optimal functioning.

For example, CBD can assist in sending the message to reduce inflammation in your gut or a twisted ankle. CBD can also stimulate serotonin receptors in the brain that help regulate and improve mood. CBD can also bond to receptors throughout your body that make anandamide, your body's natural pain-killer, more available to ease pain. It can even bond to receptors that help improve the quality and depth of sleep. CBD works with receptors throughout your body to help maximize your health.



CBD Is A Master Key For:

- **Vanilloid Receptors** — for modulating pain levels
- **Serotonin Receptors** — for improving anxiety, depression, and mood
- **Adenosine Receptors** — for regulating the quality and depth of sleep
- **Endocannabinoid Receptors** — for influencing stress levels, energy levels, memory, and appetite



“The discovery of the endocannabinoid system is the single most important scientific medical discovery since the recognition of sterile surgical technique. As our knowledge expands, we are coming to realize that the ECS is a master control system of virtually all physiology.”

- Dr. David B. Allen

A Body System Just for Cannabinoids

The primary bodily system that CBD works within is the **endocannabinoid system**. The receptors in your endocannabinoid system are the most plentiful receptors in your whole body.

The main function of the endocannabinoid system is to help regulate your other body systems for maximum health. The goal of the endocannabinoid system is to help your body maintain stable, healthy functioning despite outside influences and stressors. For example, your endocannabinoid system tells your immune system to calm down once it has killed invaders and you no longer need a fever. It tells your body to relax its muscles and lower your blood pressure after a perceived threat is gone. When your sleep schedule is thrown off or your appetite is out of whack, your endocannabinoid system works to bring them back into balance.

Basically, your endocannabinoid system tells your body when to get certain processes started and when to stop them. Your body produces its own cannabinoids, called endocannabinoids, to work as messengers between your body systems.

But oftentimes your endocannabinoid system gets depleted and stops functioning optimally. What do you do then?

Good news! CBD works as a neurotransmitter within your endocannabinoid system. In fact, it is an incredibly effective messenger that can help restore the optimal functioning of your body systems.

Is something in your body not functioning the way it should? CBD is ready to help.





CBD and Pain

The CDC reports that over 50 million Americans suffer from chronic pain. It has become so prevalent that it is a health concern in its own right with a negative impact on every aspect of an individual's life. Whether the cause is injury, headaches, arthritis, back pain, or any number of conditions, pain robs us of laughter, joy, and carefree adventure.

Sadly, many medications cause more problems than they solve. Some don't touch the pain. Others may numb sensation, but they don't solve underlying causes like inflammation. And then there are the risks of addiction, liver damage, and countless side effects.

CBD is good news for people who are searching for an all-natural way to treat pain and discomfort.

I have had back pain for years and I desperately need surgery. But I put the Relieve CBD Gel on my back and my pain is gone. I cannot believe how well this works!

– Elyse S, Livingston, NJ



Easing Pain

So how does CBD work in the body to ease pain and discomfort?

CBD interacts with a number of receptors in your body that modulate pain and inflammation, helping bring relief.

CB1 and CB2 Receptors — Have you ever heard of the “runners high”? It’s a feeling of pain-free bliss that runners and other athletes experience after extreme, even painful, physical exertion. A chemical naturally produced by our bodies, called anandamide, is what eases pain. Well, CBD increases the body’s supply of anandamide by blocking these CB receptors that absorb anandamide. The result is less pain and a greater sense of well-being.

TRPV1 Receptors — CBD directly interacts with the TRPV1 receptors throughout our body and the result is a reduction in pain and inflammation.

Serotonin Receptors — Serotonin receptors are commonly known to impact mood, but they also play a role in pain perception. By increasing the availability of serotonin, CBD can help modulate both pain and mood in a beneficial way.

Reducing Inflammation

Not only does CBD reduce pain-levels in most people, it also reduces inflammation, which is often the source of the pain. It doesn’t just mask the problem, it addresses its cause. A recent review of preclinical and animal studies confirms CBD’s anti-inflammatory effects. CBD’s powerful anti-inflammatory benefits make it an excellent treatment for injury, neuropathy (pinched or irritated nerves), arthritis, and many other conditions exacerbated by inflammation.

All-Natural Alternative to Opioids

We are experiencing an opioid epidemic that is destroying the lives of many Americans. Good news: CBD may be the solution for the opioid epidemic. A number of studies cited in *The Journal of Pain and Treatment of Chronic Pain by Medical Approaches* have confirmed that CBD can both reduce dependency on opioids and lessen the symptoms of withdrawal. The efficacy of CBD for pain management is not surprising. Our brains have 10 times as many cannabinoid receptors as opioid receptors (“mu” receptors).

The Relieve CBD Oil stops my migraines in their tracks! I take a double dose when I feel one coming on. No more three-day headaches!

– Gina C., Bend, OR





CBD and Sleep

Sleep disruption and disorders affect 50-70 million Americans. If you aren't sleeping well, you aren't alone. Many people feel like they are falling behind during the day because they can't sleep well at night. Far worse, poor sleep is linked to many chronic health conditions. Adults who get less than seven hours of sleep each night are more likely to suffer from obesity, heart disease, diabetes, arthritis, stroke and depression.

Just tried your REST CBD oil, with amazing results!!! I've had issues with falling asleep for years. This not only relaxed me after a stressful day at work, but helped me "turn off" and helped me stay asleep. Doesn't have a bitter after taste. I'm recommending this to friends for a natural way to better sleep!!!!

– Claudette, Bend OR

Unfortunately, many physicians prescribe pharmaceuticals to help people sleep, rather than a more natural supplement. These drugs often leave you groggy in the morning. Worse, they create chemical dependency, so you need them in order to sleep.

CBD is proving to be an all-natural way to get a better night's sleep, and there is no risk of addiction.

Help Falling Asleep AND Waking Up

So how does CBD work in your body to help you sleep better?

You have adenosine receptors that help regulate when you feel sleepy and when you feel awake. The more adenosine connecting to receptors throughout your body and you start to feel sleepy. The less and you start to feel awake. For example, caffeine makes you feel alert because it blocks adenosine from binding to receptors.

CBD helps regulate the availability and transport of adenosine throughout your body so that you begin to feel sleepy when it is time to sleep and alert when it is time to be awake. So CBD doesn't just help you sleep better, it helps you wake up in the morning. Many people experience a more balanced sleep-wake cycle when they take CBD.

Slowing Down a Racing Mind

Another way that CBD helps you get a better night's sleep is by reducing stress and anxiety. A racing mind can make it hard to fall asleep and many of us have experienced an influx of worry when we wake in the middle of the night.

CBD interacts with particular receptors in your nervous system that send “back off” and “stop pushing” signals throughout your body. These receptors tell your mind and body when it is time to relax and shut down. So CBD helps you to calm down, unwind, and prepare to sleep.

“Wow, I have heard about CBD and have been so curious to try it. I took the Rest CBD and had such a better night of sleep in just one night. I think I am going to be hooked!” — Louis, Sedona AZ





CBD and Anxiety

Chronic stress and anxiety are on the rise. If you are feeling overwhelmed by your circumstances, you are not alone. Over 70% of Americans report physical and psychological symptoms caused by stress.



Thanks so much for making this product. I've been looking for CBD oil with added terpene, especially Limonene because it helps me so much with anxiety. Now I'm looking to get off my anxiety and depression meds because this great product is that effective for me. Such a blessing this amazing CBD. Thank you! — Lauren W.

Sadly, these elevated stress levels are detrimental to our health. Depression, weight gain, headaches, indigestion, and even heart disease have all been linked to stress. Unfortunately, many medications developed to treat anxiety cause other health problems and are only slightly more effective than a placebo.

Thankfully, CBD is proving to be an effective, all-natural treatment for stress and anxiety.



Calming the Stress Response

So how does CBD work in the body to calm stress and anxiety?

CBD connects with serotonin receptors in a similar way to prescription serotonin reuptake inhibitors (SSRIs) such as Prozac or Celexa. It binds with these receptors in order to increase the availability of the serotonin the body naturally produces. The result is reduced stress and anxiety and a better overall mood.



Brazilian researchers did a double-blind study of patients suffering from generalized social anxiety. After consuming CBD, participants reported a significant decrease in anxiety. These results were supported by brain scans that showed blood flow within the brain consistent with an anti-anxiety effect.

In another study, researchers had patients suffering from an anxiety disorder perform a simulated public speaking test after taking CBD. Participants reported significantly less anxiety and these reports were supported by anxiety indicators like blood pressure and heart rate. Other studies have shown CBD to be effective for stress-related anxiety and stress response to events.

The more studies that are conducted, the more promising CBD seems to be as an all-natural aid to managing the stresses of modern life.

Is CBD right for you?

CBD is helping people live happier, healthier lives. It's all-natural, non-addictive and our bodies have a whole system designed to utilize it for our benefit.

If you are experiencing pain, inflammation, stress, anxiety, or poor sleep, it is worth considering CBD as an all-natural treatment.

What is the right dose of CBD?

RECOMMENDED SERVING SIZE: 25MG

Many companies add CBD to their products in such small quantities that the CBD won't be make a difference. When only 5mg of CBD is a product servicing size, the CBD is mostly a gimmick. No wonder people have tried CBD and not found it effective: they were not given enough CBD. We recommend 25mg as a serving size. That will be effective for most people.

However, everyone is different!

So, you may need to make some adjustments to identify the right serving size for you. Remember the story of Goldilocks and the three bears? Too hot, too cold, just right. Too big, too small, just right. Well, finding the perfect serving size of CBD may take some experimentation.



How to Identify the Right Dose for You:

1. Start small
2. Increase as needed
3. Pay attention to your body

If you are new to CBD, start with a smaller dose. Try just 10mg of CBD the first time, then increase the serving size until you reach 25mg. Notice the desired effect? You may increase or decrease the serving size based on how you respond to the CBD. You might find that 40mg suits you best for a great night's sleep, 15mg is perfect to take the edge off of stressed situations, and 75mg stops a headache in its tracks. Pay attention to your body and determine what is best for you.

More Than One Serving a Day is Okay!

Since CBD does not have psychoactive effects and is not addictive, it is acceptable for most people to take several servings a day. For example, if you are treating chronic arthritis, you may want to take Relieve CBD three times a day and then have some REST CBD before bed. Most people will not experience ill-effects from taking several doses of CBD a day.





IN CONCLUSION . . .

Too little, too much, just right . . . Goldilocks wasn't finicky. It just took her a few tries to discover what worked for her. The same can be true for trying CBD. But in general, we recommend:

- ✓ 25MG OF CBD PER SERVING
- ✓ START SMALLER IF YOU ARE NEW TO CBD
- ✓ INCREASE AS NEEDED
- ✓ PAY ATTENTION TO YOUR BODY

Try CBD from Mission Farms

If you are curious to try CBD or are searching for a plant-based solution for pain, anxiety, and sleep issues, we recommend all-natural CBD products from Mission Farms CBD.

[Shop Mission Farms CBD](#)

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20%**

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Mission Farms: A Trusted Source of CBD



Purity Guaranteed:

- Mission Farms CBD oversees its farming operation and ensures that all its hemp is organically grown and non-GMO. With the rigorous third-party lab testing done throughout the farming season and product creation, you know you're getting a pure CBD product without all of the extra harmful chemicals and fillers.

Third-party tested:

- The company conducts third-party testing at three different stages of product development to guarantee purity from Mission Farms to your family. There are no heavy metals, pesticides, molds, or solvents in any CBD products from Mission Farms. View all third-party lab tests on their website at www.missionfarmscbd.com/lab-results
- The third-party lab testing also ensures that you are getting the CBD that the label says you should be getting. All CBD products should legally be within 10% of the stated amount on the bottle. Mission Farms CBD tests for this and can guarantee this in all of their products. The lab results will show this data as well.
- It's THC-tested, too. If you want to ensure that you won't get a psychoactive response when you use CBD, you'll also want to check the THC amounts in lab tests. Mission Farms CBD guarantees that they are always below the legal limit of .3% THC in all of their CBD products. This means you can get healthy without the high!



Premium Hemp

- Mission Farms CBD uses organically-farmed, award-winning, premium hemp from the “Napa Valley of Hemp” in Central Oregon. Headquartered in Bend, Oregon, the company is surrounded by a region where hemp growing is ideal.

- **The hemp from Mission Farms CBD is**
 - ✓ Grown in nutrient-rich, volcanic soil
 - ✓ Soaked with the natural sunlight of our summer climate
 - ✓ Fed daily by the waters of the Deschutes River
 - ✓ Therapeutic-grade for the most medical benefits
 - ✓ Pesticide-free, chemical-free, and all-natural
 - ✓ Planted and tended by hand



Mission Farms CBD

We offer a variety of products so that you can find the boost in your well-being in a multitude of ways.



All-natural
CBD Oils



CBD Joint and
Muscle Gel



CBD Goat Milk
Creams



CBD
Mints

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coupon code
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CBD
Roll-On



CBD
Goat Milk
Soaps



CBD
Goat Milk
Bath Soaks



CBD
for Pets

Mission Farms CBD has a 30-day Money Back Guarantee on all of its products.

Save 20% at Mission Farms CBD

Use coupon code EBOOK20



Hear from customers who are happier and healthier using Mission Farms CBD...

Cooling pain relief

I love all of Mission Farms products. The Relieve CBD joint and muscle gel is no exception. It smells great, feels great. I have the creams which I love, but the gel is cooling and feels great. I highly recommend! I will always come back to Mission Farms CBD as they have helped me the most! – Jenny H.



Great CBD

Great product. Have never been disappointed. Arrives on time and is packaged well. Site is easy to navigate. – Virginia M.

Helps with sleep

My son started taking one before bed. They help him to relax and go to sleep. He's had a messed-up sleep schedule for almost a year. It helps a lot! Our family avoids medicine, for us this is a great alternative. – Lawanda C.



Love the CBD Cream

I've bought the cream and it has done amazing at addressing the source of pain. Amazing pain relief after surgery. – Rosalee J.

So good

The CBD Mints taste great and work even better! – Lisa O.



Huge fan of the Pure

Huge fan of the Pure Oil. Love the taste, love the effect. Mission Farms has a consistent product and great quality. – Susan D.



Buy this for Arthritis!

This stuff really works!! My mom has bad rheumatoid arthritis in both knees. She has the gel jar and swears by it! She is happy, no more pain! – Jennifer W.



Relieve CBD Goat Milk Soap

This is great for bathing, also keep one at the kitchen sink, helpful for my arthritic hands. – Paula H.

Pain-free range of motion

My husband uses the CBD Gel for his shoulders, he has already had surgery but his movement was not full range of motion, The pain gel has helped him restore a lot of his range of motion without the pain associated with his movements. – Laurie S.

Special Offers from Mission Farms CBD



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Get a **FREE** Travel-Size CBD Gel!



The best-selling product from Mission Farms CBD that gets 5-star reviews! You only pay shipping! Ease the discomfort in your joints and muscles with our icy-hot CBD Gel infused with menthol, aloe, and full-spectrum CBD. It's a perfect starter size and it's totally FREE!

[Get a FREE
Travel-size CBD Gel](#)

FOOTNOTES

¹Summer Burstein, “Cannabidiol (CBD) and Its Aalogs: a Review of their Effects on Inflammation,” *Bioorganic and Medicinal Chemistry* 23, no. 7 (2015): 1377-85, doi:10.1016/j.bmc.2015.01.059.

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³Ethan B. Russo and Adrea B. Hohmann, “Role of Cannabinoids in Pain Management,” Essay, In *Treatment of Chronic Pain by Medical Approaches*, (2013): 181-97. New York, NY: Springer.

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⁵Mateus M. Bergamachi at al., “Cannabidiol Reduces the Anxiety Induced by Simulated Public Speaking in Treatment-Naive Social Phobia Patients,” *Neuropsychology* 36, no. 6 (2011): 1219-26.

