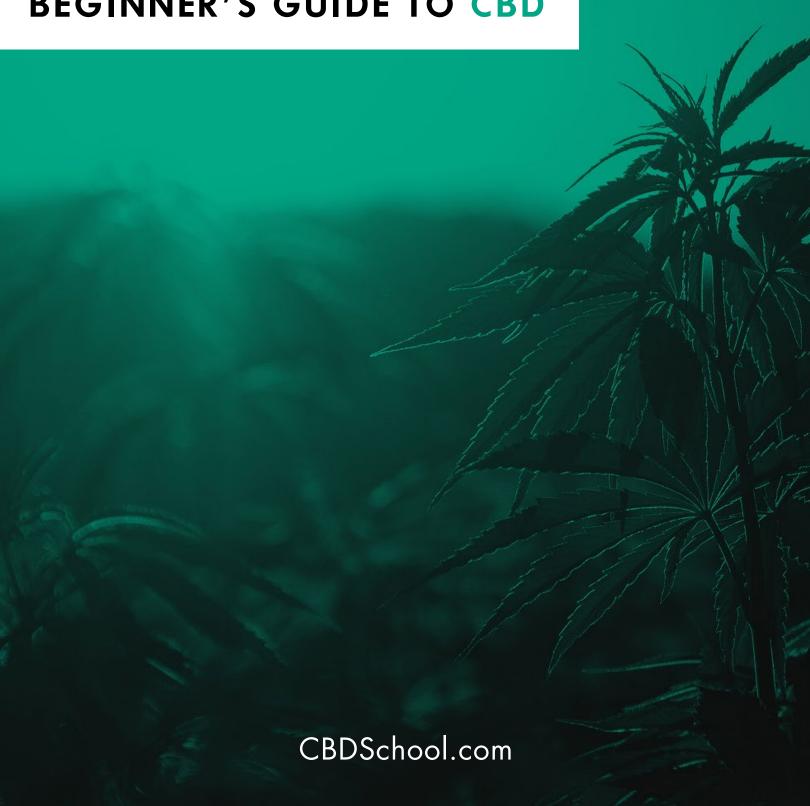
CBD S@HOOL

BEGINNER'S GUIDE TO CBD





Less than 10 years ago, CBD was virtually unheard of. In the past 5+ years, the popularity of CBD has skyrocketed, and more people are interested in CBD than ever before.

When we say more people, we mean pretty much everyone. Well, almost everyone. A recent survey by <u>High Yield Insights</u> found that 40% of Americans are interested in trying CBD.

"We are seeing many consumers looking to incorporate CBD into their wellness regimen," says cofounder of High Yield Insights with 20 years' experience in consumer insights and market research, Mike Luce. "Consumers previously unfamiliar with CBD are rapidly showing interest. Now that the federal government is finally taking steps to clear up the hazy legal picture, people see CBD as an entry point to the therapeutic benefits of cannabis."

Let's be real. CBD is everywhere. Celebrities can't get enough of it. Professional athletes have CBD sponsors. Former sports superstars swear by it.

People turn to CBD to support stress, get better sleep and manage pain. It's famous for the treatment of difficult to treat seizures.

Needless to say, if you're reading this there's a good chance you're interested in learning more about the cannabinoid that's quickly becoming one of the most popular natural wellness remedies pretty much ever.

When you consider that cannabis has been used for thousands of years as a natural medicine, the rise of CBD and cannabis-derived wellness products in the modern world makes sense. More people than ever before are seeking out natural ways to support health and wellness.

CBD's non-intoxicating effects and efficacy in supporting such a wide range of different conditions have made it the newest superstar in natural health.

Let's take a deeper look.

WHAT IS CBD?

Cannabidiol (CBD), a chemical compound found in cannabis that has gained worldwide recognition for its varied therapeutic properties. CBD is one of over 100 phytocannabinoids (commonly referred to as cannabinoids) present in cannabis that are widely responsible for the unique therapeutic benefits the plant contains.

CBD shares similar healing potential to tetrahydrocannabinol (THC), with both cannabinoids known to be beneficial for a number of different symptoms and conditions.

The biggest difference between the two? CBD doesn't cause any intoxicating effects. Basically, it won't make people feel "stoned" in the slightest. While the two cannabinoids are similar, they interact differently with receptors in the body and brain...which is exactly why CBD doesn't get you high.

How exactly does CBD work? We're glad you asked.

HOW CBD WORKS: A Brief Introduction To The Endocannabinoid System

You might be wondering how CBD works its magic.

It's actually not magic at all. Instead, the reason CBD works has to do with its relationship to a complex system found in humans and other mammals known as the endocannabinoid system (ECS).

According to some experts, the ECS is one of the most important physiological system that exists. It is, after all, believed to be largely responsible for maintaining the balance of a wide array of various cognitive and physical functions. Think mood, memory, pain perception, sleep, digestive function, immune response and more.

Founded in the late 1990s, researchers are just beginning to scratch the surface on ECS function. It's suggested, however, that the main function of the ECS is to maintain the homeostasis (balance) throughout the body in response to various changes in the environment.

- Two naturally occurring endocannabinoids produced within the body. These are known as anandamide and 2-Arachidonoylglycerol (2-AG).
- Two cannabinoid receptors known as CB1 and CB2. Cannabinoid receptors have two key functions. One, they govern the effects of the body's endocannabinoids. Two, they regulate the effects of the compounds found in cannabis.
- Enzymes that are known to synthesize and destroy endocannabinoids. The most common enzymes involved in the ECS are fatty acid amide hydrolase (FAAH) and monoacylglycerol lipase (MGL).

Let's take a bit of deeper look at the components of the ECS to gain a better understanding of its function.



ENDOCANNABINOIDS

Without endocannabinoids, there would be no ECS. These are the body's naturallyoccurring cannabinoids that are similar to the phytocannabinoids found in cannabis such as CBD and THC.

ANANDAMIDE

Anandamide and the large role it plays in the ECS might not have been discovered if it wasn't for THC.

In the 1960s, Raphael Mechoulam, an Israeli chemist fondly known as the "Father of Cannabis," discovered that THC was the compound in marijuana responsible for its psychoactive effects. Naturally, he wanted to know why it worked the way it did and if there was a similar compound in the human body that produced the same effects.

In 1992, Mechoulam finally found the answers he was looking for when he discovered and isolated a molecule with a strikingly similar chemical structure to THC. This was the body's own version of THC, responsible for the natural high we've all experienced from time to time. Mechoulam and his team decided to call this molecule anandamide, after the Sanskrit word ananda which means "bliss" or "supreme joy."

This neurotransmitter with a very similar structure to THC isn't just responsible for feelings of joy and happiness. Anandamide plays an important role in memory, motivation, higher thought process, regulation of body temperature, appetite and fertility. It also contains anti-inflammatory and anxiolytic effects and has shown to help increase neurogenesis.

2-AG

2-AG is the most abundant endocannabinoid found throughout the body, particularly in the brain and central nervous system. It is a member of a group of molecules derived from arachidonic acid or two other essential fatty acids (EFAs) known as EPA and DGLA.

2-AG has shown to be an important aspect of immune system function, pain management and appetite regulation. It is also known to help modulate anxiety, depression and addictive behaviors. 2-AG is also believed to play a role in the regulation and multiplication of certain types of cancer cells.



CANNABINOID RECEPTORS

The two cannabinoid receptors involved in the ECS are known simply as CB1 and CB2 receptors. As we mentioned, cannabinoid receptors serve two major functions. Regulating the effects of cannabis and governing the effects of endocannabinoids.

CB1 RECEPTORS

CB1 receptors are found primarily in the brain and spinal cord, with a particularly high density found in the amygdala and hippocampus, both of which play a large role in emotional regulation and memory. CB1 receptors affect areas such as memory, cognition, motor function and pain perception. They're also involved in the regulation of sleep, mood and appetite.

CB1 receptors are also involved in mediating the psychoactive effects of cannabis. THC binds directly to CB1 receptors, which results in signals sent to the brain that causes a person to experience the psychoactive effects THC is famous for.

Here's something, though. THC and CBD interact differently with CB1 receptors. While THC binds to these receptors, CBD has no binding affinity with CB1 receptors at all. In fact, the presence of CBD has shown to counteract the bond between THC and CB1 receptors, which is believed to counterbalance the effects of THC.

CB2 RECEPTORS

CB2 receptors are found primarily in the immune system, gastrointestinal tract and spleen. They are involved specifically in immune functions such as inflammation and pain management.

CB2 receptors are also found in the brain, although not as abundantly as CB1 receptors. They are known to be involved in reward and addiction, playing a large role in the modulation of dopamine activity in the ventral tegmental brain area.

The Effect of CBD on CB1 and CB2 Receptors and Other Molecular Pathways

CBD does not directly bind to either CB1 or CB2 receptors. The varied effects of CBD are actually caused by an indirect impact to both cannabinoid receptors. While CBD shows to have scarce binding affinity to either cannabinoid receptor, it is known to modulate several other non-cannabinoid receptors, ion channels and other molecular structures.

For one, CBD binds to and activates TRPV1 receptors (vanilloid receptor 1 or capsaicin receptors), which are a key element of pain and inflammation in the sensory system. For another, CBD inhibits fatty acid amide hydrolase (FAAH), which ultimately creates higher levels of anandamide.

High concentrations of CBD have also been shown to activate the 5HT1A serotonin receptor, a G-coupled protein receptor responsible for a multitude of various bodily processes, including anxiety, pain perception, sleep, appetite, addiction, nausea and vomiting.



WHERE DOES CBD COME FROM?

The terms cannabis, hemp and marijuana are commonly mistaken to be the same thing. This can make it difficult for those new to using cannabis-derived products to understand where their products come from, as well as the differences between hemp and marijuana.

Let's clear up any confusion.

CANNABIS SATIVA AND THE DIFFERENCE BETWEEN HEMP AND MARIJUANA

The word cannabis refers to the plant species cannabis Sativa L., of which both hemp and marijuana are different varieties.

While hemp and marijuana are quite similar, there are some distinct differences between the two. Their individual biological structure makes them unique in some very important ways, specifically when it comes to their cannabinoid content.

While 100+ cannabinoids have been identified in cannabis, the most abundant are THC and CBD.

It's THC that contains the psychoactive properties so many associate with cannabis use, meaning this is the cannabinoid responsible for getting you high. CBD, on the other hand, doesn't contain any psychoactive properties (remember it doesn't bind to CB1 receptors), meaning it does not and cannot get you high.

What is one of the biggest differences between hemp and marijuana?

Their cannabinoid content.

Hemp contains a particularly low concentration of THC. In fact, in order to be considered legal under the 2018 Farm Bill, hemp used to produce CBD products must contain 0.3% THC or less.

Marijuana is a different story, typically containing a moderate to high level of THC (15-40%).

Hemp is primarily used for industrial purposes and CBD, where marijuana is primarily used recreationally and for medical purposes.

There are some marijuana strains that have been bred to contain higher levels of CBD, but also contain moderate THC levels. Any of these high CBD strains that contain more than 0.3% THC are considered marijuana and are only legal in states that have enacted medical and/or recreational marijuana laws.

So where does CBD come from?

Short answer is the cannabis Sativa plant. CBD is a cannabinoid contained in the cannabis species and can be found in both hemp and marijuana.

The CBD that is widely available online and in retail locations throughout the nation, however, is derived from hemp and must contain less than 0.3% THC. If you live in a medical or recreational marijuana friendly state, you'll likely be able to find CBD derived from marijuana but only at a licensed dispensary.



THE BENEFITS OF CBD

The feedback we get from people that use CBD is amazing. You've probably heard quite a few stories about the benefits of CBD yourself. When it comes down to it, why are most people using CBD?

Check it out.

WHY DO PEOPLE USE CBD?

According to the latest Gallup Poll survey results, the top reasons people use CBD in the US are:

- Pain relief (40%)
- Anxiety (20%)
- Sleep issues/insomnia (11%)
- Arthritis (8%)

One in seven Americans use it for something, with younger adults (under the age of 30) making up the majority of CBD users (20%) in the US.

Adults between the ages of 30-49 make up 16% of CBD users in the US, while 11% of Americans between 50-64 personally use CBD products.

Only 8% of adults 65 and older use CBD, with 49% of the older population not familiar with CBD products at all.

Increased interest in CBD has led to increased research on CBD.
Scientists worldwide are now studying ways to use CBD to treat a number of different conditions.





THE BENEFITS OF CBD

If you're someone who suffers from any of the following, CBD might be worth checking out.

PAIN MANAGEMENT

The number one reason people turn to CBD is for pain management. At some point, everyone will experience physical pain, whether from injury or an underlying health condition.

Chronic pain is defined as pain that persists for longer than 12-weeks and is something an estimated 20 million American adults suffer from on a regular basis.

The sporting industry is a huge market that's using CBD to relieve localized pain due to muscle strain or injury.

Why? It's simple.

CBD is known to reduce pain and inflammation and speed up the healing process when muscles and joints become stressed during particularly intense exercise. Topical CBD products can be especially beneficial for reducing pain and inflammation caused by exercise.

CBD is also known to <u>reduce chronic pain</u> in conditions such as arthritis, as well as conditions involving neuropathic pain such as multiple sclerosis. It does so primarily by reducing inflammation that can trigger waves of pain throughout the body in varied health conditions.

ANXIETY AND MOOD SWINGS

CBD has shown to positively impact serotonin receptors in the brain, resulting in a relaxing effect that the cannabinoid has become famous for. The general effect of CBD oil seems to be an improvement in one's emotional state and overall well-being.

A <u>2011 study</u>, for example, discovered that CBD significantly reduced public speaking anxiety in participants with social anxiety.

A <u>2015 review</u> found that "current evidence indicates CBD has considerable potential as a treatment for anxiety disorders," including:

- General Anxiety Disorder
- Panic Disorder
- Social Anxiety Disorder
- Obsessive-Compulsive Disorder
- Post-Traumatic Stress Disorder

While clinical data is limited, there's still good evidence that CBD can help lift your spirits, improve your mood and positively impact your well-being.



THE BENEFITS OF CBD

ANTI-SEIZURE/ANTI-EPILEPTIC

In June 2018, the FDA approved the CBD-based drug, Epidiolex. Epidiolex is the first drug that contains only CBD and the only drug ever approved by the FDA that is derived from cannabis. Epidiolex was approved for the treatment of seizures in people suffering from two rare and intractable forms of epilepsy, Lennox-Gastaut syndrome and Dravet syndrome.

Many epilepsy patients that use CBD have experienced a significant reduction in seizure activity. What's more is that when combined with other forms of epilepsy treatment, CBD has shown to enhance the anticonvulsant effects these drugs contain.

SLEEP

Many CBD users also find it improves their sleep. Like many things concerning CBD, more research is needed before a firm conclusion on cannabidiol's effects on sleep can be reached. It's believed that since CBD has been observed to help reduce stress, it can in turn improve sleep and combat insomnia related to stress and anxiety.

PETS

Humans aren't the only ones that can benefit from CBD. There are plenty of CBD products made with pets in mind, whether four-legged, furry or feathered. There are several CBD pet products available. The most popular, however, are CBD tinctures and treats.

Like their owners, animals also have an endocannabinoid system and can benefit from CBD in a very similar way. Think soothing stress and anxiety, relieving pain and promoting overall wellness. CBD oil tinctures or capsules designed for pets can be fed to them directly by mouth or added to their food if they're a bit more finicky.

CBD formulated for pets is done so with serving size specific to animals in mind. Before giving your pet CBD, it's always recommended to first speak with your veterinarian.

While we're not suggesting that you run out and purchase CBD for any of the conditions mentioned here, if you're looking for an alternative to prescription pain medications, sleeping pills or if you're not responding to traditional medication, you might want to consider giving CBD oil a try.

Just be sure you do it carefully. CBD is considered very safe, but when taking anything it's important to be aware of any other drug interactions or potential side effects. It's always advised to speak to a doctor who is educated in CBD and can discuss the subject knowledgeably with you.





WHY QUALITY CBD MATTERS: CHOOSING THE BEST CBD PRODUCTS ON THE MARKET

Here's something we can't stress enough. Quality CBD matters.

While CBD is one of the most popular supplements ever, the market has been largely unregulated.

While this is slowly beginning to change thanks to the passing of the 2018 Farm Bill, the industry is still very much like the Wild West. Without regulation, companies can claim their CBD products are high-quality when they're really anything but. Unfortunately, there are still quite a few sneaky salesmen out there selling CBD that's really nothing but snake oil.

So how do you know a company is legit and you're getting the quality product you deserve? There are a few things to look for before purchasing CBD.

QUALITY CLAIMS

Remember, without regulation companies can say pretty much anything on their website about their products. We can't stress enough of how important it is to beware of false quality claims.

How exactly do you do this?

We're glad you asked. Look for brands that explain their process in detail and give you a good idea of how and where their hemp was grown, as well as how it was harvested. Companies that are serious about their CBD will provide evidence of manufacturing regulations, such as certified Good Manufacturing Practices (cGMP) and affiliations with accredited hemp associations. Trustworthy CBD companies will also take the time to explain their extraction and manufacturing process.

Companies that take the time to explain their process are the ones doing their best to remain transparent in an industry that still contains its fair share of phonies.



WHY QUALITY CBD MATTERS:

CHOOSING THE BEST CBD PRODUCTS ON THE MARKET

THIRD PARTY LAB TEST RESULTS

One of the best ways to determine if a CBD product is truly quality is through third party lab test results. When CBD products are tested by an independent third party lab, this ensures that the product is as pure as it can possibly be.

What exactly do third party lab tests tell consumers about their CBD products?

They confirm that there aren't any harmful substances contained in your product. Third party labs commonly test for things like pesticides, mold, mildew and heavy metals. Aside from this, they offer the transparency necessary to determine if a company's products are really sticking up to their claims.

We can't stress enough how important it is to only purchase products from CBD companies that offer third party lab test results. Certificates of Analysis (COAs) offer all the information consumers need to know that they're getting a product free from any potential contaminants. The easier these lab tests results are found on a company's website the better. We love it when a company includes lab test results on each product page. After all, you already have enough to do when choosing the best CBD products to fit your needs than search for the proof that the product is legit.

PRODUCT LABELING

Something else to watch out for is product labeling.

Here's something to keep in mind. While hemp oil contains CBD, hemp seed oil does not.

Instead, hemp seed oil is similar to other carrier oils, such as sunflower oil. These are oils extracted from seeds and classified as food products. While hemp seed contains a powerful nutritional profile, it doesn't contain CBD.

Unfortunately, a lot of companies are doing what they can to cash in on the popularity of CBD oil and claim their products contain CBD when they don't. They design their labels to look like CBD oil and say they contain "hemp oil" (which can be misleading), but in reality there are no traces of hemp or CBD.

The lesson here is to read your labels carefully. Make sure you're purchasing a product that clearly states it contains CBD. If not, leave it out of your cart or on the shelf.





WHY QUALITY CBD MATTERS:

CHOOSING THE BEST CBD PRODUCTS ON THE MARKET

EDUCATE YOURSELF

There is tons of valuable information about CBD available online. If you're interested in benefiting from CBD, one of the best things you can do is educate yourself. Doing so ensures you can make the most informed decision possible when purchasing various CBD products.

At CBD School, we're adamant about offering all the information we can about CBD so people just like you can become equipped with the knowledge they need when it comes to CBD. Our primary goal is to educate the masses with practical information on the legality and uses of CBD and cannabis products. From medical cannabis to CBD-infused products such as edibles, oils and concentrates, we discuss all of it (and more) on our website.

At CBD School, we're here to give you:

- CBD health information that's factual: We find the research, so you don't have to.
- Educational articles on everything CBD: Want to know how CBD might benefit runners and athletes? It's all explained here.
- Answers to your most pressing CBD questions: Yes, your pet can use CBD oil if they're scared of thunderstorms.
- The latest CBD news: Keep up with any legislation changes or announcements regarding CBD.

REVIEWS

You know there are 1,000s of CBD products out there, right?

We've got one more thing that can help you find the quality products to fit your needs. **Reviews.**

While we can't try all the CBD products that exist, we do try out and research various CBD products on a regular basis. Then, we give them an honest review.

In these reviews, we tell you about:

- The company: who and where they are.
- The products they offer.
- The company's claims and transparency.
- The quality, taste, ease of use and our personal experience with the products.

If you're not sure where to start when looking for CBD products, please take a look at the brands and products we've researched for you. You'll find pages of various CBD products and companies we've personally tried and feel confident about recommending to our readers.



GETTING FAMILIAR WITH DIFFERENT CBD PRODUCTS

You've probably noticed that there are a lot of CBD products on the market.

We understand how overwhelming this can be, which is one of the reasons we created this guide for those new to CBD. Getting familiar with the various CBD products will help you make the most informed buying decision based on your unique needs.

Before we dive deeper into CBD oil tinctures, capsules, gummies and more, it's important to understand the three different types of CBD oil: full spectrum, broad spectrum and CBD isolate.

FULL SPECTRUM VS. BROAD SPECTRUM VS. CBD ISOLATE: What's the Difference?

When you begin to shop for CBD products, you'll find there are three basic "types" of CBD oil. Here we'll explain their differences, so you have a better understanding of the best product for you.

Full spectrum CBD, broad spectrum CBD and CBD isolate are terms used to describe what kind of CBD oil was used to make a certain product. Each one contains CBD, but they all have a slightly different chemical composition.

What exactly is the difference between these three types of CBD oil?

We've mentioned that cannabis is an extremely complex plant, made up of some 500 various chemicals of which over 100 are cannabinoids like CBD and THC. Cannabis also contains compounds known as terpenes, flavonoids and fatty acids that have shown to lend to the therapeutic benefits the plant contains.

Why are we bringing up these other compounds found in cannabis?

It's simple. They have a lot to do with what establishes CBD oil as full spectrum, broad spectrum or CBD isolate. These compounds also have everything to do with what's known as the entourage effect.

Defined as, "the combined effect of different compounds found in cannabis that work together as a whole to produce a greater effect than if working separately to produce separate effects," the entourage effect is something experts maintain makes a big difference when it comes to CBD and other cannabis-based applications.

The three major players in the entourage effect are cannabinoids, terpenes and flavonoids.

The premise behind the entourage effect is that whole plant cannabis extracts that include these various compounds have a greater effect than isolated cannabinoids.



FULL SPECTRUM vs. BROAD **SPECTRUM vs. CBD ISOLATE**

Both full spectrum and broad spectrum CBD extracts contain those cannabis compounds known to lend to the entourage effect, but each have a slightly different composition. CBD isolate, on the other hand, is exactly what it sounds like. CBD that has been isolated from all the other compounds cannabis contains.

Here we'll take a deeper look at each to determine what type of CBD product is best for your personal needs.

FULL SPECTRUM CBD

Full spectrum CBD is CBD oil that has been extracted from cannabis that contains the wide range of compounds found in the cannabis plant. This includes THC.

The idea behind full spectrum CBD is to have an oil that contains all the beneficial compounds that lends to the entourage effect.

CBD extracted from hemp must contain less than 0.3% THC, which isn't known to cause any psychoactive effects. That being said, there are some individuals that can't have any traces of THC in their system, whether for professional or personal reasons. They still might be interested in benefiting from the entourage effect, however. This is when a broad spectrum CBD oil might be the most beneficial.

BROAD SPECTRUM CBD

Once CBD has gone through its initial extraction, some companies choose to take their oil through further refinement and remove all traces of THC.

The result is broad spectrum CBD oil. Broad spectrum CBD still contains all the other beneficial cannabinoids, terpenes and flavonoids that lead to the entourage effect. The only thing missing is THC.

Broad spectrum CBD products are a great option for those who still want to benefit from the entourage effect but prefer a product without THC. Those who can't have THC in their system due to professional, legal or personal reasons can still find benefit with the entourage effect without using a product with THC.



FULL SPECTRUM vs. BROAD SPECTRUM vs. CBD ISOLATE

CBD ISOLATE

CBD isolate is very much what it sounds like. Isolated CBD. After the initial extraction, CBD isolate is produced through further refinement that removes all other cannabis compounds, including other cannabinoids, terpenes and flavonoids.

The result? A product that contains 99%+ pure CBD.

Here's the thing. While CBD isolate is certainly beneficial in its own right, it doesn't contain any other compounds that lead to the entourage effect. Because of this, CBD isolate is typically considered the least effective of the different types of CBD. This isn't to say it doesn't work, it simply doesn't have the same potential as a full or broad spectrum product.

Whichever type of CBD product you ultimately decide on, just be sure to read the third party lab results that correspond with it. These will ensure the product you choose contains the cannabinoid content claimed on the label.

Now that you've got a better idea of the different types of CBD, let's take a look at the many different kinds of products available.



CBD CONSUMPTION METHODS

When it comes to taking CBD, you've got options. Several of them, in fact. Below is a list of the different types of CBD products you'll find widely available from various brands in the industry.

CBD OIL TINCTURE

CBD tinctures are one of the most commonly used types of CBD products. They contain CBD extract mixed with a carrier oil, such as a medium chain triglyceride (MCT) oil or other carrier oils like sunflower, hemp or olive oil. CBD tinctures are sometimes flavored with essential oils or other ingredients to improve the somewhat nutty natural flavor of pure CBD.

CBD oil tinctures are designed to be taken sublingually. This means they are held under the tongue for 1-2 minutes before being swallowed. Sublingual application of CBD oil tinctures makes the oil become absorbed by the mucus membranes under the tongue, allowing for the CBD to bypass the digestive tract and liver to reach the bloodstream more rapidly than it would by being swallowed and going through the entire digestive process.

The effects of CBD tinctures can typically be felt within 30 minutes and tend to last 4-6 hours.

CBD CAPSULES

CBD capsules are just what they sound like. Small CBD capsules or softgels filled with CBD that is swallowed just like a regular supplement. CBD capsules are popular because they offer a familiar way to take CBD in a perfectly measured dose.

The effects of CBD capsules typically take a bit longer to feel than CBD tinctures as they must first be absorbed by the digestive tract and liver before making their way to the bloodstream. The effects, however, do tend to last longer than CBD tinctures.

The effects of CBD capsules are usually felt within an hour and tend to last 6-8 hours.

CBD EDIBLES & BEVERAGES

CBD edibles are different types of foods infused with CBD. While CBD gummies tend to be the most popular of all edibles, there are also CBD-infused chocolates, hard candies, gum, cookies, energy bars and more. While not as prevalent as CBD edibles, CBD-infused beverages are another CBD consumption method that are really popular amongst athletes.

CBD edibles are an easy way to take CBD in a form that's fun and tastes great. Whatever your taste buds might be in the mood for, there's likely a CBD edible option to go along with it.

The effects of CBD edibles tend to take the longest (about an hour or more), yet they also last longer than other consumption methods.



CBD CONSUMPTION METHODS

VAPING/SMOKING CBD

Yes, smoking CBD is a thing. Just like THC, CBD can be smoked in flower form, concentrates and by vaping. You'll find quite a few companies that sell preroll CBD joints. While CBD concentrates like shatter and wax aren't as popular as THC concentrates, they do exist. Vaping CBD is one of the most popular forms of CBD inhalation, with CBD e-liquid (or vape juice), vape pens and cartridges sold by several CBD brands

Inhalation of CBD in the form of vaping, smoking or dabbing is the quickest method of delivery because the CBD is absorbed by the lungs and then quickly enters the bloodstream.

The effects of smoking CBD are usually felt almost immediately, around 1-2 minutes. While powerful, the effects only last 1-2 hours. Smoking or vaping CBD is the best option for individuals who desire immediate effects.

CBD TOPICALS

CBD topicals are creams, lotions, salves and balms infused with CBD and designed for topical application. Most people who use CBD topicals do so to relieve muscle and joint discomfort. Applied directly to the area one is feeling discomfort, CBD topicals are usually made with other beneficial ingredients to provide targeted relief from pain and inflammation.

CBD topicals are thought to work so well because research shows that the skin contains its own endocannabinoid system. They bypass the liver and digestive tract completely, going to work instead on areas that need relief

The effects of CBD topicals are typically felt within 15-20 minutes and usually last around 4-6 hours.

CBD SUPPOSITORIES

While a bit unconventional, CBD suppositories are yet another delivery method of CBD. Designed for both rectal and vaginal application, CBD suppositories have a conical shape that is much like a nonapplicator tampon. They are usually made of CBD and cocoa butter that harden when exposed to low temperatures.

Vaginal CBD suppositories are popular among women looking for natural ways to alleviate menstrual discomfort. Rectal CBD suppositories offer excellent options for those interested in the benefits of CBD that aren't able to orally consume it, whether from severe nausea and vomiting, gastrointestinal issues or other health issues that make it difficult to consume CBD orally.

CBD suppositories are suggested to have a higher absorption rate than other delivery methods as they bypass the digestive tract and liver completely. The effects of CBD suppositories are usually felt within 10-20 minutes and typically last between 4-8 hours.



HOW TO FIND YOUR IDEAL CBD DOSE

One of the biggest questions people have about CBD is how much they should take.

Here's the thing. There's no set serving size for CBD. Cannabis is a highly individualized medicine and will affect everyone differently. A dose that works for one person, won't necessarily work for the next.

A <u>2017 review</u> discovered that while CBD is considered safe, there's not been a universal serving size that works for everyone. The review actually found that people respond differently to CBD. Some of the biggest factors that affect dosage include weight, body chemistry and the reason you're taking CBD.

The majority of human studies are done with dosages between 20-1500mg. That's a huge difference in dosage, so where do you fit in?

FINDING YOUR CBD SWEET SPOT

One thing most experts agree on is to start low and go slow. What does this mean, exactly? That when you first start taking CBD, begin by taking lower doses and slowly work your way up until you feel the desired effects.

Finding your "sweet spot," as it's often referred to in the industry, will take some time. For example, you might start by taking 10mg of CBD in the morning and another 10mg of CBD in the evening a couple hours before bed. Do this for a week or so and if you don't feel any difference, up the dose you take to 20-25mg twice a day. If that doesn't work, you might want to try increasing how much you take by 5-10mg twice a day until you find the results you're looking for.

We highly recommend keeping track of how much CBD you use and anything you feel (or don't) when you first start taking it.



HOW TO FIND YOUR IDEAL CBD DOSE

CAN YOU TAKE TOO MUCH CBD?

There's another important question we hear a lot from people new to CBD. Can you take too much? The short answer is no.

Here's the thing, though. While CBD is considered non-toxic (even the World Health Organization says so), when taken in excessive amounts (over 1500mg) you could notice some side effects. These might include:

- Dry mouth
- Fatigue
- Anxiety
- Appetite changes
- Diarrhea

As far as a fatal overdose of taking too much CBD? It doesn't exist. CBD has shown to be non-toxic and safe for both humans and animals.

While research is limited, a 2019 review looked at the adverse effects and toxicity of CBD. In human studies, the above mentioned effects were cited, but there were zero reports of fatal toxicity. In animal studies the review found that 200mg CBD per kilogram of body weight administered intravenously to monkeys resulted in cardiac arrhythmias, muscle contraction or sparsity and respiratory and lung issues.

When comparing this to human models, an individual weighing 150lbs (68kg) would have to take some 13,600 milligrams (over 13 grams) of CBD oil intravenously to possibly experience similar effects. Not only would this be extremely expensive, but the likelihood of anyone taking this much CBD intravenously is very low.

Keep in mind that most people who take CBD consume no more than 100-150mg each day.





LAST THOUGHTS FOR CBD BEGINNERS

We created this e-book to give people new to CBD a general idea of what CBD is all about. If you're new to CBD, we truly hope it's served its purpose.

The non-intoxicating cannabinoid has taken the world by storm and is quickly becoming one of the most popular wellness supplements in many countries nationwide.

From understanding what CBD is, to how it works, what it might benefit and what CBD products might best suit your individual needs, our goal is to make you feel confident in making an informed and educated decision when purchasing CBD products for yourself.

We invite you to take a look at the CBD School Education section on our website, full of all the information you might need when it comes to the ever-expanding world of CBD. We're here to educate the masses with practical information on all things CBD.

Still have questions? We're always here to help.

Feel free to contact us at any time and we'll get back with you as soon as we can.