

# Hemp CBD

## Beginner's Guide



PURE BODY  
**ZEN**

SUPERIOR QUALITY & PURITY

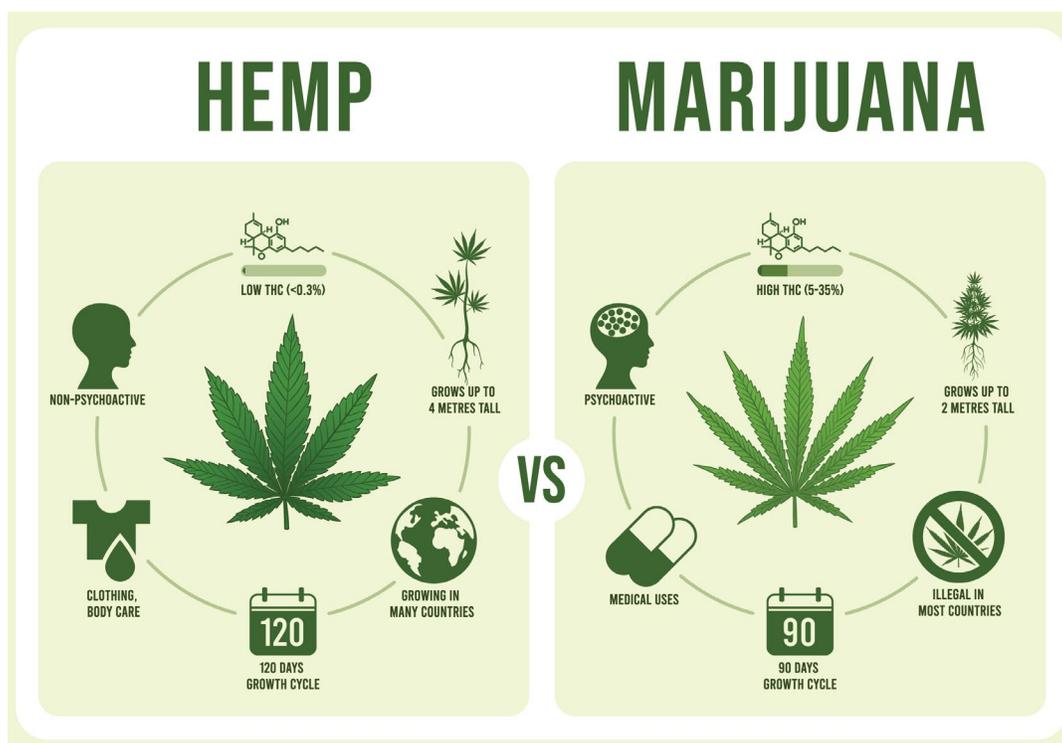
# INTRODUCTION

## WHAT IS CBD

CBD is the hottest new buzz word but what is it exactly? You may have heard that it has helped someone with cancer or that it helped your cousin's neighbor's dog, but how did it help and why? Knowing what is in your CBD products has become a virtual guessing game. Most companies either don't know or don't disclose how their products were made and not all test results are honest. Let's take a look into the world of CBD and solve some confusion.

CBD is an ingredient of the hemp plant with promising medicinal properties. The substance has an analgesic, anti-epileptic and anti-psychotic effect. CBD is also a powerful antioxidant and a potent anti-inflammatory. Finally, the nerve-protecting properties of CBD are of particular interest. CBD is an extract from legitimate hemp varieties. The extract contains the cocktail of medicinal products - cannabinoids, especially CBD (cannabidiol). THC is only contained in the lower, homeopathic level - up to 0.3%.

There are two groupings for the cannabis plant that produces CBD: hemp and marijuana.



# SO MUCH Confusion!

For the average consumer, CBD and hemp extract products are new to the market and can be confusing. We have been told our entire lives that the cannabis and hemp plants are bad, illegal street drugs, and they have been illegal (with zero tolerance) for over 80 years. The farm bill in 2018 has taken hemp off the illegal list making it a commodity once again. While this is great news for many, how does the average person know where to begin with this once taboo plant? Let's research the compounds so we can educate consumers; to stop the confusion and insanity that is impacting the current cannabis and hemp movements.

## The Endocannabinoid System and How It Works.

The endocannabinoid system (ECS) is a complex cell-signaling system identified in the early 1990s by researchers exploring THC, a well-known cannabinoid. Cannabinoids are compounds found in cannabis. Experts are still trying to fully understand the ECS. But so far, we know it plays role in regulating a range of functions and processes, including:

- sleep
- mood
- appetite
- memory
- reproduction and fertility

The ECS exists and is active in your body even if you don't use cannabis.



# How It Works

Without getting into a full biology and chemistry course here are the basics. The ECS involves three core components: endocannabinoids, receptors, and enzymes.

**Endocannabinoids**, also called endogenous cannabinoids, are molecules made by your body. They're similar to cannabinoids, but they're produced by your body.

Experts have identified two key endocannabinoids so far:

- anandamide (AEA)
- 2-arachidonoylglycerol (2-AG)

These help keep internal functions running smoothly. Your body produces them as needed, making it difficult to know what typical levels are for each.

**Endocannabinoid receptors** are found throughout your body. Endocannabinoids bind to them in order to signal that the ECS needs to take action.

There are two main endocannabinoid receptors:

- CB1 receptors, which are mostly found in the central nervous system
- CB2 receptors, which are mostly found in your peripheral nervous system, especially immune cells

Endocannabinoids can bind to either receptor. The effects that result depend on where the receptor is located and which endocannabinoid it binds to.

For example, endocannabinoids might target CB1 receptors in a spinal nerve to relieve pain. Others might bind to a CB2 receptor in your immune cells to signal that your body's experiencing inflammation, a common sign of autoimmune disorders.



**Enzymes** are responsible for breaking down endocannabinoids once they've carried out their function.

There are two main enzymes responsible for this:

- fatty acid amide hydrolase, which breaks down AEA
- monoacylglycerol acid lipase, which typically breaks down 2-AG

The Cannabis Research Initiative at UCLA states (n.d.) "In the 1990's scientists discovered endocannabinoids,

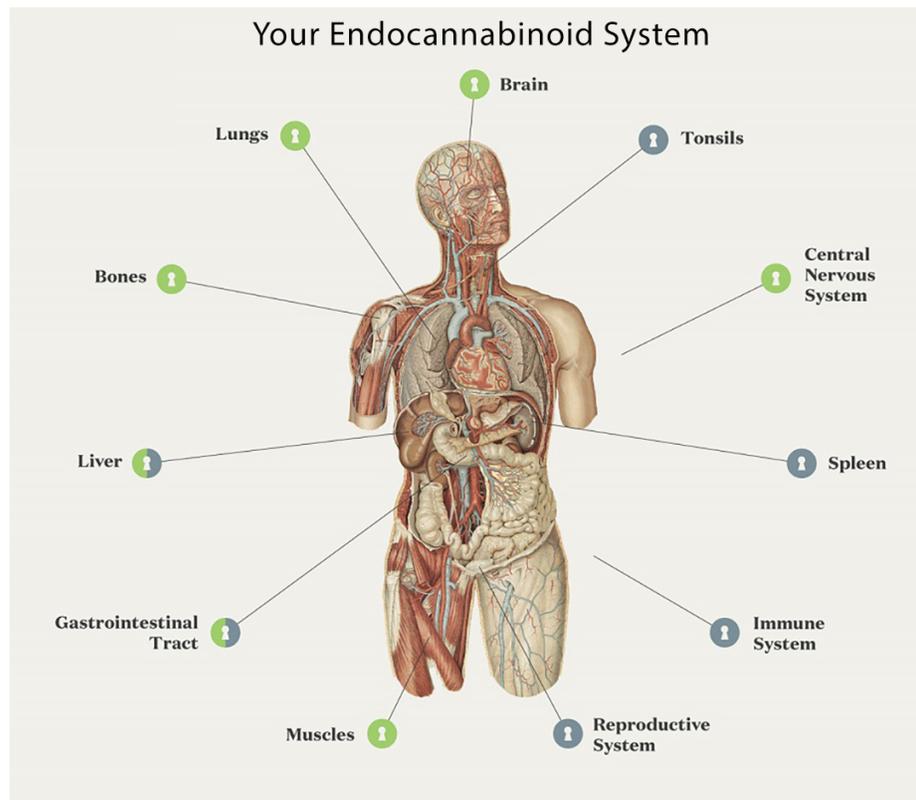
the natural cannabis-like molecules naturally produced by the human body.

Scientists began to realize cannabis exerted its effects by mimicking our endocannabinoids.

It appears the main function of the endocannabinoid system is to maintain bodily

homeostasis;

biological harmony in response to changes in the environment." This is the reason that CBD, THC, CBG, CBN and terpenes are becoming so popular in the home health care movement. It is easy to add CBD to your daily regimen and let your body do the rest naturally. Now that we know how cannabinoids work, let's look at how it's processed and the different types of goods on the market.





## HEMP-DERIVED CBD

Hemp-derived CBD is sourced from modern hemp plants, which are developed basically for their fiber and seeds. Hemp plants will in general contrast from cannabis plants in appearance; they are frequently thin and scant in foliage. Hemp is likewise separated from cannabis by its degrees of THC, the cannabinoid that has inebriating properties. Under U.S. law a hemp plant must contain close to 0.3% THC.

Marijuana-derived CBD is separated from weed plants that have thick, lavish foliage and blossoms that are commonly developed and expended for their inebriating properties. The government characterizes marijuana plants as those which contain over 0.3% THC. While most cannabis plants contain THC as the prevalent cannabinoid, there are a few strains of weed that are rich in CBD. That being stated, regardless of whether CBD is extricated from hemp or cannabis, it stays indistinguishable on a sub-atomic level.

CBD, the abbreviation for the miracle ingredient cannabidiol, has long been in the shadow of the psychoactive sister, the cannabinoid THC. However, scientists and consumers have recently started to recognize the countless advantages of CBD on their own physical and mental health. Below we have put together benefits of hemp-derived CBD that will shed light on the therapeutic power of this essential ingredient and will surprise you.



# BENEFITS OF HEMP-DERIVED CBD

## 1. RELIEVES PAIN AND INFLAMMATION

Addressing any effect that CBD has on human health would fill more pages than this article allows. One of the most common uses of CBD is pain relief and inflammation healing.

While research on CBD has made great strides in recent years, the international medical community has not yet fully recognized cannabinoids as medically effective. A study published in the Journal of Experimental Medicine in 2012 found that CBD suppresses chronic inflammatory pain in rodents. Many cannabis users claim that taking CBD supplements is essential to relieve inflammation symptoms associated with chronic pain.

Cannabinoids like CBD help relieve pain using the human endocannabinoid system. The cannabinoids attach to receptors and stimulate reactions in different areas of the body that promote positive neurological feedback. There is evidence that CBD binds to the CB receptor and provides an analgesic effect.

## 2. POST-TRAUMATIC STRESS DISORDER

CBD has provided promising evidence that it could alleviate anxiety symptoms from two common anxiety disorders, post-traumatic stress disorder (PTSD) and obsessive-compulsive disorder (OCD). Research linking PTSD to deficiency of anandamides in the human endocannabinoid system has shown cannabinoids to have beneficial effects on symptoms of anxiety disorder, such as social phobia. Patients may experience a decrease in mental and physical constraints when consuming high-CBD, low-THC strains.

## 3. NEUROLEPTIC

In addition to helping with anxiety disorders, CBD has the potential of a neuroleptic. Evidence suggests that cannabidiol helps patients with schizophrenia and other mental illnesses, such as bipolar disorder. Although THC is not considered a trigger for mental illness, it can cause acute psychotic symptoms in some patients. This is another reason why CBD is often used when large amounts of THC are consumed. While THC itself has some health benefits, the presence of CBD expands the range of therapies because it reduces the likelihood of experiencing side effects from the psychotropic effects.



## **4. ANTI-VOMITING / NAUSEA**

One of the worst feelings in everyday life is that of overwhelming nausea or worse: vomiting. But don't be afraid. CBD oils are easily supplied and can effectively treat symptoms of nausea. Taking CBD oil is not harmful to the stomach and does not contain the chalky texture or unpleasant taste of acid blockers or bismuth.

A 2012 study published in the British Journal of Pharmacology confirmed that CBD counteracts nausea and has anti-nausea effects in rats. In addition, when taking THC, it has even stronger effects that counteract nausea, since both THC and CBD fight nausea alone or together.

## **5. ANTI-SPASMODIC**

Much has been reported about the evidence that CBD can be grown and used as an effective antispasmodic. The data above all promise positive effects in the treatment of children with various forms of epilepsy, including Dravet syndrome . The evidence, most of which comes in the form of testimonials, shows that there has been shocking progress in patients consuming varieties with a lot of CBD but little THC to reduce their seizures.

## **6. ACNE**

Check out the skin care section in your local supermarket and you are very likely to come across skin care products that contain industrial hemp. Hemp and CBD contain natural anti-inflammatory properties that block lipid synthesis . CBD affects the human sebum glands and produces a trinity of cellular anti-acne responses that could be used to reduce the frequency and effects of acne. This also contains the power of CBD to naturally suppress cell division.

## **7. ENERGY**

Although CBD is known for its calming effects on consumers, it promotes a feeling of energy and counteracts sluggishness. This is because CBD strengthens the cells in the human body and contributes to complete regeneration. In addition, CBD is an antioxidant that promotes the feeling of alertness that can be disturbed by the presence of free radicals. A 2008 study shows that cannabidiol has stronger antioxidant properties than vitamin C and vitamin E.



## 8. ANTI-TUMOR / CANCER

One of the most promising areas in which CBD can help is tumor treatment and preventing cancer cells from dividing. Cannabinoids bind to receptors in the endocannabinoid system to reduce the likelihood of tumors metastasizing and thus prevent further tumor growth and the division of cancer cells.

The use of cannabis on cancer patients has been noted in files. Cannabis was an effective means of relieving pain and vomiting, especially for patients undergoing chemotherapy, while the patients experienced a pleasant euphoric feeling.

## DOSAGE OF CBD

Finding the right CBD dosage can be confusing - especially for those who have never used this therapeutic substance - as it depends on many unique variables. Everything can affect dosage, from physical health, age, weight and metabolism to the disease being treated and the CBD product used.

CBD is effective from doses of 10 to 40 mg. Depending on the treatment goal, it can also be used in high doses (up to 800 mg for adults). For children, dosages between 2 and 10 mg per kg body weight are mentioned.

The experience in children with epilepsy shows that everyone reacts differently to CBD. Low doses were sufficient for some children, while high doses were necessary for others and, in turn, third parties did not respond to treatment with CBD

If you find it difficult to keep track of how many drops you have consumed, don't worry, there are also ranges of CBD capsules. Each soft capsule is filled with a specified amount of CBD:

- 4% CBD soft capsules: 6.4 mg de CBD per capsule
- 10% CBD soft capsules: 16 mg de CBD per capsule
- 20% CBD soft capsules: 32 mg de CBD per capsule

If you suffer from anxiety disorders, amounts below 50 mg have already proven to be effective, with the intensity of the symptoms probably playing a role here again.



# Side effects

CBD is considered to be extremely safe. Only during pregnancy should CBD not be taken, since according to a study, CBD can reduce the protective function of the placenta and change its properties.

## DIFFERENCES BETWEEN CBD ISOLATES, BROAD AND FULL SPECTRUM CBD

### What is CBD isolate?

Probably the most basic form of CBD is an isolate. These contain nothing but pure, isolated CBD. In other words, there are no other cannabinoids, terpenes or flavonoids - just the well-known CBD.

Although this may be considered "basic" at first glance, extracting a hemp isolate is actually much more difficult. When hemp is extracted to remove its cannabinoids, all of the compounds are extracted from the plant. All cannabinoids and terpenes come from the plant. This means that additional steps must be taken to isolate the CBD and free it from other connections. This makes it quite difficult to make CBD isolates.

It comes in many forms. The most common CBD isolates you'll see are vapors. In the event that you didn't know, "dapping" is the vaporization of compounds on a hot nail and so on, inhaler and the resulting vapor. It looks a bit like Coat, except that you don't use an e-cigarette or e-liquid. CBD isolate swabs come in the form of powder, crystals, wax, resin or splinters, supposedly because of the glassy texture.

However, dabbling is not for everyone and CBD is increasingly being taken as oils, edible substances and capsules.



# What is full spectrum CBD?

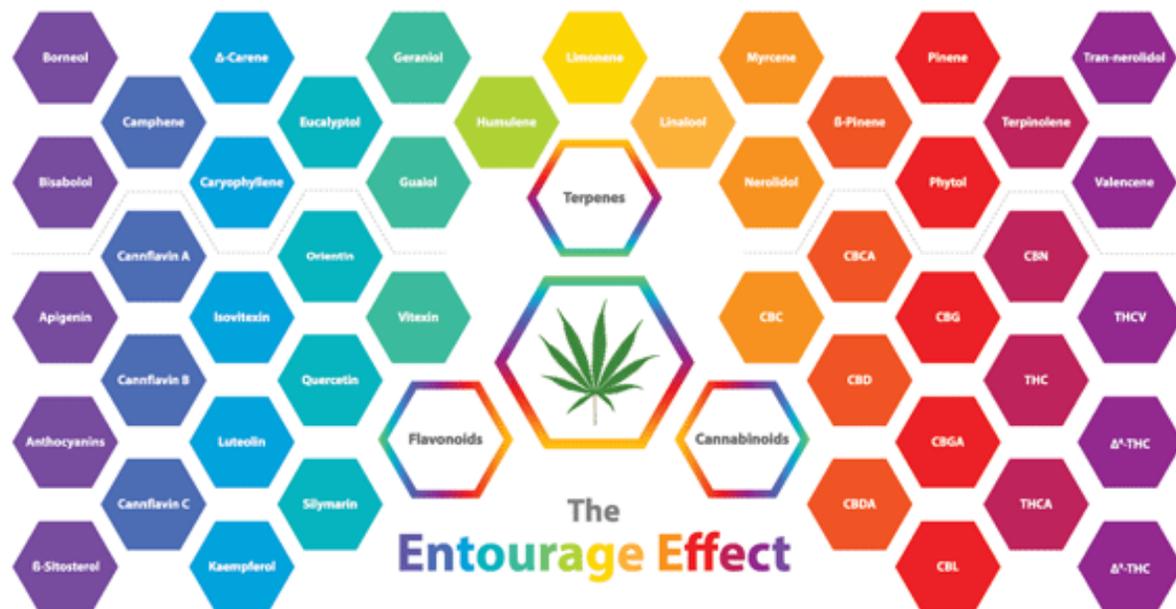
Full Spectrum contains a blend of all the beneficial compounds found in the plant like fats, lipids, terpenes, CBN, CBG, CBV, and even THC which is referred to as a full spectrum oil. The main concern here is THC. If you live in a state or country where cannabis is illegal, or you just don't want to consume THC yourself, you may be concerned about THC content. However, due to legislation, all CBD products must be made from hemp, not marijuana. Hemp by definition contains less than 0.3% THC, which means that the extract contains only negligible amounts of THC. These tracks will definitely not get you up there.

What are the advantages of a full spectrum CBD oil? In the past, isolated CBD was thought to be more effective than the full range, but now the opposite is the case; Most now agree that full spectrum CBD is preferred due to the so-called "entourage effect".

## THE ENTOURAGE EFFECT



THE ENTOURAGE EFFECT IS THE RESULTS (THE EFFECT) PRODUCED FROM THE SYNERGISTIC INTERACTION OF THE CANNABINOIDS, TERPENES, FLAVONOIDS, AND FATTY ACIDS NATURALLY FOUND IN CANNABIS.



# The "entourage effect"

This phenomenon relates to the way cannabinoids work together to become more effective. A 2005 study conducted in Jerusalem showed that patients who received full spectrum CBD were more relieved than those who received a CBD isolate.

In general, users prefer a full-spectrum CBD to improve their overall well-being. However, this does not make CBD isolates unnecessary.

While not psychoactive, a full spectrum CBD can be false positive during a drug test, especially if you use high doses of this type of CBD oil daily.

## What is Broad Spectrum CBD?

You have probably also seen the term "broad spectrum". Broad Spectrum contains many of the compounds but not all of them, so you'll need to know what compounds present and which ones are not. Companies like Pure Body Zen offer Broad Spectrum products that contain all compounds including the fats and lipids, with added omegas and triglycerides but no THC; making it safe for everyone from animals and athletes. This is ideal if you are completely against THC, if you are worried about taking it, or if you need to be checked for drugs frequently (e.g. at work). Of course, a CBD isolate can also be used, but you won't feel the full power of the entourage effect at work.

## Which one is best for me?

### **CBD isolate is the best for?**

- People with sensitivity to THC and other cannabinoids.
- People who live in states or countries with strict THC laws, or people who regularly undergo drug tests at their workplace.
- People who want to cook with CBD and want something with a light taste.



## Full spectrum CBD is the best for?

- People who are looking for a more specific use
- People who live in states or countries where cannabis is completely legal and who do not have to fear legal consequences.
- People who want to get the most out of their CBD experience.

## Broad Spectrum CBD is the best for?

- Broad spectrum CBD oil can be a good solution for athletes, since no THC can be detected in the blood. According to some professional athletes, they use it for muscle regeneration. This means that you are protected if you prepare for various competitions and do drug tests there.
- There are professions where drug tests are carried out regularly. While it is impossible for a full spectrum of CBD oil to detect THC, some people feel more comfortable knowing that their CBD oil does not contain THC. Broad spectrum CBD oil is ideal for this.
- Some people have a problem with the too intense taste of the cannabis plant. In this case, CBD gold is the right alternative. With the right carrier oil (for example MCT oil), the CBD oil is virtually tasteless.

# CBD EXTRACTIONS

The main purpose of extraction is to separate the beneficial composite materials from the raw hemp plant. Depending if the company is producing thousands of pounds at a time or just a few grams, the process can vary greatly. Solvent (liquid extractions) and solvent-less methods are used to strip the valuable components from the plant. The favored extract methods used in today's industry are CO2 (Super-critical), alcohol or liquid extractions like Ethanol, Butane, Hexane, and solvent-less techniques like water or coconut and avocado oils.

Most consumers are buying their CBD products based on strength in milligrams, THIS IS A MAJOR CONSUMER ERROR!! More isn't always the best answer. You wouldn't buy your bread based on yeast content or vodka based on alcohol content so why shop for CBD that way? Buying the highest milligram products may not taste good and it can increase your tolerance at a faster rate, meaning you always need to use more and more to feel the same benefits. Find products that use a full or broad spectrum, making a stronger product that has longer lasting results.



# Extra Ingredients



**Coconut, Avocado and Sunflower oils** – Coconut oil is very beneficial to the human system and is used in many health and beauty products, making it a good carrier oil when added to CBD extract. This is the preferred at home method but is time consuming, the material must be decarboxylated first and heated properly so the THC does not activate, and the return is usually weaker in strength.

**MCT Oil / Hempseed Oil** – The majority of fat in your diet is made up of long-chain fatty acids, which is very healthy for your endocannabinoid system. Unlike standard coconut oil, MCT oil from coconuts does not solidify when exposed to low temperatures. MCT oil and Fatty acids are essential for our bodies and have become increasingly popular with athletes. The main medium-chain fatty acid are: C6: Caproic or hexanoic acid C8: Caprylic or octanoic acid C10: Capric or decanoic acid and C12: Lauric or dodecanoic acid. Triglycerides can be used as an instant energy source or turned into ketones, which are substances produced when the liver breaks down large amounts of fat. Unlike regular fatty acids, ketones can cross from the blood to the brain. This provides an

alternative energy source for the brain, which ordinarily uses glucose for fuel because the calories contained in MCTs are more efficiently turned into energy and used by the body, they are less likely to be stored as fat.” (Brown, 2016).





## Testing

CBD production can be quite complicated. Many companies do not perform their own extractions and have been known to source their CBD from a third party. This is creating an industry of products being made with unknown material, making testing even more important. Testing is also a great way to see exactly what is in the product you are using.

There are several types of testing that can be performed, we always recommend the full panel test that shows if there are any toxins, residual solvents, and the terpene content, but it is costly. The more popular testing method is the potency test.

The potency test ***only*** shows how many milligrams there are in the product sample, it does not show any contaminants that may still be in the product. What test you get depends on how much you need to know. Companies like Pure Body Zen get their hemp from an organic farm, perform their own extraction, develop their own products, and conduct their own sales which allows them to provide the consumer with a trusted, high-quality, and reliable product... every single time. Even though we do all that we still retest our products with a FULL panel test a second time

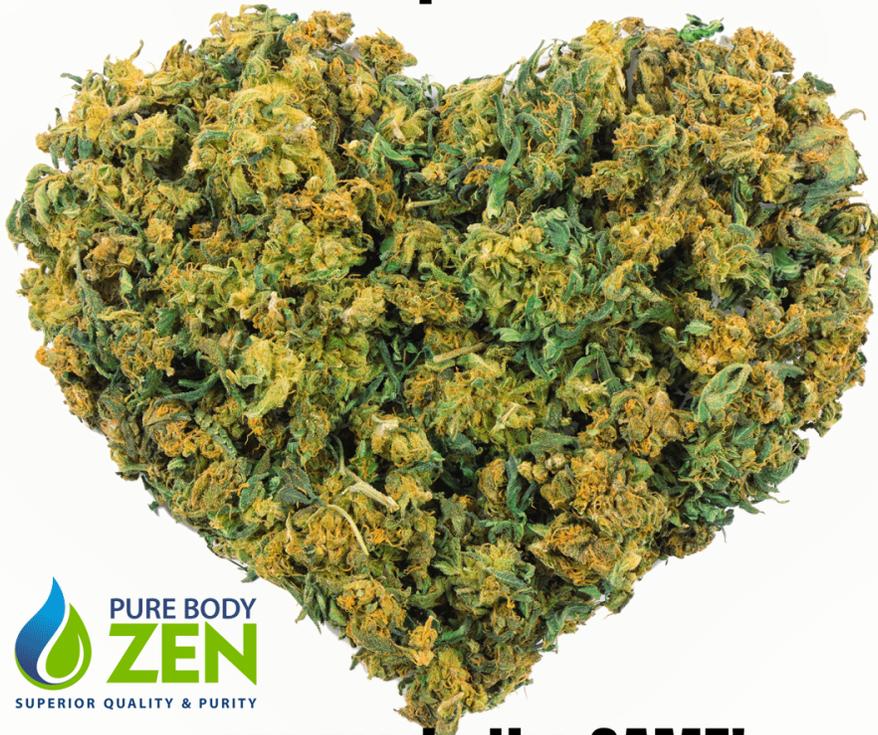


to ensure purity, quality, and safety of all our products before sending them out to you the consumer.

Now that you're in the know about CBD and how it is processed, it should be easier to determine what product and compounds you are getting.

Always know what product you are getting BEFORE you buy.

## **Not All Hemp-Derived CBD**



**are made the SAME!**

