

CBD

(Cannabidiol)

First Time Buyer's Guide

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Everything you need to know

about choosing and using CBD products

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What is CBD?

Cannabidiol (CBD) is one of about 100 cannabinoids found in cannabis but it is one that has been found to be particularly beneficial without any side effects.

All Love Hemp products are extracts from low THC varieties of cannabis known as 'industrial hemp'. The plants are grown legally under licence and the extract or oil containing up to 40% CBD is used as a food supplement to help improve and maintain health.

Cannabis is one of the oldest plants known to mankind.

100 years ago and for thousands of years before, it was grown widely all across Europe, the USA and Asia. It was a basic agricultural crop, its fibre used for making rope, fishing nets and for weaving into strong, hardwearing textiles. Way before cotton, it was used to make clothes, sails and other fabric products. and requires fewer chemicals and less processing than cotton to make it useable. Its seed can be eaten whole, ground into flour or pressed to produce a highly nutritious oil.

The leaves can be treated as any other green vegetable and its flowers contain powerful compounds used as medicine to treat all sorts of ailments. In the late 1900s more than half of all pharmacy medicines contained cannabis.

Then, in the early part of the 20th century, cannabis became the subject of an extraordinary campaign of fear and terror. It was demonised, claimed to be responsible for causing all sorts of problems in society and portrayed as a dangerous drug. From about 1925 in Europe and 1937 in the US, it was effectively banned right across the world.

Although there is still a hangover from all the scare stories and misinformation around cannabis, science is now proving that in fact **it is one of the most important plants on the planet and has a great deal of benefit to offer**

Despite the ban on cannabis, many countries have allowed certain varieties to be grown under licence for the same purposes as before. These varieties are called 'industrial hemp' and have been selectively bred to produce low levels of THC, the psychoactive ingredient in cannabis. In Europe, industrial hemp must contain less than 0.2% THC, in the Americas the limit is 0.3% and it still contains all the other ingredients found in any other variety of cannabis. These include: **cannabidiol (CBD), other cannabinoids, terpenes, flavonoids** and many other compounds which are highly nutritious and healthy.

Cannabidiol (CBD) oil is not the same as hemp-seed oil and it is very important to understand the difference. Hempseed oil is made by pressing the seeds and is a highly nutritious but delicate oil containing a balance of omega 3 and 6 which is almost perfect for human consumption but it contains only trace amounts of cannabinoids. It is excellent for salad dressing, baking and low temperature cooking but not for frying or cooking at high temperatures. For the same reason it is not a good oil for use as fuel or biodiesel.

What Can CBD Do For Me?

100 years ago and more, hemp was one of the most common agricultural crops. Throughout the world, farmers, small and large, would grow hemp as a matter of course and it was used for a myriad of different purposes. It was a part of humanity's daily diet as well as being used for its fibre and medicinal properties.

All that ended in the early years of the 20th century when the ridiculous, evidence-free prohibition of cannabis began to roll out across the world. The result is that hemp has been almost completely eliminated from our diet and **we no longer consume all the nutritious cannabinoids, terpenes, flavonoids and other compounds from the plant that our ancestors did.** Some scientists consider this has led to a pandemic of 'endocannabinoid system deficiency' because the cannabinoids that our bodies produce naturally are no longer supplemented through our food intake.

So that's the reason that so many people find using hemp food supplements helpful to maintain and improving their health. It's exactly the same as taking a vitamin or mineral supplement which compensates for any deficiency in your diet, or if your body is failing to absorb nutrients properly. But even if you eat a balanced diet you won't be getting the nutrients that hemp can provide.

To be clear, hemp is cannabis. They are the same plant. However, the cannabis that food supplements are made from is properly called 'industrial hemp' and it is restricted to containing less than 0.2% of tetrahydrocannabinol (THC), the psychoactive cannabinoid that causes the cannabis 'high'. However, it does contain all the other compounds, in particular cannabidiol (CBD), the other cannabinoid that is increasingly being seen by scientists and doctors as vital for good health.

Some scientists believe that 'endocannabinoid system deficiency' can lead to some very serious diseases. This may explain why there has been an upsurge in auto immune conditions and diseases like cancer where the body turns on itself. This includes conditions such as multiple sclerosis and Crohn's Disease and this is why so much research is taking place on using cannabis and cannabinoids to treat these conditions.



Hemp can be regarded as a very nutritious vegetable. The leaves and flowers of the plant can be consumed as any other green vegetable and the seeds are highly nutritious. They don't actually contain high concentrations of cannabinoids but they have an almost perfect balance of omega 3 and omega 6 fatty acids. They can be eaten whole or ground up and used as flour or meal. They make an excellent porridge. Pressed whole they make a superb oil which although it's not very good for cooking at high temperature, it is good for use in salad dressings or adding to pasta.

So this is why most of us will benefit from taking hemp as a food supplement Try making your favourite Love Hemp product part of your daily routine. A few drops of oil taken every day will help your body maintain and repair itself.

The Endocannabinoid System

To understand how cannabidiol (CBD) works you must understand the endocannabinoid system (ECS).

We all have an endocannabinoid system, as do all mammals, birds, reptiles, and fish. Even amphibians seem to have a primitive version. The system is not exactly the same in all animals so we will deal only with the system in humans which is much the same as in all mammals, so also the same as your dog or cat.

The endocannabinoid system is internal to the body which is why it has the prefix 'endo' from the Greek word meaning 'within, inner, absorbing, or containing'. It consists of endocannabinoids, cannabinoid receptors and enzymes.

Endocannabinoids are fatty substances or oils in microscopic quantities which interact or bind with cannabinoid receptors.

Cannabinoid receptors are membranes in our body's cells that enable signals to be passed back and forth. There are CB1 and CB2 receptors in the central nervous system and CB2 receptors in the immune and gastro-intestinal system. Scientists have suggested that there is a CB3 receptor but this is still theory at present.

The enzymes are responsible for the manufacture and disposal of endocannabinoids. Our body manufactures endocannabinoids in order to **pass messages concerning functions such as pain, inflammation, memory, appetite and mood.**

CBD is a phytocannabinoid, that is it is a substance derived from a plant (phyto) that interacts with the cannabinoid receptors found in the body. Most phytocannabinoids are from the cannabis plant although some other plants such as echinacea and cocoa also contain cannabinoid-like substances.

So CBD and other phytocannabinoids can affect our body in the same way as endocannabinoids.

The science is not yet clear whether phytocannabinoids can replace or substitute for endocannabinoids but it seems to make logical sense. Remember though that when you ingest CBD, even in small doses, these are massively greater than the microscopic quantities of endocannabinoids.

In theory then (and from actual experience), **phyto-cannabinoids can affect pain, inflammation, memory, appetite and mood.** Remember though that the effect can work either way. For example, scientists are working hard to research how cannabinoids can reduce rather than increase pain and inflammation and have a beneficial effect on our memory and mood.

So it's pretty clear that our endocannabinoid system is very important to our health and wellbeing.

All the more remarkable then that it was only discovered in 1988 by an Israeli scientist named Raphael Mechoulam and 30 years later most doctors do not receive any training in it. Medical schools have yet to catch up with the science.

Just how important the endocannabinoid system is has been well expressed by Dr David Allen, an eminent cardiac surgeon and cardiologist. He describes it as **"the most important discovery in medicine since the invention of sterile surgery technique."**

Types of CBD Products

All CBD products are extracts from low-THC cannabis plants, grown legally under licence as industrial hemp.

Once the plants have been harvested, they are allowed to dry slowly and naturally. Only the flowering tops are used for producing the highest quality oil and these are crushed and ground finely before being processed by supercritical CO2 extraction equipment. When pressurised and gently heated CO2 changes from a gas into a 'supercritical' state somewhere between a gas and a liquid and it becomes a powerful solvent which will extract the oil from the plant matter. With the pressure varied it can be adjusted to extract particular components so 'tuned' to extract maximum CBD but leave traces of THC behind. Also, because all this takes place at relatively low temperatures, the volatile terpenes and flavonoids in the plant are more easily preserved in the oil and these are important to the beneficial 'entourage effect' of CBD oil.

The oil which results from the extraction process can be used as it is or converted into different forms.

For instance, for use in a spray it will need to be diluted with a carrier oil to thin it down. Or as a body salve it will be emulsified to form a cream. It may be converted into a vape liquid by adding vegetable glycerine or propylene glycol to help it turn into vapour. CBD crystals are the most refined form of CBD. They do not contain all the other components of the whole plant extract, they are pure CBD and nothing else.

It's largely a matter of personal choice which type of CBD you use. Experiment and find out what suits you best.



How To Consume CBD

You can take CBD oil by swallowing it, by absorption through the mucus membranes in your mouth, by inhaling it, by absorption through the skin or by suppository.

Each method has its advantages and disadvantages, each is more or less efficient at getting CBD into your bloodstream. There's also a large element of personal choice and it depends on the reason you're using CBD

The most obvious method is a few drops of highly concentrated oil in your mouth. The best way is under your tongue and hold it there for as long as you can. That way at least some of it will be absorbed through your mucus membranes directly into your bloodstream. When you swallow what's left it will pass through your gastrointestinal system and into your liver. Studies show that as little as 6% of what you ingest orally will actually end up in your bloodstream but this is much the same for any substance that is metabolised through your liver. So those few seconds holding the oil in your mouth may significantly increase this. Other studies show that taking CBD oil along with high quality olive oil, rapeseed oil or hempseed oil may improve absorption. Adding CBD oil to the fat you use in baking may also help more of it get through to your bloodstream.

For many people the most convenient method of all will be taking CBD in capsules just like vitamin or mineral supplements.

Remarkably, inhaling CBD by vapourising it, using an e-cig liquid or 'dabbing' CBD crystals is probably the most efficient method of ingestion.

Studies suggest that 18% to 30% of inhaled CBD will be absorbed through the lungs into the bloodstream. Research suggests that the beneficial effects of CBD take place more quickly when inhaled but may last for a shorter period of time. When swallowed the effect takes longer but also lasts for a longer period.

CBD creams or body salves can be rubbed into the skin and absorbed directly into the small capillary blood vessels. Some people using CBD as a supplement to help with aches and pains find this directly targets the area of their body that is affected.

CBD suppositories can also be an efficient means of absorption, particularly for those who are using it as a supplement to help with digestion. Absorption via a suppository avoids most of the CBD going through the liver and may mean twice as much gets into your bloodstream as when swallowing it.



Love Hemp products are available for all methods of ingestion.

It really is up to you to try various different ways and find out which suits you best. www.cbdoilsuk.com

How Much CBD Should I Use?

Using CBD as a food supplement is about finding out what works for you, both in terms of how you use it and how much. Remember that the way you consume CBD can make a huge difference to how much is absorbed into your bloodstream. See the article 'What's the best way to consume CBD?' for more information.

As a food supplement, the maximum adult daily dose is 200mg.

CBD is being trialled at much higher doses for use as a medicine but that would be under the supervision of a doctor. Although it is impossible to overdose on CBD, it is important not to exceed the maximum dose.

To start with, we recommend using a Love Hemp product twice per day and taking 10mg each time. After a week, double the dose to 20mg twice per day and then increase as desired up to the maximum. As you get to higher doses you may choose to take CBD three or four times per day while still not exceeding the maximum of 200mg per day.

If you experience any side effects then take a break for at least one day and then return to the previous lower dose. You'll quickly work out what's best for you.

If you're using Love Hemp CBD oil, the easiest way to measure how much CBD you're taking is by the number of drops. Each drop is 0.05ml, so here's a guide to quantity for our most popular products which come in a 10ml bottle.

Love Hemp CBD Oil	
Product	mg per drop
Love Hemp 800mg 8%	4 mg
Love Hemp 2000mg 20%	10 mg
Love Hemp 4000mg 40%	20 mg

Charlotte's Web CBD Oil	
Product	mg per drop
Charlotte's Web Everyday 200	0.3 mg
Charlotte's Web Everyday Plus 500	0.8 mg
Charlotte's Web Everyday Advanced 5000	2.5 mg

Endoca CBD Oil	
Product	mg per drop
Endoca Hemp Oil Drops 300mg 3%	1.5 mg
Endoca Hemp Oil Drops 1500mg 15%	7.5 mg

Capsules and Gummy Bears are clearly labelled with the amount of CBD in each dose. For CBD E-liquids it's more difficult to calculate an exact dose but be sure not to exceed the maximum of 200mg per day



For more info and
to shop online
please visit us on:

www.cbdoilsuk.com

