



CBD effect: How does cannabidiol work and what does it help with?

Almost no one can get past the hype about CBD and its effects at the moment. Oils, capsules and tinctures can no longer be found only in pharmacies, but also in specialty stores, on the internet and in drugstores. But what effect do consumers expect from them? That is the subject of this article.

We clarify the basic terms, tell you what CBD is and how it is obtained. We will go into more detail about the effect and different areas of application and show you which side effects and interactions can occur. In addition, you will receive more detailed information on the topics of ingredients, dosage and studies. Have fun!



What is CBD?

CBD is the abbreviation for cannabidiol, an active ingredient found mainly in the cannabis sativa plant. CBD products are now available in all imaginable forms. Extracts, oils, capsules and liquid are only a small selection. It is now believed that CBD may have some very positive effects on humans and animals.

The fact that cannabidiol is extracted from the cannabis plant has led to the fact that science has not dealt with the active ingredient for a long time. Only with the public interest of the last few years, CBD has increasingly become the focus of numerous scientific studies.

CBD is also considered the harmless counterpart to THC, a substance that can have some positive effects on human health, but is banned in most countries due to its intoxicating effect. CBD has no psychoactive effect and does not make "high".

What effect can CBD have?

As mentioned, research on CBD is lagging well behind that of other natural compounds. So far, there are some small case studies, experiments and initial medical results. Many statements about the effect are also based on practical experience. As much as the studies are still expandable, some effects are already described very precisely. However, one should always keep in mind that cannabidiol has very individual effects. Therefore, there is no guarantee for a certain effect.



CBD has a calming and relaxing effect on many people. Most consumers find it helps to reduce stress or use CBD for sleep disorders. At the same time, the cannabidiol also seems to have a significant impact on some systems of our body. These include strengthening the immune system, regulating our cardiovascular system and hormone balance. CBD can also help with digestive problems.

Other, well described, effects are the reduction of pain and inflammation. It is this effect that makes CBD interesting for use in many, different diseases and is becoming increasingly popular among consumers. However, there are also negative experiences with CBD. These are the possible effects:

- Analgesic
- Anti-inflammatory
- Appetite suppressant
- Anxiety relieving
- Antidepressant
- Antiepileptic
- Anti-cramping
- Sedative
- Sleep-inducing
- Pain relieving
- Anti-tumor
- Promotes the immune system
- Promotes skin appearance
- Antidiabetic
- Circulation-promoting
- Neuroprotective
- Intestinal soothing
- Antipsychotic
- Vasodilator
- Anti-allergic
- Antibacterial
- Antiviral
- Antifungal
- Antirheumatic
- Antiseptic
- Antimicrobial
- Anti-infective
- Antiparasitic
- Antipsoriatic
- Antioxidant
- Antiemetic



What are the possible applications?

Due to the diverse, potential modes of action, there are naturally also a large number of different possible applications. These range from preventive measures to the treatment of serious diseases such as epilepsy or cancer.

We will discuss some of the applications in more detail below.

- Pain & Inflammation: Users describe CBD as particularly effective against pain and inflammation. The one is often related to the other. Many inflammations often cause pain as a consequence. What exactly causes the pain is not important for the intake of CBD. It can be used for migraine attacks, limb pain or back pain. The side effects are considerably less than with conventional painkillers. Of course, a doctor should always be consulted, especially in the case of persistent suffering.
- Psyche (anxiety, sleep, stress and co): The effect of the cannabis plant on cancer has been a controversial topic for years. While critics still demonize the plant as a drug, proponents already see CBD & THC as a cure. Meanwhile, the consensus is that hemp can play a supportive role in cancer treatment. Studies show that cannabidiol improves the effect of radiotherapy and reduces side effects of chemotherapy. You shouldn't underestimate the possible positive effect on the patient's psyche. This alone can be a reason to use CBD in cancer treatment.
- Children: While one should refrain from giving CBD to infants, CBD can have similarly good effects in children over the age of 2 as it does in adults. Thus, there are studies that confirm that CBD has a good effect in Dravet syndrome (a special form of epilepsy). Also with the typical children's disease ADHD (attention deficit hyperactivity disorder) first results are already available. Most patients feel calmer, more concentrated and were able to follow school lessons better after taking it. Note that when using CBD on children, although it does not require separate products, it is essential to adjust the dose to the physical conditions of the child.
- To strengthen the immune system: Whether CBD has a direct positive effect on the immune system has not yet been conclusively clarified. The problem is that it is not yet known exactly whether and how the endocannabinoid system influences the immune system. However, successes with autoimmune diseases suggest that there is a connection. More on this later. For the time being, however, indirect benefits from CBD use are to be expected. For example, improved sleep quality leads to a stronger immune system and a general sense of well-being also has a positive effect.
- Heart problems: The cardiovascular system may also benefit from cannabidiol. Thus, a prophylactic intake can prevent ischemia-induced dysrhythmias and prevent heart attacks. In addition, CBD is shown to have antihypertensive properties, reducing stress on the heart. Furthermore, many problems with the heart are triggered by excessive stress. So, if you don't suffer from low blood pressure, you can do little wrong with cannabidiol.
- Skin conditions and -diseases: Our skin is not only the largest organ of the body, but also exposed to environmental influences on a daily basis. In addition, it reacts very quickly to diseases and imbalances with visually, perceptible symptoms. These include redness, itching, an impure skin appearance and more.

The anti-inflammatory effect of CBD can therefore also be useful externally for the treatment of various skin diseases such as acne or psoriasis. But not only that! Various CBD creams and oils are also immensely suitable for daily care. For example, a 2011 study shows that CBD can prevent oxidative stress by capturing and destroying free radicals. It is no surprise that the skincare industry is becoming increasingly involved with cannabidiol.



- Epilepsy: Anyone who suffers from seizures or epilepsy knows how painful and distressing they can be. A study conducted on dogs in 2019 showed that CBD significantly reduced the number and duration of seizures. Although the results do not translate one-to-one to humans, many human patients also confirm that cannabidiol was able to help them.
- Diet – Supporting weight loss: CBD could actually help with weight loss as well. Unlike THC, CBD reduces appetite and thus decreases calorie intake. But cannabidiol can also accelerate the metabolic process. When it comes to body fat, there are also two types of fat:
 - Brown fatty tissue (also called baby fat) performs important tasks and is thus essential for heat balance, for example.
 - Excessive white fatty tissue, on the other hand, attacks the organs and leads to obesity.

According to a 2016 study, CBD has the potential to convert brown fat into white fat. This appears to actively use up energy, which accelerates the weight loss process. Important: CBD can help with weight loss, but it does not replace exercise or a healthy diet.

- Allergies and asthma: The possible, positive effects of CBD on the immune system also help in dealing with allergies such as hay fever. Thus, the body is strengthened and better prepared. In asthma, on the other hand, the anti-inflammatory effect plays an important role. It has already been established in 1975 that the cannabis plant can help with overactivity of the lungs.
- Neurodegenerative diseases / nerve diseases: Not only epilepsy, but also other neurodegenerative diseases could be treated with CBD. For example, the effect on Alzheimer's disease has already been studied using mice. The results showed that mice show Alzheimer's symptoms much less often after treatment with cannabidiol.

Similarly good results were obtained in the treatment of Parkinson's disease. However, it must be said that very different results can be found and the effects can vary greatly from one individual to the next. In both cases, further research is necessary.

- Autoimmune-diseases: As mentioned earlier, the effects of CBD are also seen in patients with autoimmune diseases. Multiple sclerosis, as an example, is caused by inflammation in the brain and causes spasticity, spasms, sensory impairment and severe pain. Some MS patients have already been helped with cannabidiol. However, the anti-inflammatory effect also plays an important role in the treatment of Crohn's disease (bowel disease). Furthermore, it seems that CBD additionally restricts the mobility of the intestine, which reduces pain.
- Nausea & emesis: CBD, but especially the precursor CBDa is considered a natural antiemetic. It seems to reduce both nausea and emesis. CBDa is found primarily in full-spectrum CBD oils and is another cannabinoid of the cannabis plant.
- Pets: Those who have read this far may also ask themselves whether CBD can also have a positive effect on our four-legged friends. The answer is a clear: yes. Almost all mammals possess an endocannabinoid system and react very similarly to humans. Veterinarians are therefore increasingly prescribing the active ingredient for all kinds of symptoms. The clear advantage over conventional drugs is the lower burden of side effects. But be careful. For animals, special care should be taken when choosing a product. This is due on the one hand to the much lower dosage, and on the other hand to the fact that some animals cannot or can only poorly metabolize components of full-spectrum products.



5 factors that influence the effect of CBD.

As mentioned, the effects of CBD are very different for each individual. However, the fact that one does not achieve any effects may well be due to factors that can be influenced. These include:

1. Quality of the product & ingredients
2. Individual physical condition and characteristics
3. Dosage form
4. Ingredients contained
5. Dosage

In the next sections, we will go into more detail about each of these points.

1. Quality of the product & ingredients:

Above all, the quality of the product often determines the success of the product. Since the market is not very regulated, it is unfortunately not uncommon for low-quality goods to be offered. A study conducted in 2017 even came to the conclusion that about 70% of the CBD products sold online were not properly labeled. Therefore, it is important to be careful when buying CBD!

The quality of the products is mainly determined by 2 things: the extraction process and the ingredients. Nowadays, high-quality CBD extract is made using the CO2 process. In contrast to extraction with solvents, no harmful residues are to be expected here. If high-quality hemp is used according to EU standards and it is grown organically, you will end up with a high-quality product.

By the way, reputable manufacturers know that quality rightly plays an important role for many consumers. Therefore, it is common practice for them to have their products tested in independent laboratories. The results of this testing should be transparently available on the manufacturer's website. Search here for the certificate of analysis.

2. Individual physical condition and characteristics:

While some people react very quickly and strongly to CBD, it often takes much longer for others to feel an effect. Rarely, however, users report first, noticeable effects only after weeks. Many physical differences play a role here. Among them: Metabolism, genetics, age, weight, diet, gender and general health.

3. Dosage form:

But other things can influence the effect of CBD. For example, the form of application often makes all the difference. CBD can be absorbed through the mucous membranes, the stomach, the skin and the lungs. Unfortunately, you have to find out for yourself what is best for you.

The application form not only affects the final effect, but also influences the time to effect, the duration of the effect and the absorption rate. For a better overview, we have summarized the different dosage forms in a table:



Ingestion type	CBD Product	Ingestion by	Effect kicks in After	Duration of effect	Bioavailability (absorption Rate)
Sublingual Administration	CBD oil				
	CBD Crystals	Oral mucosa	20-40 min.	6h	12-35%
	CBD Paste				
Swallowing / Eating / Drinking	CBD Capsules	Small intestine	1-2 h	5h	4-20%
	Edibles				
	Drinks				
Smoking / Vaporizing	CBD Liquid	Lung	2-5 min	3h	34-56%
	CBD flowers				
	CBD Crystals				
Topical Application (Apply to Skin)	CBD Cream	Skin	60-90 min	6h	5-10%
	CBD Ointment				
	CBD Lotion				
Rectal	CBD Suppository	Mucosa	10-15 min	8h	60-70%
Intravenous		Blood	immediately	2h	100%

→ *How quickly does CBD take effect?* An ingestion via the lungs and mucous membranes works particularly quickly. At the same time, however, the duration of effect also decreases. So if you are looking for products for acute use, you should take a closer look at oil, pastes, suppositories and especially flowers, crystals and liquid.

→ *How long does CBD work?* The duration of effect of CBD is between 2 and 8 hours, depending on the product and dosage form. Here, the slower the effect occurs, the longer the effect should last. Products that are taken orally or applied topically are particularly well suited for a long-lasting effect. These include capsules, foods, creams and ointments.

→ *How well can the body absorb CBD?* The absorption rate determines how much of the contained cannabidiol can actually be absorbed by the body. The higher the value, the lower the dosage must be. The inhalation of CBD is considered particularly efficient. With topical and oral application, however, much of the active ingredient is



lost. As a conclusion on the subject of dosage form, it can be said that some products are significantly more efficient than others. Nevertheless, one should not limit oneself only to the absorption rate. Thus, while topical application loses a lot of CBD, you can apply the product to the appropriate area in a much more targeted manner. So before buying, think carefully about what you want to use your CBD product for and what criteria it should meet.

4. Ingredients contained

CBD products do not only consist of pure cannabidiol. At least not most of the time. Here, you can see a list of components that can also be found in CBD:

- *Full Spectrum & Isolate*

CBD products are made in two different ways: Full Spectrum and Isolate. Both have their advantages and disadvantages and can also have different effects.

CBD isolate is also often referred to as crystals. This is a fine, white powder that is produced through a process called winterization. Isolate is cannabidiol in the purest form available on the market. Besides the 99.9% CBD, it contains only traces of natural terpenes.

Full spectrum products are different. These contain other cannabinoids besides CBD, such as CBG, CBN, CBDA and also THC. Vitamins, minerals, trace elements and flavonoids are also still present here. In short, you can find the whole plant profile in full spectra.

Isolate is therefore suitable for those who are looking for a highly concentrated product. In addition, it is somewhat cheaper than a full spectrum and especially athletes appreciate the absence of THC, which could be detected in drug tests.

On the other hand, the additional ingredients of a full spectrum ensure that the absorption rate is significantly higher than with the isolate. This increased bioavailability is also referred to as the entourage effect.

Whether isolate or full spectrum is better for you depends on your personal preferences and medical conditions. Severe conditions may require such high dosages, which are hardly possible with a full spectrum. For most people, however, a full spectrum is more recommended.

- *CBDA*

CBDA, or written out as cannabidiolic acid, is a precursor to CBD and yet a cannabinoid in its own right, which is found in full-spectrum products. CBDA has several advantages:

- o Heating substances containing CBDA (also called decarboxylation) converts CBDA into CBD. So more CBDA means more CBD at the same time.
- o CBDA increases the bioavailability of CBD and this even by double. So in combination it is much more efficient than isolated.
- o CBDA also has some properties on its own, which bring various advantages.

Difference CBD vs CBDA: CBDA, like CBD, has anti-inflammatory properties. In addition, it seems to stimulate the formation of serotonin. This neurotransmitter ensures a smooth exchange of information between nerve cells. Last but not least, CBDA also has the aforementioned anti-emetic effect. It thus prevents vomiting and nausea.



- *THC*

THC is also present in small amounts in full spectrum products. The tetrahydrocannabinol is probably even better known to many than CBD itself. THC has many similar properties to CBD, but it also has a psychoactive effect. This means that it puts the body into a state of intoxication and sensory perceptions are impaired. This can have positive effects like euphoria, as well as negative effects like anxiety and paranoia.

Both CBD and THC are extracted from the cannabis plant. However, it should be known that cannabinoids are usually extracted from different strains. Hemp, which is used for CBD products, contains very little THC. Nevertheless, residues of THC can also be found in cannabidiol extracts. In Germany and many other countries, a maximum limit of 0.2% applies. All products that are below this level are perfectly legal. In these amounts the THC normally has no effect.

5. Dosage:

The correct dosage of CBD not only has a great influence on the effect, but is as individual as the effect itself. Depending on the physical conditions, the type and severity of the disease and the form of intake, cannabidiol is to be dosed differently.

Decisive for the success is the absolute amount of CBD taken. Percentages on packaging therefore only give an indication of how much CBD is in the product.

So if you want to find the right dose for you, you have to try it out. Start with a small amount and then increase the dosage as needed. If the desired effect occurs, you are on the right track. If side effects occur, you can simply reduce the dose again.

For all those who still need a clue, the following applies:

- 3% is good as a preventive measure
- 5% can be used for mild symptoms or as a newbie
- 10 to 15% is advisable for moderate symptoms
- 20% and more should only be taken in case of severe complaints.

Side effects and drug interactions:

One of the reasons CBD is so popular is because it causes hardly any and only very weak side effects. However, it is not completely free of side effects. Here is a list of known side effects:

- Dry mouth
- Loss of appetite
- Decreased blood pressure
- Diarrhea
- Allergic reactions
- Fatigue



If such side effects occur, then usually in connection with a too high dosage or an intolerance. In most cases it is enough to take a little less. A dry mouth can be easily counteracted with a glass of water. A cup of coffee usually helps against tiredness.

However, you should be a little more careful when taking medications at the same time. Some of them can cause drug interactions. Blood thinners and antidepressants are particularly frequently affected. But even normal aspirin can become a problem. We therefore advise you to talk to a doctor about possible interactions before taking aspirin.

Why doesn't CBD work for me?

We have already shown you that some things can influence the effect of CBD. So if the cannabidiol has no effect on you, there are some things you can try:

- Keep trying: sometimes it takes a while for the body to adjust to the CBD. We have mentioned that in exceptional cases this can take a few weeks.
- Check the product quality: only flawless products will deliver real results.
- Change the product or the dosage form: If you change the dosage form, you might achieve better results.

Unfortunately, CBD may not work for you at all. Not everyone reacts to it.

How does the effect of CBD feel?

How CBD feels for you personally, you have to find out for yourself. Most users describe the effect as calming and liberating. They sometimes feel more focused and sometimes sleepy. However, none of them felt it affected their everyday life. Normal activities and even driving are therefore still possible without concern after taking the product.

By the way, the effect of cannabidiol also seems to depend on the time of day. In practice, there are many reports of people who felt more alive in the morning and were able to sleep better in the evening. We stand by this: just try it!

How does CBD work in the body?

In the body, CBD acts on what is known as the endocannabinoid system. This consists of a variety of receptors, which are divided into CB1 and CB2 receptor types. Cannabidiol supplied from the outside docks onto these interfaces and activates or blocks them. In this way, CBD influences certain bodily functions.

However, CBD does not only have a direct effect, because it also naturally increases the production of in-house cannabinoids such as anandamide. This is normally broken down again by the enzyme FAAH. CBD inhibits the production of this enzyme and thus increases the anandamide level.

Studies on the effect

Studies on CBD do exist, and you can find some of them in the sources of this article. Although research on CBD has been going on for many years, the results are not yet conclusive enough to make any real guarantees. In the past, legal restrictions, in particular, have made more accurate research difficult. However, with the increasing popularity and interest of society, the number of studies is likely to increase in the near future. A positive trend, in our opinion.