**Does CBD oil work for chronic pain management?**

From: Medical News Today – updated Dec 2020. Please note this is an American publication

Many people use cannabidiol (CBD) to relieve pain. Understanding CBD can help overcome the stigma associated with it.

CBD oil is derived from the cannabis plant. People report using this oil for relief from [pain](https://www.medicalnewstoday.com/articles/145750), anxiety, depression, and sleep disorders.

There is limited evidence from human studies to support the benefits of CBD oil, due to restrictions on the use of and research on cannabis. As cannabis is becoming legalized in various regions, research is gaining momentum and shows some promising results.

In this article, we look at how CBD oil works and how people use it to relieve chronic pain.

**Effects of CBD**

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CBD is one of more than [100 compounds](https://www.nccih.nih.gov/health/cannabis-marijuana-and-cannabinoids-what-you-need-to-know) found in cannabis, called cannabinoids. Many plants contain cannabinoids, but people most commonly link these compounds to cannabis.

Unlike other cannabinoids — such as tetrahydrocannabinol (THC) — CBD does not produce a euphoric “high.” This is because CBD does not affect the same receptors as THC.

The human body has an endocannabinoid system (ECS) that receives and translates signals from cannabinoids. It produces some cannabinoids of its own, which are called endocannabinoids. The ECS helps regulate functions such as sleep, immune-system responses, and pain.

When THC enters the body, it produces a “high” feeling by affecting the brain’s endocannabinoid receptors. This activates the brain’s reward system, producing pleasure chemicals such as dopamine.

[Read more about the differences between THC and CBD here.](https://www.medicalnewstoday.com/articles/325871)

**Does CBD make you high?**

CBD is an entirely different compound from THC, and its effects are very complex. It does not produce a “high” and does not impair a person’s functioning, but it influences the body to use its own endocannabinoids more effectively.

According to a [2015 study](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4604191/) published in *Neurotherapeutics*, CBD influences many other receptor systems in our body and will influence the ECS in combination with other cannabinoids.

For example, CBD can increase the body’s levels of anandamide, a compound associated with regulating pain, which can reduce pain perception and improve mood.

Cannabidiol may also limit [inflammation](https://www.medicalnewstoday.com/articles/248423.php) in the brain and nervous system, which may benefit people experiencing pain, [insomnia](https://www.medicalnewstoday.com/articles/9155.php), and certain immune system responses.

For more information and resources on CBD and CBD products, please visit our [dedicated hub](https://www.medicalnewstoday.com/cbd).

**What is CBD oil?**

Different varieties of cannabis plants — such as hemp and marijuana — contain different levels of chemical compounds.

How people breed the plant affects the CBD levels. Most CBD oil comes from industrial hemp, which usually has a higher CBD content than marijuana.

Makers of CBD oil use different methods to extract the compound. The extract is then added to a carrier oil and called CBD oil.

CBD oil comes in many different strengths, and people use it in various ways. It is best to discuss CBD oil with a doctor before using it.

[Read more about CBD oil here.](https://www.medicalnewstoday.com/articles/317221)

**Benefits and pain relief**

According to the [National Centers for Complementary and Integrative Health (NCCIH)](https://www.nccih.nih.gov/health/cannabis-marijuana-and-cannabinoids-what-you-need-to-know), some evidence suggests that cannabis or CBD could have modest benefits for chronic pain.

While CBD is a promising option for pain relief, research has not yet proven it safe and effective, and the Food and Drug Administration (FDA) have not approved CBD for treating pain.

A [2020 review](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7204604/) reports that CBD could have benefits for relieving chronic pain, improving sleep, and reducing inflammation, but that these effects are condition-specific.

More evidence is needed to determine the therapeutic potential of CBD and to determine safe and effective dosages for pain.

Based on the current research, here are some possible benefits of CBD oil:

**Neuropathic pain**

Neuropathic pain is pain caused by damage to the nerves. This type of pain is common in diseases such as multiple sclerosis, injuries such as herniated discs, and infections such as [shingles](https://www.medicalnewstoday.com/articles/154912).

A [2017 review](https://journals.lww.com/anesthesia-analgesia/Fulltext/2017/11000/Selective_Cannabinoids_for_Chronic_Neuropathic.32.aspx) found that CBD helped with chronic neuropathy pain in humans. The researchers looked at 11 randomized controlled trials with 1,219 patients.

However, a [2018 Cochrane review](https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD012182.pub2/full) concluded that the potential benefits of cannabis-based medicine might be outweighed by its potential harms.

This research looked into the effects of cannabis-derived medicines, including CBD, for chronic neuropathic pain. It looked at 16 studies and 1,750 participants.

More research is needed to understand the role of CBD in chronic neuropathic pain management, including the risks, benefits, and ideal dosages.

**Arthritis pain**

A [2016 study](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4851925/) in the *European Journal of Pain* used an animal model to see if CBD could help people with [arthritis](https://www.medicalnewstoday.com/articles/7621.php) manage their pain. Researchers applied a topical gel containing CBD to rats with arthritis for 4 days.

Their researchers noted a significant drop in inflammation and signs of pain, without additional side effects.

People using CBD oil for arthritis may find relief from their pain, but more human studies need to be done to confirm these findings.

[Read more about CBD and arthritis pain here.](https://www.medicalnewstoday.com/articles/319796)

**Multiple sclerosis**

[Multiple sclerosis](https://www.medicalnewstoday.com/articles/37556.php) (MS) is an autoimmune condition that affects the entire body through the nerves and brain.

Muscle spasms are one of the most common symptoms of MS. These spasms can be so strong they cause constant pain in some people.

[One report](https://www.ncbi.nlm.nih.gov/books/NBK425767/) found that short-term use of CBD oil could reduce the levels of muscle spasms a person feels. The results are modest, but many people reported a reduction in symptoms. More studies on humans are needed to verify these results.

**Chronic pain**

The same report studied CBD use for general chronic pain. Researchers compiled the results of multiple systematic reviews covering dozens of trials and studies. Their research concluded that there is substantial evidence that cannabis is an effective treatment for chronic pain in adults.

A [separate study](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3371734/) in the *Journal of Experimental Medicine* supports these results. This research suggests that using CBD can reduce pain and inflammation.

The researchers also found that subjects were not likely to build up a tolerance to the effects of CBD, so they would not need to increase their dose over time.

They noted that cannabinoids, such as CBD, could offer helpful new treatments for people with chronic pain.

**Other uses**

CBD currently has a range of applications and promising possibilities.

These include:

* helping people [quit smoking](https://www.ncbi.nlm.nih.gov/pubmed/23685330)
* managing [drug withdrawal](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4604178/)
* treating [seizures and epilepsy](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4707667/)
* treating [anxiety](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4604171/)
* reducing some effects of [Alzheimer’s disease](https://www.researchgate.net/publication/263934508_Long-Term_Cannabidiol_Treatment_Prevents_the_Development_of_Social_Recognition_Memory_Deficits_in_Alzheimer%27s_Disease_Transgenic_Mice)
* reducing [antipsychotic effects](https://www.ncbi.nlm.nih.gov/pubmed/22716160) for people with schizophrenia
* potentially combating [type 1 diabetes](https://www.ncbi.nlm.nih.gov/pubmed/27767974) and [cancer](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3579246/) in the future

Although more research is required to confirm the benefits of CBD oil, it is shaping up as a potentially promising and versatile treatment.

The [Food and Drug Administration (FDA)](https://www.fda.gov/news-events/press-announcements/fda-approves-new-indication-drug-containing-active-ingredient-derived-cannabis-treat-seizures-rare) have approved one form of CBD, called Epidiolex, to treat two rare forms of epilepsy and to treat seizures caused by a rare condition called tuberous sclerosis complex.

More generally, marijuana-derived CBD products are [not yet legal](http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx) at the federal level but are legal under the laws of some states.

People should check their state’s laws and those of any place they intend to travel. They must keep in mind that the FDA do not approve or regulate nonprescription CBD products. As a result, labeling may be inaccurate.

[Read more about the potential benefits of CBD here.](https://www.medicalnewstoday.com/articles/cbd-oil-benefits)

**Dosage**

The FDA does not regulate CBD for most conditions. As a result, dosages are currently open to interpretation, and people should treat them with caution.

Anyone who wishes to use CBD should first speak to a doctor about whether it will be beneficial or safe, and how much to take.

The FDA has approved a purified form of CBD for some types of epilepsy, with the brand name Epidiolex. People using this medication should follow the doctor’s advice about doses.

[Read more about the correct dosages of CBD here.](https://www.medicalnewstoday.com/articles/327518)

**Side effects**

Most people tolerate CBD oil well, but there are some possible side effects.

According to [a 2017 review](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5569602/) in *Cannabis and Cannabinoid Research*, the most common side effects include:

* [fatigue](https://www.medicalnewstoday.com/articles/248002.php)
* [diarrhea](https://www.medicalnewstoday.com/articles/158634.php)
* changes in appetite
* weight gain or weight loss

In addition, using CBD oil with other medications may make those medications more or less effective.

The review also notes that scientists have yet to study some aspects of CBD, such as its long-term effects on hormones. Further long-term studies will be helpful in determining any side effects CBD has on the body over time.

Consult a doctor before using CBD, as it may interact with certain over-the-counter dietary supplements and medicines, as well as some prescription medications — especially those that [warn against consuming grapefruit](https://www.fda.gov/consumers/consumer-updates/grapefruit-juice-and-some-drugs-dont-mix).

CBD might also interfere with an enzyme called [cytochrome P450 complex](https://www.liebertpub.com/doi/10.1089/can.2016.0034). This disruption could affect the liver’s ability to break down toxins, increasing the risk of liver toxicity.

The [patient information leaflet](https://www.accessdata.fda.gov/drugsatfda_docs/label/2018/210365lbl.pdf) for Epidiolex cautions that there is a risk of liver damage, lethargy, and possibly [depression](https://www.medicalnewstoday.com/articles/8933.php) and thoughts of suicide, but these potential side effects are true of other treatments for epilepsy, too.

[One study](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5023687/) in *Frontiers in Pharmacology*, suggested cannabinoids’ anti-inflammatory effect may reduce inflammation too much. A large reduction in inflammation could diminish the lungs’ defense system, increasing the risk of infection.

**Other considerations**

Almost all research on CBD oil and pain comes from adult trials. Experts do not recommend CBD oil for use in children, as there is little research on the effects of CBD oil on a child’s developing brain.

However, people may use Epidiolex for children ages 2 and above who have rare forms of epilepsy.

People should not use CBD oil when pregnant or breastfeeding.

People should use caution when taking CBD products by mouth alongside high-fat meals. High-fat meals can dramatically increase the blood concentrations of CBD, which can increase the risk of side effects.

The FDA does not regulate CBD products in the same way they regulate drugs or dietary supplements, so companies sometimes mislabel or misrepresent their products. That means it’s especially important to do some research and [find a quality product](https://www.medicalnewstoday.com/articles/best-cbd-oil).

**Summary**

While many studies have suggested CBD oil is helpful for pain, more research is necessary, especially long-term studies with human subjects.

However, CBD oil does show promise as a treatment for pain. Some scientific and anecdotal evidence suggests that it can help people manage chronic pain in various contexts.

CBD oil is especially promising due to its lack of intoxicating effects and a possible lower potential for side effects than many other pain medications.

People should discuss CBD oil with their doctor if they are considering using it for the first time.

**Q:**

What precautions would you advise if someone wants to try CBD oil to treat pain?

**A:**

Users should follow legal channels to obtain CBD.

The science is emerging to support its use, especially in a time where most people want to avoid addicting opioids while treating chronic pain.

Because of the changes in social acceptance for the use of the marijuana plant and the urgency to address the opioid crisis, there is [funding for clinical trials](https://www.clinicaltrials.gov/ct2/results?cond=Pain&term=cannabidiol&cntry=&state=&city=&dist).

A 2017 study found CBD was [effective for](https://www.ingentaconnect.com/content/wk/ane/2017/00000125/00000005/art00032) chronic neuropathy pain. It may have a role in reducing inflammation as well.

An individual should talk to a doctor first, start with the lowest doses possible, read the information available, and be an informed consumer.

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**Is CBD legal?** *Hemp-derived CBD products with less than 0.3% THC are legal federally but still illegal under some*[*state laws*](http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx)*. Cannabis-derived CBD products, on the other hand, are illegal federally but legal under some state laws. Check local legislation, especially when traveling. Also, keep in mind that the Food and Drug Administration (FDA) have not approved nonprescription CBD products, which may be inaccurately labeled*.

We picked linked items based on the quality of products, and list the pros and cons of each to help you determine which will work best for you. We partner with some of the companies that sell these products, which means Healthline UK and our partners may receive a portion of revenues if you make a purchase using a link(s) above.

Last medically reviewed on November 3, 2020

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