

CBD for Premenstrual Syndrome

Meta Description

Research has shown that this cannabis extract has properties that may help with the discomfort of premenstrual syndrome — such as cramping, nausea, and mood dysregulation.

[Introduction]

If you're one of the [95% of women](#) who experience premenstrual syndrome, it may come as a pleasant surprise that cannabidiol (CBD) may alleviate headaches, cramps, irritability, anxiety, insomnia and other annoying symptoms [1].

It's not a magic cure-all, of course, but research shows that CBD may be effective as an anti-pain, anti-inflammatory, and anti-anxiety supplement.

One of the problems with PMS is that it's extremely complex. Every woman (and every person) has slightly different hormone levels and a unique genetic makeup.

This article will cover everything you need to know about using CBD for premenstrual syndrome. We'll cover how PMS works and what the current research suggests for supporting this condition.

A Quick Summary: Using CBD for PMS

PMS has a wide range of symptoms and involves the flux of two reproductive hormones: estrogen and progesterone. In truth, CBD doesn't appear to have many direct effects on these hormones despite the intimate connection between the reproductive system and the endocannabinoid system (more on this later).

With that said, there are a few key areas where CBD may be able to help manage symptoms:

- **CBD may relieve symptoms of anxiety**
- **CBD may support mood disorders like depression**
- **CBD has been shown to relieve pain**
- **CBD may relax muscle tension leading to cramping**

CBD supports sleep onset

Since these are symptoms associated with PMS, CBD can be useful in treating some of the more disruptive effects.

Cannabidiol and PMS: What the Research Says

Cannabidiol is a cannabinoid extracted from the cannabis (hemp) plant. It's non-psychoactive, unlike the other main cannabinoid — tetrahydrocannabinol (THC).

CBD exerts its effects indirectly. It targets a separate subsystem in the body, which then goes on to produce the bulk of its pain-relieving, muscle relaxing, and a host of other effects.

The intermediary CBD uses to reach these other systems of the body is called the endocannabinoid system (ECS) — which is a system of neurotransmitters that regulate the function of everything from the reproductive cycle, to brain activity.

Let's cover some of the main ways CBD can support PMS symptoms.

1. Stress & Anxiety

CBD is considered a non-allosteric modulator — which is a fancy term that suggests it works by indirectly inhibiting certain activities in the brain. It uses the endocannabinoid system as the intermediary to stop the brain cells from firing, as opposed to allowing them to send signals.

While research on the endocannabinoid system is still being explored, this inhibitory behavior may explain why cannabidiol is known for being an anti-anxiety, anti-inflammatory, anti-convulsive, and anti-epileptic [therapy](#) [2].

2. Serotonin Levels

While PMS is too complex of a topic for any one therapy to work as a cure-all, cannabidiol may be a good alternative to treat some of the symptoms related to serotonin.

Since [serotonin levels](#) are thought to be affected by the changes in hormone levels during the luteal phase [3], cannabidiol's interaction with [serotonergic receptors](#) may help relieve some of the symptoms arising from low serotonin levels [4]. Specifically, depression and anxiety are two negative emotional side effects that may benefit from taking cannabidiol.

3. Pain Transmission

Cannabidiol has also been shown to [relieve pain](#) by blocking the signaling pathway for pain [5].

While the current research mainly focuses on [cancer](#) pain management and bone or joint problems (osteoarthritis), it isn't too far of a stretch to think that cannabidiol may help relieve the muscle aches that happen as a result of PMS as well [6].

The endocannabinoid system regulates both the central and peripheral nervous systems. Since pain is transmitted via these nerves, ingesting cannabidiol has been shown [in rats](#) to help with reducing pain and inflammation [7].

Unfortunately, a review of clinical experiments in people shows [conflicting results](#) [8].

4. Inflammation

Inflammation associated with premenstrual syndrome might also respond to cannabidiol.

However, inflammation is a complex immunological process involving many chemical cascades, feedback loops, and various cells from both the innate and the adaptive immune system.

More research, specifically double-blind studies involving larger sample groups, need to be conducted to see if the cause of [inflammation during PMS](#) corresponds with the [anti-inflammatory](#) actions of cannabidiol [9, 10].

5. Muscle Cramping

Most of the research on CBD and muscle has to do with treating [spasticity](#) in those with multiple sclerosis. Going back to the fact that CBD interacts with the endocannabinoid system and muscles are controlled by nerves, it is a logical step to think that CBD could have an effect on reducing muscle spasms [11].

Since the uterus cramps and spasms before and during menstruation, CBD, could in theory, affect and reduce cramping.

What Causes PMS?

Premenstrual syndrome happens before the menstrual phase (hence the name). If you're not familiar with the phases of the menstrual cycle, don't worry, we'll cover it in greater detail below.

PMS symptoms usually begin to develop after ovulation, within a week or so before menstruation.

Scientists aren't able to say exactly why the change in hormones causes both the [psychological and physical symptoms](#), but the theory is that it has something to do with the link between estrogen and serotonin production in the brain [12].

The entire menstrual cycle is a rollercoaster of hormones, each one taking their turn to rise up before crashing back down again. All of this is a well-choreographed dance designed to prepare the body for falling pregnant.

How Hormone Changes May Lead to PMS

1. Progesterone and estrogen rises and then drops quickly after ovulation
2. During this rise is when you start to feel physical symptoms such as breast tenderness. You can think of this as the body getting ready for pregnancy
3. Because estrogen is tied to serotonin, the drop in estrogen causes a drop in serotonin as well
4. Drops in serotonin (the neurotransmitter that makes you feel happy) can then cause the psychological symptoms

The 3 Stages of the Menstrual Cycle

The menstrual cycle can be broken down into 3 phases: follicular, luteal, and menses.

1. Follicular Phase

Eggs develop in little nests in the ovaries called follicles. During the follicular phase, the follicle that will eventually release a mature egg produces the hormone estrogen. This follicle is stimulated by a pituitary hormone called the [Follicle Stimulating Hormone](#) (FSH) [13].

FSH also stimulates the production of yet another pituitary gland hormone called Luteinizing Hormone (LH), which causes the egg to go through meiosis (cell division).

As estrogen levels rise with the growing follicle, the uterus lining thickens with tissue and blood vessels to get ready for implantation of a fertilized egg and pregnancy. Once the egg is mature, there is a spike in LH and the egg is released from the follicle — this marks the point of ovulation. The body is now ready to conceive a baby.

Estrogen, LH, and FSH levels begin to drop while progesterone starts to rise as it's released from the same follicle that released the egg previously.

2. Luteal Phase

After ovulation is achieved during the follicular phase, we enter the [luteal phase](#) [14].

Here, estrogen rises again with progesterone and the uterus lining continues to grow. From the ovary, the egg will travel to the uterus via the fallopian tubes.

If fertilization were to occur, it would happen during this period of 3-4 days.

If no fertilization occurs, there's no need to continue to support the highly vascularized and dense tissue of the uterus (using up a lot of the body's resources). The corpus luteum dies and both estrogen and progesterone levels drop once again.

3. Menses or Menstruation

[Menstruation](#) is the process through which the cells lining the uterus go through programmed cell death (apoptosis) and shed [15].

Blood and tissue are expelled from the vagina and women may suffer from cramping which is the contraction of the uterine muscles to help shed the lining.

Signs & Symptoms of PMS

Because there are four different hormones at play here, PMS can present itself in various ways. Not all women get all the symptoms and not every symptom occurs every month. Jet lag, sleep, alcohol and smoking, and stress can all affect PMS.

Psychological Symptoms of PMS

The emotional changes that happen post-ovulation, during the luteal phase, may include the following:

- **Depression**
- **Tension**
- **Anxiety**
- **Irritability**
- **Fatigue**
- **Emotional sensitivity**

Physical Symptoms of PMS

Along with the changes in mood, physical symptoms will also occur..

These physical symptoms include:

- **Breast tenderness**
- **Abdominal bloating**
- **Muscle and joint pain**
- **Headaches**
- **[Inflammation](#) [16]**
- **Cramping**

Current Treatment Options for PMS

There are many ways to treat mild to severe PMS, including drugs, hormone therapy, acupuncture, hot packs, supplements, and much more.

One of the newer options people are choosing these days is CBD, but we'll get into how this works in more detail below.

The scientific evidence behind things like [acupuncture and herbal medicine](#) is limited and most of the advice appears to be anecdotal [17]. Even exercise, a commonly suggested way to relieve PMS symptoms, showed inconsistent results when tested. Some groups responded while others showed [no significant](#) reduction in discomfort [18].

Hormonal options involve taking estradiol and/or progesterone pills in order to better regulate the fluctuations of these hormones in the luteal phase. Some studies have shown that this method is [effective](#), while others showed [no difference](#) in alleviating the symptoms of PMS [19, 20].

What Else Can I Do To Relieve PMS Symptoms?

Aside from taking CBD, making sure to keep your serotonin levels at a normal level can help relieve PMS symptoms. Things like exercise, sleeping well, keeping stress levels low, and eating dark chocolate are all ways to make sure your serotonin level doesn't dip too low.

Key Takeaways

While the research on the use of cannabidiol on PMS symptoms still requires further exploration, the hope is that this article gave you a bit more insight into the causes of PMS and how CBD can be used to reduce PMS symptoms.

We know that CBD doesn't directly treat PMS in its entirety. However, certain symptoms such as cramps, anxiety, and pain can somewhat be lessened by taking CBD.

Unlike other conditions, PMS symptoms and the severity of them vary month to month depending on the level of stress and other uncontrollable life issues that may arise unexpectedly. So, while it's impossible to fully eliminate PMS due to its close ties with fluctuating reproductive hormones, it is possible to target particular symptoms on a case by case basis.

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