



# The Role of The Endocannabinoid System and Cannabinoid Receptors

The endocannabinoid system is nothing less than mysterious and miraculous. Cannabinoid-rich plants like cannabis and hemp have long been known to have a profound effect on consciousness and influence

one's health and wellness. However, it wasn't until 1992 that Israeli Scientist [Dr. Raphael Mechoulam](#) and his colleagues discovered a critical function of cannabinoids leading to the discovery of the endocannabinoid system.

## What Is The Endocannabinoid System?

The Endocrine system, the nervous system, the cardiovascular system, and the respiratory system are all familiar names to us. These systems work together to perform everyday physiological activities to keep us alive. The endocannabinoid system (ECS) is another essential system found in humans and in all mammals, birds, reptiles, amphibians, fish, and more. The endocannabinoid system's main job is establishing and maintaining balance within our bodies for optimal health and well-being.

Many medical professionals are still unclear on the functions and purpose of the ECS since it is a relatively recent scientific discovery.

## What Exactly Does The Endocannabinoid System Do?

The ECS is active and operating every day through a network of receptors called CB1 and CB2 receptors. These receptors respond to cannabinoids, or chemical messengers, which have a wide range of therapeutic effects. Our ECS regulates a number of functions; some of the ongoing discoveries include:

- Pain and Inflammation
- Stress response
- Immune system response
- Sleep
- Appetite
- Mood disorders
- Motor function
- Memory



Mapping and modulating the activity of our ECS turns out to hold tremendous therapeutic promise in targeting a wide range of diseases and health conditions.

## Cannabinoid Receptors

As of now, only two endocannabinoid receptors have been identified and understood; however, scientists speculate there are more. The two primary [cannabinoid receptors](#) that we know about are located throughout the body in the central nervous system, brain, organs,

digestive system, connective tissues, bones, glands, and immune cells and are not limited to one area specifically. There is still a lot to learn about this network of receptors that send signals when the body is injured or experiencing an imbalance.

## **Cannabinoid Receptor CB1**

Various CB1 receptors have been located in the brain and spinal cord, influencing some physical and behavioral functions. Cannabinoids can influence sensory and motor responsiveness, heart rate, mood, appetite, sensitivity to pain, learning, and memory, our fight or flight response, and more.

## **Cannabinoid Receptor CB2**

CB2 receptors are expressed primarily in the cells of the immune system and peripheral nervous system, but have also been found in multiple brain regions. The function of these receptors is to respond to cannabinoid signaling to target issues when they arise so the body can achieve homeostasis to prevent disease.

The endocannabinoid system is vital to our health and wellness, yet we only understand a glimpse into all of its functions. It's no mistake that cannabinoids are produced naturally in our bodies and in many plants. This is why the cannabis plant has psychoactive and medicinal effects on humans because we have an innate ECS of receivers that communicate and coordinate to regulate various physiological processes to support our overall health.

## **What are Endocannabinoids and Phytocannabinoids**

Remarkably, the receptors that make up our endocannabinoid system are a direct receiving point for the chemical messengers in hemp and cannabis, known as phytocannabinoids. The study of these molecules is astounding, and researchers have proclaimed that they are the most versatile molecules known to exist.

## **Endocannabinoids: Your Bodies Cannabinoids**

The term “endo” refers to “within,” and endocannabinoids, also called endogenous cannabinoids, are cannabinoids produced in the human body. Yes, your body naturally produces cannabinoids in almost every organ of the human body. These cannabinoids are very similar to the chemicals present in the cannabis sativa plant. Research suggests that an endocannabinoid deficiency could be a qualifying cause for some diseases.

Certain health challenges and diseases respond very well to medical cannabis showing signs of reversal through the process of restoring healthy immune cells.

## **Phytocannabinoids: The Cannabinoids from Plants**

Consuming cannabis or hemp products deliver phytocannabinoids, cannabinoids from the plant to the cannabinoid receptors in the body. Consuming cannabis and hemp-derived cannabinoids can bring on pleasant feelings and provide relief for chronic pain, support energy balance, stimulate appetite, and many more therapeutic benefits.

Maintaining homeostasis is the primary role of cannabinoids, and if the body is not producing enough cannabinoids to meet the demand, plant-derived cannabinoids could offer value to your wellness providing a wide range of health benefits.

## **How Cannabis and Hemp Influence Our Wellness**

Consuming cannabis is often associated with its desirable effects for relaxation, like that stoney slowed down state of being that can feel blissful and calming. While that is a great place to be, there are many other effects cannabinoids can have on us.

There is a wide range of cannabis strains, and each strain has a unique cannabinoid and terpene profile. The synergy of the cannabinoids and terpenes in the flowers can produce varying effects. This is why some strains land you on the couch with a heightened appetite and induce sleep, while others bring on an uplifting vibration, promoting a flow state and relieving fatigue.

These therapeutic effects are a result of the cannabinoids and terpenes interacting with your endocannabinoid system. However, every person will respond to cannabis or hemp products differently because our endocannabinoid systems are as unique as our fingerprints.

## **Cannabis vs. Hemp**

The biggest difference between hemp and cannabis is the concentration of psychoactive cannabinoids.

Hemp typically contains a very low percentage of THC or Tetrahydrocannabinol, the psychoactive compound, and high levels of CBD or Cannabidiol, a non-psychoactive cannabinoid.

Cannabis, or marijuana, contains higher levels of THC, which produce the psychoactive effects that alter consciousness.

Both cannabis and hemp plants produce THC, CBD, and a wide range of other cannabinoids like CBG, CBN, CBD, and THCV, to name a few. Over 100 cannabinoids have been discovered so far. It's no wonder OG Kush will have you feeling laid back while the effects of Jack Herer can uplift your state of mind and boost your productivity. It's all about the plant's cannabinoid and terpene profile.

## **Plugging Into Our Endocannabinoid System**

Endocannabinoid signaling exhibits remarkable complexity. Whether you are smoking a joint, eating an edible, or vaping a delta-8 THC concentrate, you can think of this as plugging into your endocannabinoid system. The effects depend on the cannabinoid profile in the product and how your cannabinoid signaling system responds to the receptors in your brain.

### **A Word About CBD, THC, and Cannabinoid Products**

Some non-psychoactive cannabinoids, such as CBD, do not induce any noticeable changes but still hold amazing therapeutic potential. Ingesting a CBD isolate product will not alter your state of

consciousness, but it will still interact with specific receptors to benefit your overall wellness.

When THC is isolated from the plant it was produced by, it can be formulated into various products to be enjoyed. THC molecules have access to many receptors in the body, which can produce a wide range of physical and mental effects.

Whole plant or full spectrum extracts contain all the plant's natural compounds delivering CBD, THC, terpenes, and flavonoids that work together to fill the missing gaps and bring balance to our bodies.

## **Cannabinoids in Action**

Pain sensations, appetite, mood, sleep, [immune responses](#), to motor functions, all of these physiological processes are regulated by cannabinoids.

For example, if you have a mild injury causing you pain and swelling, receptors will send out signals alerting the body to produce cannabinoids. When you consume cannabinoids, they trigger a cellular response targeting cells in the injured tissues to decrease the release of activators and sensitizers to stabilize the nerve cells, creating an anti-inflammatory response.

In simple terms, cannabis and hemp support the body's natural recovery process.

Enjoying cannabis and hemp is a wonderful way to take advantage of the therapeutic benefits that support the harmony of major body functions.

## **Science and Research Developments**

Mapping and modulating the activity of the ECS system turns out to hold tremendous therapeutic promise. Discoveries are showing us that the endocannabinoid system plays a big role in disease and health conditions. Scientists are studying the effects of cannabinoids on the receptor system for movement disorders such as multiple sclerosis, Parkinson's Disease, Huntington's disease, neuropathic pain, spinal

cord injury, cancer, atherosclerosis, myocardial infarction, stroke, hypertension, glaucoma, obesity, and osteoporosis. That's only mentioning a few!



The endocannabinoid system is vital to our life, and there's still a lot we don't know about it. Experts are developing a better understanding of how the endocannabinoid system holds the key to treating several diseases.



# **Frequently Asked Questions About the ECS**

## **Are There Other Ways to Support Your Endocannabinoid System?**

Research suggests that endocannabinoids can be boosted by certain foods, such as those containing essential fatty acids, chocolate, herbs, spices, and teas, as well as by stress-reducing activities, exercise, sex, cold showers, and of course, through cannabis and hemp consumption.

## **How Do Cannabinoids Affect The Central Nervous System?**

The central nervous system, or CNS, consists of the brain and spinal cord and receives signals from all bodily systems. It regulates automated processes such as breathing, and heart rate, to hormone production. The central nervous system coordinates the higher functions of the brain, like creative tasks or solving problems, and carries signals to the rest of our body to coordinate motor functions.

Through the endogenous cannabinoid system, cannabinoids directly impact the CNS on a cellular level. They can help reduce inflammatory responses, alleviate neuropathic pain, and intercept and reduce pain signals from the brain.

## **How Do You Activate Your Endocannabinoid System?**

Daily exercise is a great way to activate the ECS. Medium or vigorous exercise provides excellent protection against stress, promotes greater focus and concentration, and improves sleep quality.

## **What Are The Symptoms of Endocannabinoid Deficiency?**

Low endocannabinoid levels can trigger an endocannabinoid imbalance. Some research has found a correlation between autoimmune conditions, poor sleep, appetite, digestive issues, mood, even reproduction, and fertility.

# Rare Cannabinoid Extracts by The Standard by BlackMarket



For daily enjoyment and well-being, The Standard by BlackMarket formulas bring you the very best the market has for Delta 8 and rare cannabinoid blends.

Formulated with live resin and enriched with beneficial terpenes derived from premium hemp, our products complement endocannabinoid activity.

Our vapes and gummies are convenient and enjoyable, delivering the desirable effects, and flavorful terpene profile from award-winning strains.

## A Note From The Author

It's time we all get familiar with our endocannabinoid system and support our government and institutions to approve access to this plant and funding for further research. These obstacles have hindered scientists as a whole, leaving medical providers and patients in the dark.

So far, we have promising evidence showing the plant's diverse effects have the potential to help with substance abuse disorders, anxiety disorders, diseases, chronic pain, and so much more. Funding this research will improve the quality of life for so many people and open the door for new life-saving medicines to be developed.

On a personal note, cannabis and hemp have helped me find peace of mind, creative inspiration, and provided much-needed relief without the side effects that come with the alternative options.

Our collective educational efforts are making a difference, and the future looks bright as more people are returning to nature for their wellness needs.

Written by London Kelley

Estimated Reading Time: 6.5 Minutes

---

**Title:** Exploring the Endocannabinoid System and Cannabinoid Receptors

**Meta Description:** Uncover the mysteries of the endocannabinoid system and its role in health. Discover how cannabinoid receptors CB1 and CB2 interact with cannabinoids to regulate pain, stress, immunity, and more.

Published on: The Standard by Black Market