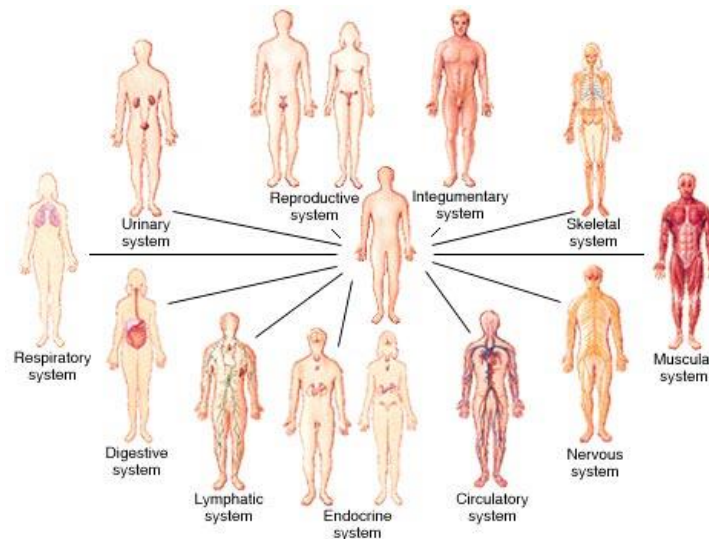


# The Endocannabinoid System – A High Level View of How CBD Works

By Seth Ninger

As children in school, we were taught about all of the different systems that make up the human body, yet nobody remembers the endocannabinoid system being one of the systems that we learned about. **Why didn't we hear about it back then, and why are we hearing about it now?**



## Major Organ Systems in Human Body

Scientists have only known about the endocannabinoid system for about 25 years. It was discovered in the 1990's, by Dr. L.A. Matsuda. Dr. Matsuda was trying to understand how THC in marijuana affected the body. What she discovered was the cannabinoid receptor, CB-1. This led to the realization that there was a complex network of cannabinoid receptors in cells of both the central nervous system and the secondary, or peripheral nervous system.

Shortly thereafter, researchers discovered another type of cannabinoid receptor, CB-2. CB-2 receptor cells are found in high concentrations in the digestive system, several of our major organs, and the immune system. Assuming that the presence of receptors meant that our bodies produced their own cannabinoids, researchers worked to identify these chemicals. The first one to be discovered was anandamide. Anandamide regulates the central nervous system, and also helps the immune system to function properly.

To this day, we still don't have a complete understanding of everything the endocannabinoid system does but, we do know that it is directly tied to almost all of the body's other systems acting as a modulator of sorts. It promotes systemic balance helping control things like memory, pain, sleep, mood, appetite, reproduction, and inflammation. In a nutshell, the endocannabinoid system is the conductor of your body's internal orchestra, making sure that all of the other systems work in concert with one another.

The activity of the nervous system is regulated by controlling the levels of various classes of chemical neurotransmitters like serotonin. This process is called neuro-modulation. The endocannabinoid receptors, CB-1 and CB-2, are neuro-modulatory receptors, and there are more endocannabinoid receptors in our bodies than all other kinds of neuro-modulatory receptors combined. Even the vast number of receptors for serotonin and dopamine don't come close. The largest number of receptors in the brain are anandamide receptors which ensure the healthy running of your central nervous system.

When the endocannabinoid system is functioning properly, all of the systems in our body are maintained, existing in a state of equilibrium in motion, or homeostasis. Science has found that an adversely impacted, or poorly functioning endocannabinoid system can result in hyper sensitivity to pain signals, resulting in conditions such as migraine, fibromyalgia, irritable bowel syndrome, and tinnitus. Doctors believe that in many instances, a dysfunctional endocannabinoid system could be the underlying cause of some of these diagnoses. The theory therefore contends that cannabinoid replacement therapy and supplements in those particular cases may in fact, correct the problem and could prove to be completely restorative in nature.

**The Trickle-Down Benefit.** People often inquire about how taking cannabinoid supplement therapeutics like CBD can be rumored to aid with such a wide range of varying complaints. The fact is that there's documentation proving that as far back as 3,000 years ago, healers were looking to the hemp plant to provide relief from pain, nausea, depression, headaches, arthritis, and epilepsy.

The endocannabinoid system has emerged as the body's most centralized and most important system, impacting the healing of, and governing the optimum functioning of all of the body's other systems. Endocannabinoids DO NOT treat, fix, or cure any symptoms or illnesses. Research does show however, that adding endocannabinoid supplements to your wellness regiment will improve the efficacy of internal and external signal transmission of your endocannabinoid system. In other words, adding CBD to your daily routine is similar in concept to adding motor oil to your car's engine. Just as engine oil lubricates all of the moving components inside of your engine to keep those components functioning properly, cannabinoid supplements intensify the effectiveness of the endocannabinoid system, which keeps the other systems of your body functioning properly.

**Neurotransmission and Illness.** The human body is an amazing creation. In many instances, the human body has the ability to heal itself or at the very least, aid in its own recovery. When a system in the body is compromised it calls out for help to the other systems. It says things like, give me more of chemicals A, B, and C or, stop giving me so much of chemicals D,E, and F. The problem is that when a particular system is in a weakened state, those messages, (those cries for help) don't always get through. The endocannabinoid system, (riddled with neuro-modulatory receptors), is basically the switchboard that those calls for help travel through. Cannabinoid supplements and therapeutics like CBD simply turn up the volume on that switchboard.