

THE ENDOCANNABINOID SYSTEM – HOW THC AND CBD WORK

In Israel when researchers experimented to understand how cannabis causes its effects in animals they discovered the Endo Cannabinoid System (ECS). They found that all animals including humans make their own kinds of signalling chemicals similar to cannabis called endocannabinoids. The ones made by our nervous and immune systems are called anandamide and 2-AG. They are widely dispersed in the nervous system where they activate CB1 receptors and in the immune system where they activate CB2 receptors.

If you think of nerve cell (neuron) A sending a signal to B sending a signal to C and so on, then our endocannabinoids uniquely send a retrograde signal back from B to A, and C to B to turn down or turn off the original signal. Of course each neuron communicates with about 10,000 other neurons, so signals can get out of hand if there is a lack of endocannabinoids to slow or stop the signals. This stopping of signals getting out of control is homeostasis. Scientific literature will tell you the ECS is involved with a huge range of balancing processes from reproductive cycles, sleeping, eating, pain, organ healing and reducing inflammation.

Chronic pain, spasms, seizures, anxiety, insomnia etc could be seen as over-active, out of control nervous system.

Inflammatory conditions such as arthritis suggests an over-active immune system.

CBD is thought to have a mild action allowing our endocannabinoids to work better.

THC is a partial agonist which means it acts in a similar way to our endocannabinoids, but more strongly.

Both could help if there was an Endo Cannabinoid deficiency.

Over 140 cannabinoids have been identified in cannabis. They each work in different ways and work together with the terpenes (aromatic molecules that give plants their own characteristic aromas, like essential oils) giving different medical benefits.

Severe pain, seizure conditions or cancers may respond better to more potent medicinal cannabis containing higher proportions of THC. This is because it acts more strongly and in different cells from CBD.