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# How Does CBD Interact Within The Body?



CBD interacts with the bodies CB1 and CB2 receptors. These are involved in regulating the immune system and through various mechanisms, CBD can suppress inflammatory response and minimize disease symptoms. It has been tested in multiple animal experiments such as multiple sclerosis, rheumatoid arthritis and colitis. The Endocannabinoid System has been recently recognized as an important modulatory system in the function of brain, endocrine, and immune tissues. It appears to play a very important regulatory role in the secretion of hormones related to reproductive functions and response to stress.

The important elements of this system are:

endocannabinoid receptors (types CB1 and CB2), their endogenous ligands (N-arachidonoyl ethanolamide, 2-arachidonoyl glycerol), enzymes involved in their synthesis and degradation, as well as cannabinoid antagonists. In humans this system also controls energy homeostasis and mainly influences the function of the food intake centers of the central nervous system and gastrointestinal tract activity.

The Endocannabinoid System regulates not only the central and peripheral mechanisms of food intake, but also lipids synthesis and turnover in the liver and adipose tissue as well as glucose metabolism in muscle cells. Rimonabant, a new and selective central and peripheral cannabinoid-1 receptor (CB1) blocker, has been shown to reduce body weight and improve cardiovascular risk factor (metabolic syndrome) in obese patients by increasing HDL-cholesterol and adiponectin blood levels as well as decreasing LDL-cholesterol, leptin, and C-reactive protein (a proinflammatory marker) concentrations. It is therefore possible to speculate about a future clinical use of CB1 antagonists, as a means of improving gonadotrophin pulsatility and fertilization capacity as well as the prevention of cardiovascular disease and type 2 diabetes mellitus. Drugs acting as agonists of CB1 receptors (Dronabinol, Dexamabinol) are currently proposed for evaluation as drugs to treat neurodegenerative disorders (Alzheimer's and Parkinson's diseases), epilepsy, anxiety, and stroke. (\*Komorowski J, et al. Postepy Hig Med Dosw (Online). 2007)

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