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CANNABINOID CHRONICLES

Medical Cannabis News and Information

Cannabis and Lupus

Lupus is a chronic inflammatory disease that occurs when a body's immune system attacks its own tissues and organs, leading to chronic pain, swelling, and long-term tissue damage. Inflammation caused by lupus can affect many different body systems, including your joints, skin, kidneys, blood cells, brain, heart and lungs.

Roughly 5 million people globally suffer from lupus, ranging from mild to life-threatening conditions. Lupus strikes mostly women of childbearing age (15-44). It can be difficult to diagnose because its signs and symptoms often mimic those of other ailments. Presently there is no cure.

The most common type of lupus is systemic lupus erythematosus (SLE), which that largely affects the skin, joints, kidney, and brain. The main complication is inflammation, which occurs in the CNS, brain, kidneys, and blood vessels.

Drug-induced lupus is a lupus-like disease caused by using one of over 400 legal prescription drugs (linked primarily to Hydralazine, Procainamide, and Isoniazid). Other types of lupus include: cutaneous lupus, which mainly attacks skin and forms circular-shaped rashes or a butterfly-shaped rash across the nose; lupus nephritis, which attacks the kidneys; and neonatal lupus, which occurs (rarely) in babies born to mothers with lupus (most turn out completely healthy).

Symptoms of lupus include pain all over but focused in hands, fingers, wrists, and knees, skin rashes, mouth sores, fatigue, mood changes, swelling of hands and feet, nausea, vomiting, depression, anxiety, seizures, fevers, weight loss, chest pain, hair loss, ulcers, swollen lymph nodes, anemia and abnormal heart rate.

Lupus is thought by some to be passed on genetically, although no one gene has been identified as the perpetrator. Despite that fact, lupus does tend to appear

in families, especially in twins. Others believe it is caused by a number of environmental factors, including stress, over-exposure to ultraviolet light (mostly sunlight), smoking cigarettes, chemical exposure (from well water and dust), infections, medications, and prescription drugs. Everyone that suffers from SLE experiences some type of joint pain or swelling, and some develop arthritis.

Cannabis can be very effective to help lupus patients cope with the symptoms of the disorder such as nausea and pain. It's also an anti-inflammatory, suppressing certain parts of the immune system.

"By lowering the levels of the inflammation-promoting protein interleukin-2, and raising levels of the anti-inflammatory protein interleukin-10, cannabis shows that it may be beneficial for treating auto-immune disorders where inflammation is the main complication," states Dr. Sean Breen, the medical director of Medical Cannabis of Southern California.

Cannabis has also been shown to suppress the immune system by activating myeloid-derived suppressor cells (MDSCs). MDSCs may help dampen the hyperactive immune system found in lupus. Cannabis also helps treat symptoms of nausea and abdominal cramping that are often severe side effects of commonly prescribed drug for lupus, such as Plaquenil and corticosteroids.

Juicing raw cannabis may reduce pain and inflammation associated with lupus.

Source: <https://unitedpatientsgroup.com/blog/2015/10/20/how-cannabis-helps-lupus> AND <http://www.mayoclinic.org/diseases-conditions/lupus/basics/definition/con-20019676>



Image courtesy of <http://www.calgarycmmc.com/lupus.htm>

International Association for Cannabinoid Medicines (IACM) Bulletin

Animal: An increased intake of olive oil in mice increased the number of CB2 receptors

A diet enriched with olive oil significantly increased the number of CB2 receptors in fat tissue of mice and reduced inflammation and proliferation of mice adipose tissue. This is the result of research at the National Institute for Digestive Diseases "S. de Bellis" in Bari, Italy, published in the Journal of Nutrition, Health & Aging. Mice received either a standard diet with soybean oil or one of three other diets enriched with three different oils, one in which soybean oil was replaced with olive oil, one in which it was replaced with salmon oil, and the third in which it was replaced with evening primrose oil. The cannabinoid-2 receptor (CB2 receptor) is known for its anti-obesity effects, anti-inflammatory effects as well as anti-cancer effects. Authors wrote that "the present findings open opportunities for developing novel nutritional strategies considering olive oil a key ingredient of a healthy dietary pattern."

Source: <https://www.ncbi.nlm.nih.gov/pubmed/28035344>

Human: Topical application of a cannabis extract helpful in cancer wound in a case report

The case of a 44-year old man with squamous cell cancer of his right cheek, which resulted in an open wound, was presented. The pain was first treated with inhaled cannabis and thereafter topically with a cannabis extract in sunflower oil. Four times daily he applied and digitally spread 1-2 ml to the entire wound. He experienced pain relief within 10–15 minutes after application, which lasted for up to two hours. In addition, the size of his malignant wound decreased by about 5% within four weeks.

Source: <https://www.jpmsjournal.com/article/S0885-3924%2816%2930328-1/fulltext>

Animal: Endocannabinoids protect brain cells from the consequences of reduced blood supply

Inhibition of endocannabinoid degradation by an inhibitor of FAAH (fatty acid amide hydrolase) mitigates damage to the nerve cells and cognitive deterioration caused by reduced blood supply to the brain.

Source: <https://www.ncbi.nlm.nih.gov/pubmed/28042028>

Animal: The number of CB2 receptors is increased in dogs with damage to the spinal cord

In the spinal cord of dogs with degenerative myelopathy the number of CB2 receptors was increased, mainly in activated astrocytes. Authors wrote that "such receptors may be used as a potential target to enhance the neuroprotective effects exerted by these glial cells." Facultad de Medicina, Universidad Complutense, Madrid, Spain.

Source: <https://www.ncbi.nlm.nih.gov/pubmed/28069688>

Animal: Mice fed with high fat and sugar presented with a dysregulated endocannabinoid system

In comparison with mice, which received a standard rodent chow, mice fed with a diet high in fat and sugar (Western diet, WD) for 60 days exhibited a large increase in body weight. This was associated with a dysregulated endocannabinoid system. Authors wrote that their results "suggest that hyperphagia associated with WD-induced obesity is driven by enhanced endocannabinoid signalling at peripheral CB1Rs."

University of California, Riverside, USA.

Source: <https://www.ncbi.nlm.nih.gov/pubmed/28065722>

Cells: Stem cells, which are treated with CBD, may be more beneficial for the treatment of Alzheimer's disease

Mesenchymal stem cells have emerged as a promising tool for the treatment of several neurodegenerative disorders, including Alzheimer's disease. A study shows that pre-treatment of these cells with CBD (cannabidiol) "possess a molecular profile that might be more beneficial for the treatment" of Alzheimer's disease.

IRCCS Centro Neurolesi "Bonino-Pulejo", Messina, Italy.

Source: <https://www.ncbi.nlm.nih.gov/pubmed/28025562>

Human: Cannabis use during adolescence not associated with weight in midlife

In an analysis of 712 Danish adolescents aged between 15 and 19 years at the beginning of the study cannabis use was not associated with weight change from adolescence to midlife according to data taken 20-22 years later. School of Molecular Bioscience, University of Sydney, Camperdown, Australia.

Source: <https://www.ncbi.nlm.nih.gov/pubmed/28060830>

Cells: Activation of the CB2 receptor counteracts inflammation of nerve cells

In an analysis of 712 Danish adolescents aged between 15 and 19 years at the beginning of the study cannabis use was not associated with weight change from adolescence to midlife according to data taken 20-22 years later.

Source: <https://www.ncbi.nlm.nih.gov/pubmed/28041663>

Cells: Beta-caryophyllene promotes the function of osteoblasts

Beta-caryophyllene is known to activate the CB2 receptor. In osteoblasts, bone-forming cells, this essential oil promotes the formation of a mineralized extracellular matrix, and thus the formation of bone and the maintenance of normal bone mass. Affiliated Hospital of Weifang Medical University, China.

Source: <https://www.ncbi.nlm.nih.gov/pubmed/28026135>

For more info visit: www.cannabis-med.org/

WHO Initiates Rescheduling of Medical Cannabis Under International Law

The World Health Organization (WHO) Expert Committee on Drug Dependence (ECDD) recently met in mid-November 2016 and initiated the first steps in a long process that could lead to the rescheduling of medical cannabis under international law, and has committed to hold a special session to discuss medical cannabis in the next eighteen months.

Discussions regarding the potential rescheduling of cannabis have been stalled for years, and the process could result in fundamental changes in the way medical marijuana research and regulations are handled in the United States and around the world.

In order for cannabis to be rescheduled, the United Nations General Assembly would vote on a recommendation made by the United Nations Commission on Narcotic Drugs. If approved by the UN General Assembly, those changes would then be reflected in the Single Convention on Narcotic Drugs, which currently lists cannabis as a Schedule I and IV substance, meaning a substance with a high risk of abuse, produces ill effects, and has no therapeutic benefit.

Under the Single Convention on Narcotic Drugs, which was ratified in 1961 and is signed by 185 of the 193 countries that make up the United Nations, including the United States, member countries are responsible for passing and enforcing their own drug laws, but the Single Convention is regarded as the standard for international drug laws. Many lawmakers point to the Single Convention as the primary obstacle in the United States' inability to reschedule cannabis.

Over the next eighteen months, the committee has requested pre-reviews for cannabis plant matter, extracts and tinctures, delta-9-tetrahydrocannabinol (THC), cannabidiol (CBD), and stereo-isomers of THC.

Source: <https://www.medicaljane.com/2017/01/01/who-takes-first-steps-to-reclassify-medical-cannabis-under-international-law/>



(With apologies to Raeside - how's the snow?)

Endocannabinoid System and Pediatrics

The endocannabinoid system (ECS) - made up of endocannabinoids, the cannabinoid receptors CB1 and CB2, and various enzymes - is present from the early stages of gestation and play a number of vital roles for the developing organism. Although most of these data are collected from animal studies, a role for cannabinoid receptors in the developing human brain has been suggested, based on the detection of "atypically" distributed CB1 receptors in several neural pathways of the fetal brain. In addition, a role for the endocannabinoid system for the human infant is likely, since the endocannabinoid 2-arachidonoyl glycerol has been detected in human milk.

Animal research indicates that the ECS fulfills a number of roles in the developing organism: embryonal implantation; in neural development; as a neuroprotectant; and in the initiation of suckling in the newborn (where activation of the CB1 receptors in the neonatal brain is critical for survival). In addition, subtle but definite deficiencies have been described in memory, motor and addictive behaviors and in higher cognitive ('executive') function in the human offspring as result of prenatal exposure to cannabis.

Therefore, the ECS may play a role in the development of structures which control these functions, including the nigrostriatal pathway and the prefrontal cortex. From the multitude of roles of the endocannabinoids and their receptors in the developing organism, there are two distinct stages of development, during which proper functioning of the endocannabinoid system seems to be critical for survival: embryonal implantation and neonatal milk sucking.

Researchers propose that a dysfunctional ECS in infants with growth failure resulting from an inability to ingest food, may resolve the enigma of "non-organic failure-to-thrive" (NOFTT). Developmental observations suggest further that CB1 receptors develop only gradually during the postnatal period, which correlates with an insensitivity to the psychoactive effects of cannabinoid treatment in the young organism.

Therefore, it is suggested that children may respond positively to medicinal applications of cannabinoids without undesirable central effects. Excellent clinical results have previously been reported in pediatric oncology and in case studies of children with severe neurological disease or brain trauma. Researchers also suggest cannabinoid treatment for children or young adults with cystic fibrosis in order to achieve an improvement of their health condition, including improved food intake and reduced inflammatory exacerbations.

Source: <https://www.ncbi.nlm.nih.gov/pubmed/15159678>



Cannabis, Tobacco, Alcohol and the Risk of Early Stroke

Current knowledge on cannabis use in relation to stroke is based almost exclusively on clinical reports. By using a population-based cohort, researchers sought to find out whether there was an association between cannabis use and early-onset stroke, when accounting for the use of tobacco and alcohol.

The cohort was made up of 49,321 Swedish men, born between 1949 and 1951, who were conscripted into compulsory military service between the ages of 18 and 20. All men answered 2 detailed questionnaires at conscription and were subject to examinations of physical aptitude, psychological functioning, and medical status. Information on stroke events up to ≈ 60 years of age was obtained from national databases; this includes strokes experienced before 45 years of age.

No associations between cannabis use in young adulthood and strokes experienced ≤ 45 years of age or beyond were found in multivariable models: cannabis use > 50 times, hazard ratios = 0.93 (95% confidence interval [CI], 0.34–2.57) and 0.95 (95% CI, 0.59–1.53).

Although an almost doubled risk of ischemic stroke was observed in those with cannabis use > 50 times, this risk was attenuated when adjusted for tobacco usage: hazard ratio = 1.47 (95% CI, 0.83–2.56). Smoking ≥ 20 cigarettes per day was clearly associated both with strokes before 45 years of age, hazard ratio = 5.04 (95% CI, 2.80–9.06), and with strokes throughout the follow-up, hazard ratio = 2.15 (95% CI, 1.61–2.88).

The researchers found no evident association between cannabis use in young adulthood and stroke, including strokes before 45 years of age. Tobacco smoking, however, showed a clear, dose-response shaped association with stroke.

Source: <http://stroke.ahajournals.org/content/early/2016/12/27/STROKEAHA.116.015565>

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Health Canada
<http://www.hc-sc.gc.ca/dhp-mps/marihuana/index-eng.php>

Drug Policy Alliance
www.drugpolicy.org

Media Awareness Project
www.mapinc.org

Together Against Poverty Society
302-895 Fort Street, Victoria
250-361-3521

“Law and order exist for the purpose of establishing justice, and when they fail in this purpose they become the dangerously structured dams that block the flow of social progress.”

-- Martin Luther King Jr. (1929-1968)