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CANNABINOID CHRONICLES

Medical Cannabis News and Information

Pilot Study Assessed the Impact of Medical Cannabis on Executive Function

As of Nov. 2016, a majority of US states have medical cannabis regulations, with varying degrees of access and with varying cannabinoid profiles.

Although medical cannabis products are derived from the same plant species as recreational cannabis, they are often selected for their unique cannabinoid constituents and ratios, not typically sought by recreational users, which may impact neuro-cognitive outcomes. To date, few studies have investigated the potential impact of medical cannabis use on cognitive performance, despite a well-documented association between recreational use and executive dysfunction.

The current study assessed the impact of 3 months of medical cannabis treatment on executive function, exploring whether medical cannabis patients would experience improvement in cognitive functioning, perhaps related to primary symptom alleviation. As part of a larger longitudinal study, 24 patients certified for medical cannabis use completed baseline executive function assessments and 11 of these so far have returned for their first follow-up visit 3 months after initiating treatment. Results suggest that in general, medical cannabis patients experienced some improvement on measures of executive functioning, including the Stroop Color Word Test and Trail Making Test, mostly reflected as increased speed in completing tasks without a loss of accuracy.

On self-report questionnaires, patients also indicated moderate improvements in clinical state, including reduced sleep disturbance, decreased symptoms of depression, attenuated impulsivity, and positive changes in some aspects of quality of life. Additionally, patients reported a notable decrease in their use of conventional pharmaceutical agents from baseline, with opiate use declining more than 42%.

While intriguing, these findings are preliminary and warrant further investigation at additional time points and in larger sample sizes.

Source:

<http://journal.frontiersin.org/article/10.3389/fphar.2016.00355/full>



Four States Legalize Medical Cannabis

Following the results of America's November 8th election, and depending how one defines access to medical cannabis, 28 states and the District of Columbia now have passed medical cannabis laws of varying comprehensiveness and scope. States with CBD-only provisions are not considered states with medical cannabis laws because these laws do not legalize use of the cannabis plant for medical purposes.

The use of both recreational and medicinal cannabis has been entirely legalized in the states of Alaska, California, Colorado, Maine, Massachusetts, Nevada, Oregon and Washington. The District of Columbia has fully legalized recreational and medical marijuana, but Congress currently blocks recreational commercial sale. Twelve states have both medical cannabis and decriminalization laws (three of them being CBD-only). Twelve states, Guam, and Puerto Rico have only legalized medical cannabis, while another twelve have only legalized CBD-only medical cannabis. One state and the U.S. Virgin Islands have only decriminalized possession laws. The remaining five states (Idaho, Indiana, Kansas, S. Dakota, and West Virginia), and two inhabited territories state that cannabis possession and sales are illegal and prohibited entirely.

Source: <http://medicalmarijuana.procon.org/view.resource.php?resourceID=000881>

International Association for Cannabinoid Medicines (IACM) Bulletin

Science: More detailed structure of the cannabinoid receptor type 1 revealed

A new study supported by the National Institute on Drug Abuse of the USA provides a more detailed view of the human cannabinoid receptor. The research was conducted by a collaboration of scientists from different universities, who say the findings provide a more in-depth understanding of the effects of cannabis.

Specifically, the study's authors demonstrated how natural and synthetic cannabinoids bind at receptors to produce their effects, which they say can vary considerably depending on the source. "Cannabinoids can produce very different outcomes, depending on how they bind to the CB1 receptor," NIDA director Nora Volkow said in a press release. "Understanding how these chemicals bind to the CB1 receptor will help guide the design of new medications and provide insight into the therapeutic promise of the body's cannabinoid system."

Source: <http://www.ncbi.nlm.nih.gov/pubmed/27768894>

Human: Genes for the CB1 receptor influence the risk of headache

People with a certain variant of the gene, which encodes the CB1 receptor, have an increased risk of headache with nausea "suggesting a specific pathological mechanism to develop migraine, and indicating that a subgroup of migraine patients, who suffer from life stress triggered migraine with frequent nausea, may benefit from therapies that increase the endocannabinoid tone." Hungarian Academy of Sciences, Semmelweis University, Budapest, Hungary.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/27762084>

Human: Sleep best in non-daily cannabis users

A total of 98 subjects (53 females) with a mean age of 22.3 years were compared with regard to their sleep quality depending on cannabis use, non-daily users of cannabis (n=29), daily users (n=49) and non-users (n=20). Mean insomnia scores were highest in daily users (7.0) compared to non-daily users (4.9) and non-users (5.0). Bad sleep was noted in 10.3% of non-daily users, 38.8% of daily users and 20.0% of non-users. University of Michigan Addiction Research Center, Ann Arbor, USA.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/26727193>

Science: THC and CBD are stable in cookies

In a study with ten commercially available cookies THC and CBD were found to be stable at room temperature for at least 3 months.

Department of Pathology, Virginia Commonwealth University, Richmond, USA.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/27798074>

Science: Vaporization of cannabis increasingly used in Canada

According to a survey of 364 medical cannabis users using a vaporizer was the most popular mode of delivery for medical cannabis (53 %), followed by smoking a joint (47 %). A majority of current vaporizer users reported using a portable vaporizer (67.2 %). School of Public Health & Health Systems, University of Waterloo, Canada

Source: <http://www.ncbi.nlm.nih.gov/pubmed/27793174>

Animal: CB1 receptors of the mitochondria involved in memory impairment

CB1 receptors present on the mitochondria of nerve cells in the hippocampus, a certain brain region, are involved in memory impairment caused by cannabinoids.

Activation of the CB1 receptors reduces certain biological processes in these cell organelles.

INSERM, NeuroCentre Magendie, Bordeaux, France.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/27828947>

Cells: THC and CBD inhibit myeloma cells

CBD and THC, mainly in combination, were able to reduce viability of myeloma cells by inducing autophagic-dependent necrosis and they reduced cell migration. The cannabinoids acted in synergy with carfilzomib, a new immunoproteasome inhibitor.

School of Pharmacy, University of Camerino, Italy..

Source: <http://www.ncbi.nlm.nih.gov/pubmed/27769052>

Cells: Mechanisms by which THC induces programmed cell death in cancer cells

Researchers investigated the mechanisms, by which THC induces apoptosis, a form of programmed cell death in glioblastoma cells. THC causes changes in the endoplasmic reticulum of the cells, which ultimately leads to the activation of apoptotic cell death.

School of Biology, Complutense University, Madrid, Spain.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/27635674>

Human: In a subpopulation of people with a high risk for the development of psychosis cannabis use may be a risk factor

In a study with 190 individuals at ultra-high risk for psychosis, cannabis use was associated with a higher risk for the development of psychosis in a subgroup of these individuals. Authors wrote that "whether this reflects underlying genetic vulnerability requires further study." Orygen, The National Centre for Excellence in Youth Mental Health, Parkville, Australia.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/27821204>

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

Federal Government to Restrict Medical Cannabis Reimbursement for Veterans

The federal government, alarmed at the increase of medical cannabis claims by military veterans, is setting a limit of 3 grams per day. The new cost-cutting policy comes into effect on May 21, 2017. Veterans in "exceptional circumstances" can apply for an exemption, with a medical specialist explaining the rationale for higher doses.

The Veterans Affairs department will also set a dollar limit of \$8.50 per gram that licensed producers can charge, based on what it sees as "fair market value," a measure welcomed by some advocates.

Jonathan Ziad, founder and executive director of Canadians for Fair Access to Medical Marijuana, said there have been instances of vendors increasing the price of medical cannabis for veterans whose prescriptions are covered by the government, and he hopes this measure ends the exploitative practice.

The move was not welcomed by retired colonel Pat Stogran, the former veterans ombudsman, who said the federal government should be more worried about opioid misuse and other drug abuse than medical cannabis.

"The efficacy of cannabis is indisputable, and I don't know how Canadians can accept government's interfering directly on issues that are between patients and medical practitioners," Stogran told CBC News.

Also left out of the discussion is the need for higher daily limits for those using oral ingestion, the reduction in cost of pharmaceutical drugs that are superseded by cannabis, and the quality of life improvements that come from avoiding or reducing use of certain drugs.

Source: <http://www.mapinc.org/drugnews/v16/n651/a04.html?204>



CBD Oil for Pediatric Anxiety and Insomnia

Abstract: Anxiety and sleep disorders are often the result of posttraumatic stress disorder and can contribute to an impaired ability to focus and to demonstration of oppositional behaviors.

These symptoms were present in our patient, a ten-year-old girl who was sexually abused and had minimal parental supervision as a young child under the age of five. Pharmaceutical medications provided partial relief, but results were not long-lasting, and there were major side effects. A trial of CBD oil resulted in a maintained decrease in anxiety and a steady improvement in the quality and quantity of the patient's sleep.

CBD oil, an increasingly popular treatment of anxiety and sleep issues, has been documented as being an effective alternative to pharmaceutical medications. This case study provides clinical data that support the use of CBD oil as a safe treatment for reducing anxiety and improving sleep in a young girl with PTSD.

Source: <https://www.ncbi.nlm.nih.gov/pubmed/2776857>

Cannabinoid Receptors and Hormones

Abstract: The physiological and pathophysiological roles of sex hormones have been well documented and the modulation of their effects is applicable in many current treatments. Conversely, the physiological role of endocannabinoids is not yet clearly understood and the endocannabinoid system is considered a relatively new therapeutic target. The physiological association between sex hormones and cannabinoids has been investigated in several studies; however, its involvement in the pathophysiology of common human diseases has been studied separately.

Herein, we present the first systematic review of molecular pathways that are influenced by both the cannabinoids and sex hormones, including adenylate cyclase and protein kinase A, epidermal growth factor receptor, cyclic adenosine monophosphate response element-binding protein, vascular endothelial growth factor, proto-oncogene serine/threonine-protein kinase, mitogen-activated protein kinase, phosphatidylinositol-4,5-bisphosphate 3-kinase, C-Jun N-terminal kinase and extracellular-signal-regulated kinases 1/2. Most of these influence cell proliferative activity.

Better insight into this association may prove to be beneficial for the development of novel pharmacological treatment strategies for many common diseases, including breast cancer, endometrial cancer, prostate cancer, osteoporosis and atherosclerosis. The associations between cannabinoids, estrogens and androgens under these conditions are also presented and the molecular interactions are highlighted.

Source: www.spandidos-publications.com/ijmm/38/6/1642/abstract



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MDs Should Consider Cannabis to Treat Opioid Addictions

A University of British Columbia (UBC) study suggests that cannabis could be effective in weaning Canadians off opioids.

Zach Walsh, a clinical psychologist and cannabis researcher at UBC, says the research shows many people are using cannabis to replace or lower their intake of heavier medications, though he cautioned that more medical trials are needed to prove how cannabis is helping those addicted to opioids.

“We need to explore the possibility that someone could substitute cannabis for an opioid and, most addiction professionals would agree, that cannabis is an easier habit to kick ...” said Dr. Walsh. “So if you can transition to cannabis, then wean yourself off that, that might offer some opportunities for people.”

Dr. Walsh and his team of five other researchers from UBC and two American institutions reviewed all studies involving mental health and cannabis published since 1960, and found a pronounced link between opioids and cannabis. Dr. Walsh said he hopes the study, published in the latest issue of the *Clinical Psychology Review* journal (www.sciencedirect.com/science/article/pii/S0272735816300939), will lead doctors and counsellors to rethink their views on cannabis.

Dr. Walsh said clinical trials are now needed to show how and why the substitution effect takes place. He added a “dream trial” would compare whether people wanting to stop using opioids in favour of cannabis see better results than those who receive a marijuana placebo or those who try to quit using traditional methods: methadone or behavioural therapy.

Source: www.theglobeandmail.com/news/british-columbia/doctors-should-consider-pot-to-treat-opioid-addictions-ubc-study-says/article32882992

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1-800-663-1278

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

“We lack compassion for the addict precisely because we are addicted ourselves in ways we don’t want to accept and because we lack self-compassion.”

-- Gabor Mate, physician and writer