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CANNABINOID CHRONICLES

Medical Cannabis News and Information

Family Doctors Should Learn to Treat Addiction, Not Shun Patients

Family doctors should be on the front lines of addiction treatment but many are unwilling to learn about substance use even as a national overdose crisis worsens, says the head of medical education at Canada's largest mental health teaching hospital.

Dr. Peter Selby, in the addictions division of the Centre for Addiction and Mental Health, said stigma and discrimination prevent physicians from getting training to treat vulnerable patients who have become addicted to opioids such as heroin or those prescribed for pain relief.

"It comes from this core lack of understanding and training around helping people with addictions as a medical condition," Selby said from Toronto. "It's still seen as something bad that people do."

Selby said it's no longer acceptable for doctors to say they don't know enough about addiction treatment, which he added should be integrated into primary care so patients can be screened and switched to medications, such as methadone and suboxone to reduce withdrawal symptoms (*or possibly cannabis - ed.*).

2,816 people died across the country in 2016 of suspected opioid overdoses; in 2017, BC has already surpassed last year's total and is at 1,013 deaths so far.

Dr. Evan Wood, director of the B.C. Centre on Substance Use, said efforts are underway to change the image of addiction medicine from an unattractive discipline to one that's rewarding because patients can dramatically improve their health with treatment.

Family doctors will need to lead the effort to treat addiction with support from specialists, the same as for other health concerns, Wood said.

Source: <http://nationalpost.com/pmn/news-pmn/canada-news-pmn/family-doctors-should-learn-to-treat-addiction-not-shun-patients-scientist>

Medical Cannabis Laws and Adolescent Use of Cannabis

Historical shifts have taken place in the last twenty years in cannabis policy. The impact of medical cannabis laws on use of substances other than marijuana is not well understood. A recent study examined the relationship between US state medical cannabis laws and use of cannabis, cigarettes, illicit drugs, nonmedical use of prescription opioids, amphetamines, and tranquilizers, as well as binge drinking.

Participants were 1,179,372 American 8th, 10th, and 12th graders in the national Monitoring the Future annual surveys conducted in 1991–2015. Highlights of the study include:

- Substance use decreased among 8th graders after medical cannabis use was legalized.
- Substance use did not change among 10th graders following legalization.
- Prescription drug and cigarette use increased among 12th graders after legalization

It concluded that medical cannabis law enactment is associated with decreases in cannabis and other drugs in early adolescence in those states. Mechanisms that explain the increase in non-medical prescription opioid and cigarette use among 12th graders following medical cannabis law enactment deserve further study.

Source: [http://www.drugandalcoholdependence.com/article/S0376-8716\(17\)30569-0/abstract](http://www.drugandalcoholdependence.com/article/S0376-8716(17)30569-0/abstract)



International Association for Cannabinoid Medicines (IACM) Bulletin

Human: In patients with heart failure cannabis use is associated with lower mortality in hospital

According to an US wide study with more than 6 million hospital stays due to heart failure over a period of 7 years, cannabis use was associated with a reduced risk to die in hospital. Study results were published in the journal *Circulation*. Cannabis users had lower rates of atrial fibrillation (irregular heartbeat).

Among 6,065,000 heart failure hospitalizations, there were 1,213 (0.02%) cannabis dependent users and 23,737 (0.40%) cannabis non-dependent users. When compared to non-users, researchers observed significantly reduced odds of atrial fibrillation among cannabis users by about 30% in dependent users and by about 20% in non-dependent users. Mortality during the hospital stay was reduced by 58% in cannabis dependent users and by 46% in non-dependent users. Authors wrote that "this study provides important opportunity to explore the preventive mechanism of cannabis on atrial fibrillation and its therapeutic potential in heart failure patients."

Source: http://circ.ahajournals.org/content/136/Suppl_1/A14752

Human: Cannabis may slow inflammation of the brain in patients with HIV and may maintain cognitive performance

Cannabis has been found to potentially slow the process, in which mental decline can occur in up to 50% of HIV patients, says a new Michigan State University, USA, study. "It's believed that cognitive function decreases in many of those with HIV partly due to chronic inflammation that occurs in the brain," said Norbert Kaminski, lead author of the study, now published in the journal *AIDS*. "This happens because the immune system is constantly being stimulated to fight off disease."

The research team discovered that cannabis compounds were able to act as anti-inflammatory agents, reducing the number of certain white blood cells, called CD16 monocytes, and decreasing the proteins (interferon-gamma-inducible protein 10) they release in the body. The researchers took blood samples from 40 HIV patients who reported whether or not they used cannabis. Then, they isolated the white blood cells from each donor and studied inflammatory cell levels and the effect cannabis had on the cells. They concluded, that "components of cannabis, including THC, may decelerate peripheral monocyte processes that are implicated in HIV-associated neuro-inflammation."

Sources: <http://www.ncbi.nlm.nih.gov/pubmed/29194121>

<http://www.sciencedaily.com/releases/2017/12/171212092100.htm>

Human: Orgasms increase the concentration of the endocannabinoid 2-AG

In a study with healthy male and female volunteers, masturbation until orgasm increased the concentration of the endocannabinoid 2-AG (2-arachidonoylglycerol) in blood. Authors concluded that "endocannabinoids might play an important role in their sexual response cycle, leading to possible implications for the understanding and treatment of sexual dysfunctions."

Source: <http://www.ncbi.nlm.nih.gov/pubmed/29110806>

Animal: Cannabinoids administered together with fat increased their concentrations in the lymph

If CBD (cannabidiol) and THC (tetrahydrocannabinol) were administered to rats together with lipids, their concentrations were much higher in the lymph compared to cannabinoids given without lipids.

Authors wrote, that "administering cannabinoids with a high-fat meal or in lipid-based formulations has the potential to be a therapeutic approach to improve the treatment of MS, or other autoimmune disorders."

Source: <http://www.ncbi.nlm.nih.gov/pubmed/29109461>

Human: Cannabis, alcohol and nicotine have an impact on brain connectivity, but effects differ

In 534 people with different drug use patterns (cannabis, alcohol, nicotine and combinations of 2 or all 3 drugs), functional magnetic resonance imaging of the brain was performed to investigate possible brain connectivity alterations. Authors "concluded that all of the substances have an impact on brain connectivity, but the effect differs." Functional brain connectivity refers to a pattern of connections between distinct units within the brain.

The Mind Research Network and Lovelace Biomedical and Environmental Research Institute, Albuquerque, USA.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/29134961>

Animal: THC may reduce migraine pain

In a rat model of migraine, THC reduced pain when administered at the right dose and the right time. Authors wrote that their findings "support anecdotal evidence for the use of cannabinoids as a treatment for migraine in humans and implicate the CB1 receptor."

Source: <http://www.ncbi.nlm.nih.gov/pubmed/29111112>

Animal: Very low doses of THC reverse age-dependent cognitive impairments

Old female mice aged 24 months that had been injected once with very low THC doses performed significantly better than untreated old mice and performed similarly to naive young mice aged 2 months, in 6 different behavioural assays that measured various aspects of memory and learning. The beneficial effect of THC lasted for at least 7 weeks.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/29107185>

More info: www.cannabis-med.org/

IACM Bulletin Continued:

Human: Cannabis may cause allergies due to a certain cannabis protein

Cannabis contains a protein of the family of so-called lipid transfer proteins (LTP). This cannabis protein is called Can s 3. LTPs are widespread in vegetables and fruits, for example peaches, walnuts and tomatoes and may be responsible for allergies against these plants. It may be possible to become allergic against cannabis by a mechanism of cross-allergy to other LTPs.

Département de Pneumologie, Oncologie Thoracique et Allergologie, CHU, Angers Cedex, France.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/29122396>

Human: The legalization of cannabis for medical uses in several states of the USA reduces alcohol sales by 15%

Alcohol sales decreased in counties of US states, which legalised the medical use of cannabis. This is the result of a study by scientists of the University of Connecticut and the Andrew Young School of Policy Studies in Atlanta, USA. They analysed alcohol sales in more than 2000 counties in the years 2006 to 2015. Alcohol sales trends in medical cannabis states were compared to sales trends in states where cannabis remained illegal.

They found that cannabis and alcohol are substitutes. When disaggregating by beer and wine researchers found that legalization of medical cannabis had a negative effect on corresponding sales by as much as 13.8 and 16.2%, respectively. Authors wrote that the results “address concerns about the potential spillover effects of medical marijuana laws on use of other substances that might contribute to negative health and social outcomes as the relationship between these substances is an important public health issue.”

Source: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3063288

Animal: Activation of the CB2 receptor may reduce kidney damage

Research with mice shows that activation of the CB2 receptor may protect from consequences of reduced blood supply to the kidneys and thus prevent acute kidney injury.

University of Tennessee Health Science Center, USA.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/29187590>

Cells: Activation of the CB1 receptor protects nerve cells

The activation of the CB1 receptor by a synthetic cannabinoid protected nerve cells, which were stressed by inflammation or stress on the endoplasmic reticulum within the cells, reduced programmed cell death (apoptosis) and improved survival. Authors wrote, that “these data suggest that the endocannabinoid system is a potential therapeutic target in neurodegenerative processes.”

Source: <http://www.ncbi.nlm.nih.gov/pubmed/29134561>

Human: Cannabis use does not increase the risk for atherosclerosis

In a study with 3498 participants of the CARDIA study (Coronary Artery Risk Development in Young Adults), cannabis use was not associated with an increased risk for the development of atherosclerosis. A working group of scientists from Switzerland and the USA published their observations in the journal *Addiction*. Participants were aged 18 to 30 years at baseline in 1985 to 1986 and were followed for 25 years.

Among those who never smoked tobacco, cannabis use was not associated with increased calcium in the abdominal aorta or the coronary arteries. Only if cannabis use was used together with tobacco there was an increased risk for the development of atherosclerosis. Authors concluded that “marijuana use appears to be associated with subclinical atherosclerosis, but only among ever tobacco users.”

Source: <http://www.ncbi.nlm.nih.gov/pubmed/29168268>

Human: Cannabidiol may be helpful in schizophrenia according to clinical study

The plant cannabinoid cannabidiol (CBD) has shown promise in a clinical trial as a potential new treatment for psychosis, scientists from King’s College in London, UK, wrote. In the trial, 88 patients received either 1000 mg of CBD or placebo for six weeks, alongside their existing antipsychotic medication. Patients treated with CBD had lower levels of psychotic symptoms than those who received a placebo.

The study found that patients, who were treated with CBD, were more likely to be rated as “improved” by their psychiatrist and there were signs of better cognitive performance. Authors concluded in their article, that these “findings suggest that CBD has beneficial effects in patients with schizophrenia. As CBD's effects do not appear to depend on dopamine receptor antagonism, this agent may represent a new class of treatment for the disorder.”

Source: <http://www.ncbi.nlm.nih.gov/pubmed/29241357>



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Acetaminophen Relieves Inflammatory Pain Through CB₁ Cannabinoid Receptors

Acetaminophen is a widely used analgesic drug with multiple but only incompletely understood mechanisms of action including a facilitation of endogenous cannabinoid signaling via one of its metabolites.

Data from a recent study indicate that enhanced cannabinoid signaling is also responsible for the analgesic effects of acetaminophen against inflammatory pain. Local injections of the acetaminophen metabolite AM 404 and of cannabinoid receptor antagonists as well as data from tissue specific CB₁ receptor deficient mice suggest the rostral ventromedial medulla as an important site of the cannabinoid-mediated analgesia by acetaminophen. [The rostral ventromedial medulla is a brain stem region involved in the modulation of nociception (the sensory nervous system's response to certain harmful or potentially harmful stimuli.)]

Source: <http://www.jneurosci.org/content/early/2017/11/22/JNEUROSCI.1945-17.2017>

Medical Cannabis an Alternative for Opioids

University of New Mexico researchers say the legal availability of medical cannabis has the potential to reduce opioid use among chronic pain patients.

The work of associate psychology professor Jacob Miguel Vigil and assistant economics professor Sarah See Stith was recently published in the journal PLOS ONE.

The results indicate a strong correlation between enrollment in New Mexico's medical cannabis program and cessation or reduction of opioid use.

Vigil says informal surveys showed a significant proportion of patients substituted their opioid prescriptions with cannabis.

Source: <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0187795>

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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

"As democracy is perfected, the office of the President represents, more and more closely, the inner soul of the people. On some great and glorious day, the plain folks of the land will reach their heart's desire at last and the White House will be occupied by a downright fool and complete narcissistic moron."

-- H.L. Mencken, the Baltimore Evening Sun, July 26, 1920