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# CANNABINOID CHRONICLES

## Medical Cannabis News and Information

### **Experts Cite Reasons for Lack of Medical Cannabis Research**

A disinterested pharmaceutical industry and the problem of finding a convincing placebo are just two reasons experts say there has been little quality research into medicinal cannabis.

A growing number of Canadians are turning to medical cannabis despite questions about its risks and effectiveness as a health product.

Cannabis' unconventional journey onto the medical market puts it at odds with more mainstream medications, which typically undergo years of costly scrutiny before being approved for use, said Mark Ware, a pain researcher at McGill University Health Centre in Montreal.

Ware said pharmaceutical companies are willing to pay hundreds of millions of dollars for clinical trials because once a drug is approved they have a window of time to sell it exclusively.

"When you think about medications that have been given approval to be sold in pharmacies, that's where most if not all of our medications come from," he said.

"That model simply does not hold for much of the classical herbal cannabis research, where you're looking for basic claims of efficacy and safety, but not trying to make a formal claim for a product that is going to be patented."

Ware said another dilemma in conducting research on medical cannabis is the absence of a plausible placebo, especially because study participants often have experience using cannabis and recognize if they have been placed in the study or control group.

Hemp has been suggested as a placebo, but it has been difficult to create a convincing product so far.

**Source:** [www.cbc.ca/news/canada/edmonton/big-pharma-snob-placebo-sag-to-blame-for-lack-of-medical-pot-research-experts-1.4464810](http://www.cbc.ca/news/canada/edmonton/big-pharma-snob-placebo-sag-to-blame-for-lack-of-medical-pot-research-experts-1.4464810)

### **Alberta MD Calls Out College on Medical Cannabis Stance**

James Moir, an Edmonton MD, has called out the Alberta College of Family Physicians (ACFP) for its recent stance on medical cannabis, which stated that there is insufficient evidence to recommend it and that adverse effects outweigh any benefits. (Sadly, in 2018, we are still hearing this untruth from physicians.)

Moir states, "The ACFP's statement is simply dead wrong, and appears to be based on outdated information, and at least partially based on the ignorance and stigma associated with cannabinoid medicine, which pervades the lay public and medical profession alike."

"There is a misconception that medical cannabis is "smoking pot," and that "pot is pot." Nothing could be further from the truth."

"There is solid evidence that these compounds are effective in chronic pain and muscle spasticity associated with diseases such as multiple sclerosis, Parkinson's disease, spinal cord injuries, certain forms of epilepsy, wasting associated with chronic illness such as cancer, or AIDS, nausea associated with chemotherapy, and chronic anxiety states."

"At the cannabinoid clinic where I work, we have successfully weaned many patients with chronic pain and inflammatory conditions off opiates entirely, or drastically reduced their daily intake to safer levels. As an experienced physician, I will categorically state that the medicinal ingredients in cannabis are the safest known to medicine."

**Source:** <http://www.mapinc.org/drugnews/v17/n432/a05.html?180>



# ***International Association for Cannabinoid Medicines (IACM) Bulletin***

## ***Human: Cannabis use does not reduce motivation in adolescents***

Cannabis use did not reduce motivation in adolescents aged 14 to 18 years according to research by scientists of the Department of Psychology of the Florida International University in Miami, USA. They compared 36 regular cannabis users and 43 occasional users. Motivation was measured by two established scales (Apathy Evaluation Scale and Motivation and Engagement Scale). After controlling for possible other factors, which may influence motivation, no significant differences were observed between regular and light users on any motivation index. Similarly, no associations between motivation and lifetime or past 30-day cannabis use (CU) amount were observed. Authors concluded that their “findings do not support a link between reduced motivation and CU among adolescents after controlling for relevant confounds.”

**Source:** <http://www.ncbi.nlm.nih.gov/pubmed/29272172>

## ***Human: The number of CB2 receptors is increased in the brains of patients with ALS***

After the death of patients suffering from ALS (amyotrophic lateral sclerosis) their brains contained more CB2 receptors than healthy people, while the CB1 receptor was not affected. Authors concluded that “These observations support that targeting this receptor may serve for developing neuroprotective therapies” in this patient population.

**Source:** <https://www.ncbi.nlm.nih.gov/pubmed/29334787>

## ***Human: A new formulation, which increases the uptake of cannabinoids by the mucosa of the mouth***

A novel oral THC and CBD formulation, called PTL401, was developed, which increased the bioavailability of the cannabinoids by 131% for CBD and 116% for THC compared to a standard cannabis spray (Sativex). Authors wrote: “The relatively faster absorption and improved bioavailability, compared to the oromucosal spray, justifies further, larger scale clinical studies with this formulation.” Tel Aviv Sourasky Medical Center, Israel.

**Source:** <http://www.ncbi.nlm.nih.gov/pubmed/29287930>

## ***Human: Cannabis may reduce inflammation associated with alcohol use***

Scientists investigated 66 regular alcohol users, of whom some also used cannabis. Alcohol use was associated with an increased level of the pro-inflammatory mediator interleukin-6, while cannabis was associated with an increased level of interleukin-1 Beta, which has anti-inflammatory properties. Authors concluded that “cannabinoid compounds may serve to mitigate inflammation associated with alcohol use.”

**Source:** <http://www.ncbi.nlm.nih.gov/pubmed/29286537>

## ***Human: Cannabis use protects against alcoholic liver disease***

Cannabis use protected alcohol users from negative consequences of alcohol to the liver, including fatty liver, cirrhosis and liver cancer (hepatocellular carcinoma). This is the result of a working group by scientists of several institutions within the USA, including the University of Massachusetts, the Howard County General Hospital in Colombia, the Hospital and Medical Center in Englewood and the Maimonides Medical Center in Brooklyn. Scientists analysed data from a data base of 319,514 adults with a history of alcohol abuse.

The risk for the development of all alcoholic liver diseases in patients, who also used cannabis, was significantly lower compared to cannabis non-users. The risk for the development of fatty liver was reduced by 45% and the risk for the development of alcoholic liver cirrhosis was reduced by 55%. Liver health was even better for dependent cannabis users than for non-dependent users. Authors concluded that their “findings suggest that cannabis use is associated with reduced incidence of liver disease in alcoholics.”

**Source:** <https://www.ncbi.nlm.nih.gov/pubmed/29341392>

## ***Human: Expectations and prejudices of investigators influence the performance of cannabis users***

The judgements of cannabis users by examiners predict performance of cannabis users and non-users. This is the result of scientists at the University of Palo Alto, USA, which was recently published in the journal *Archives of Clinical Neuropsychology*.

Participants included 41 cannabis users and 20 non-users. Before testing, examiners who were blind to participant user status privately rated whether they believed the examinee was a cannabis user or non-user. Examiners then administered a battery of neuropsychological and performance tests.

Examiners' judgements of cannabis users were 75% accurate, but they were not able to accurately predict the status of non-users. Examiners' judgments of cannabis user status predicted performance even after controlling for actual user status, indicating vulnerability to examiner expectancy effects. Authors wrote, that these “findings have important implications for both research and clinical settings, as scores may partially reflect examiners' expectations regarding cannabis effects rather than participants' cognitive abilities.”

**Sources:** <https://www.ncbi.nlm.nih.gov/pubmed/29342226>

***More info: [www.cannabis-med.org](http://www.cannabis-med.org)***

## Cannabis Studies 2017 Summary

Some medical cannabis research highlights of 2017:

**1. CBD effective for Dravet Syndrome epilepsy.** In May 2017, the *New England Journal of Medicine* published a study that looked at cannabidiol (CBD) for drug-resistant seizures in the Dravet Syndrome using a double-blind, placebo-controlled trial.

Scientists studied the effect of CBD (Epidolex by GW Pharmaceuticals) on epileptic seizures in patients with the Dravet syndrome. They found that orally-consumed CBD oil over a 14-week treatment period was an effective anti-epileptic treatment in these patients, reducing the median number of seizures each month by 39% compared to 13% for placebo-treated patients.

**Source:** [www.nejm.org/doi/full/10.1056/NEJMoa1611618#t=article](http://www.nejm.org/doi/full/10.1056/NEJMoa1611618#t=article)

**2. Cannabis can benefit people with autism.** Autism, similar to epilepsy, often results from too little inhibition in the brain, and it's common for individuals on the severe end of the autism spectrum to also have epilepsy. U. of Washington scientists published a report demonstrating CBD's effectiveness in a mouse model of epilepsy and autism. They looked at CBD's impact on autistic-like social deficits, and they revealed that CBD normalizes social behavior in mice. This was the first controlled study to demonstrate CBD's ability to treat autistic-like social behaviors.

**Source:** <http://www.pnas.org/content/114/42/11229>

**3. A 2016 report claimed that CBD turned into THC in our stomachs; a 2017 study refuted this.**

If CBD gets converted to THC, then patients that consume large doses of CBD should experience THC-like effects. But they don't. This simple observation prompted many to speculate that the conversion of CBD to THC was an artifact of the experimental conditions which were conducted in a petri dish and not a living creature.

**Source:** <https://www.ncbi.nlm.nih.gov/labs/articles/29202305/>

**4. Cannabis is proving to be effective at combating the opioid epidemic.** Numerous studies have demonstrated how opioid users have reduced their medication when also using cannabis: *International Journal of Drug Policy* and *PLoS One*. A Canadian study surveyed 271 patients: 63% reported that cannabis substituted for their prescription medications. Among pain patients, 30% reported that they swapped out their prescription opioids for cannabis. Patients reported that one of their greatest reasons for switching from opioids to cannabis wasn't necessarily because of better symptom management, but because there were fewer side effects associated with cannabis use.

**Source:** <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0187795> <https://www.ncbi.nlm.nih.gov/pubmed/28189912>  
[http://www.ijdp.org/article/S0955-3959\(17\)30013-0/fulltext](http://www.ijdp.org/article/S0955-3959(17)30013-0/fulltext)

**5. Low doses of THC promote healthy brain aging.** As the mature brain ages in adulthood, its endocannabinoid system weakens; it's thought that the weakened endocannabinoid system contributes to cognitive decline in the elderly. The study in *Nature Medicine* heard from a research team from Germany that reported consistently activating CB1 receptors with low doses of THC prevented age-related cognitive decline in mice. In old mice, THC increased the number of connections brain cells made with one another in the hippocampus.

**Source:** <https://www.ncbi.nlm.nih.gov/pubmed/28481360>

**6. Cannabis can relieve Parkinson's disease symptoms.** A study published in *Clinical Neuropharmacology* provided evidence that cannabis can relieve many of the devastating symptoms associated with the disease. In a pilot study of 40 Parkinson's disease patients, scientists from Tel Aviv University in Israel found that smoking medicinal cannabis for an average of 19 months improved many of the symptoms associated with the disease. 82% of participants reported that cannabis improved their overall symptoms. Nearly 75% also reported that cannabis enhanced their mood, suggesting that cannabis may be an effective palliative care strategy for Parkinson's disease patients. Cannabis may be having its beneficial effects by activating CB1 receptors in the substantia nigra, a small brain region where brain cells are selectively destroyed in the disease

**Source:** <https://www.ncbi.nlm.nih.gov/pubmed/29059132>

**7. Cannabis can increase sexual intercourse frequency.** The study, published in *The Journal of Sexual Medicine*, analyzed sexual activity data from over 50,000 men and women and concluded that cannabis use actually *increases* frequency of sexual activity. This increase was found in both men and women and consistent across demographic groups. The study, however, did not address the effect of cannabis use on sexual performance.

**Source:** [www.jsm.jssexmed.org/article/S1743-6095%2817%2931417-0/fulltext](http://www.jsm.jssexmed.org/article/S1743-6095%2817%2931417-0/fulltext)

**8. A national medical cannabis program (USA) could prevent thousands of deaths annually.** A 2017 study indicates that medicinal cannabis, if legalized nationally, could save 47,500 American lives annually. The study noted, "cannabis use appears to prevent approximately 17,400 to 38,500 premature deaths annually."

**Source:** <https://scholarworks.iu.edu/dspace/handle/2022/21632#>  
Cannabis use is associated with a substantial reduction in premature deaths in the United States.

**9. Senior citizens embrace medical cannabis; use is up by 250%.** Cannabis helps today's senior citizens exit the vicious cycle of pharmaceuticals and addiction. Although cannabis was once considered a dangerous recreational drug, today's senior citizens are among the fastest growing demographic within the cannabis industry.

**Source:** <http://onlinelibrary.wiley.com/doi/10.1111/add.13670/full>

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## Cannabis Studies 2017 Summary

...Continued from Page 3

**10.** Δ9-THCA has potent neuroprotective properties. Published in November in *the British Journal of Pharmacology*, the Spanish study conducted at Instituto Maimónides de Investigación Biomédica de Córdoba, found Δ9-THCA is a worthy treatment option for those suffering from debilitating neurodegenerative diseases.

**Source:** <http://onlinelibrary.wiley.com/doi/10.1111/bph.14019/abstract#THCA> shows Neuroprotective ability

**11.** Cannabis consumption can minimize risk of stroke. According to a study published in February in *the Journal of Neuropsychopharmacology*, habitual cannabis use can dramatically reduce an individual's chance of suffering a stroke.

**Source:** [https://www.nature.com/articles/npp201744?foxtrotcallback=true#Residual effects of THC on cerebral blood flow](https://www.nature.com/articles/npp201744?foxtrotcallback=true#Residual%20effects%20of%20THC%20on%20cerebral%20blood%20flow)

**12.** Cannabis helps HIV patients maintain cognitive function. In a potentially ground-breaking discovery, a Michigan State University study published in November says medical cannabis may be able to decelerate the mental decline that affects as many as 50% of patients with HIV.

**Source:** [https://journals.lww.com/aidsonline/Abstract/publishahead/HIV\\_infected\\_cannabis\\_users\\_have\\_lower\\_circulating.97348.aspx](https://journals.lww.com/aidsonline/Abstract/publishahead/HIV_infected_cannabis_users_have_lower_circulating.97348.aspx)

**13.** THC can help with migraine pain. A recent study published in the *European Journal of Pharmacology* examined the use of cannabinoids as a treatment for migraines in female rats and found THC has the power to reduce migraine-like pain.

**Source:** [https://www.sciencedirect.com/science/article/pii/S0014299917307239#THC anti- migraine effect](https://www.sciencedirect.com/science/article/pii/S0014299917307239#THC%20anti-%20migraine%20effect)

**14.** CBD has anti-psychotic effects. Performed in the Netherlands, a review of existing research on CBD has underscored the compound's efficacy as an antipsychotic medication; it is more effective at reducing psychotic episodes than currently prescribed pharmaceuticals.

**Source:** <https://www.scribd.com/document/365859501/Review-of-CBD-Research-Points-to-Antipsychotic-Effect>

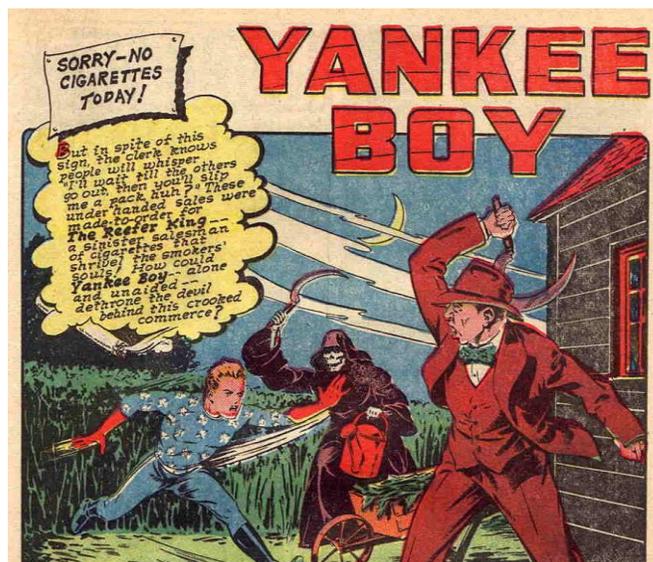
**15.** Sativex helps calm spasticity in spinal cord injuries. Research published in October indicates that Sativex – a whole plant cannabis-derived pharmaceutical spray – can mitigate spasticity associated with prolonged spinal cord injury.

**Source:** <https://www.ncbi.nlm.nih.gov/pubmed/28929471#>[Delta-9-tetrahydrocannabinol-cannabidiol in the treatment of spasticity in chronic spinal cord injury: a clinical experience].

**16.** Cannabinoids found to increase anti-cancer effect of chemotherapy. In May, researchers from St. George's University of London confirmed that chemotherapy is most effective when used in conjunction with cannabinoids for the treatment of leukemia. Per the study's results, the reduced dosage of chemotherapy could potentially translate to fewer side effects.

**Source:** <https://www.spandidos-publications.com/10.3892/ijo.2017.4022>

**Article sources:** <https://www.medicalcannabisdispensary.co.za/cbd-cannabis-studies-2017/> <https://www.marijuana.com/news/2017/12/> <https://www.leafly.com/news/health/the-top-medical-cannabis-studies-of-2017>



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

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**“The road to success and the road to failure are almost exactly the same.”**

**-- Colin R. Davis (1927 - 2013, music conductor)**