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Medical Cannabis News and Information

Veterans with PTSD Challenge Medical Cannabis Funding Cuts

New Brunswick military veterans with post-traumatic stress disorder (PTSD) are preparing to take the federal government to court in hopes of winning a declaration that Veteran's Affairs Canada (VAC) violated their rights when it reduced the amount of medicinal cannabis it would cover.

Members of the group use the drug to treat their service-related injuries. In an unusual move, instead of seeking payments for damages, the veterans plan to ask a federal court to rule that VAC violated its obligation to vets last May, when it reduced the daily allowance of medical cannabis by 70%, from 10 grams to three.

David Lutz, the Saint John-based lawyer who is representing the plaintiffs, said they want to be compensated for enough cannabis to avoid resorting to prescription drugs to control symptoms of PTSD and other conditions.

"We are asking for a declaration by the court that reducing from 10 grams to three grams is a violation of the government's obligation to the veterans," Mr. Lutz said.

When the cuts were instituted last May 2017, more than 2,500 veterans across the country had authorization to use more than three grams of medicinal cannabis a day to treat symptoms of PTSD, chronic pain and more, even though scientific research into its benefits has been inadequate. The cuts forced all of those veterans onto lower doses and many former soldiers said they tried to take their own lives to avoid relapsing with uncontrollable symptoms. Some followed through including one veteran who killed himself after just one week.

One year later, funding has been restored for nearly half of the veterans whose coverage was cut to three grams, in many cases up to 10 grams a day. A class-action

lawsuit, with funding from Veterans for Healing, an advocacy and support organization in Oromocto, N.B., is being launched.

"It's not about money, it's about doing what's right," said Jamie Keating, a Saint John-based veteran who will be the named plaintiff.

Costs of VAC's medical cannabis had increased to more than \$60 million – making it the most costly item in the department's drug-benefit program – and the lack of science to support using cannabis as a treatment factored prominently in the decision to scale back.

However, as veterans' medical cannabis use ballooned, prescriptions for opioids and tranquilizers declined significantly.

Since 2012, the number of veterans prescribed benzodiazepines – with brands such as Xanax, Ativan and Valium – decreased 43% last fiscal year. Opioid prescriptions also shrank 31% during that same period. What that translates into as a dollar amount has not been revealed publicly, but perhaps these savings outweigh the cost of cannabis or reduce overall health costs.

More in-depth research is needed but these new data echo trends observed in US states with legalized medical cannabis, where significant declines in opioid overdoses suggest that people may be substituting these oft-abused, addictive medicines with cannabis. In New Brunswick, Mr. Lutz said he is building a cache of anecdotal evidence to address this before he files the case. His office is interviewing up to 100 veterans.

"The theme here is plants, not pills," Mr. Lutz said, adding that none of those who have signed onto the suit could cope on three grams of cannabis a day without resorting to additional drugs.

Sources: <https://www.theglobeandmail.com/canada/article-veterans-with-ptsd-plan-lawsuit-over-cuts-to-funding-for-medical/>
<https://www.theglobeandmail.com/canada/british-columbia/article-number-of-veterans-using-opioids-declines-significantly-as-cannabis/>

Human: Cannabis use reduces mortality in patients with burns

In a study on 3299 patients with a burn injury, cannabis use was associated with lower mortality and shorter hospital stays compared to non-users and users of other drugs. Researchers of the Jaycee Burn Center of North Carolina in Chapel Hill, USA, analysed data of all patients admitted to the centre in 2015.

All included patients were tested for drugs, including amphetamine, cocaine, cannabis and alcohol; 56% tested positive for at least one substance. The most prevalent drug was cannabis at 29% of study population, followed by alcohol, cocaine, and then amphetamine. Patients who tested positive for cannabis had shorter lengths of stay in hospital compared to non-users and users of other drugs. Mortality was 4% for patients with positive cocaine and amphetamine screens, as well as those testing negative for drugs and alcohol. Mortality was 8% for those positive for alcohol and 1% for patients with positive cannabis screens.

Source: http://academic.oup.com/jbcr/article-abstract/39/suppl_1/S198/4965666?redirectedFrom=fulltext

Human: Effect of cannabis on adolescents on cognitive performance overstated

A review of 69 studies on the effects of cannabis on cognitive function in young people came to the conclusion that “associations between cannabis use and cognitive functioning in cross-sectional studies of adolescents and young adults are small and may be of questionable clinical importance for most individuals. Furthermore, abstinence of longer than 72 hours diminishes cognitive deficits associated with cannabis use.”

Source: <http://jamanetwork.com/journals/jamapsychiatry/article-abstract/2678214?redirect=true>

Human: THC may improve symptoms of anorexia nervosa

THC may be effective in treating psychological symptoms in patients suffering from anorexia nervosa. This is the result of a small clinical study conducted by researchers of Hebrew University in Jerusalem and Haifa University, Israel. Nine female subjects with a mean age of 45 years and a mean body mass index (BMI) of 16.1 participated. Underweight is defined as a Body Mass Index below 20 or 19. Severe underweight is defined as a BMI below 16. They were treated with 1 mg THC per day for one week and 2 mg per day for 3 weeks. Significant improvements were found in self-reported body care, sense of ineffectiveness, asceticism and depression. There were no significant changes in BMI.

Source: <https://www.ncbi.nlm.nih.gov/pubmed/29735812>

Human: Acute use of cannabis may reduce anxiety and depression according to large study

Cannabis reduces symptoms of depression, anxiety and stress according to a study by researchers from the Washington State University in Pullman, USA. Using data from an app, they analysed 11,953 cannabis sessions of people suffering from depression (3151 cannabis intakes), anxiety (5085) and stress (3717). The app (Strainprint™) provides medical cannabis users a means of tracking changes in symptoms as a function of different doses and cannabis strains.

Medical cannabis users perceived a 50% reduction in depression and a 58% reduction in anxiety and stress following cannabis use. Two puffs were sufficient to reduce intensity of depression and anxiety, while 10 puffs or more produced the greatest perceived reductions in stress. Strains with high CBD and low THC was associated with the largest changes in depression ratings, while strains with high CBD and high THC produced the largest perceived changes in stress.

Source: <https://www.ncbi.nlm.nih.gov/pubmed/29656267>

Human: Acute pain is reduced by THC

In a study with 24 healthy volunteers who received either paracetamol (1000 mg), THC (10 mg) promethazine (50 mg) or placebo, THC and promethazine reduced the pain sensation. The researchers used different tasks, which elicited electrical, pressure, heat, cold and inflammatory pain. They showed that “pain thresholds determined using this pain test battery are not driven by sedation.”

Centre for Human Drug Research, The Netherlands.

Source: <https://www.ncbi.nlm.nih.gov/pubmed/29635857>

Cells: Hemp shows potential for treating ovarian cancer

Researchers used ovarian cancer cells to investigate the effects of hemp on their growth. They demonstrated in two studies that an extract [made from what?] from Kentucky hemp slowed cell migration and therefore inhibited metastasis. Also, the extract reduced secretion of interleukin-1 beta; this cytokine stimulates cancer growth. The authors concluded that “‘KY hemp’ slows ovarian cancer comparable to or even better than the current ovarian cancer drug Cisplatin.”

Source: www.sciencedaily.com/releases/2018/04/180423155046.htm

Cells: CBD and radiotherapy may act synergistically in killing cancer cells

The combination of cannabidiol (CBD) and radiotherapy showed enhanced efficacy in the killing of pancreatic and lung cancer cells.

Brigham and Women's Hospital, Boston, USA.

Source: <https://www.ncbi.nlm.nih.gov/pubmed/29740535>

More Cannabidiol Misconceptions

The discovery of cannabidiol (CBD) and its use as a “non-psychoactive” cannabinoid-based medicine for various medical conditions has meant a large increase in research and acceptance within North American society. However, as pointed out in the article “**Cannabidiol (CBD) Misconceptions**” in Volume 7, Issue 8, of *The Cannabinoid Chronicles*, there are numerous myths and misunderstandings about CBD. Eight of these were highlighted and disproved:

1. CBD is medical; THC is recreational
2. CBD is the good cannabinoid; THC is not
3. CBD is most effective without THC
4. Single-molecule pharmaceuticals are superior to whole-plant products
5. Psychoactivity is an adverse side effect
6. CBD is legal in all US states
7. ‘CBD-only’ laws adequately serve patients
8. It doesn’t matter where the CBD comes from

Here are a few more myths:

1. **CBD is sedating** - While some early studies attributed a sedating effect to CBD-dominant cannabis preparations, CBD itself is not sedating; it is actually *alerting*. CBD has been shown to counteract the sedative effects of THC, delay sleep time, and reduce THC-associated “hangover.” Even very high doses of pure CBD, such as 600 mg in a single dose, have not produced a sedating effect in healthy subjects. Why the confusion? It may be that varieties of cannabis that contain high levels of CBD often also contain significant amounts of myrcene, a potentially sedating terpene. Patients report that CBD makes them feel awake, but they have no trouble sleeping when they lie down and close their eyes.

2. **A little CBD is all one needs** - Ideally, medicine doses are calculated to be successful at the lowest possible dose; however, some physicians support the use of high doses of CBD, especially in the absence of high levels of THC.

Milligram for milligram, CBD is much less potent than THC at relieving symptoms. For example, a patient who experiences pain or anxiety relief with 3 to 5 mg of THC may require 30 to 200 mg of CBD to produce similar results, if they can be achieved at all. And while there is significant overlap in the symptoms that can be treated with either THC or CBD, the way in which they relieve these symptoms and the individual responses to these two agents varies significantly.

Studies that have used pharmaceutical-grade CBD to treat anxiety, schizophrenia, and seizures have used hundreds of milligrams per dose. This would be simply unaffordable for most consumers. But could lower doses of CBD provide some benefit? The answer is likely yes.

Some patients report feeling more alert, focused, and clear-headed after using 2 to 20 mg of CBD by mouth.

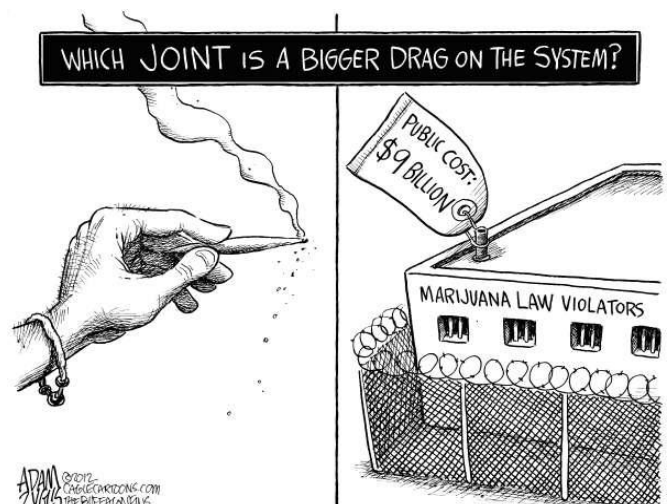
3. **CBD works by activating cannabinoid receptors** - The endocannabinoid system (ECS), a chemical signalling system that is now recognized as playing a significant role in regulating human physiological and neurological systems, and which evolved in animals roughly 500 to 600 million years ago, has been shown to regulate sleep, appetite, psychological well-being and other vital functions, and also help reduce the likelihood of certain kinds of diseases. The ECS includes: various lipids (e.g. anandamide) known as endocannabinoids; enzymes that synthesize and degrade the cannabinoids; and the cannabinoid receptors (CB₁ and CB₂).

The therapeutic effects of CBD are similar in many ways to THC, cannabis’ predominant cannabinoid. Both relieve pain, spasticity, nausea, anxiety, and seizures, and both decrease inflammation. THC works like the endocannabinoids found naturally within us; both turn on the cannabinoid receptors and lead to cellular activities that restore physiologic balance.

CBD, however, does not directly stimulate the CB₁ or CB₂ receptors; it interacts with the endocannabinoid system indirectly without binding like lock and key to receptor (called a “negative allosteric modulator” of the CB₁ receptor). This means that CBD, when administered in combination with THC, will alter the shape of the CB₁ receptor in a way that weakens its binding affinity for THC. Despite its ability to directly decrease cannabinoid signaling, CBD also has the ability to indirectly increase cannabinoid signaling. It does this by inhibiting the breakdown and transport of our most abundant endocannabinoid, anandamide.

As a negative allosteric modulator of CB₁, CBD lowers the ceiling on THC’s psychoactivity, which might be why people don’t feel as high when using CBD-rich cannabis as compared to a THC-infused product.

Sources: <https://www.leafly.com/news/cannabis-101/separating-cbd-facts-from-myths>



Scientists to Study if Cannabis Can Treat Autism

The University of California San Diego announced in a news release that it will be conducting a test on children with severe autism spectrum disorder (ASD) to see if cannabidiol (CBD) can help treat some of their symptoms.

The research, which will involve 30 children, was made possible thanks to a \$4.7 million donation from the Ray and Tye Noorda Foundation (<https://www.rtnf.org/>) in Lindon, Utah. The goals of the study are to determine 1) if CBD is safe and tolerable and whether it helps with the symptoms of ASD; 2) whether and how CBD alters neurotransmitters and/or improves brain connectivity; and 3) whether biomarkers of neuro-inflammation, also associated with ASD, are altered by CBD.

Igor Grant, professor of psychiatry at UC San Diego's Center for Medical Cannabis Research, said it's important to give parents a definitive answer as to whether CBD could improve the quality of their kids' lives.

"The more severe manifestations of autism are difficult to treat, causing parents to look for non-traditional remedies," he said. "There are unconfirmed reports that cannabidiol could be helpful, but there are no careful studies to document either its benefits or its safety.

For the study, 30 children will receive a liquid form of CBD that comes from a lab in Arizona. Aged 8 to 12, they will undergo MRI scans and behavioral testing to see what changes, if any, the treatment brings.

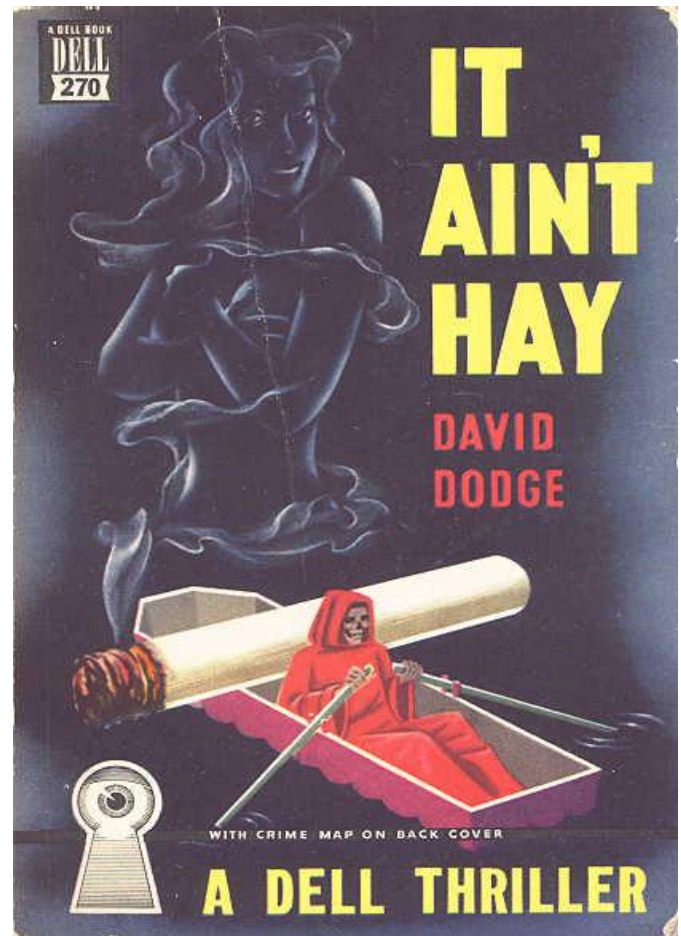
Grant told the newspaper that they also want to see if brain inflammation and brain network connectivity are affected.

A growing number of people have said that cannabis shows promise in combating some of the more harmful symptoms of autism.

On April 26, an advisory committee to the US Food and

Drug Administration (FDA) recommended that CBD should be prescribed, but only for those with severe types of epilepsy. They voted that it should only be used for children over the age of two, and must be used for those with Lennox-Gastaut syndrome and Dravet syndrome.

Sources: <http://www.mapinc.org/drugnews/v18/n106/a06.html?1042>
<https://www.entrepreneur.com/article/312723>



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

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www.drugpolicy.org

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www.mapinc.org

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***"Progress is impossible without change, and those who cannot change
their minds cannot change anything."***

-- George Bernard Shaw (1856 - 1950, playwright, critic, and political activist)