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Medical Cannabis News and Information

Solved Crime Rates Increase After Cannabis Legalization

Washington State University (WSU) researchers have found that cannabis legalization in Colorado and Washington states has not hurt police effectiveness. In fact, clearance rates for certain crimes have improved. Clearance rates - the number of cases solved, typically by the arrest of a suspect - were falling for violent and property crimes in the two states before they authorized retail sales of cannabis late in 2012. The rates then improved significantly in Colorado and Washington while remaining essentially unchanged in the rest of the nation, according to the researchers' analysis of monthly FBI data from 2010 through 2015.

"Our results show that legalization did not have a negative impact on clearance rates in Washington or Colorado," said David Makin, assistant professor in WSU's Department of Criminal Justice and Criminology "In fact, for specific crimes it showed a demonstrated, significant improvement on those clearance rates, specifically within the realm of property crime."

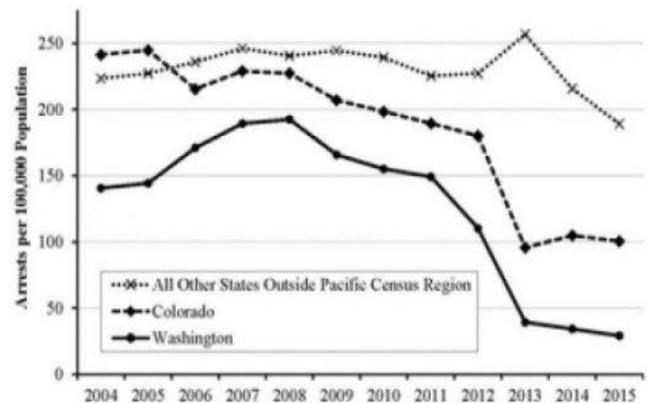
Writing this month in the journal *Police Quarterly*, the researchers said legalization created a "natural experiment" to study the effects of a sweeping policy change on public health and safety.

Citizens in 12 states have voted on cannabis legalization and proponents in all of them have argued that it would let police reallocate resources to property and violent crimes.

The WSU study bears that out. It finds that after legalization:

- Arrest rates for cannabis possession dropped considerably. Following legalization in 2012, they dropped nearly 50% in Colorado and more than 50% in Washington.
- Violent crime clearance rates shifted upward.

- Burglary and motor vehicle theft clearance rates "increased dramatically."
- Overall property crime clearance rates jumped sharply and reversed a down ward trend in Colorado.



Cannabis arrest rates were already on the decline but plummeted after Colorado and Washington authorized retail sales late in 2012. *Credit: D. Makin, Washington State Univ.*

As Makin describes, this research is not without its limitations. He offers "one of the pressing limitations within this study is that not all agencies equally report their clearance rates. It is entirely possible that as we expand our data collection to include additional years, more states, and a wider set of agencies, these results could change."

Makin also acknowledged that while he and his colleagues found a correlation between legalization and clearance rates, they do not have an explicit cause. The improvements could be the result of more overtime for law enforcement officers, new strategies or a focus on particular crimes. But Makin said he suspects that the loss of the specific reporting category of marijuana arrests prompted police departments to re-evaluate their priorities, particularly in "boots on the ground" cases.

Source:

<https://www.sciencedaily.com/releases/2018/07/180724110031.htm>

Human: Drug addicts have higher retention to opioid replacement treatment if they use cannabis

In a large study with 820 people who used illicit drugs and underwent opioid agonist treatment, retention to treatment was improved if they also used cannabis at least daily. Scientists of the BC Centre on Substance Use in Vancouver, Canada, published these results in the journal *Addiction*. Participants initiated treatment with methadone or buprenorphine/naloxone between December 1996 and May 2016. The primary outcome was retention to the treatment, defined as remaining in the treatment for two consecutive 6-month follow-up periods. At least daily cannabis use in addition to methadone or buprenorphine was positively associated with retention to the treatment compared to non-users of cannabis or less than daily users. Authors concluded that among “people who use illicit drugs initiating opioid agonist treatment in Vancouver, at least daily cannabis use was associated with approximately 21% greater odds of retention in treatment compared with less than daily consumption.”

Source: <https://www.ncbi.nlm.nih.gov/pubmed/30238568>

Animal: CBD reduces motivation for methamphetamine

In a study with rats which were dependent from methamphetamine, the administration of CBD reduced the motivation to self-administer methamphetamine and attenuated relapse to methamphetamine-seeking behaviour. Authors wrote that “cannabidiol might be worth trialing as a novel pharmacotherapy for methamphetamine dependence”.

Source: <https://www.ncbi.nlm.nih.gov/pubmed/30260267>

Human: Cannabis extract with high CBD and low THC content effective in childhood epilepsy

In a study with 19 children with Dravet syndrome, a cannabis extract containing 100 mg/ml CBD and 2 mg/ml THC reduced the number of seizures and improved quality of life. The 20-week study was conducted at the Hospital for Sick Children in Toronto, Canada. The cannabis extract was given add on to standard treatment. Mean daily dose achieved was 13.3 mg/kg of CBD (range: 7 to 16 mg/kg bodyweight) and 0.27 mg/kg of THC (range: 0.14 to 0.32 mg/kg bodyweight). Authors wrote that there “was a statistically significant improvement in quality of life, reduction in EEG spike activity, and median motor seizure reduction of 70.6%.”

Source: <https://www.ncbi.nlm.nih.gov/pubmed/30250864>

Human: The endocannabinoid system is associated with well-being in later life

The endocannabinoid system is positively influenced by exercise and this has positive effects on well-being and quality of life in later years.

Source: <https://www.ncbi.nlm.nih.gov/pubmed/30290200>

Human: Cannabis use is associated with significant reduction in occurrence of diabetes

The risk of diabetes was reduced by 19% in people who have ever used cannabis, and by 49% in those who have used it within the past 12 months. This analysis was published by investigators of the Institute of Medical Science of the University of Toronto, Canada. Data were obtained from the Canadian National Epidemiologic Survey on Alcohol and Related Conditions.

The corresponding odds ratios of diabetes were 0.81 and 0.51 for lifetime and 12-month cannabis use, respectively. Authors concluded that a “decreased likelihood of diabetes for cannabis users versus non-users was indicated after accounting for a range of potential confounders, including mental health disorders. Before the protective effects of cannabis use for diabetes can be suggested, further epidemiological studies are needed.”

Source: <https://www.ncbi.nlm.nih.gov/pubmed/30288813>

Human: Cannabidiol (CBD) may be useful in the treatment of cancer according to an observational study

In an observational study with 119 patients with advanced cancer, of whom 28 were given CBD as the only treatment, doctors were able to document improvements in a few patients. Investigators work at The Old Brewery and the St George’s University of London, UK. They analysed the data routinely collected, as part of their treatment program over a 4-year period. The main cancers were breast cancer (39 cases), prostate cancer (16 cases) and colorectal cancer (13 cases).

Authors noted that eight patients “clearly improved” by using CBD suffering from prostate cancer, brain tumours, breast cancer, oesophageal cancer and lymphoma. They presented two “impressive cases”, of which one was a 5-year-old male patient with a certain brain tumour (anaplastic ependymoma) and the other a 50-year-old patient with tancytic ependymoma, another brain tumour. In both cases there was a decrease in tumour volume, for which CBD was made responsible. Due to the character of the study, no clear conclusions can be drawn.

Source: <https://www.ncbi.nlm.nih.gov/pubmed/30275207>

Animal: New mechanism of action of CBD

In several animal studies, researchers found that CBD may block the sigma 1 receptor. This blockade may have a positive effect on chronic neurodegenerative diseases, including stroke and epilepsy, neuropsychiatric disorders, neuropathic pain and certain types of cancer.

Dept. of Translational Neuroscience, Cajal Institute, Spain.

Source: <https://www.ncbi.nlm.nih.gov/pubmed/30223868>

Can You Overdose on Cannabis?

By definition, “a drug overdose (or simply overdose or OD) is the ingestion or application of a drug or other substance in quantities greater than are recommended or generally practiced. An overdose may result in a toxic state or death.”

It follows, therefore, that one can overdo or overdose on cannabis, just like opioids or alcohol.

Opioids and alcohol can kill you.

But, and this is a big but, **cannabis cannot kill you.**

Repeat. Cannabis itself cannot kill the human body.

There are no recorded deaths from cannabis use alone.

Undoubtedly some people have experienced psychotic experiences upon ingesting a dose far greater than their system is accustomed to or can process normally. Effects, such as over-anxiety or panic or racing heart rate, can be quite unpleasant. Some folks have had to be hospitalized. They do survive, however, but they may never try cannabis again.

Cannabis over-consumption typically occurs when a novice user, or one who has abstained for a long period of time, over-consumes an oral product of some form or another (you can overdo it on oil-filled gel capsules or brownies - similar chemicals involved). For example, when oil-based cannabis products are orally ingested (like cookies or olive oil infusions), they are broken down through the stomach and then the duodenum before being processed by the liver. The strong alkaline produced by this process is called 11-hydroxy THC, a cannabinoid with stronger psychotropic effects than basic THC. This process can take from 30 to 120 minutes and limits control of dosage. The advantage is that a small dose is often very effective; the disadvantage is that a very large dose, or overdose, is debilitating or possibly worse depending upon the individual and their age. The adage “start slow unless you know” always holds true.

Overdosing typically doesn't occur with smoking or vaporizing, but a novice consuming a large amount of a concentrate with high THC levels could experience undesirable side effects. Again, they won't die.

Overdosing on opioids and alcohol is a very different matter. With opioids, for example, there is a specific mechanism that leads to death. As Oxford University anesthesiology professor K.T.S. Pattinson observed, “In drug addicts, respiratory depression is the major cause of death.” In other words, the victim falls unconscious during an opioid overdose and the body forgets to breathe.

What scientists call “the fundamental drive to respiration”, i.e. what tells the body to breathe, originates low in the brainstem in an area known as the pre-Bötzing complex. Opioid receptors are found in

many areas of the brain, including the pre-Bötzing complex. Opioids depress the pre-Bötzing complex, which causes breathing to become slow and irregular. In an overdose, breathing shuts down completely and death occurs due to lack of oxygen.

In some cases, an opioid overdose can also depress the brain's mechanism that regulates the heart and blood circulation, leading to a drop in blood pressure and heart failure.

Alcohol poisoning can become lethal when the alcohol overwhelms the liver's ability to clear it, and alcohol in the blood anesthetizes those same brain systems that regulate breathing and blood pressure. They shut down, which leads to death.

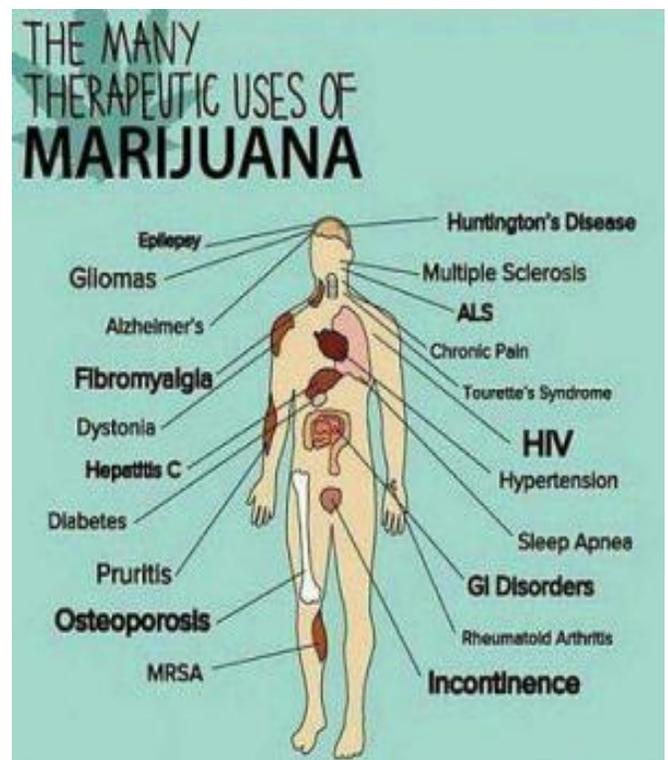
Cannabis does not have the same effect because cannabinoids act on specific receptors that are not concentrated in the brainstem, where breathing and heart rate are controlled. Cannabinoid receptors are most highly concentrated in the basal ganglia, the hippocampus, and cerebellum, which control cognition and movement.

In a 1990 study of cannabinoid receptors, researchers with the National Institutes of Health (NIH) reported that “sparse densities [of cannabinoid receptors] in lower brainstem areas controlling cardiovascular and respiratory functions may explain why high doses of THC are not lethal.”

While it is very possible to overdo your cannabis intake, it's not possible to die from a cannabis overdose.

Sources: https://en.wikipedia.org/wiki/Drug_overdose

<https://www.leafly.ca/news/science-tech/can-you-overdose-on-cannabis>



Medical Cannabis Alters Brain Connections When Relieving Pain

When medical cannabis is taken for chronic nerve pain, it may provide pain relief by reducing connections between the areas of the brain that process emotions and sensory signals, according to a study published in the September 5, 2018, online issue of *Neurology*, the medical journal of the American Academy of Neurology. The study looked specifically at radicular pain, a type of nerve pain that radiates from the spine into the legs. Sciatica is a common form of radicular pain.

The component of cannabis examined in this study was tetrahydrocannabinol (THC), one of many cannabinoids found in the cannabis plant.

“Pain is a complex experience that involves both the senses and emotions,” said study author Haggai Sharon, MD, of the Sagol Brain Institute, Tel Aviv Medical Center in Israel. “Our study results link pain relief from THC with a reduction in the connections between areas of the brain otherwise heavily connected, suggesting that THC may alleviate pain by disrupting signals between these pain processing pathways.”

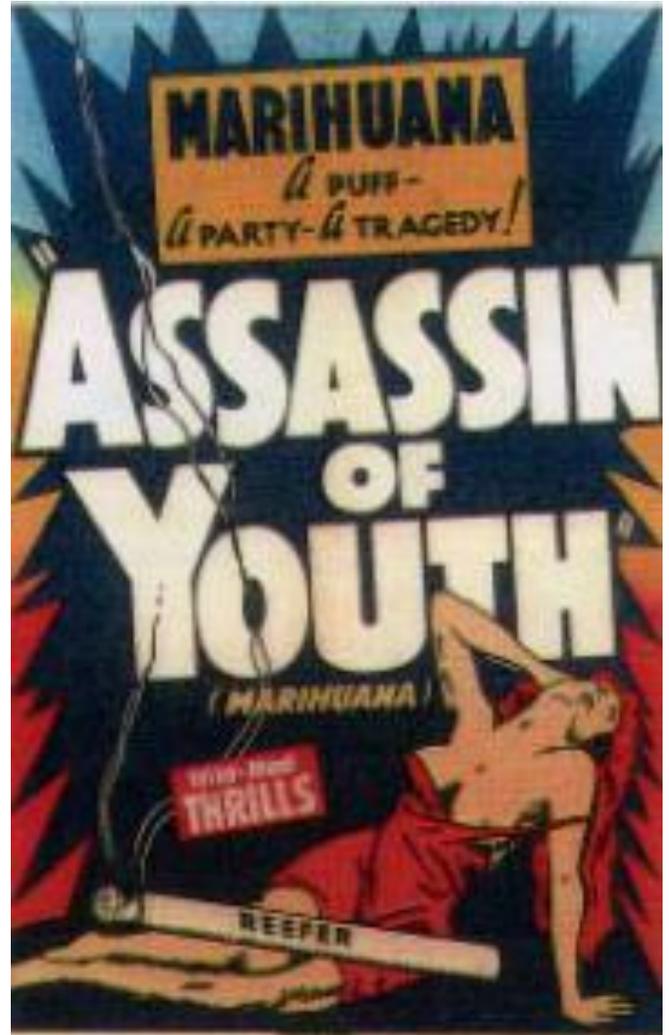
The study involved 15 men with chronic radicular nerve pain with an average age of 33. Women were excluded since hormone fluctuations during menstruation may affect pain sensitivity.

Researchers found that THC reduces a person's pain when compared to placebo. On a scale of zero to 100, before taking medication, on average participants rated their pain levels at 53. After taking THC oil, they rated their pain levels at an average of 35 compared to an average of 43 for those who were given the placebo. In addition, the more pain relief a person experienced, the greater the reduction of connections between the

areas of the brain involved in processing pain.

Limitations of the study are that women were excluded and the number of participants was small. Also, this study looked only at THC. Future studies are needed to examine how other components of the marijuana plant, like cannabidiol (CBD), may be useful in relieving pain in combination with THC.

Sources: www.sciencedaily.com/releases/2018/09/180905161942.htm



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www.drugsense.org

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

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“We are buried beneath the weight of information, which is being confused with knowledge; quantity is being confused with abundance and wealth with happiness. We are monkeys with money and guns.”

-- Tom Waits (singer-songwriter, musician, actor)