



Nothing Medical about “Medical” Marijuana:

- What does “medical” mean?
 - “medical” marijuana cannot be prescribed by a doctor
 - “medical” marijuana cannot be distributed by a pharmacist
 - “medical” marijuana is not covered by insurance or Medicaid
 - “medical” marijuana, a schedule 1 drug, does not have to be reported to the PDMP
- In states with medical marijuana, **less than 5% of users have a serious illness like HIV, glaucoma, cancer, or MS.** The average user is in his mid 30s, has a history of drug abuse, no chronic illness, and reports only pain and headaches.
 - Study: Long term marijuana users seeking medical cannabis in California: demographics, social characteristics, patterns of cannabis and other drug use of 4117 applicants.
 - <https://www.ncbi.nlm.nih.gov/pubmed/17980043>
- The National Academy of Medicine convened a panel of sixteen leading medical experts to analyze the scientific literature on cannabis. The report they prepared, which came out in January of 2017, is over 400 pages. Some things they looked at:
 - Smoking pot is widely believed to diminish nausea associated with chemotherapy. The panel pointed out, “there are no good-quality randomized trials investigating this option.”
 - In the US we are using marijuana as a treatment for pain, but “very little is known about the efficacy, dose, routes of administration, or side effects of commonly used and commercially available cannabis products in the United States.”
 - Is it good for epilepsy? “Insufficient evidence.”
 - Tourette’s syndrome? “Limited evidence. “
 - A.L.S., Huntington’s, and Parkinson’s? “Insufficient evidence.”
 - Irritable-bowel syndrome? “Insufficient evidence.”
 - Dementia and glaucoma? “Probably not. “
 - Depression? “Probably not.”
- As the National Academy panel declared, in one of its few unequivocal conclusions, “Cannabis use is likely to increase the risk of developing schizophrenia and other psychoses; the higher the use, the greater the risk.”
- From the New Yorker story on the study:
 - We need proper studies, the panel concluded, on the health effects of cannabis on children and teen-agers and pregnant women and breast-feeding mothers and “older populations” and “heavy cannabis users.”

- The panel also called for investigation into “the pharmacokinetic and pharmacodynamic properties of cannabis, modes of delivery, different concentrations, in various populations, including the dose-response relationships of cannabis and THC or other cannabinoids.”
- Figuring out the “dose-response relationship” of a new compound is something a pharmaceutical company does from the start of trials in human subjects, as it prepares a new drug application for the F.D.A.
- Too little of a powerful drug means that it won’t work. Too much means that it might do more harm than good. The amount of active ingredient in a pill and the metabolic path that the ingredient takes after it enters your body—these are things that drugmakers will have painstakingly mapped out before the product comes on the market, with a tractor-trailer full of supporting documentation
 - <http://www.nationalacademies.org/hmd/Reports/2017/health-effects-of-cannabis-and-cannabinoids.aspx>
 - <https://www.newyorker.com/magazine/2019/01/14/is-marijuana-as-safe-as-we-think>
- **By NOT requiring the marijuana industry, which is heavily propped up by investments from the tobacco industry, we are allowing big business to forgo the FDA process that protects patients and ensures quality control.**
 - The U.S. Food and Drug Administration (FDA) has not recognized or approved the marijuana plant as medicine.
 - The FDA requires carefully conducted studies (clinical trials) in hundreds to thousands of human subjects to determine the benefits and risks of a possible medication. So far, researchers haven't conducted enough large-scale clinical trials that show that the benefits of the marijuana plant outweigh its risks in patients it's meant to treat.
 - The process to bring a new drug to market is a rigorous one and one that is costly to the pharmaceutical companies that seek to sell it. It usually takes about 12 years and costs between at least one billion dollars, and often more than two billion.
 - <https://www.pharmaceutical-journal.com/publications/tomorrows-pharmacist/drug-development-the-journey-of-a-medicine-from-lab-to-shelf/20068196.article>
 - <https://www.policymed.com/2014/12/a-tough-road-cost-to-develop-one-new-drug-is-26-billion-approval-rate-for-drugs-entering-clinical-de.html>
 - Marijuana is a \$10 Billion dollar industry in the United States.
 - <https://www.nbcnews.com/news/us-news/legal-marijuana-industry-had-banner-year-2018-10b-worth-investments-n952256>
- Cronos, which became the first marijuana stock to go from the over-the-counter exchange to a major U.S. exchange, made waves in early December when it announced that tobacco

giant **Altria** (NYSE:MO) would be taking a \$1.8 billion equity stake in the company. Altria now has a 45% stake in Cronos Group, with the ability to exercise warrants it also received to boost its stake up to 55%. Should those warrants be exercised, Cronos would receive an additional \$1.05 billion from Altria.

Dangers to Kids:

- A new Canadian federal study found a 27% increase in marijuana use among people aged 15 to 24 over the last year.
 - <https://www150.statcan.gc.ca/n1/daily-quotidien/190502/dq190502a-eng.htm?HPA=1>
- Teenage marijuana use is at its highest level in 30 years, and today's teens are more likely to use marijuana than tobacco. Many states allow recreational use of marijuana in adults ages 21 and over. Recreational marijuana use by children and teenagers is not legal in anywhere in the United States. Today's marijuana plants are grown differently than in the past and can contain two to three times more THC, the ingredient that makes people high. The ingredient of the marijuana plant thought to have most medical benefits, cannabidiol or CBD, has not increased and remains at about 1%.
 - American Academy of Child & Adolescent Psychiatry:
https://www.aacap.org/aacap/families_and_youth/facts_for_families/fff-guide/Marijuana-and-Teens-106.aspx
- Long Term Health Effects: While policy, public opinion, and the perception of harm are changing, researchers are still studying the long-term health effects of marijuana. **It is widely accepted that marijuana use hurts adolescents more than adults.** However, anyone who uses marijuana may suffer from negative health effects (link below) such as testicular cancer, heart attacks, respiratory disease, a weakened immune system, pregnancy complications, and low birthweight. In addition to physical health effects, marijuana use is also **linked to cognitive problems; low academic achievement and other educational outcomes; impaired social functioning; and mental health disorders, including depression and anxiety.**
 - <https://www.drugabuse.gov/publications/drugfacts/marijuana>
- Marijuana use in adolescence or early adulthood has been associated with a dismal set of life outcomes including poor school performance, higher dropout rates, increased welfare dependence, greater unemployment and lower life satisfaction.
 - American Psychological Association:
<https://www.apa.org/monitor/2015/11/marijuana-brain>
- Persistent marijuana use was linked to a decline in IQ, even after the researchers controlled for educational differences. The most persistent users — those who reported using the drug in three or more waves of the study — experienced a drop in neuropsychological

functioning equivalent to about six IQ points, the same realm as what you'd see with lead exposure.”

- National Academy of Sciences of the United States of America:
<https://www.pnas.org/content/109/40/E2657.full>
- Although increasing legalization of marijuana has contributed to the growing belief that marijuana is harmless, **research documents the risks of its use by youth are grave.** Marijuana is addicting, has adverse effects upon the adolescent brain, is a risk for both cardio-respiratory disease and testicular cancer, and is associated with both psychiatric illness and negative social outcomes. Evidence indicates limited legalization of marijuana has already raised rates of unintended marijuana exposure among young children, and may increase adolescent use. Those who used *medical* marijuana had an earlier age of regular marijuana use, and more marijuana abuse and dependence symptoms than those who did not use medical marijuana.
- A number of studies have shown an association between chronic marijuana use and mental illness. Therefore, the American College of Pediatricians supports legislation that continues to restrict the availability of marijuana except in the context of well controlled scientific studies
 - American College of Pediatricians: <https://www.acpeds.org/the-college-speaks/position-statements/effect-of-marijuana-legalization-on-risky-behavior/marijuana-use-detrimental-to-youth>
- **Kids will find cannabis edibles irresistible, experts warn:** “As the legalization of cannabis edibles approaches, health practitioners are anticipating an increase in the numbers of kids accidentally eating cannabis-infused gummies, chocolates and baked goods. Dr. Bhaskar Gopalan, chief of emergency at the Queensway Carleton Hospital, said cannabis ingestion could affect children in profound ways. When you consume too much of the cannabis plant's primary ingredient, THC, it can cause paranoia, panic, dizziness and hallucinations — symptoms that even adults struggle with, Gopalan said.”
 - <https://www.cbc.ca/news/canada/ottawa/accidental-cannabis-ingestion-among-children-1.4908201>

- Medical marijuana includes the sale of kid-friendly marijuana candies, like gummy bears or lollipops.
 - Picture from Missouri State Patrol just a couple months after the state legalized “medical” marijuana last year:



Marijuana and Opioids:

- Marijuana users are more than twice as likely to develop a prescription opioid disorder.
 - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5756122/>
 - <https://www.drugabuse.gov/news-events/news-releases/2017/09/marijuana-use-associated-increased-risk-prescription-opioid-misuse-use-disorders>

- THE AMERICAN JOURNAL OF PSYCHIATRY, 2017 AND JOURNAL OF ADDICTION MEDICINE, 2018: Over 30,000 American adults were sampled and researchers found that **marijuana users were more than twice as likely to move on to abuse prescription opioids** – even when controlling for age, sex, race/ethnicity, other substance use disorders, and a variety of psychiatric disorders and family history. In another study, medical marijuana users were significantly more likely to report the use of prescription drugs in the past 12 months.

Driving while on Marijuana:

National Cannabis Survey

- 15% of marijuana users got behind the wheel of a car within two hours of using the drug.
- Daily users were more than twice as likely to believe that it was safe for them to operate a vehicle within three hours of ingesting the drug.
- 20% of Canadians who reported driving under the influence of marijuana admitted to also consuming alcohol at the same time.
 - <https://www150.statcan.gc.ca/n1/daily-quotidien/190502/dq190502a-eng.htm?HPA=1>
- Marijuana use makes car crashes more than twice as likely, and over half of medical marijuana users in Michigan surveyed confessed to driving while high.
 - <https://www.freep.com/story/news/2019/01/09/medical-marijuana-driving/2516322002/>
- In Washington State the percentage of fatal car crashes where a driver tested positive for recent marijuana use doubled after legalization.
 - https://wtsc.wa.gov/wp-content/uploads/2018/04/Marijuana-and-Alcohol-Involvement-in-Fatal-Crashes-in-WA_FINAL.pdf

Mental Health:

- The National Academy of Medicine, the nonprofit group that advises the federal government on health and medicine, released a report in 2017 that shows “Cannabis use is likely to **increase the risk of schizophrenia and other psychoses.**” They also report that the higher the use is, the greater the risk is.
 - <https://www.nap.edu/read/24625/chapter/14#295>

Potency and Use:

- Marijuana sold at legal dispensaries often contains between 25 and 99 percent THC- the psychoactive compound in marijuana. This is a change from the 1970s and 1980s when marijuana generally contained less than 5 percent THC.
 - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6312155/>
- Legalization of marijuana, both for medical and recreational use, continues to spread across the globe even as the possible health risks (or benefits) are not fully known. Research shows people who use cannabis daily, as well as those who use high-potency weed, may be three times more likely to develop psychotic disorder than never-users.
 - [http://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366\(19\)30048-3/fulltext](http://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(19)30048-3/fulltext)
- "Cannabis carries severe health risks and users have a higher chance of developing psychosis," according to Dr. Adrian James, registrar at the Royal College of Psychiatrists. "The risks are increased when the drug is high in potency, used by children and young people and when taken frequently."
- Overall, people who used marijuana on a daily basis were three times more likely to have a first episode psychosis compared with people who never used weed, the researchers estimated. And this increased to five times more likely for those who daily used high-potency cannabis.
 - <https://www.cnn.com/2019/03/19/health/cannabis-use-psychosis-study/index.html>

Law Enforcement:

- Colonel John Bolduc, Superintendent of the Nebraska State Patrol, testified before the Legislature that marijuana legalization would make narcotics law enforcement more difficult. For example, Nebraska's drug detection K-9s are all trained to detect marijuana. Were Nebraska to legalize medical marijuana, many or all of Nebraska's drug K-9 units would have to be replaced, at significant cost to law enforcement agencies,
- States that legalize marijuana have struggled to prevent illegal drug diversion. A 2016 Oregon study estimated that 70 percent of the state's 2017 marijuana crop would be illegally diverted and sold on the black
- Legalizing marijuana for medical use likely means increased black market and drug cartel activity in Nebraska, as it has in other states.
 - <https://www.nytimes.com/2019/04/27/us/marijuana-california-legalization.html>
 - <https://www.bostonglobe.com/news/marijuana/2019/02/02/illicit-pot-market-remains-stubbornly-robust/Fqq5baxLvgkrTB1ABJRbEL/story.html>

- Canadian National Cannabis Survey: his report comes on the heels of another study finding that the black market in Canada is absolutely thriving, with over 79% of marijuana sales in the last quarter of 2018 occurring outside the legal market. Lawmakers in the United States should take a close look at this data – which mirrors data in “legal” states – and ask if they want to see similar results for our country.” <https://www150.statcan.gc.ca/n1/daily-quotidien/190502/dq190502a-eng.htm?HPA=1>

Workforce:

- Canadian National Cannabis Survey: about 13%, or half a million, Canadian workers who are active marijuana users admitted to using the drug either prior to or during work.
 - <https://www150.statcan.gc.ca/n1/daily-quotidien/190502/dq190502a-eng.htm?HPA=1>
- Analysis of more than ten million workplace drug test results shows increases in marijuana positivity across nearly all employee testing categories.
- States that have “legalized” the use of marijuana have seen massive increases in workforce positivity since legalization. Oregon has seen a 63% increase, Nevada has seen a 55% increase, and Colorado has seen a 47% increase. All states that have implemented legal sales far outstrip the national average of 2.3%. Overall workplace positivity rates rose 10% last year while positivity rates in safety-sensitive workers, such as airline pilots and nuclear power plant employees, increased 5%.
 - http://newsroom.questdiagnostics.com/2019-04-11-Workforce-Drug-Testing-Positivity-Climbs-to-Highest-Rate-Since-2004-According-to-New-Quest-Diagnostics-Analysis?sf210848175=1#assets_30649_137136-129