



Promoting Illicit Drug Prevention Initiatives Nationally

September 28, 2023

The Senate
LEGAL AND CONSTITUTIONAL AFFAIRS LEGISLATION COMMITTEE
Inquiry into the Legalising Cannabis Bill 2023
Parliament House
Canberra
ACT 2600
Australia

Drug Free Australia does not support Legalization of cannabis and kindly request that the committee to review the very important research evidence out-line below and request the committee to recognize that under the banner of personal choice, Australia is running a general experiment in exploitation — addicting our more vulnerable neighbors to myriad pleasant-seeming vices, handing our children over to the social media dopamine machine and spreading degradation wherever so-called Medical Marijuana weed shops flourish.

1. The Risks of Marijuana Use see attached

Use of marijuana/cannabis as a medicine may not be safe or effective unless approved by the FDA. We hope this document will guide state officials and legislators on how to protect the public until the marijuana legalization laws are reversed.

2. Know the Risks of Marijuana Contrary to popular belief, marijuana is addictive. Research shows that: 1-in-6 people who start using the drug before the age of 18 can become addicted. 1-in-10 adults who use the drug can become addicted. <https://www.samhsa.gov/marijuana>

3. Cannabis (Marijuana) drug Facts According to the National Survey on Drug Use and Health <<https://www.samhsa.gov/data/report/2021-nsduh-annual-national-report>> , cannabis (marijuana) is one of the most

used drugs in the United States, and its use is widespread among young people. In 2021, 35.4% of young adults aged 18 to 25 (11.8 million people) reported using marijuana in the past year.¹

<<https://nida.nih.gov/publications/drugfacts/cannabis-marijuana#ref>>

According to the Monitoring the Future survey

<<https://monitoringthefuture.org/data/Prevalence.html#drug=%22Marijuana%22>> , rates of past year marijuana use among middle and high school

students have remained relatively steady since the late 1990s. In 2022, 30.7% of 12th graders reported using marijuana in the past year and 6.3% reported using marijuana daily. In addition, many young people also use vaping devices to consume cannabis products. In 2022, nearly 20.6% of 12th graders reported that they vaped marijuana

<<https://monitoringthefuture.org/data/Prevalence.html#drug=%22Vape+Marijuana%22>> in the past year and 2.1% reported that they did so daily.²

<<https://nida.nih.gov/publications/drugfacts/cannabis-marijuana#ref>>

<https://nida.nih.gov/publications/drugfacts/cannabis-marijuana>

4. Health Effects of Marijuana Marijuana is the most commonly used federally illegal drug in the United States, with an estimated 48.2 million people using it in 2019.² Marijuana use may have a wide range of health effects on the body and brain. Click on the sections below to learn more about how marijuana use can affect your health.

<https://www.cdc.gov/marijuana/health-effects/index.html>

5. How Pot Affects Your Mind and Body Marijuana has mind-altering compounds that affect both your brain and body. It can be addictive, and it may be harmful to some people's health. Here's what can happen when you use marijuana: [https://www.webmd.com/mental-](https://www.webmd.com/mental-health/addiction/marijuana-use-and-its-effects)

[health/addiction/marijuana-use-and-its-effects](https://www.webmd.com/mental-health/addiction/marijuana-use-and-its-effects)

6. What are the physical health risks of using cannabis? The most common physical health effect of long-term cannabis use is an increased risk of respiratory diseases associated with smoking (including cancer). This risk has been shown to be present even in the absence of tobacco smoke, while harms appear to be additive for individuals who smoke both tobacco and cannabis. Cannabis use is additionally associated with a range of mental health problems that may also increase risk to physical

health. <https://nadk.flinders.edu.au/kb/cannabis/cannabis-health/what-are-the-physical-health-risks-of-using-cannabis>

7. Marijuana Side Effects: Physical, Mental, and Long-Term Effects

However, despite its prevalent use and the relatively favorable public perception regarding the safety of such use, marijuana is not without risks. Read on to better understand marijuana, its short- and long-term effects on your physical and mental health, and how to get help if you or someone you love misuse it. <https://americanaddictioncenters.org/marijuana-rehab/long-term-effects>

8. Cannabis- and Substance-Related Carcinogenesis in Europe: A Lagged Causal Inferential Panel Regression Study

<https://d3sdr0llis3crb.cloudfront.net/images/pdf-files/library/Cannabis/Cannabis- and Substance-Related Carcinogenesis in Europe ->

[A Lagged Causal Inferential Panel Regression Study jox-13-00024.pdf](https://d3sdr0llis3crb.cloudfront.net/images/pdf-files/library/Cannabis/Cannabis- and Substance-Related Carcinogenesis in Europe - A Lagged Causal Inferential Panel Regression Study jox-13-00024.pdf) Conclusions In summary, this study demonstrates that cannabis exposure is linked across both time and space with the incidence of 25 of 41 cancers in Europe and thus confirms findings on other continents [17,41,44,167–169,211,212]. On epidemiological grounds, cannabis appears to be a more potent carcinogen than tobacco or alcohol in most tabulations, and based on E-value criteria, is a more potent carcinogen than tobacco and alcohol combined. It is important to note that the use of adjustment for multiple testing throughout these studies, the use of inverse-probability weighting in multivariable regressions and the use of E-values in bivariate and multivariable regressions move the present consideration merely from an extended report of various associations to a detailed investigation of causal relationships. All four questions considered in the Introductory Section have been answered in the affirmative in relation to the carcinogenic potential of cannabis at the level of population health, in concordance with the results of similar studies in North America, increased carcinogenic effects compared to known carcinogens tobacco and alcohol (often combined) and its implication in inheritable tumorigenesis and toxicity to multiple reproductive organs on several grounds. Together with recent findings demonstrating that cannabis exposure has driven a doubling of the US testicular cancer rate as well as rising US breast cancer rates, has increased the paediatric cancer rate in the USA by 50% in the last fifty years and also appears in the context of other mutagenic exposures to be driving current impressive and very concerning trends in pancreatic and liver cancer, the conclusion that the tumourigenic potential of cannabinoids has been seriously underestimated by the medical,

scientific, professional and lay communities alike becomes inescapable. The present results strongly reinforce all of these worrying findings. It would appear that based on results such as those in the present study and of comparable similar studies in North America, a plethora of carcinogenic mechanisms outlined by the basic sciences particularly recent impressive epigenomic studies, the seriously concerning issue of transgenerational mutagenicity and malignant teratogenicity, the known exponential dose–response relationships and the implication of multiple cannabinoids, that communities need to severely restrict the exposure of their citizenry to environmental carcinogens such as cannabinoids not only in the interests of public health and safety, but also in order to protect the genomic, epigenomic and neurodevelopmental potential of several generations to come.

9. Vaping Cannabinoid Acetates Leads to Ketene Formation The studies described herein show that ketene exposure can occur from vaping or dabbing cannabinoid acetates. This is not surprising, considering the fact that ketene was previously shown to form via a structurally-related phenyl acetate-containing compound, vitamin E acetate, under e-cigarette vaping conditions.⁸ The ketene emission levels observed in the dabbing experiments were in range of the NIOSH IDLH value.⁷ More studies are needed to understand the factors promoting ketene formation vaping cannabis and related products, along with in-depth profiling of the contents of cannabis oil condensates, and are underway in our laboratories.
<https://d3sdr0llis3crb.cloudfront.net/images/pdf-files/library/Cannabis/vaping-cannabinoid-acetates-leads-to-ketene-formation.pdf>

10. Smoking strong Marijuana daily increases risk of psychosis study finds London — Smoking high-potency marijuana
<<https://www.cbsnews.com/marijuana-nation/>> every day could increase the chances of developing psychosis by nearly five times, according to the biggest-ever study to examine the impact of pot on psychotic disorder rates. The scientists estimated that people who smoked marijuana on a daily basis were three times more likely to be diagnosed with psychosis compared with people who never used the drug. For those who used high-potency marijuana daily, the risk jumped to nearly five times. The paper was published online Tuesday by the journal Lancet
<<http://www.thelancet.com/journals/lanpsy/article/PIIS2215->

[0366\(19\)30048-3/fulltext](https://doi.org/10.1016/S0306-9891(19)30048-3)> . It was paid for by funders including Britain's Medical Research Council, the Sao Paulo Research Foundation and the Wellcome Trust.

<https://www.cbsnews.com/news/marijuana-psychosis-smoking-strong-pot-daily-increases-risk-of-psychosis-study-finds/>

11. The Contribution of cannabis use to variation in the incidence of psychotic disorder across Europe (EU-GEI): a multicentre case-control study

Our main findings show that among the measures of cannabis use tested, the strongest independent predictors of whether any given individual would have a psychotic disorder or not were daily use of cannabis and use of high-potency cannabis. The odds of psychotic disorder among daily cannabis users were 3.2 times higher than for never users, whereas the odds among users of high-potency cannabis were 1.6 times higher than for never users. Starting to use cannabis by 15 years of age modestly increased the odds for psychotic disorder but not independently of frequency of use or of the potency of the cannabis used. These measures of extent of exposure did not interact with each other, nor did they interact with the sites. This lack of interaction between degree of cannabis use (ie, daily use of cannabis or use of high-potency cannabis) and site might reflect insufficient power in our study; however, it could also indicate that although the magnitude of the effect might vary depending on the degree of cannabis use, there is a consistent effect of daily use and use of high-potency cannabis on the ORs for psychotic disorders across all study sites. [https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366\(19\)30048-3/fulltext](https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(19)30048-3/fulltext)

12. Cannabis Teratology Explains Current Patterns of Coloradan Congenital Defects: The Contribution of Increased Cannabinoid Exposure to Rising Teratological Trends

This study indicates rising levels of diverse teratogenesis in Colorado featuring the neuraxis, cardiovascular and chromosomal anomalies, are associated with rising levels of cannabis and cannabinoid exposure. <https://pubmed.ncbi.nlm.nih.gov/31288542/>

13. Testing the cannabis gateway hypothesis in a national sample of Spanish adolescents Despite the previous limitations, this study expands the available evidence on cannabis as a double gateway drug, finding that cannabis use markedly increases the likelihood of subsequently using other legal and illegal substances. We hope these findings can be helpful for the development of preventive and treatment interventions in Spain. Role of funding sources. This research was supported by a Predoctoral Grant from the National Agency of Research of the Spanish Ministry of Science, Innovation and Universities (FPU17/00659). Spanish Ministry of Science, Innovation and Universities had no role in the study design, collection, analysis or interpretation of the data, writing.
<https://www.sciencedirect.com/science/article/pii/S0306460323001466>

14. Medical Experts Call Out High Potency Marijuana (Cannabis) as Toxic and Not What Voters Bargained For Increasing medical evidence is connecting marijuana use to psychotic episodes, violence, opiate overdoses, suicide, accidents, and child endangerment. International Marijuana experts and Board members of IASIC take a position on THC content of cannabis products. <https://mailchi.mp/8f8351bcd9e1/doctors-gather-to-inform-public-about-cannabis-research-risks-10354517?e=6c87680725>

15. A Systematic Review and Narrative Synthesis of the Evolution of Adolescent and Young Adult Cannabis Consumption Before and After Legalization Higher quality evidence suggests an increase in adolescent past-month consumption of cannabis following legalization in several geographical jurisdictions. Consumption evolution prelegalization and postlegalization differed by age group and for young women and for binge drinkers. Consumption evolution differences suggest a variety of strategies might be required in efforts to lower public health impacts of cannabis consumption following legalization.
<https://pubmed.ncbi.nlm.nih.gov/35246363/>

16. A review of cannabis allergy in the early days of legalization Prospects for large-scale legalization of cannabis indicate the need of acquiring even more knowledge about CA. At present, little is yet known about the epidemiology and inter-regional clinical differences that exist among patients. Furthermore, much remains to be discovered about

cannabis allergens and their role in different clinical pictures, in cannabis-associated vegetable food allergy, and the influence of chemical and physical modifications that may occur in relation to common modes of cannabis intake (eg, combustion). The fate of diagnostic research will be inextricably linked to the evidence obtained in these areas. In this latter domain, a major breakthrough will only be possible when standardized and commercially available tests will become readily accessible to allergists, which at present is still far from being achieved.

<https://pubmed.ncbi.nlm.nih.gov/36384984/>

17. The Relationship Between Marijuana Use and Intimate Partner Violence in a Nationally Representative, Longitudinal Sample

In conclusion, any marijuana use during adolescence nearly doubles the risk for intimate partner violence perpetration and both victimization and perpetration. Future studies should examine the relationship between the eventspecific co-occurrence of marijuana use and intimate partner violence, as well as the differential effect of marijuana use on intimate partner violence by characteristics of the relationship (age discordance, number of common friends or acquaintances, etc.). These results have implications for intimate partner violence prevention efforts, as marijuana use should be a target of preventative and early intimate partner violence intervention and treatment programming.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3782298/>

18. A Review of Cases of Marijuana and Violence The main scope of this paper was to inform the public about the relationships between marijuana and violence in the general population and in individuals with mental illnesses, as recent findings do link marijuana with cases where psychosis was present. This article is a case review and not a research study; therefore, the chief limitations regard inferences that can be made from a case study. However, the findings suggest a further need for research on marijuana and violence. The authors of this paper did not intend to take sides regarding the legalization of marijuana. The focus was public health in regard to marijuana [2,11,14,18,36].

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7084484/>

19. Association Between the Use of Cannabis and Physical Violence in Youths: A Meta-Analytical Investigation

These results demonstrate a moderate association between cannabis use and physical violence, which remained significant regardless of study design and adjustment for confounding factors (i.e., socioeconomic factors, other substance use). Cannabis use in this population is a risk factor for violence

<https://ajp.psychiatryonline.org/doi/10.1176/appi.ajp.2020.19101008>

20. Geographical variation in hospitalization for psychosis associated with cannabis use and cannabis legalization in the United States

Submit to: Psychiatry Research

<https://pubmed.ncbi.nlm.nih.gov/35016118/> This nationwide study identified a greater proportion of hospital discharges for psychosis associated with cannabis use in the Pacific census division, the area with the most liberal cannabis legalization policies in the United States. We found a significant correlation between the proportion of hospitalizations for psychosis associated with cannabis use within each division and the Census Division Cannabis Legality Score, a novel score that we developed and validated to represent the status of cannabis legalization within each census division, suggesting that areas that implemented more liberal cannabis legalization policies were more likely to have a greater proportion of discharges for psychosis associated with cannabis use.

21. Reviews of cases of Marijuana and Violence

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7084484/>

<https://pubmed.ncbi.nlm.nih.gov/32121373/>

<https://www.mdpi.com/1660-4601/17/5/1578>

<https://www.ojp.gov/ncjrs/virtual-library/abstracts/relationship-between-cannabis-and-violence-review>

[https://www.drugfree.org.au/images/pdf-files/library/Marijuana /A Review of Cases of Marijuana and Violence.pdf](https://www.drugfree.org.au/images/pdf-files/library/Marijuana/A_Review_of_Cases_of_Marijuana_and_Violence.pdf)

22. David G. Evans, Esq letter to Attorney General Garland, 16 March 2022 https://d3sdr0llis3crb.cloudfront.net/images/pdf-files/library/Brain_Mental_Health/Mental_Health_Marijuana_NOTE_EXHIBITS_5_MARCH.16.2022.pdf
<https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Fd3sdr0llis3crb.cloudfront.net%2Fimages%2Fpdf-files%2Flibrary%2FBrain_Mental_Health%2FMental_Health_Marijuana_NOTE_EXHIBITS_5_MARCH.16.2022.pdf&data=05%7C01%7C%7C87747b bf5f9a43ab54d308da45bd1a4c%7C84df9e7fe9f640afb435aaaaaaaaaaaa%7C1%7C0%7C637898975829287832%7CUnknown%7CTWFpbGZsb3d8eyJWIjojMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTil6lk1haWwiLCJXVCi6Mn0%3D%7C3000%7C%7C%7C&sdata=BurR9fQynUCv82cJLwQ7z8okGNHtAuNcNgJPdiRq31o%3D&reserved=0> In regard to the community having grave concerns regarding Marijuana and Violence David comments that there are many factors that increase violence and gun deaths, but marijuana is one of the most significant factors in crime and violence. For example, there are 65 reports of marijuana-involved mass violence – representing 1000s of deaths and 1000s of injuries. We have no doubt there are many more. Each incident has an informational link to the relevant reports of how marijuana is involved with the perpetrator’s behavior. (Exhibit 5). The perpetrators of mass killings are often marijuana users or used marijuana heavily in adolescence. The Secret Service has reported on this marijuana connection. (Exhibit 6)."

23. Cannabis Use and Suicidal Behavior and Long-term Harms—Reply <https://jamanetwork.com/journals/jamapediatrics/article-abstract/2778777>
“The primary aim of our study was to examine associations of cannabis use disorder (CUD) with self-harm, suicide, and overall mortality risk in adolescents and young adults with mood disorders. In this population-based retrospective longitudinal cohort study of Medicaid-enrolled individuals aged 10 to 24 years with mood disorders, more than 10% also had diagnosed CUD. The presence of CUD was significantly associated with increased risk of nonfatal self-harm, all-cause mortality, death by unintentional overdose, and death by homicide.”

24. Cannabis, Violence, Crime and Mass Murder – The War FOR Cannabis Continues and with Mounting Casualties.

<https://www.dalgarnoinstitute.org.au/index.php/resources/next-phase-blog/1941-cannabis-violence-crime-and-mass-murder-the-war-for-cannabis-continues-and-with-mounting-casualties>

Alex Berenson, author of *Tell Your Children: The Truth About Marijuana, Mental Illness, and Violence*, pointed out that the New York Times had curiously removed from an article about the Uvalde school shooter a former coworker's recollection that he complained about his grandmother not letting him smoke weed. The Times didn't append a correction to the story as it might be expected to do when fixing a factual inaccuracy.

Assuming the elided detail was accurate, it would fit a pattern. Mass shooters at Rep. Gabby Giffords's constituent meeting in Tucson, Ariz. (2011), a movie theater in Aurora, Colo. (2012), the Pulse nightclub in Orlando, Fla. (2016), the First Baptist church in Sutherland Springs, Texas (2017), and Marjory Stoneman Douglas High School in Parkland, Fla. (2018), were reported to be marijuana users. It could be a coincidence, but increasing evidence suggests a connection.

That's what happened to Colorado teenager Johnny Stack. His mother, Laura, wrote a harrowing book chronicling his descent into cannabis addiction. He started smoking weed at 14, after Colorado legalized it, and progressed to using more-potent products such as dabs. He gradually withdrew from social activities and developed psychosis. Substance-abuse treatment and a stay at a mental hospital failed to cure him because chronic marijuana use permanently rewired his brain. Delusional, he jumped off a six-story building and killed himself. Alas, he's not an anomaly. "People who have taken large doses of the drug may experience an acute psychosis, which includes hallucinations, delusions, and a loss of the sense of personal identity," the National Institutes of Health notes.

Roneet Lev, an addiction specialist who previously led the Emergency Department at Scripps Mercy Hospital in San Diego, said in a recent interview with the American Council on Science and Health that California cannabis emergency-room visits climbed 53% in the three years after the state legalized recreational marijuana in 2016. Daily marijuana emergency-room visits in San Diego nearly quadrupled between 2014 and 2019. Cannabis-induced psychosis, she said, is fairly common. Some patients she treated experienced cannabinoid hyperemesis syndrome from long-term use, which causes "scromiting"—screaming and vomiting. There's no

antidote. Some patients spend weeks in the emergency room waiting for placement in mental-health clinics.

Countless studies have also linked chronic cannabis use to schizophrenia. A meta-analysis in January examining 591 studies concluded that early marijuana use among adolescents was associated with a significant increase in the risk of developing schizophrenia. Researchers have yet to prove a causal relationship, but the weight of evidence is hard to dismiss. Some legalization proponents claim that other countries where marijuana is widely available have fewer mental-health problems than the U.S. But a study from Denmark last summer found that schizophrenia cases associated with pot addiction have increased three- to fourfold over the past 20 years as marijuana potency rose 200%. Young people are especially vulnerable to cannabis's effects because their brains are still developing. Scientists in a recent study reviewed scans of teenagers' brains before and after they started using pot. They found that parts of the brain involved in decision making and morality judgments were altered in pot users compared to nonusers.

But can pot make people violent? A study last year found that young people with such mood disorders as depression who were also addicted to pot were 3.2 times more likely to commit self-harm and die of homicide—often after initiating violence—than those who weren't. A meta-analysis found the risk of perpetrating violence was more than twice as high for young adults who used marijuana. It's possible that pot can trigger dangerous behavior in youths who may be predisposed to it for other reasons such as prenatal exposure to drugs. Also worrisome, legalization seems to be leading to more pregnant women using pot. About 20% of pregnant young women in California tested positive for marijuana in 2016. THC crosses the placenta and can impair neurological development. Prenatal exposure to marijuana has been linked to behavioral problems, mental illness and lower academic achievement in children and adolescents.

Maybe it's time that lawmakers and voters rethink their pot-legalization experiment before more young lives are damaged.

25. Current causes of death in children and adolescents in the United States <https://www.nejm.org/doi/full/10.1056/NEJMc2201761>
<<https://www.nejm.org/doi/full/10.1056/NEJMc2201761>> “Drug overdose

<https://pubmed.ncbi.nlm.nih.gov/30780061/>

These findings are clinically relevant for violence prevention/management and highlight the necessity of further investigations with methodologically-sound studies. Thus, longitudinal studies adjusting for important confounding factors (i.e., psychopathic traits and stimulant use) are warranted.

<<https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Frdcu.be%2FcKfKp&data=04%7C01%7C%7C78fa50ebb0174bf5b5bb08da168d035b%7C84df9e7fe9f640afb435aaaaaaaaaaaa%7C1%7C0%7C637847092162779662%7CUnknown%7CTWFpbGZsb3d8eyJWlloiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IjEhaWwiLCJXVCi6Mn0%3D%7C3000&sdata=hQOAm%2FB8IZiyb%2BcP7fLni%2BbN7yucfQNy3jB%2FLwh6D2Q%3D>

&reserved=0> Part 2: <https://rdcu.be/cKfKq>

<<https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Frdcu.be%2FckKfKq&data=04%7C01%7C%7C78fa50ebb0174bf5b5bb08da168d035b%7C84df9e7fe9f640afb435aaaaaaaaaaaa%7C1%7C0%7C637847092162779662%7CUnknown%7CTWFpbGZsb3d8eyJWlloiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTil6Ik1haWwiLCJXVCi6Mn0%3D%7C3000&sdata=%2Bzc37mejrzzAwic3HnX38X5wLsR1QCzqcV4GnsWeueQ%3D&reserv>

ed=0> Part 3: <https://rdcu.be/cKfOH>

<<https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Frdcu.be%2FckfOH&data=04%7C01%7C%7C78fa50ebb0174bf5b5bb08da168d035b%7C84df9e7fe9f640afb435aaaaaaaaaaaa%7C1%7C0%7C637847>

[092162779662%7CUnknown%7CTWFpbGZsb3d8eyJWlloiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTil6lk1haWwiLCJXVCi6Mn0%3D%7C3000&sdata=o7q%2FmPqx%2BpTC%2F5KdfK6GafJX3WNdl0%2FxoLbS2UVSjQE%3D&reserved=0](https://pubmed.ncbi.nlm.nih.gov/34762615/)> Research now shows that CBD directly contributes to

many cancers including breast and lung cancers, and cancers in other major human organs, as well as colorectal cancers and Hodgkins and Non-Hodgkins Lymphoma. It is also revealed that THC and other cannabinoids cause cancers of the liver, thyroid, and pancreas, as well as heightening risk factors for melanoma and acute myeloid leukemia. The message is clear ... CBD and cannabis for medicinal purposes are dangerous and are not a safe cure for illness.

28. Sedation and Acute Encephalopathy in a Pediatric Patient Following Ingestion of Delta-8-Tetrahydrocannabinol Gummies

Following Ingestion of Delta-8- Tetrahydrocannabinol Gummies” The prevalence of delta-8 THC-containing products in the illicit drug market is increasing rapidly. Delta-8 THC products are now available in gas stations and in headshops. The clinical presentation of delta-8 THC exposure is similar to known effects of delta-9 THC exposure. These similarities limit the clinicians' abilities to determine the specific substance ingested. Symptomatic and supportive care remains an effective treatment for cannabinoid toxicity. <https://pubmed.ncbi.nlm.nih.gov/34762615/>
<<https://pubmed.ncbi.nlm.nih.gov/34762615/>>

29. Why Do Marijuana and Synthetic Cannabimimetics Induce Acute Myocardial Infarction in Healthy Young People? Cannabis contains Δ^9 -tetrahydrocannabinol as its major psychotropic principle and, with respect to vegetative effects, its use for recreational purposes has been considered safe over a long time period. In recent years, however, an increasing number of studies revealed serious cardiovascular effects, even including acute myocardial infarction (MI) in healthy young people; indeed, cannabis has been listed among the risk factors of MI. The potential mechanisms induced by exposure to THC and other cannabimimetics triggering MI are shown in Figure 2 <https://www.mdpi.com/2073-4409/11/7/1142#fig_body_display_cells-11-01142-f002> . MI related to cannabis use is associated with tachycardia. Tachycardia is the most reliable biomarker of cannabis use and occurs independent of the route of

administration. The reason why cannabis elicits tachycardia in humans but almost exclusively bradycardia in animals is unclear but may have to do with the relatively low heart rate level in humans. One explanation for the difference between humans and animals might be that the cannabinoid CB1 receptor-driven central stimulation of the sympathetic system is inhibited markedly by presynaptic inhibitory CB1 receptors on the sympathetic nerve fibers in animals but only slightly in humans. Cannabis use is frequently associated with tobacco smoking, thereby increasing the risk to develop MI. However, it is questionable whether the two most typical pathogenetic factors for the development of MI, i.e., thrombus formation and coronary constriction, play a role in the case of cannabis-related MI, at least not on the basis of the few studies available. Administration of cannabis by smoking but not by other routes impairs energy supply by increasing the formation of carboxyhemoglobin; impairment of mitochondrial respiration is an additional factor. Worsening of MI by an increased energy demand because of a positive inotropic effect is unlikely. Proarrhythmogenic effects of cannabis per se are unlikely but may appear as a consequence of increased noradrenaline levels associated with tachycardia. The increasing use of cannabis preparations for recreational but also for therapeutic purposes warrants each effort to further elucidate cardiovascular mechanisms, in order to avoid severe side effects.

<https://www.mdpi.com/2073-4409/11/7/1142> <<https://www.mdpi.com/2073-4409/11/7/1142>>

30. Medical Fraud, Mislabeling, Contamination: All Common in CBD Products Studies suggest that black-market CBD is not very reliable or safe. In 2020, the FDA did a study on products that claimed to have a specific amount of CBD and those claimed amounts were compared to the FDA testing results. Of the 102 products that indicated a specific amount of CBD, 18 products (18%) contained less than 80% of the amount of CBD indicated, 46 products (45%) contained CBD within 20 percent of the amount indicated, and 38 products (37%) contained more than 120 percent of the amount of CBD indicated. Of great concern is that 49% of the products tested contained THC.⁶

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7723146/#b6-ms117_p394> The Journal of the American Medical Association published a letter demonstrating the results of “undercover” purchases of CBD. Of 84 samples tested, THC was detected in 21%. There were other defects in the mislabeled products. Only 30.95% were accurately labeled.

Accuracy of labeling depended on product type, with vaporization liquid most frequently mislabeled (87.50%) and oil most frequently labeled accurately (45.0 %). THC was detected (up to 6.43 mg/mL) in 18 of the 84 samples tested (21.43%).⁷

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7723146/#b7-ms117_p394>

A Johns Hopkins researcher tested CBD products. Testing showed 44 products (59%) had detectible levels of CBD, but the average ratio of THC to CBD was 36-to-1. Only one product had a 1-to-1 ratio, which some research suggests is associated with fewer side effects and improved clinical benefit compared with higher ratios of THC to CBD. The testing indicated the edible cannabis products may have very little CBD.⁸

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7723146/#b8-ms117_p394>

A study published by the National Institute of Health showed that products were mislabeled with 26% containing less CBD than labeled and 43% containing more, indicating a high degree of variability and poor standardization of online products. Notably, the oil-based products were more likely to be accurate (45% compared to 25% for tincture and 12.5% for vaporization liquid) and had a smaller percentage of deviation. Oil based products also had a higher range of concentration. In addition to CBD mislabeling, THC was detected in 21% of samples. This study also notes that products containing THC could have sufficient enough concentrations to produce intoxication in children.⁹

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7723146/#b9-ms117_p394>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7723146/#:~:text=CBD%20Mislabeling%20and%20Contamination&text=Of%20great%20concern%20is%20that,the%20products%20tested%20contained%20THC.&text=The%20Journal%20of%20the%20American,%E2%80%9CUndercover%E2%80%9D%20purchases%20of%20CBD>.

31. Scientific Prospects for Cannabis-Microbiome Research to Ensure Quality and Safety of Products

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7074860/> The emerging Cannabis production sector currently lacks the strong foundational science and knowledge-based, public-domain information necessary to ensure the health of consumers and well-being of society. Very little is known about Cannabis genetics and breeding and how the microbiome offers critical genetic variability to Cannabis that could lead to new approaches for Cannabis breeding strategies, product safety and quality, whether intended for recreational, pharmaceutical, or medicinal purposes. In particular, information about the microbiome of Cannabis is scarce, and security concerns related to human health and Cannabis production sustainability have yet to be addressed, particularly with respect to pathogenic microbiomes, molds, and mycotoxins.

32. Cannabis contaminants: sources, distribution, human toxicity and pharmacologic effects

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6177718/> This qualitative narrative synthesis aggregates and interprets the available clinical evidence of cannabis contaminants and their potential human effects. Its central narrative is that the current academic literature does not deliver a clear understanding of the sources, distribution and pharmacologic effects of cannabis contaminants. Further research is required to bridge the remaining knowledge gaps in these areas. The development of the requisite analytical standards for quality testing of global medicinal cannabis preparations requires a more comprehensive evidence base of the contaminants of cannabis.

33. Cannabis Contaminants Limit Pharmacological Use of Cannabidiol

<https://www.frontiersin.org/articles/10.3389/fphar.2020.571832/full> For the

safety and welfare of all users, both medicinal and recreational, there is a necessity for a standardized set of guidelines for cultivation and testing of Cannabis products. There is currently only one set of guidelines called Recommendations for Regulators — Cannabis Operations that provides detailed set of recommended instructions on cultivation, packaging, testing and dispensing of Cannabis products including both THC and CBD products, which has proven invaluable for ensuring the safe cultivation of Cannabis ([American Herbal Products Association, 2016](#)). While these are a great set of guidelines, a more comprehensive understanding of the contamination of Cannabis products is necessary to appropriately eliminate the possible deleterious health effects contaminants may cause. Unfortunately, the classification of Cannabis as a schedule 1 drug federally makes the development and implementation of nationwide standards impossible at the moment, which if left unchanged, could lead to significant health complications in those turning to Cannabis for its medicinal properties.

34. Total yeast and mold levels in high THC-containing cannabis (*Cannabis sativa* L.) inflorescences are influenced by genotype, environment, and pre-and post-harvest handling practices

<https://www.frontiersin.org/articles/10.3389/fmicb.2023.1192035/full> The results from this study identify avenues for producers to monitor and manage the potential build-up of TYM in fresh and dried cannabis samples that should lead to lower TYM and a higher quality product. This study has emphasized greenhouse grown cannabis. Other production systems, such as field-grown or organically grown cannabis, also need to be assessed, as there can be differences in the amount and types of TYM present ([Punja and Scott, 2023](#)). or practice is discovered, steps are taken (e.g., recalls) to ensure no undue risks are posed to consumers. These protections are entirely lacking in the unregulated market, which is concerning given that cannabis is a high-value crop for which the financial consequences of a pest infestation can be severe. Illicit production without regulatory oversight or guidance on safe practices may result in consumers encountering a contaminated product.

35. How Can Cannabis Possibly remain Legal?

https://d3sdr0llis3crb.cloudfront.net/images/pdf-files/library/Drug-Free-Australia/Cannabis_and_Hemp_Latest_Science_Summary.pdf

This document presents with URL links to the abundant science showing that cannabis delivers more death and damage than other illegal drugs such as heroin, speed, ice and cocaine, with the added deficit of deleteriously affecting any cannabis user's children and multiple generations to come. It's medicinal benefits have been, perhaps purposely, over-hyped, and are far outweighed by its risks.

36. Drug Free Australia kindly requests this very important inquiry to make sure that all research papers meet the standard outline in Peer review paper as below. **The Peer Review and Scientific Publication at a Crossroads** Call for Research for the 10th International Congress on Peer Review and Scientific Publication

https://jamanetwork.com/journals/jama/fullarticle/2809861?guestAccessKey=9a9ca4be-d6f2-4116-96fc-26d0b153424f&utm_source=silverchair&utm_medium=email&utm_campaign=article_alert-jama&utm_content=olf&utm_term=092723&utm_adv=000004223380

Proposed remedies for several of the problems and biases have been evaluated,⁴ but many are untested or have inconclusive evidence for or against their use. New biases continue to appear (or at least to be recognized). In addition, there is tension about how exactly to correct the scientific literature, where a large share of what is published may not be replicable or is obviously false.²⁶ Even outright fraud may be becoming more common—or may simply be recognized and reported more frequently than before.^{27,28}

Kind Regards

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