



Follow-up Answers to Audience Questions

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ANSWERS FROM LINDA RICHTER, PH.D.

- **Will we be talking more about medical marijuana? Can it contain THC if purchased with a physician's order from a legal dispensary?**

LR: Medical marijuana does contain THC. Despite the potential for some medical benefits (such as treating certain forms of neuropathic pain) of lower potency marijuana products (i.e., generally, those with THC concentrations < 5–10%), and the known risks associated with higher potency marijuana products, THC concentrations tend to be high regardless of whether samples are obtained from legal nonmedical (“recreational”) or medical marijuana programs.^[i] Research suggests that many marijuana products that include THC concentrations on their labels are inaccurate. A study assessing the accuracy of THC content labeling in 47 different brands of marijuana edible products, purchased for medical purposes, found that only 17% were correctly labeled. Of the remaining products, 23% were under-labeled (i.e., the THC content was more than 10% above the labeled amount) and 60% were over-labeled (i.e., the THC content was less than 10% of the labeled amount).^[ii]

- **What about kids that experiment and find they feel less anxious? If that is their lived experience how can you help them from continuing to use?**

LR: The research is pretty clear that, despite the perceived (or even real) short-term benefits, marijuana use worsens mental health symptoms in the long-term. In fact, use of high potency marijuana is associated with increased risk of addiction, psychosis, depression, anxiety, sleep problems, memory loss, and other physical and cognitive impairments.^[iii] That said, many people do use it to help them relax, reduce anxiety, or otherwise self-medicate mental health problems. If a young person is using marijuana or any substance to relieve anxiety, it's best to try to address the underlining anxiety through healthier means. For some people with mild anxiety, that might mean relatively simple habits like exercise or listening to music or taking a walk. But for persistent or more severe anxiety that interferes with day-to-day functioning, it's best to see a professional for therapy or, if indicated, medication treatment. A young person who turns to

substances to self-medicate negative feelings is likely to continue to do so, potentially in more intense ways or with multiple addictive substances, if the underlying problem isn't addressed and if substance use is considered an acceptable coping mechanism. For support and resources for addressing a young person's early marijuana use in a you, please see: <https://drugfree.org/get-support/>

- **What is the difference between marijuana and "medical" marijuana?**

LR: There's no technical difference between medical marijuana and "recreational" marijuana. The THC concentrations in both are similar, although can get very high in less well-regulated recreational products. The main difference is in how they are sold (medical dispensary vs. other retail). Some states have legalized only medical but not recreational marijuana and others have legalized both or neither.

- **Just curious how far back the surveys for marijuana use go and how the data from "back in the day" compares to now with respect to age and why it's used.**

LR: The National Survey on Drug Use and Health, funded by the federal government, goes back to 1971. Periodic changes in methodology make it complicated to compare data related to the same questions over all this time (over 50 years) and it is recommended not to compare data prior to 2002 when significant methodological changes were made. Another national survey, the Monitoring the Future study, goes back to 1975 and provides data on 8th, 10th, and 12th graders. According to this survey, "Levels of annual marijuana use today are considerably lower than the historic highs observed in the late 1970s, when more than half of 12th graders had used marijuana in the past 12 months." The cause for concern now is that the level of THC (the ingredient that gets you high) in marijuana is far higher today than it was back then so that the consequences are more severe for those who do use the drug. A third national survey, administered by the CDC, the Youth Risk Behavior Survey, samples high school students. This survey suggests that marijuana use rates among male students declined since 2011 but did not change among females. The reasons for use tend to be fairly similar over time: to have fun, curiosity, to soothe stress or anxiety, to sleep.

- **What about the CBD sleep promotion? Does that work like Marijuana?**

LR: There is a lack of well-designed research studies on CBD and little understanding of the long-term effects of CBD. These products are for the most part unregulated, so users have to rely on the quality assurances of the companies that manufacture and sell them. CBD does not appear to be dangerous for short-term use, but many products contain dangerous chemicals or synthetic cannabidiol oil. Many producers do not test their products in labs or share how they are produced, making it difficult to know what you are getting when buying CBD. For its effects on sleep in particular, there is not enough research to know if it is helpful. CBD, on its own, does not have sedating effects. The same is true for marijuana. Although it might seem to help one sleep in the short-term, research shows that it interferes with sleep and sleep quality in the long-term.

- **Is there any regulation over oversight for CBD?**

LR: Currently, these products are for the most part unregulated or poorly regulated, so users have to rely on the quality assurances of the companies that manufacture and sell them. The federal government is working toward regulation, but it will take a while.

- **Can you repeat the name the individuals use to drink and get high?**

LR: Kids call it "getting crossed." For more information, please see: <https://drugfree.org/article/is-your-teen-getting-crossed/>

- **Does it (marijuana) cause schizophrenia?**

LR: Marijuana use can increase the risk of schizophrenia or other psychoses, with the highest risk among the most frequent and long-term users and those who use high-potency THC products. The risk is especially high among those with a genetic susceptibility to schizophrenia or a family history. More recent research is finding concerning links between marijuana use and schizophrenia, especially among young men.

(Endnote References can be found on P. 4)

ANSWERS FROM STORMY SKRIP, PEER PARENT COACH

- **Do you think Marijuana is still the gateway drug?**

SS: "Gateway drug" is a term that has fallen out of favor with some in the substance use treatment community. That does not change the data that marijuana use often precedes the use of other substances. According to the National Institute on Drug Abuse, marijuana use increases the likelihood of developing alcohol abuse disorder. The effect of marijuana use on the adolescent brain has been shown to alter their response to dopamine. This is shown in the epidemiology of substance use increases the likelihood they will have a greater response when exposed to "harder" drugs. Scientists have shown that exposure to THC in rats increases their response to THC and other drugs. They call this cross-sensitization. In my parental opinion, I feel that nicotine is also a "gateway drug." <https://nida.nih.gov/publications/research-reports/marijuana/marijuana-gateway-drug>

- **How did smoking Marijuana add to your son's stress?**

SS: My son's use of THC while "self-medicating" for social anxiety and ADHD actually increased symptoms of both. His substance use led to an increase in the symptoms of ADHD; not completing assignments, not paying attention in class and complete lack of organization. While he gave the attitude of not caring about falling behind, it drastically increased his anxiety about just that. This led to greater anxiety in school because he was embarrassed about not being prepared. This school anxiety manifested as what the teachers called, "extreme attention seeking behavior." It was a vicious cycle where he would use more to combat those feelings with the results of use getting worse and worse. He then began seeking other drugs to dull the anxiety. In a 2017 study at the University of Washington showed that THC can lower anxiety at low doses but increase anxiety at higher doses. This study also showed a link between marijuana use and an increased likelihood of substance use disorders. As mentioned during the webinar, THC levels today are extremely high, far higher than the roughly 7% concentrations shown to have a positive effect.

<https://adai.uw.edu/pubs/pdf/2017mjanxiety.pdf>

- **Can we talk about question I get asked all the time by my son: "Which is worse tobacco/nicotine or marijuana?"**

SS: I am not a doctor so I cannot give medical advice. In my opinion, they are both unhealthy. In my experience, it seems that vaping nicotine can be that "gateway" to vaping THC. According to University of Michigan study by Carol Boyd shows that vaping cannabis has shown greater damage to the lungs. "Without a doubt, cigarettes and e-cigarettes are unhealthy and not good for lungs. However, vaping marijuana appears even worse." <https://news.umich.edu/vaping-marijuana-associated-with-more-symptoms-of-lung-damage-than-vaping-or-smoking-nicotine/>

- **What do you think about growing your own to be safe that it isn't laced with fentanyl and other more dangerous substance?**

SS: This touches on the topic of Harm Reduction. It is unhealthy to use marijuana. Harm reduction is acknowledging that someone is going to do something unhealthy but is taking steps to make it marginally safer. Harm reduction goes from putting filters on cigarettes to providing clean needles for heroin users. Growing one's own marijuana helps reduce one potential harm from using the drug.

Richter Section Endnotes

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- ^[ii] Vandrey, R., Raber, J. C., Raber, M. E., Douglass, B., Miller, C., & Bonn-Miller, M. O. (2015). Cannabinoid dose and label accuracy in edible medical cannabis products. *JAMA*, *313*(24), 2491–2493. <https://doi.org/10.1001/jama.2015.6613>
- ^[iii] Di Forti, M., Quattrone, D., Freeman, T. P., Tripoli, G., Gayer-Anderson, C., Quigley, H.,... & EU-GEI WP2 Group (2019). The contribution of cannabis use to variation in the incidence of psychotic disorder across Europe (EU-GEI): A multicentre case-control study. *Lancet Psychiatry*, *6*(5), 427–436. [https://doi.org/10.1016/S2215-0366\(19\)30048-3](https://doi.org/10.1016/S2215-0366(19)30048-3)
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