

Legalized Recreational Marijuana Use in Maryland

Introduction

On July 1st, 2023, anyone aged 21 or older became legally permitted to purchase or possess cannabis in the state of Maryland. This made Maryland one of 21 states that has legalized the use of recreational cannabis. According to a study using National Survey on Drug Use and Health (NSDUH) data from 2008 to 2016, the occurrence of cannabis use disorder increased in adolescent and adult respondents after the legalization of recreational cannabis (Cerde et al., 2020). Given this information, it is important that people in Maryland have accurate information about the effects of cannabis use on human health.

Marijuana Consumption

The common term “marijuana” refers to the part of the cannabis plant that is rich in tetrahydrocannabinol, or “THC.” When consumed, THC alters neurological signaling pathways in the brain, resulting in a variety of sensations, including relaxation and euphoria in some users, or anxiety and paranoia in others (U.S. Department of Health and Human Services, 2021). Marijuana can be consumed in a number of ways, including inhaling, ingesting when mixed during cooking or baking, or ingesting when infused into drinks.

Depending on the method of marijuana consumption and each individual’s unique chemical makeup, the body will respond to THC in a variety of different ways. Inhalation allows THC to enter the bloodstream, where it then travels directly to the brain. This yields a feeling of intoxication quickly, causing effects which can last up to six hours. Ingesting marijuana through food and drink causes THC to enter the stomach and liver. In the liver, THC undergoes further metabolic processes and is converted to a more potent chemical form, enhancing its impacts and causing a more intense reaction (Canadian



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Centre on Substance Use and Addiction, n.d.). The THC then enters the bloodstream and, eventually, the brain. Ingestion is an indirect method of marijuana consumption, and its effects are felt less quickly. The digestion process involves the “linger,” allowing its effects to last up to 12 hours (DHHS, 2021).

Health Impacts of Marijuana Use

Both positive and negative health impacts have been attributed to marijuana usage. Some positive health benefits include a reduction in chronic pain, an anti-nausea remedy for patients undergoing chemotherapy, and a reduction in spasmodic activity in patients diagnosed with multiple sclerosis (The National Center for Biotechnology Information, 2017). However, there is limited research in support of these benefits (NCBI, 2017), due to Drug Enforcement Administration regulations (Kiel, 2019), difficulty gauging participants' past exposure to cannabis, and difficulty administering statistically accurate doses (NCBI, 2017). On the other hand, there are dangers associated with irresponsible use of the substance. In a 2018 study using human participants, the risk for developing schizophrenia or psychosis were doubled in those previously at risk after

cannabis usage (Ortiz et al., 2018). Other negative side effects include brain development irregularities (Rubino et al., 2009), depression, memory impairment, paranoia, and lung and heart damage (DHHS, 2021).

Marijuana Usage in Youths

Contrary to popular belief, it is possible to develop an addiction to marijuana. It is estimated that up to 30% of marijuana users are addicted (Hasin et al., 2015). This risk increases in individuals who begin using marijuana at younger ages. Because marijuana chemically alters the receptors, pathways, and connections formed in the brain, and since the brain is continually developing throughout teenage years, teenagers are at a higher risk for long-term related health issues (Jacobus, 2014). Marijuana use in adolescents aged 18 and under is of particular concern. FMRI scans, or scans that give insight as to how the brain operates, of these adolescents showed impaired memory, decreased attention spans, and reduced coordination – all of which impact an individual's performance in school and social settings (Schweinsburg, 2008). These effects lasted 6 weeks even after abstaining from marijuana usage (Schweinsburg, 2008). A cohort of multinational researchers conducted a study comparing the IQs of 13 year olds before they started using marijuana and again at age 38 after persistent use. Strong statistical evidence showed a 6 point drop in IQ points in the 38 year olds as a result (Meier et al., 2012). In a study sponsored by Australian Government National Health and Medical Research Council, researchers monitored students who started smoking marijuana daily before the age of 17. Findings reported that these students were 60% less likely to graduate from high school compared to those who did not smoke marijuana daily (Silins et al., 2014).

Marijuana Contamination

The use of marijuana on its own presents risks. However, according to The Substance Abuse and Mental Health Services Administration (2013), there has been an increase in the number of cases in which marijuana is laced with other harmful substances. Drugs found include PCP, a hallucinogenic that is proven to cause seizures, aggression, respiratory abnormalities, and suicidal behavior (Gilbert et al., 2013). From the year 2005 through 2011, SAMHSA reports an increase of roughly 500 percent in patients who seek emergency medical care due to PCP-related symptoms (SAMHSA, 2013). Of these reported cases, 48 percent were due to

PCP-laced marijuana, cocaine, or other drugs (SAMHSA, 2013). Medical researchers have also discovered that formaldehyde has been laced into marijuana, posing serious health threats including permanent neurological damage and death (Gilbert et al., 2013). To avoid the possibility of purchasing marijuana laced with other substances, the CDC recommends not using it when alone and carrying a Naloxone kit (CDC, 2022).

Conclusion

As part of its substance use prevention and recovery efforts, the Illinois Department of Human Services has created a guide on how to minimize the risks associated with marijuana use: https://www.prevention.org/Resources/e608a7e1-e1a2-468c-b0d5-e65ccd25da5c/LTC_IL_HowToUseCannabisResponsibly_1227.pdf. Maryland residents who feel that they are having a dangerous reaction to marijuana or other substance should contact the Maryland Poison Center at 1-800-222-1222 or through their website at <https://www.mdpoison.com/>. In the case of a medical emergency, such as if a person is unconscious, having seizures, or having difficulty breathing, call 911 right away.

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