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**Medical Guidance on Cannabis/Marijuana Use in Patients**

Dear Medical Professional,

Marijuana/Cannabis is legal in many states and is highly commercialized. In 2020 an estimated 57 million Americans used [cannabis in the past year](https://www.samhsa.gov/data/sites/default/files/reports/rpt35323/NSDUHDetailedTabs2020/NSDUHDetailedTabs2020/NSDUHDetTabsSect1pe2020.htm). Your patients may ask your opinion on safety and recommendation for various conditions. As with any medical therapeutics there is a risk-benefit assessment. The following are evidence-based guidance to consider in patient advice.

**FDA labeling**

The FDA has researched and published adverse effects and warning for pure THC and CBD when approving Marinol (THC) and Epidiolex (CBD). The information in this drug labeling is applicable to THC and CBD that patients may take, although drug purity and dosage from a pharmacy is not the same as from a dispensary. The [FDA warning for Marinol](https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/018651s029lbl.pdf) incudes neuropsychiatric adverse reactions, hemodynamic instability for patients with cardiac disorders, seizures, and paradoxical nausea, vomiting and abdominal pain. The [FDA warning for Epidiolex](https://www.accessdata.fda.gov/drugsatfda_docs/label/2018/210365lbl.pdf) includes hepatocellular injury, somnolence and sedation, suicidal ideations, and withdrawal seizures.

**Potency**

Cannabis products sold at recreational dispensaries have high potency of THC. The smoked flower products may have THC at 17 – 40%. The concentrate products can have potency near 90%. In comparison the marijuana plant of [1995 averaged 4 % THC](https://www.ncbi.nlm.nih.gov/labs/pmc/articles/PMC4987131/).

**Contaminants**

In a [study from UC Davis](https://www.clinicalmicrobiologyandinfection.com/article/S1198-743X%2816%2930605-X/fulltext), 20 out of 20 legal recreational dispensaries were found to have contaminants in their flower products. Fungal contamination with cannabis flower is well known. Therefore, the [CDC as issued a warning](https://wwwnc.cdc.gov/eid/article/26/6/19-1570-t1) against smoking cannabis for organ transplant recipients and other immunocompromising conditions.

**Screening**

The medical community routinely screens for tobacco and alcohol use. We now should specifically screen for cannabis/ marijuana use. Specifically, ask about age of onset, frequency of use, and type of products used.

**Documentation**

ICD 10 codes are still in development for the various cannabis-associated diagnosis. Cannabis is rarely a primary diagnosis but is important to document as a subsequent diagnosis. Under more specific ICD become available, Select “Cannabis poisoning” for any adverse event.

**The Growing Brain**

[Brain development](https://nida.nih.gov/publications/drugs-brains-behavior-science-addiction/preventing-drug-misuse-addiction-best-strategy) continues past bone development, to the mid 20’s, with final myelination occurring in the frontal cortex and pruning of neuronal pathways. That is why addiction of any substance to the growing brain is up to 7 times more likely than for older adults. While the legal age for drinking alcohol or consuming cannabis may be 21, the scientific age for prevention addiction is 25 or even higher.

**Drug Interactions**

Both THC and CBD are metabolized by the cytochrome P450 system and therefore include many drug interactions. There are many pain medications and psychiatric medications that interact with CBD and THC. THC and CBD used with blood thinners present a risk of spontaneous bleeding. It is recommended to use [Drugs.com](http://drugs.com/) or other medication interaction checker that include cannabis or cannabidiol.

**Cannabis Induced Psychosis**

Cannabis is known to cause neuropsychiatric symptoms according to the FDA drug label that used low potency THC. High potency THC has a greater association with psychosis. Large European studies associated high potency THC, defined at over 10%, with [5 times increase odds ratio](https://www.thelancet.com/article/S2215-0366%2819%2930048-3/fulltext) of developing a psychotic disorder. Medical providers are urged to recognize, document, and treat psychosis associated with THC.

**Cannabis Use Disorder**

Cannabis use disorder is defined using the same [DSM V 11-point criteria](https://jamanetwork.com/journals/jama/article-abstract/379036) as alcohol use disorder or opioid use disorder. Cannabis use disorder occurs in 9% of those who experiment with marijuana and up to 25-50% of daily users.

**Cannabis Withdrawal**

[Cannabis withdrawal is reported by up to 30% of regular users and in 50-90%](https://www.ncbi.nlm.nih.gov/labs/pmc/articles/PMC5719106/) of heavy users. Many cannabis users do not believe they suffer from withdrawal until they understand that the symptoms of cannabis withdrawal are different than alcohol or opioid withdrawal. The common symptoms of cannabis withdrawal are anxiety, insomnia, and headache. Typically, these symptoms last for about 2 weeks after cession.

**Cannabis Hyperemesis Syndrome**

Cannabis Hyperemesis Syndrome (CHS) is associated with long-term cannabis use, typically of smoked product. The symptoms of CHS have been described as scromiting, screaming and vomiting. There are reported deaths with CHS caused by electrolyte imbalance. San Diego leaders published a [treatment guideline for CHS](https://www.ncbi.nlm.nih.gov/labs/pmc/articles/PMC5851514/) that avoided opioids and repeated diagnostic radiation. Antipsychotic medications can be helpful in severe cases.

**Drugged Driving**

Drugged driving is a public health issue that is growing. [In a study of 191 regular cannabis users](https://jamanetwork.com/journals/jamapsychiatry/fullarticle/2788264) who smoked 5.9%, or 13.4% delta-9 THC cigarettes, simulated driving worsened in the THC group compared to controls. The results were unrelated to THC content, use history or blood THC concentration. Driving impairment was indistinguishable from placebo at 4.5 hours post consumption. [Marijuana users were about 25% more likely to be involved in a crash](https://www.cdc.gov/transportationsafety/impaired_driving/impaired-drv_factsheet.html) than drivers with no evidence of marijuana use. The [National Highway Traffic Safety Administration](https://www.nhtsa.gov/risky-driving/drug-impaired-driving#the-issue-marijuana-impairs) published information on Drug-Impaired Driving.

**Pediatric Safety**

Cannabis products should be locked away from children. Marijuana related hospital encounters in children under the age of six increased [13.3-fold in 2018 compared to 2004, with 15% requiring intensive care treatment](https://www.sciencedirect.com/science/article/abs/pii/S1876285921003776).

**Cardiovascular Health**

Patient with cardiovascular disease should be cautioned about cannabis use related to their individual medical diagnosis.

**Pulmonary Health**

Smoking and vaping of any product is detrimental to pulmonary health. Cannabis products contain similar toxins to tobacco products.

**References**

* The [International Academy on the Impact and Science of Cannabis, IASIC](http://iasic1.org/) has a medical library with many references of the adverse events of cannabis.
* [NIH – National Center for Complementary and Integrative Health. Cannabis and Cannabinoid What you Need To Know](https://www.nccih.nih.gov/health/cannabis-marijuana-and-cannabinoids-what-you-need-to-know)

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