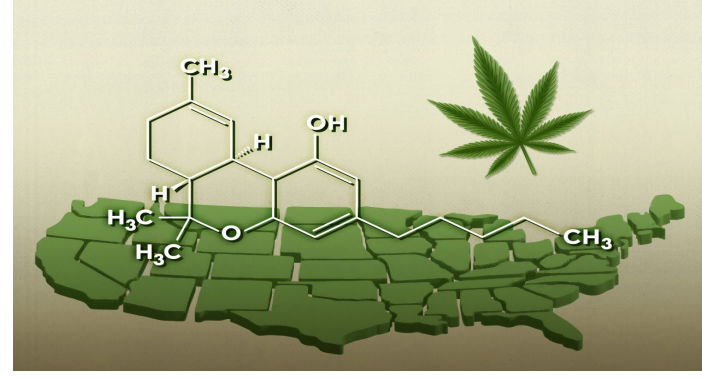


Cannabis, Cannabinoids, THC

Cannabis, a flowering plant, is a genus of the Cannabaceae family which evolved in the eastern Tibetan plateau. Three species of this plant are recognized as Cannabis Sativa (used as mild sedative, anti-emetic and analgesics), C. Ruderalis and C. Radica. It is the close relative of hop, used to produce beer, and is still native to central Asia. The earliest use of marijuana was recorded about 2500 years ago. The plant is also known as hemp, although this term is usually referred to Cannabis var. cultivated for non-drug use. There are about 500 identifiable chemical constituents known to exist in the cannabis plant, and at least 85 different cannabinoids have been isolated from the plant. The two cannabinoids usually produced in greatest quantities are cannabidiol (CBD) and tetrahydro-cannabinol (THC), but only THC is psychoactive.



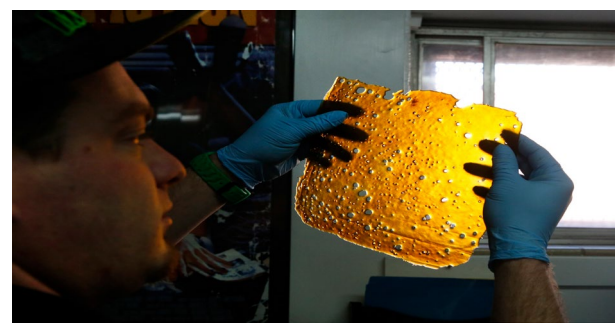
The concentration of THC, tetrahydro-cannabinol, determines this product's potency and it varies within different preparations. It is important to remember that the potency of these products has been increasing over time. THC typically refers to the most potent delta-9 isomer but synthetic forms of the product, the delta-8 THC are becoming increasingly common. In a 2017 survey, about 45% of Americans said they had at least tried smoking "pot". Starting in 2012, some of the states began legalizing this substance for medical and/or recreational usage. Yet, public health concerns remain high aside from the gain in the social and legal acceptance of the product. The dried leaves and flowers of the cannabis plant are usually rolled into cigarettes called joints or placed in a water pipes, bongs, and smoked. When smoked, marijuana delivers about 0.5%-0.9.6% of THC. They also use the cannabis in resin and/or oil forms, called hashish and hash oil, which is inhaled or ingested.



Psychoactive Effects & Medical Use

Cannabis is a worldwide recreational drug and it is only behind alcohol, caffeine and tobacco. It is believed that over 100 million Americans have tried cannabis, with 25 million only within the year.

The psychoactive effects of cannabis are in three phases. Primary psychoactive effects include a relaxation feeling and to a lesser degree, euphoria (THC). Secondary psychoactive effects, for philosophical thinking, searching intro-respectively and causing some anxiety and paranoia. The tertiary psychoactive effects of cannabis, can include an increase in heart rate and hunger. Short-term use increases adverse effects of dizziness, feeling tired, vomiting, and hallucinations. Long term effects of cannabis use are related to risk of schizophrenia (specially in young people), cognition problems, memory loss and the risk of accidental overdose, especially in kids.



Medical marijuana refers to the use of cannabis and cannabinoids, in order to improve certain symptoms and treat disease. As such, it is used to reduce nausea and vomiting during chemotherapy, to improve appetite in people with AIDS, and to treat chronic pain and muscle spasms. Cannabinoids are under preliminary research for their potential to affect depression, anxiety, attention deficit hyperactivity disorder, Tourette syndrome, PTSD and psychosis.

Still, little evidence has been shown in the data collected so far. Dronabinol and Nabilone, two extracts of cannabis, are approved by the FDA as medications in pill form to treat the side effects of chemotherapy and AIDS.

During the Covid-19 pandemic, while in lockdowns, cannabis dispensaries were in full operation. Many states declared them essential businesses and with only warning labels, the industry figured that they could shield themselves from liability, much as it was for the tobacco companies.

Cannabis Potency & Cannabis Use Disorder

Medical diagnoses related to marijuana include psychotic disorder, delusion and persistent vomiting. An estimated 800,000 people made marijuana-related emergency department visits in 2021, according to a December of 2022, published government study. Marijuana related medical emergencies have landed hundreds of thousands of people in the hospital and millions are dealing with psychological disorders linked to its misuse, according to federal government's research. Still, regulators have failed to keep up. Among the states that allow the sale and use of marijuana and its derivatives, consumer protections are spotty. According to a study led by researchers at the Mental Health Services in the Capital Region of Denmark and the National Institute on Drug Abuse (NIDA) at the National Institutes of Health, young men who are misusing marijuana are at great risk of developing Schizophrenia. This study also adds to the existing evidence that, over the past five decade, there is a consistent increase in new cases that may be attributed to cannabis use. Also noted that this increase is likely linked to the higher potency of cannabis and increasing prevalence of diagnosed cannabis use disorder over time.

Legalization

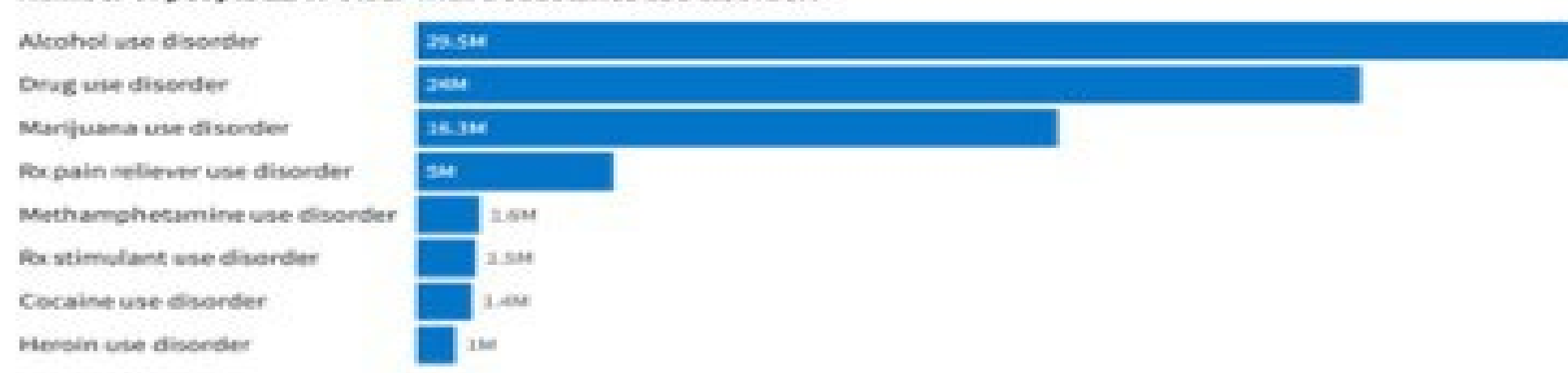
Long term effects of cannabis use are related to risk of schizophrenia (specially in young people), cognition problems, memory loss and the risk of accidental overdose, especially in kids. Legalization has also helped open the door to products that are extracted from marijuana but look nothing like it: oily, waxy, or crystalline THC concentrates that are heated and inhaled. National Institute on Drug Abuse: "The risks of physical dependence and addiction increase with exposure to high concentrations of THC, and higher doses of THC are more likely to produce anxiety, agitation, paranoia, and psychosis."

In 2021, 16.3 million people in the United States — 5.8% of people 12 or older — had experienced a marijuana use disorder within the past year, according to a survey published in January from the Department of Health and Human Services. This is far more than the total found to have substance use disorders involving cocaine, heroin, methamphetamine, prescription stimulants (Adderall), or prescription pain relievers (fentanyl and OxyContin).

Millions Experience Marijuana Use Disorders

A 2021 federal survey found that 16.3 million people age 12 or older had a marijuana use disorder within the preceding 12 months. Use disorders involve impairment, the report said.

Number of people 12 or older with a substance use disorder:



Source: Substance Abuse and Mental Health Services Administration

KFF Health News

The association of cannabis potency with cannabis use disorder and psychosis may help inform public health guidelines; policies on cannabis sales and access; and efforts to effectively prevent, screen for, and treat cannabis use disorder

"In many states the products come with a warning label and potentially no other activity by regulators," said Cassin Coleman, vice chair of the scientific advisory committee of the National Cannabis Industry Association. The federal government has a hands-off approach. It still bans marijuana as a Schedule 1 substance — as a drug with no accepted medical use and a high chance of abuse, under the Controlled Substances Act. But when it comes to cannabis sales, which many states have legalized, it does not regulate purity or potency. Colorado's ruling is more than 500 pages, but the disclosure underscores the limits of consumer protections: "This product was produced without regulatory oversight for health, safety, or efficacy." Marijuana isn't just green leafy material that you roll up and smoke anymore. Enter waxes, dabs, and oils. The FDA oversees food, prescription drugs, over-the-counter drugs, and medical devices. It regulates tobacco, nicotine, and nicotine vapes. It oversees tobacco warning labels. In the interest of public health and safety, it also regulates medical products that can include plant material.

Oral Health

Dentists have to talk about cannabis and street drugs and, how there are so many substances that can be mixed into them. It can be extremely dangerous for patients not only to take these drugs but also to mix them with the medications that dental health care providers prescribe.

Pot smoking is associated with periodontal complications, xerostomia, and leukoplakia as well as increased risk of mouth and neck cancers.

A currently intoxicated (i.e., "high") patient may present several difficulties for the dental practitioner. Increased anxiety, paranoia and hyperactivity may heighten the stress experience of a dental visit. Increased heart rate and other cardiorespiratory effects of cannabis make the use of epinephrine in local anesthetics potentially life-threatening. Patients may be unwilling to self-report marijuana use or unable to answer reliably, but determination of intoxication may be possible during the routine exam. It is because of the dangers of administering alcohol containing products to a "high" patient, with an increased anxiety and paranoia, that the dentists could refuse to treat these patients, or consider waiting 24 hours for non-emergency treatment. Important to note that there may be legal implications with regards to the informed consent with intoxicated individuals.

Signs and symptoms of an active and chronic cannabis user include:

- Euphoria, hyperactivity, paranoia, speech impediment, delusions and hallucinations.
- Tachycardia is also common as well as candidiasis and leukoplakia, gingival hyperplasia, xerostomia and stomatitis.

CONCLUSION & REFERENCES

Decades ago the THC content of was less than 1.5%. Today, cannabis products and the industry has changed tremendously, with some products marketed with more than 90% THC content and with some of the varieties actually having more than 30% THC levels.

Controlling the potency can limit the dangerous options for some people. Medical use of marijuana is now legal in 40 states and the District of Columbia, and recreational or adult use is legal in 22 state, in addition to the D.C. area. The association of cannabis potency with cannabis use disorder and psychosis may help to better inform the general public and, this may lead to establish mental health guidelines, policies on cannabis sales and its access, with efforts to effectively prevent, screen for, and treat cannabis use disorder.

Positive effects of cannabis use: controlled hunger and appetite, asthma reduction, relaxation, euphoria, reduction and relief of pain .Negative effects include disorientation, weakened perception, inflammation, oral mucositis.
Cho CM, Hirsch R, Johnstone S. General and oral health implications of cannabis use. Aust Dent J 2005;50(2):70-4.
ADA Policy on Provision of Dental Treatment of Patients with Substance Use Disorders

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