

ADDITIONAL MARIJUANA FACTS

Facts about Marijuana and Marijuana Abuse

Identification:

Marijuana is a green, brown, or gray mixture of dried, shredded flowers, leaves, stems and seeds of Cannabis Sativa. (Other terms have been used to describe the plant [e.g., hemp, Cannabis Indica, Cannabis Ruderalis]; all refer to varieties of Cannabis Sativa.)

Active Ingredient:

Delta-9-tetrahydrocannabinol or THC, one of nearly 400 chemicals in the plant, accounts for much of the marijuana's psychoactive or mind-altering effects. The strength of the drug is determined by the amount of the THC it contains. Recent data shows the following:

- Most ordinary marijuana has an average of 8 percent THC, and it has been getting stronger in recent years, according to the US Drug Enforcement Administration (DEA).
- Sinsemilla ("without seeds"), the buds and flowering tops of the female plants, has an average THC concentration of 12 percent, although it can be as high as 24 percent.
- Hashish, a sticky resin obtained from the female plant flowers, has an average of 5 to 20 percent THC.
- Hash oil, a tar-like liquid distilled from hashish, generally consists of between 15 and 50 percent THC but can have as much as 75 percent THC.
- Hash oil-like variants (e.g., budder, shatter, wax, crumble) also may have as much as 75 percent THC.

Methods of Use:

Paper-based methods are increasingly popular ways to smoke marijuana. Marijuana rolled in tobacco paper is called a "blunt", whereas "joints" are rolled with light translucent paper. A typical joint contains between 0.5 and 1.0 gram of cannabis plant matter, in which the average THC content ranges between 8.25 and 13.2 milligrams. The drug also can be smoked in a pipe. One well-known type of water pipe is the "bong". In recent years, another method is to place hash oil into vaping pens, often mixed with propylene glycol to facilitate a vapor. Some users also mix marijuana into foods or use it to brew tea. Several types of edibles now exist including infusing THC into chocolate, cookies, or gummy bears, as examples. Very strong forms of THC might also be smoked on the head of a pin, or with an oil rig pipe, such as in "budder" or "wax" (a soft, balm-like texture), "shatter" (a hard, amber-colored solid) and "crumble" (a crumb-like texture) forms.

Extent of Use:

Marijuana is the most used illicit (at the Federal level) drug in the United States. The National Institute on Drug Abuse's (NIDA) Monitoring the Future study, a national survey among middle and high school students, found that in 2019, 11.8% of 8th graders

reported marijuana use in the past year. By the 12th grade, 35.7% of students had used marijuana in the past year, and 22.3% of them were current users (last 30 days).

With the growing popularity of vaping devices, there was a significant increase in the prevalence of vaping THC amongst middle and high school students. In 2019, monthly use among 12th graders doubled from the year prior from 7.5% to 14%. Additionally, the daily use of marijuana vaping devices was 3.5% among 12th graders, 3% among 10th graders, and 0.8% among 8th graders.

Effects of Use:

THC passes quickly from the lungs to the bloodstream and is carried to the brain and other organs. Within a few minutes of inhaling marijuana smoke, users likely experience rapid heart rate, an altered sense of time, a change in mood, impaired sense of body movement (including slower reaction times), impaired memory, difficulty thinking and problem-solving, and when taken in high doses, hallucinations, delusions, and psychosis.

Effects on the Brain:

THC stimulates a “high” by triggering receptors found throughout the brain, including the amygdala, which is responsible for emotions, the basal ganglia (planning), the brain stem/spinal cord (transmitting information to the body), the cerebellum (motor coordination and balance), the hippocampus (information processing), the hypothalamus (eating), the neocortex (complex thinking, feeling, and movement), and the nucleus accumbens (motivation and reward). Marijuana use on a teen’s developing brain may impair thinking, memory, learning functions, and can cause a decline in IQ points (up to 8 points). Researchers have discovered that certain aspects of learned behaviors and memory that depend on the hippocampus are altered after chronic exposure to THC. Findings from animal studies show that chronic exposure to THC in early life led to problems with specific learning and memory tasks, and cognitive impairment associated with structural and functional changes in the hippocampus later in life.

Effects on the Respiratory System:

Someone who smokes marijuana regularly may have many of the same respiratory problems that tobacco smokers have. These individuals may have daily cough and phlegm, symptoms of frequent chronic bronchitis episodes, and more frequent chest colds. While researchers have moderate evidence that smoking marijuana does not lead to increased risk of lung cancer, continuing to smoke marijuana can lead to abnormal functioning of the lungs and airways.

Therapeutic Uses:

There is substantial evidence to support therapeutic effects of cannabis in certain adults, including treating chronic pain, reducing opioid dependence, and alleviating nausea in cancer patients undergoing chemotherapy. There is only moderate evidence to support short-term sleep outcome effects and they were found in those affected by fibromyalgia, multiple sclerosis (MS) and sufferers of chronic pain.

Cannabidiol (CBD)

Cannabidiol (CBD) is one of the many cannabinoids—a group of active chemical compounds obtained from the Cannabis Sativa plant. CBD alone is non-psychoactive and does not cause intoxication or euphoria (high). CBD can be found infused in foods, body products, cosmetics, dietary supplements and therapeutic products. Health claims may state that CBD can help reduce anxiety, post-traumatic stress disorder (PTSD), and depression, however there is not sufficient data to support such claims. As of January 2020, there is only one CBD-derived drug approved by the FDA, Epidiolex, used to treat rare seizure disorders.

MEDICAL & RECREATIONAL MARIJUANA: LEGAL ISSUES

We have found that sometimes students ask questions regarding the legal status of medical and/or recreational marijuana. Specifically, they wonder why some people can obtain marijuana for medical and/or recreational use without legal penalties, yet marijuana remains an illegal substance in several states. The students' confusion is understandable: state and federal law do seem to contradict each other. The information below may help to clarify the legal issues.

MEDICAL Marijuana and the Law:

- The federal government has the Controlled Substance Act (CSA), which forbids possession of marijuana (whether for medical use or not).
- As of April 2020, 33 states and the District of Columbia have passed laws that legalize medical marijuana in some form. These states include: *Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Hawaii, Illinois, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, Utah, Vermont, Washington, and West Virginia.*
 - An additional 13 states allow the restricted use of medical marijuana: *Alabama, Florida, Georgia, Iowa, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, South Carolina, Virginia, Wisconsin and Wyoming.*
- The Supreme Court found that the CSA is constitutional and good law. Possessing marijuana, whether for medical use or not, is illegal under federal law.
- On October 20, 2009 the U.S. Justice Department announced a formal policy stating that the federal government will no longer prosecute people using, prescribing, or distributing marijuana for medical purposes, as long as they are in compliance with state and local laws. Thus, the current federal administration will not prosecute medical marijuana use that is allowed by state law, even if such use breaks federal law. However, the federal government reserves the right to change its position on marijuana regulation at any time in the future.

RECREATIONAL Marijuana and the Law

- As of April 2020, 11 states and the District of Columbia have legalized recreational marijuana use. These states include: *Alaska, California, Colorado, Illinois, Maine, Massachusetts, Michigan, Nevada, Oregon, Vermont, and Washington*.
- As of April 2020, in states where recreational marijuana use has been legalized, efforts to clear marijuana convictions have been underway. In December 2019, Illinois cleared 11,000 low-level marijuana convictions. In California, prosecutors in Los Angeles and San Joaquin counties are clearing or reducing 54,000 marijuana convictions.
- Specific laws regulate the age, sale, cultivation, and amount of marijuana consumption within each state. Marijuana transported across state borders is subject to state and federal laws.

Regulation Differences and Developments:

- Recent data suggests that in states that have legalized marijuana for medical use, there are considerably higher rates of teen marijuana use (past-month) than in states that have not legalized medical marijuana.
- In states where recreational marijuana is legal, general controls exist to regulate the marijuana market with licensing and taxation systems.
- However, regulations in some states that have legalized medical and recreational marijuana remain murky because laws governing distribution may vary from one local jurisdiction to another.
- The 2018 Farm Bill removed hemp (historically used to make products such as rope)—which contains no more than 0.3% THC—from its Schedule I status under the Controlled Substances Act; thus, it is no longer an illegal substance under federal law.

THC-CONTAINING VAPE PRODUCTS

The Food and Drug Administration (FDA) is warning consumers who are using vaping products containing THC, the psychoactive component of marijuana, to stop use following reports of lung injuries. They also urge customers not to modify or add substances to vaping products purchased through retail establishments, or purchase products from illicit sources, or off the street. The US Centers for Disease Control and Prevention (CDC) reports that as of January 2020, there were more than 2,600 vaping-related lung injuries, some resulting in deaths, and vitamin E acetate is strongly linked to the outbreak.

MARIJUANA USE CONSEQUENCE

1. The well-confirmed danger of smoking marijuana is lung and respiratory damage. For example, long-term use may lead to frequent chronic bronchitis episodes and worsening respiratory symptoms. However, one may see improvements when they quit.
2. If you use marijuana over several years, it disrupts encoding of your long-term memory. Heavy use can lead to impairment in learning, memory, attention and other cognitive domains.
3. Adult users report the following consequences: memory loss, less able to concentrate, lower motivation, lower self-esteem, problems with relationships, and problems with mental health. If a woman who uses marijuana gets pregnant, it can cause low birth weight and prematurity of her infant.
4. Very high doses of marijuana produce a toxic delirium (especially if eaten), which may lead to confusion, agitation, disorientation, anxiety, paranoia, and hallucinations. There are no reported deaths of overdoses from smoking marijuana alone. The lethal-to-active ratio is over 1000:1.
5. The active component of marijuana is THC. It is stored in the blood for several months in regular users. Withdrawal symptoms include the ones typical of other drugs, including difficulty concentrating, irritability, urges to use, difficulty sleeping, depression, vivid dreams, anger, headaches, sweating, and decrease in appetite. Withdrawal symptoms usually subside in 1-3 weeks after stopping use.
6. Substantial evidence shows that the effects of marijuana on motor coordination, including impaired judgement and reaction time, place users at increased risk for motor vehicle accidents.
7. Twelve questions to determine whether or not you are a marijuana addict are listed in information from Marijuana Anonymous (MA). An example of a question is: Is it hard to imagine a life without marijuana?
8. Using marijuana at an earlier age is a risk factor for developing cannabis use disorder. Marijuana users do seek treatment. Most of those who seek marijuana cessation treatment are not currently using other drugs. The average adult that enters treatment for cannabis use disorder has tried to quit six times before.
9. There is an increased risk of respiratory distress, and other marijuana-related injuries among children in states where marijuana is legal.
10. Long-term mental effects can include temporary hallucinations, paranoia, and worsening symptoms in schizophrenia patients. Development of schizophrenia or other psychoses was found with frequent use. Marijuana is also linked to anxiety and other depressive disorders. Suicidal thoughts and attempts are mostly found in heavy users.