

Marijuana Facts

A Drug
Policy
Alliance
release.

We are the Drug Policy Alliance and we envision a just society in which the use and regulation of drugs are grounded in science, compassion, health and human rights, in which people are no longer punished for what they put into their own bodies but only for crimes committed against others, and in which the fears, prejudices and punitive prohibitions of today are no more.

Please join us.



Marijuana Facts

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The Drug Policy Alliance (DPA) supports information and policies related to marijuana that are grounded in science, compassion, health and human rights. **Safety is our top priority**, especially when it comes to young people.

For over 20 years, DPA has been at the forefront of marijuana law reform. We support marijuana laws that regulate marijuana effectively and that no longer arrest, incarcerate, disenfranchise and otherwise harm millions – particularly people of color, who are disproportionately affected by the war on drugs. We also work to promote the development of a safe, responsible, inclusive and ethical marijuana industry.

A brief history of marijuana

4,000 B.C.

Earliest record of marijuana's medical use.

1937

Congress passes the Marihuana Tax Act, marking the start of federal marijuana prohibition.

1971

President Richard Nixon launches the 'war on drugs' and places marijuana in the most restricted category of drugs.

1980s

President Ronald Reagan drastically escalates the drug war, leading to skyrocketing arrests and incarceration for marijuana.

1996

California becomes the first state to approve medical marijuana, with the passage of Proposition 215.

The use of marijuana for both medicinal and recreational purposes is not new. Indeed, the use of marijuana has been documented as far back as 12,000 years ago, making it one of the earliest cultivated crops.

The first record of its medicinal use dates back to 4,000 B.C. in China, where the plant originated and was used as an anesthetic during surgery. Records from 1,000 B.C. in India praise it for reducing anxiety. By medieval times, the plant

had reached Europe; and German records indicate it was used for toothaches and for relieving pain during childbirth.

Marijuana was widely used in the U.S. for centuries, where it was considered a useful drug for the treatment of numerous afflictions, and remained part of the U.S. Pharmacopoeia until 1941. Marijuana was criminalized in the early 20th century, not because of

2010

Marijuana legalization becomes a mainstream political issue as a California ballot initiative, Proposition 19, pulls off a near-victory.

2012

Colorado and Washington become the first U.S. states – and the first political jurisdictions anywhere in the world – to legally regulate marijuana.

2013

Uruguay becomes the first nation to legally regulate marijuana.

2014

Oregon, Alaska, and Washington, D.C. pass ballot initiatives to legalize marijuana.

2016

California, Massachusetts, Maine and Nevada pass ballot initiatives to legalize marijuana.

any evidence of risk to public health or safety, but rather as a result of racial prejudice against an influx of immigrants arriving from Mexico who were using marijuana.

“The idea that this is an evil drug is a very recent construction,” says Barney Warf, a professor of geography at the University of Kansas in Lawrence and author of *High Points: An Historical Geography of Cannabis*. And the fact that it is illegal is an “historical anomaly.”

This booklet is intended to provide brief answers to some of the most commonly-asked questions about marijuana. We hope it will help you better understand this plant and its effects.

Is it true that marijuana has medicinal properties?

Absolutely. For many seriously ill people, medical marijuana is the only medicine that relieves pain and suffering, or treats symptoms of their medical condition, without debilitating side effects. Marijuana's medicinal benefits are undeniable, now demonstrated by decades of studies published in highly respected medical journals.

For some people, marijuana can:

- Alleviate symptoms of a wide range of debilitating medical conditions, including cancer, HIV/AIDS, multiple sclerosis, Alzheimer's Disease, epilepsy, and Crohn's Disease
- Act as a safer and more effective alternative to narcotic painkillers
- Treat severe pain
- Reduce nausea induced by cancer chemotherapy
- Stimulate appetite in AIDS patients
- Reduce intraocular pressure in people with glaucoma
- Reduce muscle spasticity in patients with neurological disorders
- Help manage some mental health conditions, particularly PTSD

Although 29 states and Washington, D.C. have legalized marijuana for medical purposes, and there is a plethora of scientific research establishing medical marijuana's safety and efficacy, the federal government (by way of the Drug Enforcement Administration and the National Institute on Drug Abuse) is blocking the clinical trials necessary to turn the marijuana plant into an FDA-approved prescription drug.

Alternately, doctors may legally prescribe Marinol, an FDA-approved pill that contains 100 percent THC – but patients don't find it as effective as marijuana because it lacks the other therapeutic compounds found in the plant.

How strong is today's marijuana?

The marijuana available today is the same plant that has been used for thousands of years. Due to the large number of marijuana varieties, however, the level of THC – the main psychoactive ingredient – varies.

Interestingly, marijuana tested in areas where it is illegal tends to be stronger. Why? Because when access to a particular substance is sporadic, risky and limited, both consumers and producers are incentivized to use or sell higher potency material. There was a similar trend during alcohol Prohibition, when beer and cider were largely replaced by spirits and hard liquor, which are easier and more profitable to transport.

On the other side of the coin, when access is regulated and controlled, as in states where medical marijuana is legal, we see a wider variety of

potencies, including marijuana with virtually no traces of THC, but high in cannabidiol (CBD) – which is therapeutic, but not psychoactive.

Different methods of ingestion can also impact the strength of marijuana. Marijuana-infused edibles, for example, can have a stronger intoxicating effect and last longer than smoking. It's important to regulate dosage and remember that it can take up to one hour before a marijuana edible takes effect. (See page 15 for more on this.)

Is marijuana a gateway drug?



Marijuana is the most popular and easily accessible illegal drug in the United States today. Therefore, people who have used less accessible drugs such as heroin, cocaine and LSD, are likely to have first accessed marijuana and other more accessible drugs, including alcohol. But the use of one does not cause the use of another.

Most people who try marijuana never go on to use any other illegal drug, and the vast majority of those who do try another drug don't become

dependent on it, or go on to have associated problems. Indeed, for the large majority of people, marijuana is an endpoint in drug use rather than a so-called "gateway drug". New evidence suggests that marijuana can even serve as an "terminus drug," helping people to reduce or eliminate their use of more harmful drugs such as opiates or alcohol by easing withdrawal symptoms.

Are more people becoming dependent on marijuana?

In a word: no. Fewer than 10 percent of those who try marijuana ever end up meeting the clinical criteria for dependence, whereas 32 percent of tobacco users and 15 percent of alcohol users do.

Some people argue that rates of marijuana dependence are increasing because marijuana treatment admissions are increasing. However, the primary reason we're seeing an increase in admissions is because the criminal justice system is referring more people to treatment instead of jail or prison, as a result of policies implemented over the past two decades to stem the skyrocketing U.S. prison population.

That's why just 45 percent of people who enter marijuana treatment meet the official criteria for marijuana dependence. More than a third hadn't even used marijuana in the 30 days

prior to admission. When given the choice between treatment and jail, however, most people will choose treatment regardless of whether they're struggling with addiction.

In addition, the removal of criminal barriers and creation of legitimate markets for obtaining marijuana has destigmatized marijuana use. Thus, people who use marijuana are more likely to seek substance abuse treatment, with less concern about the social and criminal consequences of outing themselves.

Even though marijuana is becoming more acceptable, there is no evidence of an increase in levels of marijuana dependence in the general population.



Does marijuana impair driving the way alcohol does?

Yes and no. Marijuana can affect perception and psychomotor performance, changes that could impair driving ability. But in driving studies, marijuana produces little or no car-handling impairment – consistently less than produced by moderate doses of alcohol and many legal medications.

Mixing marijuana and alcohol together amplifies potential risks. Surveys of fatally injured drivers show that when THC is detected in the blood, alcohol is often detected as well. That said, it is never a good idea to get behind the wheel when intoxicated, even if just from marijuana alone.

For some people, marijuana may play a role in bad driving, but the overall rate of highway accidents does not appear to be significantly affected by marijuana's widespread use. Also, people who frequently use marijuana

appear to develop a tolerance to marijuana's impairing effects.

Unfortunately, as a result of marijuana's criminalization, harm prevention measures that exist for alcohol consumption – such as safe use guidelines, formal intoxication levels, designated driver education, and easily accessible information about how alcohol impacts physical and mental functioning – are not widely available for marijuana use. In states where marijuana is legally controlled and regulated, public education about using marijuana safely, including not driving under the influence, is becoming more readily available.

Does using marijuana have long-term effects on the brain?

Whether you've tried it yourself, or have been with someone under the influence of marijuana, you know that "getting high" can change how a person thinks and behaves. Some short-term effects may include immediate changes in thoughts, perceptions and information processing. The cognitive process most clearly affected by marijuana is short-term memory, but this usually disappears as soon as the person is no longer intoxicated.

So, what about long-term effects? Evidence does not support the notion that even heavy, long-term marijuana use by adults permanently impairs memory or other cognitive functions.

Some studies have shown that heavy marijuana use starting in the early teens has an impact on the brain, while other studies have shown no impact. What is clear is that much more research is needed.

A 2014 study of 2,600 young people found that when taking into account socio-economic factors such as environment, poverty, poor nutrition, parenting style, mental health, and alcohol use, the association between moderate marijuana use and IQ largely disappears. Still, it is strongly recommended that teens not use marijuana, as their brains are still developing, and in particular the part of the brain that controls emotional development can be sensitive.

For both adolescents and adults, it's important to understand the difference between use and misuse. "Drug use" includes all problematic and non-problematic drug use. "Misuse" can include both addictive use, and non-addictive problematic use (ie., driving while impaired).

Does marijuana negatively impact mental health?

There is no definitive evidence that marijuana causes some psychiatric disorders in otherwise healthy individuals. Most tellingly, rates of schizophrenia and other psychiatric illnesses have remained flat even during periods of time when marijuana use rates have increased. This is not to say that there is no relationship between psychoactive substances and mental functioning. Some effects of marijuana use can include feelings of panic, anxiety and paranoia, but these effects are temporary.

Part of the reason it's so difficult to detangle psychoactive substance use from mental health is age of onset. For most people, symptoms of mental disturbance occur in the late teens and early 20's. Teens are also more likely to experiment with marijuana and less likely to be open with their parents about their drug use and/or any symptoms of mental disturbance they may be experiencing. As a result, drug and alcohol use has usually already started by the time symptoms of mental illness become

noticeable. This is why we see so many studies that confirm that most people diagnosed with severe mental illness have had a history of alcohol and/or drug use.

The alcohol and drug use was not the cause of the mental illness, however, but rather a behavior that coincides with the undetected development of mental health symptoms. In fact, research suggests that those with mental illness might actually be self-medicating with marijuana – turning to the plant to help manage their symptoms, rather than becoming ill after use.

Indeed, emerging evidence indicates that psychiatric patients who try marijuana show significant improvements in symptoms and clinical outcomes (such as lower mortality rates and better cognitive functioning) compared with those who have not. And some of the unique chemicals in marijuana, such as cannabidiol (CBD), seem to have antipsychotic properties. Now, researchers are investigating it as a possible treatment for schizophrenia and depression.

Is there a relationship between marijuana and cancer?



According to the most scientifically valid studies, long-term marijuana smoking is not associated with elevated cancer risk, including lung, melanoma, prostate, breast or cervix. Scientists hypothesize that the anti-oxidant properties of marijuana might override any cancer-causing chemicals found in marijuana smoke, therefore protecting the body against the impact of smoking. That alone is a huge surprise to most people, but that's just the beginning.

A study in 2009 actually found that moderate marijuana smoking over a 20-year period was actually

associated with reduced risk of head and neck cancer. In fact, some of the chemicals in marijuana, such as THC and especially CBD, have been found to promote tumor cell death and show potential as effective tools in treating cancer.

Finally, marijuana smoking is not associated with any other permanent lung harms, such as chronic obstructive pulmonary disorder, emphysema or reduced lung function – even after years of frequent use.

What happens when you eat something made with marijuana?

Marijuana-infused products, often referred to as “edibles,” include any food, drink or tincture that is consumed orally. For some people, especially medical patients, these products are a better option than smoking, as their effects last longer and they can be manufactured with precise doses that more reliably meet patients’ needs (similar to how prescription medicines have very specific dosages).

As with any drug or alcohol, it’s very important to understand how much you’re ingesting, so as not to go overboard. Consuming 10-25 milligrams of THC (the psychoactive ingredient in marijuana) causes psychoactive effects that regularly last about four to six hours (and sometimes longer). How your body responds will depend on your

individual metabolism, size and overall health. Also it’s important to remember that a marijuana edible can take up to an hour to have an effect, so it’s important to wait at least this long before ingesting more. For people using marijuana for medical reasons, higher doses are sometimes necessary to relieve pain.

The Drug Policy Alliance believes that marijuana edible products should be regulated and labeled with detailed information to keep consumers safe; and that all of these products are kept away from children.

What are marijuana concentrates?

“Concentrates” refers to a concentrated form of marijuana which is made into oils, butter, or black or brown sticky substances that sometimes have the appearance of wax or glass (sometimes called ‘shatter’).

There are over 500 chemicals in the marijuana plant and about 80 of those are cannabinoids, or the active ingredients, which also include terpenes (aromas). Concentrate producers harvest these active ingredients from the plant and create a substance made up of only these, similar to juicing an orange. Concentrates are usually ingested via inhalation (either smoking or vaporizing), but can also be ingested orally, such as in an oil or tincture, or used as an ingredient in infused edible products in the form of oil or butter.

Many medical marijuana patients rely on concentrates because they enable them to ingest a large amount of cannabinoids fairly easily. Cannabinoids such as THC and CBD are found in higher levels in concentrates than in the raw plant. For example, THC levels in the raw plant range from about 5-20%, while in concentrates can range from 50-90% THC. These high levels might be ideal for patients seeking relief from debilitating conditions, but can potentially be too much for someone using cannabis as a relaxant or therapeutic agent.



Should I talk to my child about marijuana?

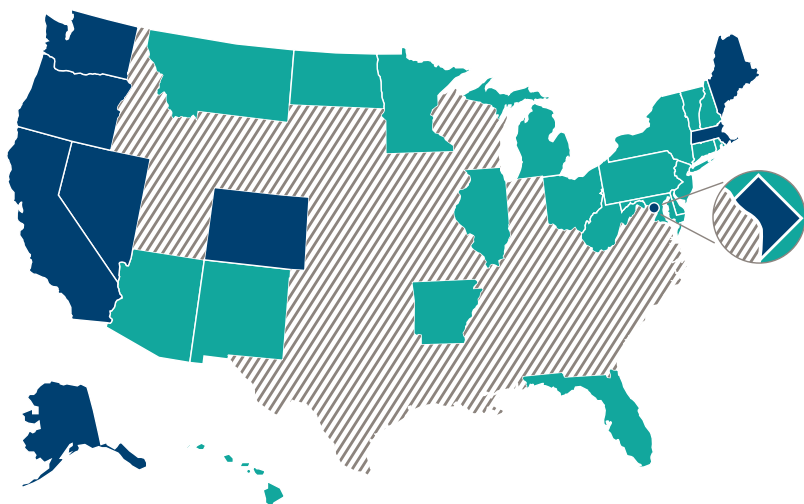
Keeping teens safe must be our top priority. Despite parents' wishes for teenagers to abstain from using marijuana, the fact is, many will experiment. To protect them, empower your child to make responsible decisions by providing them with honest, science-based information and teaching them the legal and social consequences of drug use.

When it comes to the "drug talk," be prepared to listen to their thoughts and feelings, and remain as nonjudgmental as possible. Let them know they can talk freely. Emphasize that you'd prefer that they don't experiment with marijuana because it could impact their growing brain, but if they do, stress the importance of moderation. Heavy/daily marijuana use among very young teenagers is most problematic, which is why marijuana legalization laws restrict use to those ages 21 and over.

Make it abundantly clear that you are concerned primarily with their safety, and that they have someone to turn to if they need help. If they find themselves in a compromising or uncomfortable situation, they need to trust that you will come to their aid immediately.

If the subject comes up with younger children, whose use is (hopefully) not even on the table, stick to the basic facts. Explain that for some, marijuana is a medicine; and while some adults use it to relax, similar to beer and wine, it can be damaging to young and developing bodies and is not appropriate, or legal, for kids. For more information on this topic please see the Drug Policy Alliance's booklet on this topic, *Safety First*.

Where in the U.S. is marijuana legal?



- Medical Marijuana
- Medical Marijuana and Marijuana legalization

At least 28 countries around the world have eliminated criminal penalties for marijuana possession, including Canada, Belgium, Spain, and Jamaica. In 2013, Uruguay became the first country in the world to approve the legal regulation of marijuana for adult use.

In the U.S., laws vary from state to state, but they break down into four key categories:

- Completely illegal (possessing any amount is punishable by jail time and large fines)
- Decriminalized (possessing small amounts for personal use is either legal or only a minor civil infraction, but growing, selling, etc. is still illegal)
- Legal for medical reasons only
- Legal for recreational use (publicly sold, regulated and taxed like alcohol)

Where in the U.S. is marijuana legal? (cont.)

No matter where you are in the country, marijuana is illegal to transport across state lines; it's always illegal to drive under the influence; and it's illegal to use if you're under 21 (unless you're a medical marijuana patient).

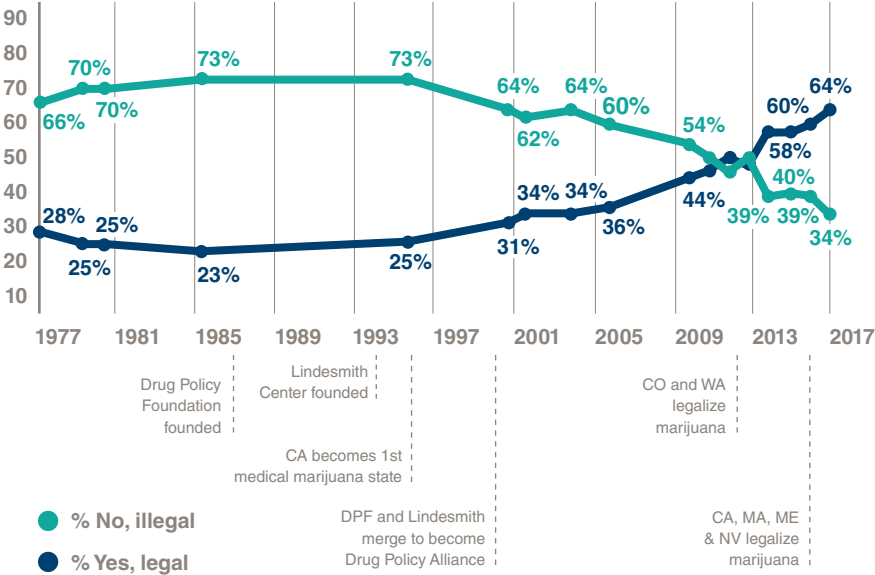
The recreational use of marijuana is legal in Washington, D.C. and eight states: Alaska, California, Colorado, Maine, Massachusetts, Nevada, Oregon and Washington. Twenty-one additional states have legalized medical marijuana: Arizona, Arkansas, Connecticut, Delaware, Florida, Hawaii, Illinois, Maryland, Michigan, Minnesota, Montana, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, Vermont and West Virginia.

In addition to the eight states that have legalized marijuana, 13 other states have decriminalized marijuana to some degree.

Colorado and Washington (the first two states to legalize and regulate marijuana for recreational use) are showing just how successful ending prohibition can be. For example, in 2015, just the second full fiscal year after implementation, Colorado collected over \$129 million in marijuana taxes and fees, and the state of Washington collected \$220 million. Additionally, arrests and charges have plummeted in these states, saving additional public expenditures and freeing up police and the entire criminal justice system to address more serious crimes.

While communities of color have borne the brunt of marijuana enforcement, they also experience formidable barriers to entry in the emerging legal marijuana industry. Some recent reforms have taken steps to begin to address this problem. California's marijuana legalization law, passed by voters in 2016, contains a wide range of anti-monopoly and anti-discrimination measures aimed at ensuring equity in the industry.

Poll: Do you think the use of marijuana should be legal?



Source: Gallup

Does marijuana legalization lead to increased use?

Changes in marijuana laws have not been found to have a significant impact on rates of adult use. According to the National Academy of Sciences, “There is little evidence that decriminalization of marijuana use necessarily leads to a substantial increase in marijuana use.”

**In short:
legal access ≠
increased use.**

When it comes to use by young people, several recent reports have found that in the majority of states that have approved medical marijuana, use among teenagers has actually decreased. Experts say this is due to a diminished “forbidden fruit” effect and decreased access

to marijuana as it moves from the unregulated streets – where there are no age requirements – to inside licensed dispensaries, where you need to be 21 to purchase marijuana.

In Colorado, adolescent marijuana use has declined slightly since marijuana was legalized in 2012, according to a comprehensive survey conducted in 2015 by the state’s departments of education, human resources, health, and the environment.

In addition to looking at whether or not these new laws lead to a decrease or increase in use, it’s also important to examine whether or not legalization reduces the harms of both drug use and drug prohibition. In the case of marijuana, this includes reducing the stark racial disparities in the enforcement of marijuana laws, as well as the fiscal, health and human costs of arresting hundreds of thousands of people in the U.S. each year for marijuana possession.



Do people still get arrested and punished for using marijuana?

Believe it or not, despite the marijuana law reforms in several states, there are still more arrests for marijuana possession every year than for all violent crimes combined.

643,121 people were arrested for marijuana law violations in 2016 – comprising almost half (45 percent) of all drug arrests in the U.S. That's one marijuana arrest every 45 seconds! On top of that, 84 percent of these arrests were for simple possession, not for selling or manufacturing.

All of these arrests are not cheap, either. U.S. states spend more than \$3 billion enforcing marijuana prohibition every year.

Sadly, these arrests are largely based on racial prejudice and politics. The first anti-marijuana laws during the 1910s and 20s, were directed at Mexican migrants and Mexican

Americans. Artists and performers – especially Black jazz musicians – were also common targets. Today, Latino and Black communities are still subject to wildly disproportionate marijuana enforcement practices, despite the fact that these groups are no more likely than white people to use or sell marijuana.

These arrests can create permanent criminal records that can easily be found on the internet by employers, landlords, schools, credit agencies and banks. And it can result in loss of employment, financial aid, housing and child custody. In many U.S. states, a marijuana possession arrest can still lead to months or even years behind bars. Clearly, a marijuana arrest is no small matter.

Over the past two decades, a powerful movement of people across the political spectrum has emerged to fight for more sensible marijuana laws. To learn more and get involved, please visit www.drugpolicy.org.

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