

Marijuana Supplement

Information and Facts for Educators and Youth

Part of the exemplary Project ALERT curriculum developed by RAND

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Marijuana: Information and Facts for Educators and Youth

What Is Marijuana?

Cannabis sativa, the plant commonly known as marijuana, has been around since ancient times. Today, there are many street names for marijuana such as *weed*, *pot*, *ganja*, *buds*, *reefer*, *chronic*, *grass*, and *cannabis*. The leaves and flower buds of the plant have a unique look and shape, and the color usually ranges from brown to green.

Why Does It Make People “High”?

The main psychoactive (or “mind-altering”) ingredient in marijuana is a chemical named *delta-9-tetrahydro-cannabinol*, or THC. Another key ingredient is *cannabidiol*, or CBD. CBD is nonpsychoactive, or “not mind-altering,” and does not cause the feeling of being “high.” Marijuana can be specially grown to create different “varieties” that contain higher and lower amounts of THC and CBD, depending on how the drug is intended to be used. The amount of THC in the marijuana grown today for recreational use is, on average, 7 times higher than the THC found in plants grown in the 1970s.

THC, with its natural mind-altering properties, can significantly affect how the brain works. When inhaled or smoked, THC moves almost instantly from the lungs into the blood stream. If it is eaten or drunk, it will enter the bloodstream through the digestive tract; this means the body absorbs the THC more slowly and usually causes the effects to be felt over a longer period of time. From the bloodstream, THC quickly heads to areas of the brain that are responsible for judgment, decisionmaking, coordination, memory, and motor functions. It can take several hours for the high to wear off; on average, the effects are felt for about 4 hours if inhaled and about 8 hours if it is eaten or drunk.



cannabis leaves and buds



How Do People Use Marijuana?



marijuana “joint”



marijuana “blunt”

Marijuana is used in a variety of ways. Some users roll up the dried flower buds, stems, and leaves of the plant in special paper (commonly called *papers* or *zigzags*) and smoke it like a cigarette called a *joint*, or in a larger rolled paper like a cigar called a *blunt*.



cannabis tea

Marijuana can also be smoked in a regular pipe or in water pipes called bongs and vaporizers. People may also consume marijuana by eating it. These edibles are mixed into foods such as brownies, cookies, and candies. Cannabis leaves can also be steeped in hot water and drunk like a tea.



water pipe ("bong")

Marijuana resin, with names like *wax*, *honey*, *budder*, or *hash oil*, is the waxy residue that can build up on the sides of a device like a pipe or bong after marijuana is smoked. It is yellowish to brown in color, can be very strong in this form, and can be smoked or eaten. Marijuana oil is also found in the cannabis plant. The oil can be poured into a vaporizer like an e-cigarette and smoked, or it can be dried and hardened into a substance called *dab* or *shatter* that is heated, then vaporized and inhaled.

Does Marijuana Affect Everyone in the Same Way?



marijuana oil

No. The amount of THC that the body absorbs through using marijuana depends on many things, including whether it is inhaled or eaten, if marijuana resins or oils are used, the amount consumed (dosage), and the strength of the plant variety. Also, individual characteristics of a user can impact marijuana's effects, such as prior use of the drug, body type and size, whether one is a male or female, and if marijuana use is combined with the use of other drugs or alcohol.



marijuana cookies ("edibles")

Are There Other Effects Besides a "High"?

THC is a mind-altering chemical, affecting users in many ways as it enters areas of the brain which control all body functions, senses, and the ability to think and learn. Some may think the high from marijuana is fun while others find it unsettling or frightening. Since body and brain development are still underway in youth (until around age 25), exposing the brain to THC is especially risky, and, typically, the more exposure the greater the risk. Difficulty remembering, learning, thinking, and lower academic performance are not the only negative effects on teens who use marijuana; studies also show lower rates of high school graduation, a drop in IQ, and a higher chance of mental problems including schizophrenia, depression, panic attacks, anxiety, and a greater risk of becoming addicted to marijuana and other drugs into adulthood compared to those who do not use the drug.

Some of the short-term effects of marijuana use are:

- altered senses (for example, seeing brighter colors)
- altered sense of time (things may seem slower and distorted)
- changes in mood (such as giggling, anger, paranoia, or relaxation)
- impaired body movement (loss of coordination and slowed reflexes)
- difficulty with thinking, problem-solving, and judgment
- impaired memory and remembering details
- increased appetite and dry mouth
- taking unnecessary or dangerous risks (for example, feeling uninhibited or acting careless)

Are There Long-term Effects of Using Marijuana?

Regular, long-term regular use of marijuana—starting in the teen years—may interfere with brain development and may lower one’s IQ, which means the brain may not reach its full potential. There is also the risk of developing a cannabis use disorder or addiction if someone uses marijuana regularly.

Research studies continue to provide important information about the effects of marijuana. When investigating the impacts of any drug, make sure to seek out trusted and reliable sources who publish their research in respected reports and scientific journals. People or organizations who may profit from the sale of marijuana or related products are not the best sources of information, as the desire for profit puts them at risk for a conflict of interest. See page 8 for a list of articles, reports, and web sites that support many reliable research studies.

Important Questions Answered

Is just trying marijuana once or using it occasionally ok?

Using drugs is a serious decision and should not be done without careful consideration of the possible consequences. Even using it once comes with risks, and occasional use increases those risks. For example, it is illegal for teens to use alcohol or marijuana in the U.S. and in many other countries. There could be consequences at school such as getting suspended or expelled. There is also the added stress or worry about getting caught using it or having it in your possession. Negative short-term effects on judgment, coordination, and behavior could lead to more serious health problems.

Depending on where you live (laws can be different depending on the state you live in), testing positive for marijuana could also prevent you from getting certain jobs. In fact, even posting seemingly “innocent” drug references on social media sites (like Facebook or Instagram) or posting photos where you appear to be using marijuana can affect an employer’s decision to consider a job applicant, a coach’s decision to put you on a team, or your chances of getting into a college.

Many companies and sports teams will conduct random drug tests on employees and team members. If a test comes up positive for marijuana or other drugs, you could be fired or kicked off a team. If you are driving a vehicle under the influence and have an accident or get a traffic ticket, law enforcement can require that you be tested periodically for drugs including THC. If you test positive again, the courts can force you to pay huge fines, make you take drug counseling classes, or even take away your license, depending upon the offense and the state you live in.

Is using marijuana safer than drinking alcohol?

This is not something that can be easily compared. Both have consequences and both are illegal for teens to use in the U.S. and other countries. Much research indicates that both substances affect the brain’s ability to process information and that both substances can be addictive. Further, both are harmful to a teen’s developing brain. The smart thing to do is to get the facts from reliable sources and make choices that will not put you at risk or harm others.

Do a lot of teens use marijuana?

Because we hear a lot about it in movies, television, and online, sometimes it seems like marijuana use is more common than it actually is. However, it is important to remember that most youth and adults do not use marijuana. In fact, results from an annual large scale study typically find that less than 7% of 8th graders have used marijuana in the past month. This means that most 8th graders (about 9 out of 10) have not used marijuana in the past month.

If it is legal to use marijuana in some states and places outside the U.S., does that mean it is safe?

Different countries have different laws about marijuana. In some places it is outlawed, and in other places using it comes with many rules and safety warnings. It is a drug, and using drugs often comes with serious, sometimes severe, consequences.

In the U.S., the federal government classifies marijuana as an illegal “Schedule I” drug, meaning it currently has no recognized and agreed-upon medical benefit, and it has a high risk for abuse with possibly severe psychological or physical dependence. However, even though it’s illegal at the federal level, some U.S. states have passed laws that are in conflict with U.S. federal law.

It is also illegal to transfer marijuana between U.S. states. For example, you cannot buy a joint in Colorado, which is a state that allows recreational use, and bring it to another state, *even if the state you’re bringing it to allows recreational use*. The same rule applies to transferring marijuana between the U.S. and other countries; if you are caught in possession, you may end up in jail or prison.

Some states have approved the use of medical marijuana and a few states have approved the use of marijuana for recreational use. However, most federal employers at both state and national levels still consider it illegal to use marijuana and this can disqualify people from getting a job with those agencies.

Note that in the U.S., recreational marijuana use is illegal in all states for anyone under 21.

Is it true that smoking marijuana does not affect driving or increase risk for accidents?

No, this is not true. Marijuana is a very strong, mind-altering substance that can greatly affect one’s view or perception of the environment and distort one’s senses (like sight, sound, and coordination), thus negatively affecting one’s driving ability. As with alcohol, it is illegal to drive under the influence of marijuana, and the penalties can be very severe. Reports from law enforcement and transportation authorities have reported an increase in motor vehicle accidents due to marijuana intoxication.

How long does it take for marijuana/THC to leave the body?

Through high-tech methods used in modern laboratories, drug testing has come a long way in recent years, revealing how long various substances remain in the body. Even though the “high” can wear off within several hours, since THC is stored in body fat, it can be detected in bodily fluids such as urine and blood for several days to several weeks. It can also be detected in body hair. This means a person can test positive for THC long after they first used it.

Is marijuana addictive?

The short answer is yes, it can be addictive; however, not everyone who uses marijuana will become addicted to it. Some people develop what is known as *cannabis use disorder*, which happens when a person has a strong mental desire and urge to use marijuana; this is often referred to as having a *psychological dependency*. This may also cause a person to feel physical withdrawal symptoms, like nervousness or shakiness, when they are not using it. Cannabis use disorder affects about 3% of the entire U.S. population, but about 1 out of every 3 people who have used marijuana in the past year show the signs and behaviors of having a cannabis use disorder. Risk of developing a cannabis use disorder increases the earlier one begins using and becomes more likely with longer-term and regular use, and in extreme cases can lead to addiction.

What is "dab" or "dabbing"?

Dab is a street name for marijuana oil that is removed from the cannabis plant through a process using toxic chemicals and heat. The oil-like liquid is then spread out onto a sheet, where it dries and hardens, and ends up looking a lot like peanut brittle without the peanuts. Dab has a very high level of THC, and also contains the chemicals that were used to produce it. When a small piece of it, a dab, is placed on the nail of a special pipe that's been heated by a blowtorch, it turns into a vapor, which the user inhales. The effect, even from a piece of dab the size of a small pebble, can be much stronger than smoking a joint.



"dab" or "shatter"

Since smoking dabs (or "dabbing") requires using a blowtorch to heat up the drug to inhale the vapor, the risks of sudden explosions, house fires, and severe burns are very serious. In recent years, among some users, it has become a popular form of marijuana, and it is extremely unsafe.

What is "synthetic" (or "fake") marijuana?

Synthetic marijuana is a man-made drug that contains chemicals similar to the THC found in marijuana, which is why it is often referred to as fake marijuana. Like THC, the chemicals in synthetic marijuana are mind-altering and affect the brain in a similar way that marijuana does. The manufactured chemicals are sprayed onto some type of plant material, such as leaves, and sold in small, colorful packets with names like Spice, K2, Moon Rocks, and Scooby Snax. It is then smoked as one would smoke a joint. It is also available in liquid form for use in a vaping device like an e-cigarette, and it can also be brewed as a tea. Although authorities have tried to make these drugs illegal, manufacturers can bypass these laws by changing the chemical formulas in their mixtures.

These drugs are often produced in unregulated labs or perhaps in someone's backyard or home, thus the amount of the mind-altering content of the synthetic drug and other possibly harmful substances in it is unknown. This means that the physical and mental effects can be unpredictable; they can be similar to or greater than the effects of marijuana, or they can be more severe and harmful to your body and your brain. As with other drugs, it is possible to overdose on synthetic marijuana.



*"Scooby Snax"
(synthetic marijuana)*

Are there medical benefits to using marijuana?

When cannabis is prescribed for a medical condition, it is referred to as "medical marijuana," and the "patient" is under a medical doctor's care. Medical marijuana can be taken in a variety of ways: in pill form, smoked, or eaten as an edible. It can still possess the mind-altering drug THC and all its related effects. However, depending on the patient's condition, a doctor may choose to prescribe a variety of cannabis that is higher in non-mind-altering CBD and lower in THC. The use of medical marijuana is controversial and requires further study to understand how it can best be used to treat certain medical conditions. Some studies have found medical benefits of marijuana for individuals with specific physical concerns, such as relieving nausea and vomiting, stimulating appetite, and promoting weight gain in cancer patients; treating epilepsy and other neurological disorders; and decreasing inner eye pressure resulting from the eye disease known as glaucoma.

Although medical marijuana is legal in some states, it is still considered a drug; and using it comes with safety risks and other consequences. There is a lot of research that indicates marijuana can be harmful when used by young people, such as its effect on brain development, academic performance, difficulty remembering things, and possible psychological difficulties related to depression and anxiety. It is a drug, and with all drugs, risks and benefits must be carefully considered and evaluated before using it.

Is "hemp" the same thing as marijuana?

No. Hemp is another variety of the *cannabis sativa* plant and hemp leaves look similar to marijuana leaves. But hemp does not have the mind-altering characteristics of regular marijuana and is not smoked to get a high. Since the hemp plant has naturally strong fibers, it is useful in manufacturing. Cloth, rope, and fuel are just a few of the products that can be made with hemp. It is also used as an additive in other products such as lotions and shampoos.



hemp fiber

What can I tell my friends when they say marijuana is not harmful?

Take the responsible approach and look for accurate and reliable information based on facts from sources like the [Centers for Disease Control and Prevention](#), the [National Institute on Drug Abuse](#), and the [U.S. Drug Enforcement Administration](#). If you feel like sharing what you learn with your friends, do so.

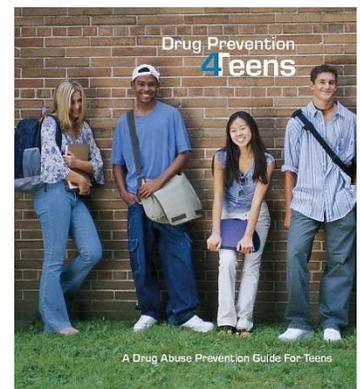
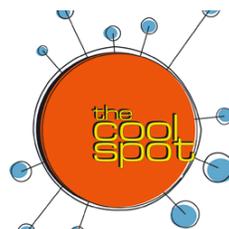
What if people I know use marijuana?

Although most teens and adults do not use marijuana, you may know someone who is using. If you hang around people who use drugs it increases the likelihood that you will use too, perhaps due to the pressure to fit in with others who use. Also, others may think you use drugs like marijuana if you hang around people who use them, and your reputation could be affected. It takes courage to resist the pressure to use when you are around others who are using. You may even find that you prefer to hang out with those who are not using and who have a healthy lifestyle.

Remember that it is not up to you to convince others to stop using; however, it is up to you to decide to stay healthy and drug-free.

Online Resources

Click on the images below to access some helpful online resources.



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