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# SEALS Health News

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## Health Effects of Marijuana



### Marijuana: How Can It Affect Your Health?

Marijuana—which can also be called cannabis, weed, pot, or dope—refers to the dried flowers, leaves, stems, and seeds of the cannabis plant. The cannabis plant contains more than 100 compounds (or cannabinoids). These compounds include tetrahydrocannabinol (THC), which is impairing or mind-altering, as well as other active compounds, such as cannabidiol (CBD).

Marijuana is the most commonly used federally illegal drug in the United States, with an estimated 48.2 million people using it in 2019.

Marijuana use may have a wide range of health effects on the body and brain.

#### FAST FACTS

- Marijuana is the most commonly used federally illegal drug in the United States, with an estimated 48.2 million people using it in 2019.
- Long-term or frequent marijuana use has been linked to increased risk of psychosis or schizophrenia in some users.

- Recent research estimated that approximately 3 in 10 people who use marijuana have marijuana use disorder. For people who begin using marijuana before age 18, the risk of developing marijuana use disorder is even greater.

- Marijuana use directly affects the brain, specifically the parts of the brain responsible for memory, learning, attention, decision-making, coordination, emotion, and reaction time. Infants, children, and teens (who still have developing brains) are especially susceptible to the adverse effects of marijuana

### Fast Facts

- In 2019, 4 in 10 high school students reported using marijuana in their lifetime.<sup>1</sup>
- Marijuana use might have permanent effects on the developing brain when use begins in adolescence, especially with regular or heavy use.<sup>3,4</sup>
- Compared with teens who do not use marijuana, teens who use marijuana are more likely to quit high school or not get a college degree.<sup>3</sup>

# Addiction (Marijuana or Cannabis Use Disorder)

**Table DSM 5 criteria for cannabis use disorder severity**

• Used for longer periods in larger amounts
• Unable to cut down use
• Excessive time spent acquiring, using and recovering from cannabis use
• Strong urge to use cannabis
• Problems fulfilling work, school, and family obligations due to cannabis use
• Continued use despite persistent interpersonal problems caused by cannabis use
• Decrease in important social and recreational activities because of cannabis use
• Repeated use in physically dangerous situations
• Ongoing use despite worsening physical and psychological problems that are likely to have been caused by cannabis
• Have to use increased amount for the same desired effect
• Withdrawal reaction upon cessation

Mild: 2-3 symptoms; moderate: 4-5 symptoms; severe: ≥6 symptoms.

**Caption describing**

Some people who use marijuana will develop marijuana use disorder, meaning that they are unable to stop using marijuana even though it's causing health and social problems in their lives.

One study estimated that approximately 3 in 10 people who use marijuana have marijuana use disorder.

Another study estimated that people who use cannabis have about a 10% likelihood of becoming addicted.

The risk of developing marijuana use disorder is greater in people who start using marijuana during youth or adolescence and who use marijuana more frequently.

The following are signs of marijuana use disorder :

- ⇒ Using more marijuana than intended
- ⇒ Trying but failing to quit using marijuana
- ⇒ Spending a lot of time using marijuana
- ⇒ Craving marijuana
- ⇒ Using marijuana even though it causes problems at home, school, or work
- ⇒ Continuing to use marijuana despite social or relationship problems.
- ⇒ Giving up important activities with friends and family in favor of using marijuana.
- ⇒ Using marijuana in high-risk situations, such as while driving a car.
- ⇒ Continuing to use marijuana despite physical or psychological problems.
- ⇒ Needing to use more marijuana to get the same high.
- ⇒ Experiencing withdrawal symptoms when stopping marijuana use.

People who have marijuana use disorder may also be at a higher risk of other negative consequences, such as problems with attention, memory, and learning.

Some people who have

marijuana use disorder may need to use more and more marijuana or greater concentrations of marijuana over time to experience a “high.” The greater the amount of tetrahydrocannabinol (THC) in marijuana (in other words, the concentration or strength), the stronger the effects the marijuana may have on the brain. The amount of THC in marijuana has increased over the past few decades.

In a study of cannabis research samples over time, the average delta-9 THC (the main form of THC in the cannabis plant) concentration almost doubled, from 9% in 2008 to 17% in 2017. Products from dispensaries often offer much higher concentrations than seen in this study. In a study of products available in online dispensaries in 3 states with legal non-medical adult marijuana use, the average THC concentration was 22%, with a range of 0% to 45%. In addition, some methods of using marijuana (for example, dabbing and vaping concentrates) may deliver very high levels of THC to the user.

# Marijuana Risks

Marijuana use comes with real risks that can impact a person's health and life.

Marijuana is the most commonly used illegal substance in the U.S. and its use is growing. Marijuana use among all adult age groups, both sexes, and pregnant women is going up. At the same time, the perception of how harmful marijuana use can be is declining. Increasingly, young people today do not consider marijuana use a risky behavior.

But there are real risks for people who use marijuana, especially youth and young adults, and women who are pregnant or nursing. Today's marijuana is stronger than ever before. People can and do become addicted to marijuana.

Approximately 1 in 10 people who use marijuana will become addicted. When they start before age 18, the rate of addiction rises to 1 in 6.

## Marijuana Risks

Marijuana use can have negative and long-term effects:



**Brain health:** Marijuana can cause permanent IQ loss of as much as 8 points when people start using it at a young age. These IQ points do not come back, even after quitting marijuana.



**Mental health:** Studies link marijuana use to depression, anxiety, suicide planning, and psychotic episodes. It is not known, however, if marijuana use is the cause of these conditions.



**Athletic Performance:** Research shows that marijuana affects timing, movement, and coordination, which can harm athletic performance.



**Driving:** People who drive under the influence of marijuana can experience dangerous effects: slower reactions, lane weaving, decreased coordination, and difficulty reacting to signals and sounds on the road.



**Baby's health and development:** Marijuana use during pregnancy may cause fetal growth restriction, premature birth, stillbirth, and problems with brain development, resulting in hyperactivity and poor cognitive function. Tetrahydrocannabinol (THC) and other chemicals from marijuana can also be passed from a mother to her baby through breast milk, further impacting a child's healthy development.



**Daily life:** Using marijuana can affect performance and how well people do in life. Research shows that people who use marijuana are more likely to have relationship problems, worse educational outcomes, lower career achievement, and reduced life satisfaction.

# 10 Negative Weed Side Effects of Marijuana Use



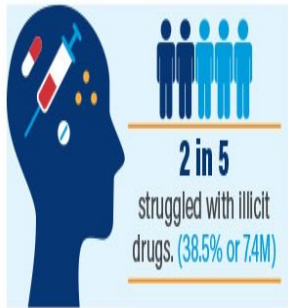
1. Teenage Brain Development Issues
2. Higher Likelihood of Depression
3. Possibility of Increased Anxiety
4. Risk of Psychiatric Disorders
5. Problems With Memory Function
6. Damage to the Lungs
7. Cannabinoid Hyperemesis Syndrome
8. Cardiovascular & Heart Damage
9. Decrease in Testosterone
10. Marijuana Use Addiction



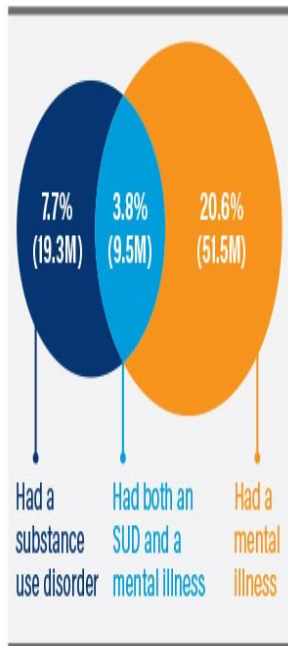
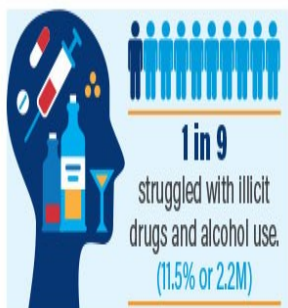
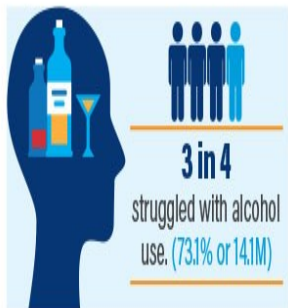
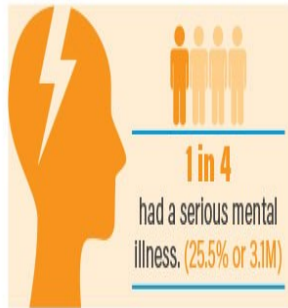
# Mental Illness and Substance Use Disorders in America

In 2019, 61.2M Americans had a mental illness and/or substance use disorder—an increase of 5.9% over 2018 composed entirely of increases in mental illness.

Among those with a substance use disorder



Among those with a mental illness



Source: National Survey on Drug Use and Health, Substance Abuse and Mental Health Services Administration, 2019

## What You Need To Know About Marijuana Use and Driving

Driving under the influence (DUI) laws are not just for alcohol. Driving under the influence of drugs, including marijuana, is also dangerous and illegal.

Driving is a complex task that requires your full attention to stay safe and alert. Marijuana affects areas of the brain that control your body's movements, balance, coordination, memory, and judgment. Marijuana use can impair important skills required for safe driving by:

- ◇ slowing your reaction time and ability to make decisions,
- ◇ impairing coordination, and
- ◇ distorting perception.

Studies have shown an association between acute marijuana use and car crashes, but more research is needed. It is difficult to connect the presence of marijuana or concentration of tetrahydrocannabinol (THC), the compound responsible for marijuana's psychoactive properties (the "high"), to impairment in driving performance for an individual person. Studies have shown that the use of multiple substances (such as marijuana and alcohol) at the same time can increase impairment.

What you can do to help prevent impaired driving

If you intend to drive, the safest option is not to use any alcohol or drugs, including marijuana. Here are steps you can take to help prevent impaired driving if you plan to use, are using, or have used alcohol or drugs, including marijuana:

Choose not to drive and remind your friends and family to do the same.

Assign a trusted designated driver who will not drink or use drugs when you are going out with a group of people you know.

Plan on getting a ride home from someone who has not been drinking alcohol and/or using drugs, using a rideshare service, or calling a taxi.

## BRAIN HEALTH

Marijuana use directly affects brain function — specifically the parts of the brain responsible for memory, learning, attention, decision-making, coordination, emotions, and reaction time.

What are the short-term effects of marijuana on the brain?

Recent marijuana use (defined as within 24 hours) in youth and adults has an immediate impact on thinking, attention, memory, coordination, movement, and time perception.

**What are the long-term effects of marijuana on the brain?**

Marijuana affects brain development. Developing brains, such as those in babies, children, and teenagers, are especially susceptible to the harmful effects of marijuana and tetrahydrocannabinol (THC). Although scientists are still learning about the effects of marijuana on developing brains, studies suggest that marijuana use by mothers during pregnancy could be linked to problems with attention, memory, problem-solving skills, and behavior in their children.

Using marijuana before age 18 may affect how the brain builds connections for functions like attention, memory, and learning. Marijuana's effects on attention, memory, and learning may last a long time or even be permanent, but more research is needed to fully understand these effects. Youth who use marijuana may not do as well in school and may have trouble remembering things.

The impact of marijuana use on the brain depends on many factors, including:

- Amount of tetrahydrocannabinol (THC) in marijuana (in other words, the concentration or strength),
- How often it is used,
- Age of first use, and
- Whether other substances (for example, tobacco and alcohol) are used at the same time.


# Mental Health

# Teens

Marijuana use, especially frequently (daily or nearly daily) and in high doses, can cause disorientation and sometimes unpleasant thoughts or feelings of anxiety and paranoia.

People who use marijuana are more likely to develop temporary psychosis (not knowing what is real, hallucinations, and paranoia) and long-lasting mental disorders, including schizophrenia (a type of mental illness where people might see or hear things that are not really there). The association between marijuana and schizophrenia is stronger in people who start using marijuana at an earlier age and use marijuana more frequently.

Marijuana use has also been linked to depression; social anxiety; and thoughts of suicide, suicide attempts, and suicide.



**FACT:** Approximately 1 in 11 people who use marijuana get addicted.

Source: National Institute on Drug Abuse

www.council-houston.org #FactOrFictionFriday

## Marijuana and the teen brain

The teen brain is actively developing and continues to develop until around age 25. Marijuana use during adolescence and young adulthood may harm the developing brain.

Negative effects of teen marijuana use include:

- Difficulty thinking and problem-solving
- Problems with memory and learning
- Reduced coordination
- Difficulty maintaining attention
- Problems with school and social life



## How marijuana can impact a teen's life:

**Increased risk of mental health issues.** Marijuana use has been linked to a range of mental health problems, such as depression and social anxiety. People who use marijuana are more likely to develop temporary psychosis (not knowing what is real, hallucinations, and paranoia) and long-lasting mental disorders, including schizophrenia (a type of mental illness where people might see or hear things that aren't there). The association between marijuana and schizophrenia is stronger in people who start using marijuana at an earlier age and use marijuana more frequently.

**Impaired driving.** Driving while impaired by any substance, including marijuana, is dangerous and illegal. Marijuana negatively affects several skills required for safe driving, such as reaction time, coordination, and concentration.

**Potential for addiction.** Approximately 3 in 10 people who use marijuana have marijuana use disorder. Some signs and symptoms of marijuana use disorder include trying but failing to quit using marijuana or giving up important activities with friends and family in favor of using marijuana. The risk of developing marijuana use disorder is stronger in people who start using marijuana during youth or adolescence and who use marijuana more frequently.

# Poisoning

Edibles, or food and drink products infused with marijuana, have some different risks than smoked marijuana, including a greater risk of poisoning. Unlike smoked marijuana, edibles can:

Take from 30 minutes to 2 hours to take effect, so some people may eat too much, which can lead to poisoning and/or serious injury.

Cause intoxicating effects that last longer than expected, depending on the amount ingested, the last food eaten, and medications or alcohol used at the same time.

Be unpredictable. The amount of tetrahydrocannabinol (THC), or the concentration or strength, is very difficult to measure and is often unknown in edible products. Many people who use edibles can be caught off-guard by their strength and long-lasting effects.

Children, adults, and pets can mistake marijuana products, particularly edibles, for regular food or candy. Consuming marijuana can make children very sick. They may have problems walking or sitting up or may have a hard time breathing. Since marijuana use has been legalized in some states, accidental marijuana poisonings in children have increased 133%, often requiring visits to the emergency room or hospitalization.

# Selinsgrove Area High School



The U.S. Surgeon General has issued a warning about the potential health risks of marijuana use in adolescence and during pregnancy. The warning, which states that no amount of marijuana use during pregnancy or adolescence is known to be safe, comes after recent increases in access to marijuana, and long term trends in higher potency.

**500 N. Broad St**  
**Primary Business**

Information brought to you by:  
CDC  
SAMHSA  
National Institute on Drug Abuse

## How harmful is K2/Spice (synthetic cannabinoids)?

Synthetic cannabinoids (called spice, K2, and other names) are man-made chemicals and, despite the name, are not marijuana or cannabinoid medicines. Synthetic cannabinoids are often sprayed onto dried plant material that can then be smoked or sold as liquids to use in vaping devices.

Synthetic cannabinoids are part of a group of unregulated, mind-altering drugs that attempt to produce effects similar to illicit drugs. Their effects are not fully understood and can cause dangerous and unpredictable health effects because of their unpredictable chemical contents.<sup>21</sup> Once these products are identified in the illegal marketplace, they are added to the list of schedule I substances by the Drug Enforcement Administration. Schedule I substances are illegal throughout the United States and are defined as having

no medical use and high potential for abuse.

Synthetic cannabinoids can affect the brain much more powerfully than marijuana, creating unpredictable and, in some cases, life-threatening effects, including:

- nausea
- anxiety
- paranoia
- brain swelling
- seizures
- hallucinations
- aggression
- heart palpitations
- chest pains

Cases of severe injury and death from use of synthetic cannabinoids have been reported, along with regional outbreaks when a contaminated batch enters a specific community.

**LONG-TERM EFFECTS OF CANNABIS**

<b>APATHY</b> 	<b>DEFICIT OF ATTENTION</b> 
<b>LOSS OF MEMORY</b> 	<b>MORE TIME TO RECOGNIZE EMOTIONS</b> 
<b>DECLINE OF THE IMMUNE SYSTEM</b> 	<b>CHANGE OF PERSONALITY</b> 