More and more states have made it legal for adults to use marijuana—but this drug still poses serious dangers for teens.

As of 2019, 11 states and the District of Columbia have legalized the recreational use of marijuana for adults. These new laws may make you think that the drug is safe. But marijuana poses very real risks—especially to teens.

Marijuana contains a chemical compound called THC (delta-9-tetrahydrocannabinol). Like other drugs, THC alters communication between nerve cells, or neurons, in the brain. This can affect coordination and reaction time—making it dangerous to drive, ride a bike, or play sports.
THC use is also associated with problems with attention, memory, learning, and decision-making. These effects can last for days or weeks, depending on how often someone uses marijuana. It remains unknown if the brain changes associated with adolescent marijuana use can become permanent.

Another danger: Marijuana is much stronger than it used to be. The average amount of THC in marijuana today is more than triple the amount found in marijuana 30 years ago. Inhaling or ingesting too much THC can cause an increased heart rate, extreme shaking, and hallucinations.

**Teens at Risk**

Your teen brain will continue to develop until your mid-20s. Everything you do during this critical time can affect your brain. Learning a new skill, such as playing the guitar, can strengthen connections between your brain’s neurons. But using marijuana or other drugs can harm your brain development. Since the teen brain is still forming, adolescents have a higher risk of developing an addiction than adults. THC causes the brain to release the chemical dopamine, which is connected to addiction. Studies show that people who begin using marijuana before age 18 are four to seven times more likely to develop marijuana use disorder. The most severe forms of this disorder are addiction, a disease where the user has a hard time quitting.

Bottom line: Laws making marijuana legal are only for adults. Marijuana is illegal and also dangerous for teenagers.

**What’s Up With CBD Products?**

Cannabis is another name for marijuana. Many products promote the health benefits of cannabidiol (CBD), one of the chemicals in cannabis. CBD does not affect the brain like THC. Over-the-counter CBD products claim to treat pain, insomnia, and anxiety. But these products are not tested for safety and may not contain what their labels claim. Some have even been shown to contain THC. Research also shows CBD may interact with other medications. Talk to a doctor before taking any CBD product.

For additional facts about science and your health, visit [scholastic.com/headsup](http://scholastic.com/headsup) and [teens.drugabuse.gov](http://teens.drugabuse.gov).

From Scholastic and the scientists of the National Institute on Drug Abuse, National Institutes of Health, U.S. Department of Health and Human Services.
The Real Risks of Marijuana

As many states legalize the recreational use of marijuana for adults, teens may be getting the message that the drug is safe. While marijuana is the most commonly used illicit drug among middle and high school students, the drug poses serious health risks to teens. By sharing the student article “The Real Risks of Marijuana,” teaching the lesson, and engaging students with the activity sheet, you’ll help students understand the dangers of marijuana use.

Reading Comprehension Questions

1. How does marijuana affect the brain? (The chemical compound THC alters the communication between neurons. This can affect coordination and reaction time, and is associated with problems with attention, memory, learning, and decision-making.)
2. Why does marijuana affect teens more than adults? (The brain continues to develop until the mid-20s. Using drugs—including marijuana—as a teen can negatively impact brain development and lead to addiction. Since the adolescent brain is still developing, these changes may be long-lasting.)
3. Why might it not be safe to use CBD products? (CBD products have not been tested for safety and may not contain what their labels claim. CBD may also interact with other medications.)

Critical-Thinking Writing Prompts

Grades 6–8 Use your own words to explain how marijuana use can cause changes to a person’s brain.
Grades 9–10 Describe how marijuana use may negatively impact a person’s life in the long term.
Grades 11–12 Imagine that you have a friend who is using marijuana. What would you say to them to convince them to stop?

Paired Reading


Writing Prompt Explain why using marijuana could make it difficult for a student to perform in school. Use evidence from “The Science of Marijuana: How THC Affects the Brain” and “The Real Risks of Marijuana” to support your reasoning.

Student Activity Sheet

Distribute the activity sheet before students read the article and direct them to record their answers in the Before Reading section. Then have them complete the activity after reading the article. Answers:

1. False. Supporting evidence may include: Marijuana today contains about three times more THC than the drug did 30 years ago. People can end up with severe symptoms after taking too much THC.
2. False. Supporting evidence may include: Teens who use marijuana are four to seven times more likely than adults to develop marijuana use disorder. The severe types of this disorder are considered addiction.
3. False. Supporting evidence may include: Marijuana use is legal for adults in many states, but it is illegal for teens. Marijuana is associated with problems with attention, memory, learning, and decision-making. Using marijuana can lead to addiction. Inhaling or ingesting too much THC can cause an increased heart rate, extreme shaking, and hallucinations.
4. True. Supporting evidence may include: Marijuana can lead to problems with attention, memory, and learning. These effects may last for days or weeks. The brain changes that lead to memory or learning problems may become permanent.
5. True. Supporting evidence may include: THC, the chemical in marijuana, can impact a person’s coordination and reaction time, making it dangerous to drive a car.
6. False. Supporting evidence may include: Teens are more sensitive to the effects of drugs like marijuana because their brains are still developing. Drug use during the time of adolescent brain development may have long-lasting impacts on brain function. Because their brains are still developing, teens also have a higher risk of developing an addiction.
Learn the Truth About Marijuana

**Directions:** Before reading “The Real Risks of Marijuana,” read the statements below. Choose true or false in the column to the left. Then, read the article. After you have finished, reread the statements. Record the correct answers based on what you learned in the right-hand column. Include at least one piece of evidence from the article that supports your answer.

<table>
<thead>
<tr>
<th>BEFORE READING</th>
<th>CLAIM</th>
<th>AFTER READING</th>
<th>SUPPORTING EVIDENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRUE</td>
<td>1. Marijuana is safer today than it was in the past.</td>
<td>TRUE</td>
<td></td>
</tr>
<tr>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRUE</td>
<td>2. Marijuana is not addictive.</td>
<td>TRUE</td>
<td></td>
</tr>
<tr>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRUE</td>
<td>3. Teen marijuana use is now legal in many states. Unlike other illegal drugs, marijuana is completely safe.</td>
<td>TRUE</td>
<td></td>
</tr>
<tr>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRUE</td>
<td>4. Using marijuana could affect a person’s performance in school.</td>
<td>TRUE</td>
<td></td>
</tr>
<tr>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRUE</td>
<td>5. Using marijuana can affect a person’s ability to drive.</td>
<td>TRUE</td>
<td></td>
</tr>
<tr>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRUE</td>
<td>6. Teens are less sensitive to the effects of marijuana than adults.</td>
<td>TRUE</td>
<td></td>
</tr>
<tr>
<td>FALSE</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For more information, visit [scholastic.com/headsup](http://scholastic.com/headsup).

From Scholastic and the scientists of the National Institute on Drug Abuse, National Institutes of Health, U.S. Department of Health and Human Services
The Real Risks of Marijuana

Find the article at: scholastic.com/headsup/realriskofmarijuana

addiction (noun): a brain disorder or illness associated with compulsive (uncontrollable) behavior, such as drug use, despite negative consequences

adolescent (noun): a young person who is developing into an adult

alter (verb): to make different

CBD (noun or adjective): abbreviation for cannabidiol; name given to products that contain the chemical compound cannabidiol. CBD is a chemical compound found in the hemp plant that does not have mind-altering effects (like marijuana).

chemical compound (noun): a substance that is a mix of elements made by a chemical process

chronic (adjective): occurring over a long period of time or repeatedly

dopamine (noun): a chemical in the brain that helps send signals between nerve cells and is associated with feelings of pleasure

hallucination (noun): the perception of objects that are not real

ingest (verb): to take in the body for digestion

insomnia (noun): inability to get enough sleep over a long period of time

marijuana (noun): dried leaves and flowers of the hemp plant that can be used as a drug

marijuana use disorder (noun): a brain disorder associated with a physical dependence on marijuana, so that when a person tries to stop using it they experience symptoms such as cravings

neuron (noun): a specialized cell that is part of the nervous system in the body and sends out and receives nerve signals. Also called a nerve cell.

potent (adjective): having a powerful effect

rigorous (adjective): very strict