

Heads Up: Real News About Drugs and Your Body

Brought to you by Scholastic and the scientists at the National Institute on Drug Abuse, National Institutes of Health, U.S. Department of Health and Human Services

STUDENT ARTICLES INSIDE

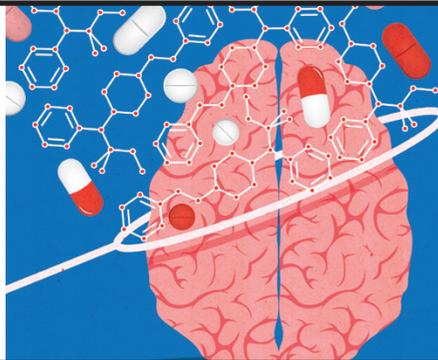
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- For this Heads Up **Student Edition Compilation**, refer to **NIH Pub No. 20-DA-8070A**.
- For the accompanying Heads Up **Teacher Edition Compilation**, refer to **NIH Pub No. 20-DA-8070B**.



The Real Risks of Marijuana

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 passed laws that legalize 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 changes the way the brain functions by altering communication between nerve cells, or neurons. The presence of THC in the brain can impact 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, which may depend on how often someone uses marijuana.

Another danger: Marijuana is far more potent 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 land you in the emergency room with severe symptoms like increased heart rate, extreme shaking, and hallucinations.

Teens at Risk

Your teen brain is still developing, and won't be fully formed 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 that help

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hand-eye coordination. But using drugs—including marijuana—can negatively impact your brain development. The brain changes that lead to memory and learning problems may become permanent and last through adulthood.

Since the teen brain is still

developing, adolescents have a higher risk of developing an addiction than adults. THC causes the brain to release the chemical dopamine, which is connected to the development of cravings and addiction. Studies show that people who begin using marijuana recreationally before age 18 are four to seven times more likely to develop what is called *marijuana use disorder*. The most severe forms of this disorder are considered *addiction*, a disease where the user has a hard time quitting, even if they experience negative consequences from their drug use.

Bottom line: It doesn't matter what the state laws are for adults. Marijuana is dangerous (not to mention illegal) for teenagers.

What's Up With CBD Products?

Many products today promote the health benefits of the chemicals in cannabis (another name for marijuana). For example, so-called **CBD** products contain a chemical compound called **cannabidiol**. Unlike THC, CBD does not have mind-altering effects on the brain. Over-the-counter CBD products claim to treat conditions such as chronic pain, insomnia, and anxiety. But these products are not regulated by the U.S. Food and Drug Administration (FDA). This means they haven't gone through rigorous testing to make sure they are safe and effective and contain exactly what their labels claim. For example, some have been shown to contain THC. Research also shows CBD may interact with other medications—with potentially harmful results. That's why it's critical to talk to a doctor before taking any CBD product.



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

Opioids:

What You Need to Know

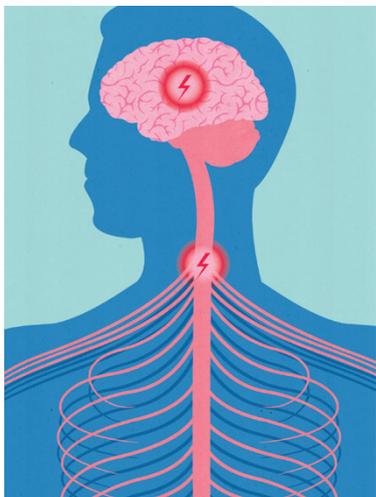
A SERIOUS HEALTH CRISIS is threatening the United States. Over the past 10 years, the number of deaths from taking too much of a drug (overdoses) have increased dramatically. The majority of these deaths are linked to **opioids** (pronounced *OH-pee-oyds*). On average, 130 Americans die every day from an opioid overdose.

Opioids are a category of powerful pain relievers that include prescription medications as well as illegal drugs like heroin. Recently, there has been a surge in synthetic (man-made) opioids such as fentanyl (*FENT-uh-nul*) being illegally imported. The illegal version of fentanyl is a major contributor to the current crisis. Fentanyl is extremely powerful—50 times stronger than heroin, an opioid made in part from natural ingredients. Even a very small amount of fentanyl can cause a deadly overdose.

What are the dangers?

Doctors prescribe legal opioids to treat severe pain. The drugs have powerful effects on the body, but if





Misusing opioids poses serious health risks. If someone takes too much of an opioid, they could overdose and stop breathing. Opioids are also highly addictive.

they are misused, they pose serious health risks. Not only do opioids block pain but they also cause a person's breathing to slow. If someone has an overdose, they could stop breathing. The rise of powerful opioids like fentanyl has made these overdose deaths more common.

Opioids are also highly addictive. Over time, misusing the drugs, such as taking them for reasons other than to treat pain, can change how the brain works and make someone crave the drugs. A person can develop *opioid use disorder*, the most severe form of which is *addiction*. Addiction is a disease that causes people to continue to use drugs, even if they want to stop.

Staying safe

The best way to avoid the dangers of opioids is simply not to use them. But sometimes, having surgery or a serious injury causes severe pain that can only be relieved with strong medications. A doctor may prescribe an opioid such as codeine, morphine, Vicodin (also known as

hydrocodone), or OxyContin (also known as oxycodone). To reduce the risks associated with using opioids, follow these precautions.

- » If you or someone in your family is prescribed a pain medication, ask your doctor if it contains an opioid. Talk about the risks, and ask if there are alternative treatments you could consider.
- » If anyone in your family is prescribed an opioid and also has a history of drug use, addiction, or mental illness, tell the doctor immediately. These factors can increase a person's risk for opioid addiction.
- » Above all, always take opioids exactly the way your doctor prescribed them, and never use them for any other reason. Never share medications with anyone else. If you have leftover pills, talk to your doctor about how to get rid of them safely. You can find programs that take back unused medications at bit.ly/2MLXiUW.

WHAT TO DO

FOR OVERDOSE

- » Signs of an overdose include limp body, pale face, slow breathing and heartbeat, blue fingernails or lips, vomiting, or inability to talk.
- » If you see someone who has these symptoms, call 911 immediately. Emergency responders can give naloxone to the patient, which can reverse the effects of an opioid overdose. If it is given in time, it can save someone's life.
- » In most states, naloxone is available from pharmacies without an individual prescription. This means that any bystander can buy and administer it to someone who is having an opioid overdose.

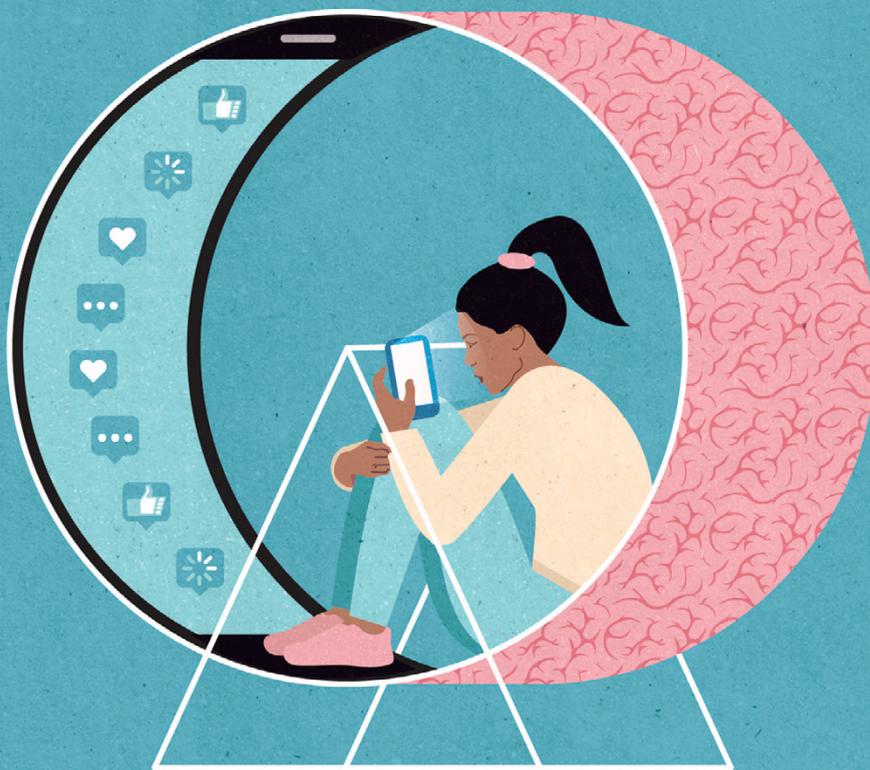
FOR ADDICTION

- » Addiction is a disease, and people suffering from it need medical support. If someone addicted to opioids tries to stop using the drugs, that person may have severe cravings, seizures, trembling, and nausea. These are known as withdrawal symptoms.
- » Medications are available to reduce the symptoms of addiction and help people who are trying to recover. Medications help a person stop misusing opioids and can restore balance to brain circuits altered by the person's disorder.
- » People who use these medications are more likely to stay off opioids, reducing the risk of overdose.



Can Too Much Screen Time Harm You?

Learn how spending excessive time on electronic devices can affect your brain and body.



Phones, tablets, even watches—screens are everywhere you turn. According to a recent survey from Common Sense Media, teens spend an average of seven hours and 22 minutes on screens *every day*—not including computer time for schoolwork!

And yet studies show that too much screen time can affect you in many ways. Teens may be especially at risk, since adolescence is a critical time in the development of the brain. So as much as you might enjoy watching funny videos or texting with your best friend, it's crucial to create habits that will give you a break from screen time. Here's why—and how.

Trouble Sleeping

Excessive screen time can disrupt the amount and quality of sleep you're getting. You may stay up later because you're so involved with what's happening on your device. The light from screens can also reduce the amount of **melatonin** your body produces. This chemical helps your body fall asleep, and *stay* asleep.

Normally, your body releases melatonin at night in response to darkness. Lights reduce melatonin



production, keeping you awake.

Sleep is especially important for teens. Getting too little of it can weaken your immune system, making you more likely to get sick. Sleep deprivation can also affect your ability to learn. You probably know that it's hard to concentrate if you didn't get enough sleep the night before. But it can also affect your memory. Sleep is the time when your brain stores what it's learned during the day—making it possible for you to recall the information come test time.

Mood Changes

There is some evidence that too much scrolling and texting may also affect your emotional health. Some studies suggest a link between higher levels of screen time and an increase in symptoms of depression. Many other factors also play a role in depression, and scientists are still investigating the relationship between screen time and mood.

Other studies have revealed that some kids who engage in excessive screen time experience changes in their mood and behavior: They neglect responsibilities, turn to screens to deal with stress, and feel anxious when cut off from their devices.

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Altering Your Brain

Too many hours on your phone may even cause physical changes to your brain. The **cortex**—the outer layer of the brain that processes information—undergoes critical development during adolescence, and research shows that screen time may affect its growth. In a study called Adolescent Brain Cognitive Development (ABCD), scientists discovered that some kids who use screens more than seven hours a day had a thinner cortex than those who use screens less. More studies are necessary to learn how this will affect kids' brains over time.

Tune Out

What scientists already know for sure is that everything you experience as a teen can affect your brain development. During your teens, the brain undergoes major changes. It's essential to challenge your brain in a variety of ways, so that it can make connections to help you process information and solve problems in the future. That's why it's important to take time away from screens. The more you try new things, like sports, music, and cooking, the more skilled your brain will become. Screens may always be a part of your life—but they don't have to be the *main* part.

Tips for "Turning Off"



1

Use an app to track your screen time and set a limit for it.

2

Turn off all screens 30 to 60 minutes before you go to sleep. You'll fall asleep more easily and feel better-rested in the morning.

3

Schedule time to do things with your screens turned off: Go outside, try a new hobby, hang out with friends without your phones.

4

Exercise—you'll feel a natural boost of your brain's feel-good chemicals.

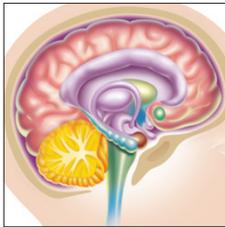
5

Keep a journal of how screen time makes you feel. Anxious or stressed? Talk to your parents, a school counselor, or your doctor for help.



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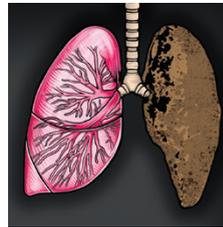
Articles and infographics on the effects of drugs

Videos



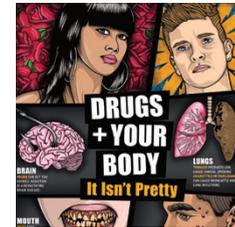
Videos that illustrate the science of drug misuse

Interactives



Interactives that explore important scientific info

Posters



Posters on the impact of drugs on a person's brain, body, and life

COMPILATION 2019-20: Student Edition

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