

Opioids: What You Need to Know

Your students may have already heard about the opioid crisis. An average of 130 people die every day from an overdose. But even if students have seen the headlines, they might not know what these drugs are—and their dangers. The student article “Opioids: What You Need to Know” and activity sheet “What Causes Addiction?” will help students understand important facts about opioids and guide them on how to be safe. Sharing these materials with your students will support them in making smart decisions and staying healthy.

Critical-Thinking Questions

1 Why have opioid overdoses increased? (*There has been a rise in the illegal importing of synthetic opioids such as fentanyl. These opioids are very powerful. Even a very small amount can cause someone to stop breathing.*)

2 What precautions should a person take if they are prescribed an opioid? (*Answers may include: share with their doctor any medical history that may make them more vulnerable to addiction, such as mental illness; follow doctor’s directions exactly; only take the drugs to treat pain.*)

3 How can medications help reduce the number of people who overdose from opioids? Describe two ways. (*If someone is experiencing an overdose, giving them a dose of naloxone can reverse the effects and save their life. Other medications can help someone who is addicted to opioids recover, reducing the risk that they will overdose.*)

Writing Prompts

Grades 6–8 Explain why opioids, including prescribed opioid medications as well as illegal heroin and fentanyl, pose health risks.

Grades 9–10 Explain how a person might increase their risk of health dangers associated with opioids. Consider both prescribed opioid medications as well as illegal heroin and fentanyl. Then, explain how they could reduce their risk.

Grades 11–12 What are some actions that people could take to help control the opioid overdose crisis, as related to both prescribed medications and

illegal opioids? Consider individuals, medical professionals, elected officials, community organizations, etc.

Paired Reading

“Sculpting Your Brain: The Science of Addiction” (teens.drugabuse.gov/blog/post/sculpting-your-brain-science-addiction)

This paired text explains how using drugs can affect brain development.

Writing Prompt Explain why teens are especially vulnerable to addiction. Use supporting text evidence from “Sculpting Your Brain: The Science of Addiction” and “Opioids: What You Need to Know.”

Activity Sheet Answers:

1) Dopamine is a chemical that helps signals pass between nerve cells. When dopamine levels rise because of a pleasurable experience, it helps your brain remember that activity to repeat it.

2) Activities like eating chocolate cause dopamine levels to rise, which makes you want to repeat it. But the increase in dopamine from using drugs is much higher. That can cause your brain to crave drugs over other pleasurable activities.

3) A person who is addicted to drugs has experienced changes in the way their brain works. The changes make the person crave drugs so that they continue to use them even if they experience negative consequences.

4) Answers will vary, but may include: Medications help a person stop misusing opioids, which can restore balance to brain circuits altered by their disorder. They may change the way that dopamine is processed in the brain so that the person experiences fewer drug cravings.

Subject Areas

- Science Literacy
- English Language Arts
- Health/Life Skills

Standards

Common Core State Standards (CCSS)

RST.6-8.1/RST.9-10.1

- Cite specific textual evidence to support analysis of science and technical texts

Next Generation Science Standards (NGSS) Practices

- Obtaining, evaluating, and communicating information

Crosscutting Concept

- Cause and effect: Mechanism and explanation

Core Idea

- MS-LS1.A/HS-LS1.A Structure and Function
- MS-LS1.D/HS-LS1.D Information Processing

National Council for the Social Studies (NCSS)

- 8. Science, Technology, and Society

Additional Lesson Resources

VOCABULARY SUPPORT

Download terms and definitions to support the article at scholastic.com/headsup/opioidsvocab

More Lessons on Drugs and Alcohol:

- headsup.scholastic.com/teachers
- teens.drugabuse.gov



National Institute on Drug Abuse

What Causes Addiction?

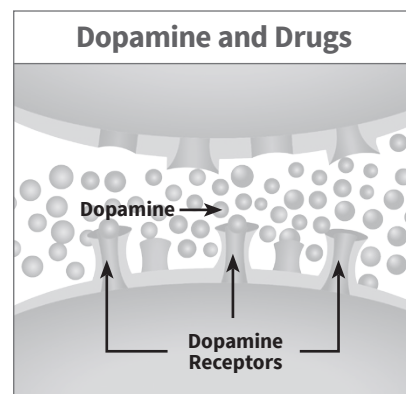
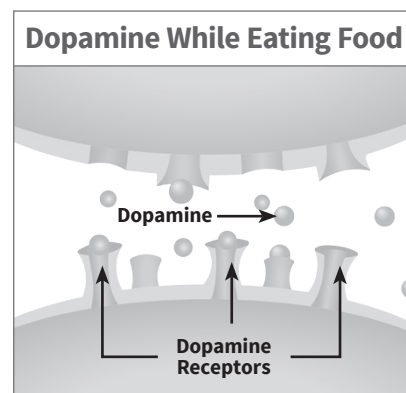
DIRECTIONS: Read the text passage and study the diagrams below to learn how drugs such as opioids change the way the brain works. Then, use the information along with what you learned in the article to answer the questions that follow.

DRUGS AND THE BRAIN

Drugs affect the way signals are sent in the brain's reward circuit, which is a network of structures that is activated when you do something pleasurable.

Dopamine is a chemical that helps signals pass between nerve cells in the brain. When you do something enjoyable, such as eating chocolate, dopamine levels increase in the brain (see top diagram). Receptors detect the rise in dopamine, which helps your brain remember the pleasurable behavior so that you are more likely to want to do it again.

Using drugs, including opioids, causes a rise in dopamine levels that is far greater than the increase from other enjoyable activities (see bottom diagram). When drugs are misused over time, the brain becomes used to the extreme surge of dopamine that drugs deliver. This leads to powerful cravings that make it very difficult to stop. The state of being ruled by these cravings is addiction.



THINK IT THROUGH

Use a separate sheet of paper to record your answers to the questions below.

1. What is dopamine? What role does it play in the brain?
2. Why are drugs more addictive than something else that gives pleasure, such as eating chocolate?
3. Explain why a person who is addicted to a drug might continue to use it even if they experience negative consequences, such as losing friends or a job?
4. In the article "Opioids: What You Need to Know," you learned that medications exist that can help treat addiction. Based on what you learned about the science of addiction above, how do you think they might work? Explain your answer.

For more information, visit 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

Opioids:

What You Need to Know

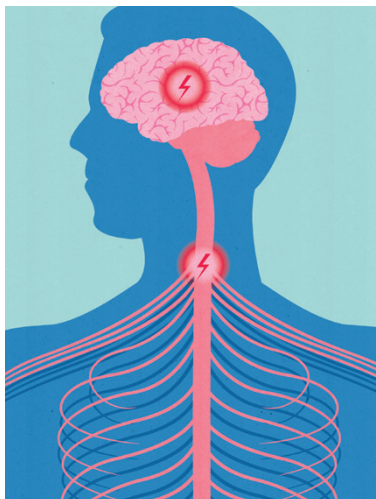
A SERIOUS HEALTH CRISIS is threatening the United States. Over the past 10 years, the number of deaths from taking too much of a drug (overdoses) have increased dramatically. The majority of these deaths are linked to **opioids** (pronounced *OH-pee-oyds*). On average, 130 Americans die every day from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



MORE FREE TEACHER RESOURCES: [scholastic.com/headsup/teachers](https://www.scholastic.com/headsup/teachers)

Lessons, Texts & Printables



Science/ELA materials that teach important facts and elicit critical thinking

Videos



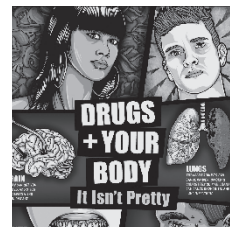
Classroom videos that illustrate the science of drug misuse

Interactives



Dynamic online supplements that engage students in core information

Poster/ Teaching Guides



Engaging visuals with activities for comprehension and reinforcement

COMPILATION 2019-20 Teacher Edition

Heads Up compilations are created by Scholastic and the National Institute on Drug Abuse, National Institutes of Health, U.S. Department of Health and Human Services. These compilations are printed by the National Institute on Drug Abuse. The photographs may not be removed from the program and reproduced or resold. The photographs are rights-managed material. This compilation is **in the public domain** and may be reproduced **in its entirety** without permission. Citation of the source is appreciated. NIH Pub No. 20-DA-8070B



National Institute
on Drug Abuse

NATIONAL INSTITUTE ON DRUG ABUSE



RESEARCH DISSEMINATION CENTER