

# Opioids:

## What You Need to Know

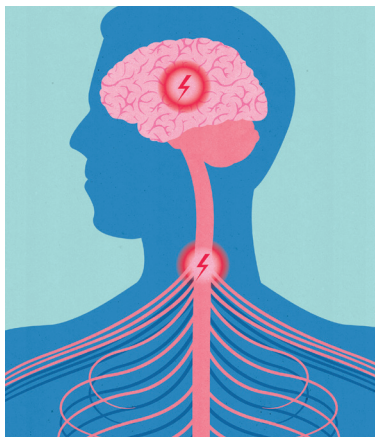
**A** SERIOUS HEALTH CRISIS is threatening the United States. Over the past 10 years, the number of overdose deaths has increased dramatically. When someone overdoses, they take too much of a drug. Most of these deaths are linked to **opioids** (pronounced OH-pee-oyds). On average, 130 Americans die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

Opioids are a category of powerful pain relievers. They include prescription medications and illegal drugs. Recently, many synthetic (man-made) opioids have come into the country illegally. The illegal version of fentanyl (*FENT-uh-nul*) plays a major role in the current crisis. This powerful drug is 50 times stronger than heroin, an illegal opioid made partly 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. While these drugs block pain, they also cause





**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.**

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a person's breathing to slow. If opioids are misused, they pose serious health risks. If someone overdoses on opioids, 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 opioids can change how the brain works and make someone crave the drugs. A person can develop opioid use disorder or 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, surgery or a serious injury causes severe pain. A doctor may prescribe an opioid pain medication 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 other treatments.
- » 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.
- » Always take opioids exactly the way your doctor prescribes them. Never use opioids for any other reason. Never share medications. 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](https://bit.ly/2MLXiUW).

## **WHAT TO DO**

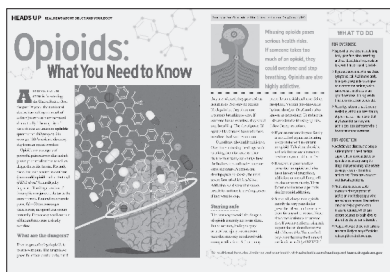
### **FOR OVERDOSE**

- » Signs of an overdose include limp body, pale face, slow breathing and heartbeat, blue fingernails or lips, vomiting, or inability to talk.
- » Call 911 immediately if someone has these symptoms. Emergency responders can give naloxone to reverse the effects of an opioid overdose. If given in time, naloxone can save someone's life.
- » In most states, naloxone is available without a prescription. Anyone can buy and give it to someone who is having an opioid overdose.

### **FOR ADDICTION**

- » Addiction is a disease that requires medical support. If someone with an addiction tries to stop using, that person may have severe cravings, seizures, trembling, and nausea. These are withdrawal symptoms.
- » Medications can help people who are trying to recover by reducing symptoms of opioid addiction and restoring balance to brain circuits.
- » People who use these medications are more likely to stay off opioids, reducing the risk of overdose.





## 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? (*Synthetic [or man-made] opioids like fentanyl have come into the country illegally. These opioids are very powerful. Even a very small amount can cause someone to stop breathing.*)

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

**3** How can medication help someone who is experiencing an opioid overdose? (*If someone is experiencing an overdose, giving them a dose of naloxone can reverse the effects and save their life.*)

### Writing Prompts

**Grades 6–8** Explain why prescription opioids pose health risks.

**Grades 9–10** Explain how a person might increase their risk of health dangers associated with both prescription opioid medications and illegal opioids. Then, explain how they could reduce their risk.

**Grades 11–12** What are some actions that individuals and medical professionals could take to help control the misuse of prescription opioid medications?

### Paired Reading

“Sculpting Your Brain: The Science of Addiction” ([teens.drugabuse.gov/blog/post/sculpting-your-brain-science-addiction](https://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 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 in the brain. Dopamine levels rise because of a pleasurable experience. This 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 drugs cause a much greater increase in dopamine. Over time, the brain craves the boost of dopamine it receives from drugs.

**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. 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](https://scholastic.com/headsup/opioidsvocab).

More Lessons on Drugs and Alcohol:

- [headsup.scholastic.com/teachers](https://headsup.scholastic.com/teachers)
- [teens.drugabuse.gov](https://teens.drugabuse.gov)



# What Causes Addiction?

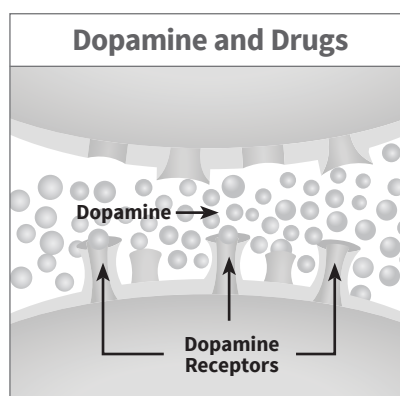
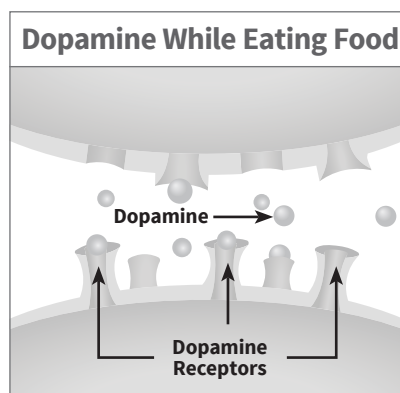
**DIRECTIONS:** Read the text passage and study the diagrams below to learn how drugs such as opioids change the way the brain works. Then, use the information along with what you learned in the article to answer the questions that follow.

## DRUGS AND THE BRAIN

Drugs affect the way signals are sent in the brain's reward circuit. This network of structures 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 eat chocolate, dopamine levels increase (see top diagram). Receptors detect the rise in dopamine. This helps your brain remember the pleasurable behavior so that you will most likely want to do it again.

Using drugs, including opioids, causes dopamine levels to rise much higher than with other enjoyable activities (see bottom diagram). When drugs are misused over time, the brain becomes used to the boost of dopamine that drugs deliver. This leads to powerful cravings that make it difficult to stop. The state of being ruled by these cravings is addiction.



## THINK IT THROUGH

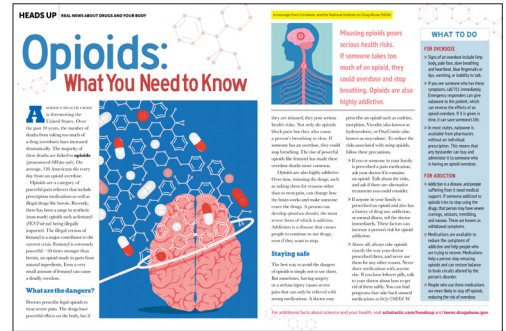
**Use a separate sheet of paper to record your answers to the questions below.**

1. What is dopamine? What role does it play in the brain?
2. Why are drugs more addictive than eating chocolate?
3. Explain why a person who is addicted to a drug might continue to use it even if they experience negative consequences?
4. The article "Opioids: What You Need to Know" explained that medications can help treat addiction. Based on what you learned above, how might these medications work? Explain your answer.

For more information, visit [scholastic.com/headsup](https://www.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

## VOCABULARY LIST



# Opioids: What You Need to Know

Find the article at:  
[scholastic.com/headsup/opioids](https://scholastic.com/headsup/opioids)

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

**addictive** (*adjective*): something, such as a drug, that causes changes to the brain that result in compulsive (uncontrollable) behavior despite negative consequences

**administer** (*verb*): to dispense or give out, such as a medication

**crave** (*verb*): to have an intense desire for something

**crisis** (*noun*): a situation that has reached an unstable point and that has a high chance of having a negative outcome

**fentanyl** (*noun*): an opioid drug made in laboratories that is much stronger (50 times) than other legal opioids. Even a very small amount can cause a deadly overdose.

**naloxone** (*noun*): an emergency medication used to reverse the effects of opioid overdose and restore breathing. If it is used quickly enough, naloxone can prevent a person from dying of overdose.

**opioid** (*noun*): one of a group of drugs that produce relaxation, pleasure, and pain relief. Opioids can be addictive and potentially deadly due to overdoses.

**opioid use disorder** (*noun*): a brain disorder associated with a physical dependence on opioids so that when a person tries to stop using opioids they experience withdrawal symptoms such as cravings

**overdose** (*noun*): a deadly or toxic amount of a drug; (*verb*) to take a deadly or toxic amount of a drug

**prescription medication** (*noun*): a medication that must be ordered by a doctor before it can be dispensed (given out)

**surge** (*noun*): a sudden increase to an excessive or high amount

**synthetic** (*adjective*): produced by a chemical process

**withdrawal symptom** (*noun*): something that happens in the body of a person addicted to a drug when the person stops taking the drug

