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.

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.
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](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