

This module of the *Brain Power! Challenge* Program presents information on two dangerous drugs—cocaine and heroin. Once referred to as hard-core, “street” drugs, cocaine and heroin are increasingly used by younger individuals in communities across the nation. Both drugs are highly addictive.

Summary

When an individual injects, smokes, or snorts heroin, it quickly travels to the brain and slows down functioning, causing feelings of drowsiness and well-being. The brain naturally contains receptors for opioids, the sites where heroin acts. These receptors, which are important for breathing, pain, emotion and feelings of reward, are activated by heroin. This causes greater amounts of dopamine to be released into the brain’s reward system, resulting in an intense but short-lived “rush.” The feelings of pleasure produced by this rush encourage the person to continue to use the drug and can lead to addiction.

Cocaine, like heroin, can be smoked, snorted, or injected. It also travels quickly to the brain, speeding up respiration and heart rate. The cocaine rush is caused by an increase in the amount of dopamine that stimulates receptors in the brain. Cocaine and heroin cause changes in normal brain processes, which leads to long-term consequences. There is some scientific evidence that the craving for cocaine becomes “hard wired” into the brain, making it very difficult for a person to stop using cocaine.

	Heroin	Cocaine
Brain Effects	Heroin acts on opioid receptors in the brain, causing feelings of pleasure and reduced pain. Long-term use of heroin can reduce the number of receptors. This means that users must use more heroin just to feel like they are functioning normally. At this point, the user is addicted.	Cocaine initially increases the amount of dopamine in the brain by disturbing normal neurotransmission. The excess dopamine causes feelings of pleasure in the short term. But the changes that occur in the brain mean that users need more of the drug to feel normal again. At this point, the user is addicted.
Body Effects	The drug “rush” is accompanied by a flushing of the skin. After-effects of the drug can include a dry mouth, heavy feeling in the limbs, nausea, vomiting, and severe itching. Abusers are generally drowsy for several hours.	Cocaine produces feelings of happiness and increased energy and alertness immediately after use. This is followed by feelings of depression and edginess, along with a craving for the drug. Cocaine can cause increased heart rate and breathing rate, muscle spasms, and convulsions.

Ask your child to help you find examples of how drugs are portrayed in the media. You can watch TV or a movie with your child, look through magazines and newspapers, listen to music, or surf the Internet. Discuss with your child how drugs are portrayed and how the people look who are using them. What drugs show up in the media most often? Are alcohol and nicotine more common drugs than cocaine and heroin? What is different about these drugs that might prompt different treatment of them by the media? Talk to your child about these drugs and how the media might influence people's—especially young people's—opinions about them.

Resources

National Institute on Drug Abuse (NIDA)

www.drugabuse.gov, 301-443-1124

This Web site contains information about drug abuse as well as a section designed specifically for parents, teachers, and students.

National Clearinghouse for Alcohol and Drug Information (NCADI)

<http://ncadi.samhsa.gov>, 1-800-729-6686

NCADI is the world's largest resource for information and materials concerning substance abuse. Many free publications are available here.

Parents: The Anti-Drug

www.theantidrug.com

This site is designed for parents and covers the risks and consequences of various drugs, and provides news, advice, and real-life stories.

***Buzzed: The Straight Facts About the Most Used and Abused Drugs from Alcohol to Ecstasy.* Kuhn, C., Swartzwelder, S. and Wilson, W.** New York: W. W. Norton & Company, 2003. A highly informative, detailed review of widely abused drugs.

***Heroin.* Ferreiro, C.** Philadelphia, PA: Chelsea House Publishers, 2003. Part of the "Drugs: The Straight Facts" series. Contains a thorough discussion of heroin, including history, effects, addiction, and related laws.

***Cocaine.* Wagner, H.L.** Philadelphia, PA: Chelsea House Publishers, 2003. Part of the "Drugs: The Straight Facts" series. Contains a thorough discussion of cocaine, including history, effects, addiction, and the "business" of cocaine.