

### Discussion Topics

- Discuss the importance of oxygen in the body and how inhalants can reduce the amount of oxygen available to organs.
- What are some possible reasons people abuse inhalants? List other things that teens can “experiment” with that are less dangerous.
- Discuss the fact that most teens do not inhale poisons, and that many of those who do use it are attempting to take care of stressful feelings, to avoid discomfort, or to numb pain. What are some other ways to cope with the stresses presented in life?

### Follow-up Activities

- Have students design posters that contain a list of safety rules to educate younger children on the dangers of inhalants.
- Have students write persuasive essays or letters geared to a hypothetical younger friend or sibling who is experiencing low self-esteem and parental conflicts and is considering inhalant use. Direct them to explain some of the immediate consequences of abuse while encouraging the reader to celebrate his/her individuality. Students can also recommend ways to resist negative influences and suggest healthy alternatives.
- Using resources like the library, newspapers and the Internet, have students find news stories that involve the death of teens due to inhalant abuse. After they have gathered a number of these tragic stories, ask them to analyze the users. Is there one ‘type’ of person that dies from using inhalants? Have them create a collage of headlines that speak to the dangers and tragedies involved.
- Invite a hazardous materials worker to the classroom to show how to prevent injury with proper ventilation and protective equipment.

### Suggested Internet Resources

Periodically, Internet Resources are updated on our Web site at [www.LibraryVideo.com](http://www.LibraryVideo.com)

- [www.health.org/govpubs/phd631](http://www.health.org/govpubs/phd631)  
This site, maintained by the Substance Abuse and Mental Health Services Administration, contains “Tips for Teens — The Truth About Inhalants.”
- [www.inhalants.org](http://www.inhalants.org)  
The National Inhalant Prevention Coalition offers inhalant resource and prevention materials, as well as treatment referrals for inhalant abusers.
- [www.freevibe.com](http://www.freevibe.com)  
A teen-oriented site that provides drug information and support.

### Suggested Print Resources

- Abraham, Henry D. *What's a Parent to Do?* New Horizon Press, East Rutherford, NJ; 2004.
- Bellenir, Karen, ed. *Drug Information for Teens: Health Tips About the Physical and Mental Effects of Abuse.* Omnigraphics, Inc. Detroit, MI; 2002.
- Hyde, Margaret O. *Drugs 101: An Overview for Teens.* Millbrook Press, Brookfield, CT; 2003.

For help with a drug problem, call 1-800-662-HELP or go to:  
[www.findtreatment.samhsa.gov](http://www.findtreatment.samhsa.gov)

#### TEACHER'S GUIDE

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# DRUG Education for Teens™

## INHALANTS

Grades 7 & up

Successful prevention education must empower teens to develop their own decision-making skills and assume responsibility for making choices that keep them healthy and safe. It is important to convey that most youths do not use drugs. In fact, smoking, drinking and other drug use has fallen among teens in recent years.

Nonetheless, drug related problems continue to devastate families and communities. Prepared with credible information, students develop an understanding of the risks involved in the use of any drug and learn that you don't have to be an addict for drugs to change your life.

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## Before Viewing the Program

Engage the group with the following discussion points before viewing the program. Brainstorm a list of responses and record them on the chalkboard or flipchart. After viewing the video, refer to the list and add or revise if necessary.

- Why do people use drugs?
- What is addiction?
- Do you know of someone who is addicted to drugs? What is his or her life like?
- Is there a type of person more likely to become addicted to drugs?
- What is your image of a drug addict?
- Where can a person find support if he or she is experiencing problems?

## Background

Thousands of household products contain dangerous chemicals. When properly used, they are useful and make life better for people, but it's no accident that these products have warning labels that show a skull-and-crossbones on them. People who handle these chemicals have to be very careful to protect themselves.

Volatile solvents are called volatile because on their own they easily change, evaporating from a liquid state to a gas. Volatile solvents are called solvents because they're used to dissolve fats, grease and oil. Since all the cells in the body, including the brain, are composed of some fat cells, exposure to these chemicals actually begins to dissolve parts of the brain that are composed of fat.

Aerosols are other toxic chemicals, like spray paint and deodorants, that can be dangerous when used without proper ventilation and protection. There are also medical anesthetics like "laughing gas" (nitrous oxide) that are used under medical supervision in dentistry and surgery. Gases produce numbness, loss of coordination and unconsciousness. The powerful effects of anesthetic gases make them dangerous each and every time they are utilized in a medical setting as well as when they are abused.

Whether accidentally inhaled or deliberately sniffed or "huffed," most inhalants act as central nervous system depressants, slowing down body systems. Inhalant abuse affects virtually every organ and function of the body, including the brain, and peripheral and central nervous systems.

Inhalant abusers who "sniff" or "huff" chemicals experience a change in their mental state, and may experience mild audio and visual hallucinations, dizziness and unconsciousness.

Some of the organs these chemicals affect are the heart (irregular heartbeat/heart failure), lungs, kidneys, muscle, bone marrow and liver (liver function can actually shut down, either temporarily or permanently).

The chemical vapors of the inhalants are also dissolved into the fatty tissues of the brain. Exposure to the chemicals in the inhalant dissolves the protective covering that surrounds the nerve cells (myelin sheath). The tissue damage that occurs can result in memory impairment, personality changes, loss of coordination, speech impairment, tremors, uncontrollable shaking, seizures, learning disabilities and hallucinations. Inhalants also affect eyesight, causing double vision and other sight disorders.

Sometimes, people don't know about the dangers of inhalants. Inhalants are one of the few substances abused more by younger children than older ones. They are readily available, inexpensive and easy to conceal.

## Effects of Inhalant Use

Inhalants are poisons that are readily absorbed into blood-rich, vital organs where they cause long-lasting damage. Inhalants work quickly by passing through the nasal cavity and entering the lungs, bloodstream and the brain, all in a matter of seconds. When they are abused, they can ruin lives and even take lives.

Most inhalants act as central nervous system depressants; they slow down body systems. Dizziness, immediate loss of motor control and often unconsciousness comes on immediately and usually lasts less than a minute but can last up to 45 minutes. Loss of coordination, slurred speech, flushed skin and sweating are all effects of inhalant use. Impaired judgment, confusion, fright, hyperactivity, anxiety, acute psychosis, increased violence and aggressive behavior are all effects of inhalant abuse.

Inhalant use has the potential to cause "sudden sniffing death" from heart failure at any use, whether the first time or the 100th use. About 22% of those who die from huffing do so the first time they try it. One of the ways that users die is from suffocation; another is choking on vomit after inhalant use. Some users die from accidents, including motor vehicle fatalities, suffered while intoxicated. In some instances, the cause of death involves high concentrations of inhaled fumes like nitrous oxide gas displacing the available oxygen in the lungs and asphyxiating the user.

If inhalant use doesn't kill instantly, it kills the body and mind over time. Some possible effects of chronic abuse include severe anemia, headaches, fatigue, weight loss, dangerous nutritional imbalances, memory loss, hearing loss, lung damage, limb spasms, permanent brain damage, bone marrow damage, liver and kidney damage, muscle wasting, loss of sense of smell, long-lasting numbness in the extremities and other neurological problems. Other effects include depression, hallucinations, decreased intelligence quotient, mood disorder, dementia, and withdrawal.

## Signs of Inhalant Abuse

Inhalant abusers may show all or some of these symptoms:

- unusual breath odor or chemical odor on clothing
- slurred or slowed speech
- a general drunken, dazed or glassy-eyed appearance
- paint or other products on the face or fingers
- red or runny eyes or nose
- spots or sores around the mouth and nose
- nausea and/or lack of appetite.
- nervousness, restlessness and outbursts of anger

## Focus Questions

1. What are volatile solvents?
2. What are aerosols?
3. What are anesthetic gases?
4. Why do people abuse inhalants?
5. Why are inhalants sometimes abused by middle school children?
6. What happens to the body of an inhalant abuser?
7. What are some of the ways users can die from exposure to inhalants?
8. What are the short-term effects of inhalants?
9. What are some of the long-term dangers?
10. What are some indications that a person is abusing inhalants?

## Vocabulary

**"huffing"** — The inhalation of toxic vapors through the mouth.

**inhalants** — Substances that are sniffed or huffed to give the user an immediate head rush or high. Inhalant use can cause a number of physical and emotional problems, and even one-time use can result in death.

**myelin sheath** — The outer lining of nerve cells.

**nitrites** — A group of inhalants that include amyl nitrite (poppers) and butyl nitrites.

**nitrous oxide** — Also known as "laughing gas"; an anesthetic gas used by dentists and surgeons to numb patients.

**sudden sniffing death** — A fatal syndrome caused by huffing in which the heart stops.

**vapors** — Fumes of a gas that can enter the body through the lungs and skin.