



National Institute  
on Drug Abuse

# Drug Facts

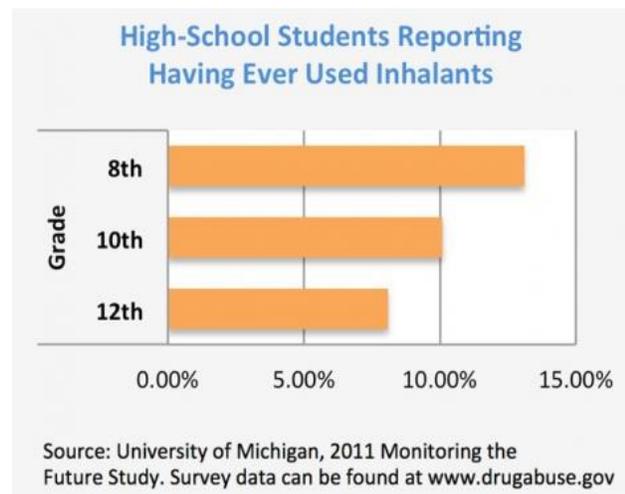
[www.drugabuse.gov](http://www.drugabuse.gov)

## Inhalants

Many products readily found in the home or workplace—such as spray paints, markers, glues, and cleaning fluids—contain volatile substances that have psychoactive (mind-altering) properties when inhaled. People do not typically think of these products as drugs because they were never intended for that purpose. However, these products are sometimes abused in that way. They are especially (but not exclusively) abused by young children and adolescents, and are the only class of substance abused more by younger than by older teens.

### Definition

Although other abused drugs can be inhaled, the term *inhalants* is reserved for the wide variety of substances—including solvents, aerosols, gases, and nitrites—that are rarely, if ever, taken via any other route of administration. (See below for a list of examples.)



### How Are Inhalants Abused?

Abusers of inhalants breathe them in through the nose or mouth in a variety of

ways (known as “huffing”). They may sniff or snort fumes from a container or dispenser (such as a glue bottle or a marking pen), spray aerosols (such as computer cleaning dusters) directly into their nose or mouth, or place a chemical-soaked rag in their mouth. Abusers may also inhale fumes from a balloon or a plastic or paper bag. Although the high produced by inhalants usually lasts just a few minutes, abusers often try to prolong it by continuing to inhale repeatedly over several hours.

People tend to abuse different inhalant products at different ages. New users ages 12–15 most commonly abuse glue, shoe polish, spray paints, gasoline, and lighter fluid. New users ages 16–17 most commonly abuse nitrous oxide or “whippets.” Adults most commonly abuse a class of inhalants known as nitrites (such as amyl nitrites or “poppers”).

## How Do Inhalants Affect the Brain?

Most abused inhalants other than nitrites depress the central nervous system in a manner not unlike alcohol. The effects are similar—including slurred speech, lack of coordination, euphoria, and dizziness. Inhalant abusers may also experience light-headedness, hallucinations, and delusions. With repeated inhalations, many users feel less inhibited and less in control. Some may feel drowsy for several hours and experience a lingering headache.

Unlike other types of inhalants, nitrites enhance sexual pleasure by dilating and relaxing blood vessels.

Although it is not very common, addiction to inhalants can occur with repeated abuse.

## What Are the Other Health Effects of Inhalants?

Chemicals found in different types of inhaled products may produce a variety of other short-term effects, such as nausea or vomiting, as well as more serious long-term consequences. These may include liver and kidney damage, hearing loss, or bone marrow damage. Effects may also include loss of coordination and limb spasms due to damage to myelin—a protective sheathing around nerve fibers that helps nerves transmit messages in the brain and peripheral nervous system. Inhalants can also cause brain damage by cutting off oxygen flow to the brain.

Inhalants can even be lethal. Sniffing highly concentrated amounts of the chemicals in solvents or aerosol sprays can directly cause heart failure within minutes. This syndrome, known as “sudden sniffing death,” can result from a single session of inhalant use by an otherwise healthy young person. High concentrations of inhalants may also cause death from suffocation,

especially when inhaled from a paper or plastic bag or in a closed area. Even when using aerosols or volatile products for their legitimate purposes like painting or cleaning, it is wise to do so in a well-ventilated room or outdoors.

Nitrites are a special class of inhalants that are abused to enhance sexual pleasure and performance. They can be associated with unsafe sexual practices that increase the risk of contracting and spreading infectious diseases like HIV/AIDS and hepatitis.

### Products Abused as Inhalants

**Volatile solvents**—liquids that vaporize at room temperature

- *Industrial or household products, including paint thinners or removers, degreasers, dry-cleaning fluids, gasoline, and lighter fluid*
- *Art or office supply solvents, including correction fluids, felt-tip marker fluid, electronic contact cleaners, and glue*

**Aerosols**—sprays that contain propellants and solvents

- *Household aerosol propellants in items such as spray paints, hair or deodorant sprays, fabric protector sprays, aerosol computer cleaning products, and vegetable oil sprays*

**Gases**—found in household or commercial products and used as medical anesthetics

- *Household or commercial products, including butane lighters and propane tanks, whipped cream aerosols or dispensers (whippets), and refrigerant gases*
- *Medical anesthetics, such as ether, chloroform, halothane, and nitrous oxide (“laughing gas”)*

**Nitrites**—used primarily as sexual enhancers

- *Organic nitrites* are volatiles that include cyclohexyl, butyl, and amyl nitrites, commonly known as “poppers.” Amyl nitrite is still used in certain diagnostic medical procedures. When marketed for illicit use, organic nitrites are often sold in small brown bottles labeled as “video head cleaner,” “room odorizer,” “leather cleaner,” or “liquid aroma.”

## Learn More

For more information on inhalants, visit:  
[www.drugabuse.gov/publications/research-reports/inhalants/letter-director](http://www.drugabuse.gov/publications/research-reports/inhalants/letter-director)