



## **Gases**

Gases used in household or commercial products, including butane lighters and propane tanks, whipping cream aerosols or dispensers (whippets), and refrigerant gases. Household aerosol propellants and associated solvents in items such as spray paints, hair or deodorant sprays, and fabric protector sprays. Medical anesthetic gases, such as ether, chloroform, halothane, and nitrous oxide (“laughing gas”)

## **Nitrites**

Aliphatic nitrites, including cyclohexyl nitrite, an ingredient found in room odorizers; amyl nitrite, which is used for medical purposes; and butyl nitrite (previously used to manufacture perfumes and antifreeze), which is now an illegal substance

## **Health Hazards**

Although they differ in makeup, nearly all abused inhalants produce short-term effects similar to anesthetics, which act to slow down the body’s functions. When inhaled via the nose or mouth into the lungs in sufficient concentrations, inhalants can cause intoxicating effects. Intoxication usually lasts only a few minutes.

However, sometimes users extend this effect for several hours by breathing in inhalants repeatedly. Initially, users may feel slightly stimulated. Successive inhalations make them feel less inhibited and less in control. If use continues, users can lose consciousness.

Sniffing highly concentrated amounts of the chemicals in solvents or aerosol sprays can directly induce heart failure and death within minutes of a session of prolonged use. This syndrome, known as “sudden sniffing death,” can result from a single session of inhalant use by an otherwise healthy young person. Sudden sniffing death is particularly associated with the abuse of butane, propane, and chemicals in aerosols.

High concentrations of inhalants also can cause death from suffocation by displacing oxygen in the lungs and then in the central nervous system so that breathing ceases. Deliberately inhaling from a paper or plastic bag or in a closed area greatly increases the chances of suffocation. Even when using aerosols or volatile products for their legitimate purposes (i.e., painting, cleaning), it is wise to do so in a well-ventilated room or outdoors.

Chronic abuse of solvents can cause severe, long-term damage to the brain, the liver, and the kidneys.

**Harmful irreversible effects that may be caused by abuse of specific solvents include:**

Hearing loss, toluene (spray paints, glues, dewaxers) and trichloroethylene (cleaning fluids, correction fluids)

Peripheral neuropathies, or limb spasms, hexane (glues, gasoline) and nitrous oxide (whipping cream, gas cylinders)

Central nervous system or brain damage, toluene (spray paints, glues, dewaxers)

Bone marrow damage, benzene (gasoline)

**Serious but potentially reversible effects include:**

Liver and kidney damage, toluene-containing substances and chlorinated hydrocarbons (correction fluids, dry-cleaning fluids)

Blood oxygen depletion, aliphatic nitrites (known on the street as poppers, bold, and rush) and methylene chloride (varnish removers, paint thinners)

**Extent of Use**

Initial use of inhalants often starts early. Some young people may use inhalants as an easily accessible substitute for alcohol. Research suggests that chronic or long-term inhalant abusers are among the most difficult drug abuse patients to treat. Many suffer from cognitive impairment and other neurological dysfunction and may experience multiple psychological and social problems.