

INHALANTS

Inhalants are breathable chemical vapors that produce psychoactive (mind-altering) effects. A variety of products common in the home and in the workplace contain substances that can be inhaled. Many people do not think of these products, such as spray paints, glues, and cleaning fluids, as drugs because they were never meant to be used to achieve an intoxicating effect. Yet, young children and adolescents can easily obtain them and are among those most likely to abuse these extremely toxic substances.

Inhalants fall into the following categories:

Volatile Solvents

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

Gases

- *Gases used in household or commercial products*, including butane lighters and propane tanks, whipping cream aerosols or dispensers (whippets), and refrigerant gases
- *Medical anesthetic gases*, such as ether, chloroform, halothane, and nitrous oxide (“laughing gas”)

Aerosols

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

Nitrites

- *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. Volatile nitrites are often sold in small brown bottles labeled as “video head cleaner,” “room odorizer,” “leather cleaner,” or “liquid aroma.”

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 in sufficient concentrations, inhalants can cause intoxication, usually lasting only a few minutes.

However, sometimes users extend this effect for several

hours by breathing in inhalants repeatedly. Initially, users may feel slightly stimulated. Repeated 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 repeated inhalations. 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 (dry-cleaning chemicals, correction fluids)
- Peripheral neuropathies, or limb spasms—hexane (glues, gasoline) and nitrous oxide (whipped cream dispensers, 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)