

Alert # 16

Date: 08/25/2005

Ohio Early

Warning Alert

Ohio Resource Network for Safe and Drug Free Schools and Communities

Inhalant Abuse Dangers

Compressed Gas Computer Cleaners:

IT IS NOT JUST AIR!

Inhalant abuse continues to be a serious and deadly issue in Ohio

Inhalant abuse among youth is a problem due to misinformation, cheap, legal, easily concealed and easily accessible products. Hundreds, even thousands of legal household products have the potential to be abused if used inappropriately. **Recently, there has been concern for compressed gas products used for cleaning computer and other equipment. Deaths have occurred as a result of using this product.** These products have the additional potential for misjudgment of their extreme toxicity. Comments such as "It is just air" can mislead impressionable teens or pre-teens. This misinformation can mislead teens into believing this is actually a safe method of abusing inhalants. They are deadly wrong! Actually the dichlorofluoromethane or freon-like propellant is the deadly component involved in this kind of abuse. ***IT IS NOT JUST AIR!!!!*** Besides being deadly, use sometimes, even leads to immediate frostbite and possible liver or kidney toxicity, according to Earl Siegel, Pharm.D. Cincinnati Drug & Poison Information Center. Falcon, the maker of Dust-Off, a computer cleaning product, is aware its product is abused in this fashion. It has posted information about inhalant abuse on its web site, and cans of Dust Off bear a label cautioning users against misuse of the product and carry this warning in large red block letters: "Inhalant abuse is illegal and can cause permanent injury or be fatal. Please use our product responsibly." Again, this is just one line of products that can be used; awareness needs to be heightened concerning inhalant abuse of all potentially hazardous products. Educating parents, as well as children, of the dangers involving inhalant use of these products is essential in preventing potentially deadly results.

According to the Partnership for a Drug-Free America's *Partnership Attitude Tracking Survey*, inhalants are one of least talked about substances by parents to their children.

Numerous national studies have found that inhalant use is widespread among teens. According to the Partnership for a Drug-Free America, the use of inhalants by eighth-graders rose in 2003 after a seven-year decline. Inhalants are the most commonly abused chemicals among 12- and 13-year-old children. Inhalant experimentation is initiated earlier than any other illicit substance, with young females starting before males.

A recent PRIDE survey indicated that 7.9% of Ohio fourth graders had experimented with this form of chemical use within the last year. A national survey by the University of Michigan found that approximately 15-20% of 8th-12th graders across the country have experimented with inhalants. According to the American Academy of Pediatrics, the peak age of inhalant abusers is 14 to 15 years, with onset occurring in those as young as 6 to 8 years. Use declines typically by 17 to 19 years of age. Children as young as 4th graders who begin to use volatile chemical solvents are also at the age where many might start experimenting with drugs, usually alcohol and marijuana.

"Most parents aren't aware of the extent of the problem," said Dr. Marcel Casavant, medical director of the Central Ohio Poison Center. The center hears about 45 to 60 cases of huffing each year, although Casavant thinks most go unreported. About half of the cases involve teens; most are boys. The National Inhalant Prevention Coalition said it knows of about 125 inhalant deaths each year, many more deaths likely are undiagnosed and unreported. Deaths of mostly 10-16-year old children continue to occur throughout Ohio. Southwestern Ohio has documented over 30 such deaths in a ten-year period.

What are Inhalants:

The term "inhalant" refers to more than a thousand different legal household and commercial products that can be intentionally abused by sniffing or "huffing" (inhaling through one's mouth) for an intoxicating effect. Easy accessibility, low cost, and ease of concealment make inhalants, for many, one of the first substances abuse. Inhalant abuse is defined as the deliberate inhalation of concentrated amounts of one or more dangerous liquid or gaseous chemicals to produce a feeling of euphoria or "high". Many of these substances are common household products, such as gasoline, glues, typewriter correction fluid, paints and varnishes. Solvent use begins in late childhood or early adolescence.



Types of Inhalants:

- *Volatile Solvents*
- *Adhesives*
- *Aerosols*
- *Cleaning Agents*
- *Dessert Topping Sprays*
- *Anesthetic Agents*
- *Nitrites*



Volatile Solvents:

Fuel gas (Butane, Propane, and Gasoline)
Nail polish remover
Lighter fluid
Carburetor cleaners
Lacquer thinners
White out (Correction Fluid)
Felt tip markers

Adhesives:

Airplane glue
Rubber cement

Aerosols:

Hair spray
Spray paint
Compressed gasses (computer cleaners, air horns)
Deodorant, air freshener

Cleaning Agents:

Dry cleaning fluid
Spot removers / Degreasers

Dessert Topping Sprays:

Whipped cream
Whippets

Anesthetics Gases:

Ether – Chloroform, Nitrous Oxide (laughing gas)
Liquid – Halothane, Enflurane
Local – Ethyl Chloride

Nitrites: (Room Odorizers)

Amyl Nitrate
Butyl Nitrite
Isopropyl Nitrite

Street terms for inhalants:

Air blast	Rush
Ames (amyl nitrite)	Snappers (isobutyl nitrite)
Bagging	Snorting (using inhalants)
Gluey	Thrust (isobutyl nitrite)
Huffing	Toncho (octane booster)
Laughing gas	Whippets (nitrous oxide)
Poor man's pot	Whiteout
Poppers (isobutyl nitrite)	

Health Effects:

While different in composition, most abused chemicals produce effects similar to anesthetics, which slow the body's functions. If taken repeatedly, intoxication may last a few minutes or several hours. At first, users may feel slightly stimulated; with successive inhalations, they may feel less inhibited and less in control; finally, a user can lose consciousness. Sniffing highly concentrated amounts of the chemicals in solvents or aerosol sprays can cause "Sudden Sniffing Death", especially when abuse of fluorocarbons or butane-type gases is involved.

Additionally, high concentrations of inhalants can lead to the displacement of oxygen in the lungs and central nervous system resulting in death by suffocation.

Health Effects *Continued*

Permanent effects caused by the use of inhalants include hearing loss, peripheral neuropathies or limb spasms, central nervous system or brain damage, and bone marrow damage. Additional serious side effects include liver and kidney damage as well as blood oxygen depletion.

Common Modes of Administration: Administration of inhalants entail sniffing or huffing directly from the containers of products such as rubber cement or correction fluid, sniffing fumes from plastic bags placed over the nose, mouth or head, or sniffing cloth saturated with the substance. The substance may also be inhaled directly from an aerosol can or out of alternative containers such as a balloon filled with nitrous oxide. Some volatile substances may release intoxicating vapors when heated.

Signs of Inhalant use and overdose:

Entry into the brain is so fast that the effects of inhalation can resemble the intensity of effects produced by intravenous injection or other psychoactive drugs. The effects of inhalant intoxication resemble those of alcohol inebriation, with stimulation and loss of inhibition followed by depression at high doses. Users report distortion in perceptions of time and space. Many users experience headache, nausea or vomiting, slurred speech, loss of motor coordination, and wheezing. A characteristic "glue-sniffer's rash" around the nose and mouth is also common. An odor of paint or solvents on clothes, skin and breath is also a sign of inhalant abuse. The chronic use of inhalants has been associated with a number of serious health problems. Glue and paint thinner sniffing in particular produce kidney abnormalities, while the solvents, toluene and trichloroethylene, cause liver toxicity. Memory impairment, attention deficits, and diminished non-verbal intelligence have been associated with the abuse of inhalants. Deaths resulting from heart failure, asphyxiation, or aspiration have occurred as well.

Short Term Effect:

Most inhalants produce a drunken, light-headed "high" that is typically short-lived. Unfortunately, this high comes at a high price: Inhalants can depress your heart rate, disturb your heart rhythm, and sap your body of oxygen. At the extreme, using inhalants can result in sudden death due to ventricular fibrillation -- even the first time you try them. Users are killing brain cells every time they breathe in. They may also experience nausea, loss of appetite, nosebleeds, coughing fits, and disorientation and loss of coordination, making it hard to walk or even stand for about 15 minutes after sniffing. It can also effect driving, and could cause motor vehicle accidents.

Inhalants are highly explosive, and users often want to smoke and light up cigarettes. This decision to smoke made while high has caused many explosions resulting in severe burns and even deaths.

Long Term Effect:

Inhalant abuse can result in permanent brain damage and widespread destruction of organs such as the heart and lungs. Extended periods of abuse can cause: Personality changes, learning disabilities, memory loss, blindness, slurred speech, vision problems, balance and coordination difficulty, hearing loss, liver damage, lung damage, nerve damage causing numbness or paralysis in arms and legs, reduced muscle tone, damage to bone marrow, and cancer. Although problems may not be immediately apparent, some users have noticed a change in their mental and physical abilities after using inhalants.

Sudden Sniffing Death Syndrome:

There is a risk of sudden death with every episode of inhalant use. It could happen on the very first incident, or any one after. Sudden Sniffing Death Syndrome occurs when inhaled chemicals sensitize the heart muscle to the body's own "adrenaline" leading to a fatal heart rhythm disturbance, Earl Siegel, Pharm.D., Co-Director, Drug & Poison Information Center, Cincinnati Children's Hospital Medical Center. "Sudden Sniffing Death" is a simple way of saying the hydrocarbons being inhaled provokes irregular heart rhythms in the victim, leading to sudden fatal cardiac arrest. Even young and very healthy hearts fail this way.

Product information input from: Jan Scaglione, Pharm.D. and Earl Siegel, Pharm.D. Cincinnati Drug & Poison Information Center (1-513-636-5111).

FIRST TIME USE



The risk of sudden death during the first time use of inhalants is greater than with any other drug of abuse. About three of every ten sniffing deaths occur in first time users. It is thought that when the chemicals are inhaled into the body, they sensitize the heart and result in fatal arrhythmias (irregular heart beats).



This young man was found dead on his bedroom floor. An aerosol can of cooking spray was on his bed. A cardboard tube from a toilet paper roll, stuffed with paper, was beside the body. The subject was apparently seated on the bed while inhaling the propellant from the spray can after it had been "filtered" through the paper in the cardboard tube. He had no known history of previous inhalant abuse.

For further information contact the following agencies.

References / Resources:

Ohio Resource Network for Safe and Drug Free Schools and Communities. www.ebasedprevention.org
National Inhalant Prevention Coalition. www.inhalants.org
U.S. Drug Enforcement Agency. www.dea.gov
Ohio Department of Alcohol and Drug Addiction Services. www.odadas.state.oh.us
Cincinnati Drug and Poison Information Center. www.cincinnatichildrens.org
Substance Abuse and Mental Health Services Administration. www.samhsa.gov
Ohio Substance Abuse Monitoring Network. www.med.wright.edu/citar/osam/html
Office of National Drug Control Policy. www.whitehousedrugpolicy.gov
National Drug Intelligence Center. www.usdoj.gov/ndic
National Institute on Drug Abuse. www.nida.nih.gov
Partnership for a Drug Free America. www.drugfreeamerica.org
Center for Substance Abuse Prevention. www.samhsa.gov/centers/csap
National Clearinghouse for Alcohol and Drug Information. www.ncadi.samhsa.gov
Drug Rehabilitation Information. www.drug-rehabs.org
Stop Addiction / Narconon. www.stopcocaineaddiction.com
Teen Challenge. www.teenchallenge.com
Central Intelligence Agency. www.cia.gov
Blue print for health. www.blueprint.bluecrossmn.com
Central Ohio Poison Center. www.bepoisonsmart.com
www.snopes.com

This warning is being sent to inform parents, prevention and treatment professionals, law enforcement and educators of this emerging trend. Please distribute this information through list serves, newsletters or bulletin boards, etc. using the Ohio Early Warning Network as your source.

For additional information on the above alert contact: The Ohio Resource Network for Safe and Drug Free Schools and Communities, P.O. Box 210109, 2624 Clifton Ave Cincinnati, Ohio 45221-0109 Phone # 1-800-788-7254 (opt#2) or fax# 1-513-556-0782.

To participate in this OEWN initiative, visit www.ebasedprevention.org and fill out the OEWN registration form. Anyone in Ohio can report an issue to the Ohio Early Warning Network by calling the toll-free non-emergency InfoLine at 1-866-OhioEWN.

This alert is brought to you by the Ohio Early Warning Network initiative sponsored by: the Ohio Department of Alcohol and Drug Addictions Services, the Ohio Department of Education and the Ohio National Guard.

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