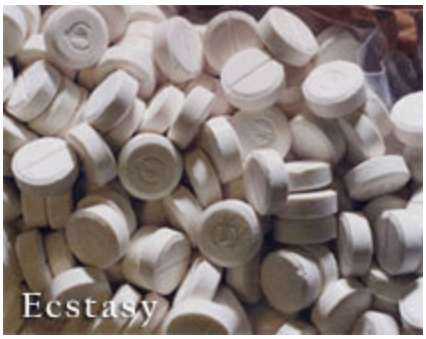
What Is Ecstasy



It is routinely sold in gelatin capsules but is also pressed into tablets. Price for one dose ranges from $7.00 to $30.00.

Methylenedioxymethamphetamine (MDMA)

Slang or Street Names: Ecstasy, XTC, X, Adam, Clarity, Lover's Speed

MDMA was developed and patented in the early 1900s as an appetite suppressant, although it was never tested in humans. Chemically, MDMA is similar to the stimulant amphetamine and the hallucinogen mescaline. MDMA can produce both stimulant and psychedelic effects.

Methylenedioxyamphetamine (MDA) and methylenedioxyethylamphetamine (MDEA) are drugs chemically similar to MDMA.

MDMA is taken orally, usually in a tablet or a capsule. MDMA's effects last approximately 3 to 6 hours, though confusion, depression, sleep problems, anxiety, and paranoia have been reported to occur even weeks after the drug is taken.

MDMA can produce a significant increase in heart rate and blood pressure and a sense of alertness like that associated with amphetamine use.

The stimulant effects of MDMA, which enable users to dance for extended periods, may also lead to dehydration, hypertension, and heart or kidney failure.

MDMA can be extremely dangerous in high doses. It can cause a marked increase in body temperature (malignant hyperthermia) leading to the muscle breakdown and kidney and cardiovascular system failure reported in some fatal cases at raves.

MDMA use may also lead to heart attacks, strokes, and seizures in some users.

MDMA is neurotoxic. Chronic use of MDMA was found, first in laboratory animals and more recently in humans, to produce long-lasting, perhaps permanent, damage to the neurons that release serotonin, and consequent memory impairment.

What is LSD?

LSD (d-lysergic acid diethylamide), commonly called "acid," is the most powerful known hallucinogen - a drug that radically changes a person's mental state by distorting the perception of reality to the point where, at high doses, hallucinations occur. Although it is derived from a fungus that grows on rye and other grains, LSD is semi-synthetic. It is chemically manufactured in illicit laboratories, except for a small amount which is produced legally for research.

Even in very minute doses (for example, 50 to 100 micrograms - a microgram is 1/1,000,000 of a gram), LSD can significantly alter one's perceptions to the point of hallucination - that is, one sees or hears things that don't, in reality, exist. Hence LSD's classification as a hallucinogen.

Pure LSD is a white, odorless crystalline powder that dissolves in water. Because an effective dose of the pure drug is almost invisible, it is mixed with other substances, such as sugar, and packaged in capsules, tablets, or solutions, or spotted on to gelatin sheets or pieces of blotting paper.

The availability of LSD has increased in the United States in the last 2 to 3 years; the hallucinogen is available in at least retail quantities in virtually every state. The sources of supply for most of the LSD available in the United States are believed to be centered in northern California.

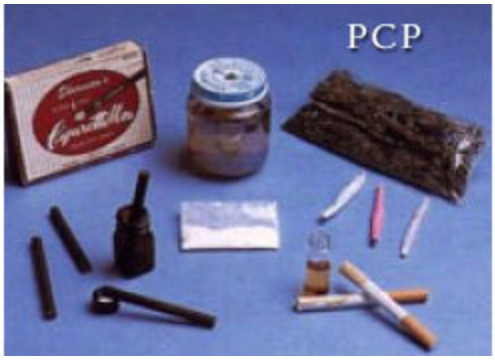
At the wholesale production and trafficking levels, LSD remains tightly controlled by relatively small, fraternal California-based organizations that have evaded drug law enforcement operations successfully for over two decades. Mid-level distribution networks generally are comprised of individuals who have known each other through long years of association and common interests.

Over the past several years, an increasing number of individuals have attempted to manufacture LSD. Many of these individuals are not associated with the traditional northern California groups that are believed to have produced most of the LSD available in the United States since the late 1960's.

Compared with methamphetamine, PCP, and other illicit drugs manufactured in the United States, few LSD laboratories have been located or seized. Six illegal LSD laboratories have been confiscated by the DEA since 1981; however, there have been no seizures since 1987. This is due primarily to the shifting of law enforcement focus to target and dismantle the rising number of cocaine trafficking organizations established during the crack epidemic that began during the mid-1980's and continues into the present.

Public and private mail systems appear to be the primary means used for the transportation and distribution of wholesale and retail quantities of LSD. LSD is relatively inexpensive with an average street dosage unit or "hit" costing about $5 and often as little as $1 or $2. Retail-level doses are available primarily in paper form; microdot tablets and gelatin squares also have been encountered.

LSD is ingested orally. A microdot tablet or square of the perforated LSD paper is placed in the user's mouth, chewed or swallowed. Paper squares are most common because their small size makes them easy to conceal and ingest. Also, because LSD is not injected or smoked, paraphernalia are not required.



What is PCP?

Phencyclidine, commonly referred to as PCP, was developed in 1959 as an anesthetic and was later used in veterinary medicine as a powerful tranquilizer. Use of PCP in humans was discontinued in 1965, as it was found that patients

often became agitated, delusional, and irrational while recovering from the anesthetic affects of PCP. PCP is illegally manufactured in clandestine laboratories.

PCP is a white crystalline powder which is readily soluble in water or alcohol. It has a distinctive bitter chemical taste. PCP can be mixed easily with dyes and turns up on the illicit drug market in a variety of tablets, capsules, and colored powders. It is normally snorted or smoked. When it is smoked, PCP is often applied to a leafy material such as tobacco, mint, parsley, oregano or marijuana.

PCP was first introduced as a street drug in the late 1960s and quickly gained a reputation as a drug that could cause bad reactions and was not worth the risk. Many people, after using the drug once, will not knowingly use it again. Yet others use it consistently and regularly. The reasons that are often cited by users as factors in their continued PCP use are: feelings of strength, power, invulnerability, and a numbing effect on the mind that often results in anger, rage, and in the disappearance of unpleasant memories.

What Does PCP Look Like?

Pure PCP (or phencyclidine) freebase appears as clear, solid crystals at room temperature, while the salt forms are glistening white solids. PCP on the street often appears as a clear, yellow, or even tan-colored liquid. It is usually sprinkled or sprayed on another substance such as parsley, marijuana, tobacco, or commercial cigarettes. Liquid PCP is typically carried by drug dealers in a vanilla extract bottle (such as the one pictured on the left). The dealer dips a Sherman, a brown cigarette such as the one pictured at the top of this page, or Kool cigarette (hense the nicknames: Sherms and Kools) into the bottle, then he sucks on the cigarette to draw the liquid PCP up into the tobacco. The PCP saturated cigarette is usually sold for around ten dollars to the drug user. Because PCP is easily and cheaply made, it is often passed off as LSD, "Supergrass," "speed," or as a brand new recreational drug by dealers who can't get the real thing or want to increase their profits by paying less for their active ingredients. It is not possible to identify street PCP by visual inspection. An analytical laboratory run by a competent chemist is needed for positive identification.

When PCP is made in illegal laboratories, the noxious chemicals used in the process are almost never removed from the final product. These impurities cause PCP to be a liquid at room temperature. The PCP available on the street is most often a mixture of PCP and industrial chemicals.

Physical Signs of PCP Usage

At low to moderate doses, physiological effects include a slight increase in breathing rate and a more pronounced rise in blood pressure and pulse rate. Respiration becomes shallows, and flushing and profuse sweating occur. Generalized numbness of the extremities and muscular incoordination may also occur. Psychological effects include distinct changes in body awareness, similar to those associated with alcohol intoxication. Use of PCP among adolescents may interfere with hormones ralated to normal growth and development as well as with the learning process.

At high doses, there is a drop in blood pressure, pulse rate, and respiration. This may be accompanied by nausea, vomiting, blurred vision, flicking up and down of the eyes, drooling, loss of balance, and dizziness. Psychological effects at high doses include hallucinations. PCP can cause effects that mimic certain primary symptoms of schizophrenia, such as delusions, mental turmoil, and a sensation of distance from one's environment. Often times, speech is sparse and mangled.

People who use PCP for long periods of time report memory loss, speech difficulties, depression, and weight loss. When given psychomotor tests, PCP users tend to have lost their

fine motor skills and short-term memory. Mood disorders have also been reported. PCP has sedative effects, and interactions with other central nervous system depressants such as alcohol can lead to coma or accidental overdose.

Who Discovered PCP?

PCP was originally developed in the 1950's by Parke, Davis & Company. It was tested on animals and humans, and found to be medically useful as an anesthetic for surgery. Parke Davis marketed it for a short amount of time as a surgical anesthetic for humans under the trade name Sernyl(R), but it sometimes cause terrifying hallucinations in patients after surgery. Because of this side effect, it was removed from the human market and sold to veterinarians for surgery on animals under the trade name Sernylan(R). PCP became more and more known as a recreational drug, and legitimate veterinary supplies were increasingly diverted for illicit sale. The commercial product Sernylan(R) was withdrawn from the market in 1978. PCP is still made in clandestine laboratories. Because the activities of these laboratories is not regulated in any way, the purity and potency of street PCP is highly questionable.

Where Does PCP Come From?

PCP is a completely artificial substance. Unlike cocaine and THC which are derived from natural sources, PCP is made from industrial chemicals. Narcotics police often detect an illegal PCP lab when the neighbors complain about terrible chemical fumes coming from a nearby house or apartment. Because illegal chemists often do not take proper safety precautions, these illegal laboratories may explode or catch fire, providing another clue to their existence.

What Kind of Drug is PCP?

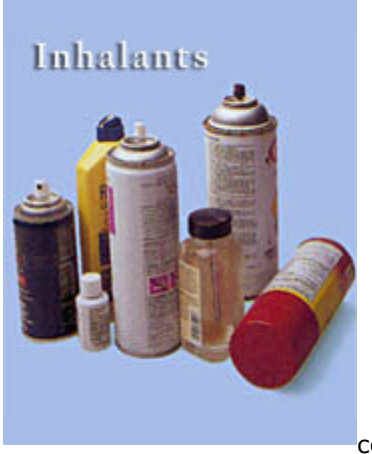
PCP is a "dissociative anesthetic." It was first used in medicine as an anesthetic for surgery. PCP prevents the user from feeling pain while high. PCP also temporarily changes a person's understanding of the boundaries of his or her own body. While under the influence of PCP, a person may look at his own hand and not realize whose hand it is.

This inability to recognize one's own body parts coupled with the inability to feel pain allow the drug user to damage his or her own body. In one published account, a person jailed for drug possession blinded himself by mutilating his eyeballs with his bare hands. Later, he claimed to remember destroying his eyes but reported that he felt no pain while doing it.

Other bizarre behaviors reported in the medical literature include biting one's forearms "almost to the bone," appearing nude outdoors for long periods of time in Winter, or "standing in the park like a statue." While people do not routinely blind themselves when taking PCP, violence or agitation occur in about a third of the people who take the drug. It is the combination of agitation or violent actions and the inability to feel one's own body parts that sometimes results in serious injuries to the PCP user.

Common Nicknames for PCP

PCP is sold on the street by such names as Angel Dust, Crystal Supergrass, Killer Joint, Ozone, Shrems, Kools, Wack and Rocket Fuel. The variety of street names for PCP reflects its bizarre and volatile effects.



What are Inhalants?

Inhalant abuse is hard to talk about because of the confusing terms used to describe it. Substances such as glue, gasoline, anesthetic gases and nitrites have all been discussed under the title of inhalant abuse. The only think in common is the way in which they are taken into the body. Even calling them "inhalants" fails to describe the variety of ways people self-administer these substances.

There are at least three chemically different types of inhalants; volatile hydrocarbons, amyl and butyl (volatile) nitrites, and anesthetic gases. The users of these three types of substances use them for different reasons and experience different effects.

Volatile hydrocarbons (including lighter fluid and typewriter correction fluid) are primarily used as solvents, refrigerants, and propellants. They act as central nervous depressants, inducing a "high" similar to alcohol.

Volatile nitrites function as a vasodilator. They dilate blood vessels and increase heart rate. Butyl nitrite is marketed in room fresheners.

Anesthetic gases product the loss of sensations and possibly loss of consciousness that is required for some dental and surgical procedures. Nitrous oxide is also used as an aerosol propellant and flavoring agent for whipping cream.

Inhaling vapor's to alter one's state of mind dates back to the times of the ancient Greeks. In ancient Delphi, a priestess known as the pythoness' inhaled vapors from a rock crevice as a part of her priestly activities.

In the 1840's the effects of diethyl ether and nitrous oxide were demonstrated to the general public in "ether frolics" and "laughing gas demonstrations." Experience with these early agents led to their use as anesthetics, and the new branch of medicine known as "anesthesiology."

Evidence of inhalant abuse in the medical literature of the 1800's consists mainly of case reports. In 1849, Dr. Horace Wells died of chloroform abuse. He had introduced nitrous oxide and chloroform as dental and surgical anesthetics only five years before. A case of chloroform abuse in an adolescent was described in 1885.

In America, gasoline sniffing became popular among teenagers in the 1950's, primarily in rural areas where alcohol and other commonly used drugs were unavailable. Glue sniffing became widespread in California in the early 1960's. By 1965 glue sniffing was occurring in every state and in many foreign countries.

Inhalant abuse has experienced a steady increase in the United States, Mexico and Canada throughout the 1980's and early 1990's. Inhalant abusers begin using in early to middle adolescence. A significant minority continue into adulthood.

Inhalants are volatile substances that produce chemical vapors that can be inhaled to induce a psychoactive, or mind-altering, effect. Although other abused substances can be inhaled, the term “inhalants” is used to describe a variety of substances whose main common characteristic is that they are rarely, if ever, taken by any route other than inhalation. This definition encompasses a broad range of chemicals found in hundreds of different products

that may have different pharmacological effects. As a result, precise categorization of inhalants is difficult. One classification system lists four general categories of inhalants—volatile solvents, aerosol, gases, and nitrites— based on the form in which they are often found in household, industrial, and medical products.

Volatile solvents are liquids that vaporize at room temperatures. They are found in a multitude of inexpensive, easily available products used for common household and industrial purposes. These include paint thinners and removers, dry-cleaning fluids, degreasers, gasoline, glues, correction fluids, and felt-tip marker fluids.

Aerosols are sprays that contain propellants and solvents. They include spray paints, deodorant and hair sprays, vegetable oil sprays for cooking, and fabric protector sprays.

Gases include medical anesthetics as well as gases used in household or commercial products. Medical anesthetic gases include ether, chloroform, halothane, and nitrous oxide, commonly called "laughing gas." Nitrous oxide is the most abused of these gases and can be found in whipped cream dispensers and products that boost octane levels in racing cars. Household or commercial products containing gases include butane lighters, propane tanks, whipped cream dispensers, and refrigerants.

Nitrites often are considered a special class of inhalants. Unlike most other inhalants, which act directly on the central nervous system (CNS), nitrites act primarily to dilate blood vessels and relax the muscles. And while other inhalants are used to alter mood, nitrites are used primarily as sexual enhancers. Nitrites include cyclohexyl nitrite, isoamyl (amy!) nitrite, and isobutyl (butyl) nitrite. Cyclohexyl nitrite is found in room odorizers.

Amyl nitrite is used in certain diagnostic procedures and is prescribed to some patients for heart pain. Illegally diverted ampules of amy! nitrite are called "poppers" or "snappers" on the street. Butyl nitrite is an illegal substance that is often packaged and sold in small bottles also referred to as "poppers."

How are Inhalants Abused?

Inhalant abusers use many different methods to extract and ingest the desired ingredient. Some of these methods add to the danger of inhalant abuse. Glue sniffers often distribute the glue on the inside surface of a paper bag. Toluene and xylene, solvents commonly found in model airplane glue, disperse into the air inside the bag, and are inhaled or "huffed" by the abuser. A variation of this is to put the glue into a rag and inhale air through the rag. Both of these methods bring glue close to the mouth and nose of the sniffer. Sometimes a rash or a translucent white film of glue appears on the upper lip, cheeks or chin of a glue sniffer. However, this sign of glue sniffing does not always appear on inhalant abusers.

Pressurized gases such as nitrous oxide and butane are sometimes inhaled by the abuser inside a plastic bag over the head. Loss of oxygen can lead to unconsciousness and death.

Some abusers inhale gases directly from pressurized containers. When a gas suddenly has its pressure released, it becomes very cold. Inhalation directly from tanks can cause frozen tissue injury to the mouth and throat. Under certain circumstances, it may stop the heart.

The choice of substance seems to be primarily a matter of what inhalant is the least trouble to obtain and use: Substances that are easy to abuse, widely available and inexpensive (or easy to steal) are the preferred agents. When there is a choice, abusers tend to pick substance with a rapid onset of action.

By definition, the usual route of inhalant abuse is absorption through the lungs. However, some substances classified as inhalants have also been mixed into soft drinks and swallowed.

The Effects of Inhalant Abuse

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What is the Scope of Inhalant Abuse

Inhalant abuse among the Nation’s 8th-, 10th-, and 12th-graders declined in 1999, continuing an apparent gradual decline that began in 1996, according to the latest MTF data. For example:

The percentage of high school seniors who abused any inhalants declined to 5.6 percent in 1999 from a peak of 8 percent in 1995. Abuse of nitrites, specifically, also declined to less than 1 percent (0.9) among seniors in 1999.

Abuse of all inhalants by 10th-graders declined to 7.2 percent in 1999, from 9.6 percent in 1995.

Among eighth-graders, abuse declined to 10.3 percent in 1999 from 12.8 percent in 1995.

Despite the declines in abuse among schoolchildren in recent years, inhalants are still being abused at higher rates than they were a decade ago, according to the NHSDA. The 1998 survey indicates that the rate of first use among 12- to 17-year-olds rose significantly from 8.4 to 18.8 per 1,000 potential new users from 1989 to 1995 and remained at those levels through 1997. The rate of first use of inhalants for young adults aged 18 to 25 also rose, from 3.7 to 10.7 per 1,000 potential new users between 1989 and 1996, before leveling off in 1997.

MTF’s lifetime prevalence figures also indicate that the percentages of students who have tried inhalants remain at high levels. In 1999, 19.7 percent of 8th-graders, 17.0 percent of 10th-graders, and 15. 4 percent of 12th-graders said they had abused inhalants at least once in their lives.

This data raises a question:

How can fewer 12th-graders than 8th-graders consistently report they have ever abused inhalants? Possibly, many 12th-graders fail to recall their much earlier use of inhalants or, more troubling, many 8th-grade inhalant abusers may have dropped out of school by the 12th grade and are no longer included in the survey population. The latter explanation is supported by research that shows higher rates of inhalant abuse among children who have poor grades or have dropped out of school than among their classmates who remain in good standing in school.

How are Inhalants Used?

Inhalants can be breathed in through the nose or the mouth in a variety of ways, such as:

Sniffing" or "snorting" fumes from containers;

Spraying aerosols directly into the nose or mouth;

Bagging"—sniffing or inhaling fumes from substances sprayed or deposited inside a plastic or paper bag;

Huffing" from an inhalantsoaked rag stuffed in the mouth;

Inhaling from balloons filled with nitrous oxide.

Inhaled chemicals are rapidly absorbed through the lungs into the bloodstream and quickly distributed to the brain and other organs. Within minutes of inhalation, the user experiences intoxication along with other effects similar to those produced by alcohol. Alcohol-like effects may include slurred speech, an inability to coordinate movements, euphoria, and dizziness. In addition, users may experience lightheadedness, hallucinations, and delusions, such as thinking they can fly.

Because intoxication lasts only a few minutes, abusers frequently seek to prolong the high by continuing to inhale repeatedly over the course of several hours, a very dangerous practice. With successive inhalations, abusers can suffer loss of consciousness and death. At the least, they will feel less inhibited and less in control. After heavy use of inhalants, abusers may feel drowsy for several hours and experience a lingering headache.

How do inhalants produce their effects?

Many brain systems may be involved in the anesthetic, intoxicating, and reinforcing effects of different inhalants. Nearly all abused inhalants (other than nitrites) produce a pleasurable effect by depressing the CNS. Evidence from animal studies suggests that a number of commonly abused volatile solvents and anesthetic gases have neurobehavioral effects and mechanisms of action similar to those produced by CNS depressants, which include alcohol and medications such as sedatives and anesthetics.

A recent study indicates that toluene, a solvent found in many commonly abused inhalants including airplane glue, paint sprays, and paint and nail polish removers, activates the brain's dopamine system. The dopamine system has been shown to play a role in the rewarding effects of many drugs of abuse.

Nitrites, in contrast, dilate and relax blood vessels rather than acting as anesthetic agents.

What are Some Medical Complications

Inhalant abusers risk an array of devastating medical consequences. Prolonged sniffing of the highly concentrated chemicals in solvents or aerosol sprays can induce irregular and rapid heart rhythms and lead to heart failure and death within minutes of a session of prolonged sniffing. 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. Inhalant abuse also can cause death by:

Asphyxiation—from repeated inhalations, which lead to high concentrations of inhaled fumes displacing the available oxygen in the lungs;

Suffocation— from blocking air from entering the lungs when inhaling fumes from a plastic bag placed over the head;

Choking—from inhalation of vomit after inhalant use;

Fatal injury— from accidents, including motor vehicle fatalities, suffered while intoxicated.

Animal and human research shows that most inhalants are extremely toxic. Perhaps the most significant toxic effect of chronic exposure to inhalants is widespread and long-lasting damage to the brain and other parts of the nervous system. For example, both animal research and human pathological studies indicate that chronic abuse of volatile solvents such as toluene damages the protective sheath around certain nerve fibers in the brain and peripheral nervous system. This extensive destruction of nerve fibers is clinically similar to that seen with neurological diseases such as multiple sclerosis.

The neurotoxic effects of prolonged inhalant abuse include neurological syndromes that reflect damage to parts of the brain involved in controlling cognition, movement, vision, and hearing. Cognitive abnormalities can range from mild impairment to severe dementia. Other effects can include difficulty coordinating movement, spasticity, and loss of feeling, hearing, and vision.

Inhalants also are highly toxic to other organs. Chronic exposure can produce significant damage to the heart, lungs, liver, and kidneys. Although some inhalant-induced damage to the nervous and other organ systems may be at least partially reversible when inhalant abuse is stopped, many syndromes caused by repeated or prolonged abuse are irreversible.

Abuse of inhalants during pregnancy also may place infants and children at increased risk of developmental harm. Animal studies designed to simulate human patterns of inhalant abuse suggest that prenatal exposure to toluene or trichiorethylene (TCE) can result in reduced birth weights, occasional skeletal abnormalities, and delayed neurobehavioral development.

A number of case reports note abnormalities in newborns of mothers who chronically abuse solvents, and there is evidence of subsequent developmental impairment in some of these children. However, no wellcontrolled, prospective study of the effects of prenatal exposure to inhalants in humans has been conducted, and it is not possible to link prenatal exposure to a specific chemical to a specific birth defect or developmental problem.

What are the special risks for nitrite abusers?

Nitrites are abused mainly by older adolescents and adults. Typically, individuals who abuse nitrites are seeking to enhance sexual function and pleasure. Research shows that abuse of these drugs in this context is associated with unsafe sexual practices that greatly increase the risk of contracting and spreading such infectious diseases as HIV/AIDS and hepatitis.

Recent animal research raises the possibility that there may be a link between abuse of nitrite inhalants and the development and progression of infectious diseases and tumors. The research indicates that inhaling nitrites depletes many cells in the immune system and impairs immune system mechanisms that fight infectious diseases.

A recent study found that even a relatively small number of exposures to butyl nitrite can produce dramatic increases in tumor incidence and growth rates in animals.