

Chapter 1 : Letter from the Director | National Institute on Drug Abuse (NIDA)

*Inhalants (Drug Abuse Prevention Library) [Clifford J Sherry PhD] on calendrierdelascience.com *FREE* shipping on qualifying offers. These nine titles discuss both individual drugs and drugs in society to present teens with solid information so that they can make smart calendrierdelascience.com teenagers never realize the risks they are taking when they abuse common inhalants such as glues.*

Thinking About Getting Rehab? Important Facts Drug abuse has a pervasive effect on an entire community. Understanding drug use risk factors and spreading the word through prevention programs is the best defense against drug abuse. Parental monitoring has been the most effective way to slow the expansion of drugs in family situations. School drug prevention programs serve a valuable purpose in first time users aged Schools with strict compliance rules and counseling support have been successful at reducing usage. The National Institute Against Drug Abuse NIDA has found that gains resulting from community drug prevention programs far outweigh the financial investment by the community. Programs should make sure to address all aspects of drug abuse. This includes underage use of legal drugs such as alcohol and tobacco, illicit street drugs, inhalants and the inappropriate use of legal drugs such as prescription and over the counter drugs. These programs must also be tailored to the specific needs of the audience. Having specialized programs for different genders, ages, cultures and ethnicities only make the programs more effective. Programs for Drug Prevention As previously mentioned, drug prevention begins with education. This education can take place at a number of levels including: Family Based Drug Prevention. The prevention of drug abuse should start inside the family unit as early as possible. There are many obvious benefits of home based drug prevention education including self-awareness, and the enhancement of parent-child communication skills and family bonding. Parental supervision and involvement are critical in adolescents. Parents must not only have a plan to educate their children on the dangers of drug use and abuse, but they must also establish and enforce family rules. Drug abuse prevention should be addressed as early as preschool. Preschool children can benefit from learning how to handle aggression, solve problems, and communicate better so that they can avoid putting themselves at risk for drug abuse later in life. Middle and high school programs should focus on peer relationships, communication, assertiveness, drug resistance skills and developing anti-drug attitudes. School based prevention programs should be repeated often for the best level of success. Communities that make an effort to come together in the fight against drugs are sure to make an impact in the prevention of drug abuse. There are many places to establish these prevention programs including schools, churches and community based clubs. Drug abuse is a growing problem and prevention should be a priority in all of our homes and communities. If you need help finding drug abuse prevention programs near you, contact our confidential Helpline at Who Answers? Help is available 24 hours a day, seven days a week.

Chapter 2 : Prevention of Inhalant Abuse

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The Facts about Inhalant Abuse What is inhalant abuse? Inhalant abuse is the intentional breathing of vapors or fumes for the purpose of getting high. Substances containing inhalants are legal, everyday products that have useful purposes, but can be misused. There are more than 1, products that are potentially dangerous inhalants, including paint, glue, typewriter correction fluid, air-conditioning refrigerant, felt-tip markers, spray paint, air freshener, lighter fluid and cooking spray. Who is at risk for inhalant abuse? According to a recent survey by the Substance Abuse and Mental Health Services Administration, inhalant abuse among students in all grades has risen steadily since Almost 20 percent of all adolescents report using inhalants at least once in their lives. Current reported use is highest among eighth graders. What are the possible effects of inhalant abuse? Inhalant abusers can also suffer from Sudden Sniffing Death Syndrome. This means that a person can die after even the single misuse of an inhalant. Other potential risks include: Heart palpitations, abnormal heart rhythms Coma, seizures, headache, dizziness Muscle weakness, loss of motor coordination Abdominal pain, nausea Nosebleeds, decreased sense of smell Breathing difficulty, wheezing Permanent damage to the heart, kidney, brain, liver, bone marrow and other organs Inhalants are physically and psychologically addicting, and inhalant abusers can suffer withdrawal symptoms with discontinuation of use. How can inhalant abuse be recognized? Parents, educators, coaches, counselors and health care professionals should be alert to the following signs of a serious inhalant abuse problem: Chemical odors on breath or clothing Paint or other stains on face, hands or clothes Hidden, empty spray paint or solvent containers and chemical-soaked rags or clothing Drunkenness or disoriented appearance Nausea or loss of appetite Inattentiveness, lack of coordination, irritability and depression Inhalant Abuse Prevention Tips and Treatment Information What can you do to prevent inhalant abuse? Awareness is key to helping prevent inhalant abuse. However, if someone is already abusing inhalants, early identification and intervention are the best ways to stop inhalant abuse before it causes serious health consequences. Talk with your children about the dangers of inhalant abuse and discourage them from experimenting with such products. Openly discuss the devastating consequences of inhalant abuse, even after just one use. If you suspect your child or someone you know is abusing inhalants, consider seeking professional help. Contact your primary care physician, a local drug rehabilitation center or other services available in your community. If you believe your child is using inhalants and is experiencing any of the symptoms such as those described on the reverse side of this page, contact the IPC immediately to obtain confidential treatment recommendations. What is the IPC? The IPC is the only certified, regional poison center in the state, serving all of Illinois 24 hours a day, days a year. Staffed by physicians, nurses, pharmacists and other poison specialists, the IPC provides confidential poison prevention advice and treatment recommendations to the public and health care professionals via a national, toll-free hot line: The IPC answers calls on household products, alcohol or drug abuse, herbal products, medication overdoses, adverse reactions to medications, venomous bites and other poisonings.

Chapter 3 : Inhalants - Where Families Find Answers on Substance Use | Partnership for Drug-Free Kids

From the National Survey on Drug Use and Health, The NSDUH Report, March 18, from the Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health Reference & Instruction Department.

Facial rash where the inhalant blistered the skin. What happens here is that the aerosol has to change from being a liquid to a gas, and it needs heat to do so. It takes heat from the surrounding area - normally the mouth - and this can lead to freezing, an agonizing way to die. The long-term effects of inhalant use tend to be extremely nasty. Brain damage is the top one. Associated with brain damage are muscle weakness and depression. You might also notice a loss of sensation and severe nosebleeds. As with many drugs, the long-term effects can include death. This can happen the first time you inhale solvents or the thousandth time. Inhalant Abuse Quiz question 5 Inhalant Abuse Treatment Generally, anyone who has been found sniffing inhalants should get treatment immediately. If a person is unconscious, call immediately and remove them from the toxic environment of the inhalant. After that, the person needs to attend an inhalant rehab to get treatment. Usually, treatment consists of getting the person stable and in a position where they can attend therapy. The individual will receive treatment in the ER for any medical complications related to the inhalant use. Therapy is the next step. Therapy will help the addict to understand why they took inhalants and the dangers of doing so. It will also aim to address any underlying causes, including depression or antisocial behavior disorder. Because inhalants tend to be popular drugs of abuse among teens, those dealing with inhalant addiction will likely be specialized in dealing with younger people. Once a patient is judged well enough to leave the treatment program, they will be released if they are in a residential rehab or the program will simply end for an outpatient clinic. Attending relapse prevention programs and support groups is the next step while the recovering addict creates new friendships and aims to stay away from the conditions that lead to the inhalant abuse. Because even one use can be fatal, this number is alarming. While inhalant use is generally more common in teens see below , it is not limited to this population. NIDA found that Teen Inhalant Abuse In , inhalant use was more common among adolescents aged 12 to 17 than any other age group 3. Teens form the bulk of the inhalant-using population, with around one in 11 teens or young adults trying them at least once. According to the National Institute on Drug Abuse 5: New users between the ages of 12 and 15 will typically use glue, paint, lighter fluid, and gasoline. Older teens between 16 and 17 will usually abuse nitrous oxide. By keeping solvents and sprays well away from children and teens, you can greatly reduce the risk of abuse. To help an Inhalant addict , call our helpline today for more information. Resources, Articles and More Information NIDA has a great fact sheet on inhalants for teens, and there are numerous inhalant statistics to be found on its main website. The following articles will also provide additional information:

Chapter 4 : Inhalant Abuse | Illinois Poison Center

Inhalant Statistics. According to the National Institute on Drug Abuse (NIDA), more than 21 million Americans 12 years old or older admitted to using inhalants at least once in their lives 1.

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. Parents should store household products carefully to prevent accidental inhalation by very young children. Inhalants fall into the following categories: 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. 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. 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

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. However, annual prevalence rose significantly for 8th-graders, from 7. Among or year-olds, 1. The number of new inhalant users was about 1 million in As in prior years, these new users were predominantly under age 18 78 percent , and about half were male 53 percent. The latest data are online at www. These data are from a national probability survey of hospital EDs in 21 metropolitan areas in the U. The survey is based on interviews with 67, respondents who were interviewed in their homes. Not included in the survey are persons in the active military, in prisons, or other institutionalized populations, or who are homeless.

Chapter 5 : Substance Abuse Prevention | Oklahoma State Department of Education

Understanding drug use risk factors and spreading the word through prevention programs is the best defense against drug abuse. Parental monitoring has been the most effective way to slow the expansion of drugs in family situations.

People who use inhalants breathe in the fumes of these substances to get high. Inhaling a substance is as simple as holding it close to the face and breathing in. But people who use the drugs have unique ways of inhaling them. Most methods of inhalant use prevent the substance from being wasted or force the substance to enter the body quickly. In general, inhalant effects include excitement, dizziness and changes to perception. Different methods of inhalant abuse cause similar psychoactive effects, but the methods may cause unique side effects. To sniff an inhalant, a person puts a substance, such as correction fluid, nail polish or a marker, next to the nose and inhales. Sniffing and snorting require no additional equipment. People who sniff or snort inhalants may have scabs or scars near their nostrils. Some substances can burn or inflame the nose, causing nasal damage. In addition to other health risks, snorting or sniffing can cause nosebleeds and loss of the ability to smell. Bagging Bagging involves spraying a substance into a bag and inhaling the fumes. Almost any spray can be bagged, including aerosol deodorant, air freshener, computer duster and hairspray. Some people place the bag around the mouth. Others place a bag over the head and inhale. Both methods of bagging are dangerous, but placing a bag over the head has an increased risk. Inhalants deprive the body of oxygen, and bagging adds an additional suffocation risk. Signs of bagging include plastic or paper bags and empty aerosol spray cans. Huffing Huffing is another way people try to intensify the effects of inhalants. It involves soaking a rag in chemicals or spraying chemicals onto a rag. The rag is then placed over the mouth or nose. The rag is sometimes stuffed in the mouth and inhaled. Like bagging, huffing can increase the risk of suffocation and asphyxiation. Individuals can choke on the rag or choke on vomit if the rag blocks the mouth. Any spray or liquid can be huffed. Signs of huffing include rags or towels smelling of chemicals. Ballooning Nitrous oxide, also known as laughing gas, is the inhalant most commonly used for ballooning. Individuals release nitrous oxide from a canister – also known as a whippit – into a balloon. The person then inhales the gas from the balloon. The rush of nitrous oxide can also damage the lungs or cause frostbite. Signs of ballooning include empty balloons or balloons smelling of chemicals. Dusting Dusting refers to spraying gas from a canister directly into the mouth or nose, according to the U. National Library of Medicine. The nickname comes from aerosol dust removers used to clean computer keyboards. Dust removers are among the most commonly used inhalants. Some people huff dust removers through towels in an attempt to limit the damage to the lungs, but there is no safe way to use the substance. Like other forms of inhalant abuse, dusting is associated with sudden sniffing death syndrome. The technique grew in popularity during the late s and became a common way to use inhalants, according to multiple media reports. As a result, reports of dusting deaths also surfaced during that time frame. Large collections of empty computer duster cans are the primary signs of dusting. Glading Glading is similar to dusting. It involves inhaling air freshener sprays. The street name is derived from the popular air-freshener brand Glade. The pleasant smells of air fresheners do not mitigate the risks of inhaling the substances. A collection of air fresheners may be a warning sign of glading. An abundance of chemicals can be abused to get high. Individuals use a variety of paraphernalia to abuse inhalants. They may use soda cans to store gases. Some people place chemical-soaked rags in toilet paper tubes and inhale through the tubes. While inhalants can be abused in a variety of ways, there is no safe way to get high on the substances. Inhalant misuse is associated with dependence and addiction. It can also cause overdose deaths or other long-term health problems.

Chapter 6 : Inhalant Use and Inhalant Use Disorders in the United States

Clinical Research Studies from the National Drug Abuse Treatment Clinical Trials Network (CTN) - a NIDA coordinated network of research institutions conducting human trials on drug abuse solutions. Research Studies at NIDA Intramural Research Program - located in Baltimore, Maryland.

Educational facilities serving grades K may prohibit smoking, snuff, and chewing tobacco on the school grounds. Schools may designate smoking areas only for adults and must offer a nonsmoking area for school personnel for breaks, lunch, or similar activities. An educational facility which offers an early childhood education program or in which children in grades kindergarten through twelve are educated shall prohibit smoking, the use of snuff, chewing tobacco or any other form of tobacco product in the buildings and on the grounds of the facility by all persons including, but not limited to, full-time, part-time, and contract employees, during the hours of 7: Career and technology centers may designate smoking areas outside of buildings, away from general traffic areas and completely out of sight of children under eighteen 18 years of age, for use by adults attending training courses, sessions, meetings or seminars. An educational facility may designate smoking areas outside the buildings for the use of adults during certain activities or functions, including, but not limited to, athletic contests. Oklahoma criminal law provides enhanced penalties for individuals who distribute a controlled substance within 1, feet of the real property of a private elementary or secondary school.

Frequently Asked Questions

How can I tell if my child is using drugs? It is difficult to determine because changes in mood, attitudes, hobbies, or interests are common in teens. Although some of the signs may be an indicator for other problems, below is a list of common signs of drug use. Negative changes in schoolwork, missing school, or discipline problems. Use of incense, air fresheners, or perfume to hide smoke odors. Conversational changes such as coded language or slurred speech. Change in clothing choices. Evidence of common inhalants, such as hairspray, nail polish, correction fluid, and air dusters. Bloodshot or dilated eyes. Empty cough and cold medication bottles.

How can I prevent my child from using drugs? Let your child know alcohol, and drug use is unacceptable. Enforce consequences when rules are broken. Know where your child is and what they will be doing during unsupervised times. Talk to your child. Tell your child why to say no before someone tells them why to say yes. Keep your child busy. Students involved in afterschool and adult supervised activities are less likely to use drugs. Learn facts about commonly abused drugs and talk to your child about the harmful effects. Make sure they know your rules and standards. Be the parent, not the friend. Know where to go if you need additional assistance. There are many professionals and treatment specialists who can help. Lower reading and math scores are linked to peer substance abuse. On average, students whose peers avoided substance use had test scores that were 18 points higher for reading, and 45 points higher for math.

Chapter 7 : Inhalants: MedlinePlus

Through scientific research, we have learned much about the nature and extent of inhalant abuse, its pharmacology, and its consequences. This research has brought the picture of inhalant abuse in the Nation into focus and pointed to the dangers and the warning signs for parents, educators, and clinicians.

Household survey that captures dropouts and truants, but misses institutionalized populations and respondents younger than 18. The MTF indicated that more 8th- and 10th-grade girls than boys, and more 12th-grade boys than girls, had used an inhalant Johnston et al. Inhalant use disproportionately afflicts subpopulations including the poor, mentally ill, and juvenile- and criminal-justice involved Howard et al. For example, studies have documented inhalant use rates of: The earlier that individuals had initiated use and the more frequently they used, the higher the likelihood that use was associated with significant psychosocial dysfunction; In addition, 10 percent of adult substance abusers surveyed in a treatment center had used inhalants more than five times Compton et al. Efforts have been made to identify subtypes of inhalant users, which could facilitate the identification of at-risk individuals, assessment, and treatment planning Perron, Vaughn, and Howard, ; Vaughn, Perron, and Howard, These latter youths exhibited significantly more polydrug use, psychiatric comorbidity, and antisocial behavior than did two other classes of adolescent inhalant users. Low monetary cost and ease of access probably contribute to the concentration of inhalant use among younger children and adolescents; low-income and unemployed adults; people living in isolated rural or reservation settings; and people housed in institutions such as psychiatric hospitals, prisons, and residential treatment centers. Inhalants can also be purchased and used without arousing the suspicion of parents, sales-people, school or law enforcement professionals, social service workers, or health care providers Anderson and Loomis, Few people, for example, think of butane cigarette lighters, computer air dusters, nail polish, nail polish remover, or paint thinner as items that can be abused for their psychoactive effects; if challenged, young people can often offer plausible benign explanations for having these items. In nationally representative surveys, youths reporting symptoms that would permit a diagnosis of inhalant abuse or dependence have included 0. The past-year prevalence of inhalant use disorder among adult participants in the " National Epidemiologic Survey on Alcohol and Related Conditions was 0. Motor deficits observed in mice exposed to toluene imply long-lasting brain damage. At the lower end, an analysis of NCS data yielded an estimate that 7. Similarly, Wu, Pilowsky, and Schlenger found that 6 percent of 12- to 17-year-olds who reported past-year use on the and NHSDA surveys met criteria for past-year inhalant abuse, and 4 percent met criteria for past-year dependence. Higher estimates for rates of inhalant use disorders among individuals with histories of inhalant use include: Louis, Missouri Ridenour, Bray, and Cottler, The wide divergence in prevalence estimates may reflect the presence of elevated-risk groups in some samples. For example, Howard and Perron found a 47 percent prevalence of inhalant use disorders among juvenile justice-involved inhalant users in Missouri. In the Wu, Pilowsky, and Schlenger NHSDA-based study , adolescents who had initiated inhalant use before age 15 were five to six times as likely as those who had started later to be diagnosed with inhalant dependence in the year prior to the survey. Acute Effects Inhalant intoxication produces a syndrome similar to alcohol intoxication, consisting of dizziness, incoordination, slurred speech, euphoria, lethargy, slowed reflexes, slowed thinking and movement, tremor, blurred vision, stupor or coma, generalized muscle weakness, and involuntary eye movement APA, Inhalant intoxication also increases the risk for fatal injuries from motor vehicle or other accidents Bowen, Daniel, and Balster, Neurological and Cognitive Effects Studies of occupationally exposed workers laid the foundation for much of what we know about inhalant-related cognitive deficits. Even a single occupational exposure leading to inhalant intoxication can produce long-term memory problems and processing speed impairments Stollery, , an ominous finding given that inhalant abuse is characterized by exposures to neurotoxins at much higher levels than those typically incurred in occupational exposures Bowen, Wiley, and Balster, Early research with recreational inhalant users noted that, similar to the findings with occupational exposures, these individuals have memory, attention, and judgment deficits compared with controls and polydrug users Hormes, Filley, and Rosenberg, ; Korman, Trimboli, and Semler, Maruff and

colleagues found that current inhalant users performed worse than former users and controls in a test of visual-spatial memory that challenges the test taker to remember the location in which a symbol briefly flashed on a computer screen. Tenebein and Pillay found diminished brain activity in response to visual and auditory events, a possible marker for neurological dysfunction, in 8 of 15 inhalant users 9 to 17 years of age, even though the youths had no clinical evidence of neurological abnormalities. Subsequent studies have disclosed that recurrent inhalant intoxication can lead to neurological disorders, including Parkinsonism, impaired cognition due to degradation of brain cells encephalopathy or loss of brain cells cerebral atrophy , and loss of muscle strength and coordination due to damage to the cerebellum cerebellar ataxia e. Imaging studies of inhalant abusers have documented thinning of the corpus callosum the band of nerve fibers joining the cerebral hemispheres and lesions of the white matter that facilitates communication between brain cells Finch and Lobo, ; Gautschi, Cadosch, and Zellweger, Regional reductions in cerebral blood flow are observable with functional magnetic resonance imaging fMRI after 1 year of inhalant use Okada et al. Lubman and colleagues reviewed recent clinical and neuroimaging studies of chronic inhalant abusers, documenting significant cognitive deficits, structural abnormalities in specific brain areas e. Animal models have been helpful for studying acute and chronic biobehavioral effects of inhalants. They have shown that toluene and other inhalants can have reversible disruptive effects on response rates in behavior modification protocols; most of these effects appear to be greater after binge patterns of exposure than after lower levels of exposure see Bowen et al. In one of the few animal studies to examine the impact of binge-pattern exposures on higher cognitive processes, Bowen and McDonald reported that mice exposed to high concentrations of toluene 3, and 6, parts per million for 30 minutes per day for 40 days similar to the amounts chronic abusers inhale demonstrated long-lasting motor deficits on a waiting-for-reward task. This result implies the presence of long-term brain damage, possibly resulting from cerebellar insult or cortical cell loss. Additional preclinical studies suggest that toluene and 1,1,1-trichloroethane TCE impair learning, memory, and attention e. Effects on Organs Other Than the Brain Evidence is mounting that inhalants can cause chronic medical problems affecting multiple organ systems Figure 2. Animal studies, case reports, and small clinical investigations have implicated inhalant use in liver, heart, and kidney toxicity; bone demineralization; bone marrow suppression; and reduced immunity T-cell responsivity e. Diminished plasma and red blood cell levels of selenium and zinc have also been noted, potentially impairing immune function and increasing the risk for infectious disease Zaidi et al. Inhalants can also cause peripheral neuropathy leading to chronic pain and vision-impairing optic nerve damage e.

Chapter 8 : Inhalant Abuse - calendrierdelascience.com

Read more about the short and long-term effects of inhalants, which can be just as bad as alcohol and drug abuse.

Chapter 9 : IPRC Training Portal

Furthermore, among diagnosed drug abusers, inhalant abuse occurred at a mean age of , which is slightly over half a year before they started using marijuana (Walker,). These data provide the basis for a hypothesis that inhalants are a gateway drug.