

Do Not Overlook Inhalant Use in Adolescents

Most teens are unaware that ‘huffing’ from a can of spray paint or keyboard cleaner can be catastrophic.

BY HEIDI SPLETE
Senior Writer

WASHINGTON — A total of 1.8 million U.S. youth aged 12-17 years—including about 17% of eighth graders—reported that they had initiated inhalant use within the year during the years 2002-2004.

This was according to data from the report by the National Survey on Drug Use and Health, “Characteristics of Recent Adolescent Inhalant Initiates.”

“Kids don’t view inhalants as dangerous,” Dr. Nora D. Volkow, director of the National Institute on Drug Abuse said at a press conference.

They have it wrong—a single episode of “huffing” from seemingly innocuous products such as shoe polish, spray paint, or

compressed air, computer keyboard cleaner can be deadly.

About 35% of the youth who had started using inhalants during the past year said they had used them for 1 day; 23% had used inhalants on 2-3 days, 14% on 6-12 days, and 19% on at least 13 days, according to the report, which was published by the Substance Abuse and Mental Health Services Administration.

The most commonly reported types of inhalants were glue, toluene (a solvent used in paint thinners), and shoe polish (30%); gasoline or lighter fluid (25%); whipped cream cartridges (whippets) or nitrous oxide (25%); and spray paints (23%).

Overall, these recent inhalant initiates were significantly more likely to be white,

compared with the general population (70% vs. 62%), and significantly more likely to be 14-15 years old, compared with the general population (39% vs. 34%).

The chemicals in products that serve as inhalants cross the blood-brain barrier and produce a high, said Dr. Volkow.

However, the chemicals have catastrophic consequences on other parts of the body. Sudden cardiac death and suffocation or asphyxiation are the most common causes of death as a result of inhalant use.

The toxicity of the inhaled compounds can cause neurologic symptoms, as well. (See box.)

Products that are used as inhalants are widely available and unregulated, and they can become addictive. Inhalants are difficult to detect; these products don’t show up on drug tests, and many children do not think of inhalants as drugs, Dr. Volkow said.

Education is the best way to prevent inhalant abuse, and education campaigns in the medical profession, as well as in the community, are the keys to addressing this problem, she emphasized.

Physicians can have an extraordinary impact on preventing inhalant abuse, because they are in a position to ask questions and educate their patients. “If the



KATHRYN DALES, ILLUSTRATION

Telltale Signs and Symptoms of Abuse

Someone who is abusing inhalants may exhibit one or all of the following symptoms:

- ▶ Burning sensation on the tongue.
- ▶ Dazed, dizzy, or drunken-seeming appearance.
- ▶ Nausea and/or loss of appetite.
- ▶ Neurologic problems including peripheral neuropathy, loss of vision, severe cognitive impairment, and seizures.
- ▶ Red or runny eyes and/or nose.

- ▶ Signs of paint, correction fluid, or other chemical products in unusual places, such as the face or fingers.
- ▶ Slurred or disoriented speech.
- ▶ Unusual behaviors such as anxiety, irritability, anger, excitability, or restlessness with no discernable cause.
- ▶ Unusual odor on the breath or chemical odor on clothing.

Sources: U.S. Consumer Product Safety Commission and the National Inhalant Prevention Coalition

physician doesn’t ask the question, he or she will never get an answer,” Dr. Volkow said in an interview.

Be vigilant about inhalant abuse, Dr. Volkow said, because studies have shown that children who have used inhalants are more likely to exhibit behavior problems and anger and to develop conduct disorder.

Inhalants also may serve as a starter. The survey data showed that 23% of recent inhalant initiates had not used cigarettes, alcohol, or marijuana prior to their first use of inhalants. ■

For a copy of the National Survey on Drug Use and Health report, visit www.samhsa.gov. For information about the symptoms of inhalant abuse and for educational materials, visit www.inhalants.org and www.inhalantprevention.org.

Virtual Reality Exposure Touted for Treatment of PTSD

BY DAMIAN McNAMARA
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SAN JUAN, P.R. — Virtual reality exposure therapy shows promise for relieving symptoms of posttraumatic stress disorder in Vietnam veterans, according to a study. Based on the findings, the principal investigator is now field testing the same high-tech approach with American soldiers in Iraq.

“We’ve used this as a new way to do exposure therapy,” said Barbara O. Rothbaum, Ph.D., at the annual meeting of the American College of Psychiatrists.

With virtual reality, “the person experiences a sense of presence. It’s immersive, so it’s more than simply a multimedia experience.”

In the Vietnam veteran study, participants donned a virtual reality headset and experienced a virtual Vietnam War clip (J. Clin. Psychiatry, in press). To more closely simulate actual combat, each veteran stood or sat on a platform above a vibrating speaker during the therapy session.

“People got better; we see it as a slice, or part, of the treatment,” said Dr. Rothbaum, director of the trauma and anxiety recovery program, department of psychiatry and behavioral sciences, at Emory University in Atlanta.

Dr. Rothbaum and her associates observed good end-state functioning immediately post therapy and at 6-month follow-up with virtual reality among 10 Vietnam veterans with posttraumatic stress disorder (PTSD). For example, 70% had good functioning after virtual reality exposure, compared with 50% after eye

movement desensitization and reprocessing exposure (EMDR). EMDR is a form of exposure combined with saccadic eye movement—patients follow the therapist’s finger while a traumatic story is recounted. At 6 months, the figures were 78% for virtual reality and 35% for EMDR, said Dr. Rothbaum.



Military personnel try out “Virtual Iraq,” a PTSD exposure application developed at the University of Southern California’s Institute for Creative Technologies.

“We’re just about to start a study of Iraqi veterans with a series of virtual reality images we can individualize for patients,” Dr. Rothbaum said.

The virtual reality application was developed at the University of Southern California’s Institute for Creative Technologies by Skip Rizzo, Ph.D., and Jarrell Pair, in collaboration with Ken Graap at Virtually Better Inc. in Atlanta.

It is unknown whether a combination of exposure therapy and medication for PTSD would enhance outcomes. Once field testing is complete, participants in the Iraq war veteran study will take D-cycloserine (Seromycin), alprazolam (Xanax), or a placebo before each virtual reality exposure “to see how they do,” Dr. Rothbaum said.

Several research teams around the world are using virtual reality for treating PTSD, Dr. Rothbaum said. For example, investigators at Cornell University, Ithaca, N.Y., and the University of Washington, Seattle, are simulating the World Trade Center attacks; researchers at the University of Washington and the University of Haifa, in Israel, are simulating terrorist bus bombings; University of Buffalo, N.Y., investigators are simulating motor vehicle accidents; and investigators at the University of Lusofona in Portugal are creating a virtual Angola. ■

COURTESY GREG REGER/DR. SKIP RIZZO