

The NSDUH Report

March 17, 2005

Inhalant Use and Delinquent Behaviors among Young Adolescents

In Brief

- In 2002 and 2003, an annual average of 718,000 (8.6 percent) youths aged 12 or 13 had used inhalants in their lifetime
- Youths aged 12 or 13 who used inhalants in their lifetime were more than twice as likely to have been in a serious fight at school or work in the past year than youths who had never used inhalants
- About 35 percent of youths aged 12 or 13 who used inhalants in their lifetime also used another illicit drug, compared with 7.5 percent of youths who had never used inhalants

Early onset of substance use has been linked to substance use disorders, delinquent behaviors, and other problems later in life.^{1,2,3} Data from the 2003 National Survey on Drug Use and Health (NSDUH) show that a higher percentage of youths aged 12 or 13 had used inhalants than marijuana in the past year.⁴

NSDUH asks respondents to report their lifetime, past year, and past month use of inhalants, as well as their age at first use of inhalants. NSDUH defines inhalants as “liquids, sprays, and gases that people sniff or inhale to get high or to make them feel good,” and categorizes them as shown in Figure 1.

Additional questions ask about the use of other illicit drugs,⁵ dependence on or abuse of alcohol or illicit drugs in the past year, arrests for breaking the law,⁶ and past and current school enrollment status, which allows for the classification of individuals as school dropouts and non-dropouts.⁷ NSDUH defines substance dependence or abuse using criteria in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV).⁸

NSDUH also asks youths aged 12 to 17 to report how often they engaged in various delinquent behaviors, as shown in Figure 2, during the past year.⁹

This report presents the prevalence of inhalant use among young adolescents aged 12 or 13, the association between inhalant use and delinquent behaviors within this age group, and the association between early onset of inhalant use and problems later in life. To improve reliability, all estimates are annual averages based on combined data from the 2002 and 2003 NSDUH.

Prevalence of Inhalant Use among Young Adolescents

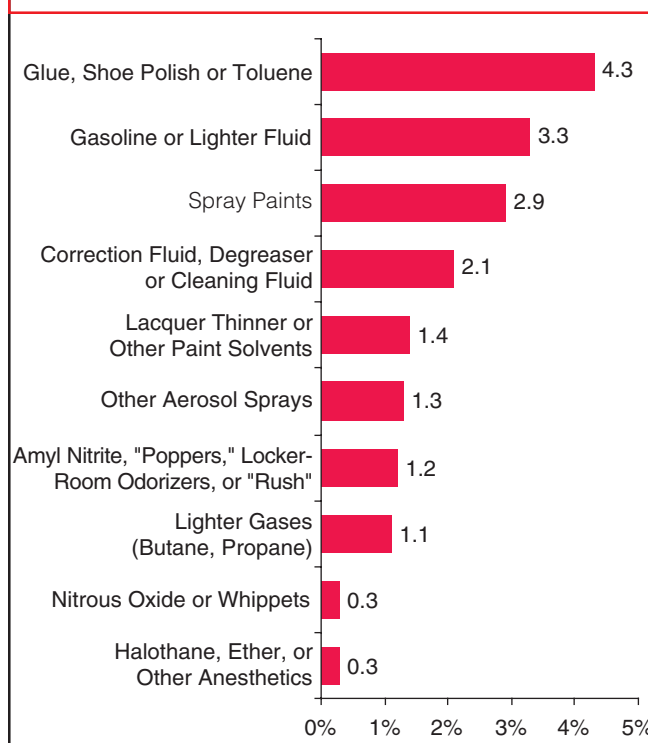
In 2002 and 2003, an annual average of 718,000 (8.6 percent) youths aged 12 or 13 reported using inhalants in their lifetime. The inhalants used most often by this age group were glue, shoe polish, or toluene (4.3 percent), followed by gasoline or lighter fluid (3.3 percent) and spray paints (2.9 percent) (Figure 1). Youths aged 12 or 13 had a higher lifetime prevalence of inhalant use (8.6 percent) than any other illicit drug, including nonmedical use of psychotherapeutics (6.5 percent), marijuana (3.8 percent), and hallucinogens (1.3 percent).

In 2002 and 2003, males had a higher prevalence of lifetime inhalant use than females (9.1 vs. 8.0 percent). There were no significant differences among racial/ethnic groups in lifetime inhalant use.

Inhalant Use and Delinquent Behaviors among Young Adolescents

Youths aged 12 or 13 who used inhalants were more likely to have participated in delinquent behaviors in the past year than youths aged 12 or 13 who had never used inhalants (Figure 2). For example, youths aged 12 or 13 who reported lifetime inhalant use were more than twice as likely to have been in a serious fight at school or work than youths who had never used inhalants, and they were six times as likely to have stolen or tried to steal anything worth more than \$50. In addition, 35.4 percent of youths aged 12 or 13 who had used inhalants in their lifetime had used another illicit drug, compared with 7.5 percent of

Figure 1. Percentages of Youths Aged 12 or 13 Reporting Lifetime Use of Inhalants, by Inhalant Type: 2002 and 2003



youths in this age group who had never used inhalants.

Early Onset of Inhalant Use and Problems Later in Life

Among persons aged 18 to 49 in 2002 and 2003, 1.9 percent first used inhalants at age 13 or younger, 11.8 percent first used inhalants at age 14 or older, and 86.3 percent had never used inhalants in their lifetime.^{10,11} Persons who had initiated inhalant use at age 13 or younger were more likely to report certain problems than persons who had initiated inhalant use at age 14 or older or persons who had never used inhalants (Figure 3). For instance, 35.2 percent of persons aged 18 to 49 who initiated inhalant use at age 13 or younger were classified with dependence on or abuse of alcohol or an illicit drug in the past year, compared with 30.2 percent of persons who initiated inhalant use at age 14 or older and 10.1 percent of persons who had never used inhalants.

Figure 2. Percentages of Youths Aged 12 or 13 Who Participated in Delinquent Behaviors One or More Times in the Past Year, by Lifetime Inhalant Use: 2002 and 2003

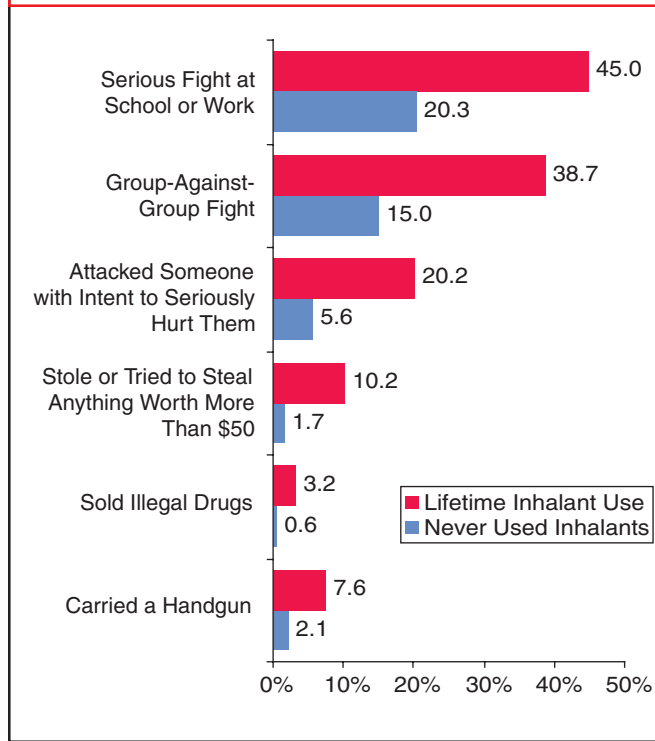
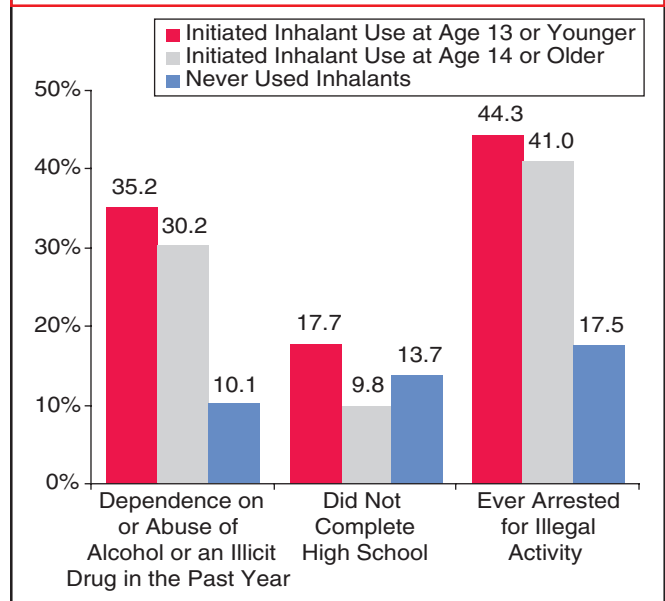


Figure 3. Percentages of Adults Aged 18 to 49 Reporting Past Year Substance Dependence or Abuse, School Dropout, and Lifetime Arrests, by Age at First Use of Inhalants: 2002 and 2003



End Notes

- Anthony, J. C., & Petronis, K. R. (1995). Early-onset drug use and risk of later drug problems. *Drug and Alcohol Dependence*, 40, 9-15.
- Grant, B. F., & Dawson, D. A. (1997). Age at onset of alcohol use and its association with DSM-IV alcohol abuse and dependence: Results from the National Longitudinal Alcohol Epidemiologic Survey. *Journal of Substance Abuse*, 9, 103-110.
- Mackesy-Amiti, M. E., & Fendrich, M. (1999). Inhalant use and delinquent behavior among adolescents: A comparison of inhalant users and other drug users. *Addiction*, 94, 555-564.
- Office of Applied Studies. (2004, September). *Results from the 2003 National Survey on Drug Use and Health: Detailed tables. Section 1, Tables 1.19 to 1.27*. Retrieved February 8, 2005, from <http://www.oas.samhsa.gov/WebOnly.htm#NHSDAtabs> [PDF at <http://www.oas.samhsa.gov/nhsda/2k3tabs/PDF/Sect1peTabs19to27.pdf>]
- Illicit drugs include marijuana/hashish, cocaine/crack, inhalants, hallucinogens, and heroin, as well as psychotherapeutic drugs used nonmedically. Psychotherapeutic drugs include pain relievers, sedatives, stimulants, and tranquilizers. Nonmedical use is defined as use of prescription-type drugs not prescribed for the respondent by a physician or used only for the experience or feeling they caused.
- Respondents were asked, "Not counting minor traffic violations, have you ever been arrested and booked for breaking the law?"
- School dropouts completed less than the twelfth grade, were not currently enrolled in school, and had not received either a high-school diploma or a GED (general equivalency diploma). Non-dropouts included current high-school students, high-school graduates, college students, and college graduates.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Youths were asked how many times in the past year they had participated in each delinquent behavior. The response options are (a) 0 times, (b) 1 or 2 times, (c) 3 to 5 times, (d) 6 to 9 times, and (e) 10 or more times in the past

year. For this report, youths were counted as engaging in the behavior if they reported participating one or more times.

10. Evidence suggests there is considerable "recanting" of inhalant use (i.e., persons who reported lifetime use in one survey but did not report lifetime use in a subsequent survey). For example, in the Monitoring the Future study (<http://monitoringthefuture.org/data/04data.html#2004data-drugs>), eighth-grade students in 1998 showed higher rates of self-reported inhalant use than tenth-grade students in 2000, who had higher rates than twelfth-grade students in 2002, despite the fact that these data supposedly represent the lifetime rates for the same cohort. For this reason, persons who later in life admit use of inhalants in adolescence may comprise a subset not fully representative of all lifetime inhalant users.

11. These analyses were restricted to persons aged 18 to 49 because persons aged 50 or older have a very low lifetime prevalence of inhalant use.

Figure Note

Source: SAMHSA, 2002 and 2003 NSDUH.

The National Survey on Drug Use and Health (NSDUH) is an annual survey sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA). Prior to 2002, this survey was called the National Household Survey on Drug Abuse (NHSDA). The combined 2002 and 2003 data are based on information obtained from 135,910 persons aged 12 or older, including 16,737 persons aged 12 or 13, and 78,199 persons aged 18 to 49. The survey collects data by administering questionnaires to a representative sample of the population through face-to-face interviews at their place of residence.

The NSDUH Report is prepared by the Office of Applied Studies (OAS), SAMHSA, and by RTI International in Research Triangle Park, North Carolina. (RTI International is a trade name of Research Triangle Institute.)

Also available online: <http://www.oas.samhsa.gov>

Because of improvements and modifications to the 2002 NSDUH, estimates from the 2002 and 2003 surveys should not be compared with estimates from the 2001 or earlier versions of the survey to examine changes over time.

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