

# The NSDUH Report

March 13, 2008

## Inhalant Use across the Adolescent Years

### In Brief

- Inhalants were the most frequently reported class of illicit drugs used in the past year among adolescents aged 12 or 13 (3.4 and 4.8 percent, respectively)
- Combined data for 2002 to 2006 indicated that an annual average of 593,000 adolescents aged 12 to 17 had used inhalants for the first time in the year before their survey interview
- Among past year inhalant initiates aged 12 to 15, the three most commonly used types of inhalants were glue, shoe polish, or toluene; spray paints; and gasoline or lighter fluid; in comparison, nitrous oxide or whippets were the most common type of inhalant used among past year inhalant initiates aged 16 or 17

Inhalant use, the deliberate inhalation of volatile substances to induce a psychoactive or mind-altering effect, tends to occur among younger teens and can be highly toxic and even lethal.<sup>1</sup> The 2006 Monitoring the Future study indicates that more 8th graders have tried inhalants in their lifetime than any other illicit drug.<sup>2</sup>

The National Survey on Drug Use and Health (NSDUH) asks respondents aged 12 to 17 questions related to their use of inhalants during their lifetime and in the past month and past year. NSDUH defines inhalants as “liquids, sprays, and gases that people sniff or inhale to get high or to make them feel good.”

NSDUH collects data not only about the use of any inhalant, but also asks about the use of specific types of inhalants. The categories of inhalants covered in the survey are (a) amyl nitrite, “poppers,” locker room odorizers, or “rush”; (b) correction fluid, degreaser, or cleaning fluid; (c) gasoline or lighter fluid; (d) glue, shoe polish, or toluene; (e) halothane, ether, or other anesthetics; (f) lacquer thinner

**Table 1. Percentages of Past Year Illicit Drug\* Use among Adolescents Aged 12 to 17, by Age: 2002-2006**

Illicit Drug	12 Years Old	13 Years Old	14 Years Old	15 Years Old	16 Years Old	17 Years Old
Any Illicit Drug	6.8	11.2	17.3	24.1	30.9	35.0
Marijuana	1.1	4.0	9.9	17.5	24.6	29.0
Cocaine	0.1	0.2	0.8	1.7	3.0	4.7
Hallucinogens	0.4	1.0	1.9	3.1	5.0	6.6
Ecstasy	0.1	0.4	0.8	1.3	2.4	3.5
Inhalants	3.4	4.8	5.3	5.1	4.2	3.9
Pain Relievers**	2.7	3.9	6.0	8.1	10.6	12.6
Tranquilizers**	0.3	0.6	1.2	2.4	3.5	4.8
Stimulants**	0.4	0.9	1.6	2.7	3.3	4.0

Source: SAMHSA, 2002-2006 NSDUHs.

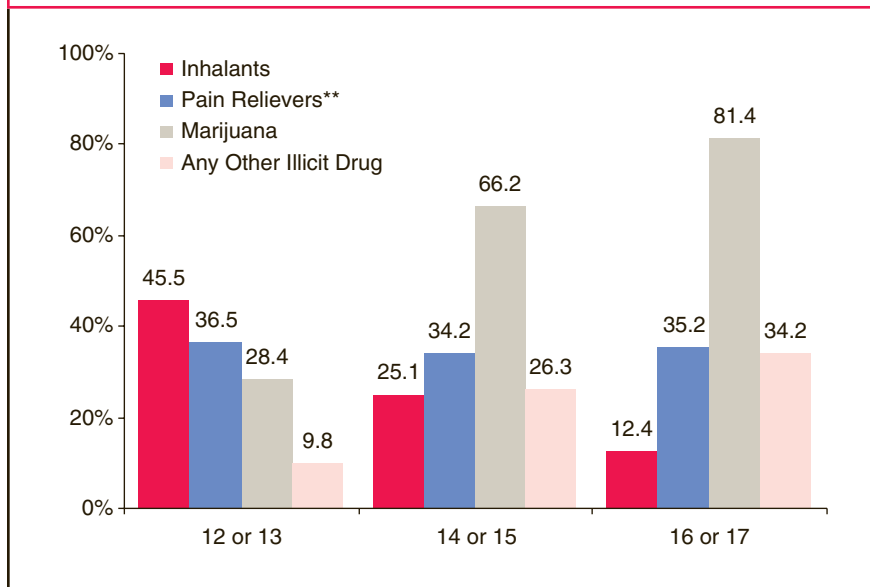
or other paint solvents; (g) lighter gases, such as butane or propane; (h) nitrous oxide or whippets; (i) spray paints; and (j) other aerosol sprays. Respondents who reported having used inhalants were asked how old they were when they first used them. Responses to this question were used to identify persons who first used inhalants in the 12 months preceding the survey (past year initiates).<sup>3</sup>

This report focuses on variations in inhalant use among adolescents aged 12 to 17, by detailed age categories. All findings presented in this report are annual averages based on combined 2002 to 2006 NSDUH data.

### Illicit Drug Use among Adolescents Aged 12 to 17

Combined data from 2002 to 2006 indicate that 20.9 percent of adolescents aged 12 to 17 used an illicit drug in the past year.

**Figure 1. Percentages of Past Year Illicit Drug\* Users Aged 12 to 17 Who Used Specific Drugs, by Age Group: 2002-2006**



Source: SAMHSA, 2002-2006 NSDUHs.

Inhalants were the most frequently reported class of illicit drugs used in the past year among adolescents aged 12 or 13 (3.4 and 4.8 percent, respectively), while marijuana was the most commonly used class of

drugs among adolescents aged 14 to 17 (9.9, 17.5, 24.6, and 29.0 percent, respectively) (Table 1). The percentages of adolescents using most illicit drugs generally increased with age; the one exception was for

**Table 2. Percentages of Past Year Specific Inhalant Use among Past Year Inhalant Initiates Aged 12 to 17, by Age: 2002-2006**

Inhalant	Total Aged 12-17 Years Old	12 Years Old	13 Years Old	14 Years Old	15 Years Old	16 Years Old	17 Years Old
Amyl Nitrite, "Poppers," Locker Room Odorizers, or "Rush"	15.3	14.7	17.7	16.4	15.1	12.4	14.5
Correction Fluid, Degreaser, or Cleaning Fluid	19.4	22.5	25.9	21.7	20.5	15.0	8.1
Gasoline or Lighter Fluid	25.7	26.5	30.9	33.2	28.5	19.9	9.9
Glue, Shoe Polish, or Toluene	29.6	33.8	42.9	40.8	27.1	16.0	9.8
Halothane, Ether, or Other Anesthetics	3.6	4.0	3.2	2.6	5.0	4.5	2.6
Lacquer Thinner or Other Paint Solvents	12.5	16.0	15.1	14.1	15.0	8.8	4.5
Lighter Gases, Such as Butane or Propane	8.7	7.0	10.7	12.4	9.0	7.5	3.0
Nitrous Oxide or Whippets	22.7	4.7	5.5	11.6	19.6	43.4	59.3
Spray Paints	24.4	28.6	33.2	30.4	26.1	14.8	8.5
Some Other Aerosol Spray	20.5	16.4	20.5	24.3	23.9	18.1	17.2

Source: SAMHSA, 2002-2006 NSDUHs.

inhalants. The rates of past year inhalant use increased steadily from 3.4 percent at age 12 to 5.3 percent at age 14, then declined to 3.9 percent by age 17.

Reflecting these patterns, 45.5 percent of past year illicit drug users aged 12 or 13 had used inhalants and 28.4 percent had used marijuana; among past year illicit drug users aged 16 or 17, 12.4 percent had used inhalants and 81.4 percent had used marijuana (Figure 1).

### Types of Inhalants Used among Past Year Initiates Aged 12 to 17

Combined data for 2002 to 2006 indicated that an annual average of 593,000 adolescents aged 12 to 17 used inhalants for the first time in the year before their survey interview. Glue, shoe polish, or toluene was the most frequently

mentioned type of inhalant used among all past year inhalant initiates aged 12 to 17, with 29.6 percent reporting use of inhalants in this category (Table 2). This was followed by gasoline or lighter fluid and spray paints (25.7 and 24.4 percent, respectively).

However, the types of inhalants used varied by age. Among past year inhalant initiates aged 12 to 15, the three most commonly used types of inhalants were glue, shoe polish, or toluene; spray paints; and gasoline or lighter fluid. In comparison, nitrous oxide or whippets were the most common type of inhalant used among past year inhalant initiates aged 16 or 17.

#### End Notes

- <sup>1</sup> Volkow, N.W. (2005). Inhalant abuse: Danger under the kitchen sink. *NIDA Notes*, 20(3).
- <sup>2</sup> Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2007). *Monitoring the Future national results on adolescent*

*drug use: Overview of key findings, 2006* (NIH Publication No. 07-6202). Bethesda, MD: National Institute on Drug Abuse. [Available at <http://monitoringthefuture.org/pubs.html#monographs>]

- <sup>3</sup> Respondents whose age at first inhalant use was equal to or 1 year less than their current age were asked to indicate the month in which they initiated their inhalant use.

#### Table and Figure Notes

- \* NSDUH defines illicit drugs as marijuana/hashish, cocaine (including crack), inhalants, hallucinogens, heroin, or prescription-type drugs used nonmedically.
- \*\* NSDUH measures the nonmedical use of prescription-type pain relievers, sedatives, stimulants, or tranquilizers. Nonmedical use is defined as the use of prescription-type drugs not prescribed for the respondent by a physician or used only for the experience or feeling they caused. Nonmedical use of any prescription-type pain relievers, sedative, stimulant, or tranquilizer does not include over-the-counter drugs.

#### Suggested Citation

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Research findings from the SAMHSA 2002-2006 National Surveys on Drug Use and Health (NSDUHs)

## Inhalant Use across the Adolescent Years

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The National Survey on Drug Use and Health (NSDUH) is an annual survey sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA). The 2002 through 2006 data used in this report are based on information obtained from 114,016 adolescents aged 12 to 17, including 58,149 males and 55,867 females. 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.)

Information on the most recent NSDUH is available in the following publication:

Office of Applied Studies. (2007). *Results from the 2006 National Survey on Drug Use and Health: National Findings* (DHHS Publication No. SMA 07-4293, NSDUH Series H-32). Rockville, MD: Substance Abuse and Mental Health Services Administration.

Information for earlier NSDUHs is available in the following publications:

2005 NSDUH: (DHHS Publication No. SMA 06-4194, NSDUH Series H-30)

2004 NSDUH: (DHHS Publication No. SMA 05-4062, NSDUH Series H-28)

2003 NSDUH: (DHHS Publication No. SMA 04-3964, NSDUH Series H-25)

2002 NSDUH: (DHHS Publication No. SMA 03-3836, NSDUH Series H-22)

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

Because of improvements and modifications to the 2002 NSDUH, estimates from the 2002 through 2006 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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