

The NSDUH Report

August 21, 2008

Inhalant Use and Major Depressive Episode among Youths Aged 12 to 17: 2004 to 2006

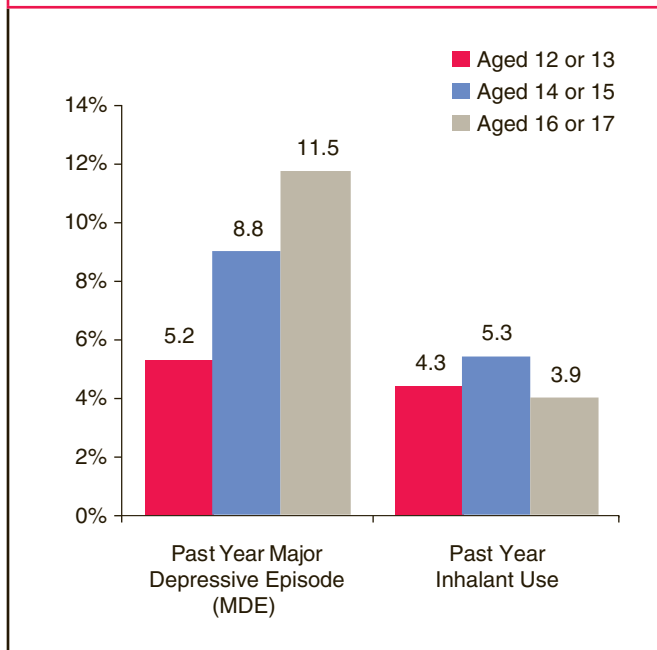
In Brief

- In 2004 to 2006, 1.1 million youths aged 12 to 17 (4.5 percent) used inhalants in the past year, and 2.1 million (8.5 percent) had experienced major depressive episode (MDE) in the past year
- The rate of past year inhalant use was higher among youths aged 12 to 17 who had MDE in the past year than among those who did not (10.2 vs. 4.0 percent); an estimated 218,000 youths had used inhalants and experienced MDE in the past year
- Among the youths aged 12 to 17 who had used inhalants and experienced MDE in their lifetime, 43.1 percent had their first episode of MDE before initiating inhalant use, 28.3 percent used inhalants before they had their first episode of MDE, and 28.5 percent started using inhalants and had their first episode of MDE at about the same time

Inhalant use and abuse constitute a public health problem that disproportionately affects youths. The 2006 National Survey on Drug Use and Health (NSDUH) indicated that the prevalence of past year inhalant use was almost 4 times higher among persons aged 12 to 17 than among young adults aged 18 to 25 (1.3 vs. 0.4 percent).¹ Among adolescents, inhalant use and abuse have been found to be associated with depressive symptoms.^{2,3} Mental health research focusing on young adolescents who had not previously used inhalants indicates that those with a past year major depressive episode (MDE) were more than 3 times as likely as their counterparts with no past year MDE to initiate use of inhalants.²

NSDUH includes questions for youths aged 12 to 17 related to their use of inhalants during the past year and to assess MDE.^{4,5} This issue of *The NSDUH Report* examines the co-occurrence of inhalant use and MDE in the past year. All findings presented in this report are annual averages based on combined 2004 to 2006 NSDUH data.

Figure 1. Percentages of Youths Aged 12 to 17 with Past Year Major Depressive Episode (MDE)* and Past Year Inhalant Use, by Age Group: 2004-2006



Source: SAMHSA, 2004-2006 NSDUHs.

How Many Youths Experienced MDE in the Past Year?

In 2004 to 2006, 8.5 percent of youths aged 12 to 17 (an estimated 2.1 million youths) experienced MDE in the past year. Females were about 3 times as likely as males to experience past year MDE (12.7 vs. 4.6 percent). As youths increased in age from 12 or 13 up to ages 16 or 17, the rate of past year MDE also increased (Figure 1).

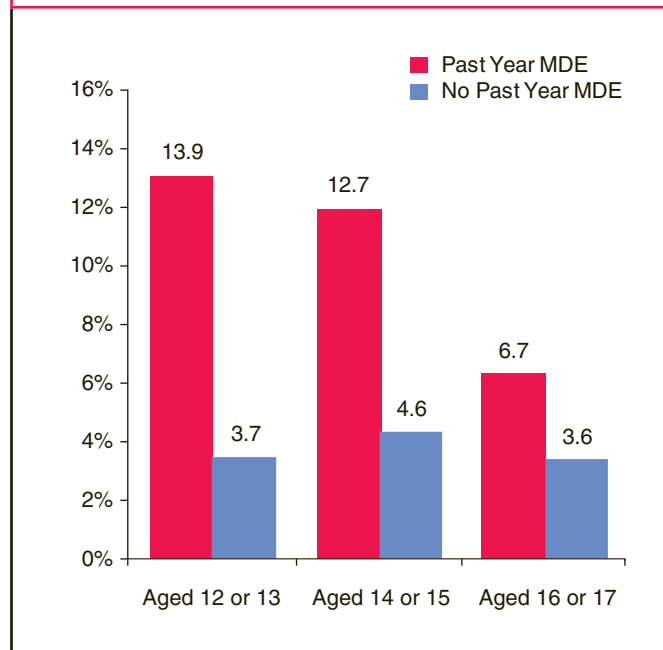
How Many Youths Used Inhalants in the Past Year?

In 2004 to 2006, 4.5 percent of youths aged 12 to 17 (an estimated 1.1 million youths) used inhalants in the past year. Females in this age range were more likely than males to use inhalants in the past year (4.8 vs. 4.2 percent, respectively). Youths aged 14 or 15 were more likely than youths aged 12 or 13 and those aged 16 or 17 to have used inhalants in the past year (Figure 1).

Were Youths with MDE More Likely to Use Inhalants?

Of the youths aged 12 to 17 who had experienced past year MDE, 10.2 percent used inhalants in the past year compared with 4.0 percent of the youths aged 12 to 17 who had not had past year MDE. Males with past year

Figure 2. Percentages of Youths Aged 12 to 17 Using Inhalants in the Past Year, by Past Year Major Depressive Episode (MDE)*: 2004-2006



Source: SAMHSA, 2004-2006 NSDUHs.

MDE were about twice as likely as those without past year MDE to have used inhalants (9.6 vs. 4.0 percent). Females with past year MDE were about 3 times as likely as those without past year MDE to have used inhalants (10.5 vs. 3.9 percent). In each age group, youths with past year MDE were more likely than youths without past year MDE to have used inhalants in the past year (Figure 2).

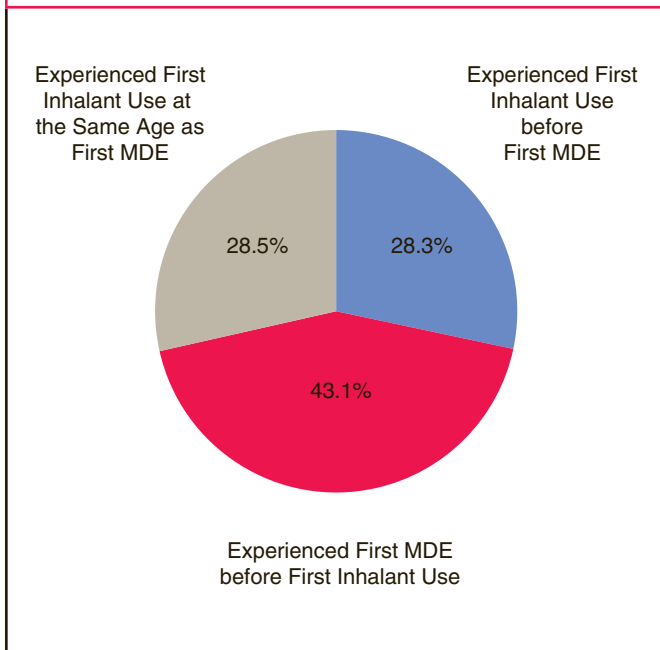
Which Comes First: Inhalant Use or MDE?

An estimated 218,000 (0.9 percent) youths aged 12 to 17 used inhalants and experienced MDE in the past year. Among those who had used inhalants and had also experienced MDE in the past year, 43.1 percent experienced their first episode of MDE before initiating inhalant use, 28.3 percent used inhalants before they experienced their first episode of MDE, and 28.5 percent started using inhalants and experienced their first episode of MDE at about the same time (Figure 3).

Do Youths with MDE Use Inhalants More Frequently than Youths without MDE?

Regardless of whether youths aged 12 to 17 experienced MDE in the past year, the majority of

Figure 3. Percentages of Youths Aged 12 to 17 Who Used Inhalants and Experienced Major Depressive Episode (MDE)* in the Past Year, by First Inhalant Use and First MDE: 2004-2006**



Source: SAMHSA, 2004-2006 NSDUHs.

youths who used inhalants did so on 1 to 11 days in that time frame (Figure 4). However, among youths who used inhalants in the past year, those with past year MDE were more likely than those without past year MDE to have used inhalants on 100 days or more per year (12.3 vs. 7.9 percent).

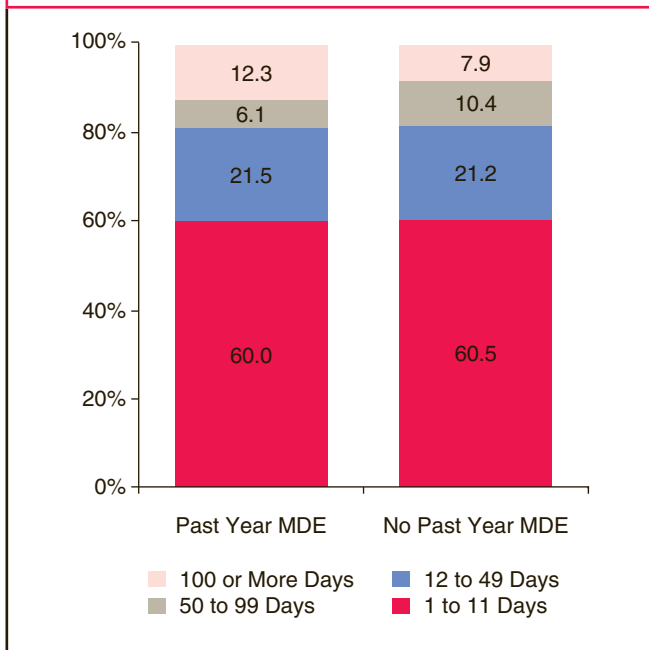
Discussion

Inhalant use continues to be a serious public health problem that can have potentially dire consequences for young people, including damage to major organ systems and cognitive processes. When combined with a major episode of depression, inhalant use can have devastating consequences for adolescents and their families. These findings suggest that clinicians and parents monitoring adolescents for depression should be alert to the potential for the initiation of substance abuse, including the use of inhalants. Similarly, the data suggest that adolescents using or abusing inhalants might benefit from screening to determine the presence of co-occurring mental health issues such as depression.

End Notes

¹ 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.

Figure 4. Percentages of Youths Aged 12 to 17 Using Inhalants in the Past Year, by Past Year Major Depressive Episode (MDE)* and the Number of Days Used Inhalants in the Past Year: 2004-2006**



Source: SAMHSA, 2004-2006 NSDUHs.

- ² Kubik, M. Y., Lytle, L. A., Birnbaum, A. S., Murray, D. M., & Perry, C. L. (2003). Prevalence and correlates of depressive symptoms in young adolescents. *American Journal of Health Behavior, 27*, 546-553.
- ³ Sakai, J. T., Hall, S. K., Mikulich-Gilbertson, S. K., & Crowley, T. J. (2004). Inhalant use, abuse, and dependence among adolescent patients: Commonly comorbid problems. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*, 1080-1088.
- ⁴ NSDUH refers to inhalants as "liquids, sprays, and gases that people sniff or inhale to get high or to make them feel good."
- ⁵ For these estimates, MDE is defined using the diagnostic criteria set forth in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*, which specifies a period of 2 weeks or longer during which there is either depressed mood or loss of interest or pleasure and at least four other symptoms that reflect a change in functioning, such as problems with sleep, eating, energy, concentration, and self-image. In assessing MDE, no exclusions were made for MDE caused by medical illness, bereavement, or substance use disorders. See the American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Figure Notes

- * See end note 5.
- ** Due to rounding, percentages do not total 100 percent.

Suggested Citation

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Research findings from the SAMHSA 2004-2006 National Surveys on Drug Use and Health (NSDUHs)

Inhalant Use and Major Depressive Episode among Youths Aged 12 to 17: 2004 to 2006

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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 2004 to 2006 data used in this report are based on information obtained from 67,706 youths aged 12 to 17. 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. (2008). *Results from the 2007 National Survey on Drug Use and Health: National findings* (DHHS Publication No. SMA 08-4343, NSDUH Series H-34). Rockville, MD: Substance Abuse and Mental Health Services Administration.

Information for earlier NSDUHs is available in the following publications:
2006 NSDUH: (DHHS Publication No. SMA 07-4293, NSDUH Series H-32)
2005 NSDUH: (DHHS Publication No. SMA 06-4194, NSDUH Series H-30)
2004 NSDUH: (DHHS Publication No. SMA 05-4062, NSDUH Series H-28)

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

Because of improvements and modifications to the 2002 NSDUH, estimates from the 2004 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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