

# Asthma in Rural Minnesota Adolescents

## Asthma Survey

In October 2001, the Minnesota Department of Health conducted a survey of 9th-11th grade students in rural counties of Minnesota to learn more about their experiences with asthma. A total of 13,564 students in 41 rural high schools were surveyed. Student responses were collected through self-completed questionnaires. Students were asked about wheezing (a common symptom of asthma), asthma history, and whether they currently had asthma. Those who reported that they had asthma were asked about asthma severity, medical care, medication use and activities missed due to asthma. Smoking history, height and weight, and farm versus non-farm residence were also obtained.

## Survey Findings

- One out of eight students (12.6%) reported having ever been diagnosed with asthma and 9% reported that they currently had asthma.
- An additional 13.1% of the students reported wheezing in the past year but had not been diagnosed with asthma. Wheezing is a common symptom of asthma, so a substantial portion of these students may have undiagnosed asthma.
- 21.2% of the students reported wheezing during exercise in the past 12 months. Exercise is one of a number of possible triggers of asthma symptoms.
- Girls were more likely than boys to report wheezing and asthma.
- Among students with asthma, 6.5% reported missing school, 8.3% reported missing sports, and 7.1% reported missing

recreational activities for 2 or more days in the past month due to asthma.

- 31% of those students with asthma reported being bothered by it two or more times a week.
- Only half (49.4%) of those students with asthma have a regular doctor or clinic for asthma care.
- Only 38.5% have an Asthma Action Plan. Action plans provide critical, individualized information on what symptoms to watch for and what actions to take when a person has an asthma episode.
- Students who reported wheezing but no asthma diagnosis were more likely to report that they were current smokers (20.8%) than students with asthma (16.0%) or those without asthma (10.1%).
- Students who reported wheezing but no asthma diagnosis were also more likely to live in a household where someone smokes (42.5%) than students with diagnosed asthma (37.2%) or those without asthma (31.0%).
- Students living on farms were less likely to report wheezing and asthma.
- Overweight students were more likely to report wheezing and asthma.

## Conclusions

These findings indicate that asthma is a significant public health issue among rural Minnesota adolescents. One out of eight has had a diagnosis of asthma, while an equal number report symptoms suggestive of asthma, but do not have an asthma diagnosis. Most of those with asthma do not have written asthma action plans.



Health Promotion and Chronic Disease Division  
Minnesota Asthma Program  
717 Delaware St. SE  
P.O. Box 9441  
Minneapolis, MN 55440-9441  
(612) 676-5226  
[www.health.state.mn.us/divs/hpcd/cdee/asthma/](http://www.health.state.mn.us/divs/hpcd/cdee/asthma/)

### **For more information**

Contact Wendy Brunner at 612-676-5541 or  
[wendy.brunner@health.state.mn.us](mailto:wendy.brunner@health.state.mn.us).

Minnesota Asthma Program  
Chronic Disease and Environmental  
Epidemiology  
717 Delaware Street SE  
P.O. Box 9441  
Minneapolis, MN 55440-9441  
[www.health.state.mn.us/divs/hpcd/cdee/asthma/](http://www.health.state.mn.us/divs/hpcd/cdee/asthma/)  
Toll Free Number: 1-877-925-4189