

Asthma in Minnesota

Asthma is a chronic disease of the airways that makes breathing difficult. Asthma causes inflammation and a narrowing of the airways along with an over production of mucus in the lungs. During normal breathing, air flows freely in and out of the lungs. However, during an asthma attack or asthma episode, the lining of the airways swell even more, muscles around the airways tighten and thick mucus clogs the tiny airways making it difficult to breathe.

Asthma symptoms can include wheezing, cough (especially at night), shortness of breath, and chest tightness, but not everyone experiences the same symptoms. Asthma symptoms can range from mild to life threatening. There is currently no cure for asthma, but it is manageable with appropriate medications and by avoiding things that trigger symptoms.

Causes of asthma symptoms

Anyone can develop asthma at any age in life. We don't know what causes asthma, but we do know what can trigger or start an asthma attack. A trigger is anything that causes the muscles around overly sensitive airways to contract. Some common triggers are:

- Tobacco and wood smoke
- Colds, flu, respiratory infections
- Pollen and outdoor air pollution
- Dust mites
- Pet dander and pests
- Aerobic exercise
- Strong odors such as perfume or cleaning products

Sensitivity to triggers varies greatly from person to person. It is important for asthma patients to talk with their health care providers to understand their triggers and ways to reduce exposure to those triggers.

Genetics also play a role in developing asthma. Having a family history of eczema, allergies or having parents or siblings that have asthma increases the risk.

Asthma Impact

Asthma is one of the most common health conditions in the United States. An estimated 24 million Americans currently have asthma, including 6.3 million children under the age of 18, according to the Centers for Disease Control and Prevention (CDC). An estimated 393,000 Minnesota children and adults have asthma.

- 1 in 16 (6.4%) children have asthma.¹
- 1 in 13 (7.4%) adults have asthma.¹
- One in 10 middle and high school students (grades 6-12) (10.6 %) in Minnesota have asthma.²
- In 2014, there were 21,800 emergency department visits and 3,400 hospitalizations for asthma across Minnesota³
- In 2014, asthma cost an estimated \$669.3 million, including \$614.9 million in direct medical expenses and \$54.3 million in lost workdays.⁴
- In 2015, there were 61 deaths due to asthma in Minnesota.
- 59% of those who died were age 65 or older when they died.
- There were 6 deaths among residents under age 35.⁵

Asthma disparities in Minnesota

The likelihood of having asthma differs by race/ethnicity.

- American Indian and African American middle/high school students are more likely than other students to have been diagnosed with asthma. ⁶
- African American adults are more likely than whites to have asthma. ¹

There are differences in the rates of hospitalizations and emergency department (ED) visits by state region.

- Hospitalization rates for children living in the Twin Cities metropolitan area are 67% higher than for children living in Greater Minnesota.
- Rates of ED visits for asthma for children living in the Twin Cities metro area are nearly twice as high as for children living in Greater Minnesota.
- In certain ZIP codes in the city of Minneapolis, hospitalization rates for asthma among children are four times higher than the statewide rate. ³

There are also disparities in rates of death due to asthma in Minnesota.

- Death rates are four times higher among African Americans and three times higher among Asian/Pacific Islanders than among whites.
- Among those who were under age 65 when they died, the asthma death rate for African Americans was six times higher than it was for whites. ⁷

More asthma data is available on the [MN Public Health Data Access Portal](https://apps.health.state.mn.us/mndata/ashtma)
<https://apps.health.state.mn.us/mndata/ashtma>

Living with Asthma

Improving asthma care and the quality of life for every child and adult who lives with asthma is the ultimate goal. Asthma can be challenging, disruptive, and frightening for those who have it, and for family, friends and caregivers. [Clinical Guidelines from the National Institutes of Health](#) give health care providers the tools and information they need to diagnose, treat, and teach effective self-management skills so people who have asthma can live the life they want to live.

Asthma care is a partnership and a shared responsibility between the patient and the health care provider. Asthma can be controlled through [Effective Asthma Management](#).

- Assess and monitor asthma severity and control.
- Provide individualized asthma self-management education and a written asthma action plan.
- Control or remove asthma triggers in the environment.
- Address other health conditions that impact the patient's asthma.
- Prescribe appropriate asthma medications and monitor use.

References

- ¹ Minnesota Behavioral Risk Factor Surveillance System, 2015
- ² Minnesota Youth Tobacco Survey, 2014
- ³ MN Hospital Uniform Billing (UB) Claims Data, Health Economics Program, MDH and Minnesota Hospital Association, 2014
- ⁴ National Asthma Control Program, CDC, 2016
- ⁵ Minnesota Center for Health Statistics, 2015
- ⁶ Minnesota Student Survey, 2016
- ⁷ Age-adjusted rates from the Centers for Disease Control and Prevention (CDC), National Center for Health Statistics, Compressed Mortality File on CDC WONDER Online Database, <http://wonder.cdc.gov/>, 2006-2015