Asthma

In the United States, asthma is more common among boys than it is among girls. In 2011, ten percent of males under age 18 were reported to have asthma, compared with nine percent of females.

Importance

Asthma is the most common chronic disorder affecting children. It is estimated that seven million children under the age of 18 have asthma in the United States. Asthma is the third leading cause of hospitalization among children under age 15 and, in 2008, was associated with an estimated 10.5 million missed school days. The combination of illness-related absence (due to doctors' visits as well as to illness), and potential asthma emergencies in the classroom, reduces student and teacher productivity and can negatively affect children's academic performance.

Among the factors that have been linked to an increased risk for asthma are low birthweight, exposure to antibiotics during the first year of life, use of acetaminophen, being overweight, exposure to community violence, having a parent with major depression, maternal exposure to intimate partner violence, and maternal exposure to high levels of magnetic fields. Additionally, many studies have linked exposure to air pollution and second-hand smoke to asthma incidence in children. None of these, however, has been identified as a proven cause.

Common symptoms of asthma include coughing, chest tightness, shortness of breath and wheezing. While most cases of childhood asthma are mild or moderate, asthma can cause serious and sometimes life-threatening health risks when it is not controlled. The illness can be controlled by using medication and avoiding "attack triggers" such as: outdoor and indoor pollutants (e.g., cigarette smoke); allergens such as pollen, mold, animal dander, feathers, dust, food, and cockroaches; respiratory infections and colds; and exposure to cold air or sudden temperature change. Some of these environmental factors, such as dampness and mold, cockroaches, and inadequate ventilation are more common in poor, urban settings. In addition, vigorous exercise can sometimes trigger asthma attacks, but most children with asthma can fully participate...
can sometimes trigger asthma attacks, but most children with asthma can fully participate in physical activities if their condition is properly controlled.\[19\] With the proper treatment and care, most children with asthma can have active and healthy childhoods.

## Trends

After a period of fairly steady increase from the 1980s to the mid-1990s\[1\] the proportion of children with current asthma has increased only slightly over the past decade, from eight percent in 2002 to ten percent in 2011. (Figure 1)

### Differences by Gender

Asthma is more common among boys than it is among girls, though the difference has been narrowing for the past five years. In 2011, ten percent of males under age 18 had asthma, compared with nine percent of females. (Figure 1)

### Differences by Age Group
Older children are more likely to currently have asthma than younger children. In 2011, seven percent of children younger than five had asthma, compared with eleven percent of youth ages 12 to 17. (Figure 2) At least some of this difference may be due to undiagnosed asthma in younger children.

Differences by Race and Hispanic Origin [20]

Black and Hispanic children are more likely than white and Asian children to have asthma. About one in six (16 percent) of black children had asthma in 2011, compared with ten percent of Hispanic children and eight percent of white children. Seven percent of Asian children were diagnosed with asthma, but this was not significantly different from the proportion of white
Children with public health insurance are more likely than other children to have asthma. In 2011, 13 percent of children with public health insurance had asthma, compared with eight percent of children with private insurance and seven percent of children without health insurance. (Figure 4)

Differences by Family Income Level

Asthma is more common among children living in families with incomes below the federal poverty level. In 2011, 13 percent of children in poor families had asthma, compared with eleven percent of children in families that were near-poor, and eight percent of children in families that had incomes of at least twice the federal poverty level. (Appendix 1)

State and Local Estimates

State estimates for 2011/12 are available from the National Survey for Children’s Health through the Data Resource Center for Child & Adolescent Health.
International Estimates

Data on asthma prevalence worldwide is available from the [Global Initiative for Asthma](#).

National Goals

Through its *Healthy People 2020* initiative, the federal government has set seven national goals related to childhood asthma. They are: reducing the rate of deaths due to asthma among children and adolescents; reducing hospitalization rates for children and adolescents with asthma; reducing the rates of hospital emergency room visits due to asthma; and reducing the number of school days missed by children with asthma because of asthma, reducing activity limitation among persons with asthma, increasing formal patient education, and increasing appropriate asthma care.

More information is available [here](#). Â (Goals RD 1-7)

What Works to Make Progress on This Indicator

The Centers for Disease Control and Prevention lists [science-based strategies for addressing asthma](#).

Also, see Child Trends' LINKS database ("Lifecourse Interventions to Nurture Kids Successfully"), for reviews of many rigorously evaluated programs, including the following which have been shown to be effective:

- [Asthma Adherence Monitoring with Feedback](#)
- [Healthy Learners Asthma Initiative (HLAI)](#)
- [Parent Mentors for Children with Asthma](#)
- [Asthma Basic Care](#)
- [Asthma Command](#)
- [The Asthma Files](#)
- [Sexual Health and Adolescent Risk Prevention (SHARP)](#)
- [Informed Parents and Children Together (ImPACT)](#)
- [CALMA](#)
- [Air Academy](#)

In addition, for a review of the effectiveness of a number of asthma education programs,
see *What Works for Asthma Education Programs: Lessons From Experimental Evaluations of Social Programs and Interventions for Children*.

**Related Indicators**

- [Children with Special Health Care Needs](#)
- [Children with Limitations](#)
- [Parental Smoking](#)

**Definition**

From 1997 to 2008, children were identified as ever diagnosed with asthma by asking parents "Has a doctor or other health professional EVER told you that your child has asthma?" If the parent answered YES to this question, they were then asked (1) "Does your child still have asthma?" and (2) "During the past twelve months, has your child had an episode of asthma or an asthma attack?" The question "Does your child still have asthma?" was introduced in 2001 and identifies children who currently have asthma. [21]

Estimates are based on a response from a parent or adult household member.

**Data Sources**


**Raw Data Source**

National Health Interview Survey

http://www.cdc.gov/nchs/nhis.htm

**Appendix 1: Among Children Ages Birth Through 17, Percentage Reported to Currently Have Asthma, Selected Years 2001-2011**

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*Data for American Indian are for 2001-2004 only. They are not available for later years.*
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* Indicates data not available

1 Persons of Hispanic origin may be of any race.

2 Parental education reflects the education level of the most educated parent in the child's household.

3 Children covered by both public and private insurance are placed in the private insurance category.

4 Public health insurance for children consists mostly of Medicaid or other public assistance programs, including State plans. It does not include children with only Medicare or the Civilian Health and Medical Care Program of the Uniformed Services (CHAMPUS/CHAMP-VA/Tricare).


Endnotes

[i] Due to changes in the questions asked in the National Health Interview Survey, estimates for years prior to 1998 are not strictly comparable with estimates for later years. However, data for 1980-1996 show a substantial increase in the prevalence of asthma among children. For additional information, see Measuring Childhood Asthma Prevalence Before and After the 1997 Redesign of the National Health Interview Survey--United States, October 13, 2000. MMWR 49(40); 908-911. Centers for Disease Control and Prevention. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4940a2.htm


[2] Ibid.


[16] Ibid.


[20] Hispanics may be any race. Estimates for whites and blacks do not include Hispanics.


Suggested Citation:


Last updated: March 2013