Asthma

Indicators of Child and Youth Well-Being
In the United States, asthma is more common among boys than it is among girls. In 2015, ten percent of males under age 18 were reported to have asthma, compared with seven percent of females.

**Importance**

Asthma is one of the most common chronic disorders affecting children.\(^1\) It is estimated that 6.3 million children under the age of 18 have asthma in the United States.\(^2\) 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.\(^3\) 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,\(^4\) and can negatively affect children’s academic performance.

Among the factors that have been linked to an increased risk for asthma are low birthweight,\(^5\) exposure to antibiotics during the first year of life,\(^6\) use of acetaminophen,\(^7\) being overweight,\(^8\) exposure to community violence,\(^9\) having a parent with major depression,\(^10\) maternal exposure to intimate partner violence,\(^11\) and maternal exposure to high levels of magnetic fields.\(^12\) Additionally, many studies have linked exposure to air pollution and second-hand smoke to asthma incidence in children.\(^13\) None of these, however, has been identified as a proven cause.

Common symptoms of asthma include coughing, chest tightness, shortness of breath and wheezing.\(^14\) 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.\(^15\) 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.\(^16,17\) Some of these environmental factors, such as dampness and mold, cockroaches, and inadequate ventilation are more common in poor, urban settings.\(^18\) In addition, vigorous exercise 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, the proportion of children with current asthma has remained steady over the past decade, remaining between eight and ten percent. Eight percent of children currently had asthma in 2015. (Figure 1)

Differences by Gender

Asthma is more common among boys than it is among girls. In 2015, 10 percent of males under age 18 had asthma, compared with 7 percent of females. While the overall trend has remained steady, the proportion of girls who had asthma decreased from 9 to 7 percent between 2012 and 2015. (Figure 1)


1 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
Differences by Age Group

Older children are more likely to currently have asthma than younger children. In 2015, 5 percent of children younger than 5 had asthma, compared with 10 percent, each, of youth ages 12 to 17 and ages 5 to 11. (Figure 2) At least some of this difference may be due to undiagnosed asthma in younger children.

Figure 2

Percentage of Children Reported to Currently Have Asthma, by Age Group: 2015

4.7
9.6
10.0
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25

Ages 0-4
Ages 5-11
Ages 12-17

Differences by Race and Hispanic Origin²⁰

Asthma is most common among black children, followed by white and Hispanic children. Asian children are the least likely to currently have asthma. About one in seven (14 percent) of black children had asthma in 2015, compared with eight percent of both Hispanic and white children. Five percent of Asian children were diagnosed with asthma in 2015. (Figure 3)

Figure 3

Percentage of Children Reported to Currently Have Asthma, by Race and Hispanic Origin: 2015

1 Hispanic children may be of any race.

Differences by Type of Insurance Coverage

Children with public health insurance are more likely than other children to have asthma. In 2015, 11 percent of children with public health insurance had asthma, compared with 10 percent of children with other types of insurance, and 7 and 6 percent, respectively, of children with private insurance and children without health insurance. (Figure 4)

![Figure 4](https://example.com/figure4.png)

**Percentage of Children Reported to Have Asthma, by Type of Insurance Coverage: 2015**

Note: Children with both public and private insurance are placed in the private insurance category. Public insurance, as defined here, consists mostly of Medicaid or other public assistance programs, including state plans. It does not include children with only Medicare.


Differences by Family Income Level

Asthma is more common among children living in families with incomes below the federal poverty level. In 2015, 11 percent of children in poor families had asthma, compared with 9 percent of children in families that were near-poor, and 7 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:

http://www.childhealthdata.org/browse/survey/results?q=2400&r=1

International Estimates

Data on asthma prevalence worldwide is available from the Global Initiative for Asthma, at


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; reducing the number of school days missed by children with asthma because of asthma, increasing formal patient education, increasing appropriate asthma care, and increasing the number of states with comprehensive asthma tracking systems.

More information is available at: http://www.healthypeople.gov/2020/topics-objectives/topic/respiratory-diseases/objectives

(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. Information at: [http://www.cdc.gov/HealthyYouth/asthma/index.htm#2](http://www.cdc.gov/HealthyYouth/asthma/index.htm#2)

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 Basic Care: [www.childtrends.org/?programs=asthma-basic-care](http://www.childtrends.org/?programs=asthma-basic-care)
- Asthma Command: [www.childtrends.org/?programs=asthma-command](http://www.childtrends.org/?programs=asthma-command)
- The Asthma Files: [www.childtrends.org/?programs=asthma-files](http://www.childtrends.org/?programs=asthma-files)
- CALMA: [www.childtrends.org/?programs=calma](http://www.childtrends.org/?programs=calma)
- Air Academy: [www.childtrends.org/?programs=air-academy-the-quest-for-airtopia](http://www.childtrends.org/?programs=air-academy-the-quest-for-airtopia)

Related Indicators

- Parental Smoking: [www.childtrends.org/?indicators=parental-smoking](http://www.childtrends.org/?indicators=parental-smoking)

Definition

Children ever diagnosed with asthma were identified 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?". 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](http://www.cdc.gov/nchs/nhis.htm)
## Appendix 1 - Percentage of Children, Ages Birth through 17, Who were Reported to Currently Have Asthma: 2001-2015

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"-" Indicates data not available.
* Estimate has a relative standard error of greater than 30% and should be used with caution.
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


16 Ibid.


20 Hispanics may be any race. Estimates for whites and blacks in this report do not include Hispanics.