

classification may change over time. Risk factors for each category are not presented in this table. See original reference for additional classification data. Asthma treatment should not be based on this table.

From National Asthma Education and Prevention Program: *Guidelines for the diagnosis and management of asthma: summary report 2007*, from <http://www.nhlbi.nih.gov/guidelines/asthma/index.htm>.

Asthma is the most common chronic disease of childhood, the primary cause of school absences, and the third leading cause of hospitalizations in children younger than 15 years old (Trent, Zimbro, and Rutledge, 2015). Although the onset of asthma may occur at any age, 80% to 90% of children have their first symptoms before 4 or 5 years old. Boys are affected more frequently than girls until adolescence, when the trend reverses. Asthma prevalence, morbidity, and mortality are increasing in the United States, especially among African Americans (Akinbami, Moorman, and Liu, 2011). Morbidity and mortality increases may result from worsening air pollution, more premature infants with chronic lung disease, poor access to medical care, under diagnosis, and under treatment.

Etiology

Studies of children with asthma indicate that allergies influence both the persistence and the severity of the disease. In fact, atopy, or the genetic predisposition for the development of an immunoglobulin E (IgE)–mediated response to common aeroallergens, is the strongest identifiable predisposing factor for developing asthma (Loutsios, Farahi, Porter, et al, 2014). However, 20% to 40% of children with asthma have no evidence of allergic disease. In addition to allergens, other substances and conditions can serve as triggers that may exacerbate asthma (Box 21-15). Evidence shows that viral respiratory infections, including RSV infection, may also have a significant role in the development and expression of asthma (Knudson and Varga, 2015).

Box 21-15

Triggers Tending to Precipitate or Aggravate Asthma Exacerbations