

287 Asthma

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Asthma is a disease characterized by episodic airway obstruction and airway hyperresponsiveness usually accompanied by airway inflammation. In most cases, the airway obstruction is reversible, but in a subset of asthmatics, a component of the obstruction may become irreversible. In a large proportion of patients, the airway inflammation is eosinophilic, but some patients may present with differing types of airway inflammation, and in some cases, there is no obvious evidence of airway inflammation.

MANIFESTATIONS

Asthma most frequently presents as episodic shortness of breath, wheezing, and cough, which can occur in relation to triggers but may also occur spontaneously. These symptoms can occur in combination or separately. Other symptoms can include chest tightness and/or mucus production. These symptoms can resolve spontaneously or with therapy. In some patients, wheezing and/or dyspnea can be persistent. Episodes of acute bronchospasm, known as exacerbations, may be severe enough to require emergency medical care or hospitalization and may result in death.

EPIDEMIOLOGY

Asthma is the most common chronic disease associated with significant morbidity and mortality, with ~241 million people affected globally. Cross-sectional studies suggest that 7.9% of the population in the United States suffers from asthma as compared to ~4.3% prevalence worldwide. Prevalence continues to increase (starting at 7.3% in 2001 in the United States) and is associated with transition from rural to urban living. Asthma is more prevalent among children (8.4%) than adults (7.7%). In children, the prevalence is greatest