



Introduction and overview

Asthma is the most common chronic disorder affecting people from childhood to adulthood. It is characterized by airway inflammation, hypersensitivity to a variety of stimuli, and obstruction. It's a global health issue with an estimated prevalence of 358 million people worldwide. In Saudi Arabia, the prevalence of asthma in children ranges from 8%-25%.

Asthma can be classified into either intermittent or persistent which could be either mild, moderate, or severe. In addition, patients with asthma may be classified as allergic, nonallergic, occupational, aspirin-exacerbated respiratory disease, potentially fatal, exercise-induced, and cough variant asthma.

A minority of patients with asthma have uncontrolled or partially controlled asthma despite intensive treatment. Severe asthma is asthma that remains uncontrolled despite the use of high-dose preventive therapies and treatment of contributory factors, or that worsens when high dose treatment is decreased.



In 2010, the WHO divided severe asthma into 3 groups:

WHO class	Name	Explanation
I	Untreated severe asthma	Uncontrolled. as yet untreated asthma
II	Difficult-to-treat asthma	Uncontrolled asthma due to adherence problems. persistent triggers. or comorbidities
III	Therapy-resistant asthma	Uncontrolled asthma despite maximum therapy or asthma control that can only be maintained with maximum therapy

Asthma risk factors



Tobacco

Active smoking increases the risk of developing asthma. Exposure to secondhand smoke (SHS) is also associated with the development of asthma in both adults and adolescents. In addition, a strong correlation exists between parental smoking and the development of asthma in children.



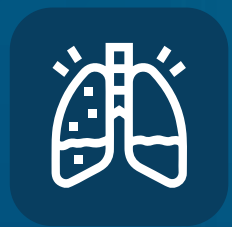
Pollution

Exposure to outdoor and indoor air pollution is a considerable risk factor for asthma development and asthma symptoms triggering.



Obesity

Obese patients are more likely to suffer from asthma, and their health status is impaired. Obese asthmatics experience more symptoms, worse quality of life, increased healthcare use, and increased asthma severity.



Occupational risk factors

The work environment is a potential risk factor for asthmatic patients both in terms of its development, and in terms of disease aggravation.



Stress

A strong association exists between psychological stressors and asthma development and morbidity.

Diagnosis

Basic diagnostic procedures include the following:

- Clinical history
- Clinical examination
- Lung function testing [spirometry or whole-body plethysmography]

Symptoms

Asthma symptoms vary from one person to another. Symptoms include:



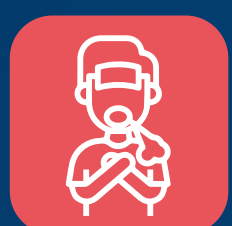
Dyspnea:

Shortness of breath.



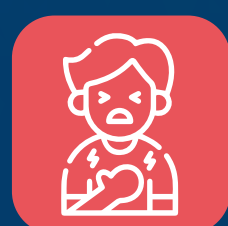
Coughing:

A persistent cough that occurs or worsens most often at night.



Wheezing:

A whistling sound usually heard when breathing out.



Chest tightness:

Feeling as if a rope is being pulled tighter and tighter around chest.

Additional signs indicating that asthma is worsening include symptoms becoming more frequent, increasing difficulty breathing and the use of quick-relief inhalers more often.

Treatments

Unfortunately, asthma cannot be cured, but the right treatment can help keep it under control.

Many types of medications are available to treat asthma symptoms:



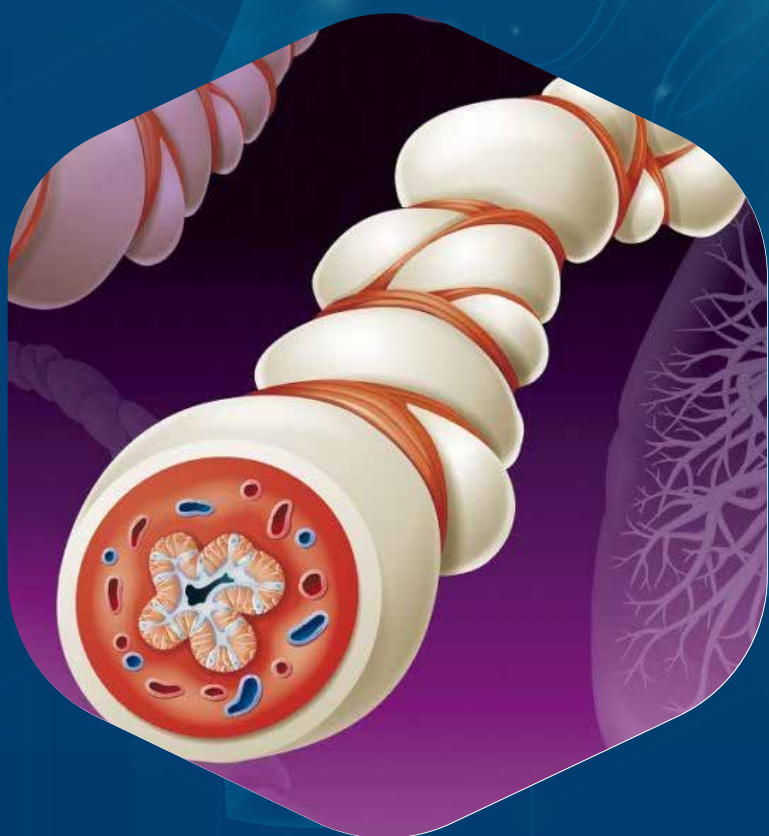
Strong-acting beta agonists:

Quick-relief inhaled bronchodilators. They ease symptoms within minutes during an attack.



Anticholinergic agents:

bronchodilators that act rapidly to immediately relax the airways and help patients to breathe easily.



Long-term asthma control medications are generally taken on a daily basis. The different types include inhaled corticosteroids, leukotriene modifiers, combination inhalers and theophylline.



Biologics: They prevent swelling inside the airways. They are for people with moderate-to-severe asthma that is hard to treat with inhaled corticosteroids and/or other medicines and are given by injection or infusion.

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