



What is asthma?

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Abstract

Asthma is a respiratory disease characterized by the narrowing of lung airways due to triggers that cause swelling, inflammation, and excess mucus. It manifests when airways become obstructed, leading to symptoms such as coughing, wheezing, chest pain, excess phlegm, and shortness of breath. The causes of asthma are multifaceted, with exposure to airborne irritants, genetic predispositions, infections, and obesity playing significant roles. Managing asthma involves a comprehensive approach, including environmental interventions and consulting with healthcare providers.

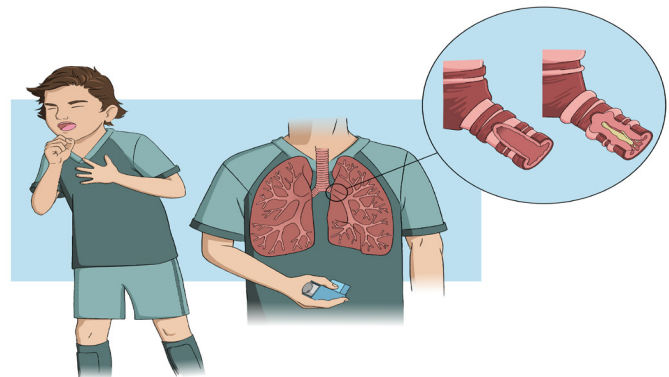
Introduction

Asthma is one of the most commonly known respiratory conditions affecting around eight percent of the population in the United States. It is characterized by a narrowing of the lung airways due to swelling, inflammation, and/or excess mucus, which reduces the volume of air one can breathe in. The restriction of air due to asthma can have detrimental, potentially lethal, health effects, without proper knowledge and management of symptoms.

Asthma is a disease of the respiratory system. The respiratory system is made up of the sinuses, nose, mouth, throat, lungs, blood vessels, and the muscles around these structures that assist them. When discussing asthma, the most important organ to focus on is the lungs. When an individual inhales, air travels through the lung, and the smaller airways are then filled

where the body obtains oxygen and expels (exhale) unwanted gasses, such as carbon dioxide. This process is known as respiration.

When airways become swollen, inflamed, and/or blocked with mucus, it can become difficult for air to pass through. This condition may lead to coughing, wheezing, chest pain, excess phlegm, and shortness of breath. Medical professionals refer to this process and symptoms as Asthma.





What causes asthma?

Asthma diagnoses in individuals often result from a combination of factors, including exposure to airborne irritants, genetic predispositions, infections, and obesity. These irritants may encompass various airborne particles such as pollen, mold, and pet dander, which can incite allergic reactions. Additionally, environmental substances like perfumes, cigarette smoke, and pollutants may act as triggers.

When these airborne triggers are inhaled, the immune system is activated, leading to hyperactivity, airway obstruction, and inflammation characterized by swelling and redness within the respiratory system. This inflammatory process persists as long as the trigger remains pres-

ent in the environment, and is accompanied by symptoms such as prolonged airway swelling, mucus accumulation, and narrowing. This persistent condition is recognized as asthma.

Notably, asthma is often more prevalent in children, given their narrower airways compared to adults, which makes any restriction of air passage more pronounced and deleterious. By effectively regulating or halting the immune response within the lungs, the associated symptoms and complications of asthma can be mitigated.

How is it treated?

There are many strategies that can be used to help alleviate asthma symptoms. One such strategy is the installation of HEPA (high-efficiency particulate air) filters in the home to reduce exposure to airborne lung irritants while indoors. Additionally, people showing signs of Asthma should consult with a healthcare provider.

Doctors can assess the severity of the condition, test for allergies, offer medical advice, and provide medications such as inhalers or pills

to manage environmental allergies. Though all these things can help with controlling Asthma, it is important to also identify the cause of it. Causes can include lung irritants, such as smoke, pollen, dust, and pet dander, and limiting exposure to these irritants can alleviate the condition.

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