

ASTHMA

Understanding Asthma

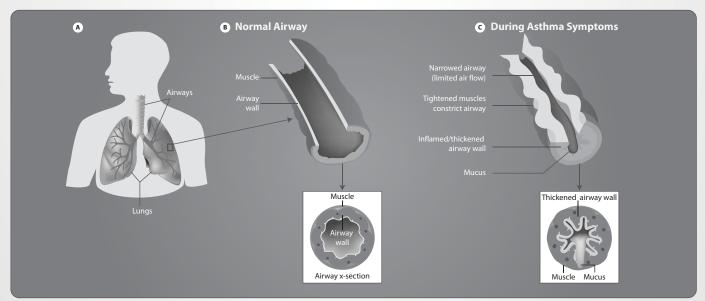
To understand asthma, let us first look at our respiratory system.

Figure 1A shows the location of lungs and the airways or tubes that carry air into and out of the lungs. Figure 1B shows an enlarged depiction of normal airway. In patients with asthma, the airways become inflamed, swollen and sensitive. When certain substances are

inhaled, the airways respond by tightening the muscles around them. This causes narrowing of airways, which causes less air to flow into the lungs (see Fig. 1C). The greater the swelling, the narrower the airways become. There may also be greater than normal mucus production in the airways, which further narrows the airways. These reactions cause asthma symptoms.

Asthma is a lung disease that causes inflammation and narrowing of airways. It affects all age groups, but usually starts in childhood.¹

Fig. 1: Location of lungs (A); normal airway (B); and narrowing of airway (C).



Symptoms of Asthma

Common signs and symptoms to look out for in asthma include:



Wheezing: Wheezing is a whistling sound that is heard while breathing.



Coughing: Coughing usually gets worse at night or early in the morning.



Chest tightness: This refers to a feeling of squeezing or heaviness in the chest.



Shortness of breath: There may be difficulty in breathing and feeling out of breath.





What Causes an Asthma Attack?

Factors that trigger or start asthma attacks are shown in Fig. 2:

Fig. 2: Factors responsible for asthma attack.



Allergens from animal fur²



Cigarette smoke²



Some infections of the upper respiratory tract²



Allergens from dust and mold²



Air pollutants²



Physical exercise²



Pollen from trees and flowers²



Bad weather: **High humidity** or breathing in cold, dry air³



Some food or food additives³

How to Control Asthma?

Asthma cannot be cured, but it can be controlled.

- 1. Avoid things that can start your asthma attacks: For example, limit outdoor time (to limit exposure to pollen or air pollution), stay away from certain environments or keep away from pets if these are triggers for your asthma.
- 2. Medicines: Your doctor may prescribe medication based on the severity of your asthma. Most medicines are given through an inhaler, which helps the medicine to directly reach the lungs.
 - **Long-term control medicines:** These medicines reduce irritation or swelling of airways, thus preventing asthma symptoms.
 - Quick-relief medicines: These medicines help relieve symptoms during asthma attacks.
- 3. Regular check-ups: Visit your doctor regularly to monitor your symptoms and effectiveness of prescribed medicines.

Do's and Don'ts

Do's

- Clean your bedsheets, pillow covers, mattresses and carpets regularly to avoid dust mites
- Practice regular pest control to prevent cockroaches in your home
- Keep away from pets

Don'ts

- Don't smoke or allow smoking in your house
- Don't stay in rooms while they are being dusted or cleaned
- Don't go to places where pollen or mold spore counts are high

- 1. National Institute of Health. Explore asthma. Available at: http://www.nhlbi.nih.gov/health/health-topics/topics/asthma/. Accessed on: 27 May 2013.
- 2. National Institute of Health. Explore asthma. Available at: http://www.nhlbi.nih.gov/health/health-topics/topics/asthma/signs.html. Accessed on: 27 May 2013.

 3. Centers for Disease Control and Prevention. Asthma. Available at: http://www.cdc.gov/asthma/faqs.htm. Accessed on: 27 May 2013.
- 4. National Institute of Health. Explore asthma. Available at: http://www.nhlbi.nih.gov/health/tealth-topics/topics/asthma/treatment.html. Accessed on: 27 May 2013.

 5. National Heart, Lung, and Blood Institute's Asthma Action Plan. Available at: http://www.nhlbi.nih.gov/health/public/lung/asthma/asthma_actplan.pdf. Accessed on: 27 May 2013.

