

What is Asthma?

Written by:
Prof Robin Green (2004 and 2008)
Revised 2012
Based on an original by:
Prof Prakash Jeena, Dr David Luyt,
Dr Adrian Morris



naep@netactive.co.za
www.asthmasa.org



Asthma:

- is one of the most common respiratory complaints in the world today.
- affects one in ten children (10%) and one in twenty adults (5%)
- can occur for the first time at any age, even in adulthood.
- usually begins before the age of five years. A few children affected will 'outgrow' it during their teenage years but it usually persists if contracted in adulthood.
- tends to run in families as do related allergic conditions like hay fever and eczema.
- cannot as yet be cured but if kept under control, those affected will be able to live normal lives enjoying full involvement in sport and all other activities.

The greatest tragedy of asthma is that it is sometimes not recognised and treated, in which case the patient undergoes needless suffering.

What happens to the lungs in asthma?

Asthma affects the breathing pipes or tubes called airways or bronchi. When we breathe in, air passes through the voice-box and down the wind-pipe (called the trachea). The wind-pipe branches into the two main bronchi which take air into the two lungs. These bronchi then divide further and further, becoming smaller and smaller as they take air deeper into the lungs to the point where oxygen passes into the blood-stream.



In asthma, narrowing of the airway is caused by:

- Swelling of the lining.
- Increased sticky mucus or secretions lying in the airways produced by the mucus glands. The swelling and increased secretions are called inflammation.
- Muscles going into spasm. Spasm occurs only when there is inflammation.

When the bronchi become too narrow or are partially obstructed from inflammation and spasm, the typical symptoms of asthma will develop.

These symptoms are:

- Coughing, which often occurs more frequently at night and with activity, can be dry or mucous and is persistent or recurrent.
- Wheezing which is a whistling noise in the chest.
- Tightness of the chest with breathing difficulty.
- Shortness of breath - especially after exercise.

The exact cause of the asthmatic process is not well understood but it is thought to be triggered off by an allergy or when the lungs are irritated by something in the air. (See "Risk factors for asthma and triggers for asthma attacks").

What starts off (triggers) an asthma attack?

A viral cold

A viral cold or the flu can make asthma symptoms temporarily worse and this effect may last for up to six weeks after the illness.

Allergies

Asthma attacks are most commonly triggered by allergies to airborne particles of house-dust mites, grass or tree pollens, fungal spores and skin flakes from furry animals such as cats and dogs. Certain foods and additives can (rarely) also trigger off asthma when eaten.