



Asthma Basics

Asthma has become one of the most common chronic disorders in the developed world. Asthma is difficult to describe, but the International Consensus Report on the Diagnosis and Management of Asthma defines it the following way: "Asthma is a chronic inflammatory disorder of the airways in which many cells and cellular elements play a role".

Throughout the developed world, typically 5% of adults and 10% of children have clinically significant asthma. Its prevalence has increased significantly over the last 25 years and is now thought to affect around 300 million people worldwide.

Asthma can be a serious condition, which occasionally proves fatal, accounting for 1,131 deaths in the UK in 2009. However, most deaths and hospital admissions for asthma are preventable. Asthma is a condition that can be managed successfully and part of that management should include a strategy for allergen avoidance.

For example, in the UK, around 5.4 million people suffer from asthma, which includes 1.1 million children. The condition costs health services around £1 billion a year and accounts for an annual 1.1 million lost working days and around 80,000 hospital admissions.

Asthma comes in several forms

There are two primary types of asthma – childhood onset and adult onset. Most asthma does begin in childhood and is often associated with other atopic diseases like eczema and rhinitis.

Childhood onset asthma often has clearly identifiable triggers which will bring on an attack.

Adult onset asthma may be a continuation of childhood onset asthma, or it may be a new onset of the condition. Asthma can occur at any age, and should be

considered in anyone who has a chronic cough. In adult onset asthma, there is often no obvious trigger, except for a chest infection.

There are also several sub-categories of asthma, including:

- **Nocturnal asthma:** Many people with asthma are woken at night with an attack. This feature has been associated with poor overall control of the disease.
- **Occupational asthma:** Officially recognised as an industrial disease, occupational asthma is caused by exposure to a substance in the workplace. The UK Health and Safety Executive lists around 50 causal airborne substances, such as isocyanates, aluminium and hair spray ingredients, and various kinds of dust like flour and wood dust and animal dander.
- **Brittle asthma (types 1 & 2):** This is a severe form of asthma. In type 1 the disease is uncontrolled and marked by very variable peak flow in air to the lungs. In type 2, there are sudden severe deteriorations from a stable baseline air flow from the lungs.
- **Exercise-induced asthma:** Physical activity is a common asthma trigger, particularly in children.
- **Aspirin-sensitive asthma:** Asthma that is brought on by aspirin and related drugs, such as anti-inflammatory drugs like ibuprofen. Asthma may also be brought on by other drugs, such as beta-blockers.

Familial factors

Asthma tends to run in families. However, asthma is not a single-gene disorder, with a clear line of inheritance. There are several 'susceptibility' genes involved in asthma, each contributing to the risk of developing the disease.

Diagnosis

Diagnosis depends upon the doctor taking a careful medical history from the patient and noting whether the hallmark symptoms of wheeze, chest tightness, breathlessness, and cough are present. There are no laboratory or other tests which can definitely diagnose asthma and distinguish it from other lung conditions. However, if your doctor suspects asthma you may be subject to breathing tests to help confirm the diagnosis. Such tests include:

Spirometry: Spirometry is breathing into a machine which measures how much air you can exhale, which shows whether the airways are obstructed or not.

Peak expiratory flow rate test: A small hand-held device, called a peak flow meter, is used to measure how fast you can blow air out of your lungs in one breath. The peak flow meter can be a useful tool to use yourself at home to monitor your asthma.

Skin prick, or blood tests, are often carried out to find out which allergens might be triggering your asthma.

Thorough diagnosis by a doctor is a must, as asthma can easily be mistaken for other conditions, including:

- Chronic Obstructive Pulmonary Disease (COPD)
- Hyperventilation/panic attack
- Heart failure
- Cough induced by ACE inhibitors (a blood pressure drug)
- Vocal cord problems
- Cystic fibrosis
- Bronchiectasis
- Pulmonary thromboembolism (blood clot on the lungs)
- Lung cancer

Prognosis

Asthma tends to be a chronic disease (that is once you have asthma it will remain with you for the rest of your life). However, around a half of children do 'grow out of' asthma by the time they become teenagers, sometimes to re-emerge in adulthood. Like other chronic diseases, such as diabetes, asthma is not curable in the same way that, say, an infection can be cured. However, asthma can be controlled successfully so you can still live a full life.