

Information about Asthma

Haywards Heath & District Probus Club



What is Asthma?

Asthma is widespread and affects approximately 300 million people worldwide. It is a condition that affects the airways carrying air in and out of your lungs. It usually causes symptoms such as coughing, wheezing and breathlessness. It affects people of all ages and often starts in childhood but can also develop for the first time in adults. Currently, there is no cure, but there are simple treatments that can help keep the symptoms under control, thereby limiting the impact on the life of the person affected.

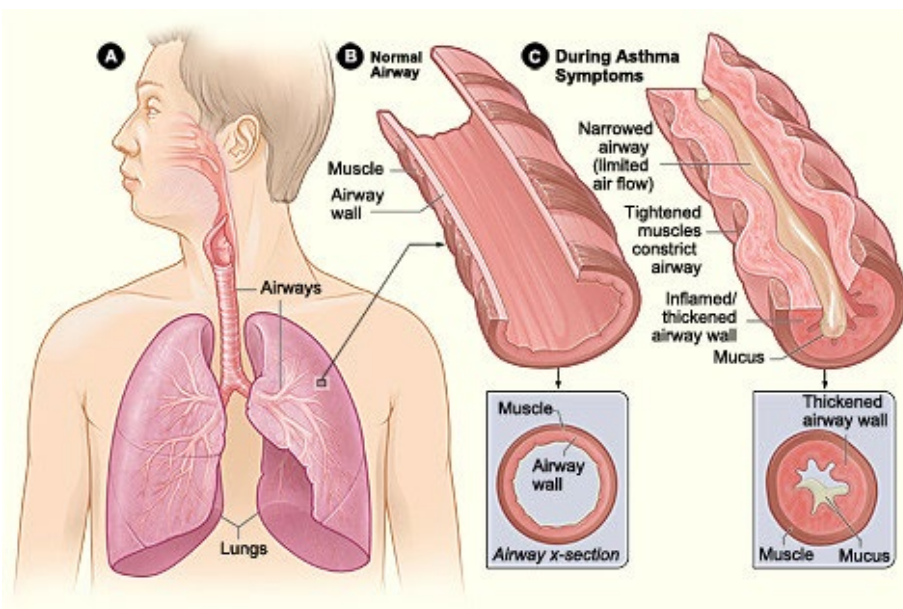
The word "Asthma" originates from the Greek meaning of *short of breath*. The term was refined in the latter part of the 19th Century with the publication of a treatise by **Henry Hyde Salter** entitled "*On Asthma and its Treatment*".

Adult Asthma refers to either:

- Childhood Asthma that has continued into adulthood.
- Asthma that has returned after being present in childhood and then disappearing.
- Asthma that developed only in adulthood. Adult Asthma is often linked with allergies and accompanied by other allergic conditions, such as hayfever. Adult Asthma is more common in females.

Asthma is a long-term condition

Asthma is a long-term condition for many people, particularly if it first develops when you're an adult. It sometimes goes away or improves during teenage years, but it can come back later in life. The symptoms can usually be controlled with treatment. Most people will have normal, active lives, although some people with more severe Asthma may have ongoing problems.



Picture Credit: "Asthma illustration" by National Institutes of Health (NIH) is licensed under CC BY-NC 2.0

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Information about Asthma

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Although Asthma can usually be kept under control, it is still a serious condition that can cause several problems. If it is poorly controlled, Asthma can cause issues such as:

- Feeling tired all the time.
- Underperformance at, or absence from, work, school or other places of learning.
- Stress, anxiety or depression.
- Disruption of work and leisure because of unplanned visits to a GP or hospital.
- Lung infections (pneumonia).
- Delays in growth or puberty in children.

There's also a risk of severe Asthma attacks (where the sufferer struggles to breathe), which can be life-threatening.

What are the stages of Asthma?

Doctors classify Asthma into four main stages. The symptoms and treatments for each stage differ.

Asthma can be either intermittent or persistent. When symptoms only arise occasionally, a person has *intermittent* Asthma. Symptoms of *persistent* Asthma occur more often. The symptoms of Asthma are the same at every stage, but their frequency and severity differ.

Symptom	Intermittent Least severe form	Mild Persistent The least severe form of persistent Asthma	Moderate Persistent The second most severe form of Asthma.	Severe Persistent The most serious form of Asthma.
<i>symptom frequency:</i>	About two days a week or less often.	More often than twice a week but not every day.	Symptoms will occur daily.	Symptoms will arise throughout the day.
<i>nighttime awakenings:</i>	Two or fewer times each month.	Tending to wake a person three or four times a month.	Symptoms will wake a person more often than once a week but not every night.	A person will likely be woken by symptoms every night.
<i>severity:</i>	Symptoms will not interfere with regular activities.	Symptoms may have a minor impact on regular activities.	Symptoms will limit regular activities somewhat.	Symptoms will significantly limit regular activities.
<i>lung capacity:</i>	Forced expiratory volume (FEV) lung capacity test is usually 80 per cent or more of normal values.	The result of an FEV lung capacity test is often 80 per cent or more of normal values.	The result of an FEV lung capacity test tends to be 60–80 per cent of normal values.	The result of a forced vital capacity lung function test tends to be less than 60 per cent of normal values.
<i>inhaler use:</i>	A person will need to use a <i>short-acting beta-agonist</i> (SABA) inhaler to control symptoms on two or fewer days each week.	A person will need to use a SABA inhaler to control symptoms more often than twice a week but not daily.	A person will need to use a SABA inhaler daily.	A person will need to use a SABA inhaler to control symptoms several times a day.

Excerpted from the source of the above information: <https://www.medicalnewstoday.com/articles/324461>

Symptoms

The main symptoms of Asthma are:

- a whistling sound when breathing (wheezing)
- breathlessness
- a tight chest, which may feel like a band is tightening around it
- coughing

Any of the symptoms can sometimes get temporarily worse and may result in what is known as an Asthma attack. Several conditions can cause similar symptoms to Asthma, so it's important to get a proper diagnosis and correct treatment.

Diagnosing Asthma

Asthma can usually be diagnosed from the symptoms you have and some simple tests that GPs will probably be able to conduct. If not, they may refer you to a specialist if they are not sure. The GP may ask:

- what symptoms you have
- when they happen and how often
- if anything seems to trigger them
- if you have conditions such as Eczema or allergies, or a family history of them

The main tests used to help diagnose Asthma are as follows:

- FeNO test – you breathe into a machine that measures the level of nitric oxide in your breath, which is a sign of inflammation in your lungs
- Spirometry – you blow into a machine that measures how fast you can breathe out and how much air you can hold in your lungs
- peak flow test – you blow into a handheld device that measures how fast you can breathe out, and this may be done several times over a few weeks to see if it changes over time

After you're diagnosed with Asthma, you may also have a chest X-ray or allergy test to see if an allergy might trigger your symptoms.

Treatment

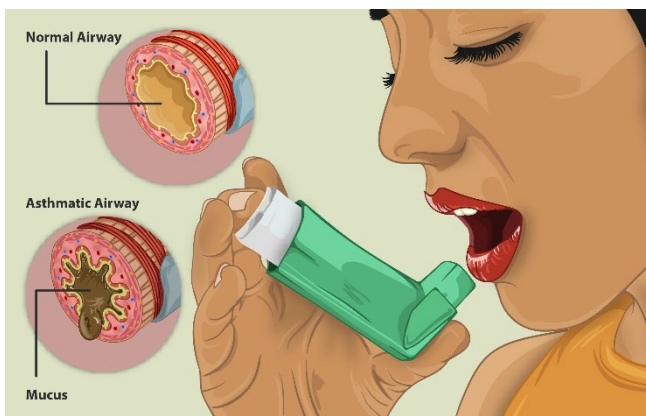
Using an inhaler (a device that lets you breathe in medicine) is the primary treatment. Tablets and other therapies may also be needed if your Asthma is severe. You will usually create a personal action plan with a doctor or Asthma nurse. This includes information about your medicines, how to monitor your condition and what to do if you have an Asthma attack.

Inhalers

Inhalers can help:

- relieve symptoms when they occur (called *reliever inhalers*)
- stop symptoms developing (called *preventer inhalers*)

Some people need an inhaler that both relieves and stops symptoms (called *combination inhalers*).



Picture Attribution: An Asthma patient taking medication using an inhaler is shown. Additionally, the airways of an asthma patient have been shown in comparison with normal airways.

Source: <https://www.myupchar.com/en/disease/asthma>
Author: <https://www.myupchar.com/en>

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Reliever inhalers

Most people with Asthma will be given a reliever inhaler. These are usually blue. A reliever inhaler is used to treat symptoms when they occur, usually within a few minutes. Tell a GP or Asthma nurse if you have to use your reliever inhaler three or more times a week. They may suggest additional treatment, such as a preventer inhaler.

Reliever inhalers have few side effects, but they can sometimes cause shaking or a fast heartbeat for a few minutes after they're used.

Preventer inhalers

If you need to use a reliever inhaler often, you may also need a preventer inhaler. These are usually brown, red or orange. A preventer inhaler is used every day to reduce the inflammation and sensitivity of your airways, which stops symptoms from occurring. It's essential to use it even when you do not have symptoms.

You should speak to a GP or Asthma nurse if you continue to have symptoms while using a preventer inhaler.

Preventer inhalers contain steroid medicine, and whilst usually having no side effects, can sometimes cause:

- a fungal infection of the mouth or throat (oral thrush)
- a hoarse voice
- a sore throat

These side effects can be reduced by using a spacer (a hollow plastic tube attached to the inhaler), as well as by rinsing your mouth after using your inhaler.

Combination inhalers

If using reliever and preventer inhalers does not control your Asthma, you may need an inhaler that combines both. A combination inhaler is used every day to help stop symptoms from occurring and provide long-lasting relief when they do happen. It's essential to use it regularly, even if you do not have symptoms.

Side effects of combination inhalers are similar to those of reliever and preventer inhalers.

Tablets

You may also need to take tablets if using an inhaler alone is not helping control your symptoms:

- *Leukotriene receptor antagonists (LTRAs)*: LTRAs are the leading tablets used for Asthma. They also come in syrup and powder form. You take them every day to help stop your symptoms from occurring. Possible side effects include tummy aches and headaches.
- *Theophylline*: Theophylline may also be recommended if other treatments are not helping to control your symptoms. It is taken every day to stop your symptoms from occurring. Possible side effects include headaches and feeling sick.

Information about Asthma

Haywards Heath & District Probus Club

- **Steroid tablets:** Steroid tablets may be recommended if other treatments are not helping to control your symptoms. These soluble tablets, usually *Prednisolone*, are sometimes required to treat Asthma. Short courses of oral steroids are considered safe. They can be taken either:
 - ✓ as an immediate treatment when you have an Asthma attack
 - ✓ every day as a long-term treatment to prevent symptoms – this is usually only necessary if you have very severe Asthma and inhalers do not control your symptoms

Long-term or frequent use of steroid tablets can occasionally cause side effects such as:

- increased appetite, leading to weight gain
- easy bruising
- mood changes
- fragile bones (osteoporosis)
- high blood pressure

You'll be monitored regularly while taking steroid tablets to check for signs of any problems.

Other treatments

Other treatments, such as injections or surgery, are rarely needed but might be recommended if all other treatments are not helping.

Injections

For some people with severe Asthma, injections given every few weeks can help control the symptoms. The main injections for Asthma are:

- benralizumab (Fasenra)
- omalizumab (Xolair)
- mepolizumab (Nucala)
- reslizumab (Cinqaero)

These medicines are known as biologic therapies. They are not suitable for everyone with Asthma and can only be prescribed by an Asthma specialist. The main side effect is discomfort where the injection is given.

Surgery

A procedure called *bronchial thermoplasty* might be offered as a treatment for severe Asthma. It works well, and there are no serious concerns about its safety.

You will be sedated or put to sleep using a general anaesthetic during a bronchial thermoplasty. It involves passing a thin, flexible tube down your throat and into your lungs. Heat is then used on the muscles around the airways to help stop them from narrowing and causing asthma symptoms.

Complementary therapies

Several complementary therapies have been suggested as possible treatments for Asthma, including:

- Breathing exercises – such as techniques called the Papworth or Buteyko method.
- Traditional Chinese herbal medicine.
- Acupuncture.
- Ionisers – devices that use an electric current to charge molecules of air.
- Manual therapies – such as chiropractic Homoeopathy.
- Dietary supplements.

Little evidence has emerged to suggest many of these complementary treatments help, although there's some evidence that breathing exercises can improve symptoms and reduce the need for reliever medicines in some people, but they should not be used instead of prescribed medicine.

Causes and Triggers of Asthma

Asthma is caused by swelling (inflammation) of the breathing tubes that carry air in and out of the lungs. This makes the tubes highly sensitive, so they temporarily narrow. The lining of the airways becomes inflamed and starts to swell. Sometimes, sticky mucus or phlegm builds up, which can narrow the airways even more. It may happen randomly or after exposure to a trigger.

Common Asthma triggers include:

- Allergies (such as house dust mites, animal fur or pollen)
- Smoke, pollution and cold air
- Exercise
- Infections like colds or flu

These reactions in the airways make it difficult to breathe and lead to Asthmatic symptoms, such as chest tightness, wheezing, or coughing. It can also lead to an Asthma attack.

Who gets Asthma, and is it serious?

In the UK, around 5.4 million people are currently receiving Asthma treatment. That's one in every 12 adults and one in every 11 children. Asthma affects more boys than girls. Asthma in adults is more common in women than men. It tends to run in families, especially when there's also a history of allergies and or smoking.

Tragically, three people die every day because of Asthma attacks, and research shows that two-thirds of Asthma deaths are preventable. The reassuring fact is that most people with Asthma who get the proper treatment - and take it correctly - can manage their symptoms and get on with what they want to do in life.

Asthma is the most common long-term medical condition in children in the UK. One million children in the UK are receiving treatment for Asthma. Seven to ten per cent of school children who experience Asthma attacks may suffer from allergies, which trigger the condition.

Complications Related to Asthma in Children

An Asthma attack can be very serious. If your child doesn't get the right treatment quickly, a severe attack could even be fatal. It is essential to seek medical advice if you suspect your child has Asthma, even if they haven't had a bad attack so that you can be prepared if it happens.

Getting the right care can also help you to manage the condition more effectively.

When Asthma isn't managed well, it can cause problems such as tiredness, growth delays, and lung infections such as pneumonia. It can also be very stressful for both you and your child if you are experiencing frequent, potentially preventable asthma attacks and hospital visits that could have been avoided.

Source: <https://www.childrensrespiratorydoctor.co.uk/asthma.php>

Can Asthma be cured?

Whilst Asthma UK and others are **striving to find a cure**, currently there is no cure for Asthma. The good news, though, is that there are many safe and effective **treatments** available to manage the symptoms. It will help if you work with your GP or Asthma nurse to find the treatments that work well for you and get into good habits so you take them exactly as prescribed to get the benefits.

Information about Asthma

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Key Facts

While it's not a certainty that everyone with Asthma will also have Eczema, there is an association between the two conditions. If you have one condition, you might be more likely to get the other.

You might know some of the basics about Asthma, but here are some aspects that may surprise you:

- 5.4 million people in the UK are currently receiving treatment for Asthma: 1.1 million children (one in 11) and 4.3 million adults (1 in 12).
- Every 10 seconds, someone is having a potentially life-threatening Asthma attack in the UK.
- On average, three people die from an Asthma attack in the UK every day.
- Around 200,000 people in the UK have severe Asthma, a debilitating form of the condition that doesn't respond to usual treatments and can cause people to be in and out of the hospital.
- The NHS spends around £1 billion a year treating and caring for people with Asthma.
- In 2016/17 (the most recent data available), there were 77,124 admissions to hospitals for Asthma in the UK.
- In 2017 (the most recent data available), 1,484 people in the UK died from an Asthma attack in the UK.

Source of the above list: <https://www.asthma.org.uk/about/media/facts-and-statistics/>

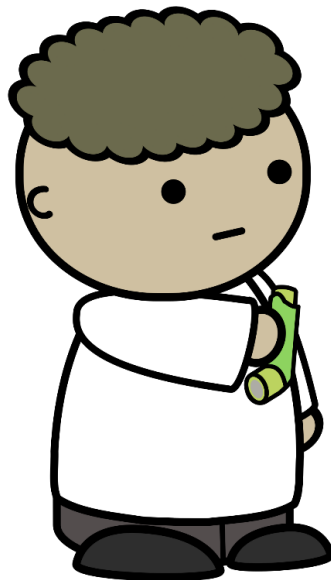


Image Source:

<https://openclipart.org/detail/327125/kid-with-asthma-inhaler>

Sources and Further Information

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