

exactly where it's needed than conventional inhalers can. This is particularly critical in the event of a moderate or severe asthma attack. Nebulisers are often used in hospital, but occasionally people may buy them to use at home. They're also sometimes used at home instead of an inhaler to treat children under two.

Nebulisers are not available on the NHS in England and Wales but you can purchase one - most manufacturers sell them by mail order.

Asthma attacks - what to do

In the event of an asthma attack you should:

- give your child their reliever treatment immediately, preferably with a spacer
- sit your child down (don't lie them down) and try to relax them
- wait 5-10 minutes - if the symptoms disappear you do not need to do anything
- if the symptoms do not go away, then you should call a doctor or an ambulance
- continue giving your child their reliever, preferably with a spacer, every few minutes until help arrives

This factsheet is based on reputable sources of medical evidence and has been reviewed by BUPA doctors. For more details of references and sources, please see our website. The content is intended for general information only and does not replace the need for personal advice from a qualified health professional.

If you go to hospital, take details of your child's treatments with you.

Visit your GP after your child is discharged from hospital so you can review their treatment.

Asthma management

Medicines are only part of the treatment for asthma. Asthma also needs to be managed by dealing with the things that make it worse. Identifying and avoiding the things that trigger your child's asthma are an essential part of their overall treatment plan. Keeping a diary to record anything that triggers your child's asthma can help you to discover a pattern. Using a peak flow meter to monitor your child's lung function can also help. Repeatedly low readings in a certain situation may indicate the trigger.

The older your child, the more he or she will be able to understand and participate in their own asthma management. With good preventive measures and appropriate treatment, most children with asthma lead completely normal lives.

Further information

Asthma UK

☎ 0845 701 0203

www.asthma.org.uk

Asthma in children

This factsheet is for parents of children with asthma.

Asthma is a common condition that causes coughing, wheezing, tightness of the chest and breathlessness in about 1 in 10 children.

About half of all children who develop asthma will grow out of it. But left untreated asthma can cause permanent damage to the airways. Very rarely, a severe asthma attack can be fatal.

What is asthma?

Asthma is a condition where the airways become irritated and inflamed.

As a result, they become narrower and produce extra mucus. This makes it more difficult for air to flow into and out of the lungs and causes the symptoms of asthma.

Asthma symptoms

The symptoms of asthma may be mild, moderate or severe. They may include:

- coughing
- wheezing
- shortness of breath
- tightness in the chest

These symptoms tend to be variable and may stop and start. They are usually worse at night.

Causes

The exact cause of asthma isn't fully understood at present. Sometimes, the symptoms flare up for no obvious reason, but you may notice certain triggers that set off your child's asthma attack or make their symptoms worse. These triggers irritate the airways in your child's lungs and can include:

- infections such as colds and flu
- irritants such as dust, cigarette smoke, fumes and chemicals
- allergies to pollen, medicines, animals, house dust mite or certain foods
- exercise - especially in cold, dry air
- emotions - laughing or crying very hard can trigger symptoms, as can stress

Risk factors

Factors thought to increase a child's risk of developing asthma include those listed below.

- Asthma often runs in families and children can inherit the tendency to get inflamed bronchial tubes. Children can also inherit the tendency to have allergies (this is called atopy), which increases the risk of developing asthma.
- Boys are more likely than girls to get asthma as a child. But girls are more likely than boys to have asthma as adults.
- If you smoke when pregnant, your baby is more likely to get asthma. Children with parents that smoke around them are also more likely to get asthma.
- There is a theory (called the hygiene hypothesis) that children in developed countries are no longer exposed to the kinds of infections they would have had to deal with in the past, so their immune systems over-react to harmless substances.

Diagnosis

If you think your child has asthma, consult your GP. He or she will ask about your child's symptoms and if you have noticed any factors that trigger the symptoms. Your GP will carry out a physical examination. Your doctor may also do one or more of the tests listed below.

- Depending on the age of your child, your doctor may use a device called a peak flow meter to help diagnose asthma. A peak flow meter measures how much, and how fast, air can be expelled from your child's lungs. This device can also be used to monitor whether a treatment is effective.
- A spirometry test can also measure how well your child's lungs are functioning but provides more detailed information than a peak flow meter.
- Less commonly, other tests such as chest X-rays may be done to make sure no other breathing problems are present.
- An allergy skin test may be done to find out whether your child is allergic to certain substances.

Treatment

Asthma cannot be cured. Treatments aim to reduce the frequency, severity and length of asthma attacks. Because a lot of different factors are involved in asthma, each treatment plan will be individual, combining medicines and asthma management in the way that works best for your child.

Inhalers

These devices (sometimes called 'puffers') contain a gas that propels the correct dose of medication when the top is pressed down. This is inhaled into the airways. Inhalers need to be used correctly to work properly, so ask your doctor for advice.

There are two basic categories of inhaler medicines:

- relievers - which treat symptoms
- preventers - which prevent symptoms

Relievers are used when asthma symptoms occur. They can be short-acting or long-acting. Short-acting relievers (known as bronchodilators) contain medicines such as salbutamol (eg Ventolin) and terbutaline (Bricanyl) that work to widen the airways and quickly ease the symptoms.

If your child's asthma is not well-controlled using a regular steroid (see *preventers* below) and occasional use of a short-acting reliever, a long-acting reliever can be added to their treatment. Long-acting relievers contain medicines such as salmeterol (Serevent) or formoterol (eg Oxis). Reliever inhalers are usually a blue or green colour.

Preventers are used every day - even if your child does not have symptoms. They help to keep symptoms from occurring. Preventers usually contain a steroid medicine, such as beclometasone (eg Becotide) or fluticasone (Flixotide) that work to reduce the inflammation of the airways. Side-effects are unusual at normal doses (although they can sometimes cause a sore mouth or throat). It can take up to six weeks for the full effect of preventer medicines to build up, but once they do, the reliever inhaler may not be needed at all. Preventer inhalers are usually a brown, orange or red colour.

Spacers

A device called a 'spacer' can help your child to use their inhaler correctly. A spacer is a long tube which clips onto the inhaler. At the other end of the tube is a mouthpiece to breathe in and out of.

It is easier to use because it enables your child to activate the inhaler, then inhale in two separate steps. Children as young as three can learn to use an inhaler with a spacer. And for babies and very young children, a face mask can be attached. Using a spacer also reduces the risk of getting a sore throat from using a steroid inhaler.

Other medicines

Severe attacks of asthma are sometimes treated with a course of steroid tablets, such as prednisolone. In this case, steroids are used as a 'reliever' therapy. If they are taken for about a week, there are few side-effects. Side-effects of steroids are usually associated with taking them for several months or at high doses.

Several other medicines are available as tablets and inhalers, if the standard treatments are not suitable for your child (perhaps because of side-effects) or if asthma is still not adequately controlled. These include tablets of montelukast (Singulair), zafirlukast (Accolate) or theophylline (eg Sio-Phyllin).

Nebulisers

Nebulisers make a mist of water and asthma medicine that is breathed in. They can deliver more of the drug to