

Asthma in children

What is asthma?

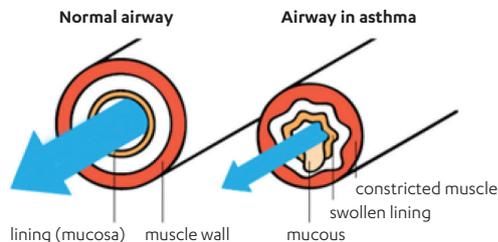
Asthma occurs when the small airways of the lungs become sensitised and then inflamed. During an asthma attack this inflammation leads to swelling of the lining of the airways. In addition, there is a build-up of mucus (phlegm) and the muscles around the airways tighten (bronchoconstriction). These factors cause narrowing of the airways and make breathing difficult.

One in four children, one in seven teenagers and one in 10 adults suffer from asthma. Asthma can occur in very young children, although it is difficult to diagnose in children under the age of one.

What causes asthma?

Asthma can affect anyone and it is not known what causes it. There is evidence that smoking during pregnancy or around young children may increase the risk of them developing asthma. Those with a family history of asthma, eczema or hay fever are more likely to be affected.

Doctors are not exactly sure why children with asthma have sensitive airways. A number of things may 'trigger' or bring on an asthma attack. The most common trigger in children is viral infections such as the common cold. Other common triggers are cigarette smoke and allergies such as to pet hair, pollens, mould and dust mites.



What are the symptoms?

Your child may have any of the following:

- Coughing (usually a dry cough) – usually happening at night or in the early hours of the morning, when the weather is cool, and during exercise. Cough alone does not mean asthma.
- Wheezing (a whistle in the chest when breathing)
- Difficulty breathing
- Working hard to breathe, sometimes trying to 'suck in' air
- Tightness in the chest
- An increased rate of breathing

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The symptoms vary from child to child. An asthma attack can take a few minutes to develop (such as when a child comes in contact with a trigger) or may come on gradually (such as with a cold).

What should I do in an emergency?

If your child has difficulty breathing, is very distressed or exhausted, follow their Asthma Action Plan. If they do not have one, use the Asthma First Aid Plan below.

Call an ambulance immediately (dial (000)) in a severe episode of asthma.

Asthma First Aid Plan

Step 1. Sit your child upright and give reassurance. Do not leave your child.

Step 2. Without delay give up to six puffs of a blue reliever puffer such as Ventolin® (if your child is six or under) or up to 12 puffs (if your child is over six) through a spacer. Shake the puffer before use. The medication is best given one puff at a time followed by four normal breaths then another puff and so on.

Step 3. Wait four to five minutes. If there is little or no improvement repeat steps 2 and 3.

Step 4. If your child is getting worse, or can't speak, is pale or blue around the lips, or sweaty, call an ambulance (dial 000) without delay.

Continuously repeat steps 2 and 3 while waiting for an ambulance

Treatment

There are different medications to help children with asthma. These are commonly given through a metered dose inhaler (MDI), or 'puffer'.

- **Relievers** – such as Ventolin® and Bricanyl®, which rapidly open narrowed airways
- **Preventers** – these come in the form of puffers or tablets. Pulmicort® and Flixotide® are puffers that treat the inflamed airways and are taken every day. Singulair is a tablet that is taken daily.

In the emergency department your child may have been given large doses of reliever to help open the airways. They may feel 'shaky', or want to run around more – these are all normal side effects of the medication and will wear off in time

The reliever may have been given through a spacer, which allows children to breathe the medication deep into the lungs. It also reduces the amount of medicine deposited at the back of the throat, which does not reach the lungs. A spacer is a clear tube that can be bought from a pharmacy. It is portable and easy to use. Spacers come in a variety of shapes and sizes, depending on your child's age.

In the emergency department, your child may have been given a medication called prednisolone (a steroid) to help reduce the airway inflammation and swelling. This usually takes four to six hours to work. You may be instructed to give your child more doses of prednisolone at home to help their asthma while they are unwell (the usual course of prednisolone is three days, given once per day).

Antibiotics, antihistamines and cough medicine are not helpful in treating asthma in children.

Home care

- Make sure your child uses their asthma puffers as directed
- Learn how to use the puffer and spacer correctly
- Learn how often to give the reliever and how much reliever to use
- Your child's puffers should be with them at all times
- Always use a spacer to give 'puffer' medication in children. A small spacer can be used in children under six years of age, whereas a large spacer should be used for children older than six. Clean the spacer regularly with warm soapy water and allow to 'air' dry. Do not rinse the spacer – the residual soap left on the inside of the spacer will minimise static electricity in the spacer, allowing more of the medication to enter your child's lungs.
- Help your child to stay active and healthy
- Ask your doctor for an Asthma Action Plan. This may help to decrease the number of asthma attacks, warn you when your child's asthma is getting worse and teach you what to do. A copy of the plan should be given to the child's child care centre, kindergarten or school.
- Take your child to your local doctor for regular check-ups. Do not stop your child's medication unless your doctor tells you to.
- Do not give puffer medication without using a spacer to children under six. Do not allow people to smoke in your home, car or around your children.

Follow up

The Cabrini emergency department and your local doctor are both experienced services to help you with this episode of asthma and with longer-term management. You should take your child for medical review within one or two days after visiting the emergency department, especially if your child is not getting any better or is getting worse.

When your child has recovered you should visit your local doctor to review or create an Asthma Action Plan.

What to expect

- In mild cases you will be able to treat your child's asthma at home
- Some children need to be observed in hospital during an asthma attack
- With the right treatment, most children with asthma can join in sports, leisure activities and lead active lives
- Children with asthma tend to have fewer attacks as they get older. By adulthood, two out of three will no longer have asthma attacks.

Seeking help

Cabrini Emergency Department (ED) is staffed by experienced emergency doctors and nurses 24 hours a day, 7 days per week. If you have any questions about your ED treatment our qualified ED staff can be contacted on **(03) 9508 1500** at any time. If you need to return to Cabrini ED for ongoing care we would be glad to take care of you again and if this occurs within a week of your initial consultation the doctor's fee will be bulk-billed.

You can also expect to receive a phone call or SMS message from one of our emergency nurses the day after you have been discharged. The nurse will be able to clarify any aspect of your diagnosis, treatment, or follow-up.

In a medical emergency return to Cabrini ED if it is safe to do so or go to the nearest hospital emergency department or call an ambulance – dial triple zero (000).

Want to know more?

- Contact Cabrini ED on **(03) 9508 1500**
- Ask your local doctor or healthcare professional
- Contact the Asthma Foundation Victoria, phone 1800 645 130 www.asthma.org.au
- Visit the Royal Children's Hospital website www.rch.org.au/kidsinfo
- Visit the Better Health Channel at www.betterhealth.vic.gov.au