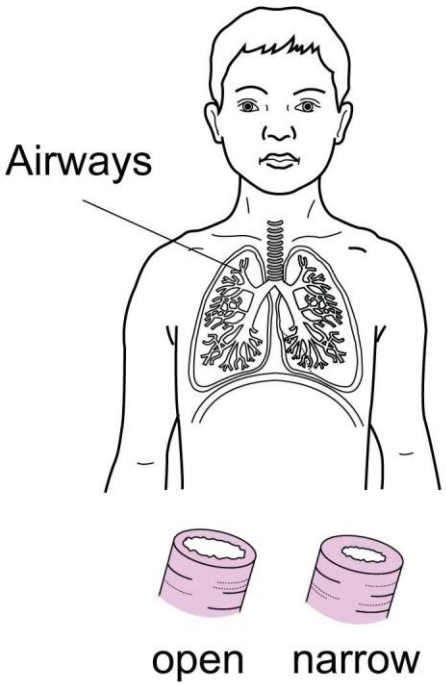
Perth Children's Hospital

Health Facts

The wheezing child

A wheeze is a whistling sound that is made as a person breathes. It is mainly heard when the person is breathing out.

In most cases a wheeze is caused by the sound of air trying to move through the breathing tubes of the lungs when they become narrow or tight. The breathing tubes are often called the airways of the lungs.



What makes a child wheeze?

There are several causes for wheezing in a pre-school aged child or baby. Some of the common causes for wheeze are explained below.

Viral chest infections

Viral chest infections are by far the common cause of wheeze in pre-school children. Children with viral chest infections tend to wheeze on 1 or 2 occasions, while some children will wheeze regularly with viral infections.

Up to 66 per cent of children who have frequent episodes of wheeze, will not be wheezy by 6 years of age and will not go onto subsequently have asthma. Viral chest infections cause swelling and mucus to build up in the airways. This makes the airways narrow and causes cough and wheeze. Many viruses can cause wheezing. These viruses are more common in the winter months.

Immature / floppy airways (Bronchomalacia)

In infants, particularly if they are well and have always wheezed. This occurs as the cartilage rings that make the airways stiff can be immature and flexible in young children. This results in airways that can narrow with breathing, and wheezing is usually worse when the child is excited or active and breathing harder. Children with this improve as they get older and gradually outgrow this condition with wheezing completely resolved in the majority by 3-4 years of age. The hallmark of this is the child has wheezed and always wheezed from shortly after birth and does not improve with asthma medications.

Asthma

Wheezing in older children may be due to asthma. A history of asthma, eczema and hay fever in the family increases the chances of a child developing asthma. Children with asthma have extra sensitive or "twitchy" airways inside their lungs. This means that their airways overreact and become narrow when they come into contact with certain triggers. When this happens, they can get short of breath, wheeze or cough. Some common

triggers are viral chest infections, cold air, smoke and exercise. Some children can have specific allergies, which may also trigger their asthma for example dust, mould, grasses and animal dander (hair, skin, scales and saliva).

Cigarette smoke

Young children who breathe in the second hand/passive cigarette smoke of people around them have a higher risk of wheezing. Cigarette smoke exposure can not only trigger wheeze in asthmatics, but also predispose children to the development of asthma, which they might not have developed, had they not been exposed to the smoke.

Keeping the house and car smoke free at ALL times, is a vital step in helping to avoiding wheezing in your child.

How will my doctor know what is making my child wheeze?

Your doctor will ask you questions about your child and family's medical background. This will help your doctor decide whether it is just a virus causing the wheeze, or whether there is a chance that this might also be asthma.

What treatment will my child need to get better?

Your doctor is best placed to advise you of the best course of treatment for your child.

- For a viral chest infection: Asthma medications may be tried for children older than 12 months. For younger infants with viral wheezing, asthma medications are less likely to help.

- A "reliever" medication, like Salbutamol (Ventolin®/Asmol®) will be administered and may help to open their airways to make breathing easier. Salbutamol is breathed into the lungs and is usually given through a puffer and a spacer. (In severe attacks through a nebuliser).

A steroid called prednisolone (Redipred®) may be given to help your child recover quickly from their wheezing episode by reducing the swelling in their airways. It is usually taken as a syrup or tablet over a 3 to 5 day period. When taken this way it is very safe with no risk of steroid side effects. What will I need to do once my child is well enough to go home?

- Antibiotics are not effective in the treatment of viral chest infections, so in most cases they are not needed. The virus will go away by itself. If we suspect a bacterium is causing the breathing difficulties, antibiotics may be used.

- In some children with severe respiratory infections, oxygen may be needed in hospital to help with their breathing. The oxygen is given through a face mask or by a thin tube that sits just inside the nose. The nurses caring for your child will closely check your child’s breathing and their need for oxygen therapy.

- For some children with frequent episodes of viral wheezing, a steroid inhaler, Flixotide Junior ® may be prescribed, especially in the winter months. This is taken twice a day everyday through the spacer until advised to stop.

Reliever medication:

- If your child was treated with Salbutamol while in hospital, you will be given a Salbutamol puffer, a spacer (and a mask if appropriate) to give Salbutamol to your child at home until they are recovered.

- In children, puffers must be given with a spacer to help ensure that the medicine can get down into their lungs. Your nurse will show you how to use the puffer with the spacer and parents and carers will need to assist with delivering the medication. Children under 3 years of age may also require a mask to deliver the medication

- You may need to complete a 3 or 5 day course of prednisolone, a prescription for this will be given to you before discharge from hospital. Instructions for these medications will be printed on the box

- Salbutamol inhalers and prednisolone syrup or tablets should be stored in a cool place, room temperature, they do not require refrigeration.

Follow-up appointment with your doctor

It is a good idea to take your child to see your family doctor/ GP within a week of going home. This is important, so your doctor can:

- check to see if your child has improved
- check how much longer your child will need to continue treatment
- to let you know when to have your child reviewed again.

It is important to remember how your child looks and behaves when they are well, so that you will notice the difference if they start to have breathing trouble.

When my child is well, they have no difficulty breathing, can play without becoming short of breath, do not cough or wheeze. When they are well, no regular medication is required.

Watch closely for any signs of a cold or flu. Wheezing or breathing problems may follow. Give Ventolin® 2-6 puffs every 3-4 hours as required and closely observe them.

Any one of the following signs means that your child is working harder to breathe:

- Sucking in at the base of the neck, below the breastbone or in between the ribs.
- Breathing harder or faster than normal.
- Tummy pulling in and out hard as they breathe.
- A persistent cough.
- Wheezing –whistling sound when breathing out.

If your child displays any of the above symptoms give 6 puffs of Ventolin® as needed and see a doctor or come to hospital as soon as possible.

When should I call an ambulance?

Call an ambulance and follow your action plan if your child shows any one of the following signs:

- blue at the lips, or
- can't say more than a few words at a time because they are so breathless, or
- so tired they look like they are going to stop breathing, or
- breathing very fast, cannot be comforted, are restless or having trouble feeding because of shortness of breath (infant), or
- if you or your child are frightened by what is happening.

While waiting for the ambulance, give your child their Ventolin® puffer through their spacer - 4 puffs every 4 minutes until the ambulance arrives.

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