

Asthma

& Wheezing in the
First Years of Life



A guide to wheezing for
parents and those caring
for infants and young children

FOR PARENTS & CARERS

what is **Wheezing?**



Wheezing occurs when the small airways of the lungs become narrow or constricted. This makes it difficult to breathe, and can cause a whistling sound when breathing out.

Wheezing can be a symptom of asthma where a combination of swelling, mucus and muscles tightening can cause narrowing of the airways.

However, asthma is not the only cause of wheezing. For example, wheezing can also be a symptom of other breathing conditions such as bronchiolitis which is inflammation of the lungs caused by a virus. In addition, other viral infections of the airways such as Respiratory Syncytial Virus (RSV) can lead to excess mucus production that can build up and clog the airways. This is particularly likely in a child born with narrow or abnormally shaped airways.

It is therefore important to remember that when narrowing of the small lower airways occurs, it can be caused by different things depending on the condition or problem that your child might have.

Are there different types of wheezing?

Studies in babies and children found that there are different types of wheezing in young children. These include transient (temporary) and persistent wheezing.

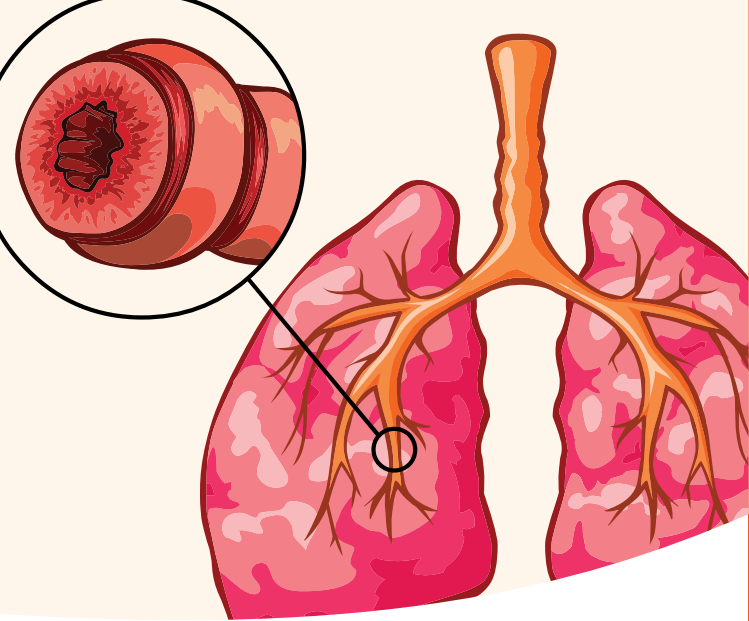
Transient wheezing affects more than half of all children who wheeze. It usually occurs when the child has an infection, and stops when the child gets better. Transient wheezing usually stops happening altogether by about 3 years of age as the airways grow and widen.

Persistent wheezing is found in children with wheezing that continues beyond the preschool years, and who have other allergic conditions. These include having eczema, hay fever, or a runny nose without a cold.

Even though we know about different types of wheezing, it can still be difficult sometimes to tell whether a young child has transient or persistent wheezing.

Bronchiolitis is a wheezing illness commonly caused by viruses. Bronchiolitis causes transient wheezing in babies, particularly infants and toddlers under 12 months of age. If your baby has a lung condition such as bronchiolitis, it does not necessarily mean that he or she will develop asthma.





What is asthma?

Asthma is a disease of the airways, the small tubes which carry air in and out of the lungs. Children with asthma have sensitive or “twitchy” airways.

When exposed to certain asthma triggers (such as cold air, exercise, pollen and viruses) the sensitive airways react. They can become red and swollen (inflamed) which causes the airways muscles to tighten and produce excess mucus (phlegm). This makes the airways narrow and difficult for a person to breathe.

Common asthma symptoms include shortness of breath, wheezing, coughing, and a feeling of tightness in the chest.

Asthma is a manageable health condition. Although at the moment there is no cure, with good asthma management and education, children with asthma can lead normal, active lives.

Is there a link between asthma and wheezing?

Wheezing is very common in the first few years of life. For most children it is temporary and does not mean that they have asthma.

Wheezing is more likely to be related to asthma if a child has both persistent wheezing and allergies. It is also more likely when one or both of the parents has allergies or asthma.

However, the doctor may not be completely sure whether it is asthma until the child has a lung function test (see the “*Asthma and Lung Function Tests*” brochure at nationalasthma.org.au).

Sometimes a child is too young to perform lung function tests. It is therefore also recommended that you take note of the following information and share it with your child’s doctor:

- how often your child has wheezing, shortness of breath and coughing
- if your child wakes at night because of coughing or wheezing, or commonly coughs when they exercise
- how often and how many puffs of reliever medicine (blue or grey puffer) and oral steroid medicine (such as *Redipred* or *Predmix*) he/she is using
- whether your child has ever taken regular preventer medicine (usually orange or brown puffer)

To identify which children are likely to develop asthma, it is also important to understand more about how asthma develops.

Working out whether your child’s wheezing is caused by asthma involves gathering different types of information over time, including family history, signs of allergy, and whether wheezing continues despite being treated with medications.

What might increase the risk of my child developing asthma?

Asthma affects different people in different ways, which is one reason why it is so hard to define and diagnose. Research suggests that asthma starts to develop very early in life (probably before birth) and involves a complex interaction between genes and the environment.

Family history

Family history is an important factor in a child developing asthma and wheezing. Having a family member who has allergies, asthma, or other diseases affecting the lower airways is also a risk factor for all types of wheezing. Maternal allergy and asthma in particular has been shown to increase the risk of persistent wheezing developing in a child.

It is therefore important to let your child's doctor know if there is history of asthma and allergy in your child's family.

Smoking

Exposure to tobacco smoke during pregnancy and after birth can hurt the development of your child's lungs. Being exposed to tobacco smoke also increases the risk of transient wheeze and asthma.

Women should not smoke while pregnant, and babies and children should not be exposed to smoke either.

If you or other members of your household smoke, speak with your doctor about steps you can take to help you quit smoking. For further support, also visit the Australian Government website quitnow.gov.au, or the Cancer Institute NSW website icanquit.com.au.

How do infections & allergies impact wheezing & asthma?

Infections such as bronchiolitis are the main cause of transient wheezing. Situations that increase the risk of getting infections (such as having more brothers and sisters or being in child care) are also risk factors for transient wheezing.

Researchers are continuing to investigate the relationship between viruses, other infections, allergies and asthma, as well as the link between vitamin D and asthma.

For more information on allergies see the publication "Asthma and Allergy - a guide for patients and carers" via our website nationalasthma.org.au.

Managing asthma and wheeze

If your child experiences wheezing or breathlessness, you should seek advice from your child's doctor.

The doctor will be able to assess your child's health, and recommend a suitable medicine if needed. If the doctor diagnoses a wheezing condition, they may prescribe a puffer medicine to help widen your child's airways. This medicine is known as a reliever medicine. It is the same medicine used to manage asthma symptoms.

Your doctor, nurse practitioner or pharmacist should also show you how your child should take their medicines, using a spacer device if available. For information on using asthma medicines see: nationalasthma.org.au or contact your local Asthma Foundation (see *Further information*).

Before leaving the doctor's clinic (or hospital if your child is admitted), make sure you have everything you need to manage your child's wheeze or asthma, such as:

- asthma medicines and/or scripts
- an asthma action plan (this is a plan that will tell you what to do if your child is experiencing symptoms)
- instructions on how to use the medicines and device/s — such as a spacer device with a puffer
- asthma education from a health professional and/or referral to a health professional for asthma education.

Medicines and medicine devices

For children aged 5 years or younger experts recommend using reliever medicine (such as *Ventolin* or *Asmol*) with a spacer when wheezing happens. You should use a mask with the spacer until your child is 4 or 5 years old.

A spacer is a holding chamber usually made of plastic and shaped like a football or tube. It makes it easier to take asthma medicine from a puffer, and also helps the medicine get straight to where it is needed in your child's lungs.

A puffer with a spacer is just as effective as a nebuliser, and is also easier to use, cheaper, and has fewer side-effects. *For more information on the use of spacers and nebulisers see the healthy living fact sheet "Spacer use and care" via our website: nationalasthma.org.au.*

Oral steroid medicines (such as prednisolone) will rarely be prescribed for ongoing treatment in preschool aged children. In general, most young children with transient wheezing will not need daily preventer treatment. *For further information see the National Asthma Council Australia's website: nationalasthma.org.au or our Kids with Asthma website: kidswithasthma.com.au.*

When to seek further medical help

It is important to follow your child's asthma action plan to identify signs and symptoms of asthma, so you can start giving reliever medicine early.

If your child needs reliever medicine such as *Ventolin* or *Asmol* every 3 to 4 hours (especially if a dose of oral steroids such as *Redipred* or *Predmix* has been given) you should go immediately to your nearest Emergency Department. Give puffer reliever medicine with a spacer if available.

If you have concerns about taking your child to the nearest hospital, call an ambulance on triple zero (000). The ambulance operator will support you with advice until the ambulance arrives.

If your child has visited hospital for treatment make sure you have received a discharge letter for your child's doctor.

It is also recommended that you make an appointment with your child's family doctor within a week following discharge from hospital.



What to remember:

- wheezing is very common in the first few years of life but more than half of all children who wheeze do not develop asthma
- asthma is more likely to develop in children who continue to wheeze beyond the age of three and have allergies, or have parents with allergies or asthma
- the process that leads to asthma starts very early in life (probably before birth) and involves a complex interaction between genes and the environment. Family history of asthma and allergy plays an important part
- exposure to tobacco smoke affects lung development before and after birth. Women should not smoke while pregnant, and exposure of babies and children to tobacco smoke should be avoided
- most preschool children will rarely be prescribed with oral corticosteroid medicines for ongoing treatment. For children aged 5 years or younger, the first line treatment is a reliever puffer with a spacer (and mask if needed)
- talk to your doctor if you think your child is showing symptoms of asthma. Seek further medical assistance if your child shows further difficulty in breathing, even after administering their medicine.

Children, asthma, and wheezing resources

Children, wheezing, and asthma

- Children's Asthma Resource Pack for Parents and Carers. Produced by the Sydney Children's Hospital Randwick, Children's Hospital Westmead & Kaleidoscope Hunter Children's Health Network: sch.sesahs.nsw.gov.au
- National Asthma Council Australia's *Kids with Asthma* website: kidswithasthma.org.au

Smoking

- Australian Government website: quitnow.gov.au
- The Cancer Institute NSW "I can quit" website: icanquit.com.au

Further information

- talk to your doctor or pharmacist
- visit the National Asthma Council Australia website at: **nationalasthma.org.au**
- contact your local Asthma Foundation 1800 645 130 **asthmaaustralia.org.au**
- visit the Australian Society of Clinical Immunology and Allergy website at: **allergy.org.au**

Although all care has been taken, this brochure is only a general guide; it is not a substitute for individual medical advice/treatment. The National Asthma Council Australia expressly disclaims all responsibility (including negligence) for any loss, damage or personal injury resulting from reliance on the information contained

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Note for health professionals:

Visit the National Asthma Council Australia website to:

- order printed copies of this brochure
- access the related information paper for health professionals