

# Asthma and babies

In babies, it is often difficult to distinguish asthma from other more common airway conditions that cause cough and wheeze; however, most other airway conditions are less likely than asthma to persist.



## What is asthma?

Asthma is a condition in which the airways are over-reactive, resulting in them narrowing and restricting airflow. This narrowing comes about because:

- ▶ the smooth muscle in the airway walls tightens (contracts);
- ▶ the cells lining the airways become inflamed and swollen; and
- ▶ extra mucus builds up in the airways.

In adults, asthma usually causes breathlessness, a feeling of chest tightness, wheeze, and coughing. In a severe asthma attack breathing can be very difficult.

In babies younger than 12 months, the airways are already small so it doesn't take much inflammation or contraction to cause symptoms. A recurring wheeze can be the first indication that a baby might have asthma. However, the presence of a cough alone does not tend to indicate asthma, as only very rarely is coughing the only symptom of asthma.

## What's causing my baby's coughing and wheezing?

It is not always easy for doctors to tell whether a baby has asthma or another condition causing similar symptoms, especially before 12 months of age. There are many other causes of wheezing in babies apart from asthma that must be considered.

Bronchiolitis is a common condition of babies under 6 months old. Most cases occur between late autumn and early spring. Caused by a virus, bronchiolitis starts like a cold, then the baby often wheezes, coughs and breathes quickly. There may also be a fever. Bronchiolitis generally lasts about 10 days; the cough, however, may last for weeks. In some infants, especially young babies, bronchiolitis can be severe, occasionally requiring hospitalisation.

Other conditions apart from asthma and bronchiolitis that can cause cough and/or wheeze in babies under 12 months are:

- ▶ respiratory viruses; and
- ▶ croup, an infection mainly affecting the larynx (voice box) and trachea (windpipe), causing the baby to have a harsh, barking cough.

And, less commonly:

- ▶ cystic fibrosis;
- ▶ lung development problems, including those due to a premature birth;
- ▶ milk aspiration (milk flowing into the airways instead of the stomach during feeding);
- ▶ a foreign body in the airways; and
- ▶ heart problems.

Most babies who have recurrent wheezing grow out of it by early childhood, and do not end up with asthma. Several things may suggest to your doctor that asthma is likely:

- ▶ several respiratory symptoms; for example, cough, shortness of breath and wheeze;
- ▶ frequent wheezing;
- ▶ severe wheezing spells, especially after 6 months of age;
- ▶ close relatives having a history of asthma, eczema or urticaria;
- ▶ premature birth;
- ▶ being exposed to cigarette smoke either before or after birth; and
- ▶ improvement when given an inhaled asthma medicine.

However, a definite diagnosis of asthma may not be possible until your child is old enough for lung function tests — usually 7 years old or older.

## Can I stop my baby getting asthma?

Asthma seems to be a product of the complex interplay between a baby's genes and a baby's environment, both before and after birth, especially in the first year of life.

The most important thing you can do to help prevent asthma is not smoke while pregnant or after your baby is born. Tell your partner, other family members and friends not to smoke inside the house or anywhere near the baby.

In terms of other measures that are sometimes suggested to reduce the risk of a child developing asthma, the National Asthma Council gives the following advice.

- ▶ Breast feeding should be encouraged as it has many benefits for your baby. Breast feeding may reduce the risk of asthma in early childhood, but as yet there is no evidence that breast feeding protects against asthma for longer than this.
- ▶ If you are not breast feeding, hydrolysed milk formulas seem to be associated with a slightly lower risk of childhood asthma than other formulas, including those made from soy.
- ▶ Giving your baby omega 3 fatty acid supplements does not appear to reduce the risk of childhood asthma or wheeze.
- ▶ Taking probiotics during late pregnancy and while breast feeding (or giving probiotics to formula-fed babies) does not seem to prevent asthma.
- ▶ Avoiding potential allergens in the diet (e.g. eggs, milk, nuts and shellfish) while pregnant or breast feeding, or omitting these foods from an older baby's diet, does not appear to prevent asthma. (However, the NHMRC recommends that whole cows' milk is introduced only from about 12 months of age.)
- ▶ Avoiding house dust mites does not seem to prevent asthma in young children.
- ▶ At present, it is not clear whether having a pet in the house protects against asthma or increases the risk of asthma in

children.

It is recommended that you do not go on a restriction diet during pregnancy or when breast feeding — unless you need to do so for a definite food allergy that you have had diagnosed — as this appears to have no influence over your baby developing asthma, and it may lead to you eating a diet that is poor for both you and your developing baby. Always check with your doctor or dietitian before making changes to your diet during pregnancy or breast feeding or to your baby's diet.

## Treating asthma in babies

If your baby needs asthma medicine, your doctor will explain how to give this to the baby. A reliever medicine with or without a preventer medicine may be prescribed; both are likely to be inhaled (breathed in) rather than swallowed.

For babies and very young children, the inhaler is attached to a small spacer chamber, which is attached to a face mask. The inhaler is pressed by the parent or doctor to dispense the medicine into the holding chamber, and the baby's own breathing then draws in the medicine from the spacer via the face mask.

Alternatively, a nebuliser may be used with a face mask. A nebuliser is a device that makes a liquid medicine into a fine vapour, ready for inhalation.

If your baby has been treated with asthma medicine and gets better on this treatment your doctor may wish you to continue with this approach. You will need to have your baby checked regularly by the doctor as changes in treatment are likely as your baby grows.

If your baby continues to cough or wheeze despite a trial of asthma medicine, this may mean that your baby needs to be reassessed as another condition may be causing their symptoms.

If your baby has been diagnosed with asthma, your doctor will teach you how to know when your baby's asthma is getting worse, and will give you an asthma action plan that tells you which medicine to give if this happens, and when to contact your doctor or a hospital.

The asthma action plan is an important part of keeping your baby's asthma well controlled. It is also important to make sure your baby has regular check ups and is given any prescribed medicine regularly.

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