

ASTHMA - *In Children*



ASTHMA
SOCIETY
OF IRELAND

ASTHMA IN CHILDREN

Introduction

Asthma affects 15 per cent of children in Ireland. About 30 per cent of under fives have had at least one attack of wheezing. This means that a number of parents have been told that their child has asthma and have seen for themselves what asthma can do. Most often asthma is mild and easily controlled by medicines but sometimes children may have attacks that can be frightening and very distressing. Most young children with wheezing episodes outgrow their asthma by school age. For parents it is always worrying to see their child suffer, no matter how mild the asthma may be. The Asthma Society receives numerous enquiries from worried parents who are keen to know more about asthma and to do the best thing for their child. The aim of this booklet is to help you to understand asthma in children of all ages. From page 13 onwards is a section on the most frequently asked questions in relation to asthma in children.

Describing asthma

Lungs have hundreds of tiny tubes, called airways that carry air in and out. Children with asthma have airways that are extra sensitive to substances which irritate (trigger) them. Although they vary from child to child, triggers such as colds, cigarette smoke or pollen can cause the airways to narrow as the surrounding muscles tighten. As your child's airways narrow, the inflamed and swollen lining of the airways produces sticky mucus. This often, although not always, makes a wheezing noise when they breathe. Children with asthma cough a lot, partly because their airways are irritable, but also because they produce a lot of mucus (phlegm).

Some children with asthma may also have other related conditions such as eczema, hayfever (allergic rhinitis) and itchy, streaming eyes (conjunctivitis). It is important to make sure that doctors take an overall view, so always remind them of your child's other conditions.

The cause of asthma

The tendency to develop allergies, including allergic asthma, often runs in the family but there are probably a number of other things that cause children from such families to develop asthma. It is known, for instance, that smoking during pregnancy increases the likelihood of childhood asthma and that children with asthma whose parents smoke will have more severe symptoms. Smoking seems to be an important cause but not the only one. In the first few years of life asthma may consist of acute attacks with colds. It occurs in response to virus infections and does not seem to be related to allergies.

How asthma is diagnosed

The typical symptoms of asthma in young children are wheezing and troublesome coughing. It is the pattern of symptoms that develop over time, which shows whether a child has asthma or not. Children will benefit once everyone knows they have asthma because they will then receive regular monitoring and proper treatment.

It is a good idea to keep a record of your child's symptoms and when they happen to help diagnosis. Symptoms can vary and a record may show a particular pattern. Children tend to develop their own pattern and severity of symptoms.

Spotting asthma in very young children

It may be difficult to spot asthma in very young children for three reasons:

- ❖ Thirty per cent of all children will have at least one period of wheezing during their first five years of life. Most of these children will never have breathing problems again, so doctors may not want to use the term 'asthma'.
- ❖ Doctors use a variety of words to describe asthma; wheezing, wheezy bronchitis, chesty coughs, colds that move onto the chest.

ASTHMA - *In Children*

- ❖ It is not easy to measure how well a young child's lungs are working because the device that is normally used for school children and adults (the peak flow meter) can only be used by children who are over six years old.

It may take a number of visits to doctor to get to the bottom of your child's breathing problems.

Patterns to look for

- ❖ Repeated attacks of wheezing and coughing, usually with colds.
- ❖ A cough that won't go away or keeps coming back.
- ❖ Restless nights due to wheezing and/or coughing between colds, especially after exercise or excitement, or on exposure to cigarette smoke and allergic triggers such as dust, pets, pollens or feathers.

It is important to note that for many young children a dry, irritating cough may be the only symptom of asthma, even though most people think that wheezing is the only asthma symptom. Healthy children do not cough. Children under one are most likely to suffer from asthma, which is set off by virus infections such as colds and a runny nose.

Different degrees of asthma:

Doctors often use the words 'mild', 'moderate' and 'severe' to describe asthma. Below are some guidelines explaining what they mean.

- Mild:** Coughs and wheezes but plays happily and feeds well
- Moderate:** Waking at night, can't run around or play without cough or wheeze
- Severe:** Too restless to sleep, unwilling to play at all, too breathless to talk or feed, lips going blue

Modern asthma management

Unfortunately there is no cure for asthma yet. But the aim of modern asthma management is to reduce children's symptoms and allow them to lead a healthy, active life, unaffected by their asthma. To achieve this, keep in regular contact with your doctor or practice nurse.

Asthma medicines:

Almost all asthma treatments these days are given by some form of inhaler. There are two main types of asthma medicine:

Preventers:

Preventers protect the lining of the airways and make them less likely to narrow when triggered. They do not bring immediate relief from symptoms. Preventers are usually recommended if a child needs to use a reliever more than once a day on a regular basis. Preventers must be taken regularly, even if your child is well. They take about 14 days to become effective. Once the symptoms are under good control, your doctor may possibly suggest reducing (stepping down) the treatment to a lower level.

Relievers:

Relievers make breathing easier by relaxing the tiny muscles surrounding the narrowed airways and allowing them to open up. They are mostly used after symptoms appear but sometimes they may give brief protection against triggers such as exercise before they appear. Relievers are particularly important for treating asthma attacks. It is worth noting that not all relievers work well for all children under one year old and so doctors use trial and error to find the one that works best. Symptoms cannot always be prevented so it is necessary to have a reliever medicine to hand at all times. Medicines have two names: the brand name and the chemical name, which is in brackets. Doctors may use either when they prescribe medicine for your child.

Complementary treatments:

Many people have suggested that complementary treatments have improved their asthma.

Because complementary treatments have not undergone the same strict trials that medicines have, doctors will rarely recommend them. Complementary treatments are often wrongly called 'alternative' treatments. There are no proven alternatives to modern medicines. If you decide to consult someone other than your doctor about your child's asthma, remember to continue giving your child the preventer and reliever medicines as agreed with your doctor.

Asthma management plan

Your doctor or practice nurse can develop an asthma management plan with you, which will explain when to use the preventer, and reliever and what to do if your child's symptoms get worse. The plan should be written down for you to keep at home.

Helping the medicines to go down:

Inhalers:

Most asthma medicines are breathed in (inhaled). Because they go straight into the lungs they can be given in low doses and have the smallest possible side effects. Even in infants, inhaled medicines are much more effective than the syrups, which used to be prescribed. There is a wide range of inhalers. Some are aerosols (puffers) like mini spray cans. Sometimes for children older than three years, dry powder inhaler devices are prescribed. These are good for giving preventer treatment, but they are not inhaled very well when children are tight-chested and wheezy. An aerosol may still be needed for reliever therapy at such times.

Spacers and puffers:

All young children should be prescribed a spacer to fit their aerosol puffer. Spacers are important because they make it possible to give very young children inhaled medicines, provided they are prescribed with a face mask. They also ensure that the medicine reaches the

lungs rather than landing on the throat or in the mouth. There are several different brands of spacer which fit different puffers and they do not all come with a mask.

Nebulisers:

Very occasionally children need extra help to take their medication. They may be prescribed a nebuliser by a hospital consultant; these machines create a mist of medicine which the child breathes in. While they are very helpful for a small minority, most children are better off using a spacer which is quicker to use and much less bulky.

Using puffers and spacers:

Getting your child to take inhaled medicine properly is the most important part of asthma management. The following suggestions may help you to give your child the medicines they need:

- ❖ Make sure that your doctor, practice nurse or chemist (pharmacist) shows you how to use the inhalers and spacer that you have been prescribed. You should also be told how to clean and when to replace them.
- ❖ Always give your child the medicine using an aerosol puffer fitted with a spacer (unless your child has been prescribed a nebuliser by a hospital consultant).
- ❖ Introduce your child to the spacer and puffer as toys. Use them yourself (without firing the puffer) to demonstrate. Try putting stickers on the spacer to make it look more interesting and try to turn giving the medicine into a game.
- ❖ Giving your child spacer or nebuliser treatment when asleep is always an option. This can be done by holding the spacer and mask over the sleeping child's face, so the treatment is breathed in.
- ❖ If your child is in distress and you want to give the medication quickly, remember the treatment can still be inhaled even when the child is crying.

Keeping a watchful eye:

Signs that your child's asthma is slipping from control and worsening include:

- ❖ Wheeze and cough first thing in the morning
- ❖ Increased symptoms after exercise or exertion
- ❖ Waking at night with a cough or wheeze
- ❖ Increased use of reliever therapy

It is important to agree with your child's doctor, in advance what to do if the asthma is getting worse. This should form a part of your child's asthma management plan and may include stepping up preventer treatment.

An asthma attack

During an asthma attack coughing, wheezing or breathlessness worsens quickly until breathing becomes difficult. Some children become too breathless to talk or feed during an attack. An attack can take anything from a few hours to a few days to develop and in young children it normally follows a cold. An asthma attack can be life threatening and therefore needs to be taken seriously. It can be frightening but knowing what to do can help you to stay calm and help your child.

The pattern of each attack tends to repeat itself in individual children. Sometimes this gives enough warning to allow a course of steroid tablets to be given to prevent the attack building up.

Steroid tablets

A short course of steroid tablets (one to four days) is sometimes needed to treat an asthma attack, in addition to the preventers and relievers. The tablets are called prednisolone tablets. They are like the steroids that our body makes naturally but are very different to anabolic steroids. Your child should not experience side-effects from steroid tablets that are taken occasionally, except for possible temporary hyperactivity.

In an emergency

Most parents learn to recognise an asthma attack. Follow an emergency plan that you have already agreed with your doctor, which will be along these lines:

- ❖ Give your child their reliever treatment immediately, wait five to ten minutes and repeat until their breathing improves or until help arrives. Give your child steroid tablets if they have been prescribed by your doctor.
- ❖ Hold or sit the child in an upright position. Lying down is less comfortable.
- ❖ Call your doctor or an ambulance (whichever is quicker in your area), or take your child to the nearest hospital.

If your child does go to hospital make sure that your own doctor is kept informed and that your child has a follow-up appointment either at the hospital or with your own doctor.

Asthma and daily life

Preventing the onset of asthma.

There are no simple cures or methods of preventing the onset of asthma. In any case most of the youngest children who wheeze occasionally after colds will grow out of asthma.

Breast-feeding.

Breast-feeding is often recommended for a number of very good reasons. But, even in families with a history of allergies, breast-feeding has not been shown to prevent the onset of asthma; at best there is a delay in the onset of symptoms. If artificial feeds are used, then soya milk is no better than cow's milk. If your child has eczema or other definite allergies, you should consult your health visitor or dietician to discuss low-allergy weaning diets. It has to be said that these diets are rarely of any value for wheezing.

Avoiding the triggers

Common Colds.

Some triggers are easier to avoid than others. For example, it is almost impossible to avoid colds and runny noses in young children. House dust can be very difficult to control and in the summer, pollen is almost everywhere. All parents would like to take positive steps to help their child but it can be very demoralising trying to avoid the unavoidable. Therefore it is important to discuss any changes you plan to make in your lifestyle with your doctor beforehand.

Below is a list of some common triggers that cause asthma symptoms to develop in young children.

Irritants:

Cigarette Smoke.

One trigger that all children should avoid is cigarette smoke. This should be the priority of all parents. Cigarette smoke is especially harmful to growing lungs and triggers asthma attacks. If planning another baby, parents should stop smoking during pregnancy too, to reduce the risk to the next child. Do not smoke in the home or anywhere around children. Be bold and ask others to do the same and avoid smoky places.

Allergies

House dust mites.

House dust mites are tiny creatures that live in our beds, carpets, soft furnishings and soft toys. About 60% of all school children with asthma are allergic to house dust mite droppings. Most pre-school children with asthma do not have known allergies to mites or other dust. Therefore it is worth weighing up carefully the costs and the benefits before adopting a strict regime of dust control, and only take steps if your child is very allergic to dust mites. Dust control can reduce the number of house dust mites but it will not get rid of them altogether. A combination of the following measures may help:

- ❖ replace the bedroom carpet with vinyl
- ❖ keep pets out
- ❖ damp dust once a week
- ❖ never put a child with asthma in the bottom bunk
- ❖ put a special cover over the mattress and wash the linen at 60 degrees Celsius a least once a week
- ❖ put soft toys in a freezer once every two weeks to kill the dust mites they harbour
- ❖ avoid feather and wool in bedding and pillows. See our “Dust in the Home” leaflet for more ideas.

Pollen.

Pollen can trigger asthma in older children. Again, few infants and very young children have this type of symptom unless they have other allergies or a family history of allergy. It can be difficult to avoid pollen at some times of the year. Children should not be stopped from playing outside, but playing in long grass or outside when the pollen count is high could cause problems. This might mean increasing the dose of preventer during the pollen season.

Pets.

Some children with asthma are allergic to birds and furry animals. Do not keep pets with fur or feathers if there is a family history of allergies and your child has asthma. It is much harder to get rid of a pet than never to have had one. Bathing the cat once a week has been shown to help.

Moulds.

Tiny pollen-like particles are released into the air by mould, which grows in almost any warm, damp area. Remove mould in the house quickly and avoid condensation where possible. It is important to keep rooms well aired.

Activities:

Exercise and excitement

Exercise, laughing and excitement can trigger asthma. If this happens then the asthma is not properly controlled. It is very important for children with asthma to have fun and enjoy exercise. With proper asthma management this should not be a problem.

Cold air and asthma:

Some children are sensitive to cold air and may cough or wheeze initially on going out. This should not mean staying inside. A dose of reliever just before going out may be all that is needed. Over wrapping babies and keeping the bedroom too warm does not help wheezy young children and can be dangerous for other reasons.

Childcare and asthma:

Many parents work or study when their children are young. Finding the right childcare can be difficult, especially for parents of children with asthma. There are a number of alternatives to try including childminders, nannies, day nurseries, playgroups, and nursery schools. To stop your child's asthma getting worse while you are away watch out for triggers and make sure your childcare workers know what to do in an emergency. Think about the following:

- ❖ Will people be smoking around your child?
- ❖ Are there any pets to consider?
- ❖ Will your childcare workers give your child medication if necessary? If so will they understand when and how to use it?
- ❖ Do your childcare workers know how to recognise and deal with an emergency?
- ❖ Can they contact you quickly at all times?
- ❖ Is your childcare worker properly registered with the local authority?

As with school children it is important to leave clear written instructions with the carers. Before your child starts school, check with the teacher and playground attendant that they know how to deal with your child's asthma.

Asthma and sleep

It is not normal for children with asthma to wheeze and cough during the night; the presence of such symptoms means that the asthma is not under control. This can mean disturbed sleep for both child and parents. Sleeping problems can have a major affect on quality of life; children can become tired and listless during the day and parents can become short-tempered and have difficulty coping. Every effort should therefore be made to get rid of night-time symptoms (as with all asthma symptoms) and to allow a normal sleeping pattern to develop. If night-time symptoms persist talk to your doctor who may want to alter your child's asthma management.

What next?

All parents would like to know if their child will grow out of asthma, but no one can predict the future. In very general terms the younger the children are when they develop asthma, the more likely they are to grow out of it by the time they start school. Children who develop asthma later (aged three to five) or who have a strong family history of allergies, tend to experience asthma during primary school but may grow out of it by their teens. Of those children who still have asthma at the age of 14, the majority will carry a tendency towards asthma into adult life.

YOUR QUESTIONS ANSWERED

What is Asthma and who gets it?

As many as one in five Irish children will have symptoms of asthma at some time. These children have over sensitive breathing tubes. These tubes react to a variety of things by becoming narrower, making breathing difficult. This narrowing is caused by a mixture of:

- ❖ Muscle tightening around the breathing tubes.
- ❖ Swelling of the lining of the breathing tubes.
- ❖ Extra mucus which may block small breathing tubes.

Will my child grow out of it?

Many children with asthma seem to lose symptoms as they get older. Some children will find symptoms return occasionally in the future and a few children will continue to have asthma symptoms throughout their lives.

How do I know if my child has asthma?

Asthma symptoms in children are:

- ❖ Breathlessness, often with wheeze.
- ❖ Coughing, particularly at night and after exercise.
- ❖ Tight feeling in the chest.

Your doctor can listen to the chest and may arrange a variety of blowing tests for those children old enough to participate.

Does asthma run in families?

Yes, but not everyone in the family will have it. Also there is a greater chance of developing asthma if there is eczema and hay fever in the family. Asthma, hayfever and eczema are similar allergy reactions, one in the lungs, one the nose and one the skin.

How is asthma triggered?

Symptoms are nearly always triggered by:

- ❖ Infection. In children these are usually viral colds.
- ❖ Exercise. A common trigger, but these episodes are usually short.
- ❖ Allergy. To things like house dust, cats, pollen etc.
- ❖ Sometimes by emotional upset or excitement.
- ❖ Smoke
- ❖ Fumes e.g. Paint, nail varnish and aerosol sprays.

How will asthma affect my child?

Your child may have trouble sleeping by coughing at night and he/she may have difficulty in exercising.

How do I know when my child's asthma is worsening?

By an increase in the symptoms mentioned before:

- ❖ Increased breathlessness
- ❖ Increased cough, especially at night and after exercise
- ❖ Waking up with asthma at night
- ❖ Needing more and more treatment with less and less effect.

If children are old enough (about six years) they can use a Peak Flow Meter. Blowing into one of these measures how well the lungs are working. To obtain a peak flow meters:

1. If you have a medical card and your doctor prescribes a peak flow meter, apply to your health board, enclosing the doctor's letter.
2. You can buy one from your pharmacist.
3. You can buy one from the Asthma Society, by mail order or by calling into our office during office hours. We offer members the three most commonly prescribed brands, at the lowest available prices. Phone the Asthma Society for their Mail Order Guide on 01 8788511.

Treatment

Are there things I can do to help my child's asthma?

Yes, by avoiding asthma triggers:

- ❖ Don't smoke and don't let people smoke in your home
- ❖ Try to keep dust down in bedrooms by a combination of damp dusting and weekly vacuuming. Wherever possible woollen blankets, feather filled duvets and pillows should be avoided. To avoid the house dust mite special mattress and pillow covers can be purchased. If bunk beds are used, **children with asthma should sleep on the top bunk**. For more information on this contact the Asthma Society for the leaflet "Dust in the Home"
- ❖ Children with asthma should not sleep in the same room as pets
- ❖ Although exercise can trigger asthma it should not be restricted. It may be necessary for some children to use medicine before exercise. Keeping fit helps asthma, but be sensible, children should not be made to exercise if they are unwell
- ❖ It is almost impossible to stop children catching viral colds and so probably not worth trying. Flu injections are not recommended for children

What about other treatments?

Both hypnosis and acupuncture have been shown to have small short-lived effects on asthma in adults. They are not recommended as routine treatment for children with asthma. There are lots of other "alternative" treatments available most of which have not been studied scientifically and should not be thought of as true alternatives to the usual asthma medicines. For some children with troublesome asthma it could be extremely dangerous to stop the usual prescribed treatment suddenly.

What about food allergies?

In a few children certain kinds of food or drink may make their asthma worse. If you are worried that a particular food or drink is affecting your child's asthma, discuss it with your doctor, contact your asthma nurse or contact the Asthma Live Line, see details on page 24.

How do Asthma medicines work?

There are many medicines available but basically they can all be thought of as either Preventers or Relievers.

Preventers

These help prevent swelling and narrowing inside the breathing tubes. They are taken every day and keep your child's asthma under control. They are a most important part of the treatment.

Relievers

These medicines work quickly to relieve symptoms. They open up the tube by relaxing the tightened muscle. They don't have much effect on the swelling inside. If symptoms are frequent it is important to prevent the breathing tubes from getting narrow and swollen.

As children grow, will their asthma medicines change?

Medicines used for the pre-school child with asthma are no different from those of older children but the dose is less for younger children. However special consideration needs to be given to the delivery device (how it is to be taken) and what is practical for the individual situation. Your doctor will discuss the choices.

What use are steroid tablets in asthma?

Steroid tablets are very useful in treating asthma. For children they are generally used in high doses for short periods of a few days. Used in this way they are very safe and effective at bringing troublesome attacks of asthma under control quickly.

What can we do during an asthma episode?

It is important to recognise and treat worsening asthma as early as possible. Mild symptoms would be – shortness of breath, slight wheeze, cough, or chest tightness. In a moderate episode a loud wheeze, obvious breathing difficulty, persistent cough, only able to speak in short sentences. Use reliever inhaler for immediate relief. You need a clear plan of action for this situation (preferably written down). For older children a peak flow meter can measure how the lungs are working. A drop in peak flow reading means worsening asthma and a change/increase in medicines.

What if my child's asthma gets worse at school?

Discuss your child's asthma with the teacher before this happens. Explain how they can prevent or recognise symptoms and supervise the treatment of asthma episodes early. The school should have a spare inhaler, with the child's name on it, available for emergency use and the child should have one in their bag for easy access. The Asthma Society's booklet "Asthma at School - A Teacher's Guide" may be of use for the teacher of your child. Ensure that the school has your written permission to give reliever medicine in an emergency and that your contact phone numbers are kept up to date in school records.

Can an episode be an Emergency?

Emergencies are not common as they can be prevented by giving treatment early. In a severe attack the child would be:

- ❖ Distressed and anxious.
- ❖ Gasping for breath.
- ❖ Have difficulty speaking two words.
- ❖ Blue around the mouth.

How you can help during an attack;

Over time, children with asthma learn from their experience of attacks; they usually know just what to do and will probably carry the correct emergency treatment. Because asthma varies from child to child, it is impossible to give rules that suit everyone; however the following guidelines may be helpful.

1. *Ensure that the reliever medicine is taken promptly and properly.*
A reliever inhaler should quickly open up narrowed air passages: try to make sure it is inhaled correctly. Preventer medicine is of no use during an attack; it should be used only if the child is due to take it.
2. *Stay calm and reassure the child.*
Attacks can be frightening, so stay calm and do things quietly and efficiently. Try tactfully to take your child's mind off the attack. It is very comforting to have a hand to hold but don't put your arm around the child's shoulder as this is very restrictive.
3. *Help the child to breathe.*
In an attack people tend to take quick and shallow breaths, so encourage the child to breathe slowly and deeply. Most people with asthma find it easier to sit fairly upright or leaning forward slightly. They may want to rest their hands on their knees to support the chest. Leaning forwards on a cushion can be restful, but make sure that the child's stomach is not squashed up into the chest. Lying flat on the back is not recommended.
In addition to these three steps loosen tight clothing around the neck and offer the child a drink of warm water because the mouth becomes very dry with rapid breathing.

Call a doctor urgently if:

- ❖ The reliever has no effect after five to ten minutes.
- ❖ Your child is either distressed or unable to talk.
- ❖ Your child is getting exhausted.
- ❖ You have any doubts at all about your child's condition.

If a doctor is unobtainable call an ambulance.

After the attack.

Minor attacks should not interrupt a child's activities. As soon as the attack is over, encourage the child to continue with what they'd been doing.

If symptoms recur, repeat treatment and rest – see your doctor.

Acknowledgements:

The Asthma Society would like to thank Dr Eamonn Shanahan, GP, Frances Guiney, Asthma Nurse Specialist and the National Asthma Campaign (NAC) for their help in preparing this booklet.



For further information on asthma visit our Website at:
www.asthmasociety.ie

Or phone our Asthma Line at 1850 44 54 64 for 24 hour pre – recorded information.

Or phone our Asthma Liveline to speak to an Asthma Nurse Specialist on 01 8788122. Monday and Friday: 9.30 – 1.00 and Thursday: 9.30 – 5.30. (Times may vary – please contact our office – *see contact details below* – if you experience any difficulty.)

The Asthma Society is primarily an information service which aims to enhance and augment the information provided by your GP, asthma nurse and chemist.



Address 26 Mountjoy Square, Dublin 1
Phone (01) 878 8511
Fax (01) 878 8128
Email office@asthmasociety.ie