# Asthma

Asthma is a respiratory illness involving a chronic inflammation of the airways, leading to wheezing, coughing and difficulty breathing. There are differing degrees of severity with asthma. Yet, no matter how severe, it is manageable with the right care and treatment.

## Facts about asthma

Asthma is currently one of the most chronic illnesses in Australia and the most common reason that children present to the emergency department, with 1 in 7 children reported to be suffering from asthma.

The incidence of asthma is increasing worldwide, and the condition is twice as likely to occur in boys than girls.

Asthma can be difficult to fully diagnose in young children, given that a third of all children experience coughing and wheezing symptoms in their first five years. Also, one of the diagnostic tools used to measure how well the lungs work (a "peak-flow meter") can only be used with children over five years. Wheezing in early childhood is less predictive of asthma than if it happens later in a child's life. If there is a recurrent pattern of coughing and wheezing over the age of five years, the probability that it is due to asthma rises to 80%.

The presence of other allergies, such as hay fever and eczema increases the likelihood of a concurrent condition of asthma by approximately 95%.

## Symptoms of asthma

There are a number of symptoms that characterise asthma. They inculde, intermittent wheeziness (varying in severity), shortness of breath and difficulty breathing, tightness in the chest, persistent coughing, and in more serious attacks there may be a blueness around the lips (known as cyanosis) which indicates a lack of oxygen. If you notice that your child experiences recurrent patterns of any of these symptoms, especially if symptoms worsen in the mornings or at night, talk to your doctor.

Most doctors do not diagnose asthma in babies less than 12 months until the airways in their lungs have matured. It is now generally acknowledged that wheezing in infants may occur for a number of reasons, and follows one of two patterns.

1) Transient early wheezers are those who experience symptoms of wheezing within the first 6 months and stop after the age of three. This accounts for approximately 60% of all early wheezers. These children will not respond to asthma medications because they are not asthmatic.

2) Persistent wheezers are those children who show asthma symptoms within the first 3 years of life, and continue on until they are diagnosed with asthma.

While asthma cannot be cured it can be adequately controlled with a number of treatment options. Relievers are sometimes known as bronchodilators (such as Ventolin and Bricanyl) and open up the bronchi by relaxing the muscles in the airways, thus allowing breathing to be easier. They are usually given as an inhaler that is used with a "spacer", which makes it simpler for children to manage. Relievers act quickly to relive symptoms of wheezing and breathlessness.

## Risk factors and Triggers

The two strongest risk factors for a child developing asthma are a family history of asthma and the presence of allergenic tendencies. In addition, passive smoking is associated with an increased risk of respiratory infections in early childhood, and may contribute to the development of asthma and other allergic reactions.

• If your child is diagnosed with asthma, try not to worry as most children with asthma will lead normal lives and often improve as they get older. The best way to help your child is to understand her condition and monitor what triggers her asthma; you can then minimise or avoid exposure to these triggers. Viral respiratory infections are the most common trigger for asthma attacks. Other triggers are allergies to food, such as milk, eggs, peanuts and food additives.

The preservative metabisulphite (commonly used for antioxidant effects) has also been demonstrated to trigger immediate asthma symptoms in two-thirds of children with persistent asthma. Inhaled allergens are similarly known triggers of asthma and include house dust mites, pet hair, moulds, cigarette smoke, pollen etc. Asthma has also been linked to changes in diet and weather, along with exposure to certain drugs, stress, pollution and even exercise.

Once you have established what triggers your child's asthma, it is suggested that you divide these triggers into groups: those you can avoid, those you can't avoid, and those triggers you don't want to avoid (such as exercise).

## Medications

Some reliever medications (such as prednisolone) are taken as a syrup or tablet, but this form of medication can take between 6 - 8 hours to work. Inhalation is generally accepted as the most effective means of taking an asthma medication, since the medication gets to the airways rapidly and takes effect within minutes.

Preventer medications are for children with intermittent or persistent asthma and are designed to be used daily, even when the child is well and not suffering with symptoms. These medications prevent the inflammation associated with asthma and aim to reduce the frequency and severity of asthma attacks.

All children with asthma will need a reliever medication and some will require a preventer as well. Preventer medications can be cortico-steroids or non-steroidal. After a few weeks on preventer treatment, it is advisable to consult with your doctor and establish whether the medication has reduced the number of episodes of asthma and the frequency and severity of symptoms between episodes.

There are some side-effects from inhaled steroids (such as slowed growth rate, among others) but evidence suggests a greater risk to growth if asthma is not adequately controlled.

Additional treatments for asthma include symptom controllers. These medications work like relievers but last longer (approx. 12 hours compared to 4). They are usually only added to your child's asthma treatment when the symptoms continue (even when using low to moderate doses of inhaled cortico-steroids).

In some cases, immediate action is required and you will need to call a doctor or an ambulance. If your child continues to wheeze, cough, experiences chest tightness or shortness of breath after using the reliever medication (or if the symptoms return within minutes of using it), take your child to the nearest local doctor or the Emergency Department. The same applies if your child is requiring reliever medication every 3 hours, or if she is finding it difficult to breathe or talk.

When dealing with a child with asthma it is important to consult with your doctor and establish an asthma action plan. This will tell you how to prevent and manage asthma attacks. Once you have done this, keep it close at hand and ensure all caregivers are aware of what to do in the event of your child having an asthma attack.

# Asthma patterns & treatment

The most common pattern, affecting 70 - 75% of all children, is infrequent or frequent episodic asthma. They may experience intermittent episodes (such as 1 day every 2 weeks) but remain symptom free in between. In 20% of cases, children will have mild, moderate or severe persistent asthma. This is similar to the episodic asthma pattern, but with shorter periods of respite in between. This group will benefit from regular preventive therapy.

In 5 - 10% of cases, children will experience persistent asthma with acute periods that may interrupt their sleep. These children may need inhaled cortico-steroids or combination therapy to control symptoms.

The type of asthma pattern your child has will determine the day-to-day management of the condition. You may choose to keep a daily asthma symptoms diary to help you track your child's condition, along with an asthma record card which will outline your management plan, medications and what needs to be done in the event of an acute asthma attack.

# In an emergency

In an emergency, the standard asthma first aid plan (as advised by Asthma Australia) may be used:

**Step 1:** Sit the child upright, remain calm and offer reassurance. Oo not leave the child alone.

**Step 2:** Give four puffs of a blue reliever puffer, one puff at a time, preferably through a spacer device. Ask the child to take 4 breaths from the spacer after each puff.

**Step 3:** Wait 4 minutes.

**Step 4:** If there is little or no improvement, repeat steps 2 and 3. If the situation remains the same, call an ambulance immediately on 000. Continue to repeat steps 2 and 3 while waiting for the ambulance.

## Want more information?

**For more information, talk to your doctor or contact the following organisations:**

**The Asthma Foundation of NSW**
Phone 1800 032 495
Monday- Friday 9am - 4pm

**Asthma Australia**
Phone 1800 645 130

**National Asthma Council**
www.nationalasthma.org.au

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**Department of Health**
http://www.health.gov.au

**Royal Melbourne Childrens Hospital -** online resources
www.rch.org.au

**The Sydney Childrens hospital** online resources
https://www.schn.health.nsw.gov.au/

**Healthdirect**
Phone 1800 022 222, 24 hours To speak to a registered nurse
www.healthdirect.gov.au

**Raising Children Network**
For information on raising children
www.raisingchildren.net.au

**Parentline NSW**
Phone 1300 1300 52
9am - 9pm weekdays and 4pm - 9pm weekends for advice on child health and parenting

## Local Services

**Lismore Community Health - Child & Family**
Phone 02 6620 7687
8am – 5pm, Monday to Friday to make an appointment.

**Goonellabah Child and Family Health Centre:**
Phone 02 6625 0111
9am – 4:30pm, Monday to Friday to make an appointment.

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