Asthma

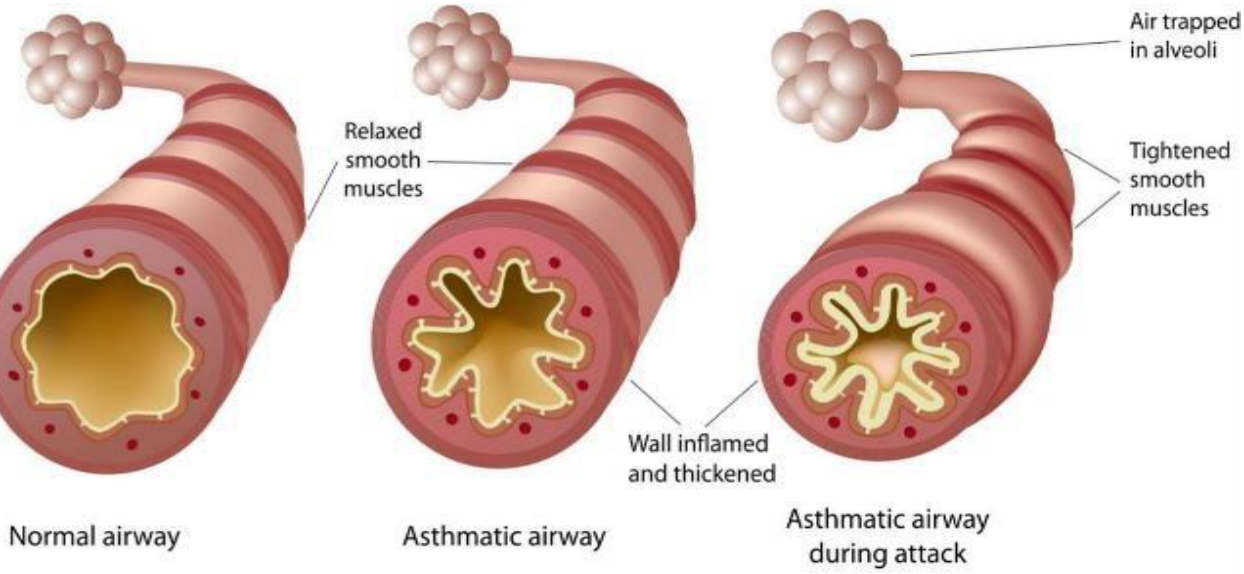
Check list

Before discharge from hospital, you will be provided with the following:

1. Inhaler, spacer, mask (if applicable) and written instructions on how to use and care for your spacer. A nurse or doctor will have demonstrated the correct spacer technique
2. An asthma action plan, given and explained.
3. Follow-up advice with your GP. If you are being followed-up at Perth Children's Hospital (PCH) a clinic letter will be posted to you a month prior.
4. Any additional medication, to continue at home, that has been prescribed.

What is asthma?

Asthma is caused by inflammation/swelling of the airways (breathing tubes) that carry air to and from the lungs.



These airways are highly sensitive and when the airways are exposed to certain triggers they narrow further from:

- muscles in the airway squeezing the airway tight
- lining of the airway becoming swollen further
- airways producing extra mucous.

Symptoms of asthma

- **Coughing** – may be a dry cough at first.
- **Wheezing** – a whistling sound heard as the child tries to push air out of the tight, narrow airway.
- **Shortness of breath** – breathing may become fast and shallow.
- **Tight chest** – it may feel like a tight band around the chest, younger children may feel like “an elephant is sitting on their chest”.

Younger children may complain of tummy pain, as extra effort required to breathe puts extra strain on breathing muscles including tummy muscles.

Asthma attacks can come on quickly or slowly.

It’s important to recognise and treat asthma attacks early to stop the attack from getting worse.

Asthma triggers

Asthma is triggered by a variety of things; some people have a lot of triggers; some only one or two.

Common triggers include:

- respiratory viruses
- cold air/weather changes
- exercise
- cigarette smoke/vapes/wood fire/bush smoke
- allergies, including animals, house dust mites, grasses and pollens.

House dust mites are the most common allergy in asthmatics. These critters live in furnishings, bedding soft toys and carpets. If your child is allergic, minimise stuffed toys on the bed, remove carpet from the bedroom if applicable, and cleaning bedding regularly are sometimes helpful strategies.

Allergy testing can only be done by skin prick testing or a blood test. If you suspect your child has significant allergies, consider discussing this with your doctor.

Treatments for asthma

Reliever medication

Blue/grey inhalers:

- used to temporarily relieve asthma symptoms
- work quickly to relax the tight muscles in the airways and give quick relief
- should only be given when needed
- If needed 3 or more times per week outside of exercise it would indicate that asthma is not well controlled and a preventer should be considered
- examples are Salbutamol and Terbutaline (Ventolin®, Asmol®, Airomir®, Bricanyl®).
- possible side effects (these only last for a few hours):
    - “the shakes”
    - rapid heartbeat
    - hyperactivity

Preventer medications

Tablet preventer therapy:

- Montelukast (Singulair®), a non-steroidal preventer that comes as a chewable tablet
- used by itself or in addition to another preventer.
- may be effective for children with exercise induced asthma or children with allergies
- also be helpful in hay fever
- taste is well liked by most children so it is sometimes used when children struggle with other medications.
- possible side effects:
    - aggressive behaviour
    - sleep disturbance
    - anxiety and mood changes including depression.

Most children tolerate Montelukast without any side effects. The above side effects usually develop in the first 2 weeks after starting the medication, so this is the time to be most mindful of any changes in your child.

If side effects occur it is important to stop taking montelukast immediately. Side effects usually resolve within a few days after stopping the medication. If side effects occur please speak to your GP about an alternative.

Inhaled preventer medication

Corticosteroid inhalers:

- autumn coloured inhalers
- work slowly to reduce swelling and mucus in the airways
- need to be taken every day as prescribed
- examples are Pulmicort®, Flixotide®, Qvar® and Alvesco®.
- possible side effects:
    - sore throat
    - hoarse voice
    - oral thrush.

These side effects are rare in children due to the lower doses prescribed. To minimise the risk, rinse your mouth out and spit after inhalation.

Combination inhalers:

- Combination inhalers for asthma combine a corticosteroid and a long-acting reliever medication.
- There are several combination inhaler devices available, your doctor or asthma nurse will discuss with you which ones are the most suitable.
- Combination inhalers include Seretide®, Pavlitide®, Symbicort®, Breo®, Flutiform®

Inhalation devices

There are a large range of inhaler devices available and are grouped generally into metered dose inhalers and dry powder devices.

Metered dose inhalers (which also include Rapihaler® and autohalers):

- spray type devices that use an aerosol to deliver medicine
- **should be given with a spacer device (pictured right) to allow the maximal amount of medication to be breathed in**
- devices inhaled straight into the mouth without a spacer most of the medication ends up at the back of the throat and only 5% of the medicine is inhaled into the lungs.

Dry powder devices (turbuhaler, accuhaler, ellipta, and respimat):

- release a powder with each dose that can be inhaled into the lungs
- generally only suitable for children aged over 8 years
- don't need a spacer
- require specific techniques that are different for each device to be used correctly.

If you are confused about how to use your asthma devices, helpful videos can be found on the National Asthma Council how-to website: https://www.nationalasthma.org.au/living-with-asthma/how-to-videos

Asthma educators can also check your child's device technique via Respiratory Care WA. Call 1800 278 462 or visit: https://respiratorycarewa.org.au/education/

Oral steroids

- For severe episodes of asthma, an oral steroid may be prescribed for one to five days, depending on the severity and duration of the attack.
- Oral steroids especially if used several times per year have risks of weakening bones and delaying growth. If your child has used steroids more than 3-4 times per year it is worth discussing with your doctor whether it would be safer to change your preventer.
- Possible side effects:
    - increased appetite
    - labile (unstable) behaviour.

These side effects will cease once the course of medication is ceased.

Tests for asthma

Asthma may be diagnosed based on symptoms and response to medications.

The main tests that can help diagnose asthma are:

Spirometry

- for children 6 years and over
- child blows hard and fast into a machine to measure how fast and how much you can blow
- can also be measured again, after reliever medication is given, to see if there is a change.

FeNO test

- for children 6 years and over (occasionally younger)
- requires subject to breathe constantly into a machine that can measure allergic inflammation.

FOT

- for children 4 years old and younger
- measures airways properties while a child is breathing normally
- can also measure changes in airways after a reliever medication is given.

Is your child’s asthma under control?

Any of the following symptoms when your child is well indicates poor asthma control:

- coughing at night
- chest tightness on wakening
- waking up tired
- falling asleep during the day

- cough or wheeze with exercise
- unable to keep up with peers during exercise and play
- using reliever therapy more than twice a week (not including before exercise)
- missing school or work because of asthma
- requiring multiple GP or hospital visits because of asthma
- requiring multiple courses of oral steroids.

See your doctor or asthma specialist for advice on getting your child's asthma under better control.

Asthma at school

When asthma is well controlled it should not impair your child's ability to participate at school. It is important, even if your child's asthma is well controlled that the school has an asthma action plan. You may also need to supply the school with a spare reliever inhaler and spacer.

School asthma plans may defer from the asthma plan you are sent home with as most school plans concentrate on delivering asthma first aid to keep your child safe. It is important for these plans to be focused on being easy for educators to understand and follow.

Respiratory WA has a school action plan that has been approved by the WA Department of Education: https://respiratorycarewa.org.au/wp-content/uploads/2024/08/Student-Asthma-Management-and-Emergency-Response-Plan-Resource.pdf

Could my child's problem be something other than asthma?

Asthma is very common and effects approximately 10% of the population. It makes it the most likely cause of most children's breathing problems. However, if your child has these symptoms there is a stronger possibility that it may not be asthma:

- **Your child has a chronic wet cough** (longer than 4 weeks)
    - This can be protracted bacterial bronchitis. In this condition there is usually a daily cough that is wet and never dries or clears. If this is what your child is experiencing, it is worth discussing with your doctor whether a course of antibiotics would help.
- **Your child describes tightness in their throat**
    - This may be inducible laryngeal obstruction (ILO). This is a condition that can be mistaken as asthma symptoms and does develop in asthmatics. This is a condition on top of asthma (occurring in 30% of severe asthmatics). It is caused by voice box/laryngeal tightness/spasm which is most commonly triggered by exercise. It often gives symptoms of throat tightness, which does not improve with increasing medications. It can be treated through exercises provided by a speech therapist. If you suspect this, discuss with your doctor regarding specialist review.

- **Your child does not improve with asthma medications**
    - If your child doesn't see improvements from asthma medications or still gets very sick in spite of asthma medications it could be a problem with the asthma medications not being right or being incorrectly used. If these have been checked and alternative asthma medications also do not work, please discuss with your doctor about considering further specialist review.

These tests are usually only done when children are well as they can sometimes make asthma symptoms worse.

Contacts and resources

Please do not hesitate to ask questions if you do not understand or need more specific information. Resources in languages other than English are available through the PCH general paediatric nurses.

PCH switchboard: 6456 2222
Department of General Paediatrics: 6456 5671
(the clerical staff will forward your call to one of the nursing staff).

Respiratory Care WA

- Monday to Friday, 9am-5pm (free telephone advice)
- Telephone: 9289 3600
- Free call 1800 ASTHMA (1800 278 462)
- PO Box 864 West Perth 6872
- Email: ask@asthmawa.org.au

Fact sheet

Asthma videos

National Asthma Council Australia

Asthma Australia

Useful contacts

- Your GP
- Health Direct: 1800 022 222
- Quitline (support with quitting smoking): 13 78 48

Government of **Western Australia**
Child and Adolescent Health Service

This document can be made available in alternative formats on request for a person with a disability.

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