

CLINICAL SKILLS: ASTHMA

Asthma is a common condition and is relevant in both paediatrics and adult medicine. As well as providing [advice and information](#) about asthma to patients, it is also important to appreciate the variety of inhalers available and how to [teach and assess inhaler technique](#).

What is asthma?

- Asthma is a condition of the lungs
- It causes shortness of breath and wheeze, due to a reversible narrowing of the airways
- It is a very common condition, occurring in 8% of the population
- Mainly occurs in children
- In 90%, it has resolved during adolescence

What causes asthma?

- Asthma is caused by a variety of different factors
- There is usually a genetic predisposition in sufferers, where there is a family history of asthma, hayfever or eczema
- This makes them hypersensitive to external stimuli such as:
 - Pollen
 - House dustmite
 - Exercise
 - Smoking
 - Air pollution
 - Cold air

What are the symptoms?

- The symptoms vary for different people
- Patients may be asymptomatic most of the time
- Early morning and late at night are common times for symptoms to appear
- Patients may report a feeling of tightness in their chest and a feeling of shortness of breath
- They may report an audible wheeze when they exhale, and may report a dry cough (particularly at night)
- They may report 'attacks' where there is a rapid onset of symptoms
- When exposed to certain triggers they may report that their exercise tolerance is greatly reduced, feeling breathless with little exertion. Additionally, exercise can be a trigger in itself, with patients remaining asymptomatic unless they start vigorous activity
- It is important to recognise these symptoms and assess their severity so that treatment can be started

How can you treat asthma?

- Firstly, it is important to give information to the patient and provide them with ongoing support. There are many charities and support groups available for this condition
- Lifestyle factors are very important in improving asthma, especially removing triggers, e.g.:

- Reduce house dust mite – remove carpets, curtains, etc. put a plastic sheet over the mattress, vacuum regularly
- Stopping smoking is **vital**, as is stopping family members smoking
- Reducing weight and improving exercise tolerance
- Carefully discussing any possible triggers related to pets - this can be a tricky topic, and it is difficult to remove a beloved family pet!
- Vaccinations
 - The annual influenza vaccine is important, it might be relevant to discuss the pneumococcal vaccine if they are at particular risk
- Medications include:
 - Salbutamol inhaler – taken as required, both when symptoms start coming on (the earlier the better), and prophylactically - e.g. 5 minutes before starting to exercise
 - Side effects: (usually dose related)
 - Tremor
 - High heart rate
 - Agitation
 - Inhaled steroids – every day regularly (e.g. twice a day) to minimise symptoms
 - Anti inflammatory
 - Side effects:
 - Sore throat and hoarse voice if used regularly
 - Candida infection (oral thrush) is possible, and therefore use of the inhaler should be followed by cleaning teeth or rinsing mouth every time after use
 - If symptoms don't fully improve your symptoms, there are many other medications to be tried (in the first discussion about asthma, it may not be relevant to explore these other treatments, as the first steps on the 'treatment ladder' are salbutamol
 - It is important to recognise severe attacks – these may require additional treatment in hospital if they can't be treated at home. Warning signs should prompt the patient or family/friend to seek urgent medical attention, and these include:
 - Breathing very quickly
 - Being unable to talk in complete sentences
 - Becoming drowsy
- Monitoring of the condition
 - This is using a peak flow meter
 - It may be appropriate to show the patient how to use the peak flow meter at this point
 - You should ask the patient to keep a peak flow diary - daily (or twice daily) readings to assess for response to any treatment that is started
- Follow up:
 - You will be regularly followed up to check how you are getting on with your treatment with your GP

To conclude the consultation:

- Ask if there are any further questions or anything that needs to be clarified
- Ask the patient to come back for another appointment soon to review their peak flow diary and response to any treatment that you discuss
- Give the patient a leaflet and links to relevant asthma charity groups (e.g. www.asthma.org.uk)

Additional notes:

- **Medications for asthma**
 - Inhaled steroids:
 - Budesonide (Pulmicort®)
 - Fluticasone (Flovent®)
 - Ciclesonide (Alvesco®)
 - Beclomethasone Dipropionate (Beclazone, QVAR®)
 - Side effects:
 - Hoarse voice
 - Thrush
 - Reduced risk by washing out mouth after taking
 - Ipratropium bromide
 - Atrovent
 - Salbutamol
 - Proventil
 - Ventolin
 - Terbutaline
 - Side effects:
 - Increased heart rate
 - Restlessness
 - Tremor (i.e., shaky hands)
 - Long acting beta agonists
 - Serovent (salmeterol)
 - Foradil (formetorol)