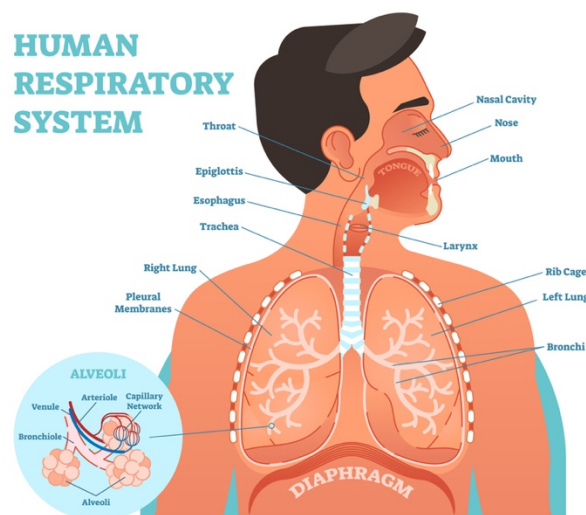


## Why do we feel breathless?

### Asthma

Healthy lungs are needed for effective and effort-free breathing. As we discussed in our last blog, **what happens when our lungs are damaged**, <https://australianpolyclinic.com/816-2/>, there are multiple reasons for being breathless due to a variety of lung diseases. Asthma is one of the most common lung diseases causing breathlessness.

Before we talk about asthma, we need to know about the **airways or bronchi**. Airway starts from the mouth and includes throat, larynx, windpipe/trachea which divides into two major bronchi. These continue to divide as these go to further parts of the lungs. These airways transport air from outside our body to alveoli in all parts of lungs where gas exchange happens. During gas exchange, oxygen gets transferred to the blood whilst carbon dioxide is transported from the blood back to the lungs, to be exhaled.



In patients with asthma, the small lung tubes/airways (bronchi), which transport air from the outside our body to different parts of the lungs, get inflamed. The inflammation can be intermittent or constant, leading to either intermittent or persistent symptoms of asthma. Inflammation of the airways leads to the swelling of the lining of airways, reducing inside calibre of the airways along with spasms in the muscles lining the small airways. There is also associated increased mucus production which further compromise the inside lumen.

The common symptoms of asthma include cough which is intermittent initially and worse overnight as airways lumen size is down due to natural diurnal (from day to night) variation. In patients who have persistent asthma over a long period of time, they may develop permanent cough. Typical asthma cough is dry most of the time, though patients may feel their chest being congested. Sputum is usually scant and thick in consistency. A lot of sputum on daily basis either indicate superadded complication to asthma or another disease process entirely.

The narrowing of the airways can lead to wheezing, a whistle like sound, coming from the chest. It is worse or more noticeable if asthma is uncontrolled and at night-time/during sleep. Wheezing itself does not cause any breathlessness but indicate narrowing of the airways.

Another very common symptom of asthma is breathlessness which patients can experience in different ways, most commonly “can’t breathe”, “heavy to breathe”, “breathlessness”, “difficulty breathing”, “chest not right”, “can’t get my breath” etc. When this is present, it usually gets worse on any moderate to severe exertion or exercise. Due to diurnal variation of airway narrowing, breathlessness is also usually worse in the late afternoon, overnight or very early in the morning. These symptoms usually get better if patient takes any inhalers which dilate the airways, for example, Ventolin.

The other symptoms of asthma include chest tightness or pressure which occasionally feels like dull chest pain.

Asthma can be associated with other diseases, more commonly **allergic rhinitis/rhinosinusitis** which is commonly known as hay fever. Its symptoms include runny nose, frequent sneezing, itchy eyes/nose, sinus congestion and postnasal drip. **Gastro-oesophageal reflux disease (GORD)** is seen more commonly in patients with persistent asthma. Uncontrolled reflux disease makes asthma control worse too.

#### **Asthma Triggers:**

Asthma can get worse with different triggers which commonly are viral respiratory tract infections/flu. Other common triggering factors include smoking, poor quality air/pollution, very cold/dry air, allergens (pollens/dust mite), mould, certain animal exposures (cats, dogs, horses), strong smells, and heavy exercise.

#### **Diagnosis of Asthma:**

Accurate diagnosis of asthma is very important. It requires thorough symptoms analysis, physical examination and breathing tests. Sometimes, we need to perform a chest X-ray and some blood tests too for complete assessment.

**Spirometry** or simple breathing test should be performed in all patients with suspected asthma. It is also used to monitor the control of asthma in the long run. It requires patients to breathe in the machine, to measure amount of air being exhaled. If the spirometry/lung function is reduced, it signifies significant asthma burden.

In patients with mild intermittent asthma, spirometry may be normal when these patients may not have any symptoms. In patient with high clinical suspicion, we use bronchial challenge test in which we make patients inhale certain medicines and measure the response of their spirometry.

#### **Treatment:**

The treatment of asthma requires inhaler therapy which can be divided into two groups. First group is called reliever. These medications open the small airways in few minutes and relieve the symptoms quickly. The typical example is Ventolin.

Second type of medicines are called preventer inhalers. All of asthma preventers have steroids in them in combination with other medicines. You may recall the main problem in asthma is inflammation and steroids are strong anti-inflammatory medicines. Many a times, we use long-acting bronchodilators in different strengths in combination with steroids in inhalers. These medications invariably control asthma in more than 95% patients if taken appropriately.

**Severe persistent asthma:**

Small number of asthmatic patients may develop severe persistent asthma that requires frequent oral steroid which has its own side effects in taken for long duration or frequently. We can use newer asthma injections (usually monthly dosing) which works quite well for majority of these patients with severe persistent asthma though cost remains a hindrance.

If you are worried about any asthma symptoms and would like to get thorough assessment, you can book an appointment at Australian Polyclinic, situated in DHA phase 5 CCA, Lahore.

You can explore and learn more about our services at [www.australianpolyclinic.com](http://www.australianpolyclinic.com)

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