

Why do we cough? Common reasons

Cough is a very common symptom of many diseases which affects the lungs, airways, throat, nose, sinuses, and ears. We may cough “normally” from time to time, to clear any irritant or mucus in the airways too.

Cough reflex is inbuilt/inherent protective reflex in our bodies. Multiple stimuli like touch, distention or displacement of airway/throat can cause cough. Acid exposure in any part of airways can cause cough. Hot and dry air, cold air, dust, and any inhaled irritants can lead to activation of cough receptors resulting in involuntary cough reflex.

Once cough receptors are activated, a signal is sent to the brain part called medulla (cough centre) which sends signal down the spinal cord and nerves which control diaphragm and throat/chest muscles. It is a very coordinated action of muscle and nerves, to produce a cough reflex.

Types of cough:

Cough is usually divided into three categories.

1. Acute cough, of less than 3 weeks duration
2. Subacute cough, duration from more than three weeks to eight weeks
3. Chronic cough, more than 8 weeks' duration

Acute cough:

Acute cough is one of the most common cough types. It usually happens with viral and bacterial throat/ear and chest infections. Chronic conditions like asthma and COPD can present with acute cough if those conditions were under good control previously. It usually happens in context of infection or strong triggering event like dust or irritant exposure. Also, all diseases which usually presents with chronic cough, can present with acute cough sometime.

Subacute cough:

Cough which lasts more than three weeks but less than eight weeks is called as subacute cough. The most common cause of subacute cough is **post-infectious cough**. This happens when someone has recovered from viral or bacterial throat or chest infections, but their lungs and throat are still very sensitive. These patients cough quite often. Usually there is minimal to no associated sputum production. This usually can last for few weeks.

Another cause is whooping cough which is getting more common now a days. Acute infection lasts for a week or so but can leave patients with significant cough which can be severe enough to disturb their routine and sometimes associated with post cough vomiting.

People who have recent asthma or COPD flare-up can have cough for few weeks, especially those patients whose symptoms were under good control previously.

Chronic cough:

The most common causes of chronic cough which lasts more than 8 weeks are asthma, COPD, non-asthmatic eosinophilic bronchitis, upper airway cough syndrome and gastro-oesophageal reflux disease.

Unusual causes include lung cancer, throat/larynx cancer, bronchiectasis, interstitial lung diseases, and inhaled foreign body usually in children. Cough can sometimes be psychogenic in nature.

The patients with **asthma** will have cough, worse at night, associated wheezing, breathlessness worse on exertion and chest tightness. Many asthmatic patients may have associated sinus allergic disease and skin allergies/atopy.

COPD (chronic obstructive pulmonary disease) patients usually have significant smoking history, usually more than 20 years. Chronic cough with small sputum production, chest tightness, breathlessness and wheezing are other features. Surprisingly, these patients are not worried about their cough and that is usually not a reason for their consultation with a doctor.

Gastro-oesophageal disease (GORD/GERD) is very common reason for cough in patients who do not have actual lung disease. Oesophagus or food-pipe when stimulated with recurrent acid exposure sends signals to cough centre, which results in coughing. This cough is usually worse at night but not associated with breathlessness or chest tightness/wheezing usually.

Upper airway cough syndrome/vocal cord dysfunction (post nasal drip):

This condition is also commonly a cause for chronic cough. It may be associated with asthma too. It is usually due to post nasal drip (secretions dropping from back of nose to the throat) irritating throat and voice box (larynx), resulting in cough. These patients may have variable voice changes.

Vocal cord dysfunction is one type of upper airway cough syndrome which is due to spasms in the vocal cords in our voice box, causing intermittent hoarseness, wheezing, throat tightness, feeling of something stuck in the throat (globus) and occasional exertional breathlessness. These symptoms are generally not a problem once patients go to sleep. It can be an isolated problem, or many a times associated with significant asthma too, making the management quite challenging as inhaler medicines can make vocal cord dysfunction worse but are needed for effective asthma management.

Bronchiectasis is abnormal dilated inflamed airways. These patients have significant sputum along with cough. Asthma can be an associated feature too.

Drugs can sometimes a reason for chronic cough. The most common culprit medicines are **ACE inhibitors** (perindopril, lisinopril etc) which are commonly used to control hypertension. Cough can start from few days to many weeks/months later and usually resolves once these medicines are stopped. Other medicines are usually those which makes gastric reflux worse.

There are also many other causes of chronic cough but are less common. If you are worried about your lung health and has any persistent cough or other issues, you should consult a pulmonologist as it is important to diagnose and treat conditions as early as possible to avoid irreversible lung damage.

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