

## Common reasons of sputum/mucus production from lungs

Sputum or mucus production from the lungs is a common phenomenon. In healthy individuals, the lungs produce a small amount of thin mucus which helps to trap any inhaled irritants, microorganisms or dust particles and clear them up from the airways. There are many common reasons of increased sputum or mucus productions from the lungs.

Mucus is made-up of mucin and a few other proteins mixed in fluid. The small amount of mucus is not noticeable in healthy individuals, and they tend to swallow the mucus which is being pushed up with the help of micro-hair on the lining of the air tubes/airways.

The mucus production can increase in variety of lung conditions, and we will discuss those conditions briefly here.

### **Lung infections:**

Acute lung infections are one of the most common reasons for mucus production. The mucus can be white, off white to yellow/green or rusty brown in color. The later colors tend to indicate bacterial infections though it is not entirely possible to separate the viral or bacterial infection depending on the color of the mucus. The common lung infections include acute bronchitis, lower respiratory tract infection or pneumonia.

Few unusual infections can also cause the mucus production. The one of the common examples among rare causes is fungal infection. Patient may cough up black coloured sputum. There could be some blood in case of acute infection sometimes.

### **Smoking & chronic bronchitis:**

Chronic bronchitis is a continuous mucus production in patient who have significant history of smoking over many years. The patients cough up a small amount of mucus of light yellow in colour and they are not usually bothered with chronic mucus production unless it has changed in recent times. In pure emphysema, there is no significant mucus production.

### **Throat infections/Flu:**

Upper respiratory tract infections or throat infections can also be associated with small mucus production which can vary from to light to dark color and those patients tend to have significant upper respiratory tract symptoms to suggest the cause of mucus production in such cases.

### **Asthma:**

Asthma is quite common inflammatory airway disease which leads to significant mucus production in asthmatic patients. About 10% of world population suffer from asthma, either continuously or intermittently. These patients also have associated wheezing, breathlessness or chest tightness. They may have a history over many months to years.

### **Bronchiectasis:**

Bronchiectasis is abnormal dilatation of the airways/tubes of the lungs leading to frequent airway infections. Such patients produce copious amount of mucus, can be up to cup full a day. These patient usually have associated airway disease and have significant breathlessness and wheezing.

**Tuberculosis:**

TB or tuberculosis is bacterial infection caused by mycobacterium. It causes low grade fever over many weeks to months along with the sputum production and there may be some blood in the sputum. Patient may present with the increased breathlessness, weight loss and persistent nighttime fevers.

**Lung cancer:**

patient who may have smoke and has developed lung cancer can present with new mucus production which many a times is associated with some blood streaking initially and maybe frank blood later on.

**Cystic fibrosis:**

Cystic fibrosis is a genetic disease caused by mutation in one of the genes which help produce thin mucus. Cystic fibrosis patients produce very thick mucus which is difficult to clear and these patients can develop a significant airway infections leading to bronchiectasis over many months to years. These patients have persistent airway disease and have other respiratory symptoms too. Patient with cystic fibrosis perdues sputum which is very difficult to clear and thick in consistency.

**Hay fever or allergic rhinosinusitis:**

Patients with allergic rhinitis or hay fever may have significant nasal secretions causing post nasal drip. Patient may perceive that mucus is being coughed up from the lungs, rather this is a drop down from on the back of their nose into their throat from where they're coughing it up. The patients may have significant nasal symptoms and signs on examination.

These are common reasons for increased mucus or sputum production from the lungs. If you do suffer from increased mucus production especially associated with breathlessness, cough, wheezing, weight loss or fever, it is important to see your physician for investigations.

As you are aware now that they could be many and nasty reasons for mucus production that need to be investigated properly and treated effectively to get the best long term outcome.

**Australian Polyclinic,**  
CCA Phase 5 DHA, Lahore  
0311 057 3333

**Dr G Sarwar Chaudhry**  
MBBS (King Edward Medical College)  
Fellow Royal Australasian College of Physicians (FRACP Australia)

Fellow American College of Chest Physicians (FCCP)  
Conjoint Lecturer, University of Newcastle, NSW, Australia

Consultant Pulmonologist and Sleep Physician  
Consultant General Physician  
[www.australianpolyclinic.com](http://www.australianpolyclinic.com)