

# Difference Between Dry Cough and Wet Cough

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## Key Difference – Dry Cough vs Wet Cough

Cough is the commonest symptom of respiratory diseases and its characteristics can be helpful in getting an idea about the underlying pathology. **In wet cough, there is plenty of secretions and mucus coming out when the patient coughs unlike in a dry cough where there is no production of secretions and mucus.** This is the key difference between dry cough and wet cough. Dry cough and wet cough can also be symptoms of underlying serious medical conditions.

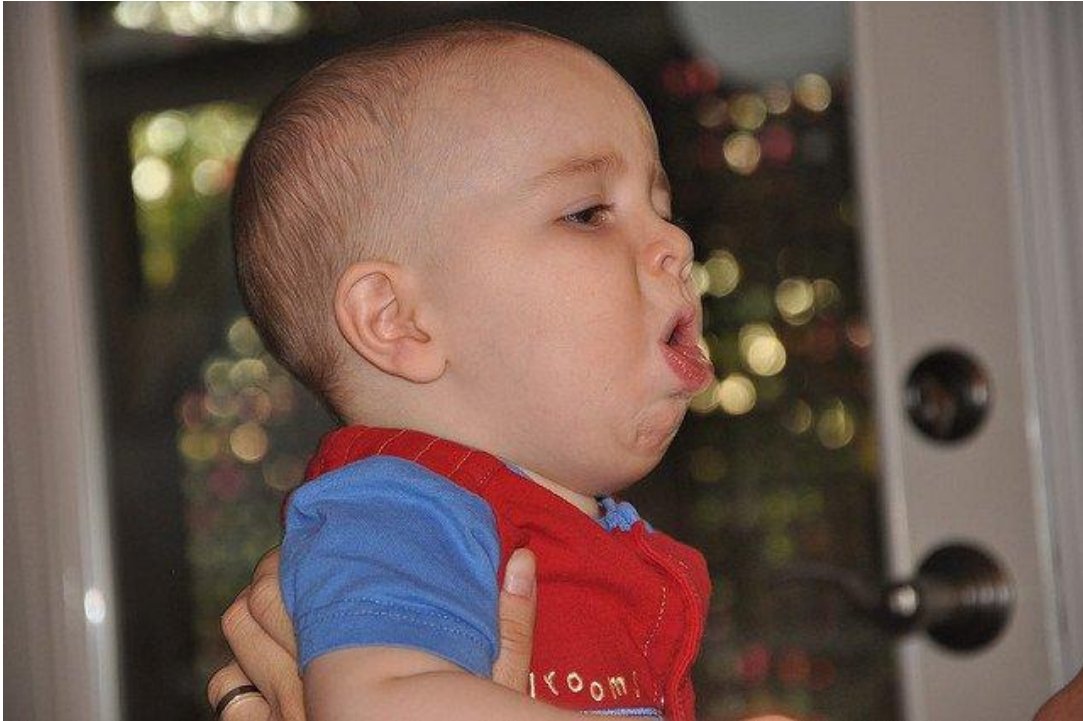
## What is Cough Reflex

A cough is a sudden protective reflex, which helps to clear the breathing passages in the respiratory tract. The steps below explain how a cough is produced in the body.

- The mucosa of trachea and bronchi are irritated.
- Afferent nerve impulses pass through the vagus nerve to the medulla of the brain.
- About 2.5 litres of air is rapidly inspired.
- Vocal cords shut and epiglottis closes entrapping the air inside the lungs.
- Abdominal muscles contract pushing the diaphragm upwards.
- Respiratory muscles contract forcefully.
- The pressure inside the lungs increases exponentially.
- Epiglottis and vocal cords suddenly open.
- Air entrapped within the lungs explodes outwards carrying any foreign material lodged in the airway.

## What is Dry Cough?

When the cough is not associated with the production of secretions or mucus, it is called a dry cough. Although it is usually caused by an infection of the upper airway it can sometimes be an early warning sign of an infection of the lower respiratory tract.



**Figure 01: A child coughing**

## **Causes**

- Post nasal drip
- Laryngitis
- Tracheitis – along with cough, there is a retrosternal chest pain
- [Bronchitis](#) (can be a wet cough also)
- [COPD](#)
- [Asthma](#)
- Bronchial carcinoma (often with hemoptysis)
- [Pneumonia](#) (initially there is a dry cough)
- Interstitial fibrosis
- Adverse effects of drugs such as ACE inhibitors
- Foreign body in the airway (especially in the children)

## **What is Wet Cough?**

If secretions and mucous are coming out when you cough, it is called a wet cough. A wet cough is more likely to be a result of an infection of the lower respiratory tract involving the lungs.

## Causes

- Bronchitis
- COPD
- [Tuberculosis](#)
- Pneumonia
- Bronchiectasis
- [Pulmonary edema](#)

In order to arrive at a diagnosis, duration of the cough should be considered. A chronic cough is more likely to be due to a more serious medical condition. Therefore in such patients, it is important to do further investigations to establish the exact cause of the symptoms.

## Investigations

The following tests can be performed when a patient suffers from a chronic cough.

- Chest X-ray
- Mantoux test
- Ambulatory esophageal pH
- Fibreoptic bronchoscopy
- Thoracic CT

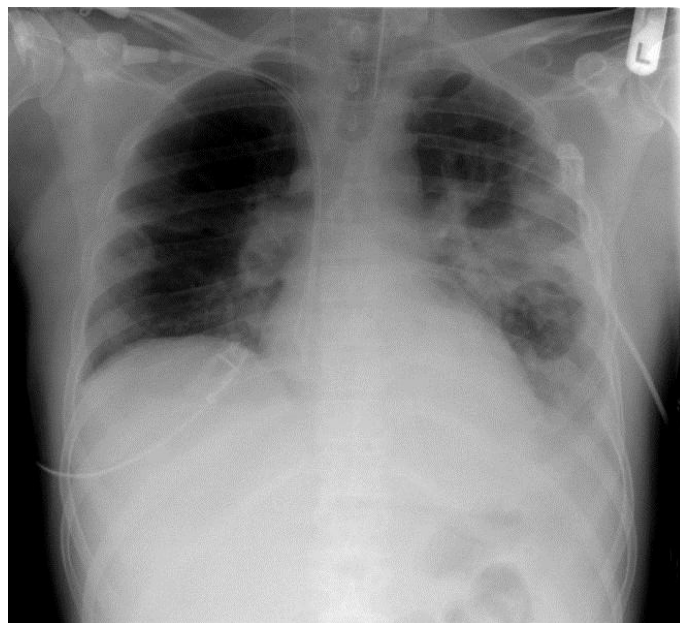


Figure 02: Chest X-ray

## What are the similarities between Wet Cough and Dry Cough?

- Irritation of the mucosa of the airway initiates the cough reflex in both cases.

## What is the difference between Wet Cough and Dry Cough?

Wet Cough vs Dry Cough	
Wet cough is associated with the production of secretions and mucus.	Dry cough is not associated with the production of secretions and mucus.
Cause	
Wet coughs are often caused by infections of the upper airway.	Dry coughs are typically caused by infections in the lower respiratory tract involving the lungs.

## Summary – Wet Cough vs Dry Cough

Both wet cough and dry cough initiate from the irritation of the mucosa of the airway. The difference between wet cough and dry cough depends on the production of mucus and other secretions. They can be caused by different factors. Both these conditions can be symptoms of underlying serious medical conditions. Therefore, it is important to take medical treatment if you have a chronic cough.

### Reference:

1. Walker Brian, Nicki R. Colledge, Stuart Ralston, and Ian Penman, eds. Davidson's Principles and Practice of Medicine. 22nd ed. N.p.: Elsevier Health Sciences, 2013. Print.
2. Hall, John E., and Arthur C. Guyton. Guyton and Hall textbook of medical physiology. 12th ed. Philadelphia, PA: Elsevier, 2016. Print.
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