

## Pneumonia Assessment

Pneumonia is an inflammation of lung tissue affecting one or both sides that often occurs as a result of an infection. It may include the interstitial spaces, the alveoli, and the bronchioles. Edema associated with inflammation stiffens the lung, decreases lung compliance and vital capacity, and leads to hypoxemia.



PLAY PICMONIC

### Risk Factors

#### Older Adult

##### Older adult

The older adult is more susceptible to pneumonia due to reasons such as suffering from comorbid conditions, which decrease their ability to respond to infection or weaker immune systems.

#### Immunocompromised

##### Immunocompromised by bacteria and viruses

Immunocompromised individuals cannot fight off an illness as effectively, and are thereby more susceptible to infections.

#### Long Term Care

##### Long Hospital

Pneumonia is one of the most common infectious diseases in long-term care facilities and residents living there are at increased risk due to being in close proximity with others and contracting nosocomial infections.

### Assessment

#### Shortness of Breath (SOB)

##### S.O.B.

Patients with pneumonia present with shortness of breath (dyspnea), along with tachypnea (increased respiratory rate) defined as rapid, shallow respirations.

#### Hypoxemia

##### Hippo-blood-O2

Hypoxemia, defined as a low O<sub>2</sub> level in the blood, occurs in pneumonia due to fluid and debris build up in the alveoli. This leads to pulmonary shunting, which refers to perfusion without ventilation.

## Cough and Sputum Production

### [Coughing Coffee-pot and Spit-thumb](#)

Patients who have pneumonia may present with a cough, but not always. This may include sputum production that appears purulent, bloody, or rust colored.

## Wheezing or Crackles

### [Weasel with Cracker](#)

Wheezing is heard as a high-pitched whistling sound in the lungs, while crackles (rales) are brief, discontinuous popping sounds. Crackles are a result of fluid accumulation in the lungs.

## Fever

### [Fever-beaver](#)

Depending on the cause of pneumonia, patients may present with a fever ranging from mild to severe, or be asymptomatic.

## Pleuritic Pain

### [Pearl Pain-bolts](#)

Pleuritic pain may result from irritation and inflammation in the lungs, or due to pleural surfaces rubbing against one another. It is usually described as sharp pain.

## Diagnosis

### Chest X-ray

#### [Chest X-ray](#)

If positive for pneumonia, the chest x-ray will show consolidation. Though chest x-ray is the most common diagnostic tool, other findings when combined can also lead to the diagnosis of pneumonia. These include sputum culture, decreased pulse oximetry, increased white blood cell count, and possibly hypernatremia.