



# **Chest Tube seminar -1-**

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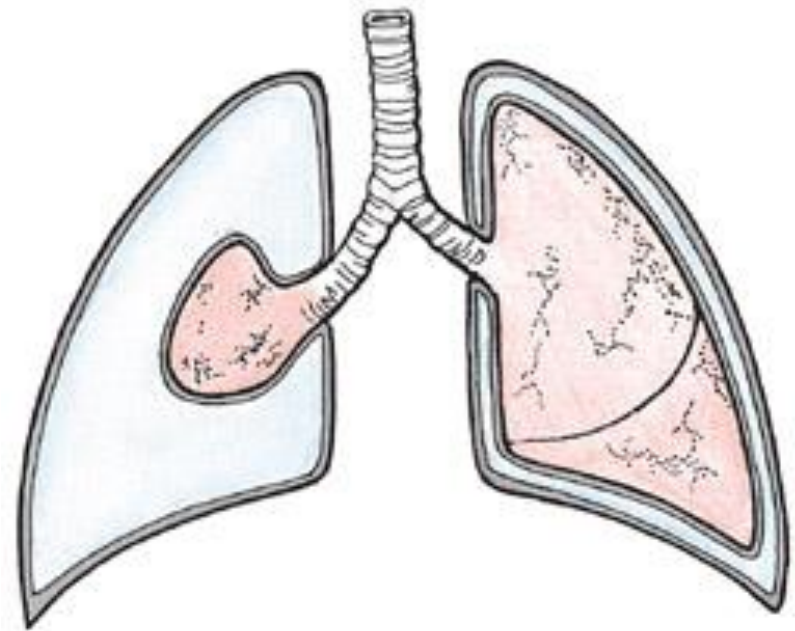
# Chest tube

Is a flexible plastic tube that is insertion through the chest wall and into the pleural space

The chest tube is a **surgical procedure** – sterile technique-

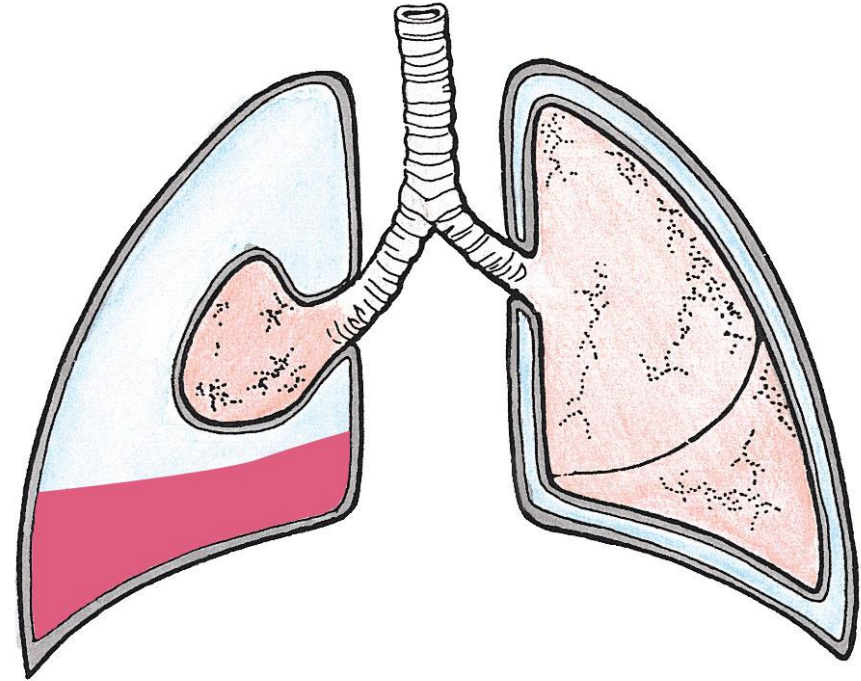
# Conditions that requiring chest tube

**1-Pneumothorax:** A collection of air in the pleural space.

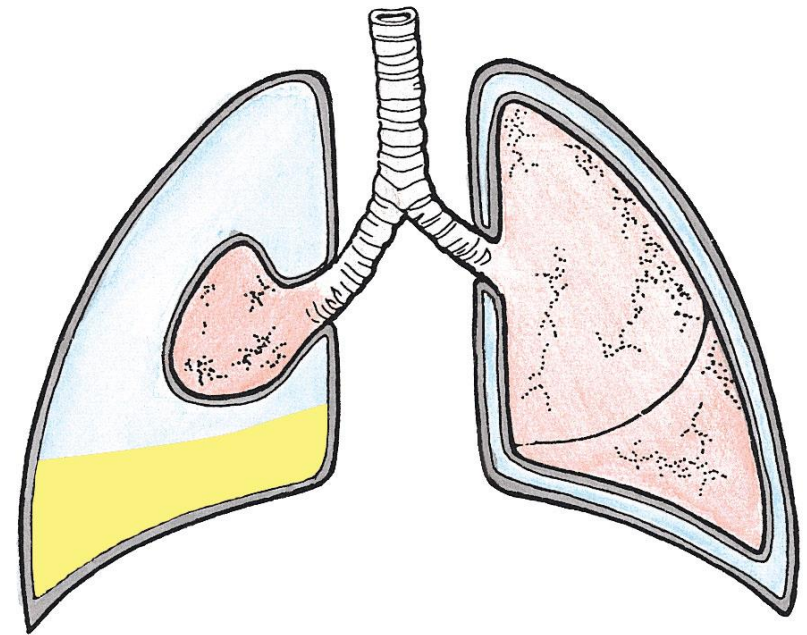


**2-Hemothorax:** A collection of blood in the pleural cavity.

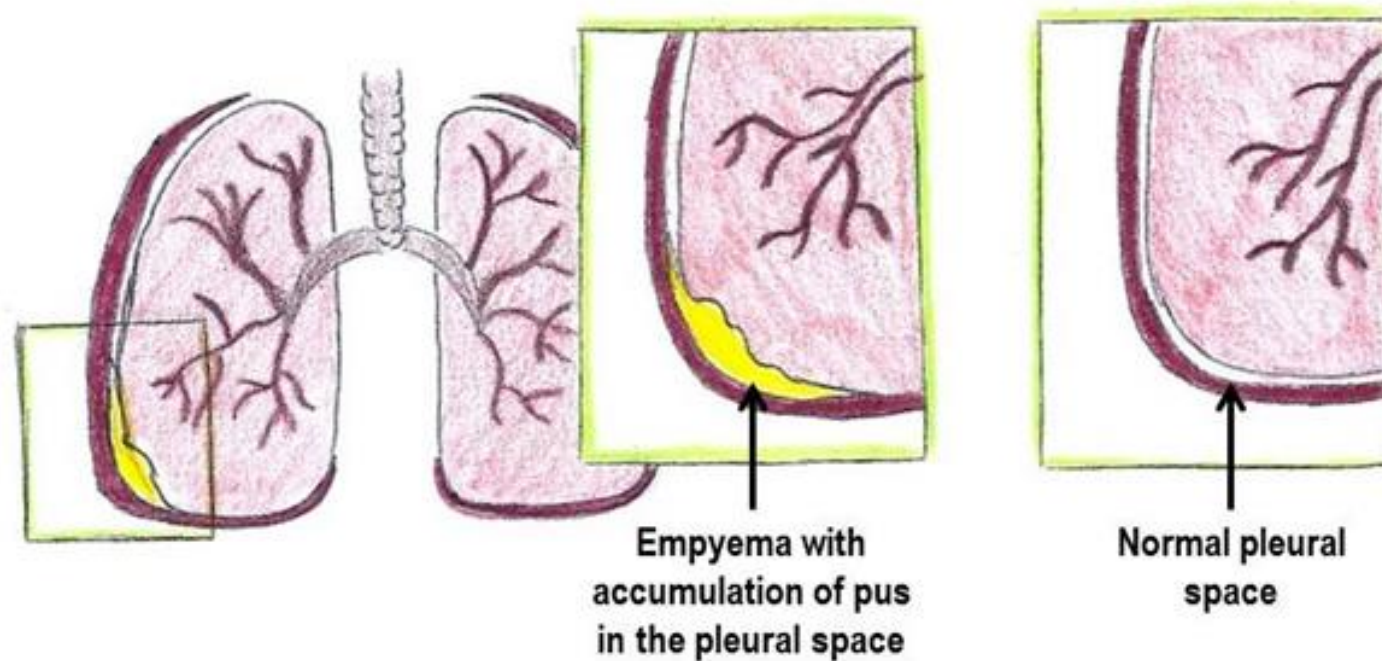
**3-Hemopneumothorax:** An accumulation of both air and blood in the pleural cavity.



**4-Pleural effusion:** Is excessive fluid in the pleura cavity.  
**5-Chylothorax :** Is the accumulation of lymphatic fluid in the pleural space.



**6-Empyema:** Is a collection of purulent material from an infection like pneumonia in the pleural space.



# common causes for air or fluid in the pleural space

<b>Causes</b>	<b>Examples</b>
<b>Trauma</b>	Rib fractures (falls, auto accidents), Penetrating wounds (knife or gunshot wounds) or Blunt trauma (falls, auto accidents)
<b>Medical/Surgical complications</b>	High ventilator pressures, central line insertions, thoracic surgery, cardiopulmonary resuscitation (CPR), puncture of chest wall during surgery and lung or chest wall biopsy.
<b>Infection or disease</b>	Pneumonia cancer, emphysema, cystic fibrosis, tuberculosis, pulmonary embolism or fungal infections
<b>Cardiovascular Problems</b>	Heart failure

(English, & Leslie, 2006)

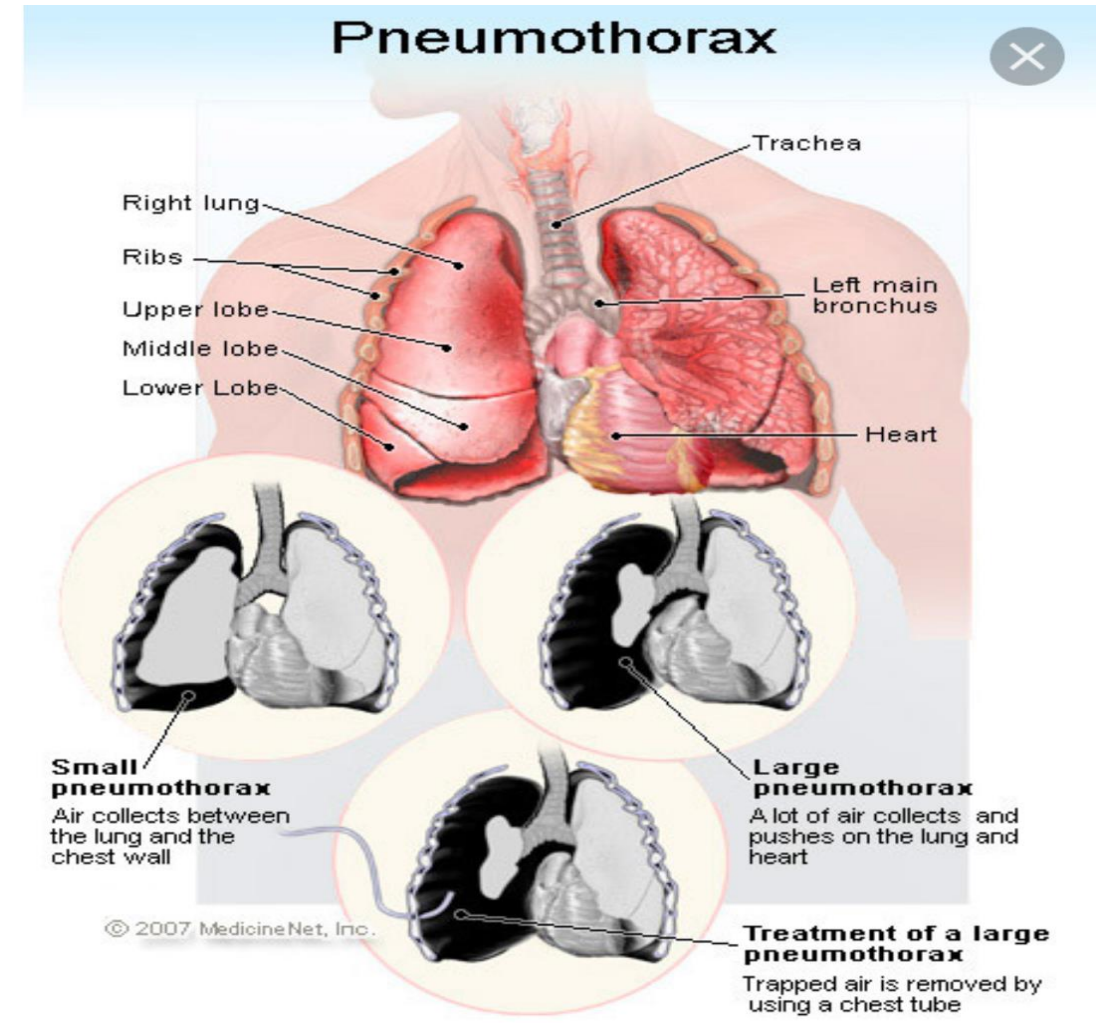
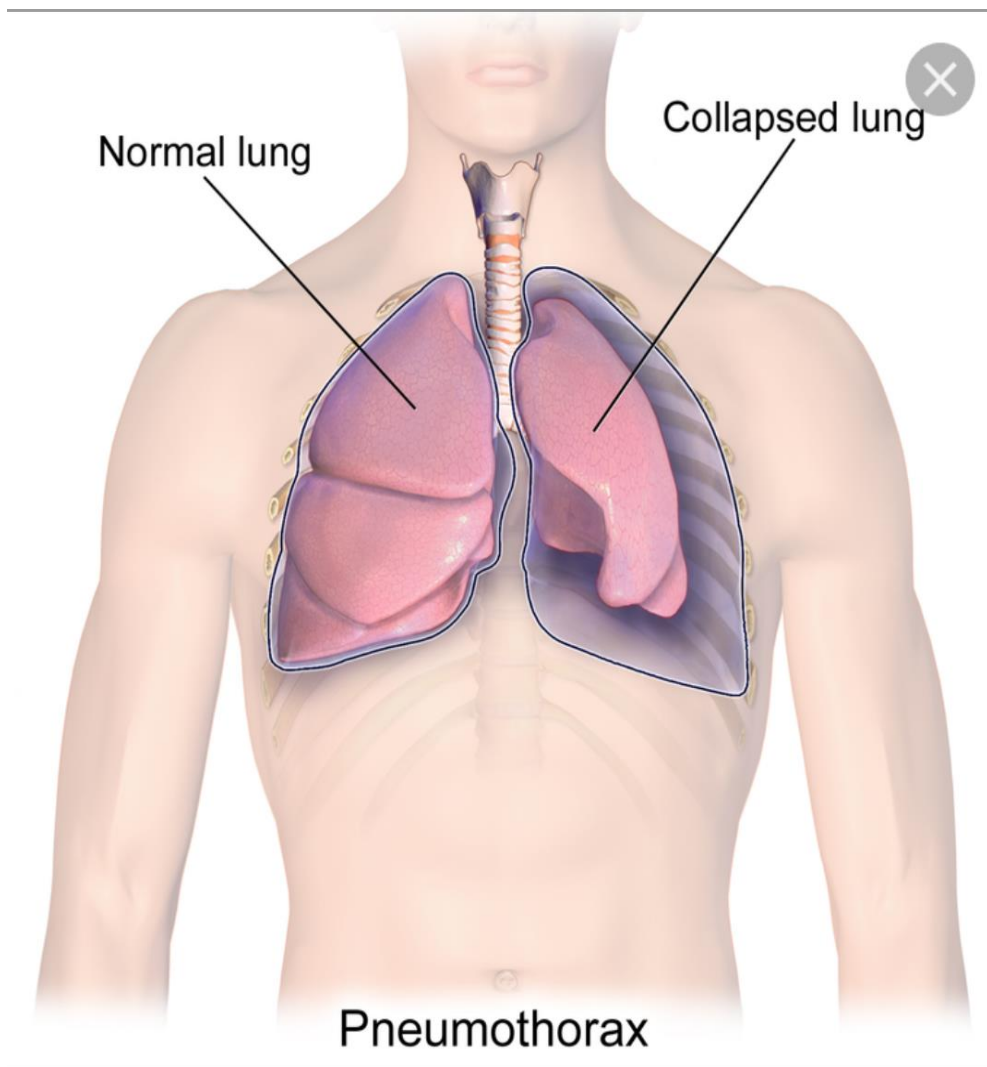


# Clinical Manifestations of a lung collapsed

- Chest Pain
- SOB
- Cough
- Absent or decreased breath sounds on affected side
- Shallow Respirations
- Asymmetrical chest movement
- Decreased O<sub>2</sub> saturation



# Lung collapsed



# **patient assessment is should concentrate on:**

- Vital signs
- Respiratory rate
- Respiratory status
- Respiratory pattern
- Respiratory depth
- Ease of respiration
- Oxygen saturation
- Check for subcutaneous emphysema (crackling sensation under the skin during palpation)

# **Nursing diagnosis**

- Ineffective breathing pattern
- Impaired spontaneous ventilation
- Risk for bleeding
- Acute pain
- Activity intolerance
- Knowledge deficient


# Removal of Chest Tube

## - Indications

- 1- No fluctuation in the fluid column of the tube (complete lung re-expansion or tube occlusion)
- 2- Daily fluid drainage  $< 100\text{ml}$  in 24 hours ( $< 50$  c.c./day)
- 3- Air leakage has stopped

# Termination of Chest Tube

- **Valsalva Maneuver ; Take deep breathing and hold it when removing the chest tube .**
- Some physicians prefer coughing or holding breath to increase intrathoracic pressure
- Occlusive dressing



Thank you for your  
time