

## **Signs of Respiratory distress**

1. Tachypnoea.
2. Indrawing of the intercostal spaces.
3. Using accessory muscles.

## **Clues for obstructive lung disease**

1. Hyperinflation ( barrel chest )
2. Tripod position (release CO<sub>2</sub>)
3. Pursed lips
4. Prolonged expiration relative to inspiration

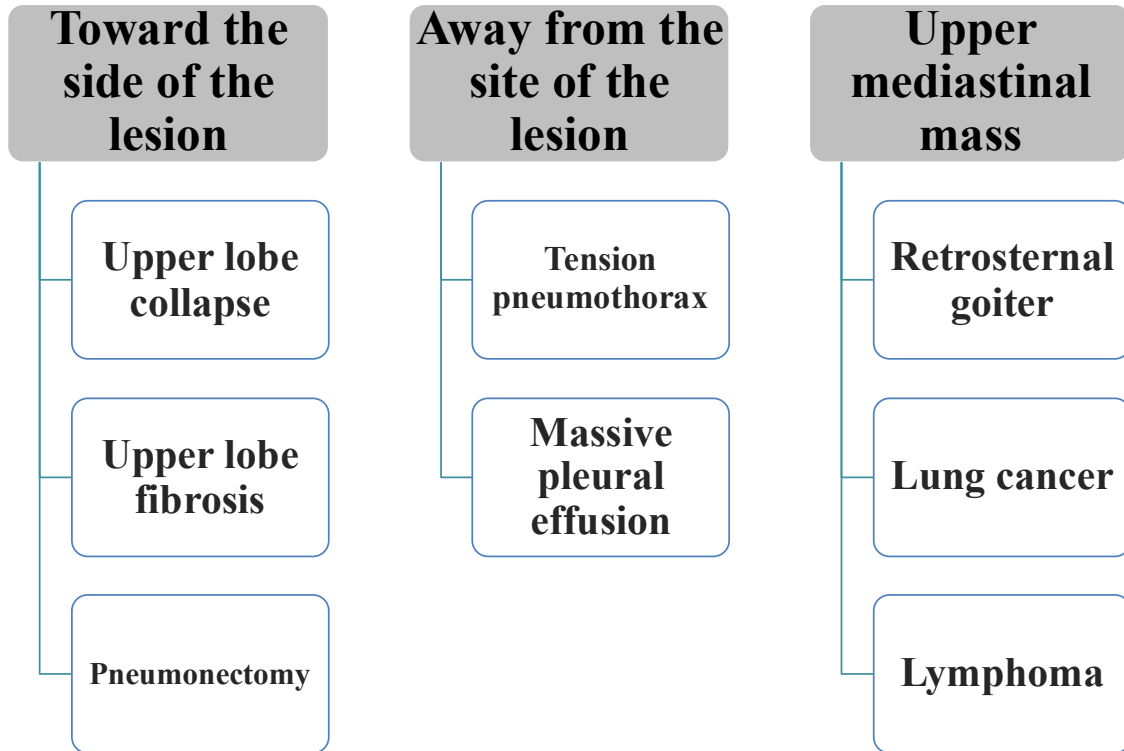
# Cheyne–Stokes respiration

- Distinctive pattern of alternating periods of deep and shallow breathing
- In healthy adults at altitude, elderly people and patients with heart failure, or during the final stages of dying
- Abnormal feedback from carotid chemoreceptors to the respiratory center.

# **Hypertrophic pulmonary osteoarthritis**

- Painful tender swelling of the wrists and ankles
- Rare complication of lung cancer
- Accompanies pronounced finger clubbing
- X-ray shows sub periosteal new bone formation overlying the cortex of the long bone

# Tracheal deviation



# **Tactile vocal fremitus (TVF)**

- . Is the palpable vibration (of non-vascular origin) that reaches the body surface during low frequency vocalization and is felt by examiner's palm
- . Sound waves travels faster and is conducted better in solid media rather than air / fluid

## Increased

Consolidation

Dense  
pulmonary  
fibrosis

Lobar collapse  
with patent  
major bronchi

Lung mass

## Decreased

Pleural effusion/  
heamothorax

obesity

pneumothorax

Collapsed lung with  
obstructed major  
bronchi

COPD,  
emphysema

# Chest expansion

- **Reduced expansion on one side** indicates abnormality on that side: for example, pleural effusion, lung or lobar collapse, pneumothorax and unilateral fibrosis.
- **Bilateral reduction in chest wall movement** is common in severe COPD and diffuse pulmonary fibrosis.
- **Paradoxical inward movement** may indicate diaphragmatic paralysis or, more commonly, severe COPD.

# Percussion

## Findings:

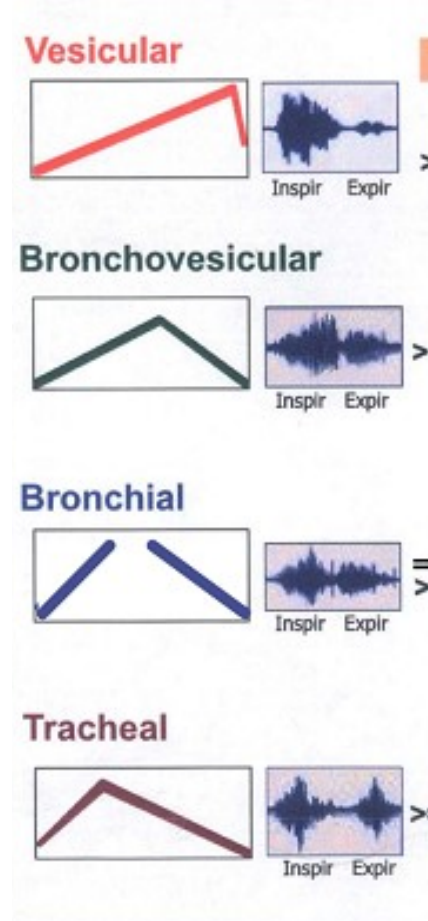
- Resonance: Normal lung tissue.
- Hyper-resonance: Pneumothorax, emphysema.
- Dullness: Consolidation, pleural effusion.



# Auscultation

## Normal Sounds:

- Vesicular: Soft, low-pitched.
- Bronchial: Hollow, loud, harsh with midrange pitch, Bronchial breath sounds are normal if they occur over the trachea while the person is breathing out.
- Tracheal: Harsh, high-pitched over trachea.



Identify any gap between inspiration and expiration and listen for added sounds. Avoid auscultation within 3 cm of the midline anteriorly or posteriorly, as these areas may transmit sounds directly from the trachea or main bronchi.

**You should comment on:**

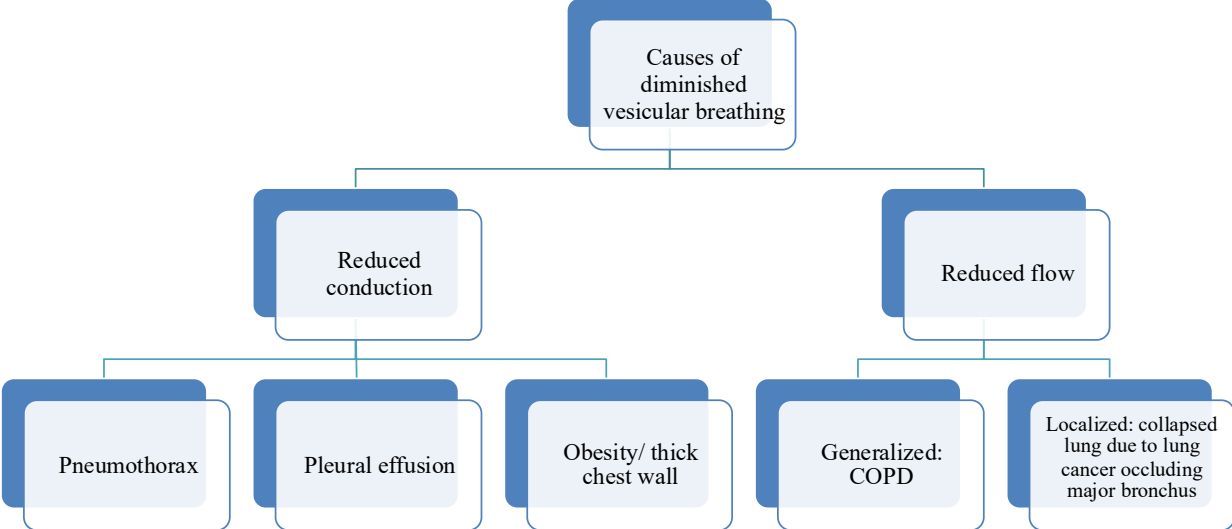
**Determine whether you hear Bronchial or vesicular breathing**

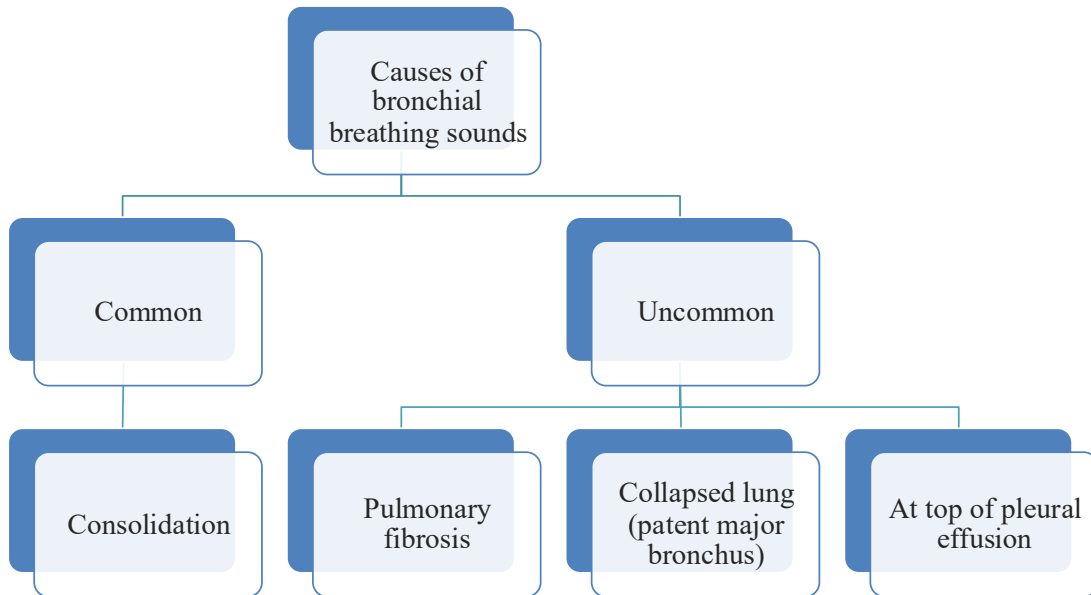
**If there is good bilateral air entry or reduced air entry**

**If the air entry is symmetrical or not**

**If there is prolonged expiration**

**If you hear Added sounds**





# Vocal resonance

- Please say “one, one, one”
- Healthy lung: muffled and deadened
- Consolidated or fibrotic scarred lung heard loudly and clearly
- Pneumothorax and pleural effusion: absent or greatly diminished

# Whispering Pectoriloquy

- Whispering 'one one one '
- Muffled to silence by normal lung
- Heard over consolidated or scarred lung.

# Aegophony

- Aegophony is a bleating or nasal sound heard over consolidated lung (pneumonia) or at the upper level of a pleural effusion. It is due to enhanced transmission of high-frequency noise across abnormal lung, with lower frequencies filtered out
- **Ask the patient to say (E) if heard as (A) then this is Aegophony which indicates consolidation.**