

Respiratory examination

Haider Alidrisi MD FIBMS CABM MSc Endocrinology

University of Basrah, College of Medicine, FDEMC

AACE, EASD, ES, ESE

Reference from Macleod's clinical examination 14th edition

<https://fccdl.in/pwQCIS8DfI>

Clinical examination of the respiratory system

6 – 9 Thorax
(see opposite)

5 Face, mouth and eyes

- Pursed lips
- Central cyanosis
- Anaemia
- Horner's syndrome (Ch. 25)

4 Jugular venous pulse

- Elevated
- Pulsatile

3 Blood pressure

- Arterial paradox

2 Radial pulse

- Rate
- Rhythm

1 Hands

- Digital clubbing
- Tar staining
- Peripheral cyanosis
- Signs of occupation
- CO₂ retention flap



▲ Finger clubbing

6 Inspection

- Deformity (e.g. pectus excavatum)
- Scars
- Intercostal indrawing
- Symmetry of expansion
- Hyperinflation
- Paradoxical rib movement (low flat diaphragm)



▲ Idiopathic kyphoscoliosis

7 Palpation

- From the front:
 - Trachea central
 - Cricosternal distance
 - Cardiac apex displaced
 - Expansion
- From behind:
 - Cervical lymphadenopathy
 - Expansion

8 Percussion

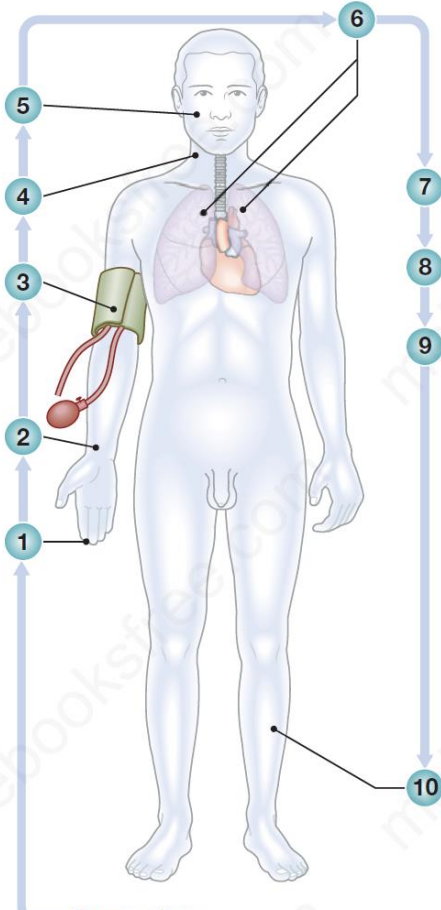
- Resonant or dull
- 'Stony dull' (effusion)

9 Auscultation

- Breath sounds: normal, bronchial, louder or softer
- Added sounds: wheezes, crackles, rubs
- Spoken voice (vocal resonance): absent (effusion), increased (consolidation)
- Whispered voice: whispering pectoriloquy

10 Leg oedema

- Salt and water retention
- Cor pulmonale
- Venous thrombosis



Observation

- Respiratory rate
- Cachexia, fever, rash
- Sputum (see below)
- Fetor
- Locale: Oxygen delivery (mask, cannulae)
- Nebulisers
- Inhalers

Sputum



▲ Serous/frothy/pink
Pulmonary oedema



▲ Mucopurulent
Bronchial or pneumonic infection

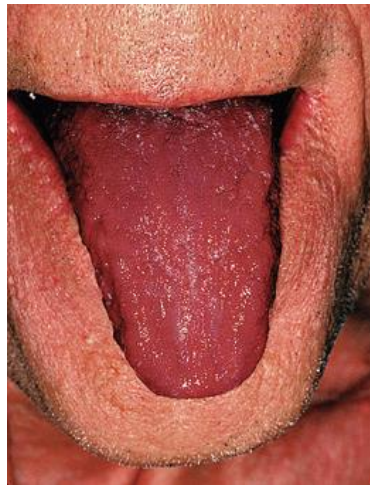
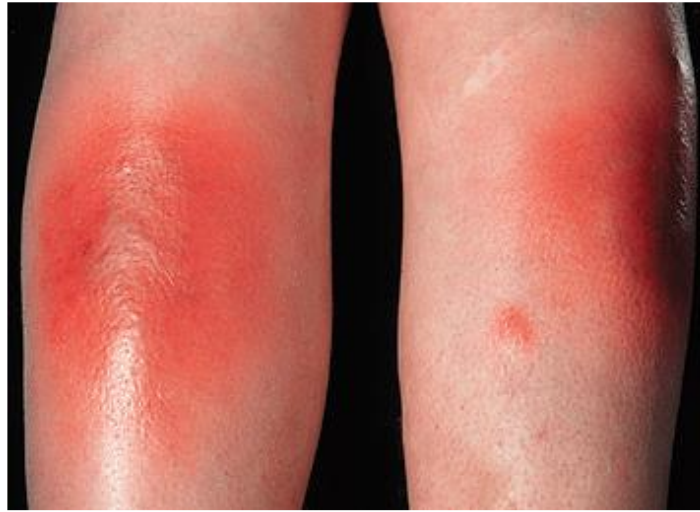


▲ Purulent
Bronchial or pneumonic infection



▲ Blood-stained
Cancer, tuberculosis, bronchiectasis, pulmonary embolism

Inspection



Flapping tremor

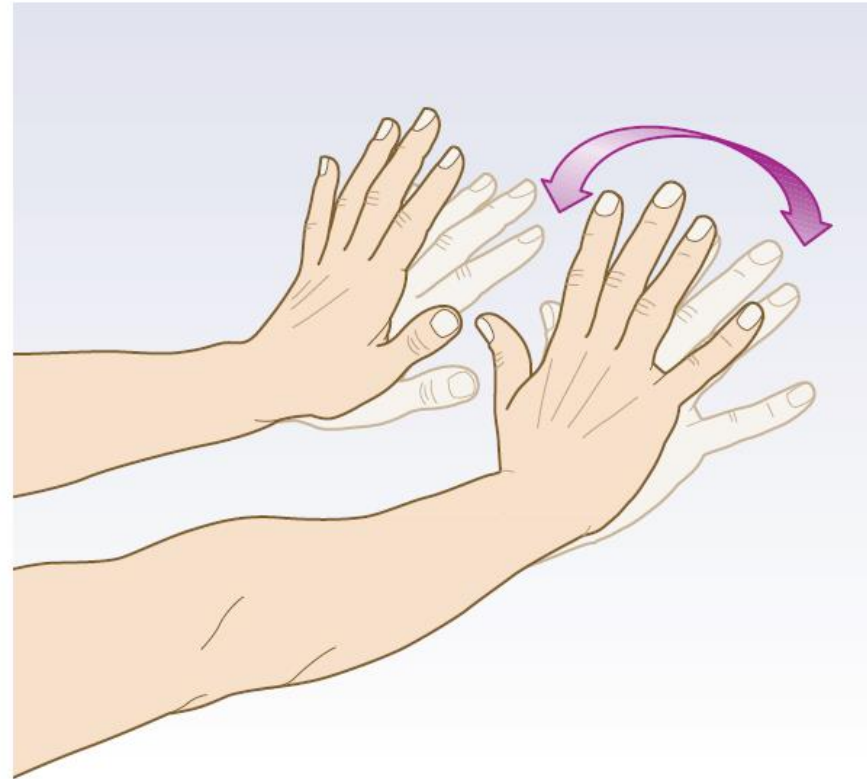


Fig. 5.10 Hand position for testing for the coarse tremor of CO₂ retention.

Finger clubbing



Inspection



Fig. 5.6 Abnormalities in the shape of the chest. **A** Hyperinflated chest with raised sternum and shoulder girdle. **B** Kyphoscoliosis. **C** Pectus carinatum with Harrison's sulcus (*arrow*). **D** Pectus excavatum.

Chest inspection

- Dilated chest vein in superior vena cava obstruction



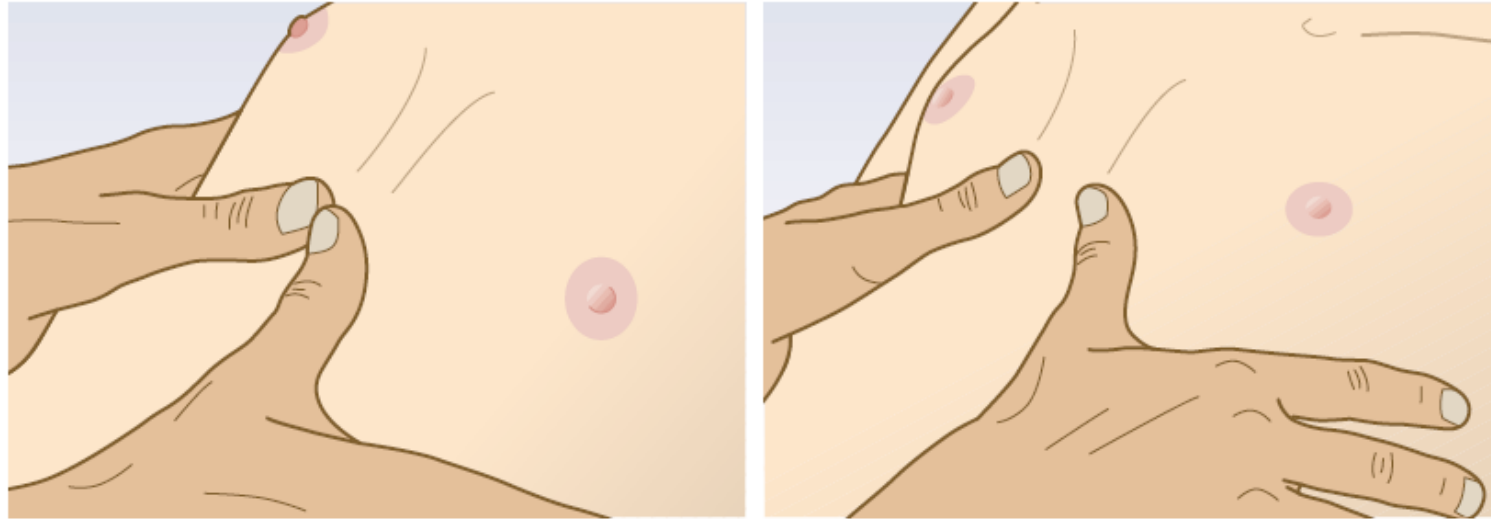
Trachea palpation

- Tracheal shift
- Tracheal tug
- Crico-sternal distance



Fig. 5.13 Examining for tracheal shift.

Chest expansion



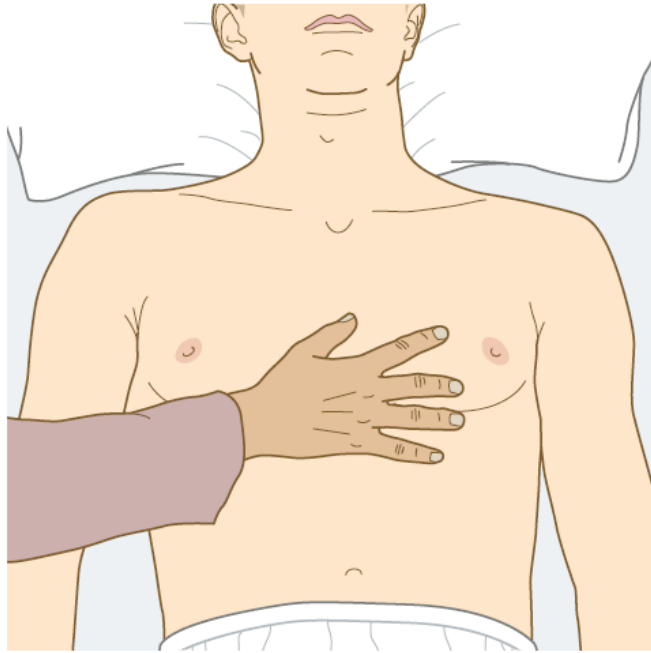
A

B

Fig. 5.14 Assessing chest expansion from the front. **A** Expiration.

B Inspiration.

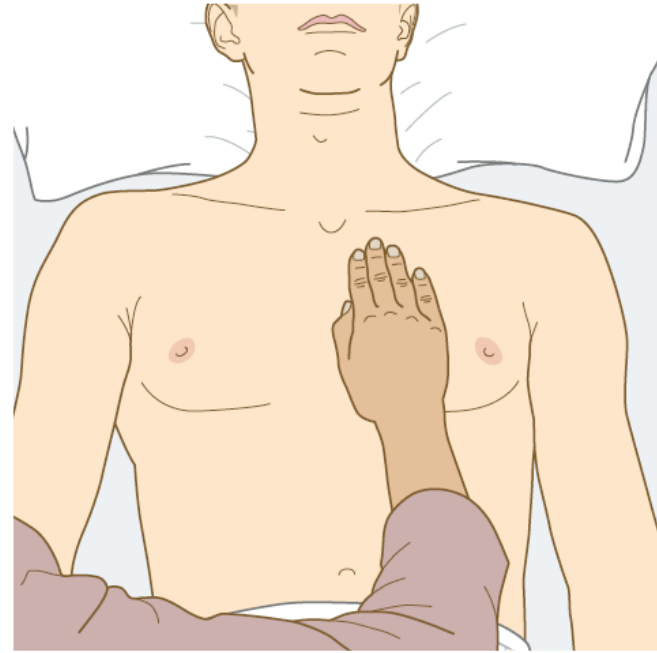
Apex beat



A



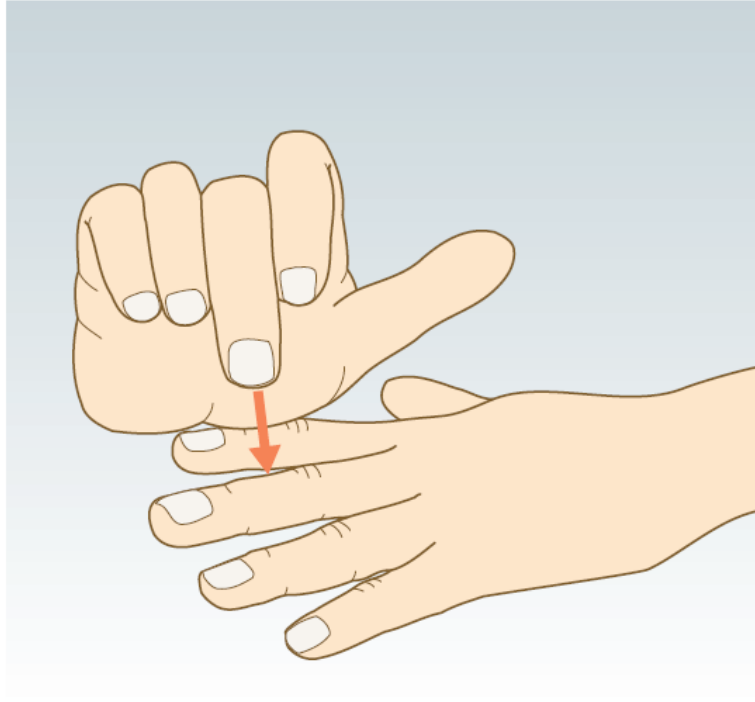
B



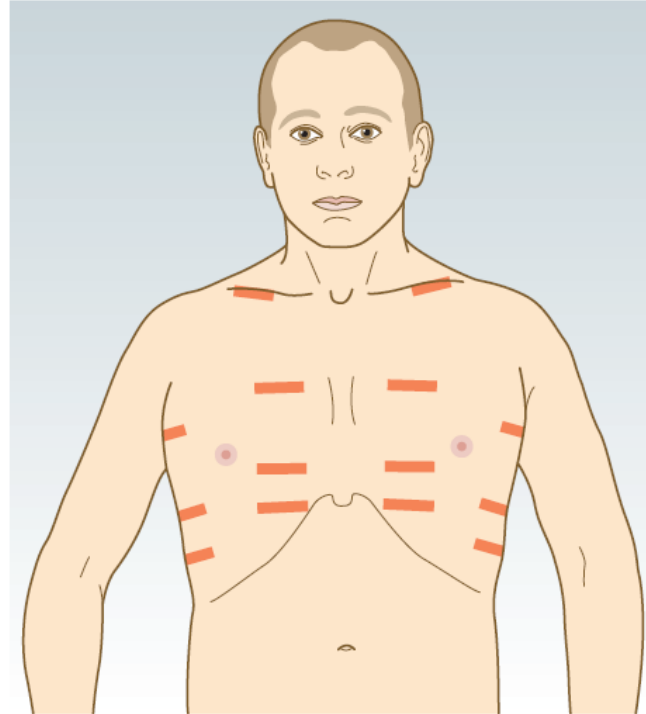
C

Fig. 4.18 Palpating the heart. **A** Use your hand to palpate the cardiac impulse. **B** Localise the apex beat with your finger (if necessary, roll the patient into the left lateral position). **C** Palpate from apex to sternum for parasternal pulsations.

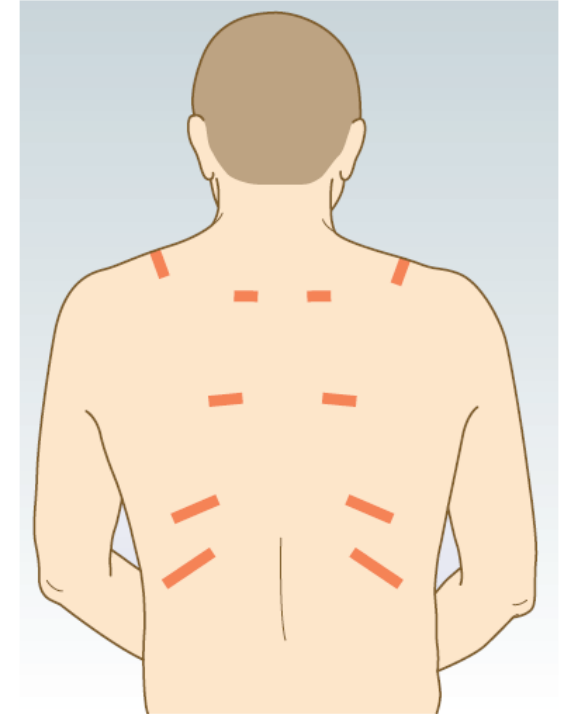
Percussion



A



B



C

Fig. 5.16 Percussion of the chest. **A** Technique. **B** Anterior and lateral sites. **C** Posterior sites.

Auscultations

1. Normal vesicular breath sounds (diminished?)
2. Harsh vesicular breath sounds
3. Prolonged expiratory breath sounds
4. Bronchial breath sounds
5. Added sounds:
 1. Wheeze / rhonchi
 2. Crackles (fine/coarse)
 3. Pleural rub
6. Vocal resonance
7. Whispering pectoriloquy
8. Aegophonia