

# Respiratory Examination

## Prepare patient

- Introduction
- Position semi-recumbent at 45° with whole chest exposed

## General Inspection

### General signs:

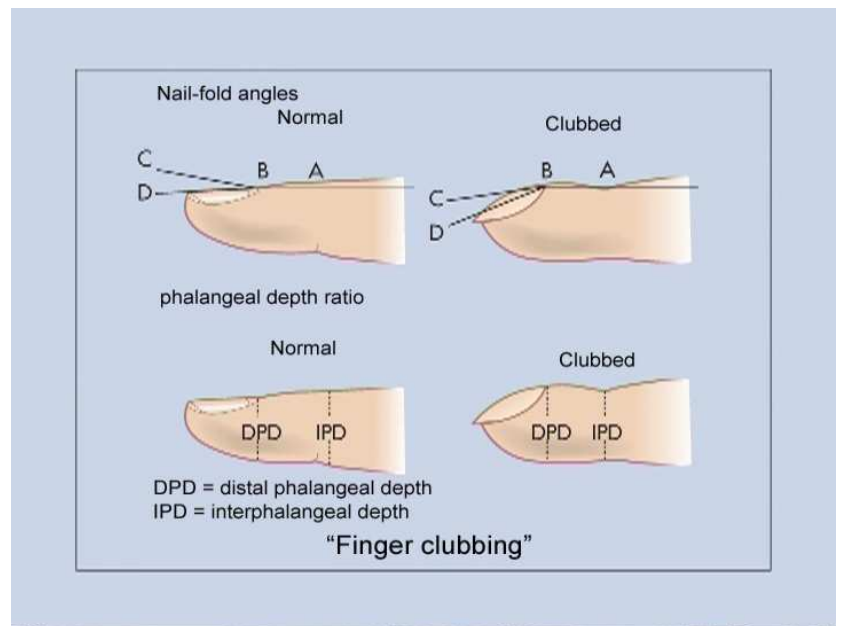
- Cachexia, cyanosis, sputum pot contents, rate & depth of breathing, stridor/wheeze, use of accessory muscles. Ask to cough & note character (dry, barking, productive, bovine).

## Hands & Wrist

### Peripheral cyanosis

### Clubbing (many causes including):

- Cyanotic congenital heart disease
- Infective endocarditis
- Atrial myxoma
- Lung Ca
- Chronic lung suppuration
  - Lung abscess or empyema
  - Bronchiectasis or CF
- Idiopathic pulmonary fibrosis
- Pleural mesothelioma
- Asbestosis
- IBD
- Cirrhosis
- Coeliac disease
- SB lymphoma
- Thyrotoxicosis (acropachy)
- Idiopathic/familial
- Rarely:
  - Pregnancy
  - 2° Hyperparathyroidism



### Tar staining of fingers

### Wrist tenderness (HPOA- Hypertrophic pulmonary osteoarthopathy)

Wasting & weakness (test strength of spreading digits) of small muscles (?lung Ca affecting brachial plexus)

### Wrist flap (Extend both for 30s - ?CO<sub>2</sub> narcosis)

### Radial Pulse

- Rate & rhythm. ?Tachycardia ?Pulsus paradoxus

## Face

Eyes: Horner's - ipsilateral ptosis, small pupil, enophthalmos, ↓facial sweating (apical lung Ca)

Sinuses: Tenderness

Nose: Patency

Mouth: Cyanosis

Voice: Hoarseness (recurrent laryngeal nerve palsy)

## Neck

Trachea - ?midline

## Posterior Chest

### Inspect

- Scars - thoracotomy?
- Shape of chest
  - Barrel chest: ↑AP diameter compared to lateral diameter - asthma, COPD
  - Pectus carinatum (pigeon chest): localised outward bowing of sternum/costal cartilages - rickets, chronic childhood respiratory disease
  - Pectus excavatum (funnel chest): localised depression of distal sternal - development defect
  - Harrison's sulcus: linear depression of lower ribs just above costal margin - asthma, rickets
- Spine deformity

### Palpate

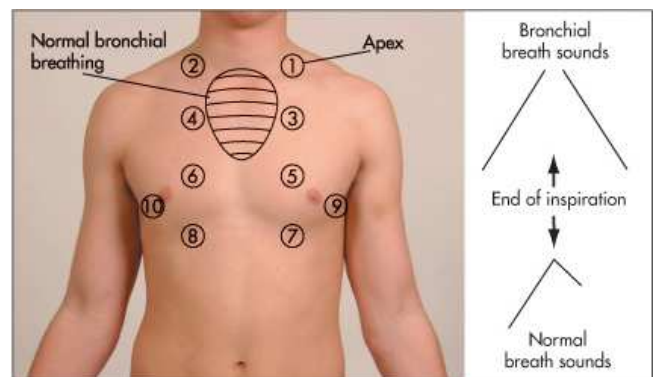
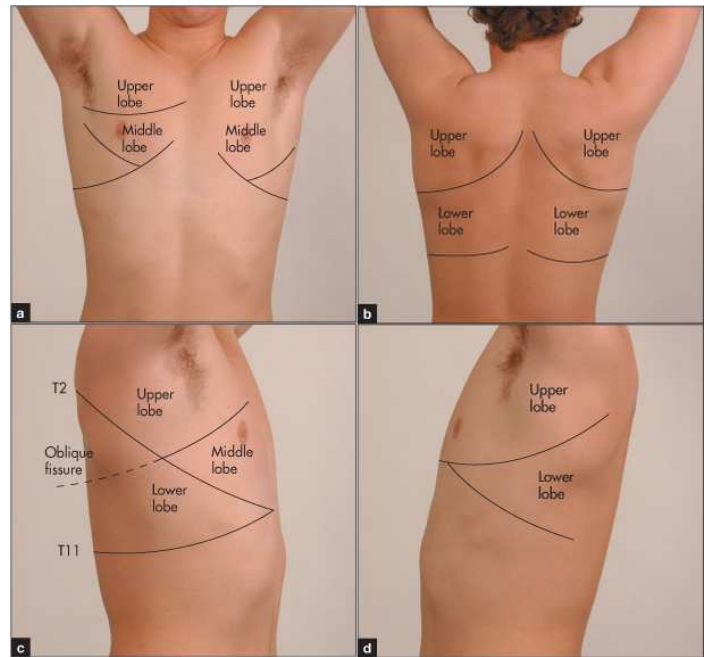
- Cervical LN
- Chest expansion
  - Upper lobes - watch clavicles from behind & above to see if R=L
  - Lower lobes - encircle chest & check ↑thumb separation (>5cm) on breathing
- Tactile vocal fremitus ("99")

### Percuss

- Back & axillae: stony dull for effusion, hyperresonant for hyperexpansion, PTX

### Auscultate

- Breath sounds
  - Vesicular (normal over lung)
  - Bronchial (normal over trachea)
- Adventitious sounds
  - Stridor
  - Wheezes - exp>insp usually. Imply airway narrowing. Fixed wheeze - ?lung Ca
  - Crackles (high freq = crepitations, low freq = rales)
    - Early inspiratory crackles - COPD
    - Late/pan-inspiratory crackles
      - Fine - pulmonary fibrosis
      - Medium - LVF
      - Coarse - Bronchiectasis, retention of secretions
- Vocal resonance
  - Muffled over normal lung, aegophony or whispering pectoriloquy over consolidation



## Anterior chest

### *Inspect*

- Radiotherapy marks
- Subcutaneous emphysema
- Upper chest expansion

### *Percuss*

- Supraclavicular regions, clavicles, ant chest
- Liver upper edge (usually 5icsmcl)
- Auscultate
- As shown.
- Note a pleural rub (pleurisy, PE, pneumonia) or displaced apex beat

## Assess for Right Heart Failure

### *Inspect JVP - if elevated then:*

- Check for Pemberton's sign for SVC obstruction (arms over head >1min → facial plethora)
- Auscultate the heart
- Palpate/Percuss the liver
- Examine the legs for oedema

## Other

### *Temperature*

### *Recent chest x-ray*

### *PEFR/Spirometry*