#### Visual Examination

- Consider the impact of chest shape on the respiratory condition of the patient
  - Barrel chest
  - Kyphosis
  - Scoliosis
  - Pectus excavatum (funnel chest)
  - Pectus carinatum



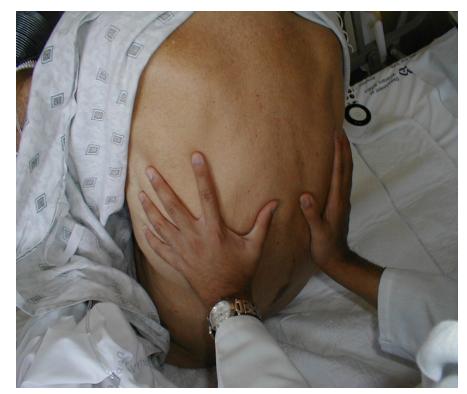
## Visual Assessment of Thorax

- Thoracic scars from previous surgery
- Chest symmetry
- Use of accessory muscles
- Bruising
- In drawing of ribs
- Flail segment <u>www.nejm.org/doi/full/10.1056/NEJMicm0904437</u>
- Paradoxical breathing /seesaw breathing
- Pursed lip breathing
- Nasal flaring

# **Palpation**

- For vibration of secretion
- Surgical emphysema
- Symmetry of chest movement
- Tactile vocal fremitus

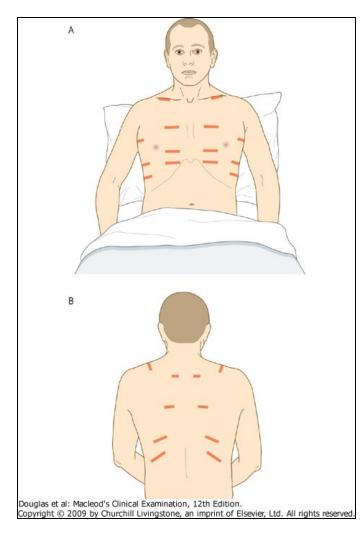
- Check for a tracheal tug
- Palpate Nodes



http://www.ncbi.nlm.nih.gov/books/NBK368/

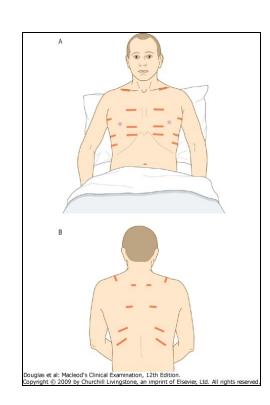
## Auscultation

- Is there any air entry?
- Differentiate
  - Normal vesicular sounds
  - Bronchial breathing
  - Wheeze
  - Distinguish crackles
    - Fine
    - Coarse
    - During inspiration or expiration
    - Profuse or scanty
  - Absent sounds
  - Vocal resonance



### Percussion

- Tapping of the middle phalanx of the left middle finger with the right middle finger
- Sounds should be resonant but may be
  - Hyper resonant
  - Dull
  - Stony Dull



http://stanfordmedicine25.stanford.edu/the25/pulmonary.html

Pathological Process	Expansion	Mediastinal Displacement	Percussion Note	Breath Sounds	Further Examination
Consolidation	Reduced on affected side	None	Dull	Bronchial breathing	û Vocal resonance û Whispering pectoriloquy
Collapse	Reduced on affected side	Towards affected side	Dull	Reduced	None
Pleural effusion Empyema	Reduced on affected side	Towards opposite side	Stony dull	Reduced/ Absent	Occasional rub
Asthma	Reduced throughout	None	Resonant	Normal/ Reduced	Wheeze
COPD	Reduced throughout	None	Resonant/ Hyper-resonant	Normal/ Reduced	Wheeze
Pulmonary Fibrosis	Normal or reduced throughout	None	Normal	Normal	Bibasal crepitations
Pneumothorax	Reduced on affected side	Towards opposite side	Hyper-resonant	Reduced/ Absent	None

http://www.cram.com/flashcards/test/lung-sounds-886428 sign up and test yourself.