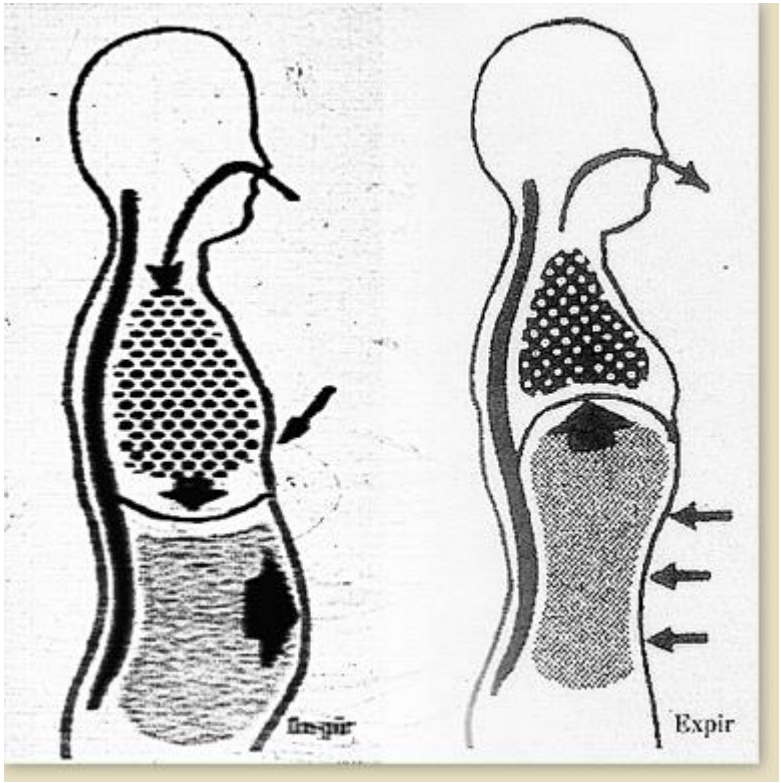
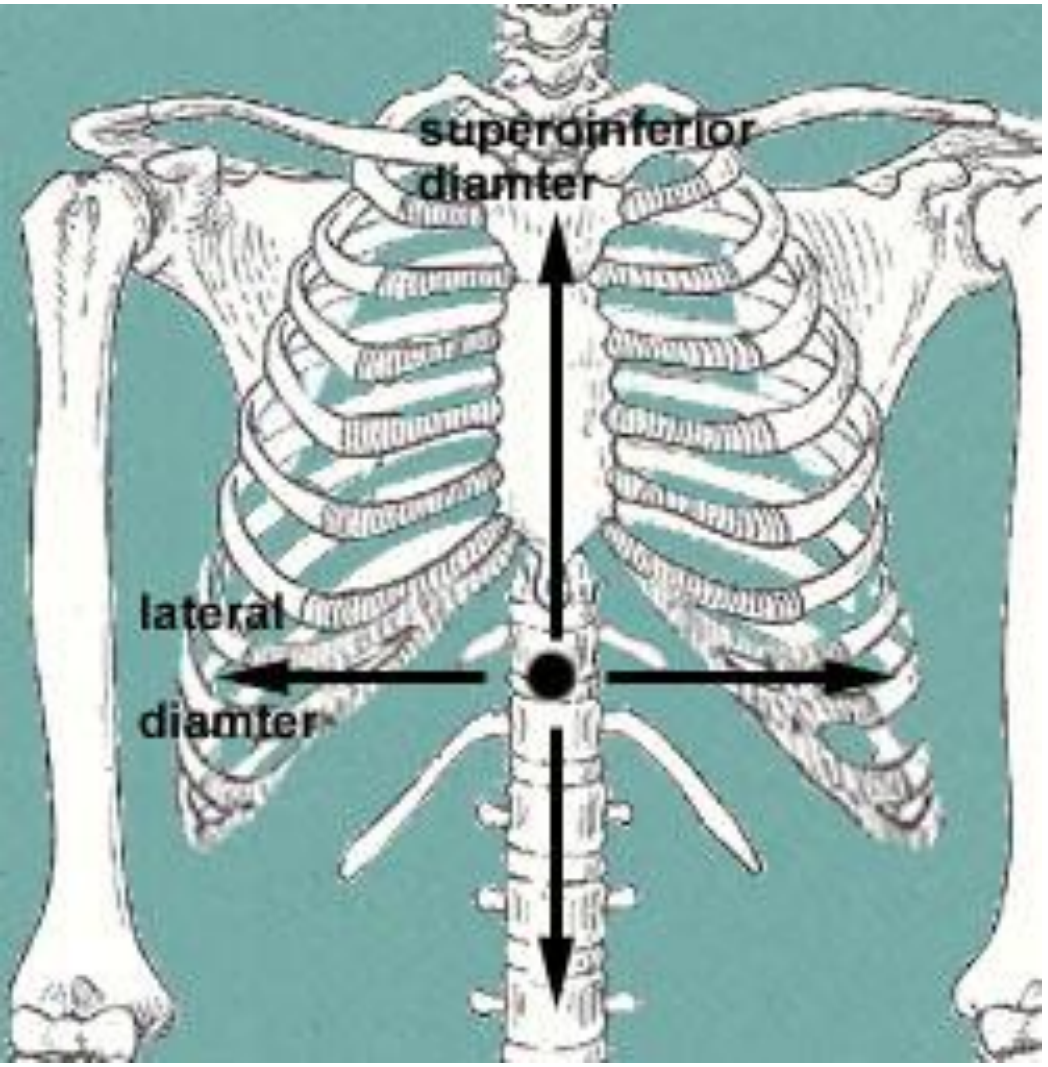
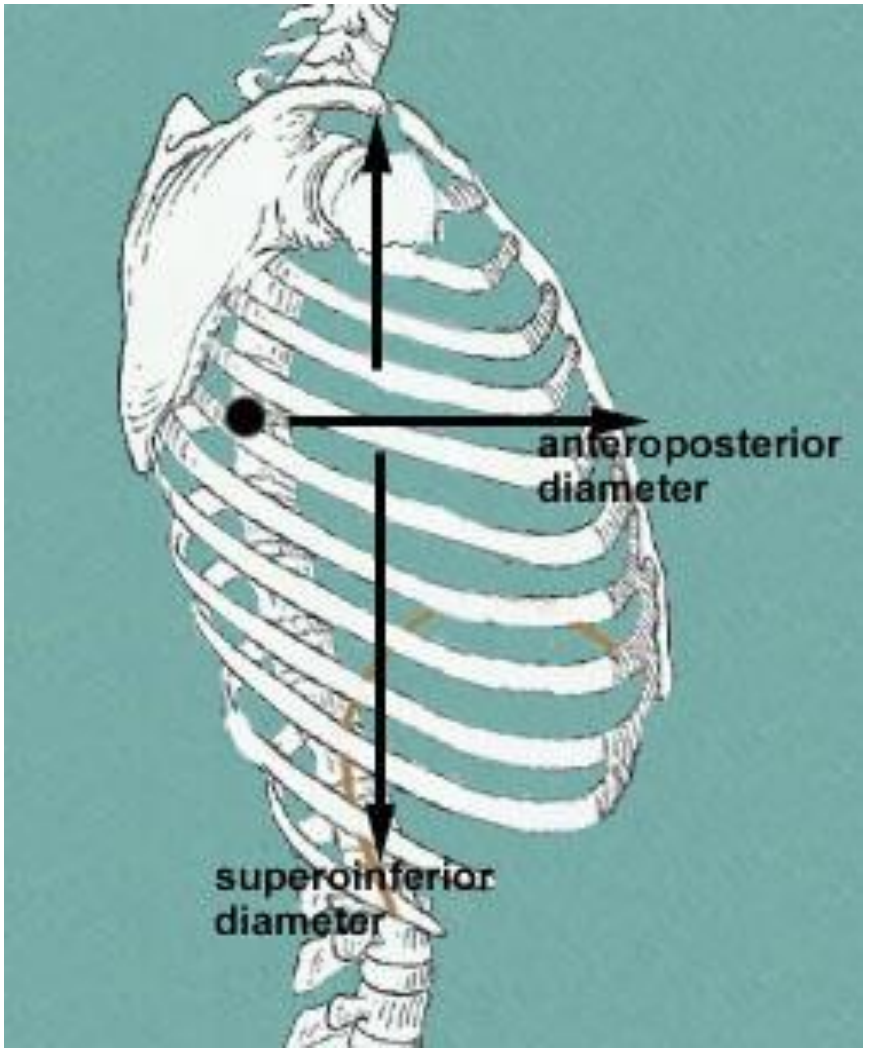
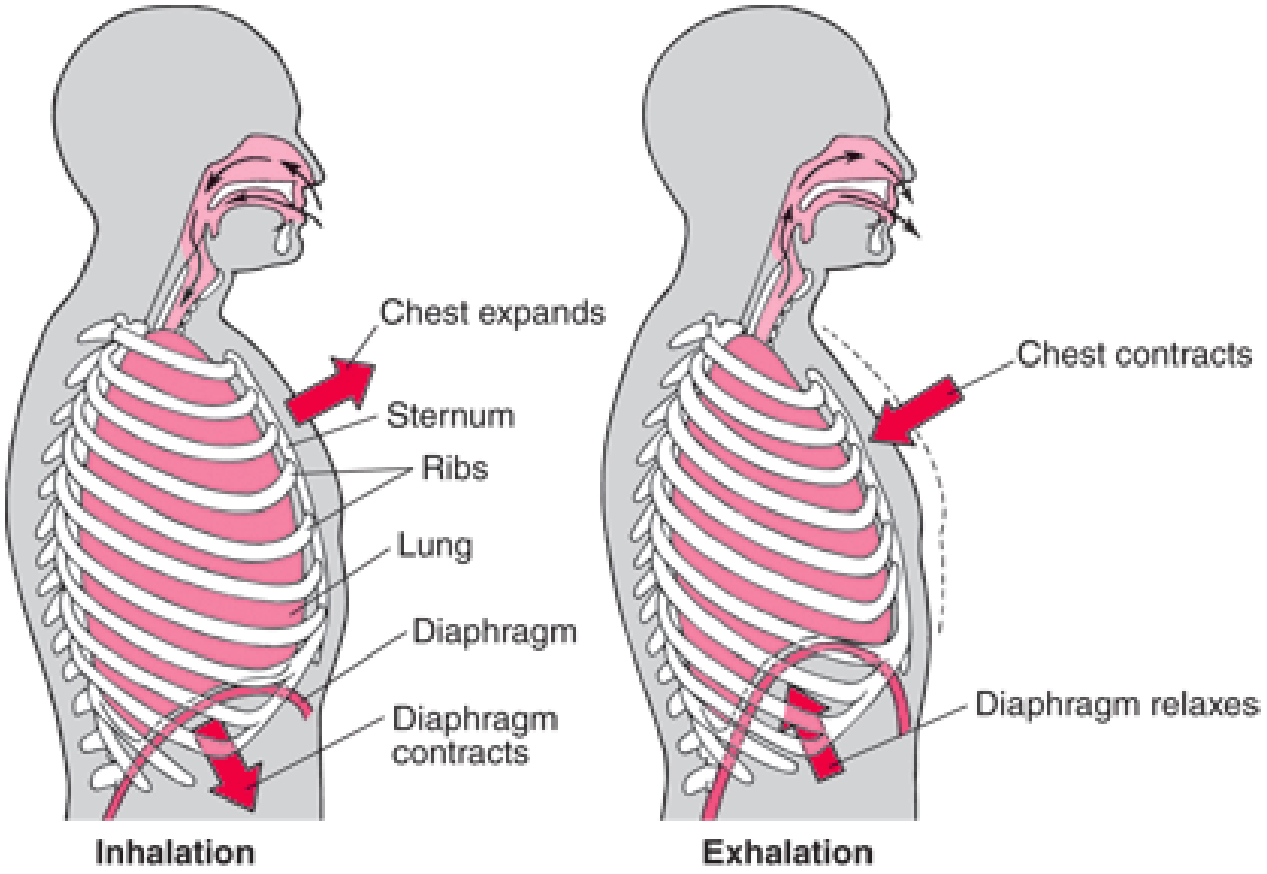
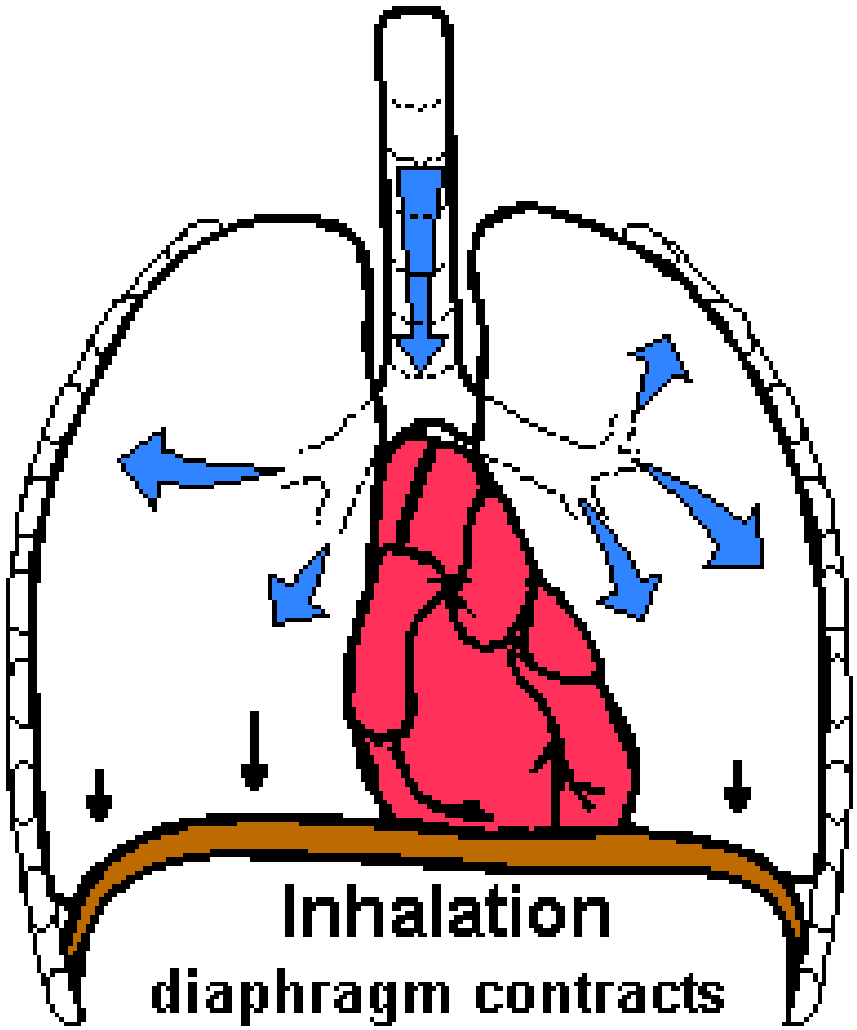
RESPIRATORY MOVEMENTS

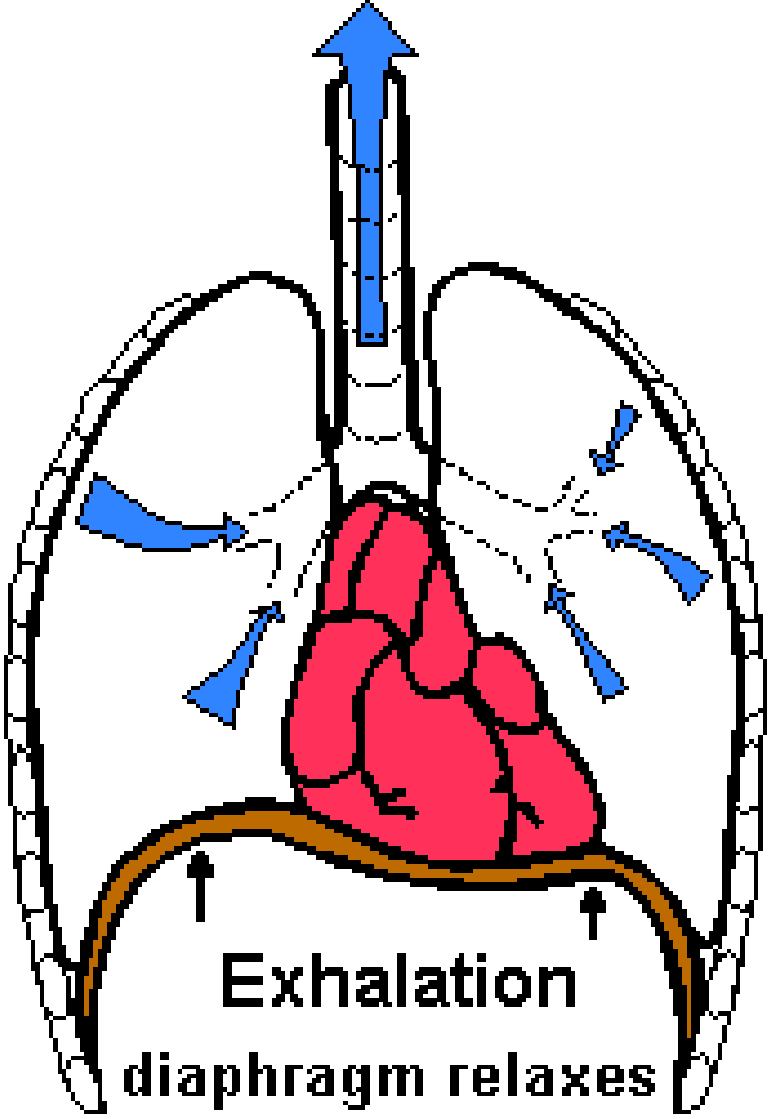



superoinferior
diamter
lateral
diamter


anteroposterior
diameter
superoinferior
diameter

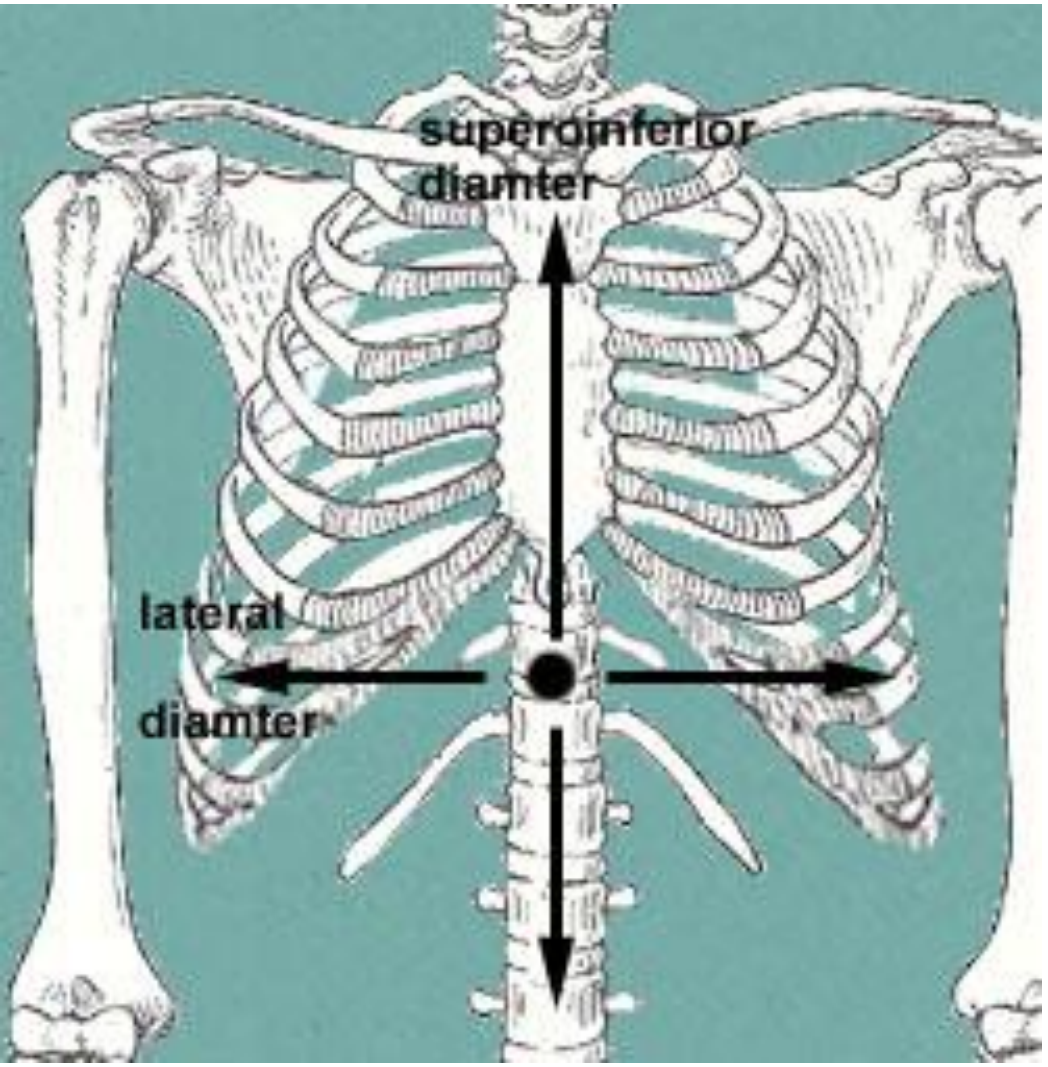

Chest expands
Sternum
Ribs
Lung
Diaphragm
Diaphragm contracts
Inhalation
Chest contracts
Diaphragm relaxes
Exhalation

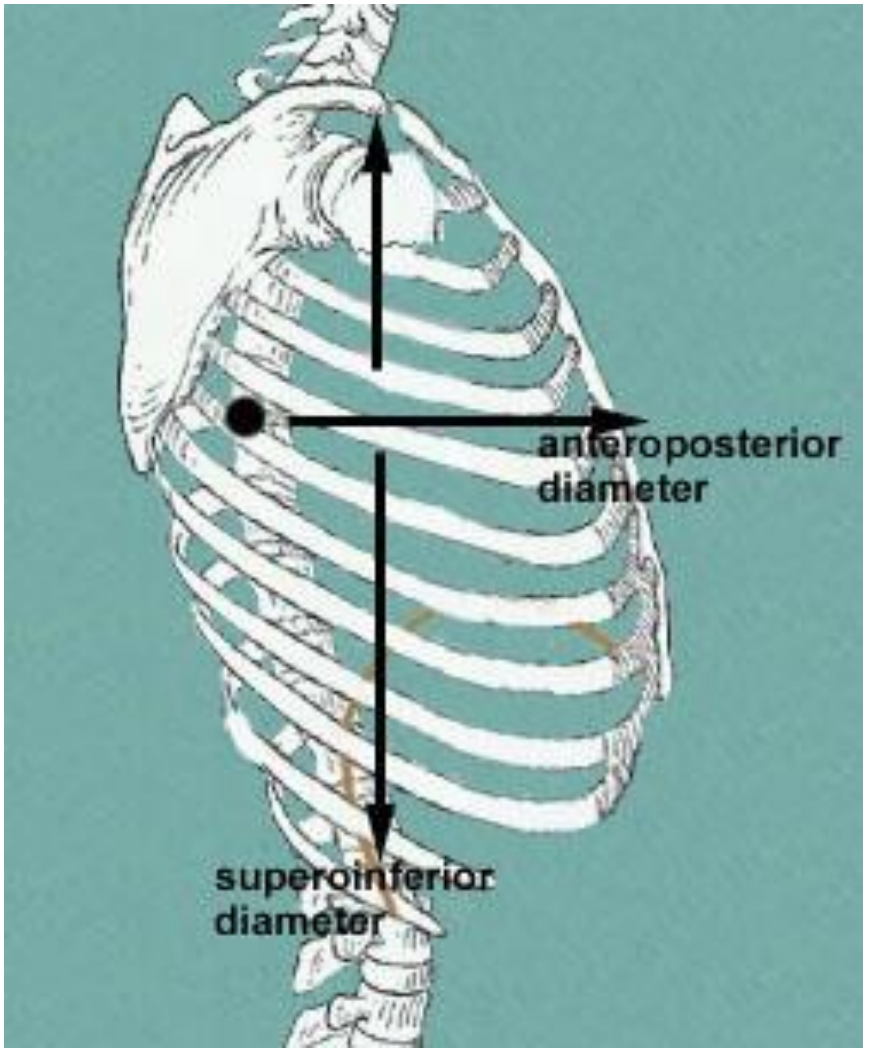

Inhalation
diaphragm contracts


Exhalation
diaphragm relaxes

RESPIRATION

INSPIRATION	EXPIRATION
Active process	Passive process
Contraction of muscles	*Elastic recoil of lungs and thoracic cage*
1sec.	3 sec.

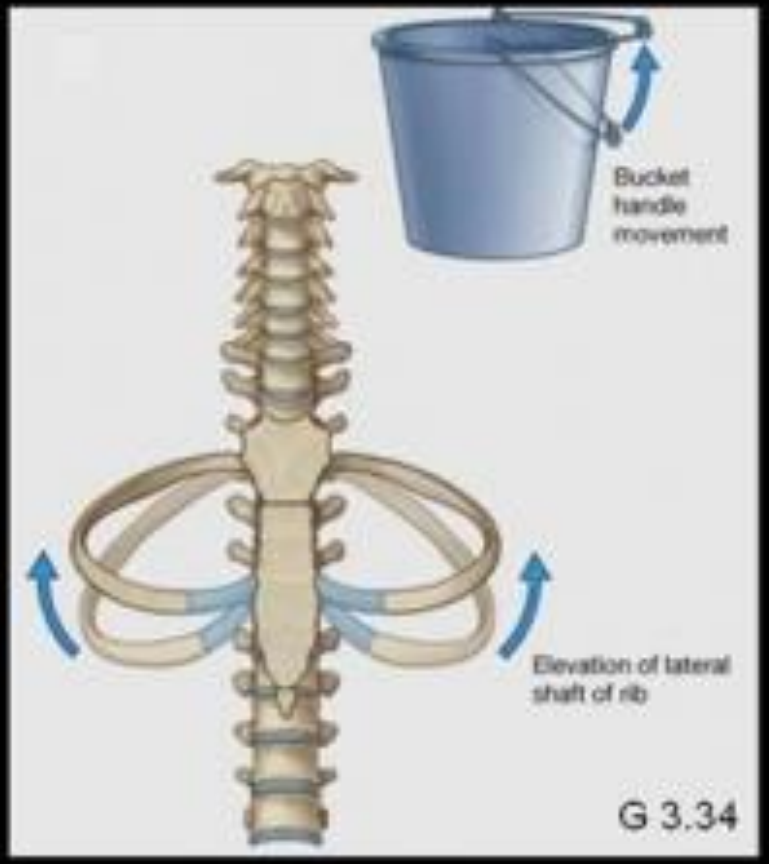

superoinferior
diamter
lateral
diamter


anteroposterior
diameter
superoinferior
diameter

Respiratory movements

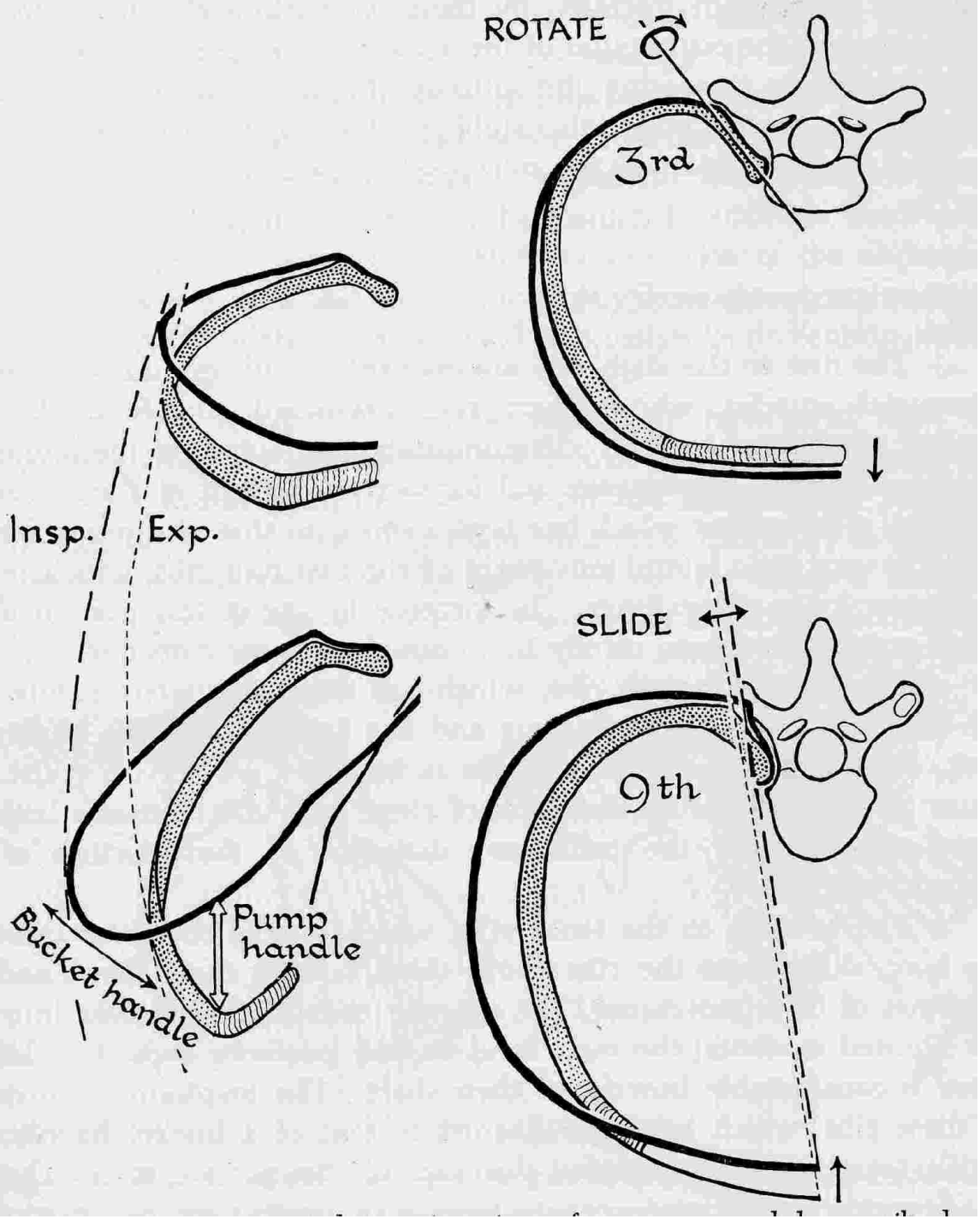
- Bucket-handle movements
- Pump-handle movements
- Piston movement

Inspiration: contraction of rib elevators

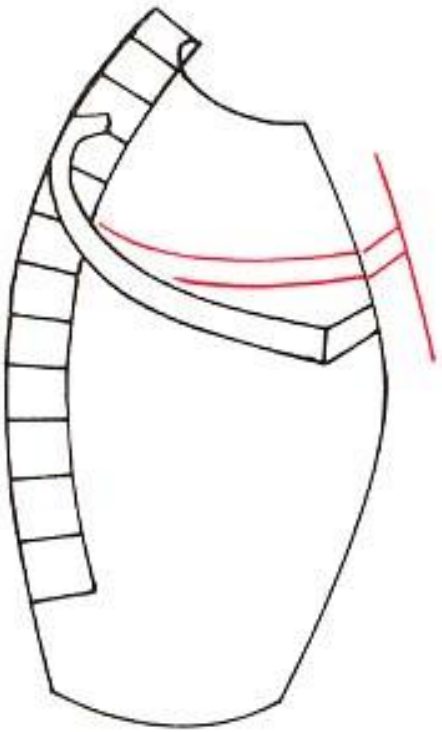


Increasing transverse dimension

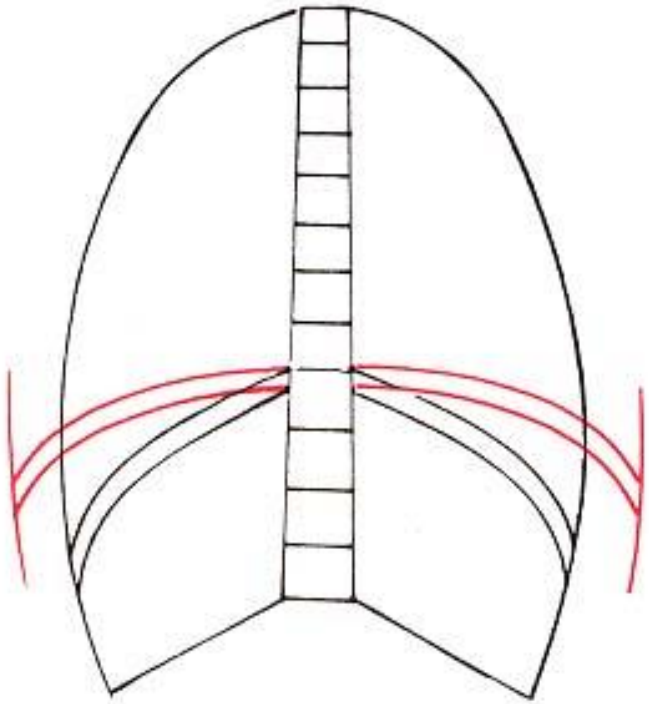
Increasing AP dimension


ROTATE
3rd
Insp.
Exp.
SLIDE
9th
Pump handle
Bucket handle

A LATERAL



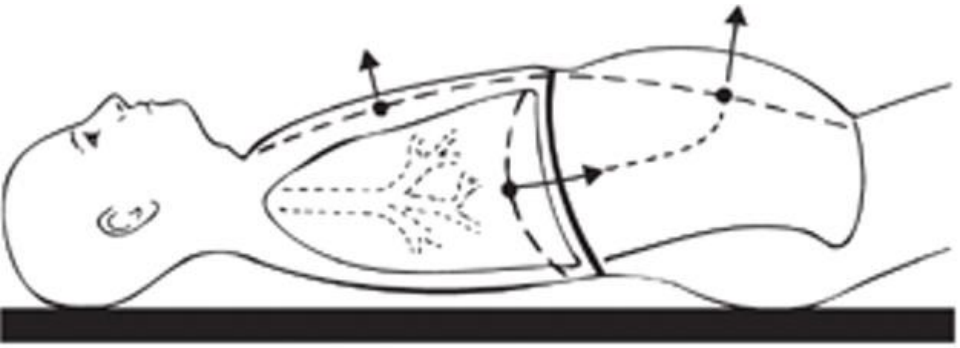
B POSTERIOR



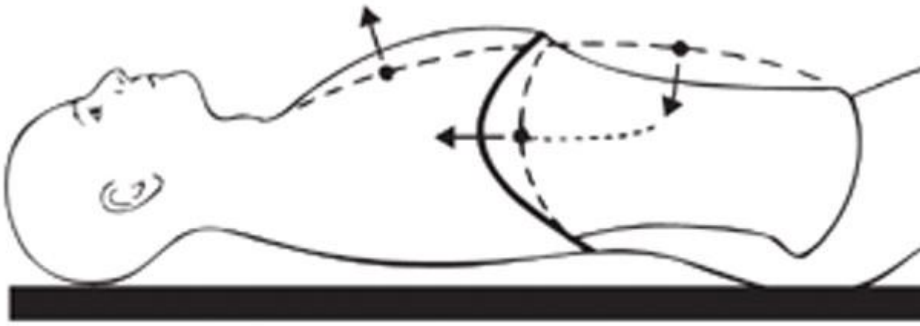
Muscles of inspiration

- Diaphragm
- Intercostal muscles
- Erector spinae
- Scalene group of muscles
- Sternomastoid
- Pectoral muscles
- Serratus anterior
- Quadratus lumborum

DIAPHRAGM



A Normal inspiration



B Inspiration with a weak diaphragm

Muscles of expiration

- Flat muscles of anterior abdominal wall
- Latissimus dorsi

Applied anatomy

- Dyspnoea
- Tachypnoea
- Bradypnoea

Aknowledgements

- Human Anatomy by BD Chaurasia
- Gray’s Anatomy
- Essentials of Human Antomy: Thorax by Asimkumar Dutta