Lecture: 8

Thoracic Wall formed by:

1_Intercostal muscles
2_membranes,
3_nerves & vessels.

Intercostal muscles inclued:

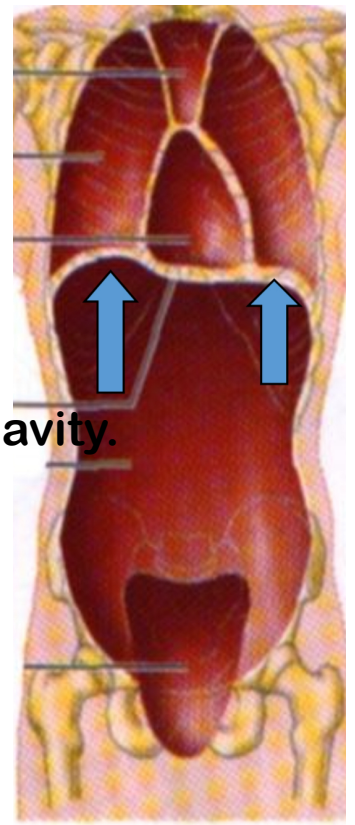
1_Internal Intercostal muscles,its direction:downwards,backwards.
2_External Intercostal muscles ,its direction:downwards ,forwards.
3_Inner most Intercostal muscles:its direction:downwards,backwards.

The Actions/Functions of intercostal muscles:

#the external intercostal are used for inspiration.
#The internal and innermost are used for expiration.

DIAPHRAGM:musculo-tendinous,partition which separates the thoracic cavity from the abdominal cavity.
Upper surface is convex towards the thoracic cavity.
* Lower surface is concave towards the abdominal cavity.
* Right side is called Right
copula & bulges higher up than the left copula.

The Diaphragm is Dome-shaped,and the center is fibrous in structure, semilunar in shape have 1 median and 2 leflets.



The Actions/functions of Diaphragm:

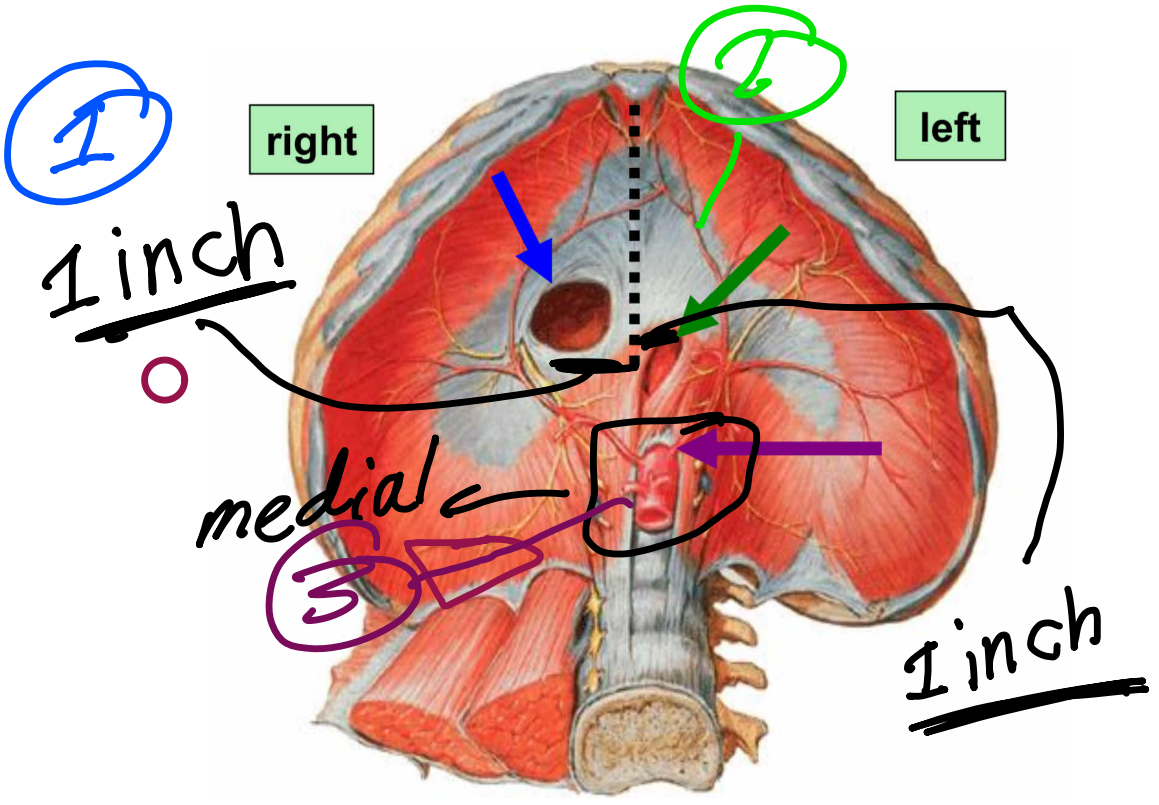
1_main muscle of inspiration.
2_increase the vertical diameter of the thoracic cavity.
3_It is active during forced expulsive acts.

Major foramina of the diaphragm :

1_Inferior Vena caval opening:piercing central tendon.

2_Oesophageal opening :piercing right crus.

3_Aortic opening:in mid linebehind median arcuate ligament.



Muscles of the Abdominal

AnteriorAbdominal Wall:

1. External oblique ms.
2. Internal oblique ms.
3. Transversus abdominis ms.

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Posterior Abdominal wall:

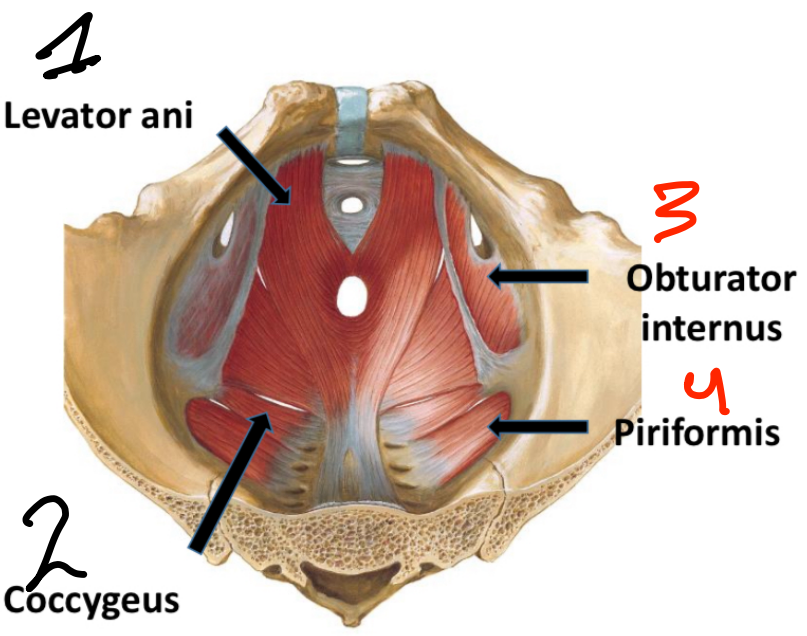
1. Psoas major.
2 Psoas minor (may be absent)
3.Quadratus lumborum.
4. Iliacus

External oblique ms its fibres run :obliquely ,downwards, forwards, medially.

Internal oblique ms its fibres run :obliquely,upwards,forwards,medially.

Transversus abdominis ms its fibres run:transeversely.

Muscles of the pelvis:



1 and 2 relate to :pelvic floor,diaphragm

3 and 4 ralate to :pelvic wall

Muscles.	Origin.	Insertion.	Nerve supply.	Action
External intercostalMs.	. lower border of rib above.	Upper border Of rib below.	Corresponding Intercostal nerves	Inspiration
Internal intercostal Ms.	Costal groove Of rib above	Upper border Of rib below.	Corresponding. Intercostal nerves	Expiration
Innermost intercostal MS.	Costal groove Of rib above	Upper border Of rib below	Corresponding. Intercostal nerves	Expiration
Psoas major.	from lumbar vertebrae.	lesser trochanter of femur.	No	The main flexor of thigh
Psoas minor.	1st lumbar vertebra.	hip bone.	No.	Helps in flexion of thigh
Quadratus lumborum.	iliac crest of hip bone.	last rib.	No.	Lateral flexion of the trunk 2- Extension of trunk
Iliacus.	hip bone.	lesser trochanter of femur.	No.	Helps in flexion of thigh
Diaphragm.	circumference of the thoracic outlet.	crescentic.	Motor supply: right & ..... left phrenic nerves	

Note that: circumference of the thoracic outlet:origins of Diaphragm:

1. Sternal origin from back of xiphoid process.
2. Costal origin from the inner surfaces of the lower 6 costal cartilages.
3. Vertebral origin from upper 3 lumbar vertebrae.

@The anterior intercostal muscles and the rectus are supplied by:
lower six thoracic spinal nerves (T7 to T12)

Actions of interior Abdominal Muscles

1. Support & protect
2. Expiration.
3. Expulsive
4. Movements of the trunk:

* Flexion of the trunk.
* Lat. Flexion of the trunk.

4_They have different direction of muscle fibers to strengthen the abd. wall.

The rectus abdominis is an vertical muscle, near the midline, which is enclosed within a tendinous sheath Rectus heath) formed by the aponeuroses of the flat muscles.

Neurovascular plane: Lies between internal oblique transversus and abdominis.

The muscles (AnteriorAbdominal Wall) have wide fleshy origin & aponeurosis towards insertion forming:

1. Rectus Sheath.
2. Linea alba

a disciplined study means distinctive future.