

## Mediastinum

- It is the space inside the thorax and located between two pleural sacs.

- IVD  $\rightarrow$  Inter Vertebral Disk

- Due to the presence of pericardium, the Mediastinum is divided into 4 parts not 2  $\Rightarrow$  superior, Anterior, Middle, Posterior

### Superior Mediastinum

It contains central single structures and paired structures (central paired structures)

(I) central single structure: From anterior to posterior

A- Thymus Gland: lymphoid organ in the children  $\Rightarrow$  new born until 2 years (immunity)  
acquired immunity later

B- Superior Vena Cava = Right Brachiocephalic Vein + Left Brachiocephalic Vein

C- Arch of aorta: starts and ends at level of sternal angle

D- Thoracic Duct:

main thoracic channel in the body  $\rightarrow$  it starts at the liver  $\rightarrow$  because the liver is filter to the body, when we eat, the veins will carry the blood with product of digestion to the liver through the blood  $\rightarrow$  loaded

⇒ send it to the liver through a system called:  
**portal circulation**, why??

\* because when someone ~~eat~~ drink liquids (عاشبه) it will go the ~~#~~ check point to detoxification in liver

~~and~~ \* and Microbes, it will destroyed ~~and~~ by phagocytes in liver.

⇒ So it started at liver and then ascend to the thorax and drain into venous system

E. Trachea

F. Esophagus

} we will talk about these later

## 2) ~~Paired~~ Paired structures

A. Three branches of aorta

B. Right and left Brachiocephalic vein

C. Right and left Vagus nerve

vagus (عاشبه) → tenth cranial nerve

عاشبه

D. Right and left phrenic nerves

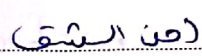
⇒ supply the Diaphragm ⇒ originate from C3/C4/C5

⇒ close to the brachial plexus.

E. Right and left sympathetic trunks ⇒ trunk ⇒ base of the skull → Down to the coccyx


→ at the both sides of vertebral column

### \* Anterior Mediastinum

It is slit like (  )

- bounded posteriorly by the anterior wall of the pericardium.

- Thymus Gland → it not ~~exist~~ exist in adults

→ remnants (  ) of it. in the adults.

### \* Middle Mediastinum

bounded posteriorly by Middle 4 thoracic vertebrae ( T5, T6, T7, T8 )

### ⇒ Important note :

**Phrenic nerves:** Two nerves that moving at the both side of the heart to innervate the ~~the~~ diaphragm muscles and the pericardium and it is the **only motor nerve of the Diaphragm**

→ originate from C3, C4, C5 at the root of the neck

→ sharing C5 with brachial plexus.

# Important note <sup>NO.</sup> ⇒ help you in the next lecture

**Diaphragm** → has sloping part and horizontal part

\* **Posterior Mediastinum (content)**

① **Esophagus** → started at the neck → pass in the thorax → then passes down to the abdomen

② **Thoracic aorta**: continuation of arch of the aorta.

⇒ called **Descending aorta**

⇒ begins at the level of T<sub>4</sub>/T<sub>5</sub> (sternal angle) and ends at the level of T<sub>12</sub>

⇒ after passing the diaphragm (through the Aortic opening) ~~it will~~ ~~it will~~ it will be called abdominal aorta.

③ **Thoracic duct**:

It started in the abdomen close to the liver then it will ascend up through the thorax then it will ~~go~~ go to drain into venous system.

④ **Sympathetic trunk**

extending from base of the skull, it is located in ~~both~~ sides of the vertebral column in the posterior mediastinum → down to coccyx.

## 5) Azygos Veins

in GI (intestine) → venous drainage go to liver  
 kidney, prostate → → → to IVC  
 wall of abdomen, thorax → → → to system called  
**Azygos system**

- Azygos → draining the wall of abdomen and  
 thorax and then it will go to drain into the  
 SVC ~~the venous system~~

Diaphragm → Lateral View

الجزء المنحني

Horizontal  
part

