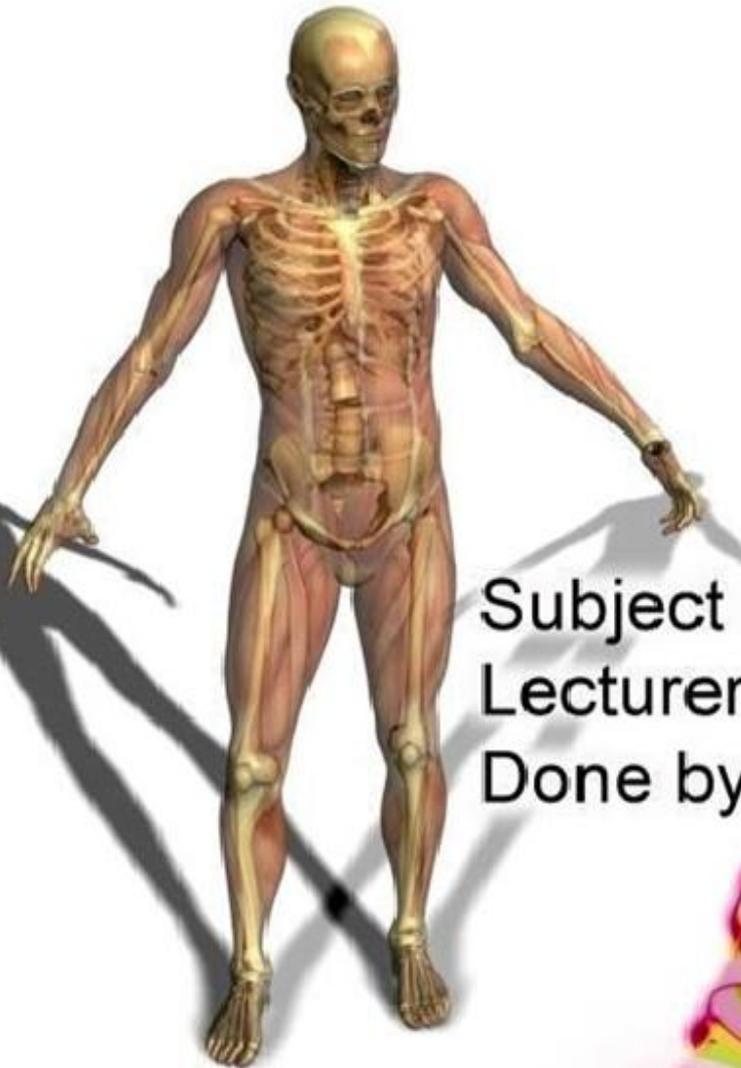




ANATOMY

Sheet



Subject : *Introduction to Anatomy*

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Thorax - Mediastinum

Mediastinum:

It's a thick moveable partition that extends superior from thoracic inlet and the root of the neck, inferior by thoracic outlet (diaphragm) anterior by the sternum and by the thoracic vertebrae posterior.

Mediastinum contains the remains of the thymus gland, heart and large blood vessels, the trachea, esophagus, thoracic duct, and lymph nodes, the vagus and phrenic nerves, and the sympathetic trunk.

- Borders of Mediastinum:

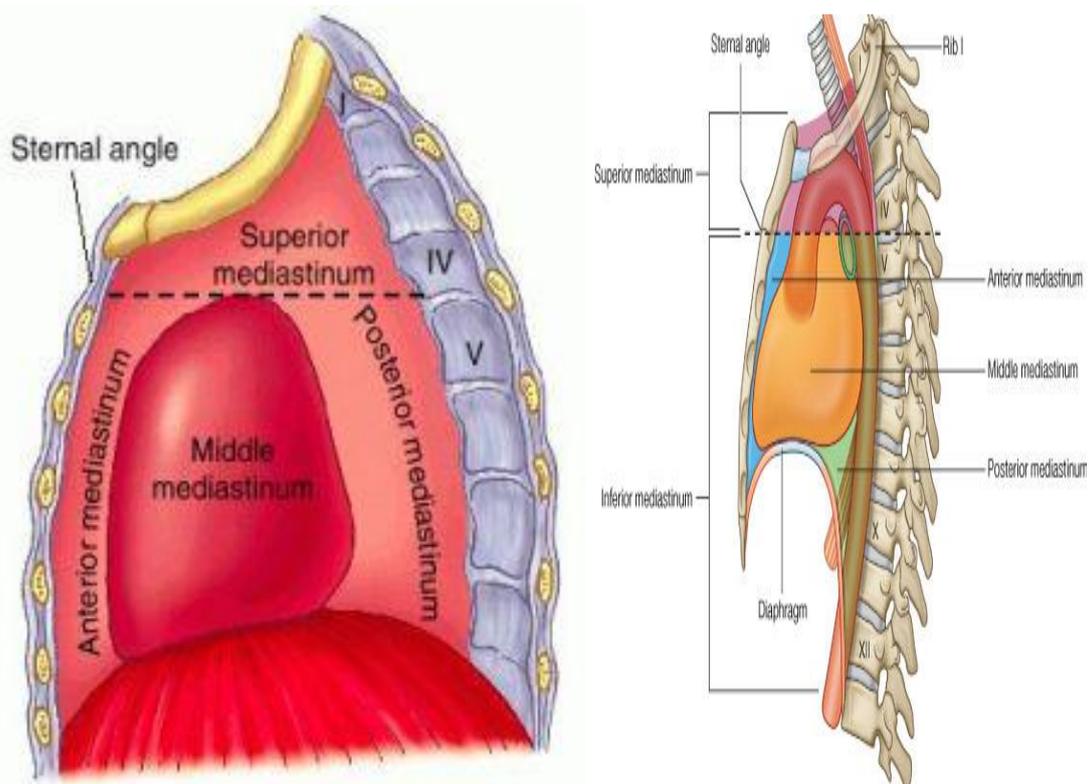
It's bounded superiorly by thoracic inlet, inferiorly by "thoracic outlet" diaphragm, anteriorly by the whole sternum and posteriorly by all thoracic vertebrae.

MEDIASTINUM SUB DIVISIONS

Mediastinum is large so it's subdivided into parts.

There is an **imaginary line** which extends from the sternal angle anteriorly to the lower border of the 4th thoracic vertebrae posteriorly. This line divides the mediastinum into 2 parts; superior mediastinum above the imaginary line and inferior mediastinum below it.

*Thoracic vertebrae are 12, we divide them into upper 4, middle 4, and lower 4 vertebrae.

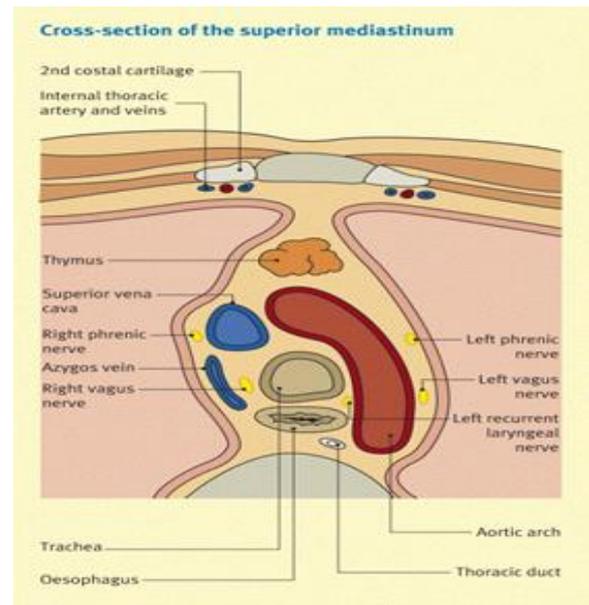


1 -Superior Mediastinum:

bounded superiorly by thoracic inlet, inferiorly by imaginary line, anteriorly by manubrium sterni, posteriorly by the upper 4 thoracic vertebrae.

- Contents of superior mediastinum:

- 1-Esophagus passes behind the trachea which divided at the 4th rib.
- 2-trachea located behind the arch of aorta, which is divided at the sternal angel.
- 3- Arch of aorta and its branches
- 4- Superior vena cava
- 5- Thoracic duct (left side of lymphatic)
- 6- Thymus gland.



2-Inferior Mediastinum:

it's large and due to the presence of the pericardium and its contents it's subdivide into 3 parts:

1-Anterior mediastinum:

It's a space between the pericardium and the sternum and its narrow, it's bounded anteriorly by the body of sternum, posteriorly by the pericardium, superiorly by the imaginary line and inferiorly by the diaphragm.

-contents:

- 1-Thymus gland (in children)
- 2-Fat

2-Middle mediastinum:

It's bounded anteriorly by the anterior mediastinum, posteriorly by middle 4 thoracic vertebrae, superiorly by the imaginary line, inferiorly by the central tendon of the diaphragm.

-contents:

- 1-Pericardium
- 2-Heart in the pericardium.
- 3-Phrenic nerve (which innervates the diaphragm).
 - *it is the only motor nerve supply to the diaphragm.
 - *phrenic = related to the diaphragm.

3- Posterior mediastinum:

It's bounded anteriorly by pericardium, posteriorly by the lower 8 thoracic vertebrae, superiorly by the imaginary line, inferiorly by the sloping part of diaphragm.

* Diaphragm has sloping part ends at the T12 and horizontal part ends at T8.

-Contents:

1- Esophagus (passes at the neck to thorax to the abdomen)

2- Thoracic aorta (from arch of aorta)

3- Thoracic duct (left lymphatic) starts at the abdomen and then it will go up.

4- Sympathetic trunks (extending from the base of the skull then on both sides of the vertebral column and end at the tip of the coccyx).

- Sympathetic trunk is beaded these beads are ganglions which gives the code to the nerve to be sympathetic.

preganglionic sympathetic > synapse > receives the code > give post ganglion then it goes to the vessels, glands, smooth muscles...etc.

- Thoracic duct

lymphatic vessels in the body drain into two major vessels; one is the right lymphatic trunk which drains the right upper limb the right half of the head and neck and the lateral half of the right breast, the rest of the body is drained by the thoracic duct "left lymphatic trunk". At the end the lymphatic vessels will go to the venous blood for refiltration and cleaning the body.

