

Abdominal cavity

***Peritoneum (continue) .**

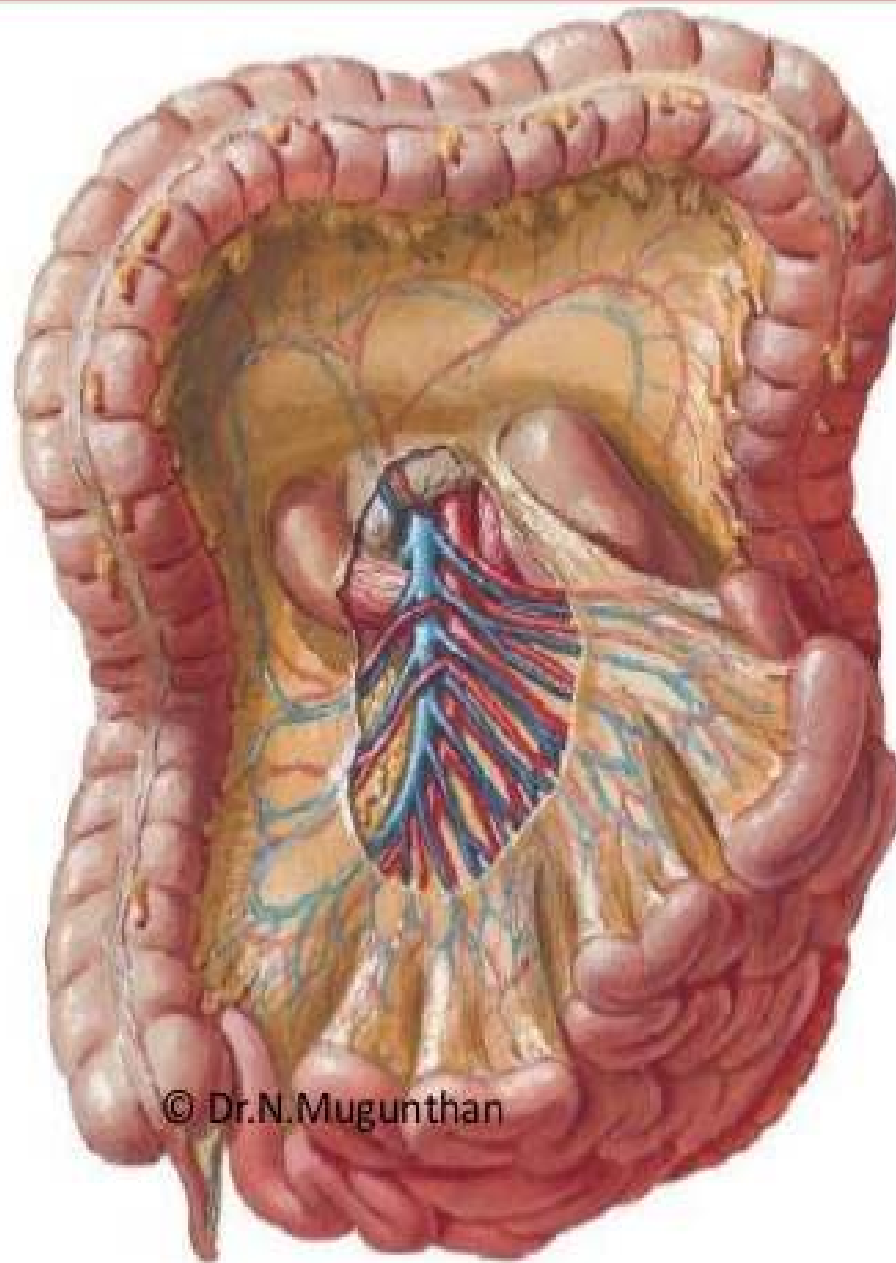
***Gastro intestinal tract:**

--- Esophagus.

Notes:

- **The subphrenic spaces and the paracolic gutters are clinically important because they may be sites for the collection and movement of infected peritoneal fluid.**
- **The peritoneal ligaments, omenta, and mesenteries permit blood, lymph vessels and nerves to reach the viscera.**

MESENTERY



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- **The parietal peritoneum is sensitive to pain, temperature, touch and pressure.**
- **The visceral peritoneum is sensitive only to stretch and tearing only.**

Nerve Supply of the Peritoneum:

1)The parietal peritoneum of anterior abdominal wall:

Lower 6 thoracic & 1ST lumbar nerves that same nerves that innervate overlying muscles & skin.

2)The diaphragmatic peritoneum:

Central part----- phrenic nerves .

*Peripheral part-----*lower 6 thoracic nerves.

3)The parietal peritoneum in the pelvis:

obturator nerve.

4) Visceral peritoneum:

It is supplied by autonomic afferent nerves that supply viscera.

Blood supply & lymphatic of peritoneum:

The **parietal peritoneum** is supplied by somatic blood vessels of abdominal & pelvic wall .its lymphatic's join those in body wall & drain in it .

Visceral peritoneum is best regarded as integral part of viscera which is overlies . It is derived its blood supply from viscera & its lymphatic join visceral vessels to drain to regional lymph vessels.

Functions of the Peritoneum:

1) Protection:

The peritoneal coverings of the intestine tend to stick together in the presence of infection. In this manner, many of the intraperitoneal infections are sealed off and remain localized.

2. large amounts of fat stored in ligaments & mesenteries esp. greater omentum.

3. Blood vessels, lymphatics & nerves runs in folds.

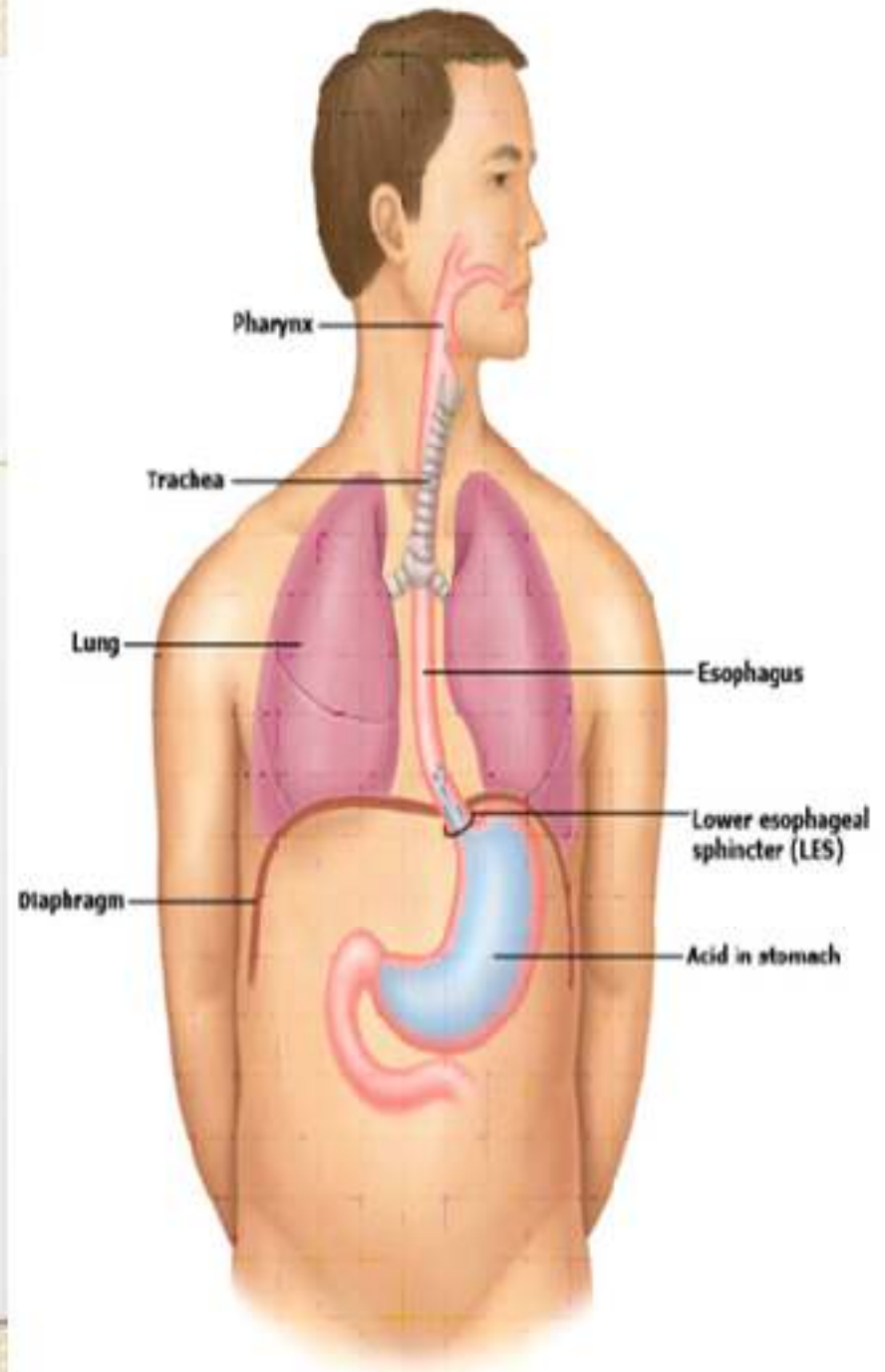
4. Peritoneal folds play a role in suspending various organs within peritoneal cavity.

Gastro-intestinal Tract: Esophagus (Abdominal Part):

It is a muscular collapsible tube about 25 cm long that joins pharynx to the stomach.

The greater part of esophagus lies within thorax.

The esophagus enters abdomen, pierces diaphragm. After a short course about 1.25 cm it enters stomach.



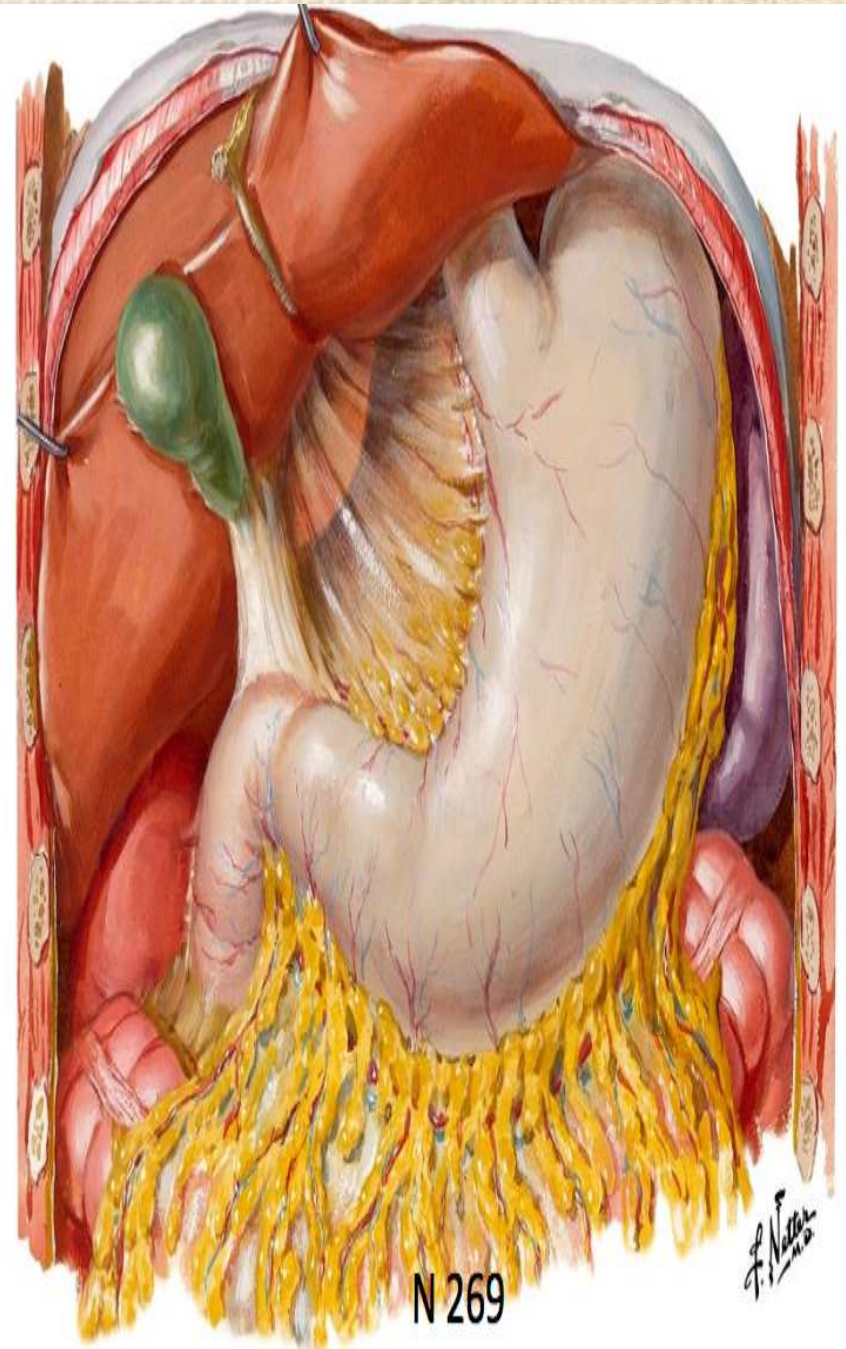
Anatomical relations :

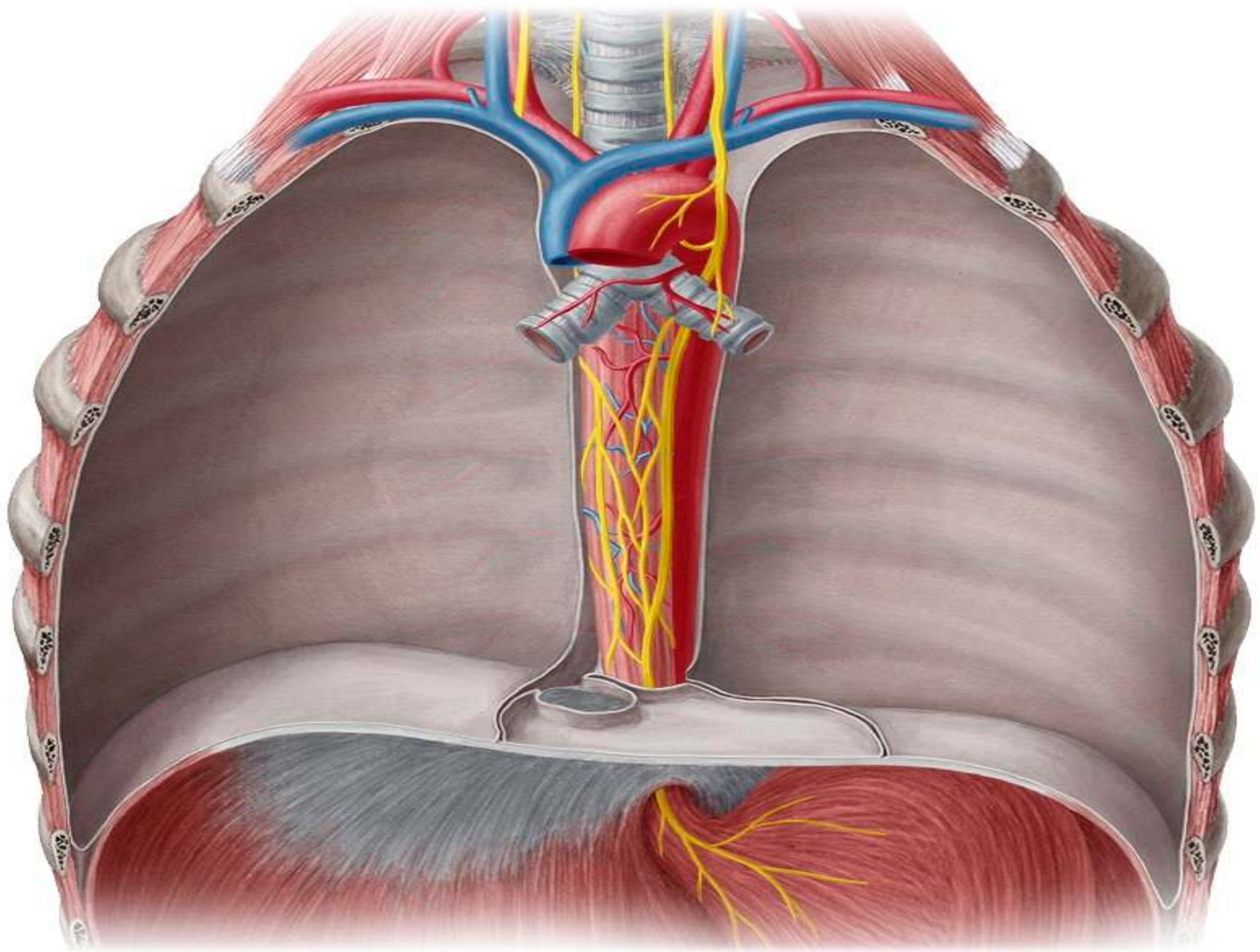
Anteriorly:

**Left lobe of the liver , left
vagus nerve .**

Posteriorly:

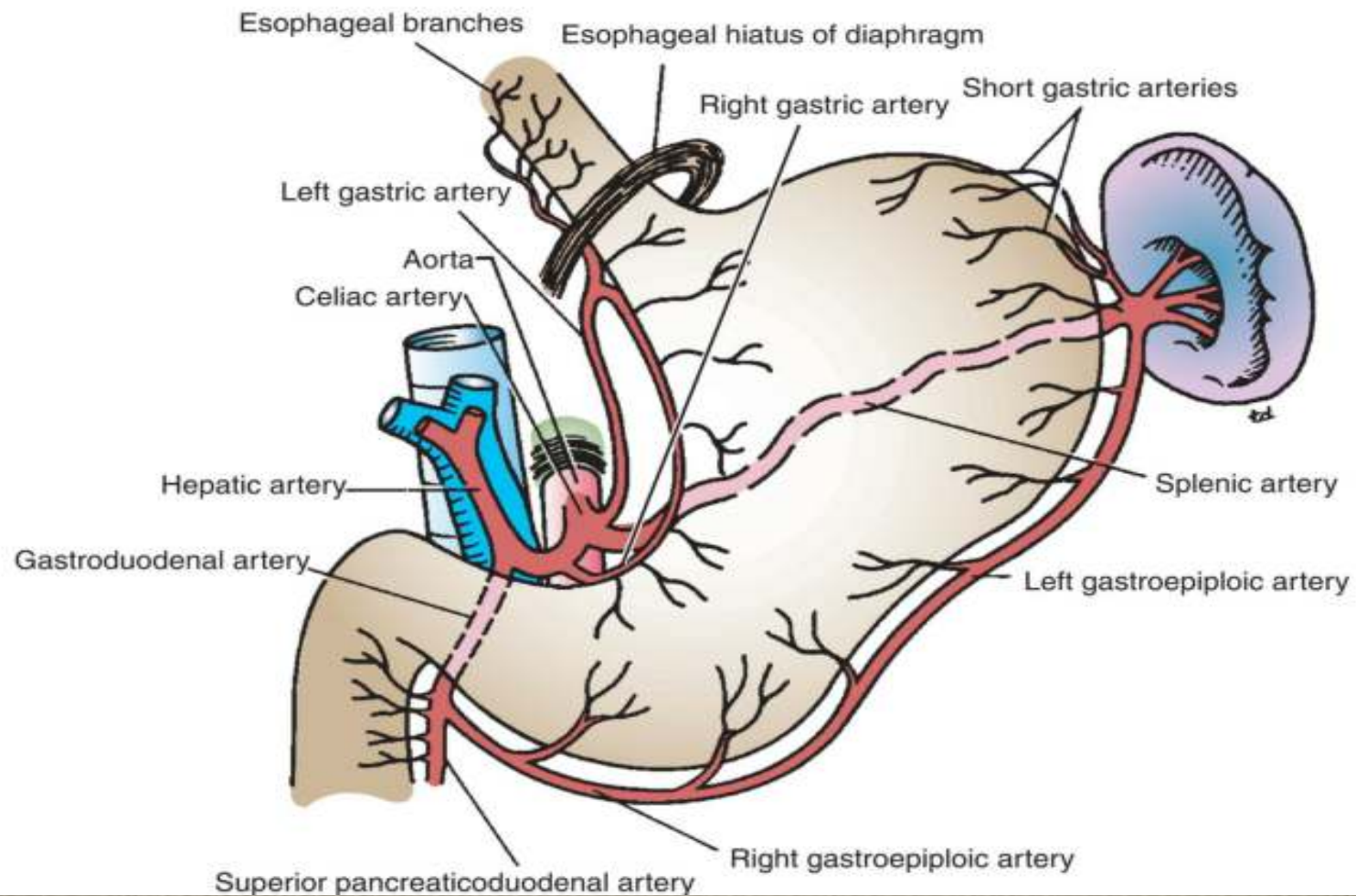
**The left crus of diaphragm ,
right vagus nerve .**





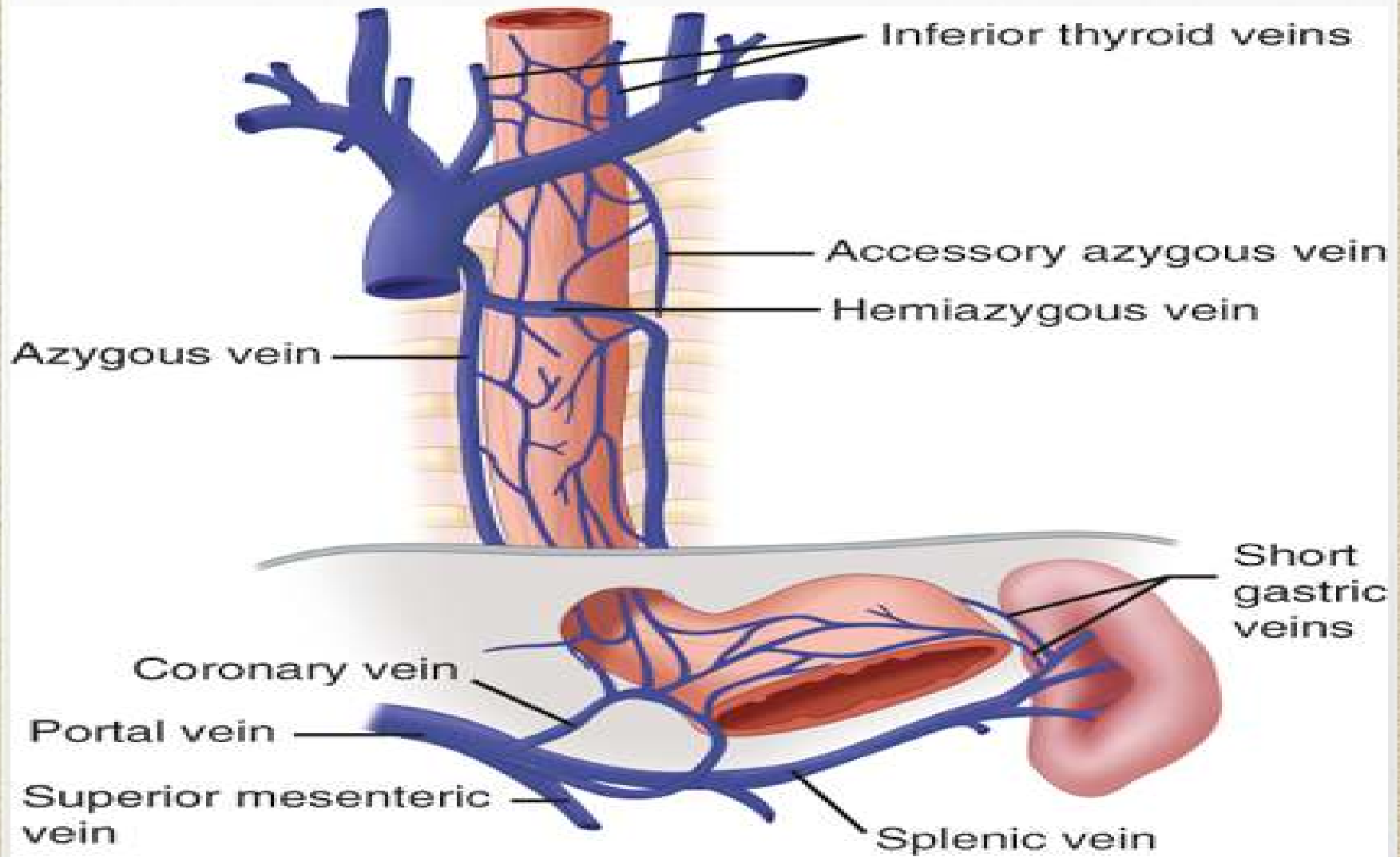
Blood Supply:

- **Arteries:** The branches from left gastric artery.



Veins

The veins drain into left gastric vein & eventually portal vein.



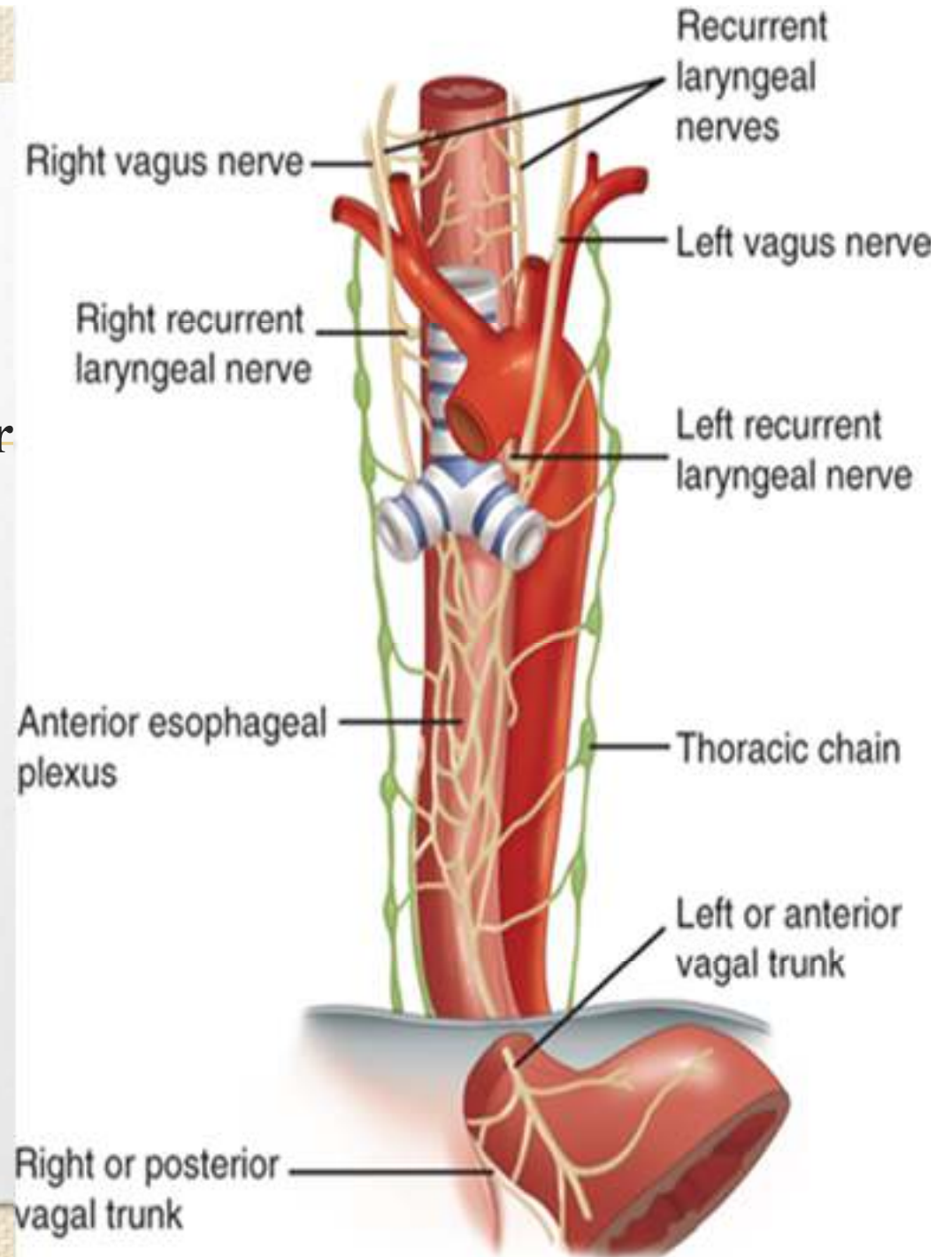
Nerve Supply:

1) Parasympathetic supply:

The nerve supply is anterior & posterior vagi.

2) sympathetic supply :

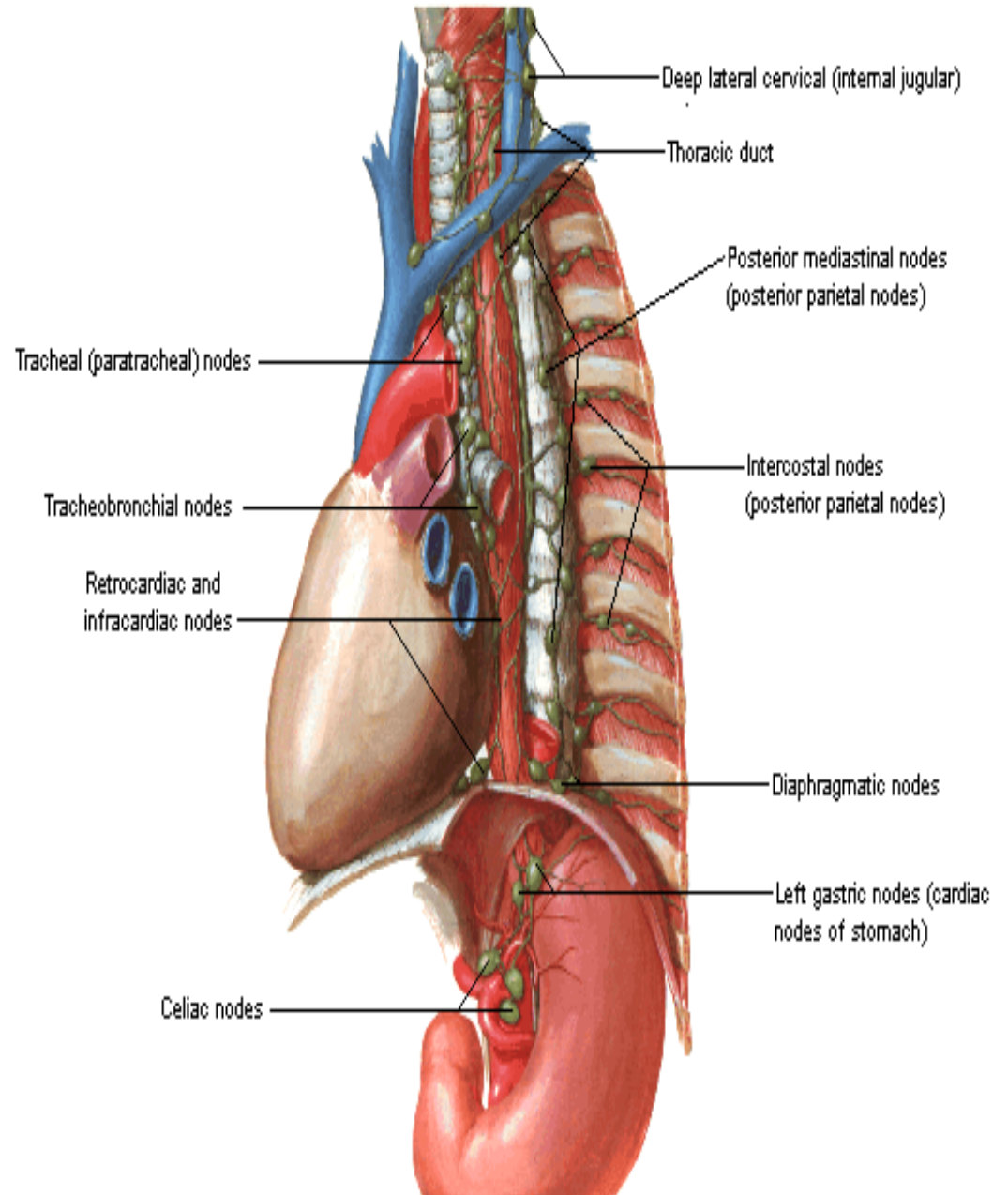
sympathetic thoracic trunk.



Lymph Drainage:

The lymph vessels follow
arteries into **left gastric nodes**.

Lymph Vessels and Nodes of Esophagus



:Gastroesophageal Sphincter

The esophagus conducts food from pharynx into stomach.

Wavelike contractions of muscular coat called peristalsis which propel food onward.

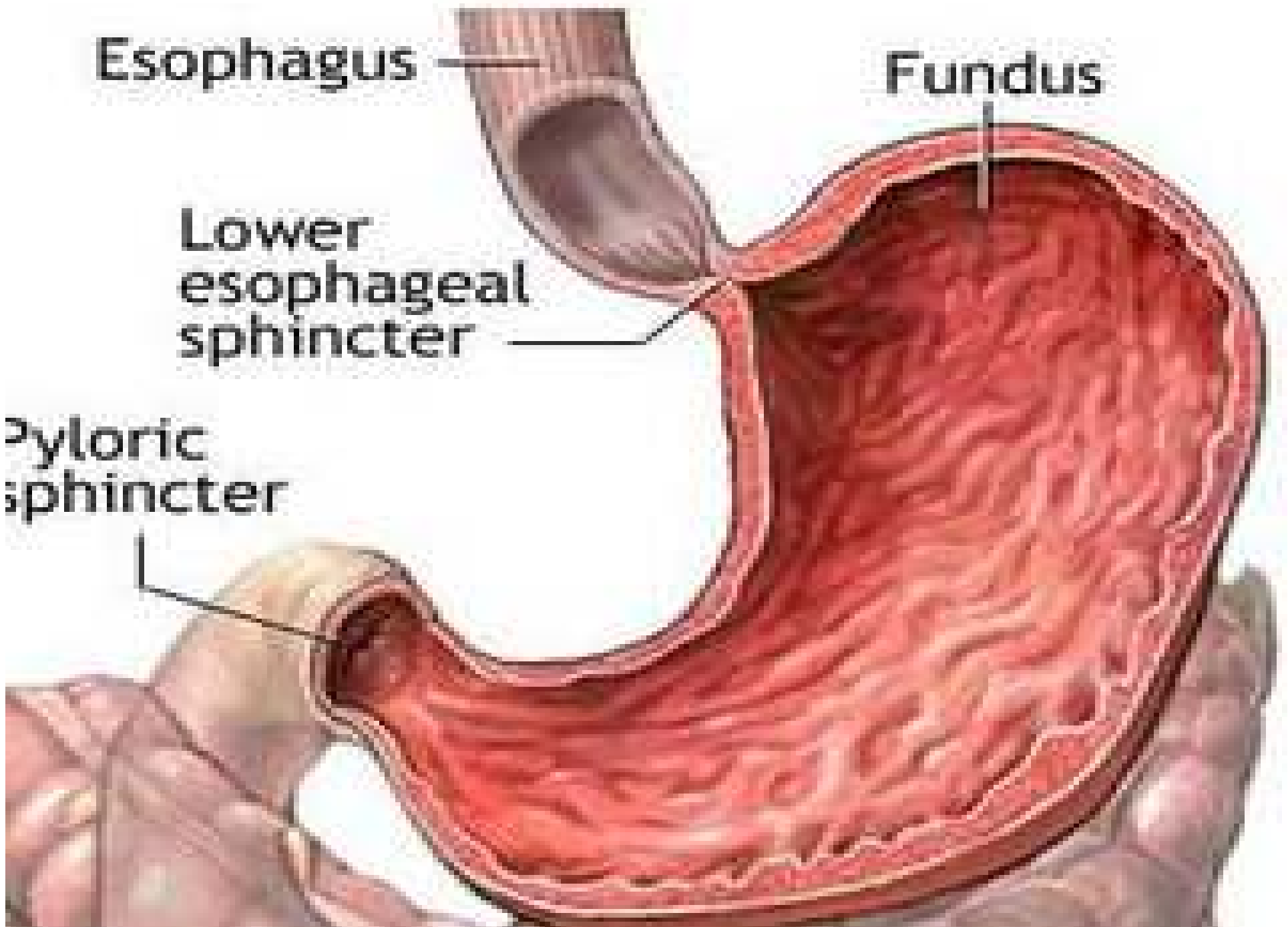
No anatomic sphincter exists at lower end of esophagus but circular layer of smooth muscle in this region serves as a physiologic sphincter. As food descends, relaxation of muscle at lower end occurs ahead of peristaltic wave so that food enters stomach. The tonic contraction of this sphincter prevents stomach contents from regurgitating into esophagus.

Esophagus

Fundus

Lower
esophageal
sphincter

Pyloric
sphincter



The closure of sphincter is under vagal control and this can be **increased by the hormone gastrin** but **reduced in response to**

:

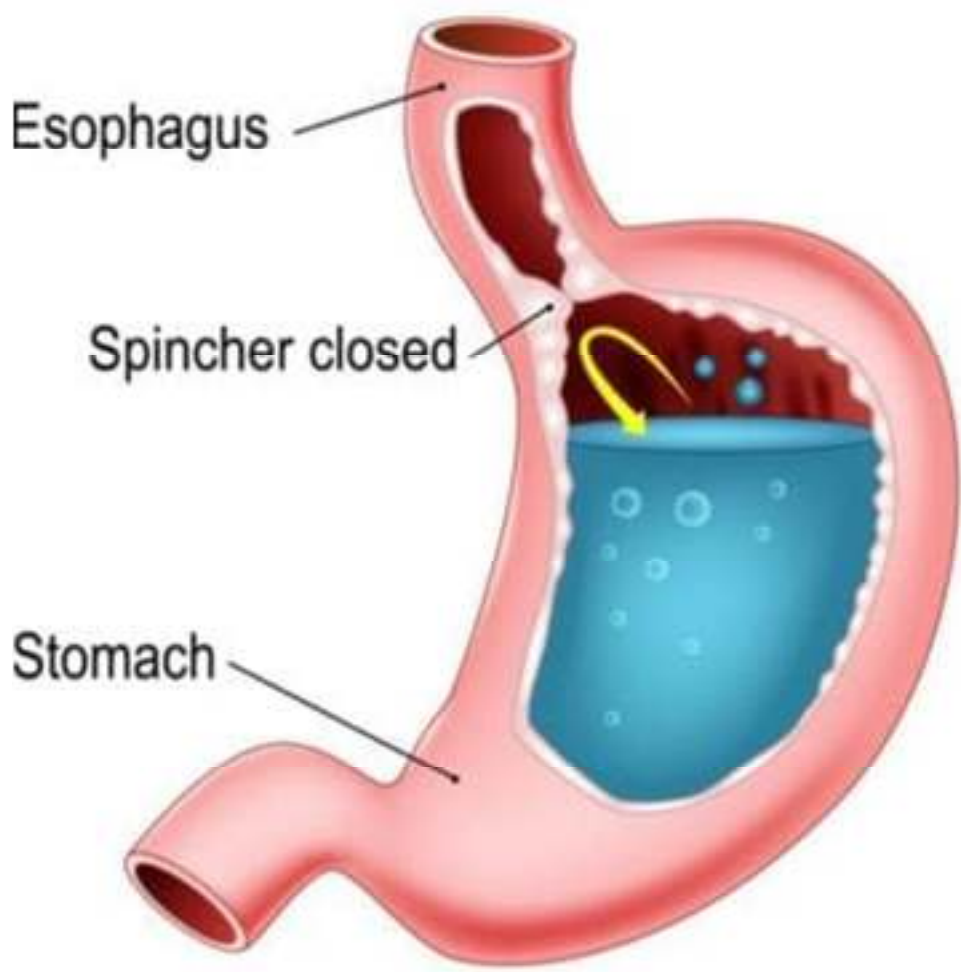
-Secretin

-Cholecystinin

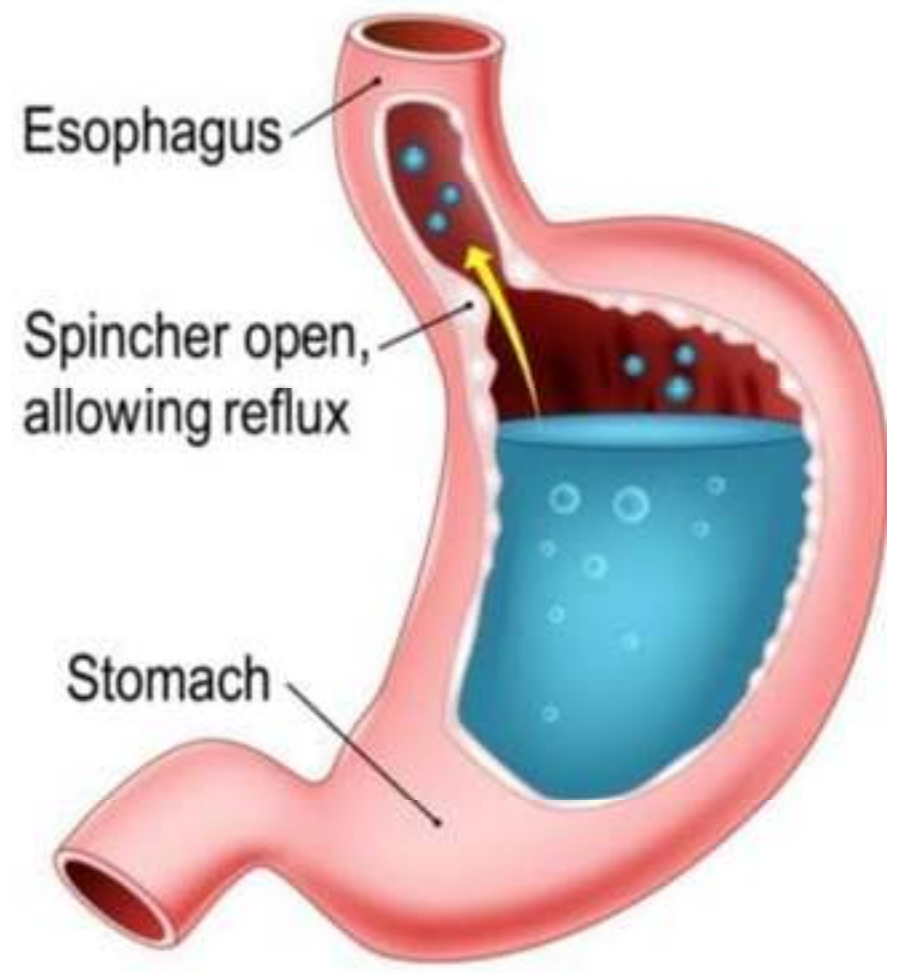
-glucagon.



GERD: Gastroesophageal Reflux Disease



Healthy



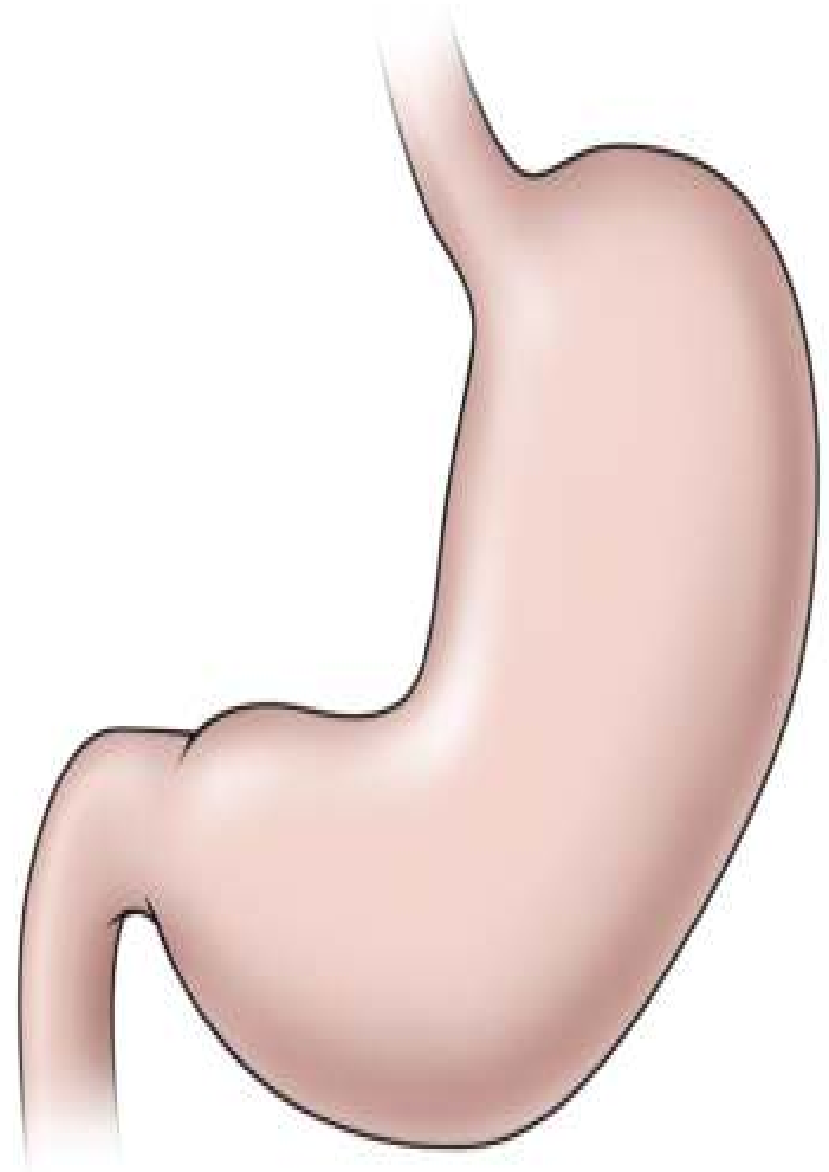
GERD

Stomach

Function of stomach:

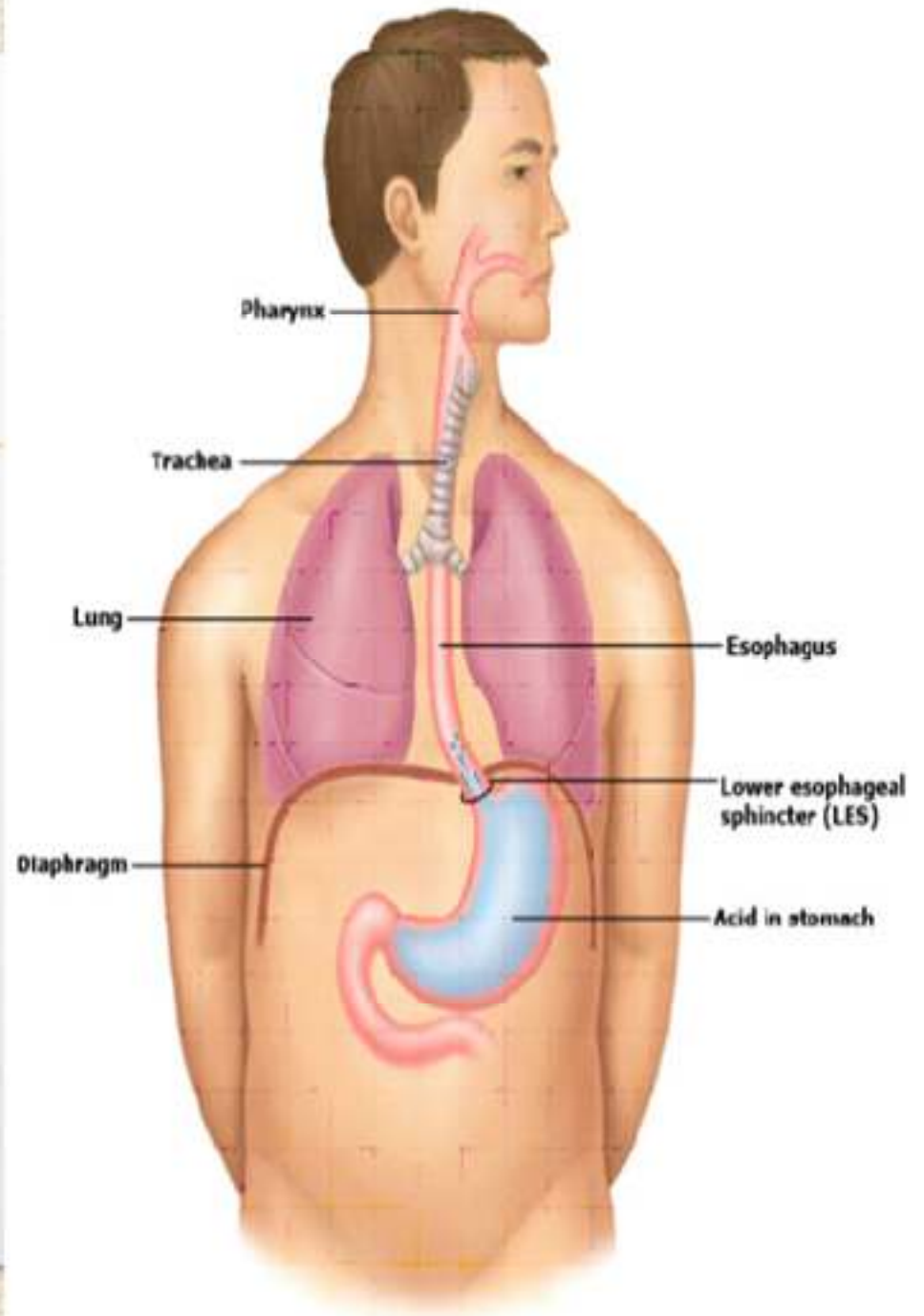
The stomach is dilated portion of alimentary canal:

- 1) It stores food (has a capacity of about 1500 mL).**
- 2) It mixes food with gastric secretions to form a semifluid chyme .**
- 3) It controls rate of delivery of chyme to small intestine so that efficient digestion & absorption can take place.**



Location :

It located in the upper part of abdomen, extending below left costal margin into the epigastric and umbilical regions.



Shape:

The stomach is relatively fixed at both ends but is very mobile in between.

1) **steer-horn stomach** : It tends to be high & transversely arranged in short, obese person .

2) **J-shaped stomach** : elongated vertically in tall, thin person.

*Its shape undergoes considerable variation in same person & depends on volume of its contents, position of the body & phase of respiration.

