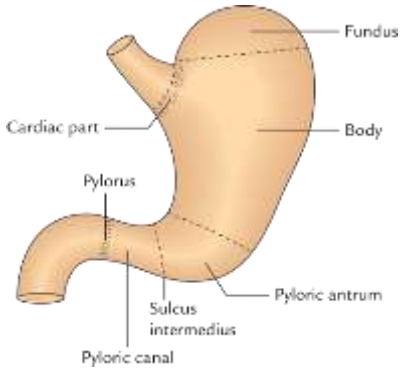
ABDOMINAL PART OF ESOPHAGUS & STOMACH

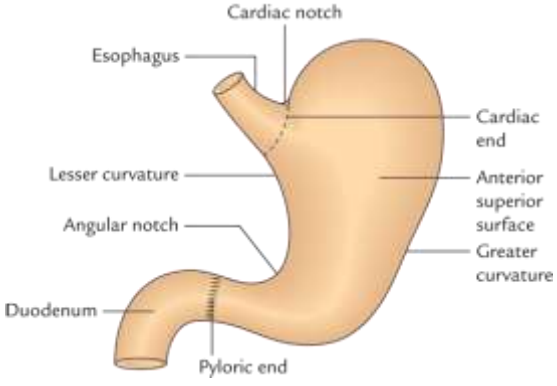
DESCRIBE STOMACH UNDER FOLLOWING HEADINGS:

a. **POSITION**
b. **PARTS**
c. **GROSS FEATURES**
d. **PERITONEAL AND VISCERAL RELATIONS**
e. **BLOOD SUPPLY**
f. **NERVE SUPPLY**
g. **LYMPHATIC DRAINAGE**
h. **DEVELOPMENT AND CONGENITAL ANOMALIES**
i. **MICROSCOPIC STRUCTURE**
j. **APPLIED ASPECTS**

a. Position: left hypochondriac, umbilical, epigastric
b. Parts: body, fundus, pyloric part (pyloric antrum, pyloric canal, pylorus)

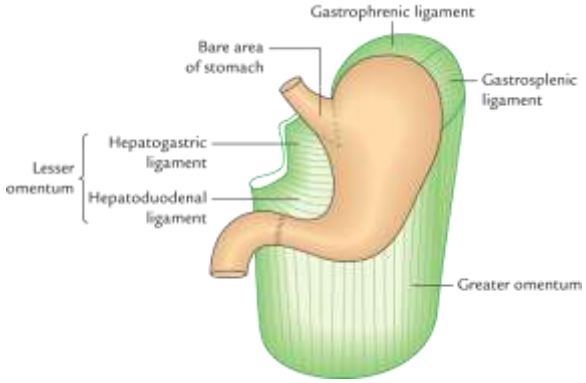


c. Gross features:
    1. Two ends- cardiac end, pyloric end
    2. Two surfaces- anterosuperior surface, posteroinferior surface
    3. Two curvatures-greater(left), lesser (right)



d. Peritoneal and visceral relations

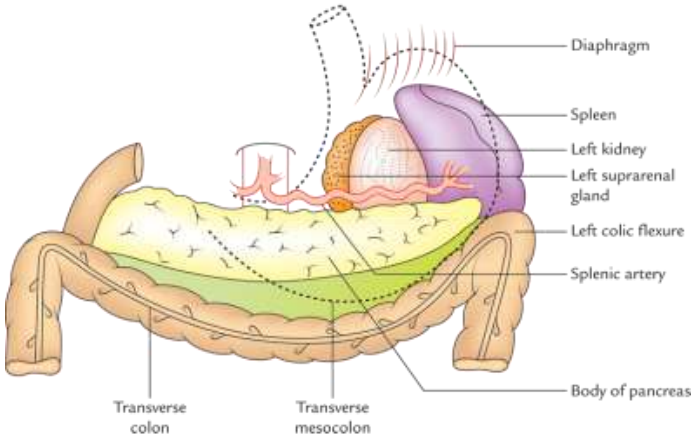
Peritoneal relations- it is covered by peritoneum all over except near the curvatures and cardiac end posteriorly (bare area of stomach). Peritoneal folds attached to greater curvature from above downwards are- gastrophrenic ligament, gastrosplenic ligament, greater omentum.



The folds attached to lesser curvature are hepatogastric and hepatoduodenal ligaments.

Visceral relations:

i. Lesser curvature- lesser omentum, anastomosis between right and left gastric arteries
ii. Greater curvature- greater omentum, anastomosis between right gastroepiploic and left gastroepiploic arteries
iii. Anterosuperior surface- left lobe and quadrate lobe of liver, diaphragm, 6-9 ribs, anterior abdominal wall
iv. Posteroinferior surface- lesser sac, left crus of diaphragm,



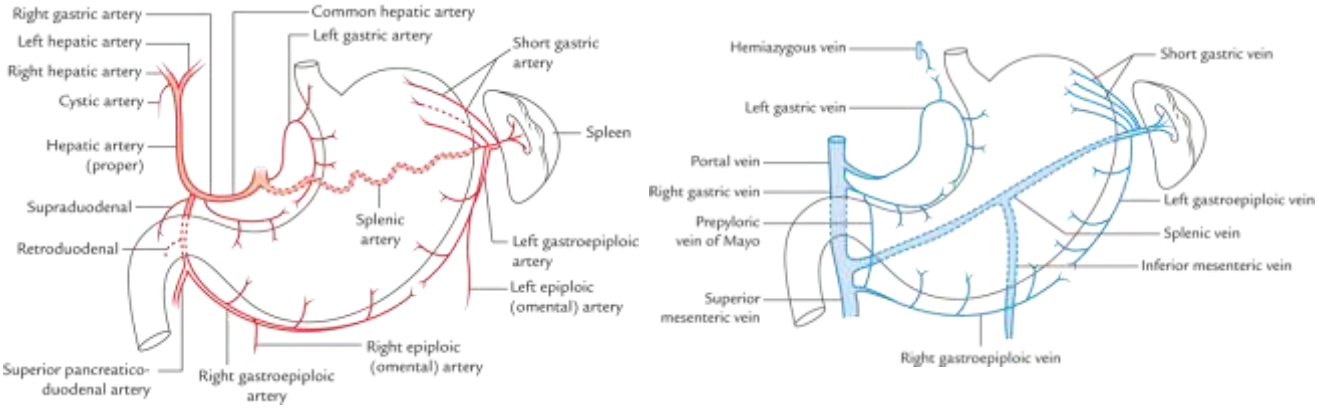
spleen, left kidney, left suprarenal gland, left colic flexure,

splenic artery, pancreas, transverse mesocolon, transverse colon

e. Blood supply:

Arterial supply- left gastric artery, right gastric artery, left gastroepiploic artery, right gastroepiploic artery, short gastric arteries.

Venous drainage- left gastric vein and right gastric vein drain directly into portal vein, right gastroepiploic vein into superior mesenteric



vein, left gastroepiploic and short gastric veins into splenic vein.

f. Nerve supply:

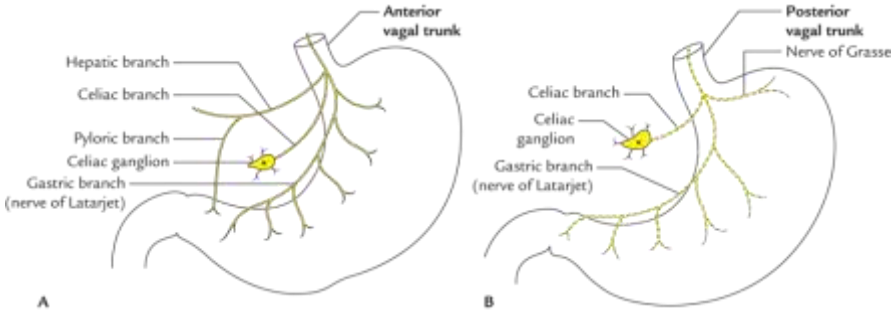
Parasympathetic-

Motor- anterior and posterior vagal trunks. Stimulates gastric musculature, inhibits pyloric sphincter, secretomotor to glands

Sensory- conveys hunger and nausea

Sympathetic-

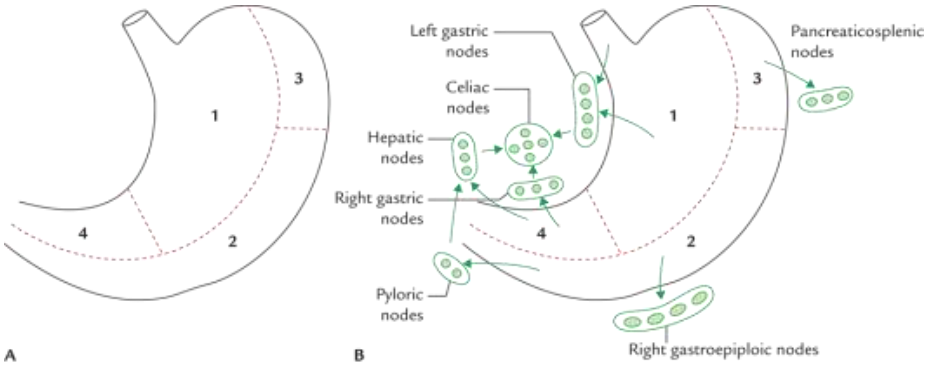
Motor-T6-T9 segments.Vasomotor, stimulates pyloric sphincter, inhibits gastric musculature



Sensory- conveys pain sensations

g. Lymphatic drainage:

The part adjacent to lesser curvature: hepatic lymphnodes, right gastric lymphnodes
The part adjacent to greater curvature: pancreaticosplenic,

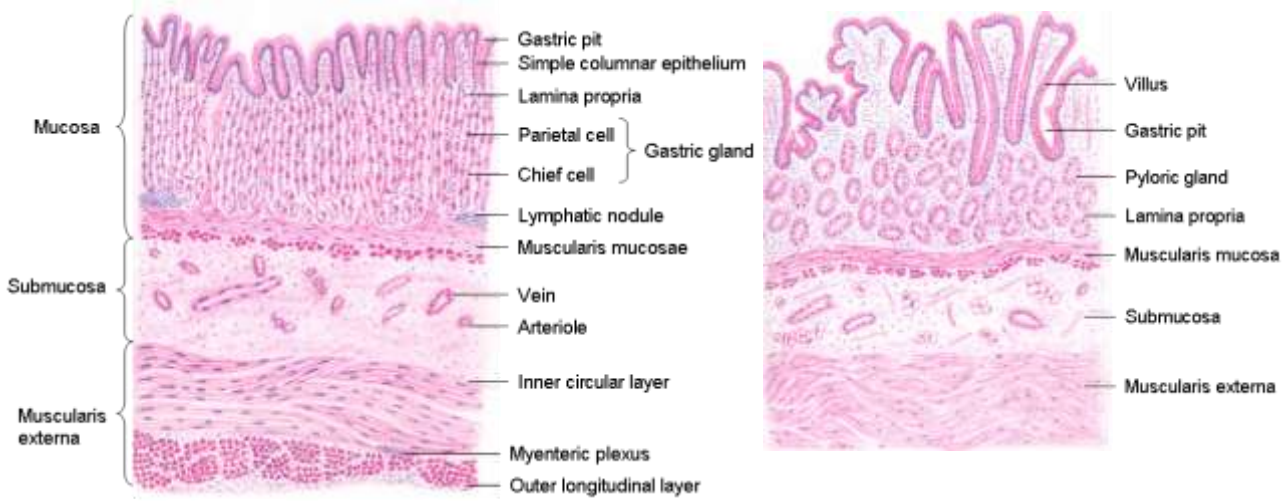


gastroepiploic, pyloric lymphnodes

h. Development and congenital anomalies

Development: a fusiform dilatation appears in the foregut dorsal to foregut and inferior to diaphragm. The dorsal surface grows faster than the ventral surface resulting in asymmetric growth. Then it rotates 90 degrees clockwise in cranio-caudal axis and develops lesser curvature on original ventral surface and greater curvature on original dorsal surface. The cranial end shifts slightly downward and to the left, while the caudal end shift slightly upward and to the right. The dorsal mesentery forms the greater omentum and ventral mesentery forms the lesser omentum.
Congenital anomalies: hypertyrophic pyloric stenosis- hypertrophy of pyloric sphincter

e. Microscopic structure

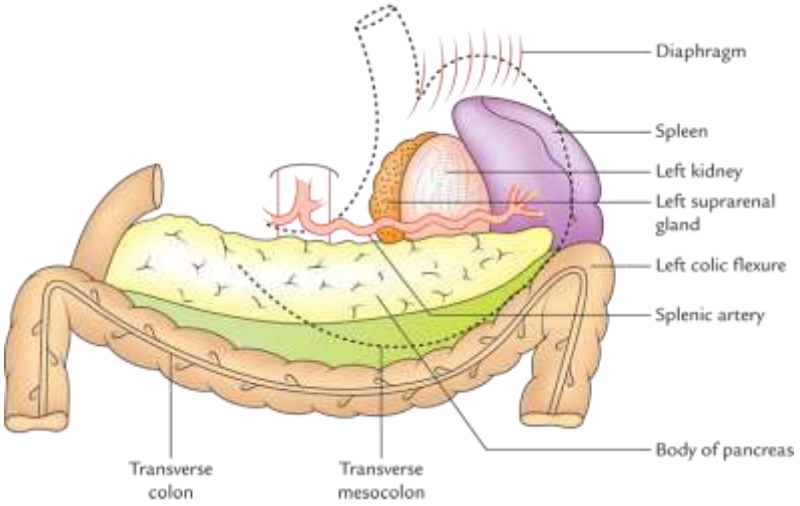


f. Applied aspects:

1. Referred pain- pain in the stomach is referred to the epigastrium because of the nerve supply form the same segments (T6-T9)
2. Gastric ulcers usually occur close to the lesser curvature
3. Stomach carcinoma spreads through lymphnodes. Hence total gastrectomy is done where all the associated lymph nodes are also removed along with stomach.

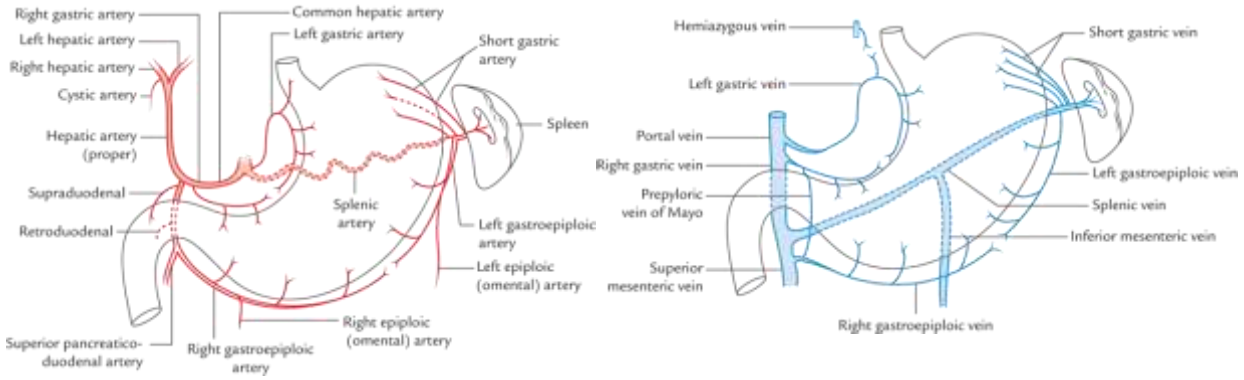
STOMACH BED(SE)

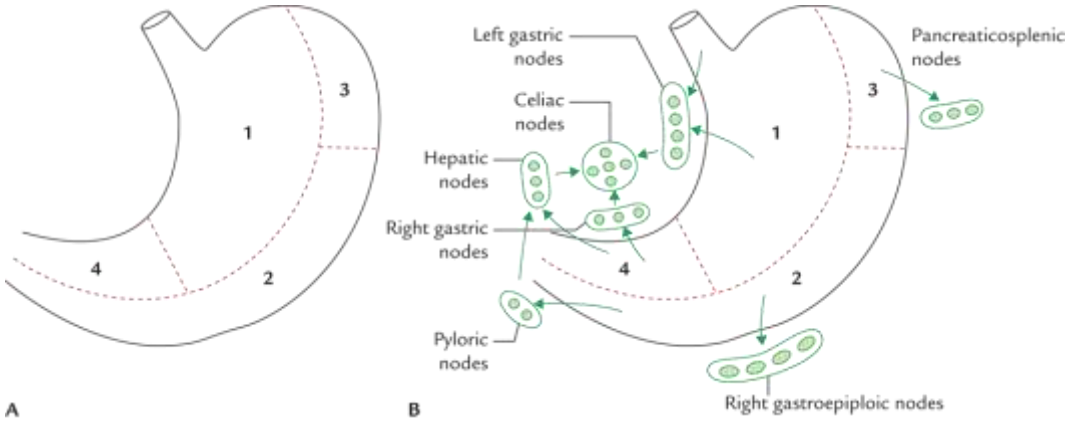
The structures forming stomach bed are related to Posteroinferior surface of stomach and are separated from it by lesser sac. The structures are left crus of diaphragm, spleen, left kidney, left suprarenal gland, left colic flexure, splenic artery, pancreas, transverse mesocolon, transverse colon.



BLOOD SUPPLY AND LYMPHATIC DRAINAGE OF STOMACH(SE)

a. Blood supply:
    1. Arterial supply- left gastric artery, right gastric artery, left gastroepiploic artery, right gastroepiploic artery, short gastric arteries
    2. Venous drainage- left gastric vein and right gastric vein drain directly into portal vein, right gastroepiploic vein into superior mesenteric vein, left gastroepiploic and short gastric veins into splenic vein
b. Lymphatic drainage:
    1. The part adjacent to lesser curvature: hepatic lymphnodes, right gastric lymphnodes
    2. The part adjacent to greater curvature: pancreaticosplenic, gastroepiploic, pyloric lymphnodes





STOMACH- BLOOD SUPPLY(SE)

Blood supply:

Arterial supply-

left gastric artery- branch of celiac trunk supplies area along lesser curvature

right gastric artery- branch of common hepatic artery supplies laong lesser curvature

left gastroepiploic artery- branch of splenic artery supplies along greater curvature

right gastroepiploic artery- branch of gastroduodenal artery supplies along the greater curvature

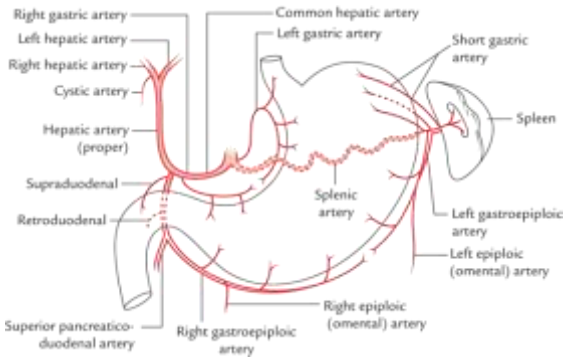
short gastric arteries- 3 to 4 branches from splenic artery supplies fundic part of stomach

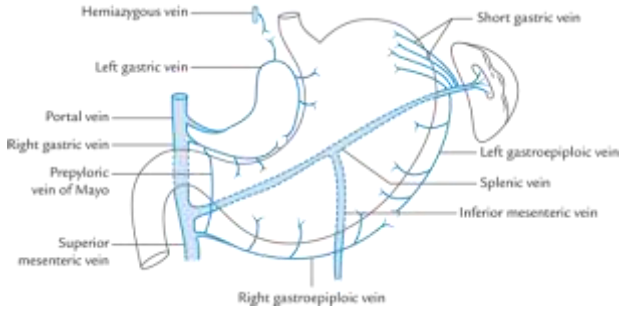
Venous drainage-

left gastric vein and right gastric vein drain directly into portal vein

right gastroepiploic vein into superior mesenteric vein

left gastroepiploic and short gastric veins into splenic vein





STOMACH- LYMPHATIC DRAINAGE(SE)

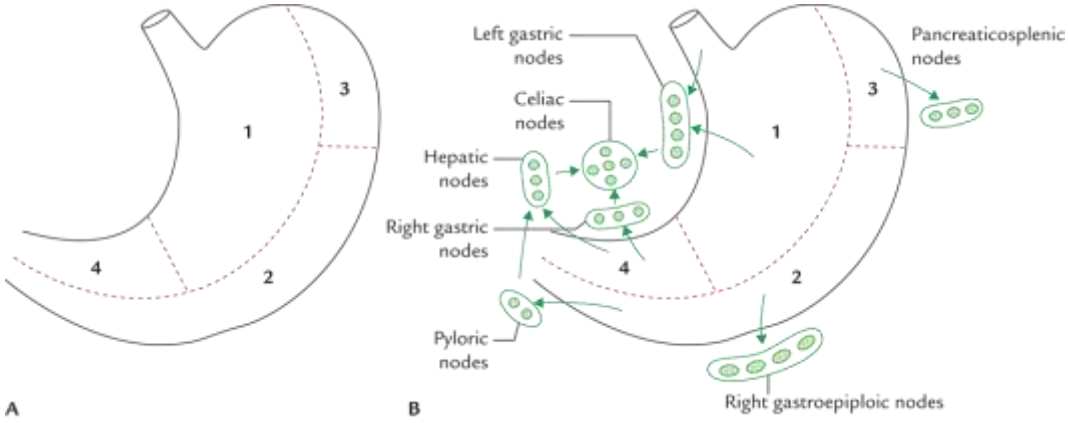
Lymphatic drainage:

The superior 2/3rd part adjacent to lesser curvature: drains along right and left gastric vessels to hepatic lymphnodes and right gastric lymphnodes

The lower part adjacent to greater curvature: right gastroepiploic, pyloric lymphnodes

Fundus and superior part of body: drains along short gastric arteries into pancreatico splenic lymphnodes

The lower 1/3rd along lesser curvature- drains into hepatic, pyloric and right gastric lymph nodes



STOMACH- NERVE SUPPLY(SE)

Parasympathetic

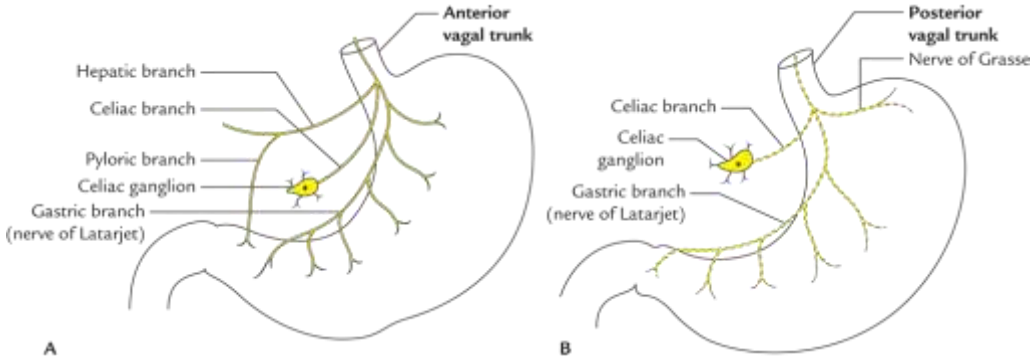
Motor- anterior and posterior vagal trunks. Stimulates gastric musculature, inhibits pyloric sphincter, secretomotor to glands

Sensory- conveys hunger and nausea. Cell bodies located in ganglion nodosum on vagus

Sympathetic

Motor-T6-T9 segments. Vasomotor, stimulates pyloric sphincter, inhibits gastric musculature

Sensory- conveys pain sensations. Cell bodies located in dorsal root ganglia of T6-T9



NAME THE TYPES OF STOMACH(SA)

Reverse L
J shaped
Steer horn
semilunar

STRUCTURES IN STOMACH BED(SA)

Left crus of diaphragm, spleen, left kidney, left suprarenal gland, left colic flexure, splenic artery, pancreas, transverse mesocolon, transverse colon

ARTERIES SUPPLYING STOMACH(SA)

Left gastric artery, right gastric artery, left gastroepiploic artery, right gastroepiploic artery, short gastric arteries

LYMPHATIC DRAINAGE OF STOMACH(SA)

1. The part adjacent to lesser curvature: hepatic lymphnodes, right gastric lymphnodes
2. The part adjacent to greater curvature: pancreaticosplenic, gastroepiploic, pyloric lymphnodes