



The stomach (gastra)

Musculo-membranous sac between esophagus & duodenum. It receives the insalivated food and store it, then the gastric glands secrete **renin, pepsin, and Hcl** which digest the food.

Stomach vary in shape, size and type of inner mucosa according to the nature of food.

Stomach classify according to the type of mucosa as follow:

1-Simple stomach like the glandular stomach of carnivore (dog).

2-Compound stomach like stomach of horse and ruminants, which have glandular and non-glandular parts.

Stomach classify according to the number of its compartments as follow:

A= Unilocular stomach in dog and horse.

B= Multilocular stomach in ruminants.

Stomach of the dog: simple unilocular stomach.

Stomach of horse: compound unilocular stomach.

Stomach of ruminants: compound multilocular stomach.



The unilocular stomach:

The stomach characterized by having:

-Two openings; cardiac opening & pyloric opening.

-Two surfaces: parietal surface & visceral surface.

-Two curvatures: lesser curvature & greater curvature.

-Cardiac opening: join the esophagus with the stomach, it controlled by the cardiac sphincter, the stomach part near this opening called the cardia.

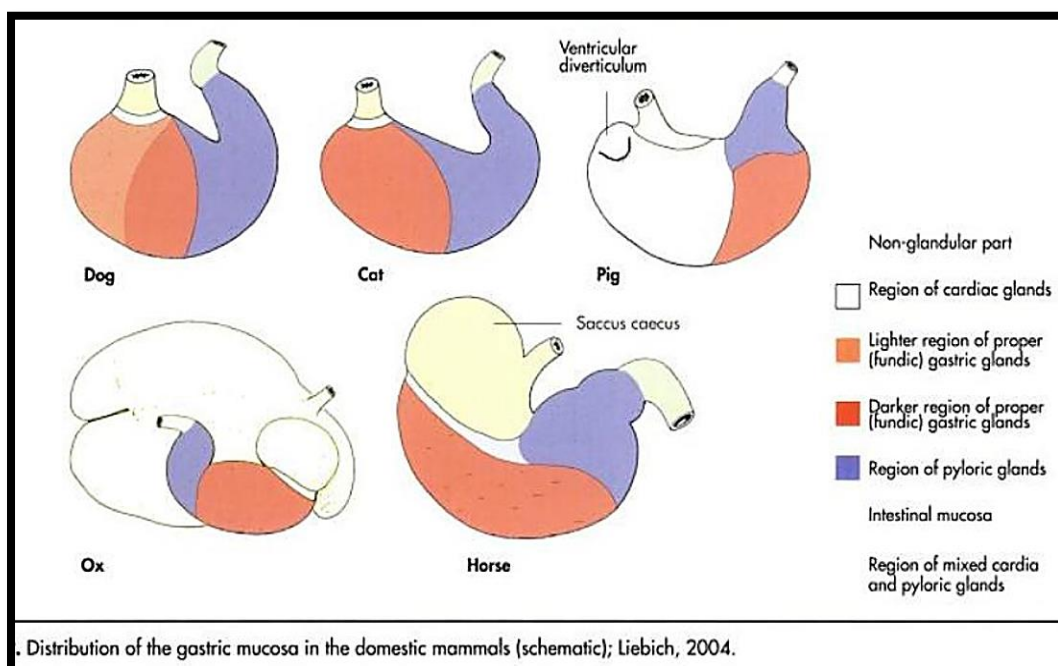
-Pyloric opening: join stomach with the duodenum, it controlled by the pyloric sphincter, the stomach part near this opening called the pylorus.

The cavity (lumen) of stomach divided into:

1-Fundus: part of stomach near the cardia.

2-Pyloric antrum: part of stomach near pylorus.

3-Body of stomach: part of stomach between fundus and pyloric antrum.



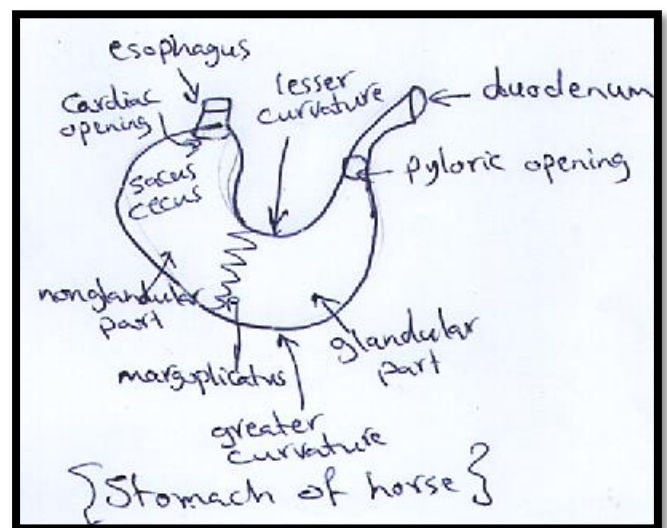
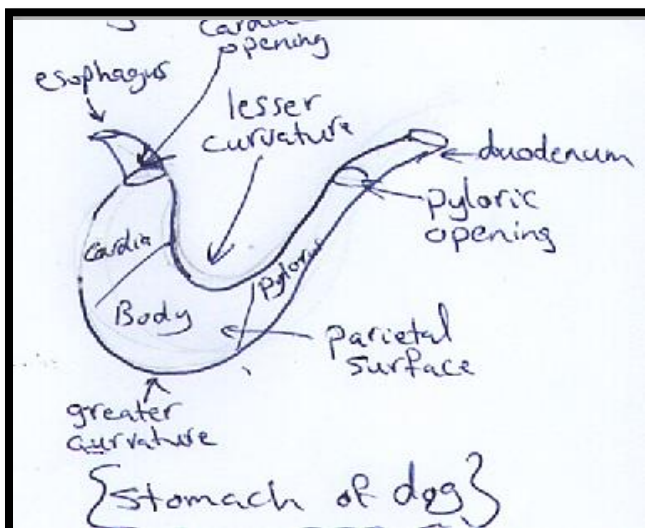
Stomach of dog

Simple unilocular stomach have J-letter shape with two openings; the cardiac opening controlled by cardiac sphincter while the pyloric opening controlled by pyloric sphincter and two curvatures; concave lesser curvature & convex greater curvature and two surfaces; parietal surface face the diaphragm & visceral surface face the viscera.

Stomach of horse

Compound unilocular stomach, have two openings; the cardiac opening & pyloric opening and two curvatures; concave lesser curvature & convex greater curvature and two surfaces; parietal surface face the diaphragm & visceral surface face the viscera.

Stomach of horse characterized by presence of an enlargement in the fundus region called the blind sac (sacus cecus). The epithelium lining the stomach of horse have two types glandular and non-glandular separated internally by distinct limit called the margoplicatus.



Fixation of the stomach: The stomach fixed in its position by:

- 1-Its connection with the esophagus.
- 2-Presence of the adjacent viscera.
- 3-Greater omentum.
- 4-Ligaments.

Ligaments of stomach are:

- 1.Gastrosplenic ligament.
- 2.Gastrophrenic ligament.
- 3.Gastrohepatic ligament.
- 4.Gastropancreatic ligament.

Blood supply of the stomach come from the celiac trunk, which have three branches:

- 1-Hepatic artery.
- 2-Splenic artery.
- 3-Left gastric artery.

Stomach receive sympathetic and parasympathetic nerve supply.

Stomach of ruminants

Compound multilocular stomach, consist of 4 compartments (rumen, reticulum, omasum, and abomasum).



The first three parts called together forestomach or proventriculus, lined with non-glandular epithelium.

The forestomach responsible for the biological (bacterial) digestion of food particles especially cellulose.

The rumen lies in the left half of the abdominal cavity.

The reticulum lies cranially to rumen.

The omasum lies near reticulum to the right.

The abomasum lies below them on the right side of the abdominal cavity.

The rumen: is large sac compressed bilaterally, occupy the major part of the abdominal cavity. It extends from the diaphragm to the pelvic inlet filling the left half of the abdominal cavity.

The rumen has:

- Two openings:** esophageal opening & rumino-reticular opening.
- Two curvature:** dorsal curvature & ventral curvature.
- Two surfaces:** parietal surface & visceral surface.

