

Mastication/ Chewing Reflex

Food in mouth



Reflex inhibition of muscles of mastication



Drop of lower jaw



Reflex contraction of jaw muscles



Jaw is raised → Bolus is compressed

Achalasia Cardia

- lower oesophageal sphincter fails to relax during swallowing
- due to deficient myenteric plexus at lower oesophagus
- gastroesophageal reflux is caused (acidic stomach contents reflux into oesophagus) leading to heartburn & esophagitis, ulceration & stricture of oesophagus

Stomach Movements

Movements in Empty Stomach: Type I - mild

Type II → hunger contractions

Type III → hunger pangs

Receptive Relaxation: after a meal

- ↳ causes ↑ in stomach volume
- ↳ caused by vagovagal reflex originating in Pharynx & Oesophagus

Digestive Peristalsis: as soon as food enters stomach

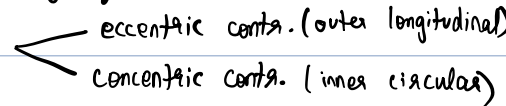
- ↳ Peristaltic waves in wall of stomach (of progressively increasing strength)
- propulsion carries food towards pylorus
- pyloric sphincter closes to push food downward ⇒ Retroperistalsis.

Gastric Emptying - Pyloric Pump

SI Movements

ISHITA
KANODIA

Mixing movements - mixing of food with juices

Segmentation Contraction 
eccentric contr. (outer longitudinal)
concentric contr. (inner circular)

Pendular mmts.

Propulsive mmts. - Peristalsis

Mmts of Villi

LI Movements

Mixing movements (Haustriations)

Propulsive movements (Mass mmts.)

Phases of GI secretion

Cephalic
Gastric
Intestinal

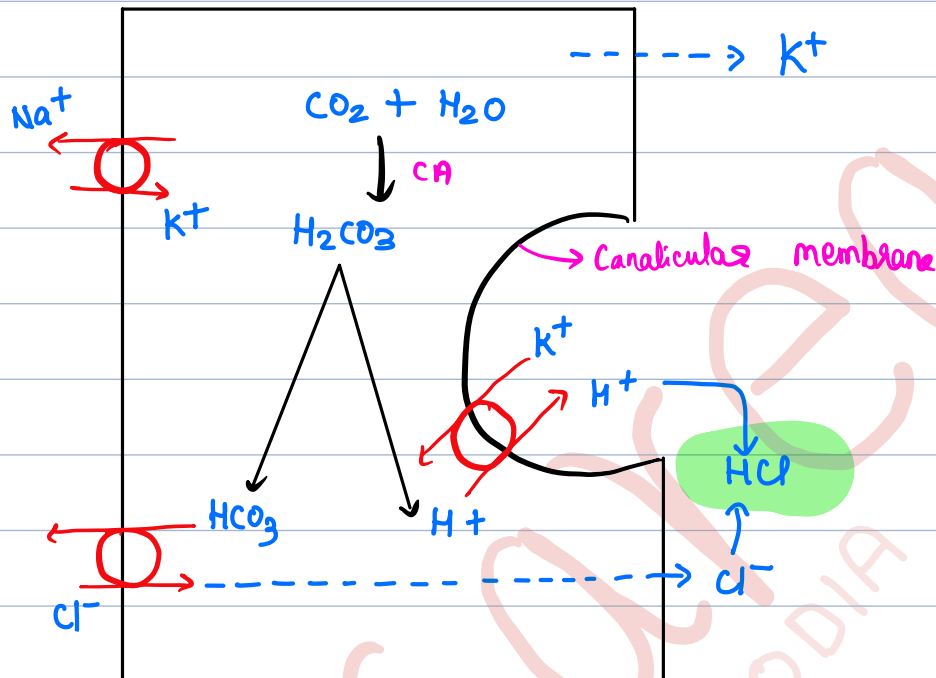
HCl Secretion

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ISF

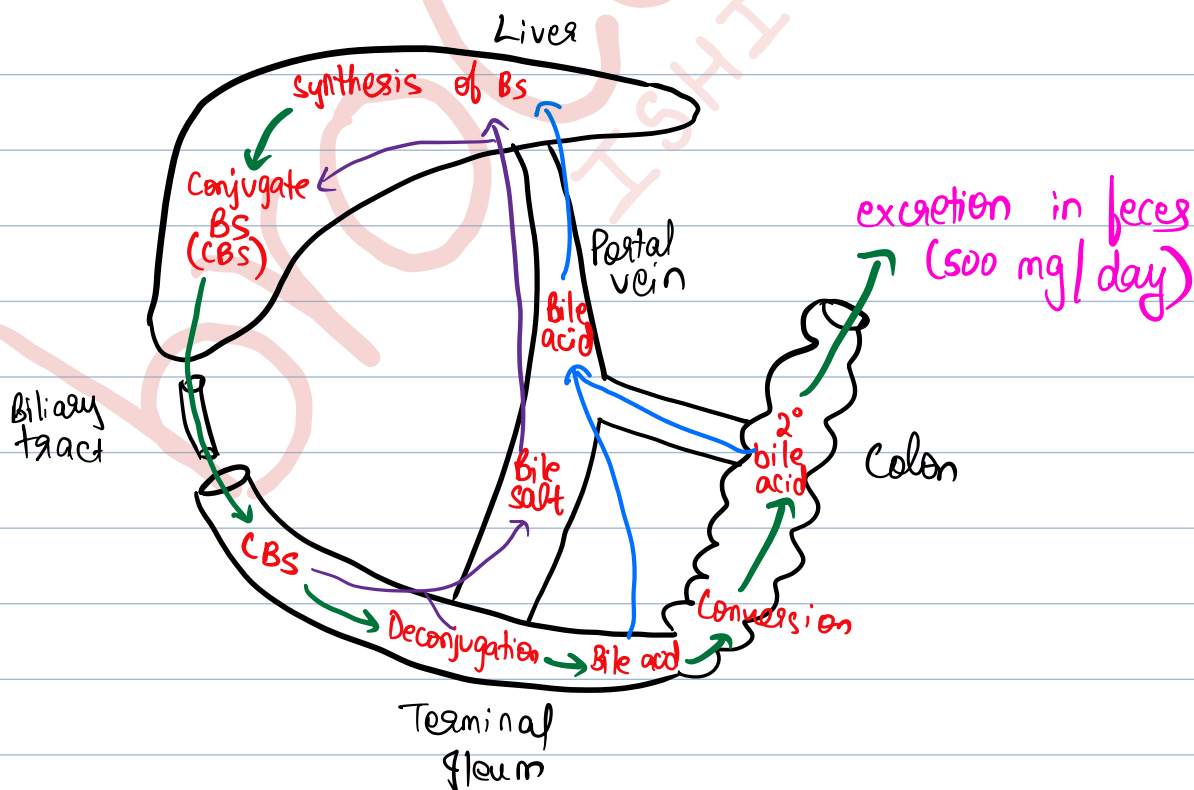
Parietal Cell

Gastric
Lumen



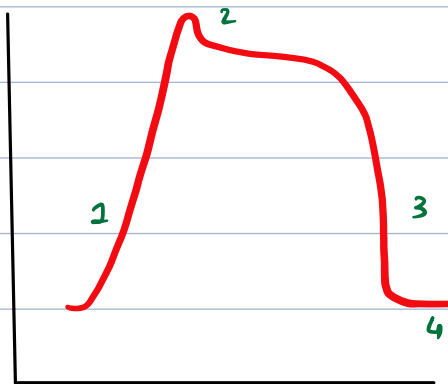
BS = bile salts

Enterohepatic Circulation



Electrical Slow Wave

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Stomach 3/min

Colon 9/min

Jejunum 15/min