

digestive system

पाचन तंत्र

Stomach अमाशय

- !) आकार shape
- ① चैलीनुमा संरचना है। Bag like structure
 - ② उ के आकार का होता है। J shaped

3) અમ્લીય
Acidic

અમાશય
Stomach

pH Value
માન

જઠર રસ
Gastric Juice

(અમાશયી રસ)
Stomach Juice

(પાણી + HCl + એન્ઝાઇમ)

Water
99.5%

0.3%

0.2%

HCl

Hydrochloric
Acid

હાઇડ્રો ક્લોરિક અમ્લ

Enzyme એન્ઝાઇમ

pH

1-5-2

1-3

HCl

⇒ अमाशय में पैरिएटल कोशिका HCl का स्राव करती हैं

Parietal cell of stomach secretes HCl

⇒ function
कार्य

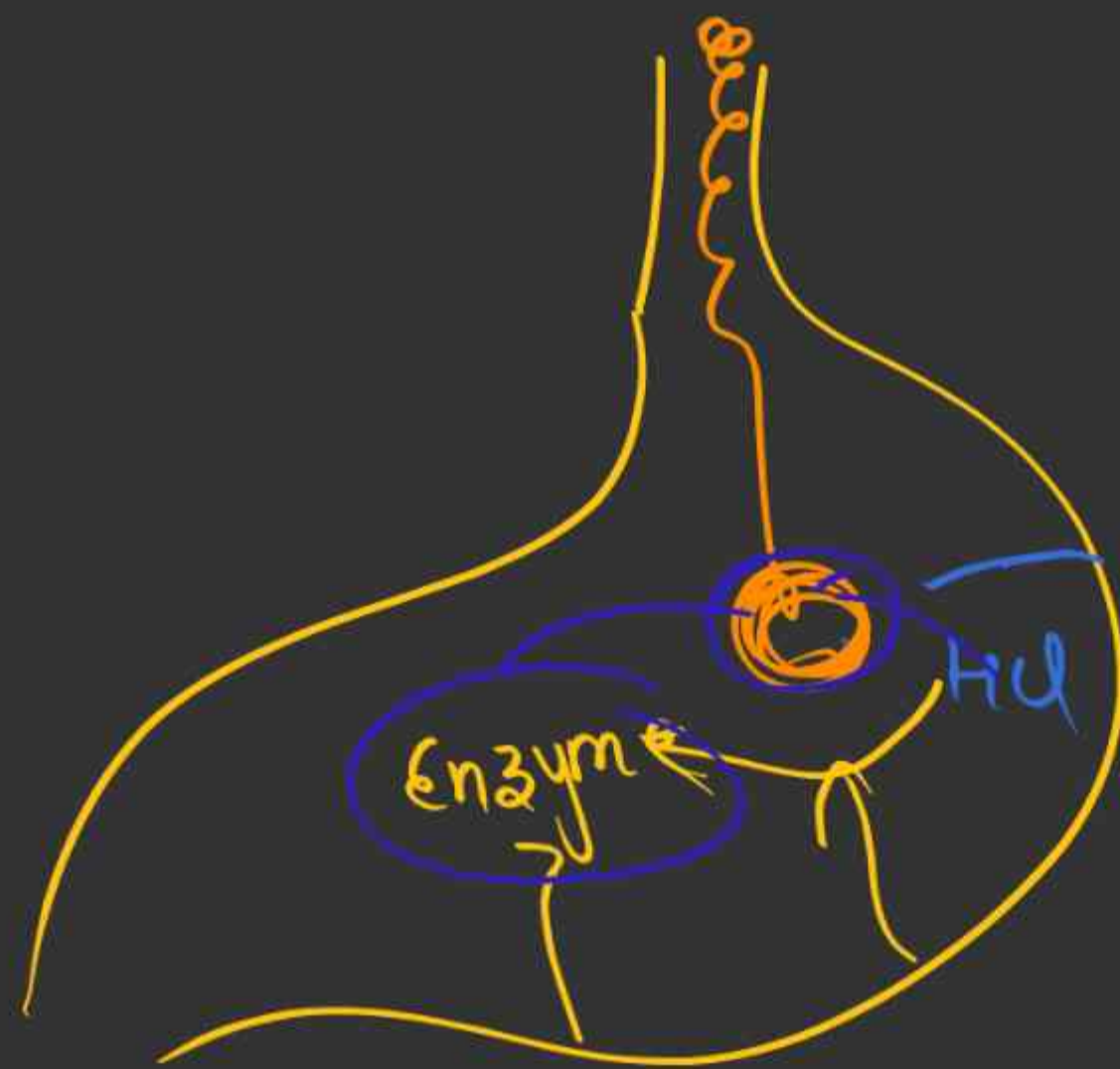
① भोजन को अम्लीय बनाना

Make food Acidic

② भोजन में उपस्थित जीवाणु को मारना

Kill Bacteria present in the food.

③ एन्जाइम को सक्रिय करना Activate enzyme



अमाशपके रसजाइम Stomach Enzymes

Renin
रनीन

Child Enzyme (बच्चों का रसजाइम)

Milk digestive Enzyme दूध का पाचन
करने वाला रसजाइम है

Pepsin पेप्सीन

↳ अन्य प्रोटीन का पाचन
digestion of other protein

Renin
रनीन

→ दूध की प्रोटीन को पाचता है
digestion of milk protein

Milk protein
दूध की प्रोटीन

→ कैसीन
Casein

→ ParaCasein
पैराकैसीन
(फटा हुआ दूध)
(curd like)

→ Caseinogen
कैसीनोजेन

Pepsin
पेप्सीन

पेट → पेप्सीन → प्रोटीन → पेप्टॉन

Stomach → Pepsin → Protein — Peptone

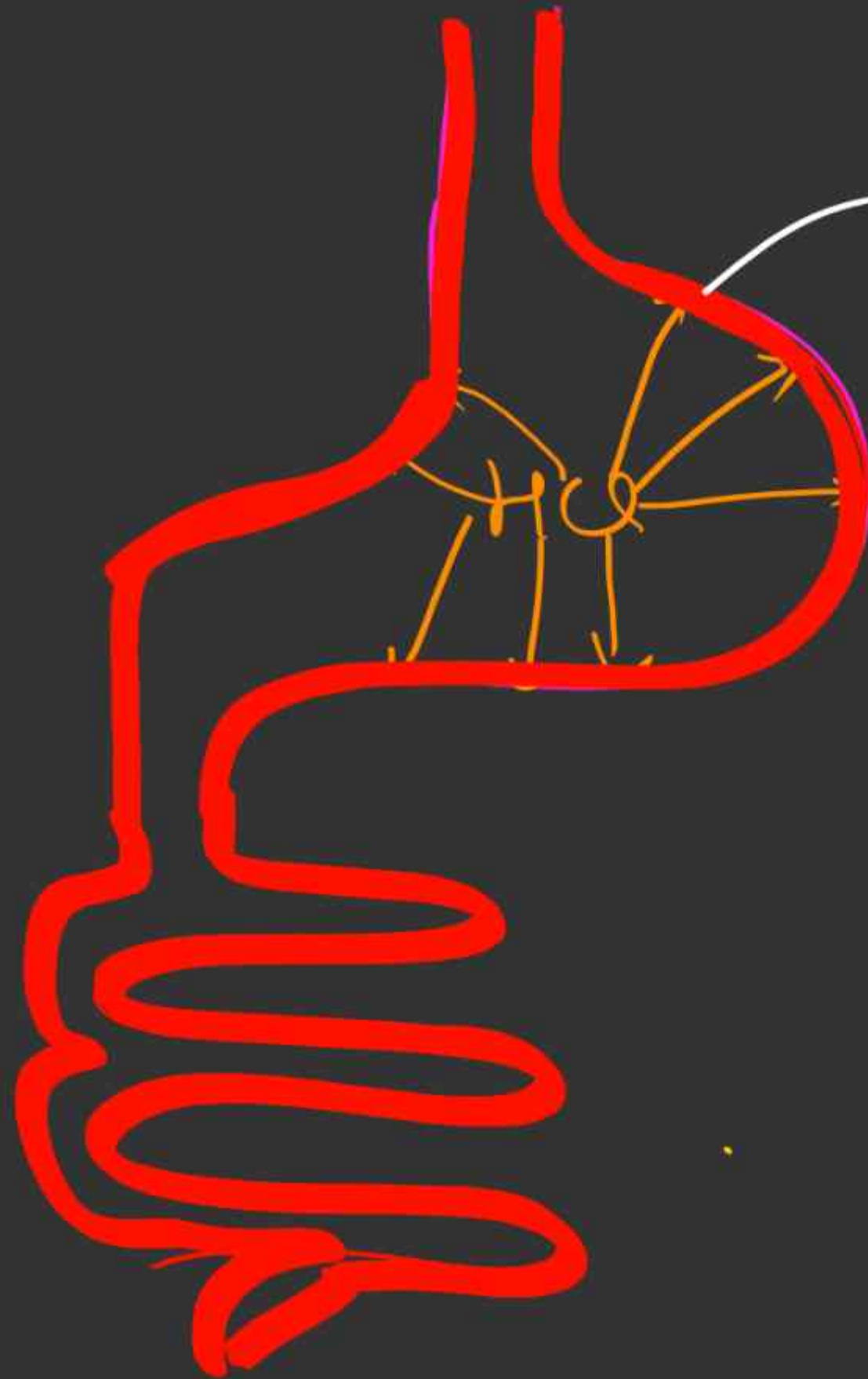


नोट

Note

अमाशय में प्रोटीन का
पाचन शुरू हो जाता है

Digestion of protein
start from the
stomach



Mucous Membrane
श्लेष्म झिल्ली

= जलगम
Mucous

यह अम्ल के प्रभाव से अमाशय को
सुरक्षा प्रदान करती है।

It protect stomach from the
effect of Acid

Acidity अम्लीयता

↳ दवा → Antacid

Medicines

प्रतिअम्ल दवा कहते हैं

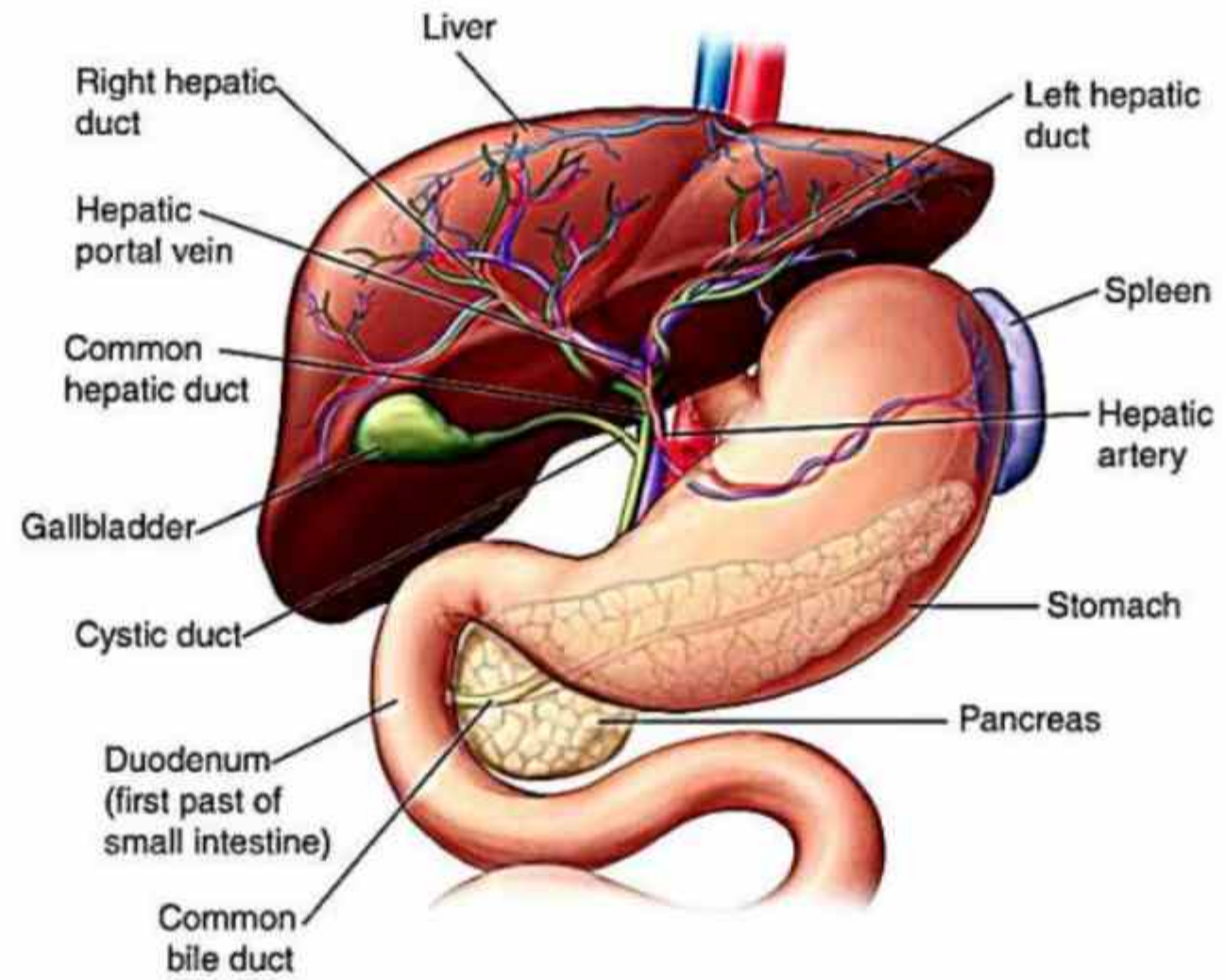
Magnesium Hydroxide

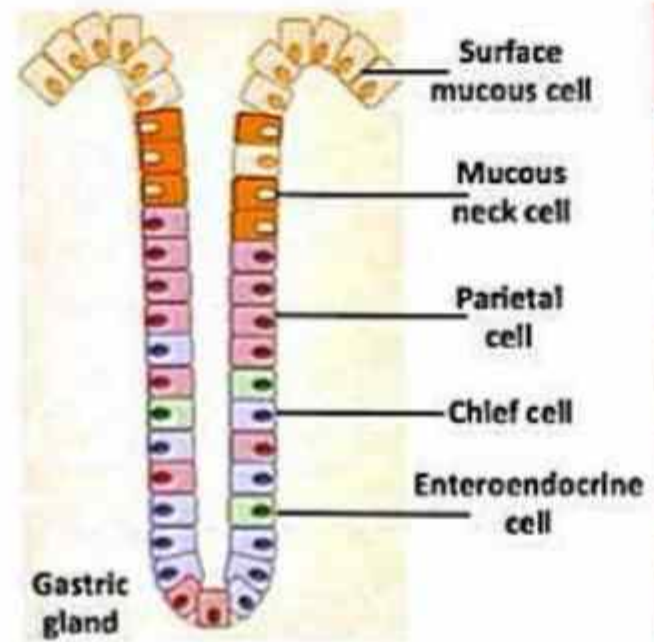
1) $Mg(OH)_2$ मैग्नीशियम हाइड्रॉक्साइड

2) $Al(OH)_3$ Aluminium Hydroxide

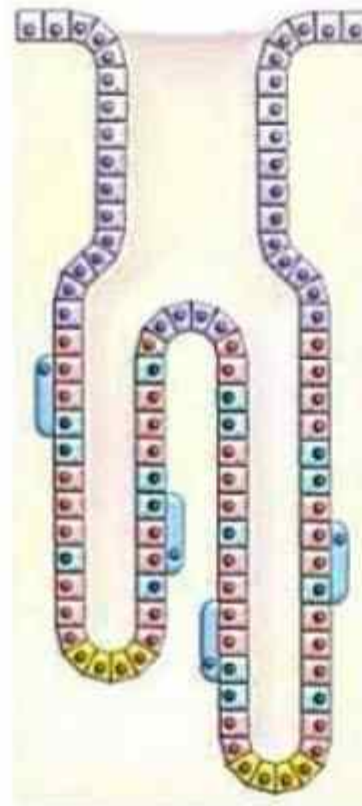
3) ENO एन्डो मिनिम हाइड्रॉक्साइड

द्वारा Base



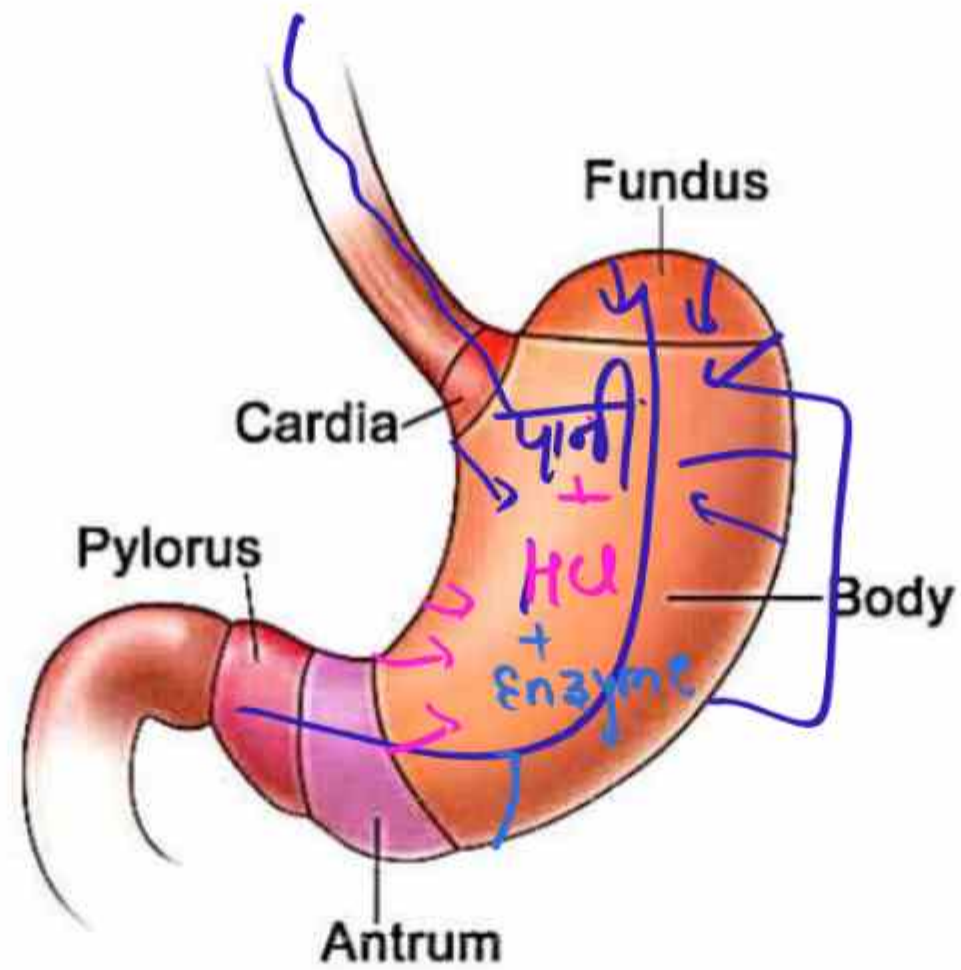


Cells of the gastric glands	Secretory products
Surface mucous cells	Mucin in an alkaline fluid
Mucous neck cells	Mucin in an acidic fluid
Parietal cells	HCl & intrinsic factor
Chief cells	Pepsinogen & lipase
G cells/enteroendocrine cells	Gastrin

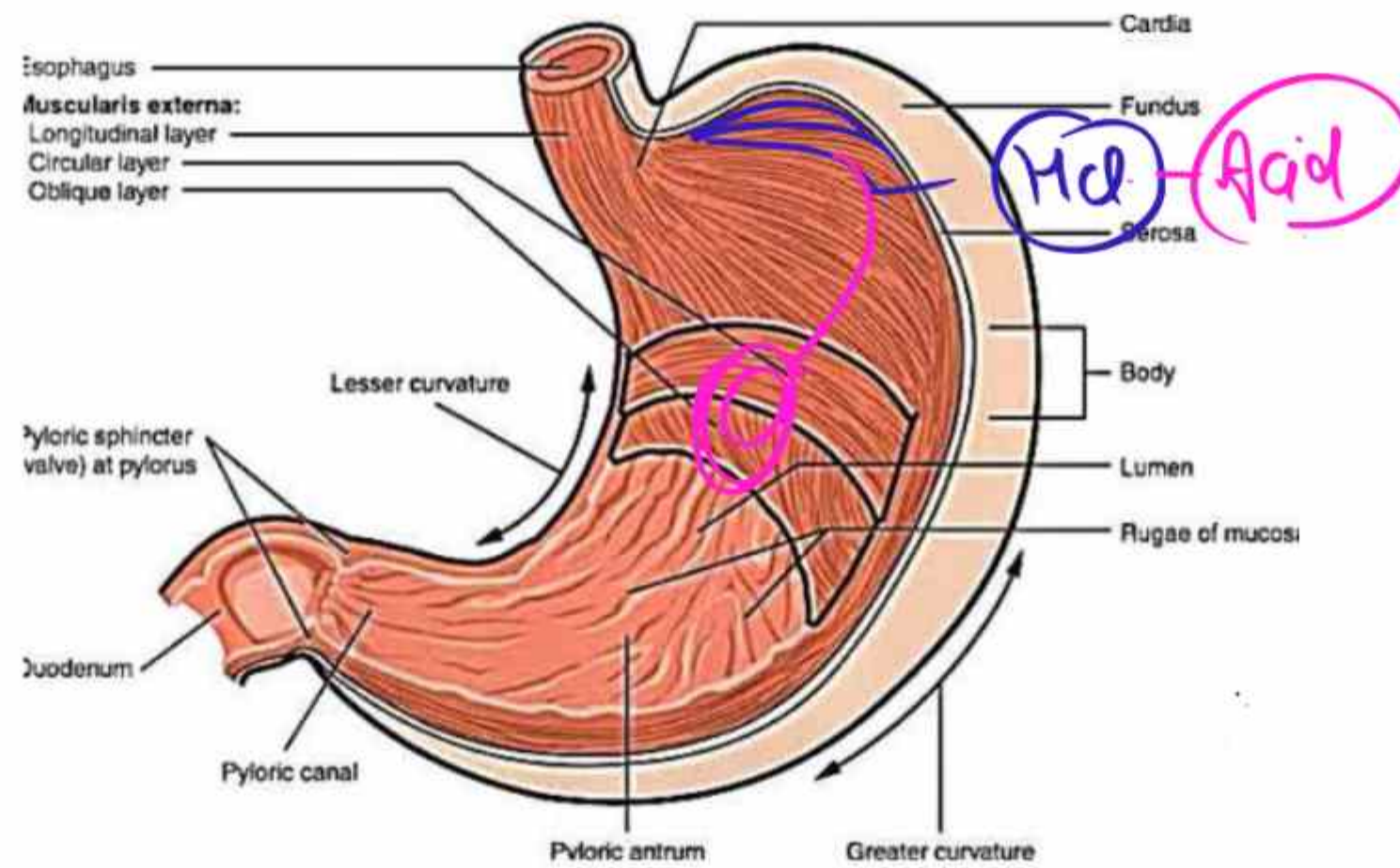


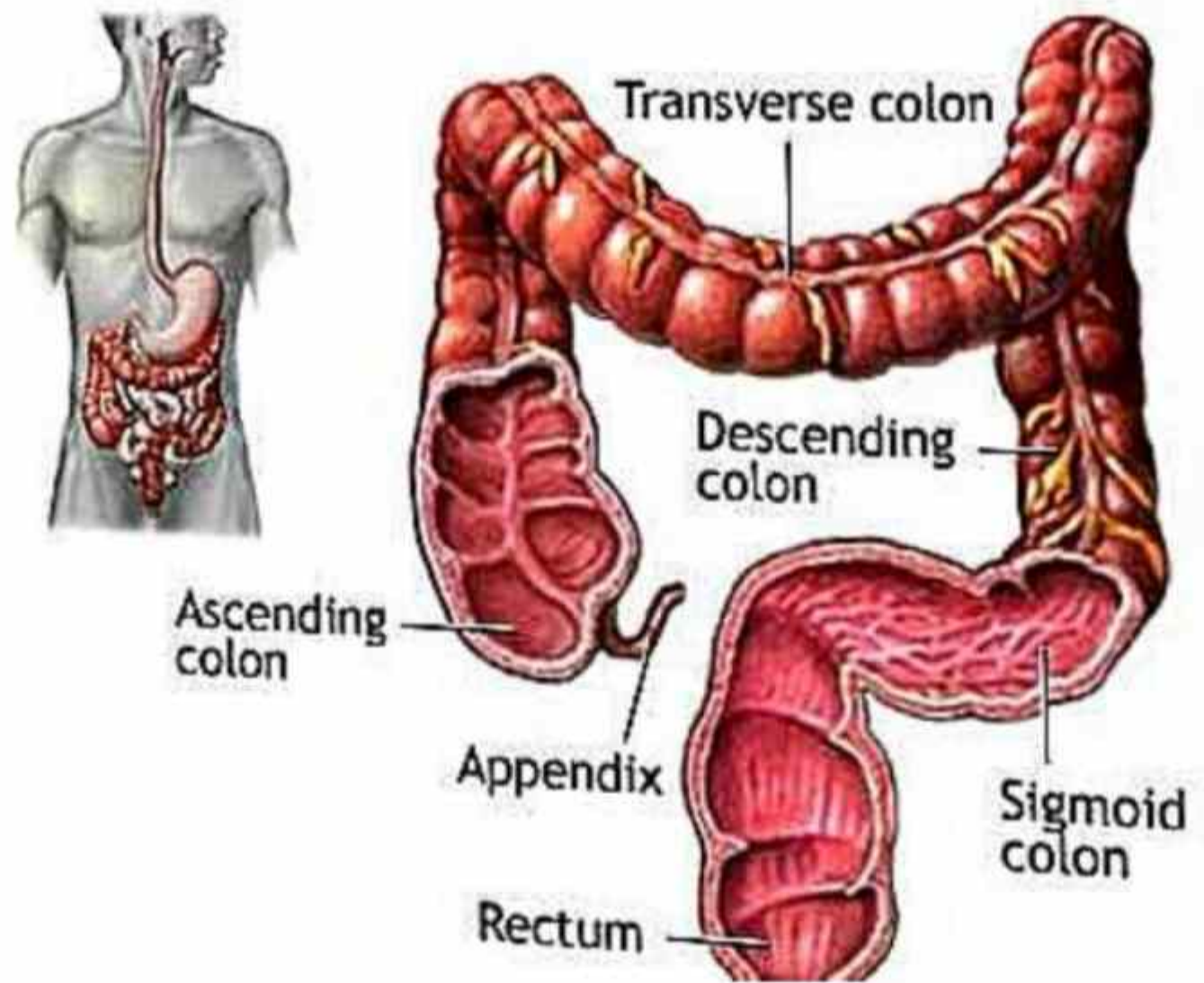
Cell Types	Substance Secreted
Goblet cells	Mucus (protects stomach lining)
Parietal cells	Gastric acid (e.g. hydrochloric acid)
Chief cells	Pepsinogen (protease precursor)
D cells	Somatostatin (inhibits acid secretion)
G cells	Gastrin (stimulates acid secretion)

Sections of the Stomach



Stomach
juice
अम्ल रस



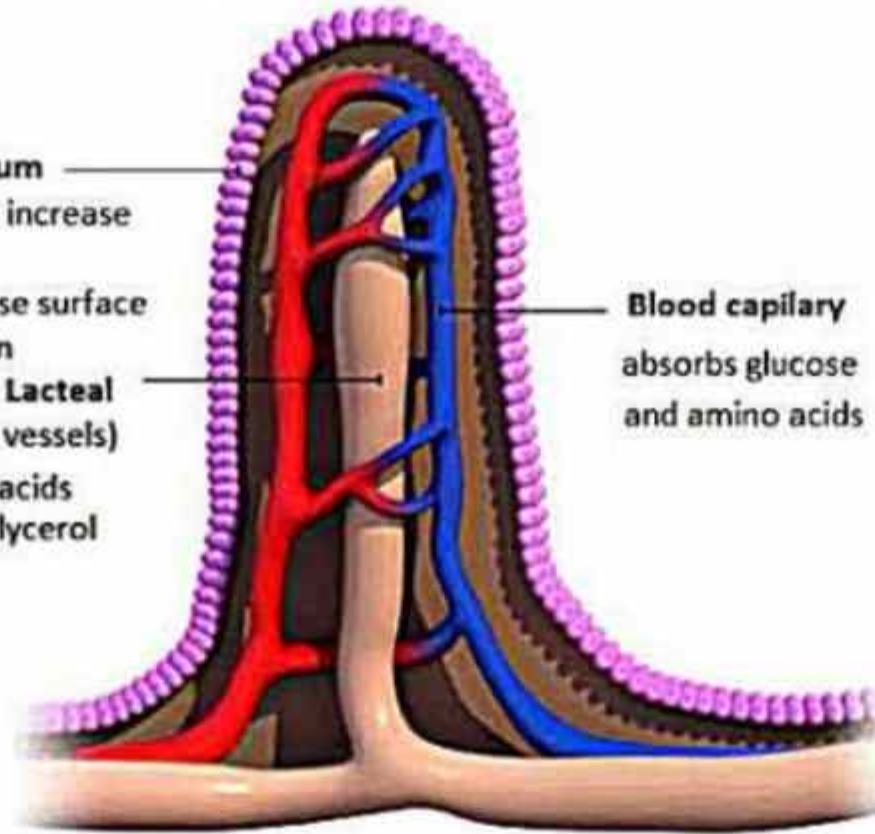


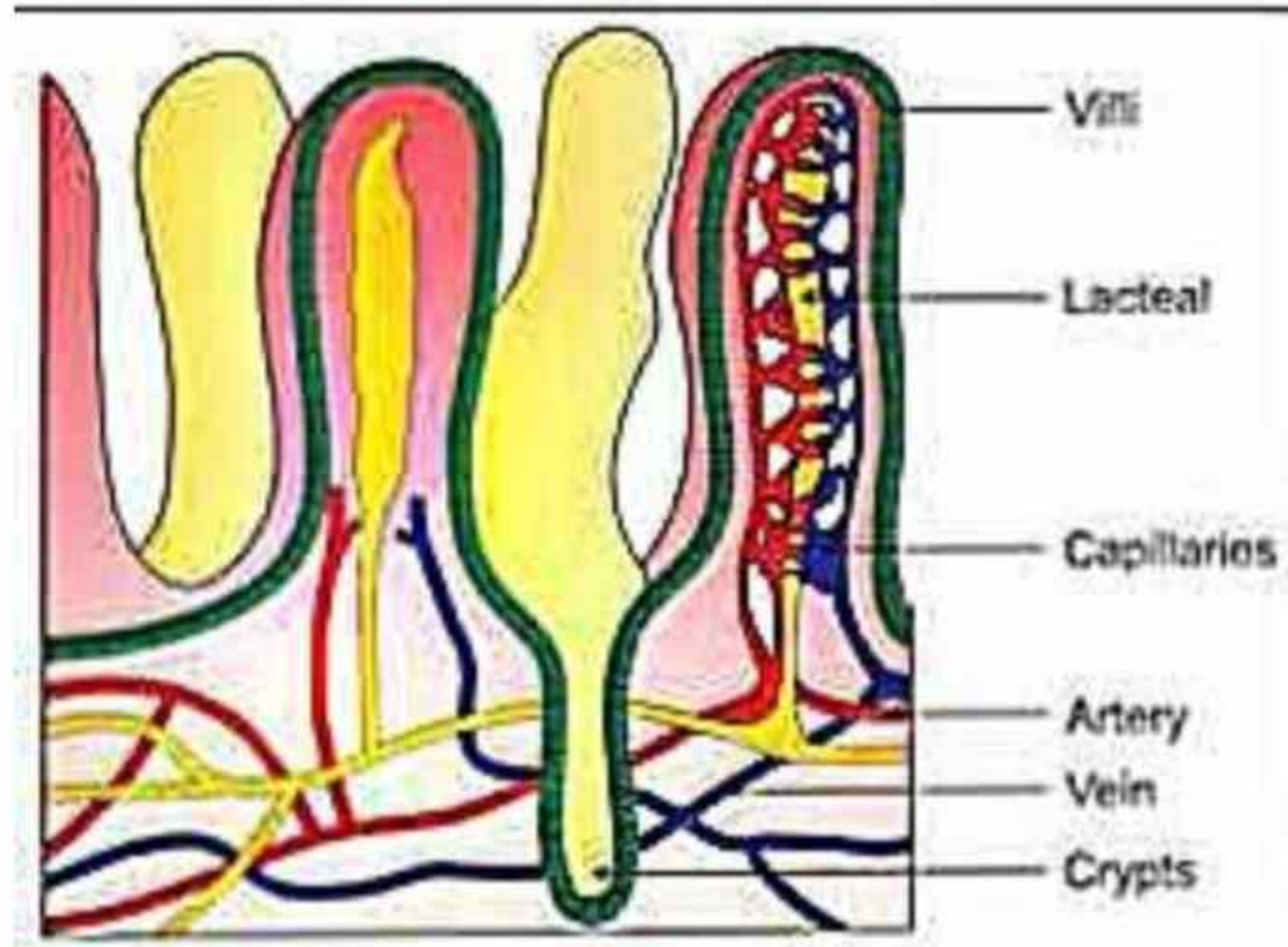
Longitudinal section through a villus

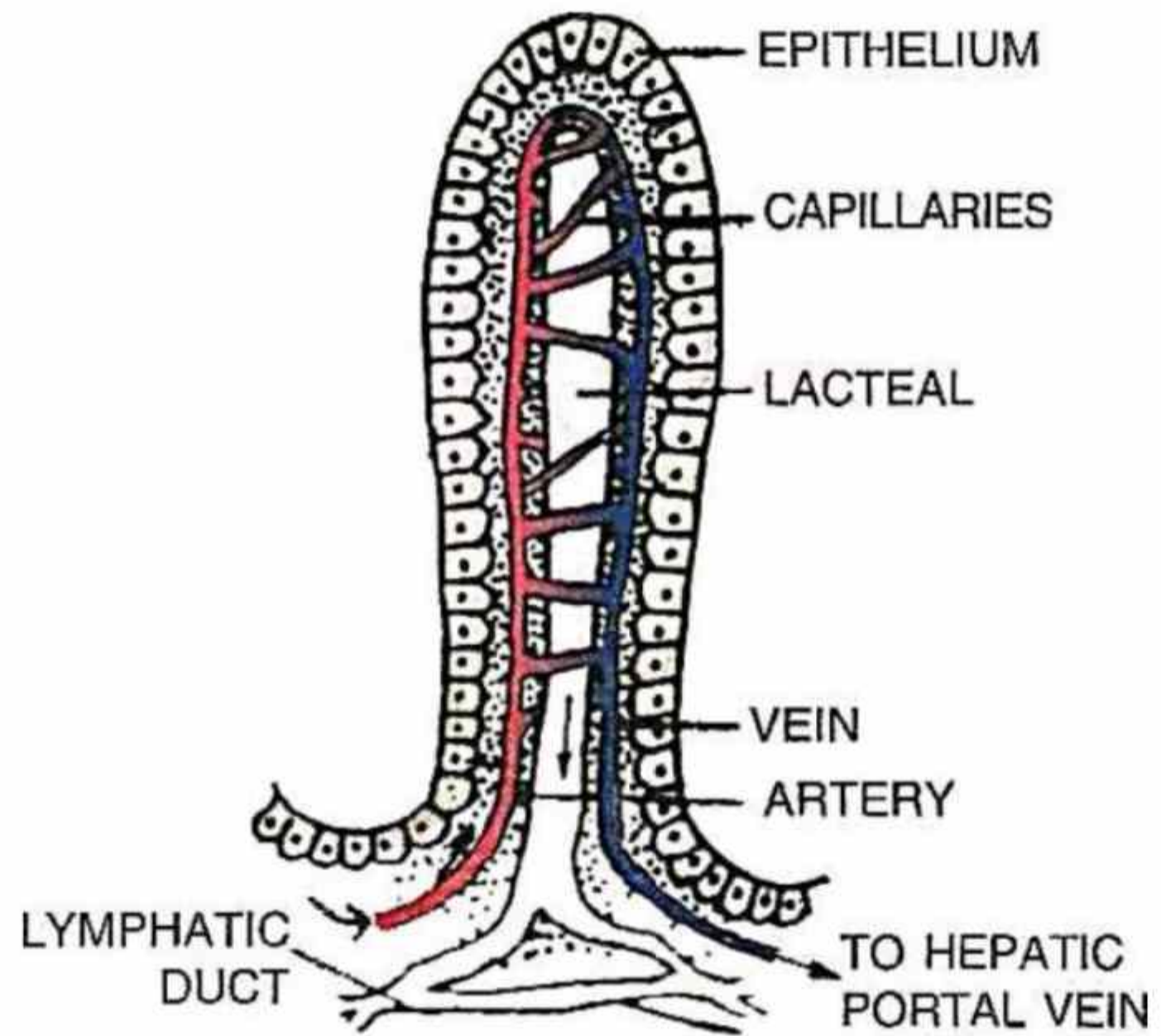
Thin epithelium
- one cell thick to increase
diffusion rate
- microvilli increase surface
area for absorption

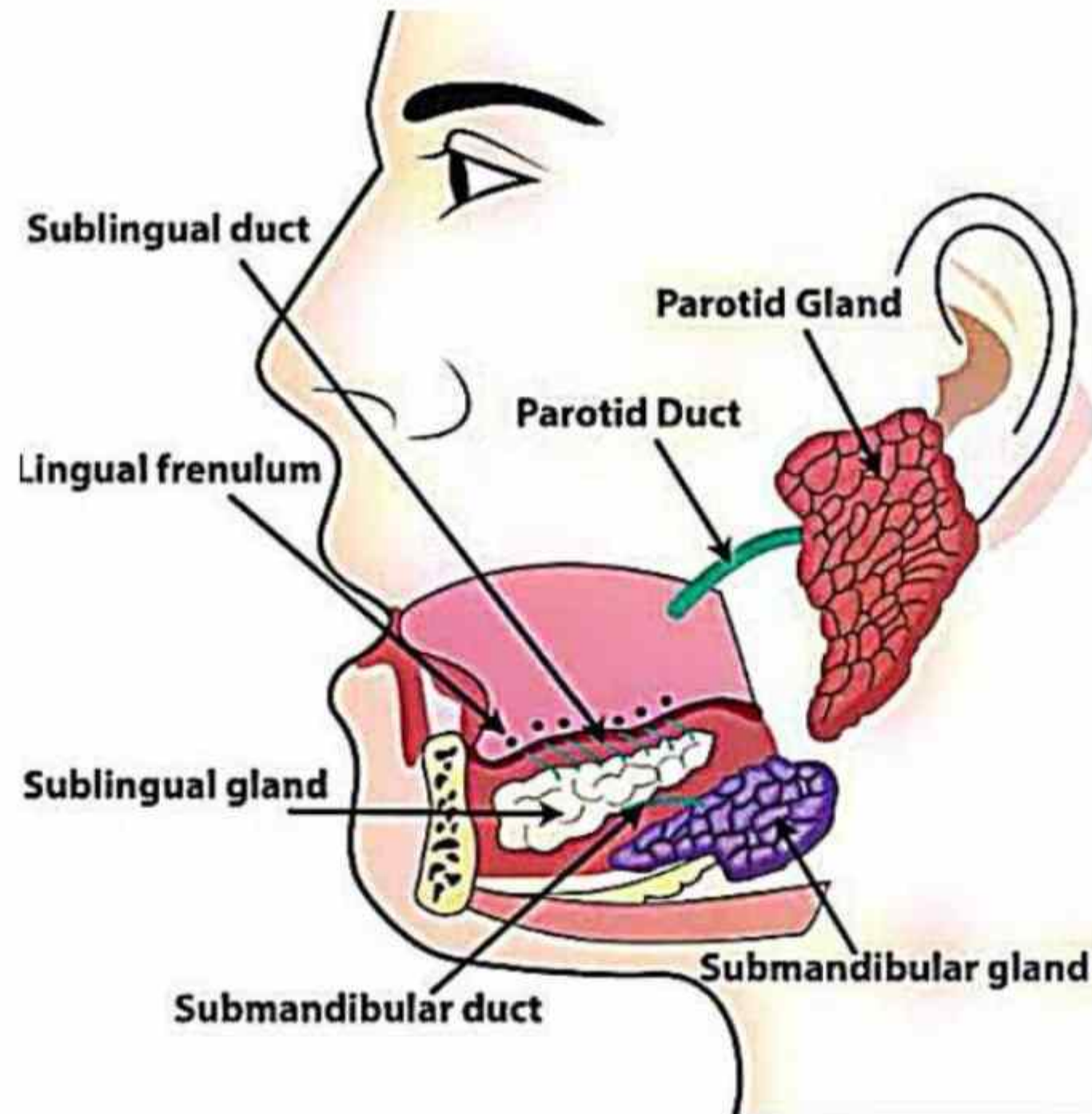
Lacteal
(tiny lymphatic vessels)
Absorbs fatty acids
and glycerol

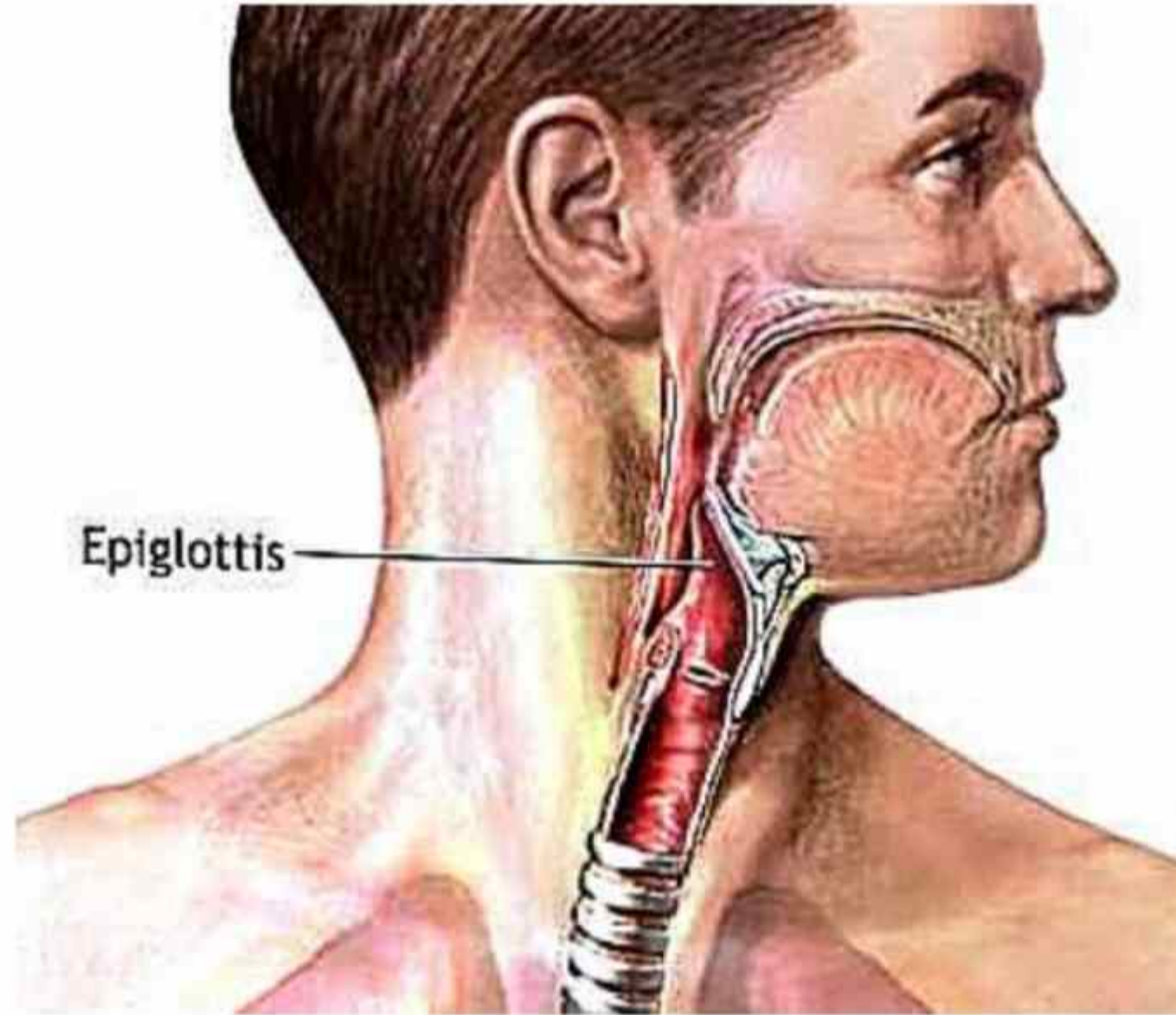
Blood capillary
absorbs glucose
and amino acids

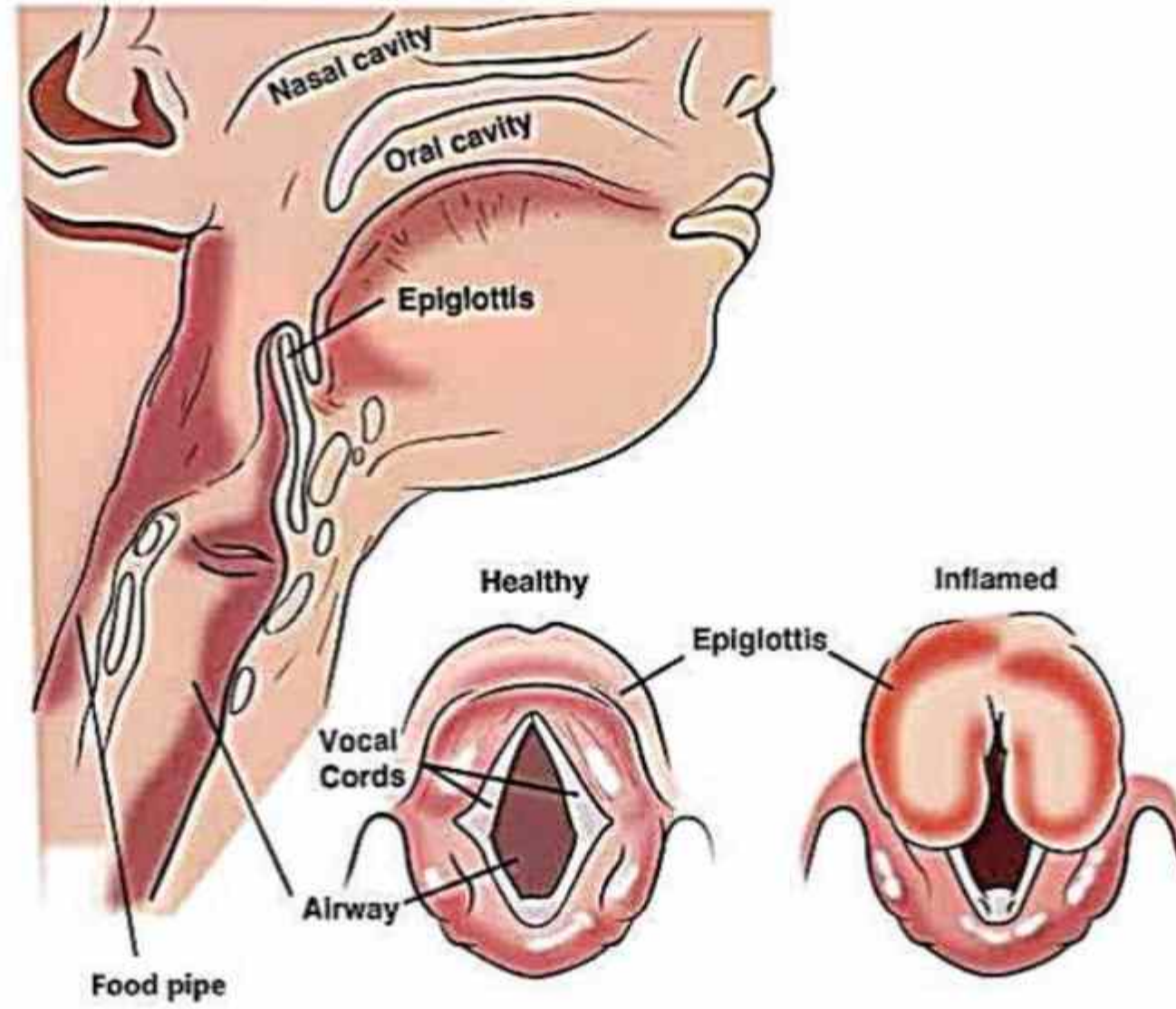












PERISTALSIS

