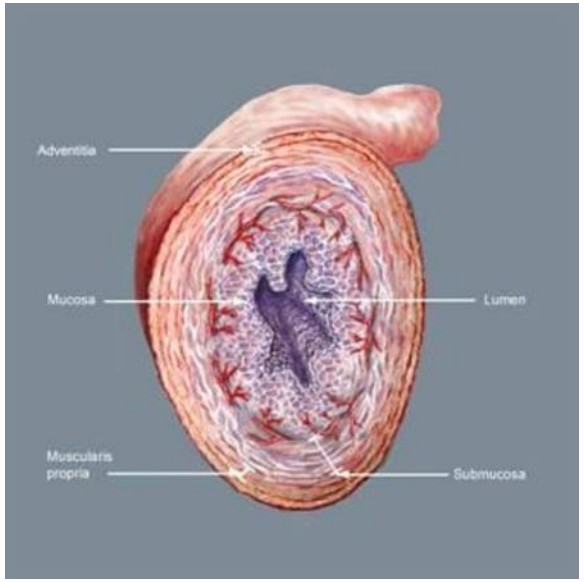
# Histology of Oesophagus



# Objectives

- State the basic differences in the structure of various regions of the oesophagus.
- State how the structure is adapted to function.

# Digestive tract

Mouth and Pharynx

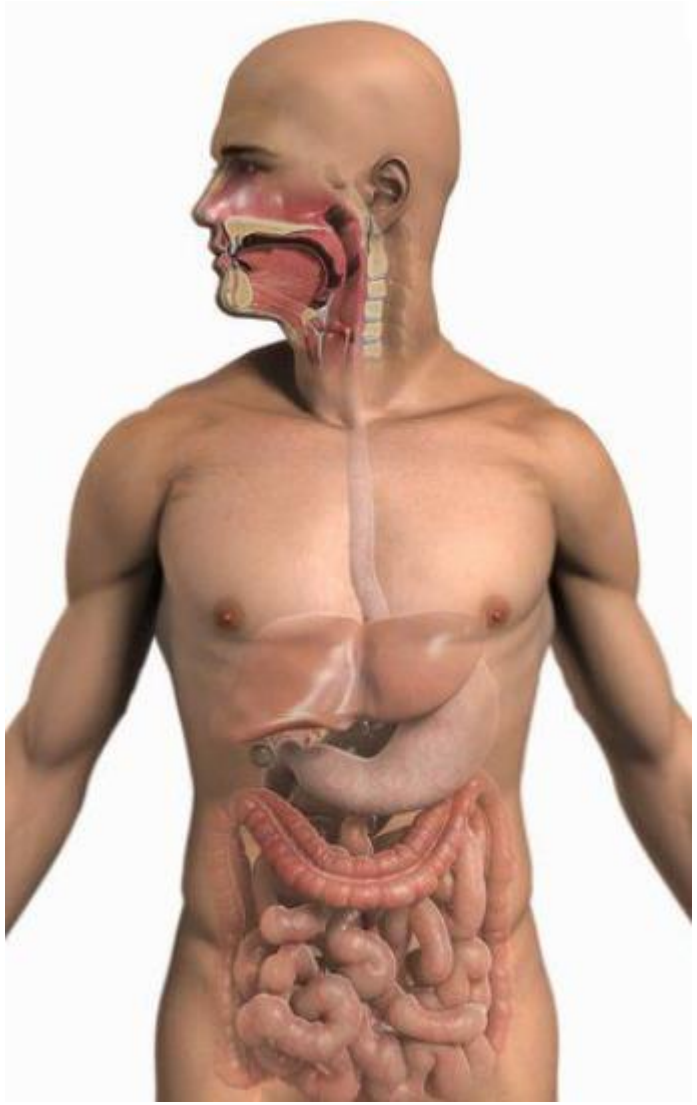
Oesophagus

Stomach

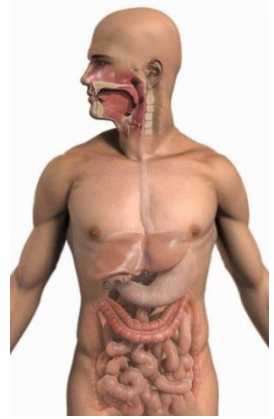
Small intestine

Large intestine

Associated glands



# Oesophagus



- Muscular tube 10 inches / 25 cms long
- Pharynx in the neck ⇒ stomach of abdomen
- Lower border of the cricoid cartilage (C6) ⇒ cardiac orifice of the stomach(T11)
- **Function:** ***conveys food from oropharynx to stomach***

# Basic types of mucosa in GIT

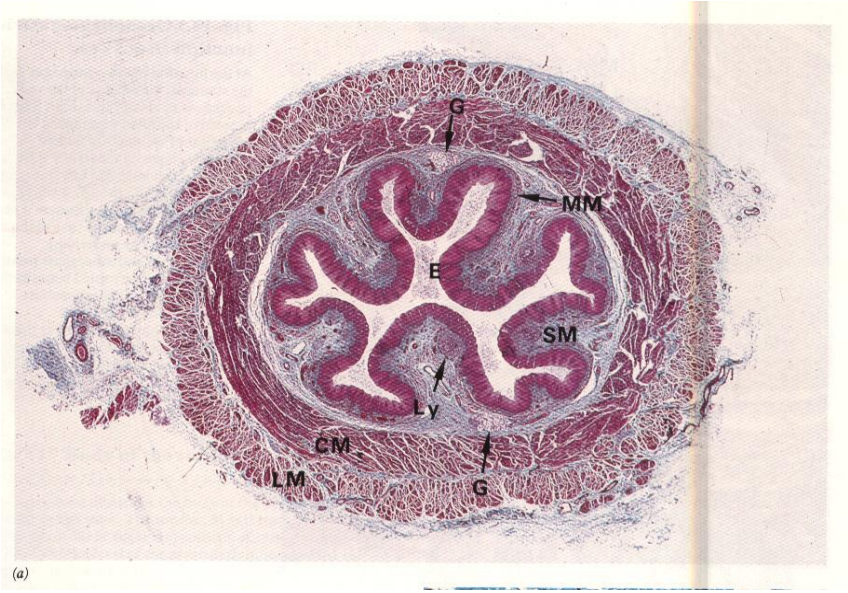
- Protective ⟵ **Oesophagus**
- Secretory
- Absorptive
- Absorptive/Protective

# Typical layers - GIT

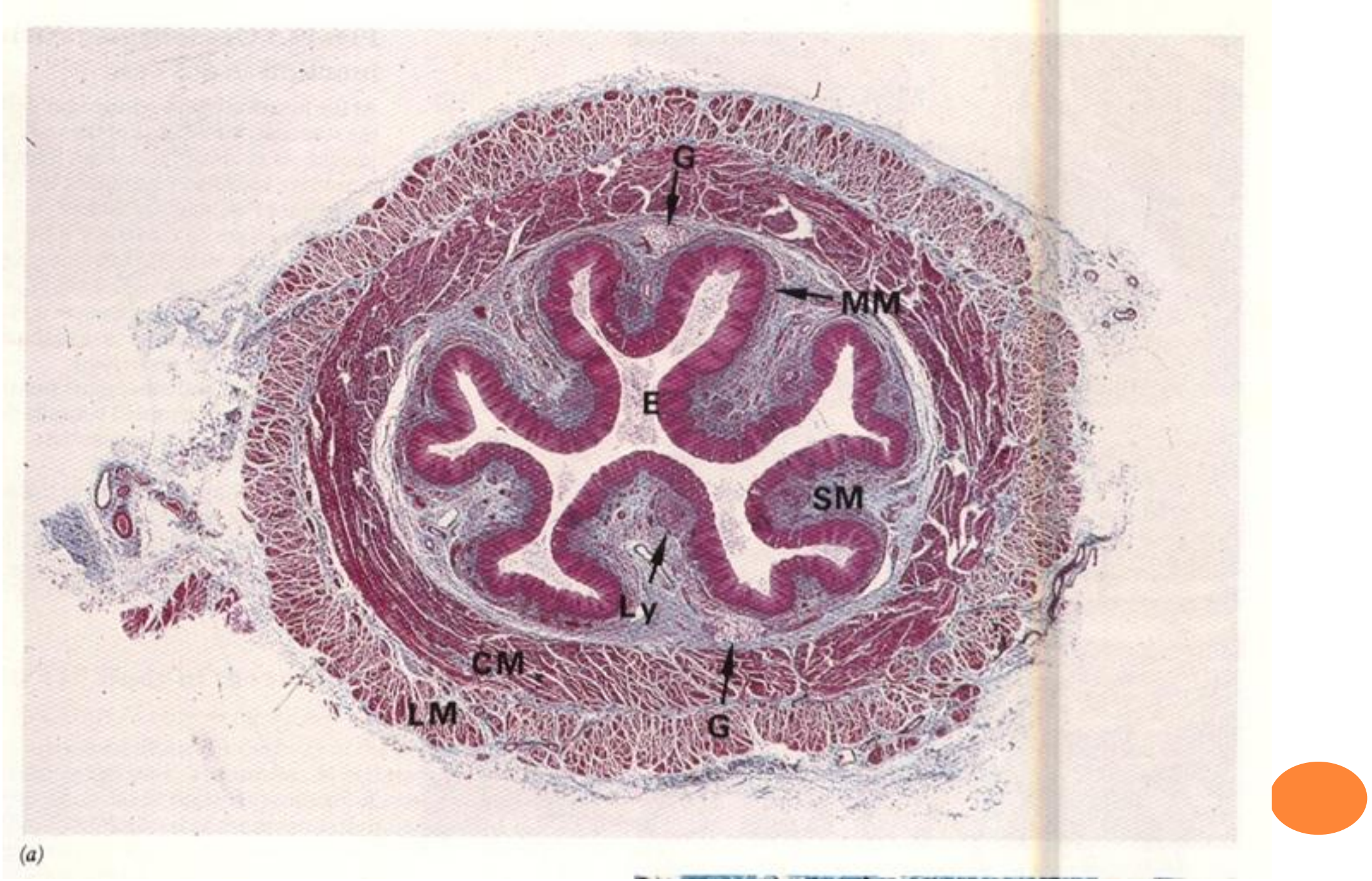
- **Mucosa**
  - *Epithelium*
  - *Lamina propria*
  - *Muscularis mucosae*
- **Submucosa**
- **Muscularis externa**
- **Adventitia / Serosa**

# Oesophagus

- Mucosa
  - Epithelium (E)
  - Lamina propria
  - Muscularis mucosae (MM)
- Submucosa
- Muscularis externa (CM & LM)
- Adventitia / Serosa




***Parts of oesophagus : upper , middle & lower***



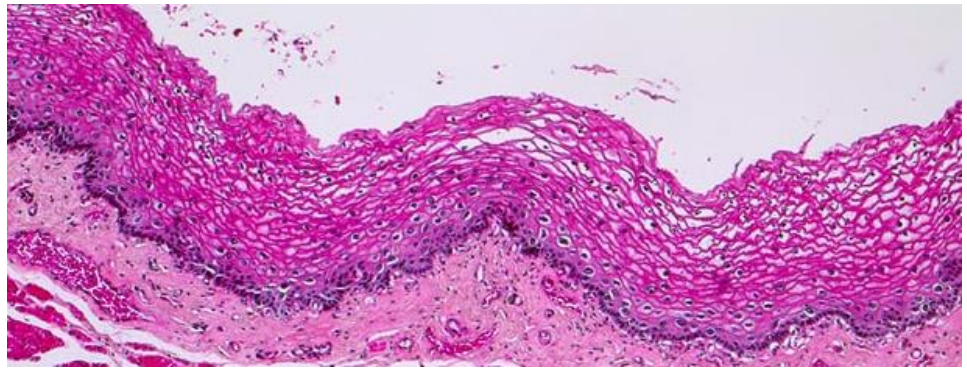

(a)

# Oesophagus - Mucosa

- Epithelium
- Lamina propria
- Muscularis mucosae

# Epithelium

- Stratified squamous non keratinized
- Wet epithelium
- Lubricated by mucus



mucus glands

*Submucosa*

*Lamina propria*

# Lamina Propria

- Relatively condensed connective tissue
- Lymph and blood capillaries
- More lymphoid nodules
- Numerous plasma cells

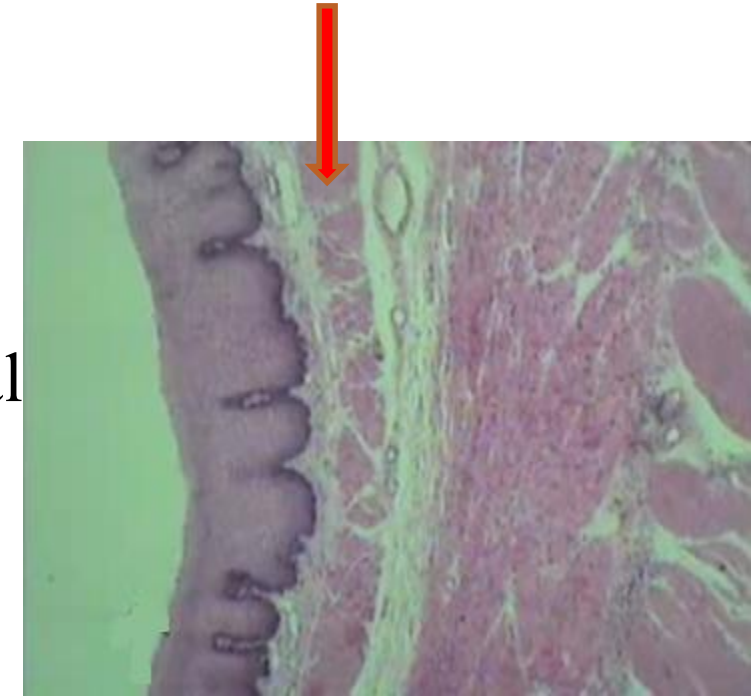
- **Mucous gland (upper & lower of the oesophagus )**
- **The mucus mucosal glands of the abdominal esophagus closely resembles gastric cardiac gland & named oesophageal gastric gland**

# Muscularis mucosae

- Thin layers of smooth muscle

  2 layered: Inner circular

  Outer longitudinal



- **Prominent in oesophagus**
- Contraction – propulsion of food

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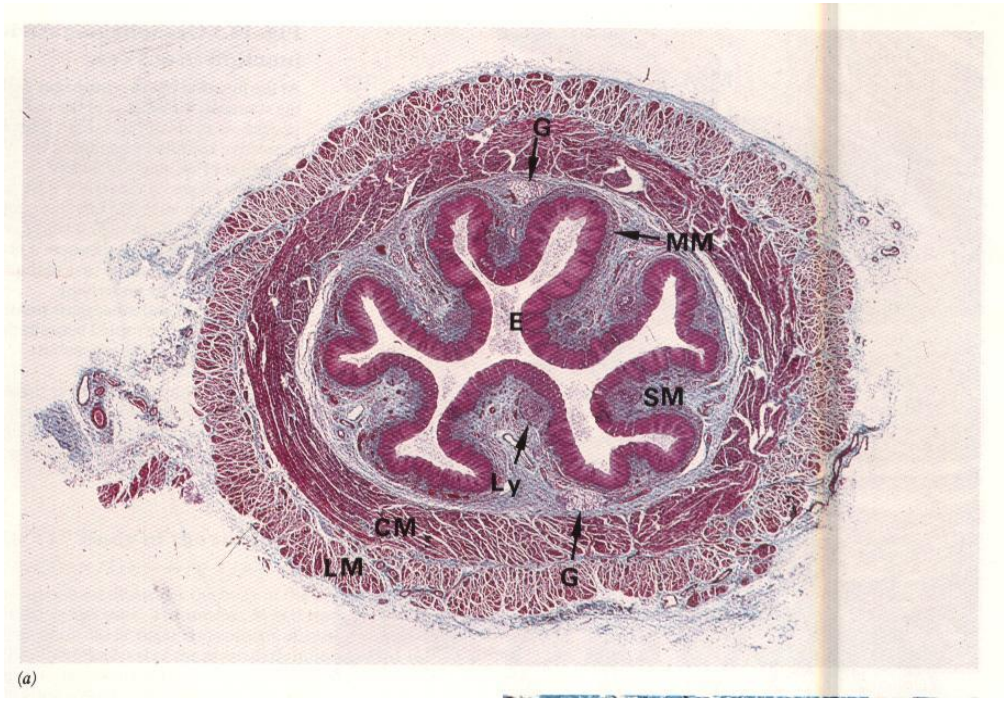
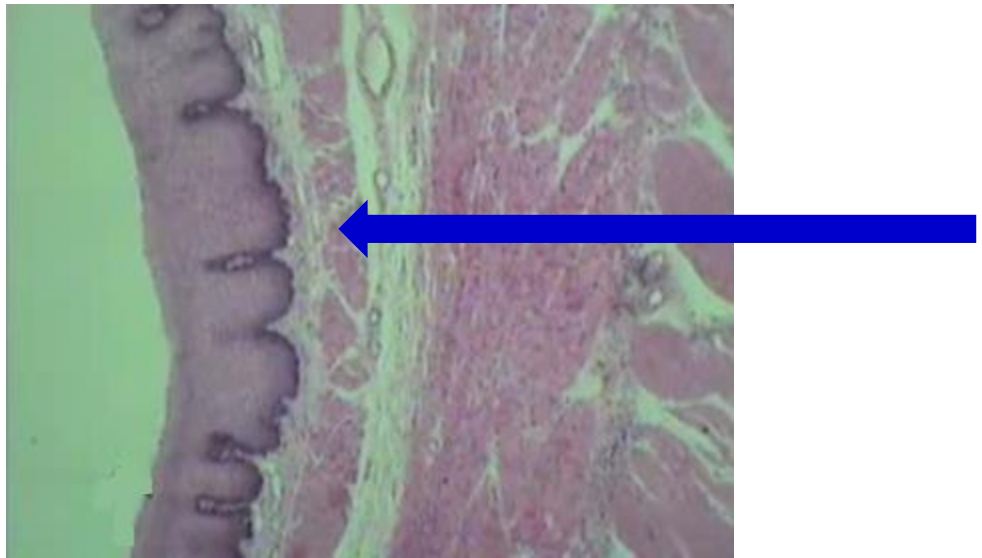


# Submucosa

- Relatively loose connective tissue

  ⇩

  Considerable distension
- Highly vascular
- Nerve plexus - meissner's plexus
- Tubule-acinar oesophageal glands: contain single long ducts
- Composed mostly mucous cells with some serous cells



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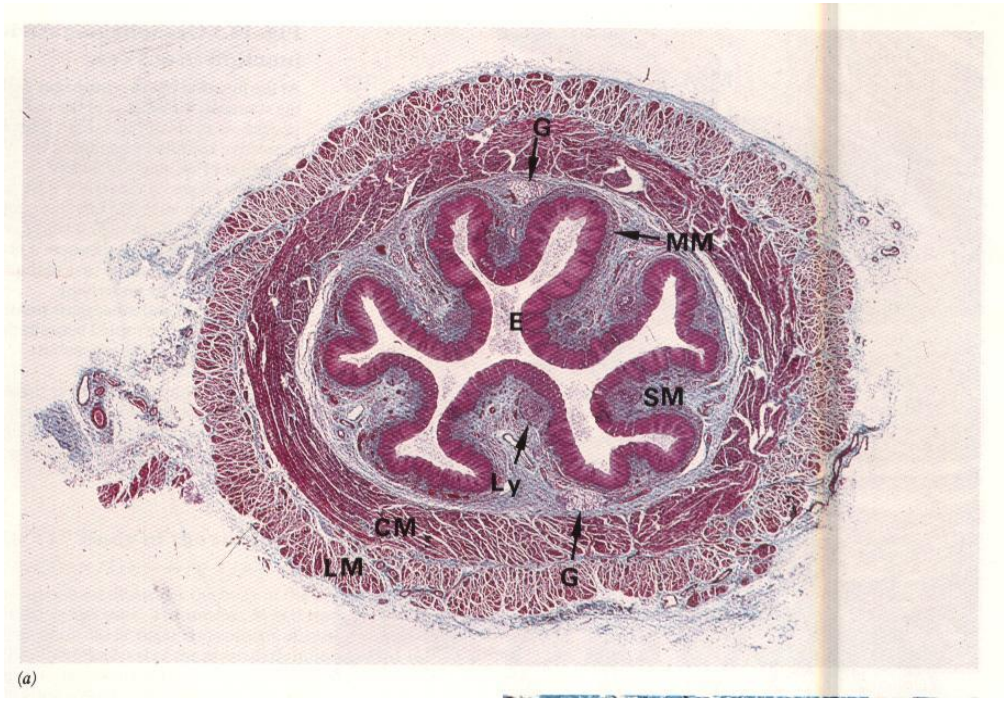
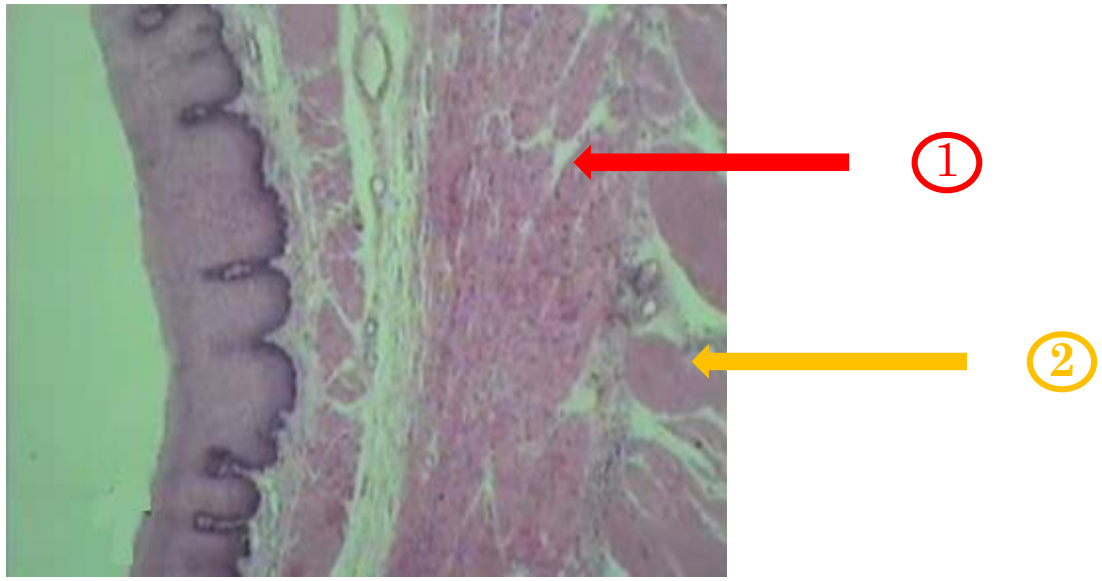


# Muscularis externa

- Thick layers of muscle :
  - ① Inner circular layer —— ***constricts and narrows - lumen***
  - ② Outer longitudinal layer —— ***shortens & ↑diameter - lumen***
- Action; right angle to one another → *Peristaltic contraction*
- Nerve plexus : myenteric plexus (Auerbach's plexus)



# Muscularis externa


***Upper third*** ⇒ ***striated muscle***

***Middle third*** ⇒ ***striated muscle & smooth muscles***

***Lower third*** ⇒ ***smooth muscle***

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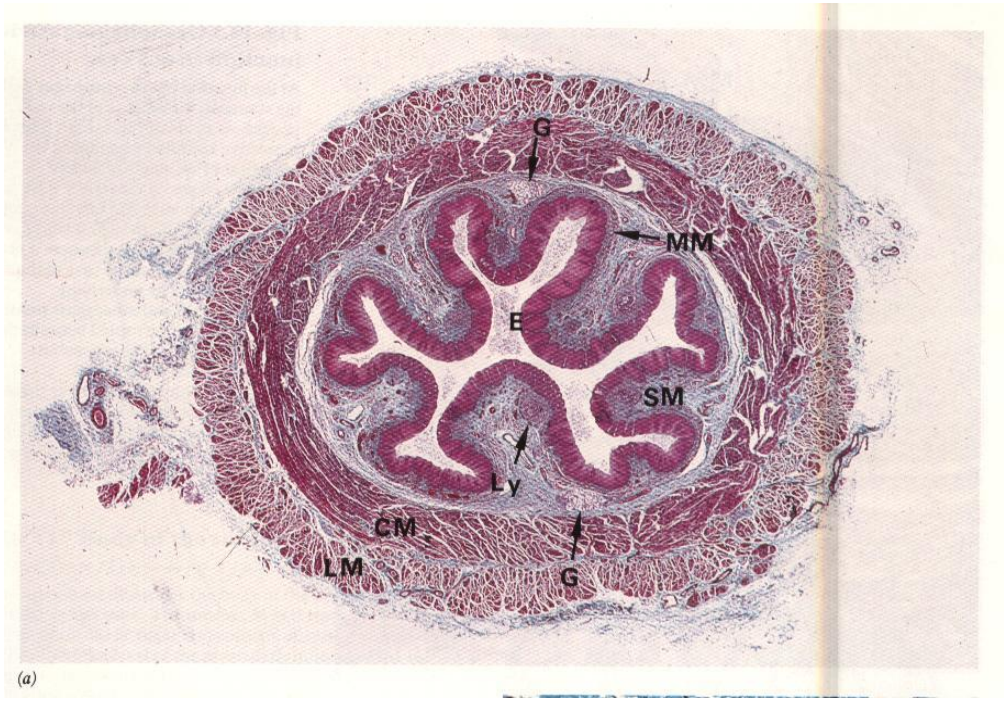
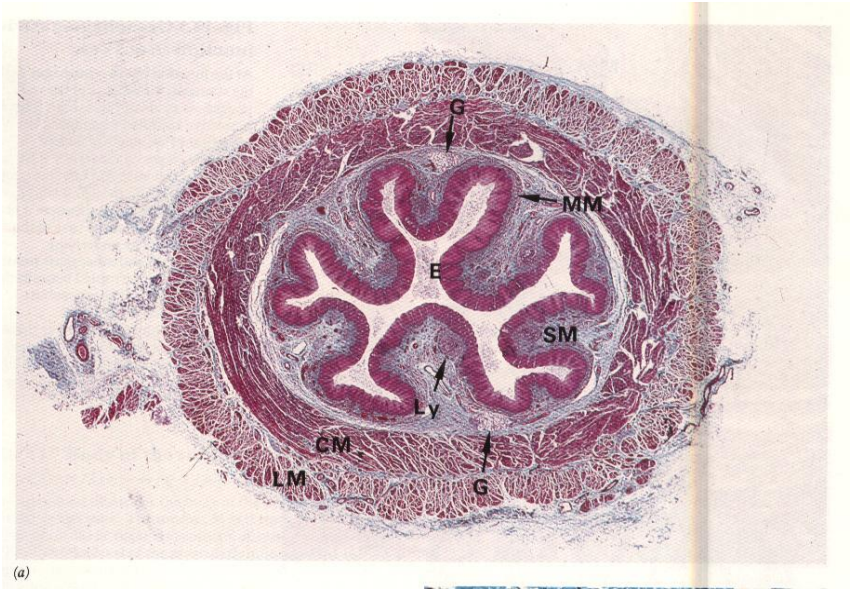


# Adventitia / Serosa

- Outermost layer
- Connective tissues
- Major vessels & nerves
- Adipose tissue

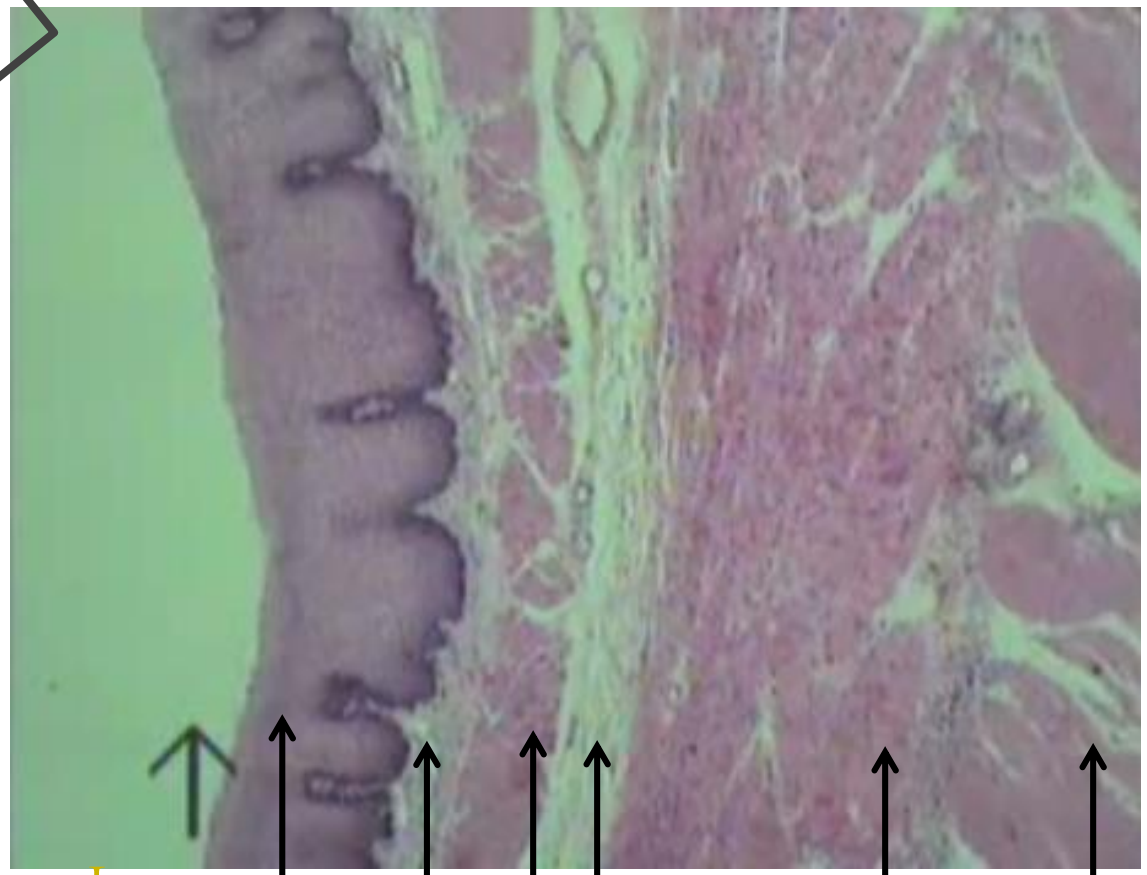



# Abrupt mucosal transition points – GI tract

- Oesophago-gastric junction
- Gastro-duodenal junction
- Ileo-caecal junction
- Recto-anal junction

# Applied Anatomy

# Summary


Luman
Stratified squamous non keratinized epithelium
Lamina propria
Muscularis mucosae
Submucosa
Inner circular layer
Outer longitudinal layer
Mucosa
Muscularis externa

# REFFERENCES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- **Gray's Anatomy**

Thank you