

## ESOPHAGUS

The **esophagus** is a muscular tube that delivers the **bolus** of food from the **pharynx** to the **stomach**. The esophagus, as well as the remainder of the digestive tract, is composed of four concentric layers:

### A. Mucosa

The **mucosa** has three regions: **epithelium**, **lamina propria**, and **muscularis mucosae**. The **epithelium** is **stratified squamous nonkeratinized**.

### B. Submucosa

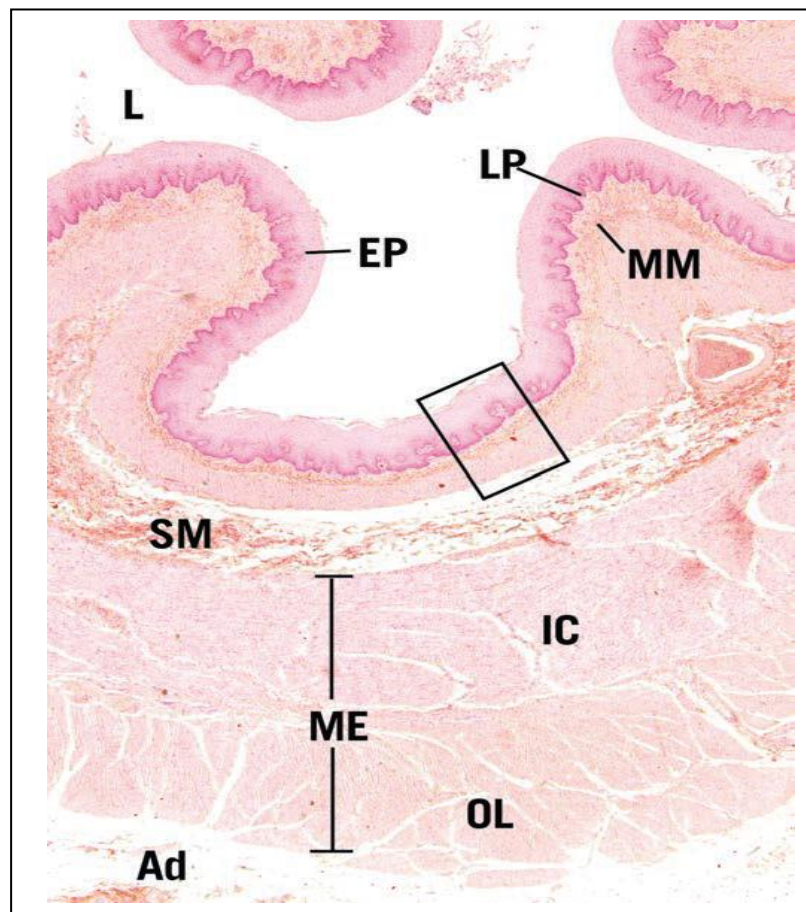
The **submucosa**, composed of fibroelastic connective tissue. The **esophageal glands proper** of this layer produce a mucous secretion. **Meissner's submucosal plexus** found in this layer.

### C. Muscularis Externa

The **muscularis externa** is composed of **inner circular** and **outer longitudinal muscle** layers.

### D. Adventitia

The **adventitia** of the esophagus is composed of fibrous connective tissue.



**IC** inner circular muscle , **L** lumen , **LP** lamina propria , **EP** epithelium , **Sm** submucosa , **MM** muscularis mucosae , **OL** outer longitudinal muscle , **Ad** adventitia.

## Colon:-

**1. Mucosa:** The **mucosa** presents no specialized folds. It is thicker than that of the small intestine.

**a. Epithelium :** The **simple columnar epithelium** has goblet cells and columnar cells.

**b.Lamina Propria:-** The **crypts of Lieberkühn** of the **lamina propria** are longer than those of the small intestine. They are composed of numerous **goblet cells**

**c. Muscularis Mucosae :-** The **muscularis mucosae** consists of **inner circular** and **outer longitudinal smooth muscle** layers.

**2. Submucosa:-** Contain large blood vessels.

**3. Muscularis Externa** The **muscularis externa** is composed of **inner circular** and **outer longitudinal smooth muscle** layers.

**4. Serosa :-** The colon possesses both **serosa** and **adventitia**.

