

# General construction of the digestive tract

The digestive system (digestorium system) is used to process nutrients and absorb them. During digestion, food passes through the digestive tract, where it is crushed and chemically broken down into simpler substances. These get into the blood and then into the tissues and cells of the body, where they are used as a source of energy or a building block of cells.

The digestive system consists of digestive tubes and accessory glands - *gll. salivariae majores* (glandula parotid gland, glandula submandibularis, glandula sublingualis, liver a pancreas)

## Major organs and sections of the digestive system

1. **cavitas oris** - oral cavity
  - *Dentes* - teeth, *lingua* - tongue, *palatum* - floor, *glandulae oris* - Salivary Glands
2. **Pharynx** - pharynx
3. **Oesophagus** - oesophagus
4. **Gaster** - stomach
5. **Intestinum tenue** - small intestine
  - *Duodenum* - duodenum
  - *jejunum* - jejunum
  - *ileum* - ileum
6. **Intestinum crassum** - large intestine
  - *Caecum* - appendix
  - *colon* - colon - ascendens, transversum, descendens et sigmoideum
  - *rectum* - rectum

### Glands opening into the duodenum

- *hepar* - liver
- *pancreas* - pancreas

## The individual layers of the digestive tract

### Tunica mucosa

The lining of the digestive tract cavities as a soft, pink to red layer, moistened with glandular secretions. In some sections it is smooth, in others it is folded into lashes or runs out into tiny protrusions.

1. **Lamina epithelialis**
  - Formed at the beginning and end of the digestive tract of stratified squamous non-conforming epithelium in areas which primarily serves as a mechanical protection (oral cavity, pharynx, esophagus, anal portion of the alimentary canal), the central part in terms of epithelium unilamellar cylinder that performs the stomach function of secretory and in the intestine resorption function.
  - It can form algae (*plicae*), papillae (*papillae*) or villi (*villi*).
  - Epithelial cells produce mucus (*mucus*) and the amount of mediators that are responsible for digestion, absorption and elimination of harmful substances, indigestible and unnecessary metabolites.
2. **Lamina propria mucosae**
  - It is located below the epithelium and is a layer of sparse collagen connective tissue in which numerous blood and lymphatic vessels and glands occur.
  - **Lymph follicles** (folliculi lymphatici solitarii et aggregati) are present in some places.
  - Just below the epithelium is a zone where numerous macrophages, lymphocytes and plasma cells produce antibodies (immunoglobulins) that bind to the secretory proteins produced by the epithelial cells and are released to the mucosal surface.
3. **Lamina muscularis mucosae**
  - It consists of smooth muscle cells.
  - It does not always have to allow the mucosa to move along the muscle of the digestive tract.

### Tunica submucosa

In other words, the submucosal ligament formed by the sparse collagen ligament in which the blood and lymphatic vessels are located. It is a layer that connects the mucosa to the muscle. Glands (eg. *gll. duodenales seu Brunneri* or glands in oesophagus) and lymphatic tissue also appear in the submucosa. There are also braids of thicker blood

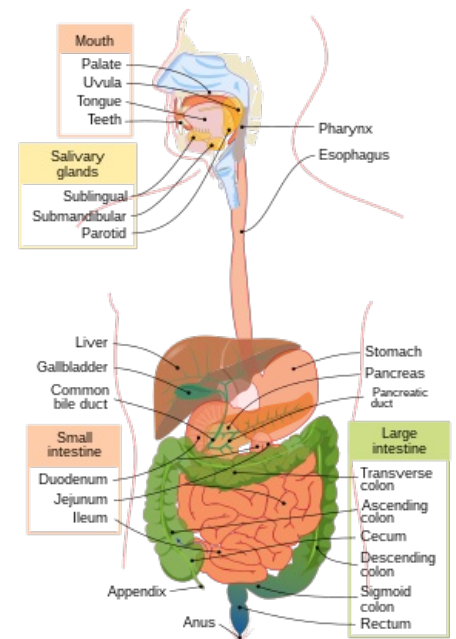
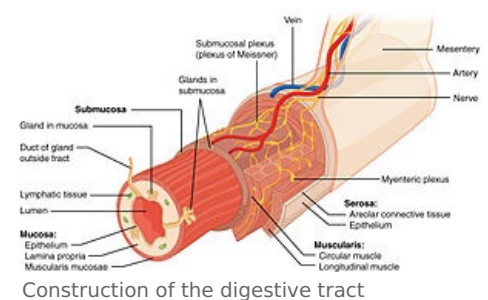


Diagram of the digestive tract



Construction of the digestive tract

vessels and nerves (*plexus submucosus Meissneri*).

## Tunica muscularis externa

The muscular layer is formed at the beginning (up to the middle of the esophagus) and at the end of the digestive tract by transverse striated muscle, in the middle part, ie from the middle part of the esophagus to the lower part of the rectum, by smooth muscle. The muscle is arranged in two layers. The inner layer is circular (stratum circulare) and the outer longitudinal (stratum longitudinale). Both smooth and transversely striated circular muscle is sometimes strengthened in the sphincters, sphincters. Between the circular and longitudinal muscles there is a weak layer of connective tissue, in which other blood, lymphatic vessels and the nerve plexus (plexus myentericus Auerbachii) lie.

## Tunica externa

The outer surface layer is formed as either a **tunica adventitia**, composed of a sparse or thickened ligament, which passes into the surrounding ligament (mediastina, paraproctia). The outer layer thus formed encloses the parts of the digestive tract which do not lie in the peritoneal cavity i. cervical and thoracic oesophagus a rectum. The second form of surface layer is a smooth and shiny **tunica serosa**, which envelops the part of the digestive tract facing the abdominal cavity. It consists of one layer of flat epithelial cells, so-called mesothelial cells, supported by a small layer of subserosal connective tissue, tunica subserosa.

## References

### Related Articles

- Digestion
- Epithelium
- Salivary Glands
- Oesophagus

### Practicing histological specimens

- [Practice: Digestive system ([https://www.wikiskripta.eu/w/Procvi%C4%8Dov%C3%A1n%C3%AD:Tr%C3%A1vic%C3%AD\\_syst%C3%A9m](https://www.wikiskripta.eu/w/Procvi%C4%8Dov%C3%A1n%C3%AD:Tr%C3%A1vic%C3%AD_syst%C3%A9m))]

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