

DIGESTION AND ABSORPTION

Digestive System - Introduction

- Digestive
SystemTo perform various functions of the body, energy is required, which is
obtained from food.
 - The process of conversion of complex large and indiffusible food material into simple and diffusible food by mechanical and biochemical (hydrolysis) process, is termed as Digestion.



Mouth

Mouth is a horizontal transverse slit like aperture which is surrounded by upper and lower lip.

Buccopharyngeal cavity, this cavity is divided into two parts.



Tongue

On the floor of oral cavity a muscular, flat, fleshy plate like structure is present which is called Tongue.





Teeth and Its Type

- * The crown part of the tooth is made up of a very hard substance called the **Enamel**. It is the hardest material in all animal of animal kingdom.
- Dentine is the main part of tooth. Dentine surrounds a cavity called pulp-cavity. This cavity contains soft connective tissue, blood capillaries, nerve fibres.
- ✤ A special type of cells form the lining of the pulp-cavity called the Odontoblast cells.



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Dental Formula



Salivary Glands - 6 200

Infra-orbital-glands is located just below the eye-orbit. These glands are absent in Human.

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Composition of saliva :

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Parotid gland

potassium, chloride, IgA antibody, urea and uric acid etc.



Waldeyer's Ring

The lymphatic tissues of the pharynx and oral cavity are arranged in a ring like manner, which are collectively called Waldeyer's ring (Waldeyer's lymphatic ring).

•The tonsils are collections of lymphatic tissue located within the pharynx. Pharyngeal tonsil Tubal tonsils (x2) Palatine tonsils (x2) Lingual tonsil



Alimentary Canal – Oesophagus , Peristalsis

- Oesophagus is simple uniform tube which runs downward and pierces the diaphragm and finally opens into stomach that site of piercing on diaphragm is called Hiatus.
- The length of oesophagus depends on length of neck so the longest Oesophagus is present in Giraffe.



Stomach



Stomach is covered by layer of **peritoneum**.

The stomach stores the food for 4-5 hours. The food mixes thoroughly with the acidic gastric juice of the stomach by the churning movements of its muscular wall and is called the **chyme**







- For absorption large surface area is required. Therefore
 - (a)Great length of the intestine.
 - (b)The presence of permanent deep folds in mucosa is called **plicae circularis**, or **valvulae conniventae** or **folds of kerkring**, along with **villi and microvilli**.





Large Intestine



•Portions of the longitudinal muscles are thickened, forming three conspicuous bands called the **teniae coli** that run most of the length of the large intestine.

• Tonic contractions of the bands gather the colon into a series of pouches called haustra, which give the colon a puckered appearance.

