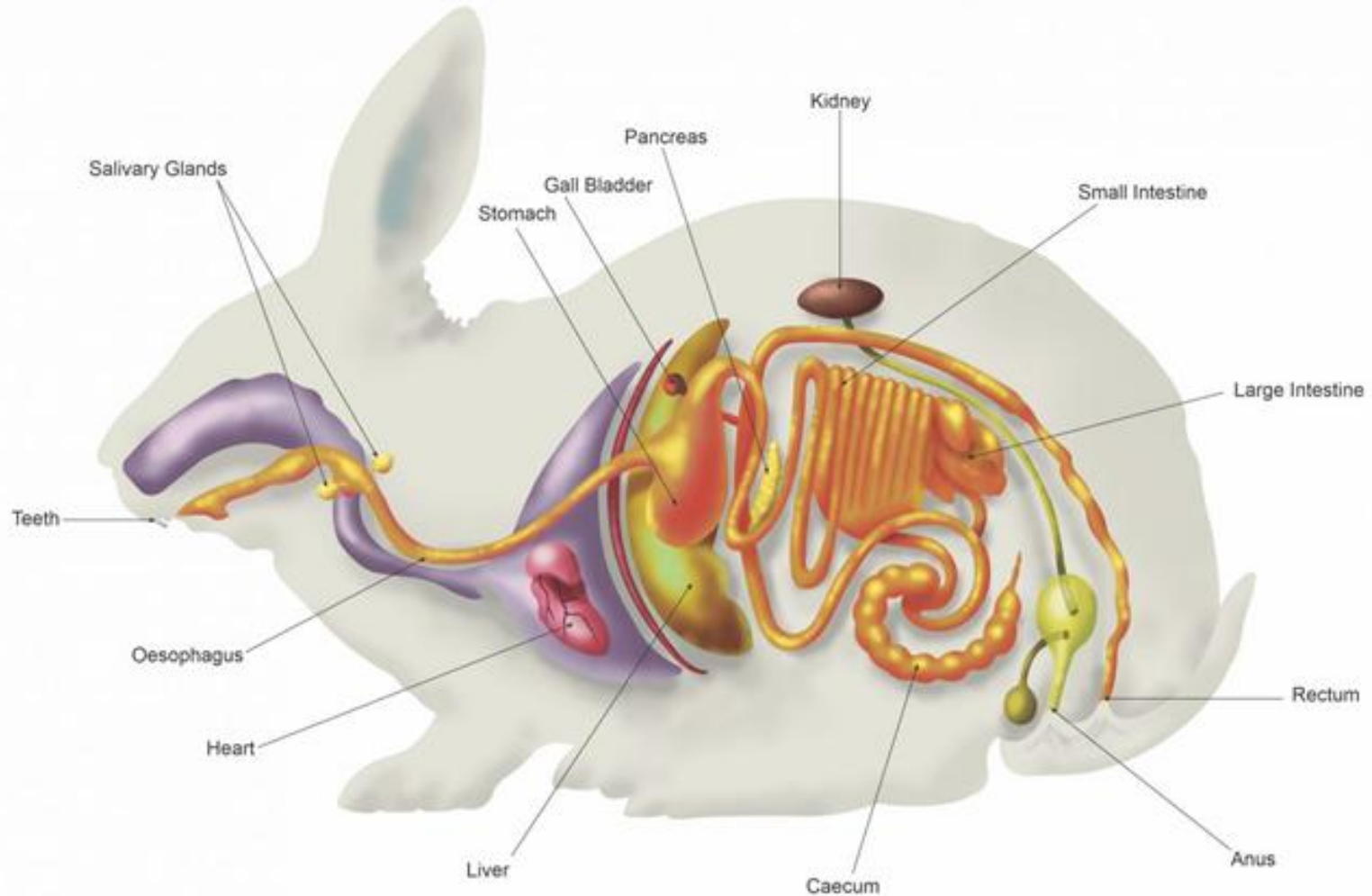


DIGESTIVE SYSTEM - RABBIT



- The digestive system includes organs concerned with
 - **Food grinding**
 - **swallowing**
 - **digestion**
 - **Absorption and**
 - **Egestion**
- It consists of the ***alimentary canal*** and ***digestive glands***

[I] **Alimentary canal**

- Coiled tube
- mouth, vestibule, buccal cavity, pharynx, oesophagus, stomach, small intestine, caecum, large intestine and anus.

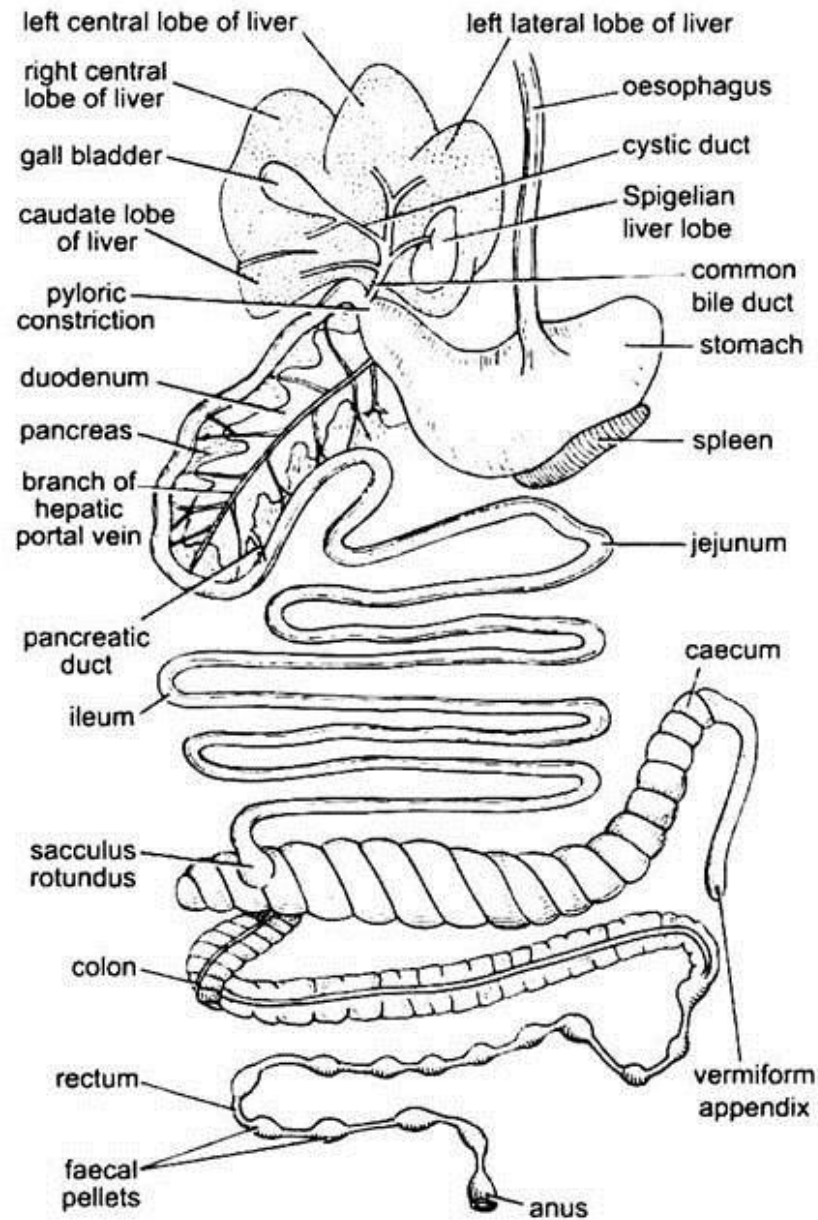


Fig. 29.27. Rabbit. Alimentary canal with associated glands.

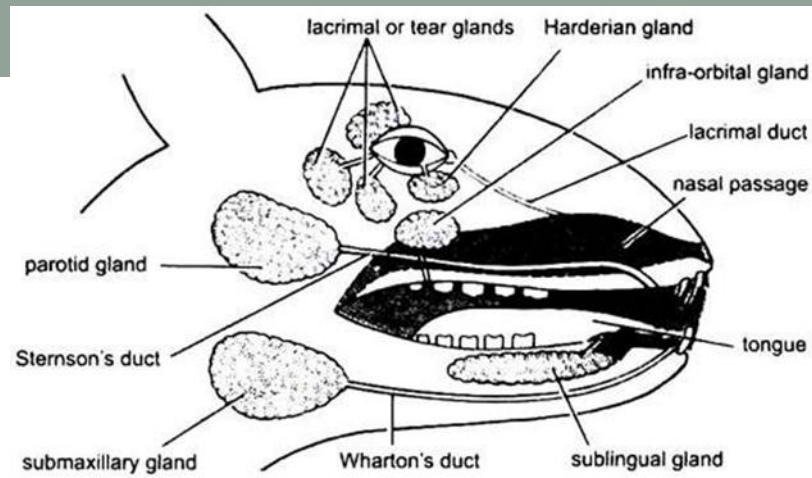


Fig. 29.32. Rabbit. Glands in the head.

1. Mouth

- The alimentary canal starts from the mouth.
- It is bounded by two **lips**, an **upper lip** and a **lower lip**
- The upper lip is divided by a **median vertical cleft** extending up to the nostrils
- Through this cleft, the front teeth (**upper incisors**) are exposed.
- This type of lip is called hare lip

2. Vestibule

- The mouth opens into a narrow, vertical, slit-like space, the *vestibule*.
- Mucous glands are found in its lining.

3. Buccal cavity

- The vestibule leads into the *buccal cavity*.
- It is bounded above by the **palate**.
- It divides the buccal cavity into a **nasal passage** above and a **food passage** below.
- floor of the buccal cavity- muscular **tongue**
- The dorsal surface also bears numerous **papillae** containing **taste buds**.
- Teeth of rabbit are present on both the jaws.
- Teeth – **thecodont, diphyodont**

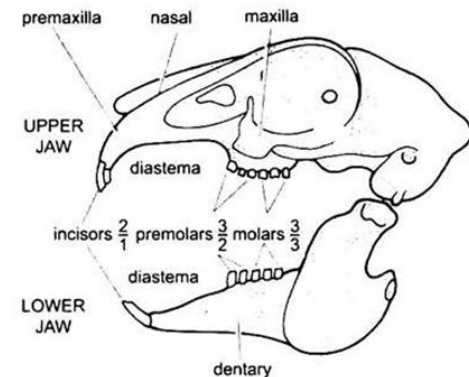


Fig. 29.26. Rabbit. Dentition. Arrangement of teeth on jaws.

4. Pharynx

- The buccal cavity leads into the *pharynx*. It can be divided into 1. Nasopharynx 2. Oropharynx 3. Laryngopharynx

5. Oesophagus

- The oesophagus is a long, narrow, elastic and muscular tube.
- It passes through the neck, in the thorax it pierces the diaphragm and reaches the abdomen
- It serves to convey the food from the pharynx into the stomach

6. Stomach

- anterior *cardiac stomach*, middle *fundic stomach* and the posterior part as the *pyloric stomach*.

7. Small intestine

- The small intestine following stomach is a long (2-2.5m), narrow and much convoluted tube made of three parts—*duodenum*, *ileum* and *sacculus rotundus*.
- *duodenum* - U-shaped loop
- *Descending limb* – receives bile duct
- *Ascending limb* – receives pancreatic duct
- *ileum*. duodenum leads into ileum. internal lining is raised into minute finger-like processes, called *villi*, which increase the inner absorptive surface.

8. Caecum

- At the junction of ileum and colon is present a wide, about 50 cm long, thin-walled tube, the *caecum*.
- Distally caecum terminates in a small, about 15 cm long, narrow, thick-walled blind tube, the *vermiform appendix*.
- **Cellulose** of plant material is broken by bacterial action inside caecum.

9. Large intestine

- The large intestine is more than **one meter** long and consists of two regions : **colon and rectum**

10. Anus

- **Rectum opens** to the outside through *anus*, situated at the base of the tail. It is guarded by an *anal sphincter*.

[II] Digestive glands

1. Mucous gland

- It occurs throughout the **mucous lining** of the digestive tract.
- Mainly found in the lining of the **vestibule**
- Mucus helps in the **moistening, lubrication and swallowing of food**

2. Salivary glands

- **Four pairs of** salivary glands open by their ducts separately into buccal cavity.
- **Parotid gland** – base of the external ear.
- **Infra-orbital glands** – below the orbits
- **Submandibular or submaxillary glands** – angles of the jaws/ mandible
- **Sublingual gland** – below the tongue

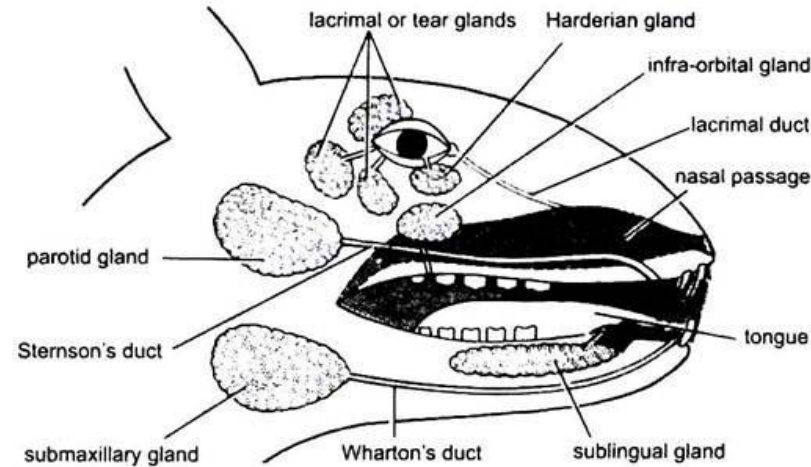


Fig. 29.32. Rabbit. Glands in the head.

- The secretion of salivary glands is an alkaline watery liquid, called **saliva**, which mixes with the food masses in the buccal cavity. Its main function is to provide a **lubricant** to make swallowing easier.
- It contains an enzyme called **ptyalin**, which converts starch into **maltose**
- 3. Gastric glands
 - These are found in the mucous membrane of **stomach**.
 - Their secretion is called as **gastric juice**
- 4. Liver
 - It is the **largest** gland
 - Divided into **5 lobes**
 - Liver cells secrete a greenish fluid, the **bile**, which is stored in the **gall bladder**.

5. Pancreas

- It is an irregularly branched pinkish gland in the U shaped duodenal loop.
- Its single duct opens into the distal limb of duodenum.

6. Intestinal glands

- numerous, microscopic, simple and tubular intestinal glands are found in the mucous lining of *the* small intestine at the bases of the villi. Their secretion called *intestinal juice* (succus entericus) includes several enzymes which act on all types of food.

