

The Endocrine Glands

The endocrine or ductless glands are those that deliver their secretory products (hormones) in to the blood , lymph or tissue fluid which transports them to the largest organs .

Endocrinology :- Is one of the most important and currently most active branches of biological and clinical medicine sciences .

There are three types of endocrine organs may be recognized

1- Comprises the few discrete organs of a primary endocrine nature

- * Pituitary gland (Hypophysis)
- * Pineal gland
- * Thyroid gland and parathyroid gland
- * Adrenal gland

2- Comprises those organs that combine major endocrine with other important related function

- * Pancreas
- * Testes
- * Ovaries
- * Placenta

3- Comprises organs not included with major combination with endocrine, but could be secrete hormones through individual cells:-

Kidney, Liver, Heart, Thymus and GastrointestinalTract .

Pituitary Gland (Hypophysis)

Is sometimes described as the master gland since produce certain hormones that directly influence the activities of other endocrine glands it is located as an appendage of the brain at the (floor) of brain , also relay between the nervous and hormonal mechanism , that jointly control certain functions .

It is dark ellipsoidal body measuring 1X 0.75 X 0.5 cm. in the medium sized dog. It is suspended below the hypothalamus by a narrow fragile stalk and the gland is covered by the reflection of dura matter of meninges , so called " diaphragmatic sella" . A large venous channel (cavernous sinus) is related to the lateral sides of the gland provide a longitudinal connection between the ophthalmic plexus and thus the vein and the face rostrally and the external Jugular vein and the vertebral venous plexus caudally, by transverse intervenous sinuses .

Boundaries :

- laterally is the cavernous sinus and cranial nerves which supply the eye ball which are **III ,IV ,VI** and ophthalmic nerve .
- Anteriorly---- optic chiasma
- Posteriorly----Dorsum sella

The gland is divided of

Posterior lobe (Neurohypophysis)

Anterior lobe (Adenohypophysis)

- **Posterior lobe**

Is formed by a down growth of the hypothalamus via a stalk that persist which connect the gland to the brain

- **Anterior lobe**

Is formed by epithelial cells which emerge as outgrowth of the roof of the developing mouth. This lobe contains a small lobe called intermediate lobe