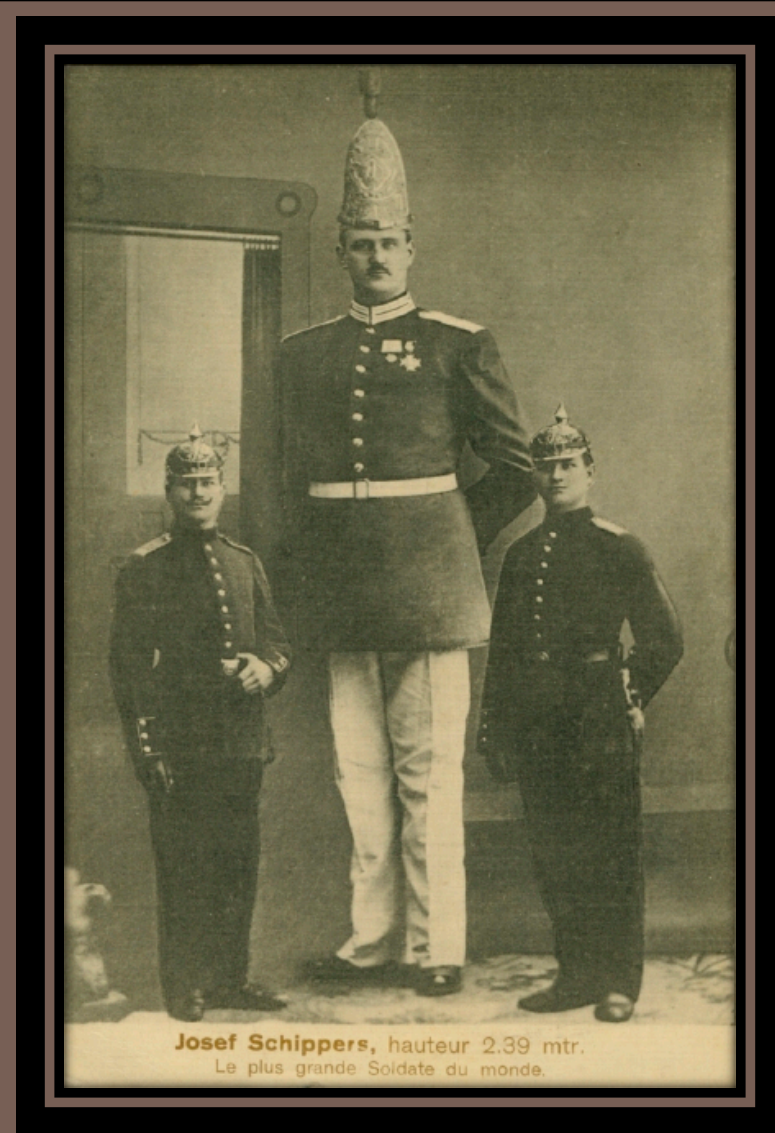


# ANATOMY OF THE PITUITARY GLAND



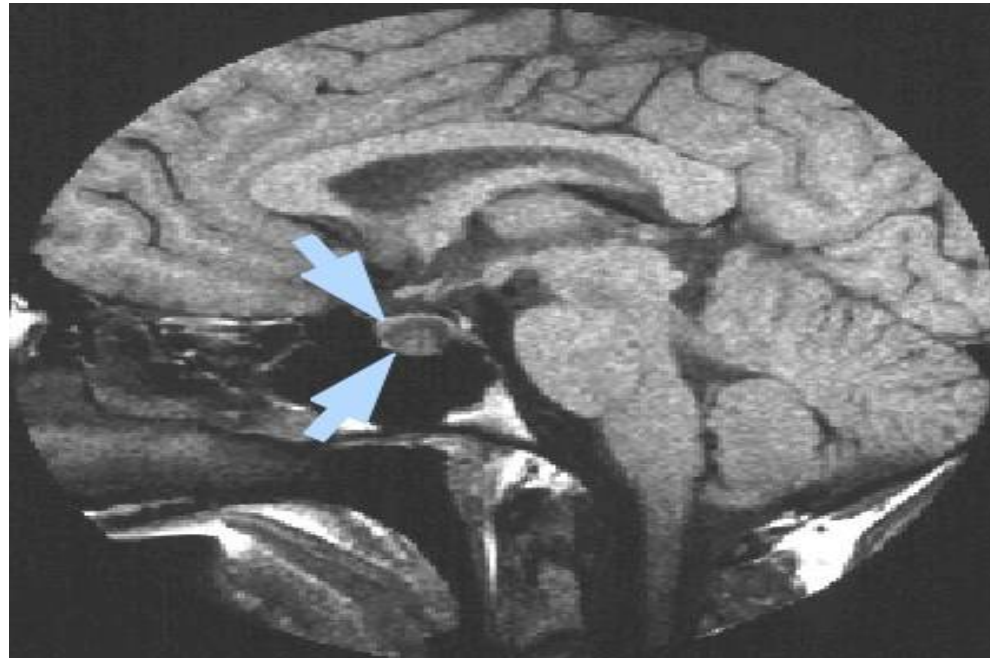
*Dr. Ahmed Fathalla Ibrahim & Dr. Jamila El Medany*

# OBJECTIVES

*At the end of the lecture, students should be able to:*

- ❑ Describe the position of the pituitary gland.
- ❑ List the structures related to the pituitary gland.
- ❑ Differentiate between the lobes of the gland.
- ❑ Describe the blood supply of pituitary gland & the hypophyseal portal system.

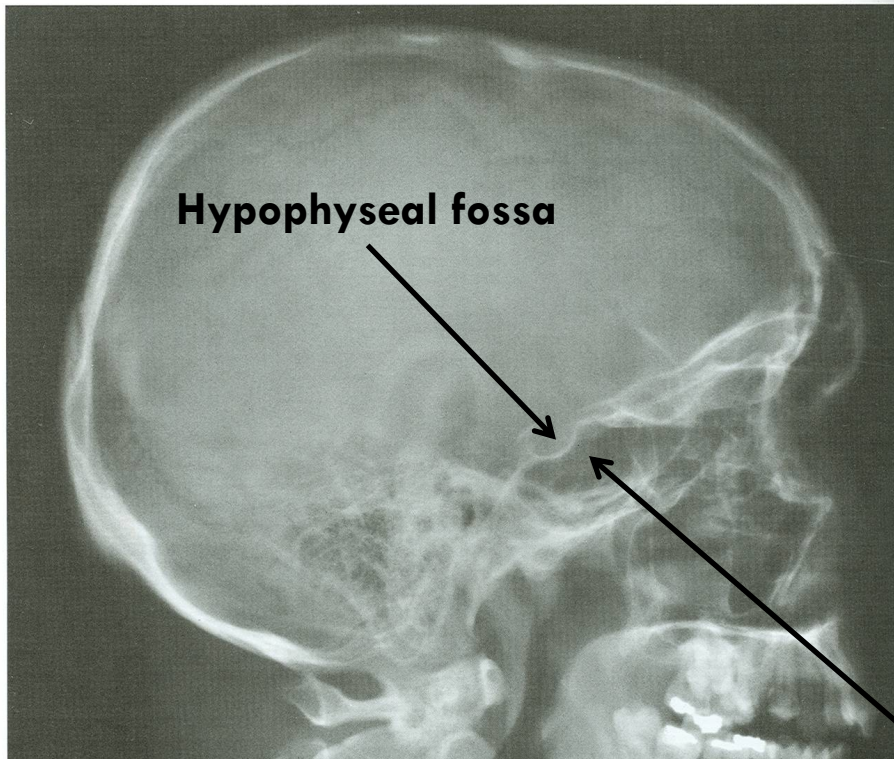
# PITUITARY GLAND (HYPOPHYSIS CEREBRI)



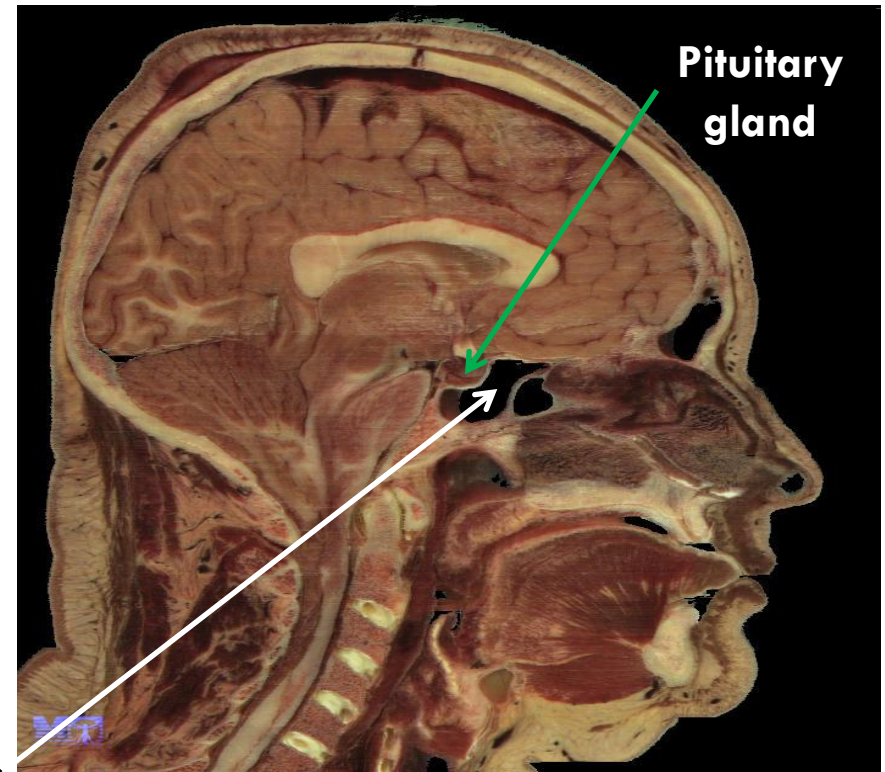
- ❑ It is referred to as the master of endocrine glands.
- ❑ It is a small oval structure 1 cm in diameter.
- ❑ It doubles its size during pregnancy.

# PITUITARY GLAND

X-RAY SKULL: LATERAL VIEW



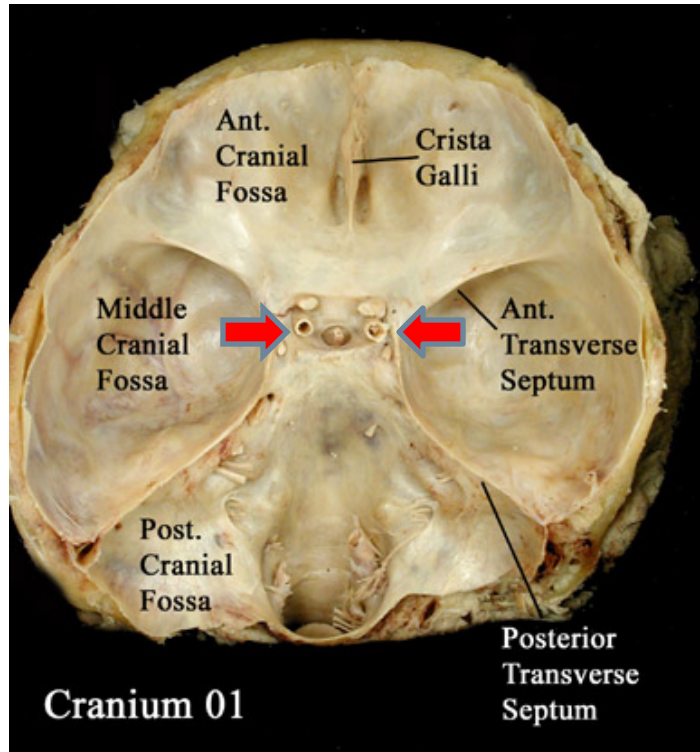
SAGITTAL SECTION OF HEAD & NECK



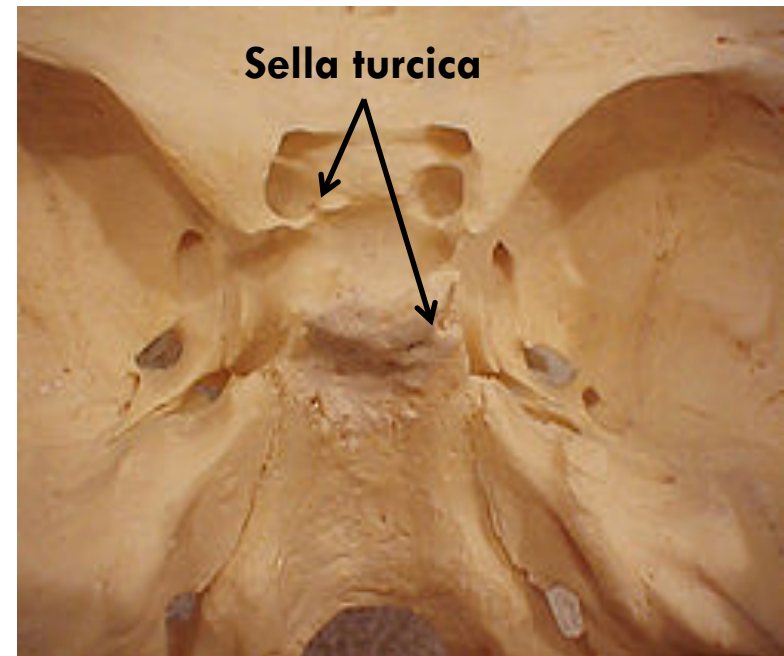
Sphenoidal air sinus

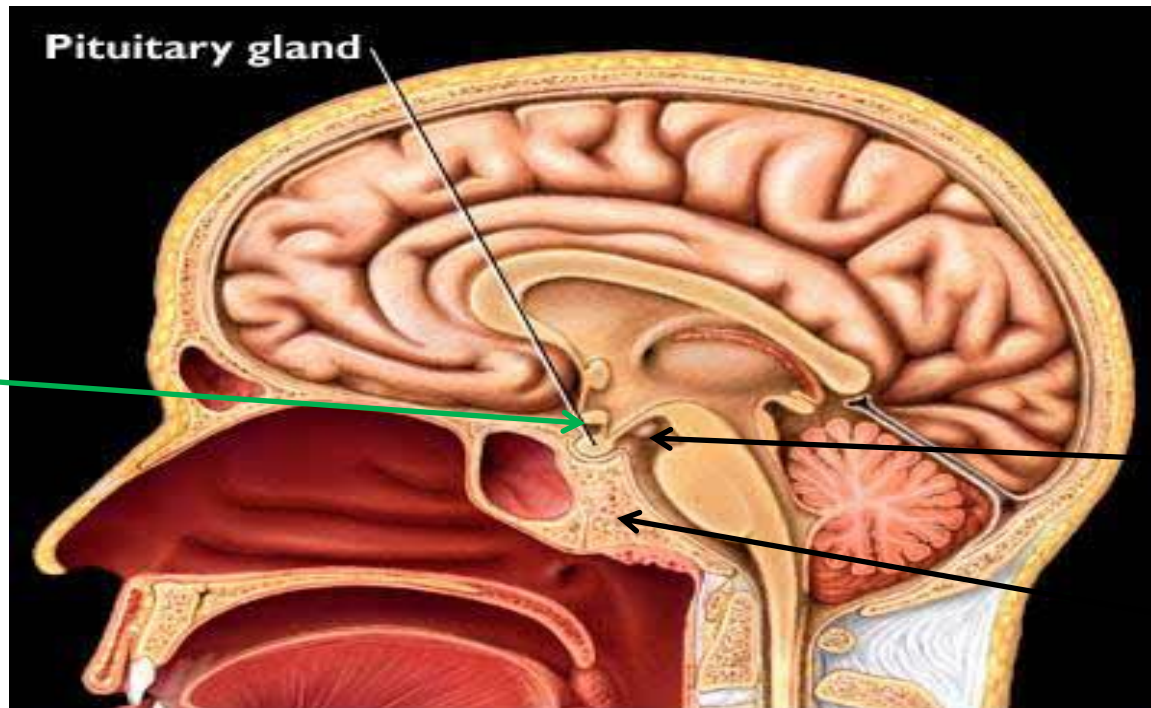
# POSITION

It lies in the **middle cranial fossa**



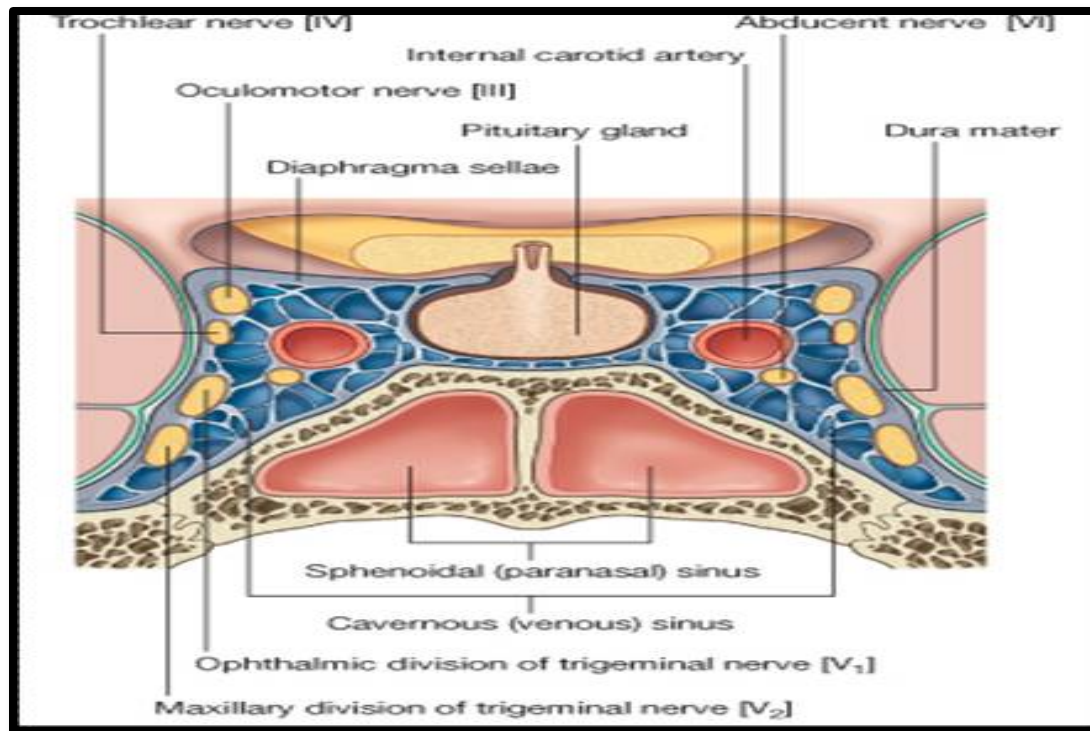
It is well protected in sella turcica (hypophyseal fossa) of body of sphenoid



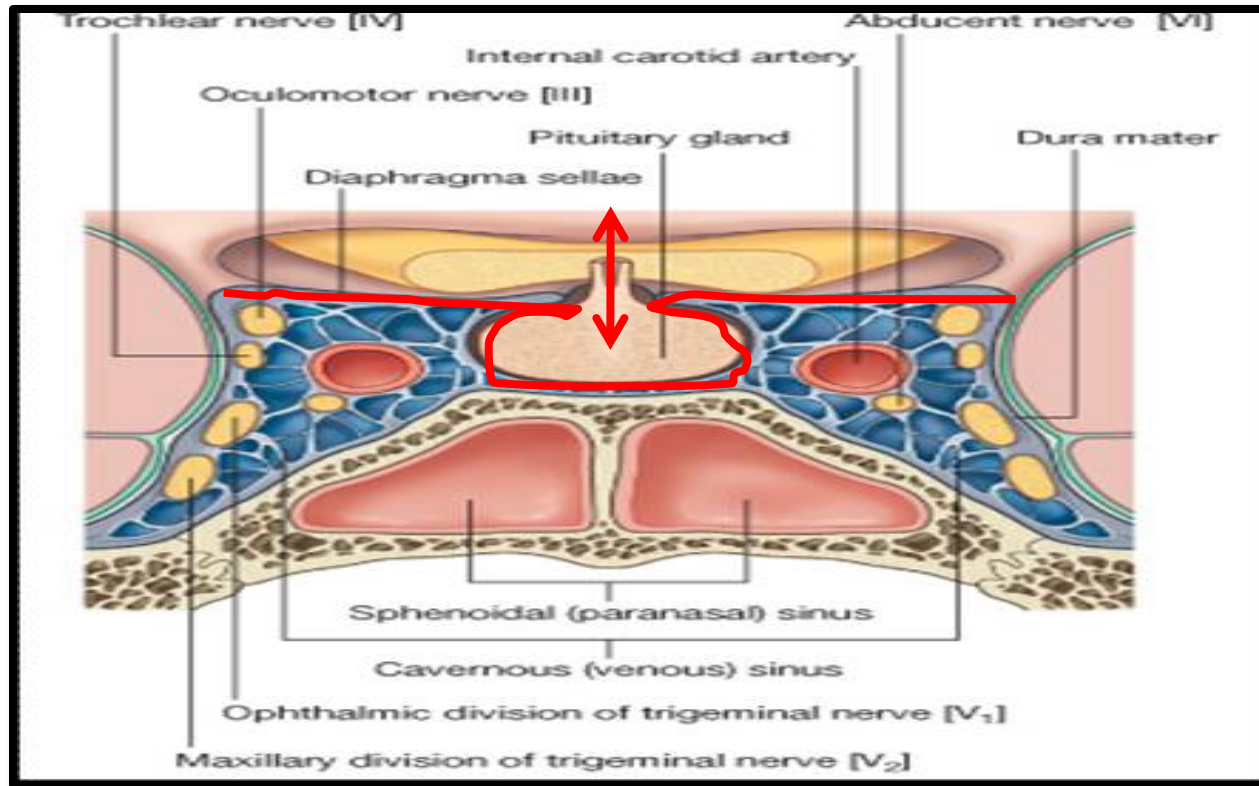


- it lies between Optic chiasma (anteriorly) & Mamillary bodies (posteriorly).

# IMPORTANT RELATIONS



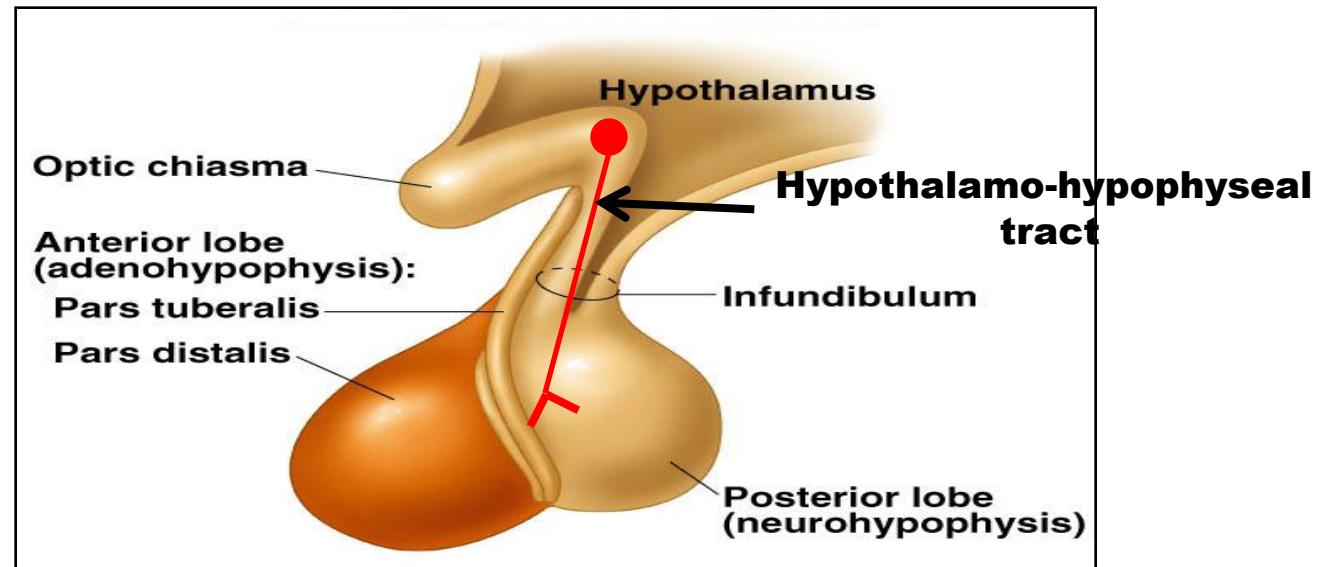
- ❑ **SUPERIOR:** Diaphragma sellae
- ❑ **INFERIOR:** Sphenoidal air sinuses
- ❑ **LATERAL:** Cavernous sinuses



**Diaphragma sellae :** A fold of dura mater covers the pituitary gland & has an opening for passage of infundibulum (pituitary stalk) connecting the gland to hypothalamus.



# SUBDIVISIONS OF PITUITARY GLAND

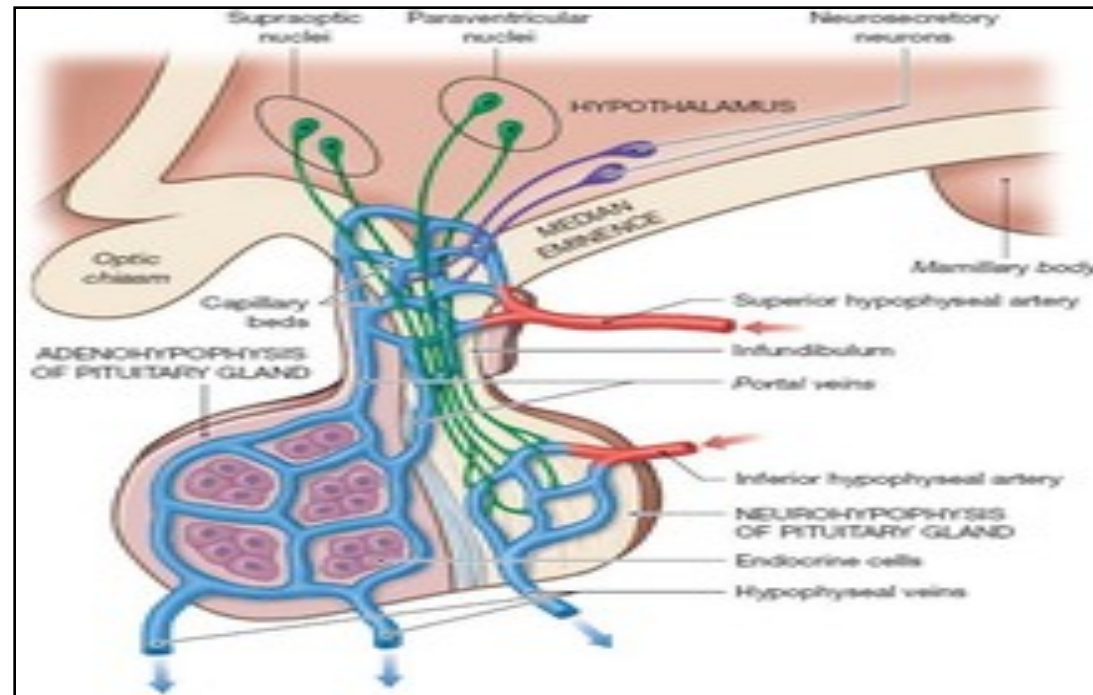


The gland is subdivided into:

**Anterior Lobe (Adenohypophysis)**: it is the True gland, Secretes hormones

**Posterior Lobe (Neurohypophysis)**: connected to hypothalamus through hypothalamo-hypophyseal tract, Stores hormones secreted

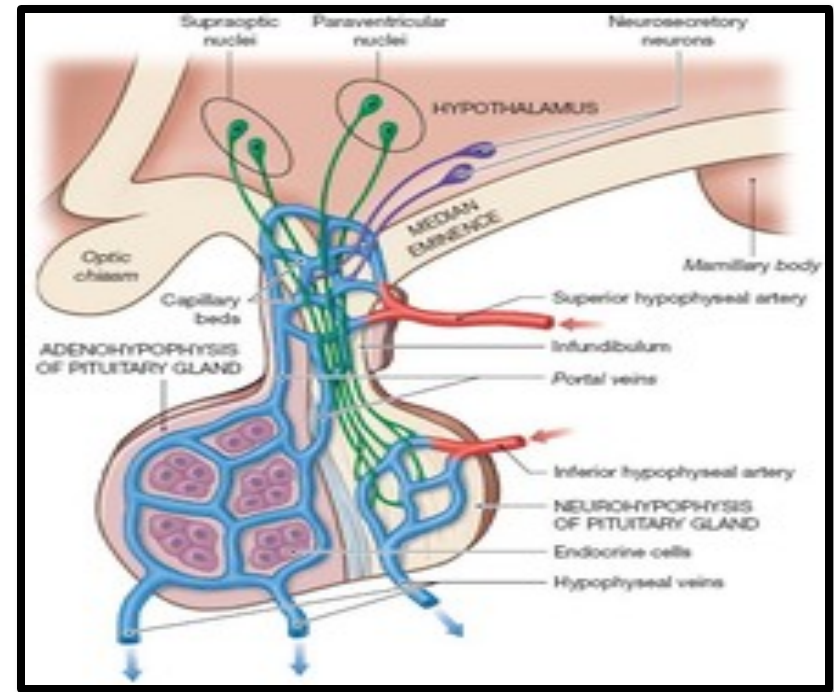
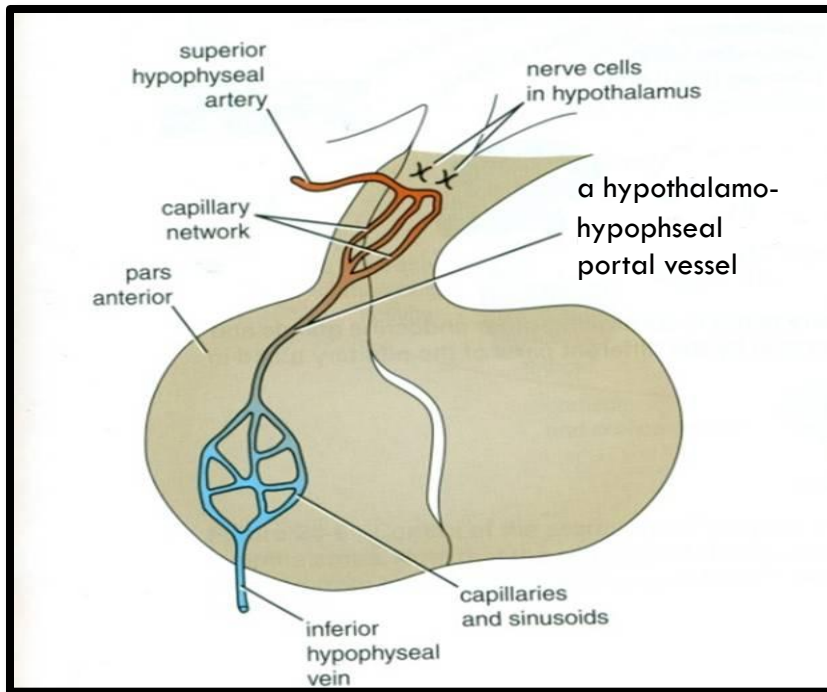
# BLOOD SUPPLY OF PITUITARY GLAND



**ARTERIES: Superior & Inferior hypophyseal arteries** (branches from Internal Carotid artery)

**VEINS: Hypophyseal veins** drain into Cavernous Sinuses.

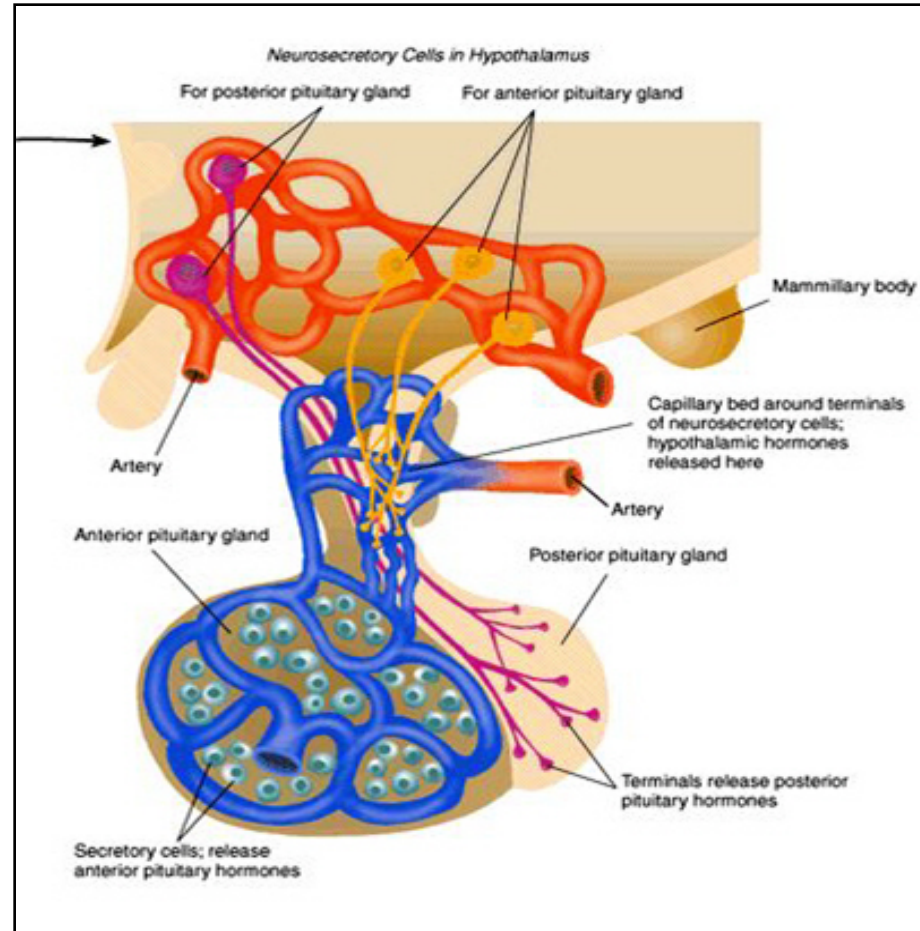
# DISTRIBUTION OF ARTERIES



- **Superior hypophyseal:** supplies infundibulum & forms a capillary network from which vessels pass downward & form sinusoids into the anterior lobe of pituitary gland (**hypophyseal portal system**).
- **Inferior hypophyseal:** supplies posterior lobe of pituitary gland.

# ANTERIOR LOBE

• **Hormone-releasing & inhibiting factors produced by hypothalamus use Hypophyseal Portal System of vessels to reach the Anterior lobe of pituitary gland**



# POSTERIOR LOBE

- **The Neurohypophysis** receives a nerve supply from some of the hypothalamic nuclei (supraoptic & paraventricular)
- The axons of these nuclei convey their neurosecretion to the Posterior lobe of pituitary gland through Hypothalamo-Hypophyseal tract from where it passes into the blood stream.

