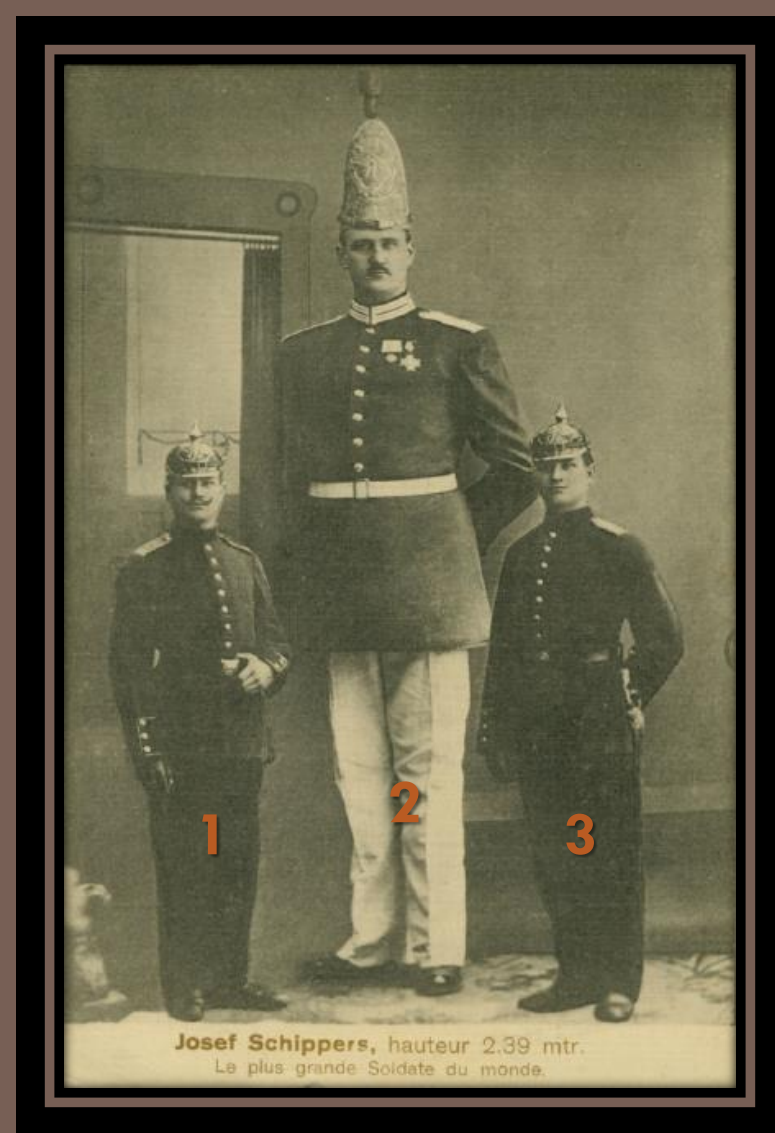


ANATOMY OF THE PITUITARY GLAND

Who suffer (s) from pituitary disturbances?

- 1) Soldier # 1
- 2) Soldier # 2 ←
- 3) Soldier # 3
- 4) Soldiers # 1 & 3



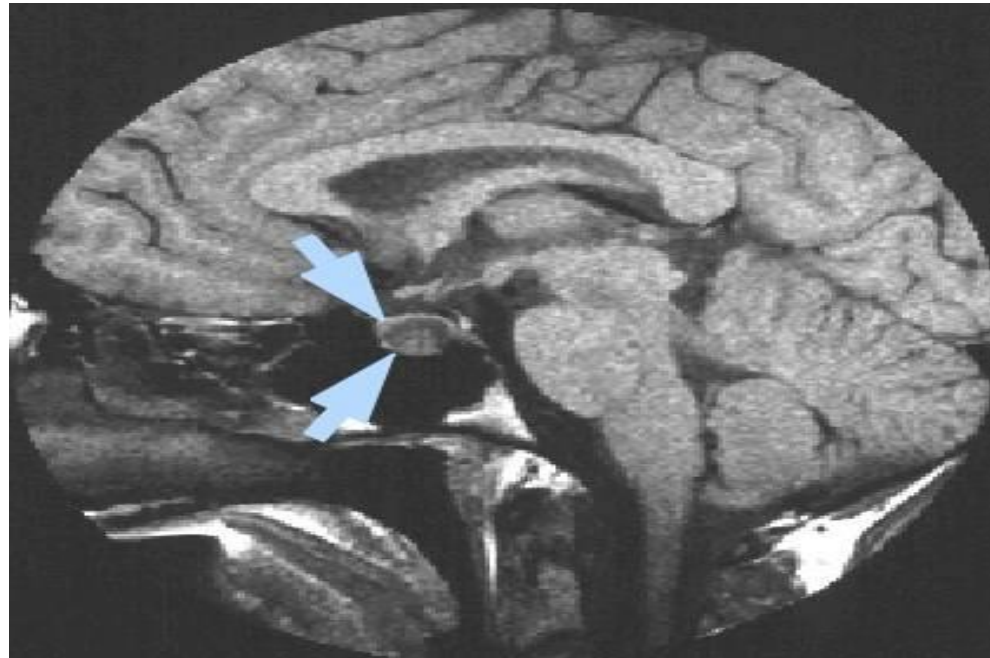
Prof. Ahmed Fathalla Ibrahim

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.

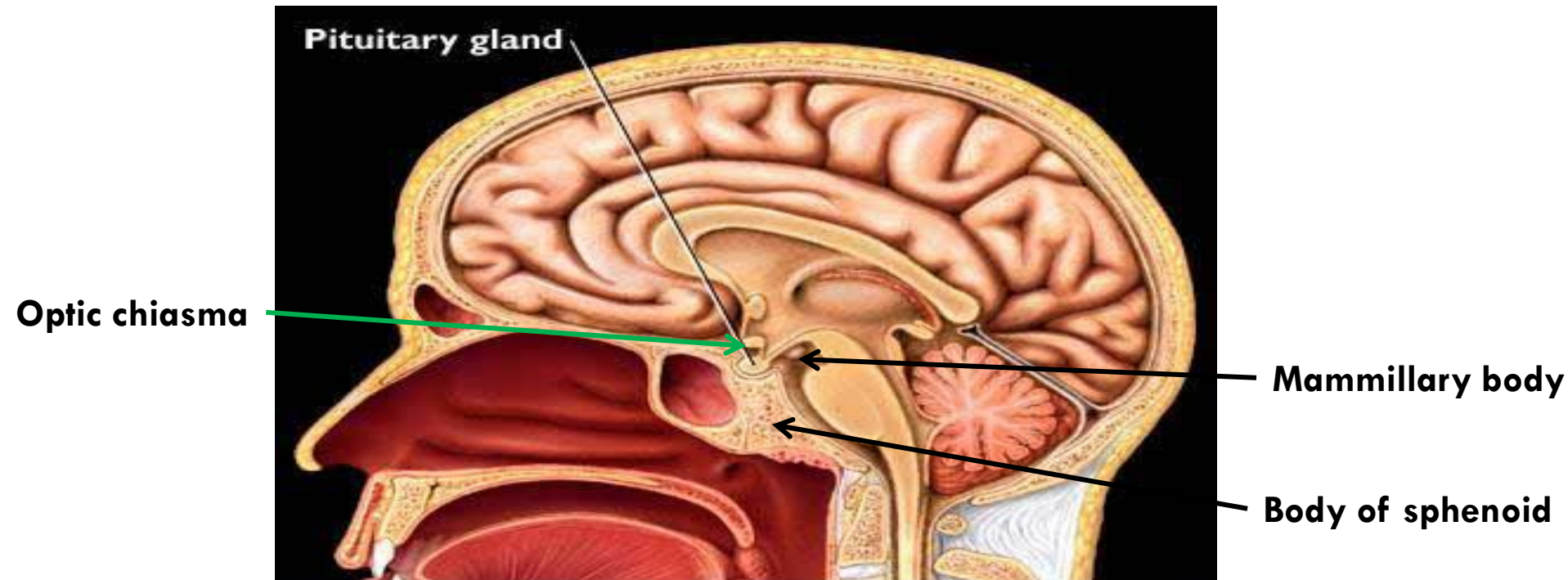
PITUITARY GLAND (HYPOPHYSIS CEREBRI)



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

PITUITARY GLAND

(POSITION)

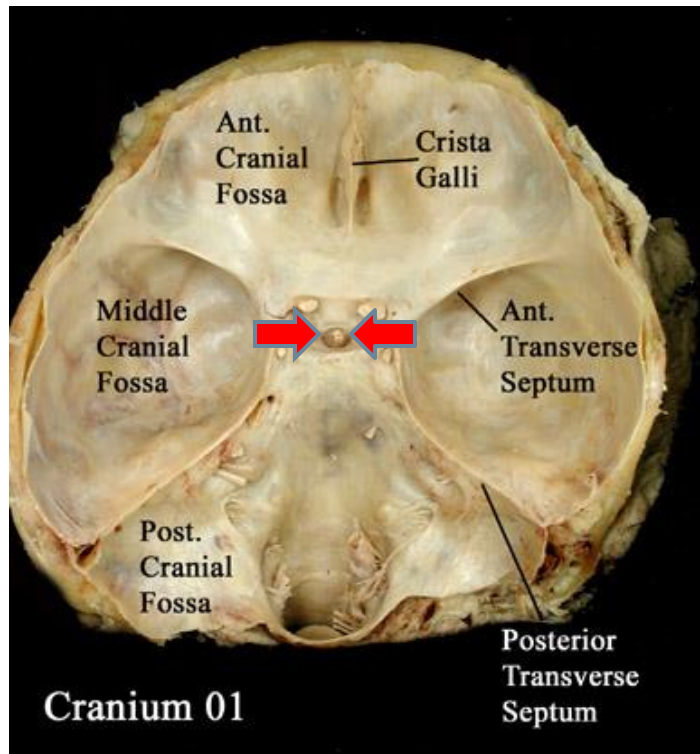


- It lies in the hypophyseal fossa of the body of sphenoid bone, between optic chiasma (anteriorly) & mamillary bodies (posteriorly).

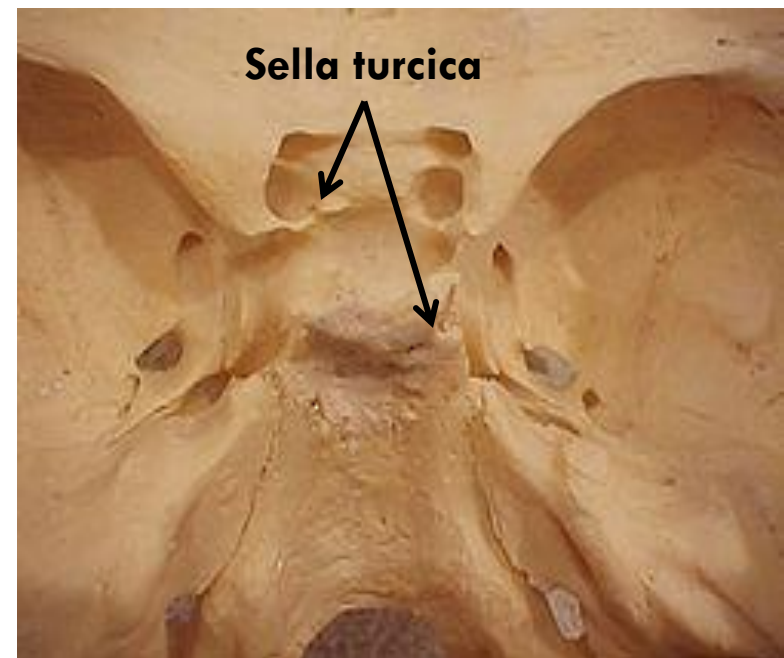
PITUITARY GLAND

(POSITION)

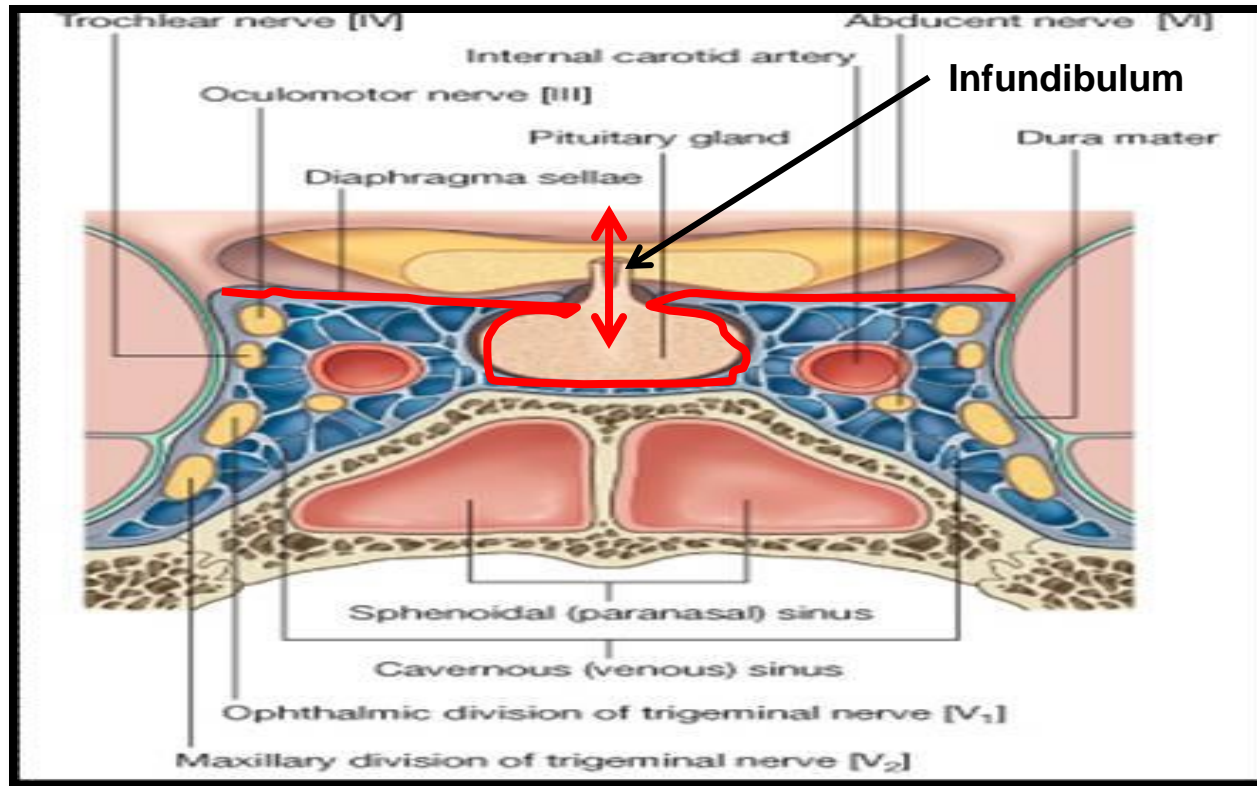
It lies in the middle cranial fossa



It is well protected in sella turcica of body of sphenoid



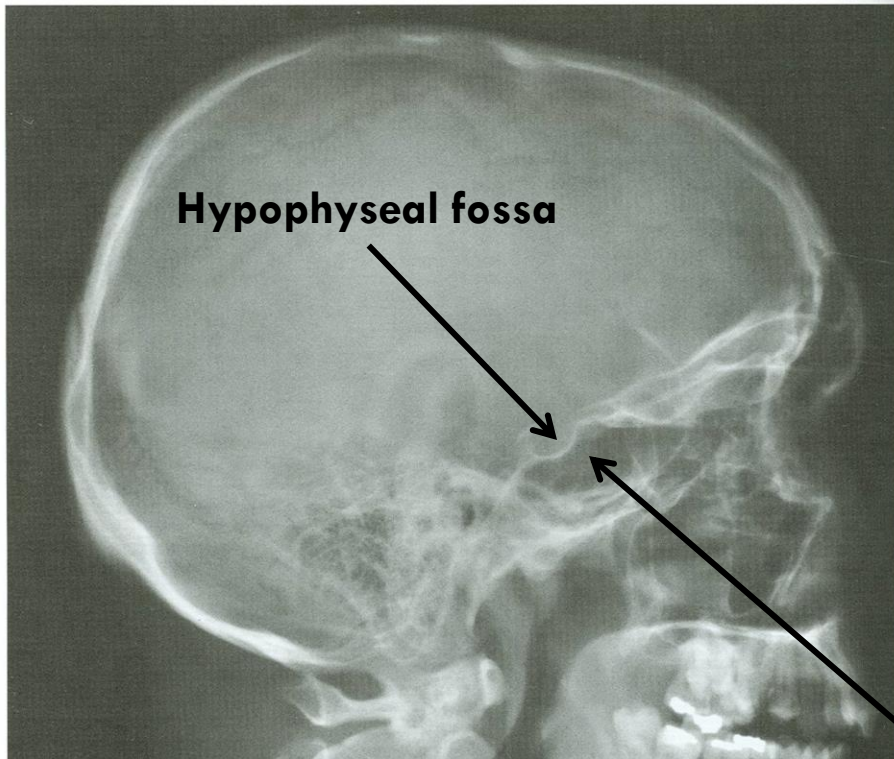
PITUITARY GLAND (POSITION)



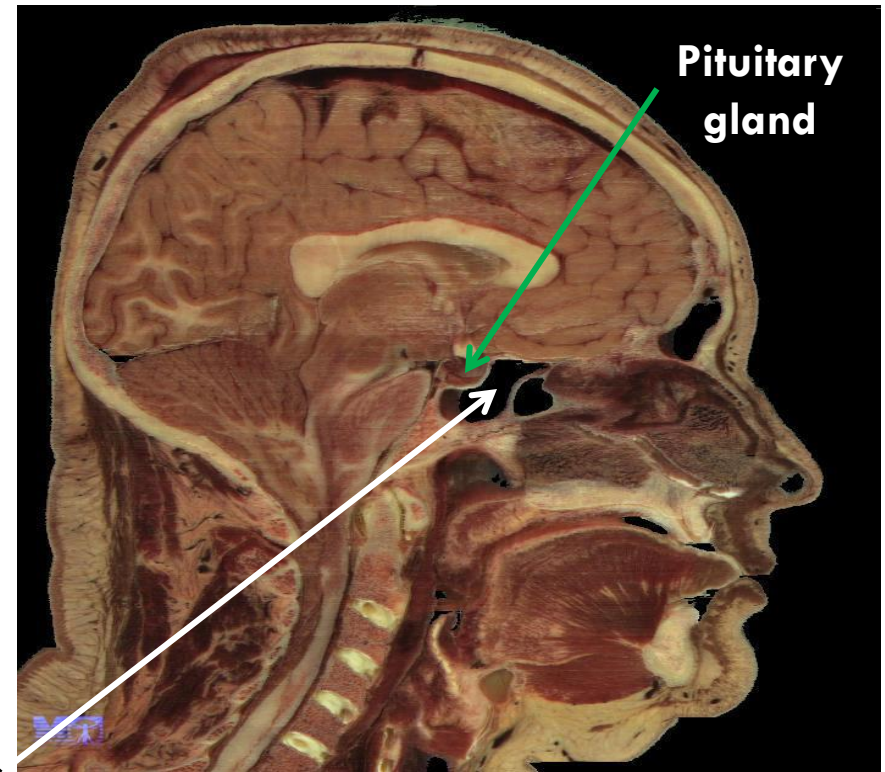
A fold of dura mater (Diaphragma sellae) covers the pituitary gland & has an opening for passage of infundibulum (pituitary stalk) connecting the gland to hypothalamus.

PITUITARY GLAND

X-RAY SKULL: LATERAL VIEW

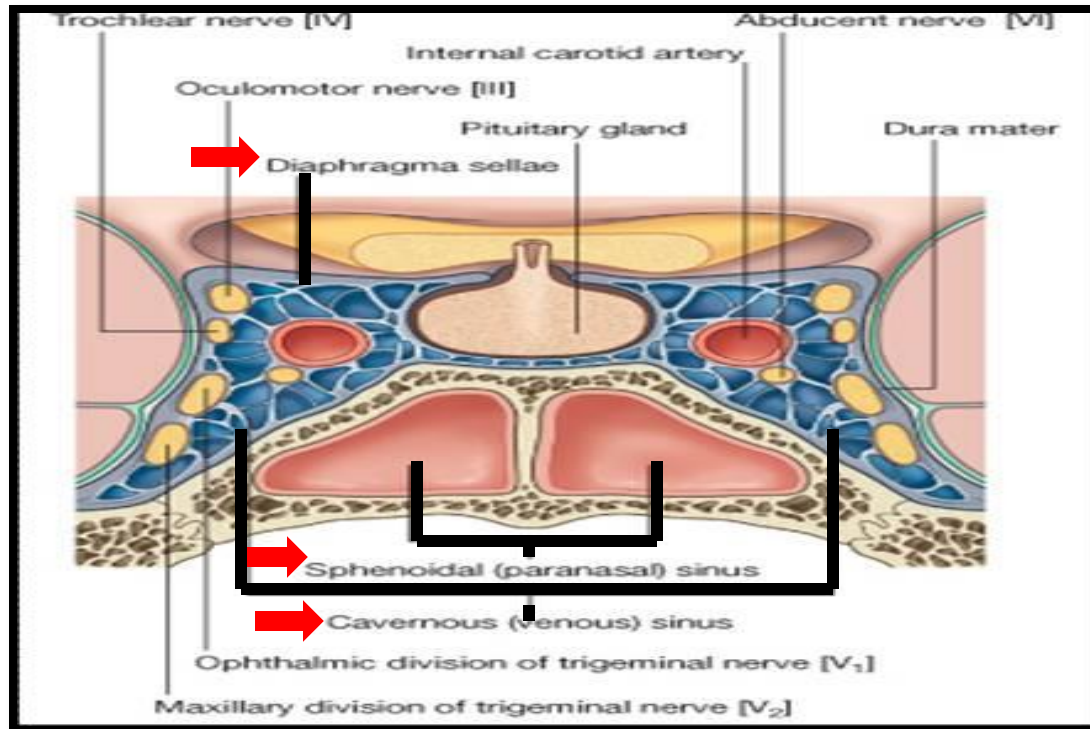


SAGITTAL SECTION OF HEAD & NECK



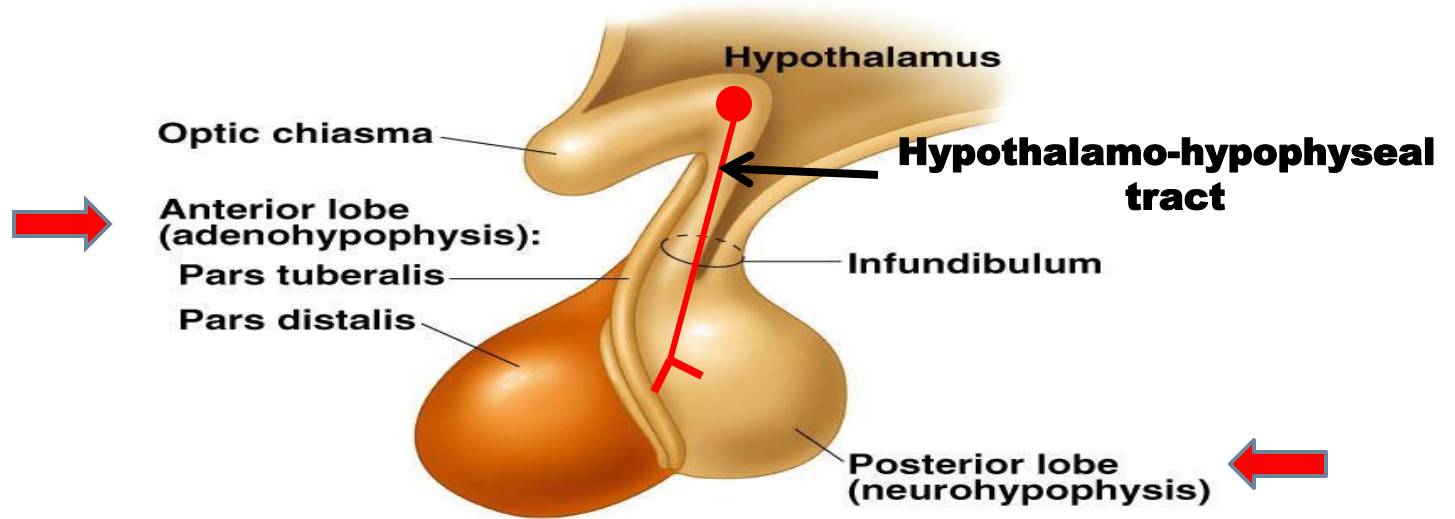
Sphenoidal air sinus

IMPORTANT RELATIONS



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

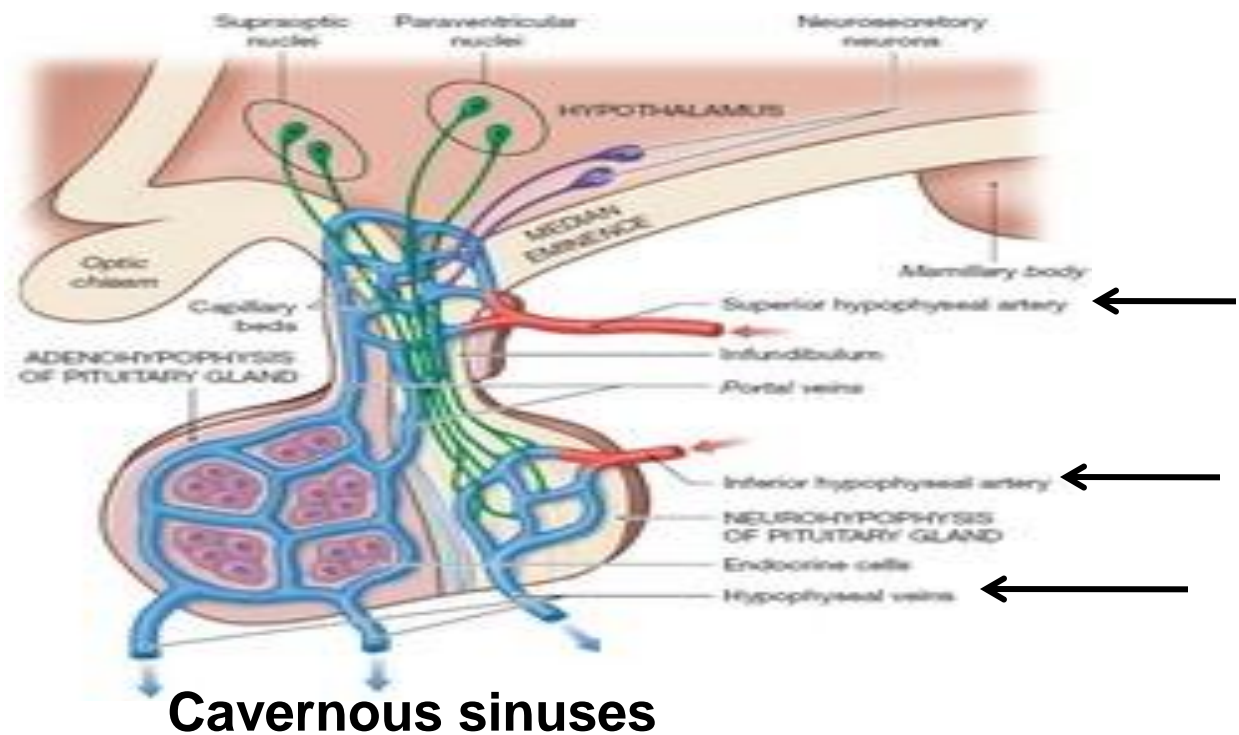
SUBDIVISIONS OF PITUITARY GLAND



The gland is subdivided into:

- 1) Anterior lobe (adenohypophysis):** true gland, secretes hormones
- 2) Posterior lobe (neurohypophysis):** connected to hypothalamus through hypothalamo-hypophyseal tract, stores hormones secreted by hypothalamic nuclei

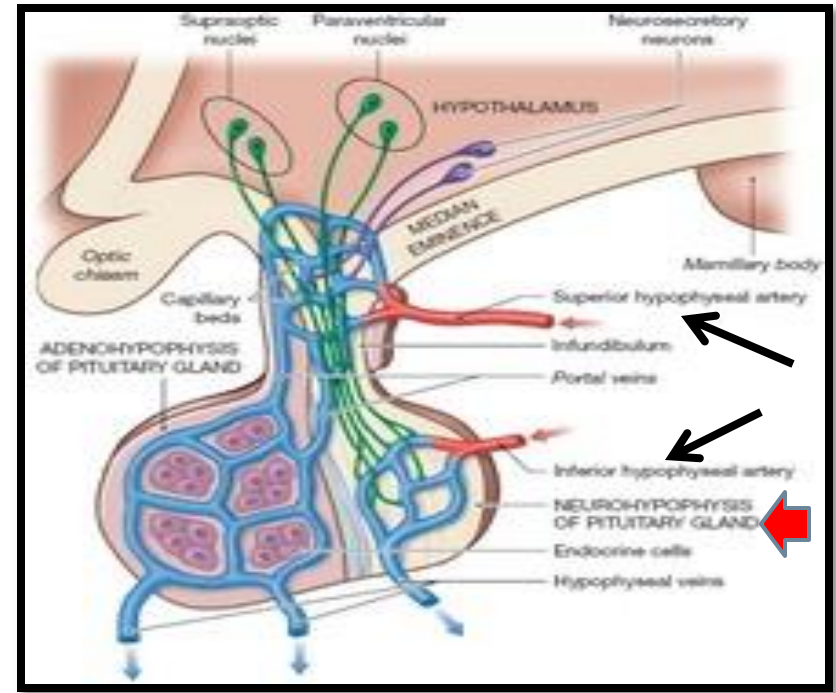
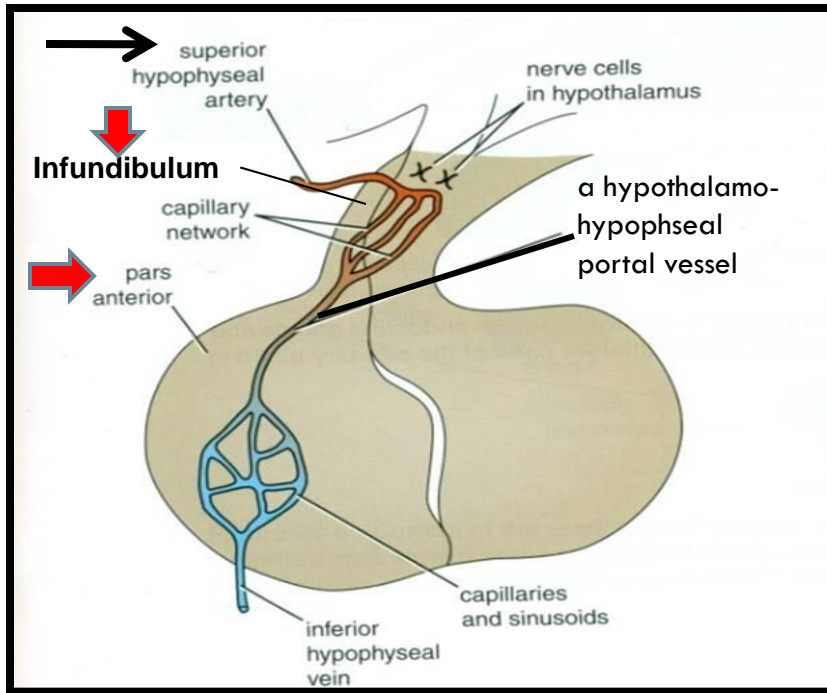
BLOOD SUPPLY OF PITUITARY GLAND



ARTERIES: Superior & inferior hypophyseal arteries (branches of internal carotid artery)

VEINS: hypophyseal veins drain into cavernous sinuses.

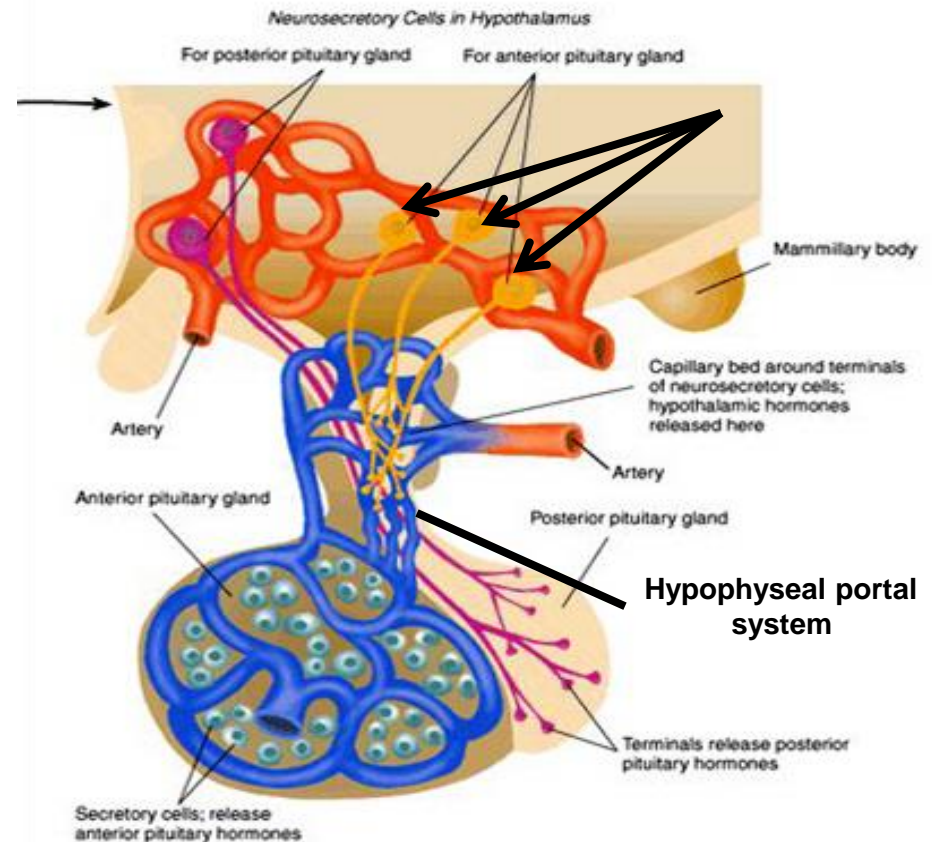
ARTERIES OF PITUITARY GLAND



- **The inferior hypophyseal:** supplies posterior lobe of pituitary gland.
- **The 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).

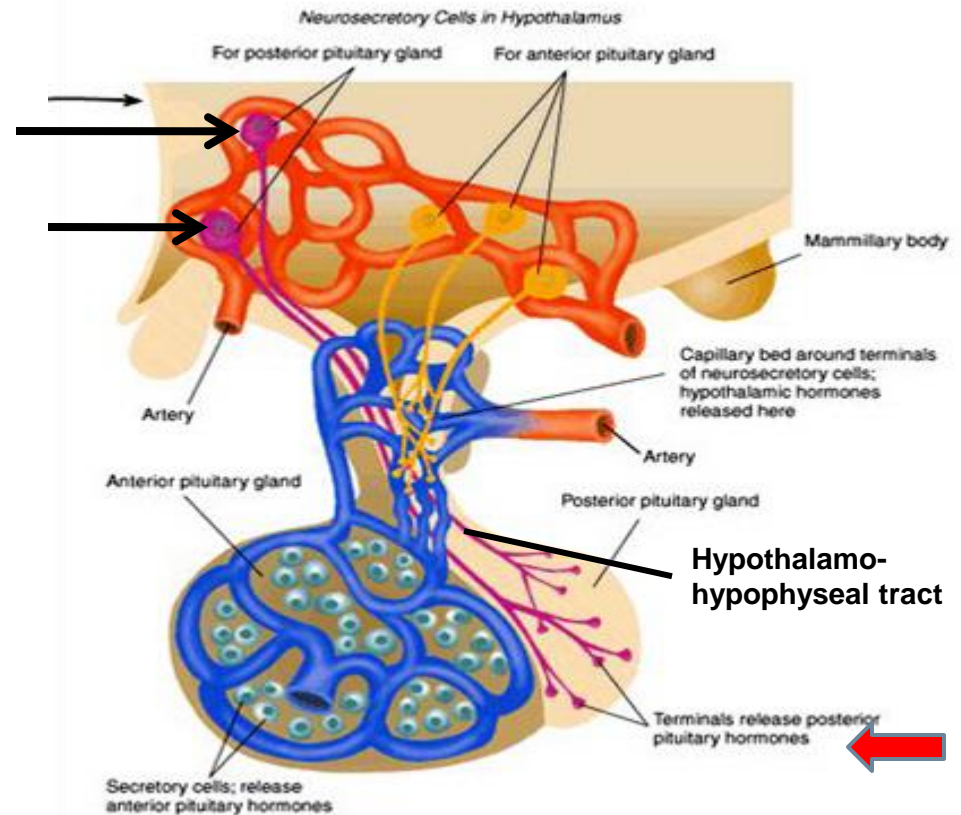
ANTERIOR LOBE OF PITUITARY

• **Hormone-releasing & inhibiting factors produced by hypothalamus use hypophyseal portal system of vessels to reach the anterior lobe of pituitary gland**



POSTERIOR LOBE OF PITUITARY

• **Axons of supraoptic & paraventricular cells of hypothalamus send their secretion (neurosecretion) to posterior lobe of pituitary gland through hypothalamo-hypophyseal tract**



QUESTIONS



QUESTION 1

- Which one of the following structures is superior to the pituitary gland?
 - 1) Optic chiasma
 - 2) Diaphragma sellae ←
 - 3) Mammillary bodies
 - 4) Sphenoidal air sinuses

QUESTION 2

- Which one of the following venous sinuses drains hypophyseal veins?
 - 1) Superior sagittal
 - 2) Cavernous ←
 - 3) Transverse
 - 4) Sigmoid

A photograph of a hospital operating room. The room is brightly lit with overhead fluorescent lights. In the center, there is a surgical table with various pieces of equipment, including monitors and IV stands. To the right, a large anatomical skeleton is mounted on a stand. In the background, another skeleton is visible. The walls are light green, and the floor is a light-colored tile. The text "THANK YOU & BEST WISHES" is overlaid in large, bold, orange letters across the center of the image.

**THANK YOU
&
BEST WISHES**