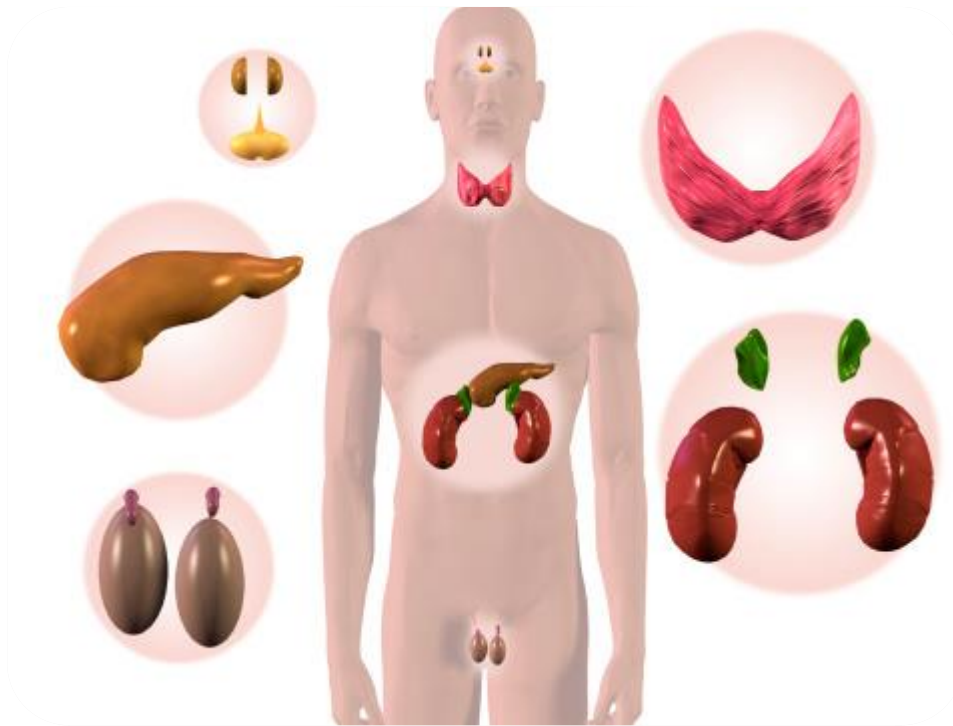




# ENDOCRINE SYSTEM



**LECTURE: ANATOMY OF THE PITUITARY GLAND**

**DONE BY: LEENA ALYAHYA ♣**

**REVIEWED BY: ABDULLAH ALSABTI**

[If there is any mistake or suggestions please feel free to contact us:](#)

[Anatomyteam32@gmail.com](mailto:Anatomyteam32@gmail.com)

Both - Black

Male Notes - BLUE

Female Notes - GREEN

Explanation and additional notes - ORANGE

Very Important note - Red

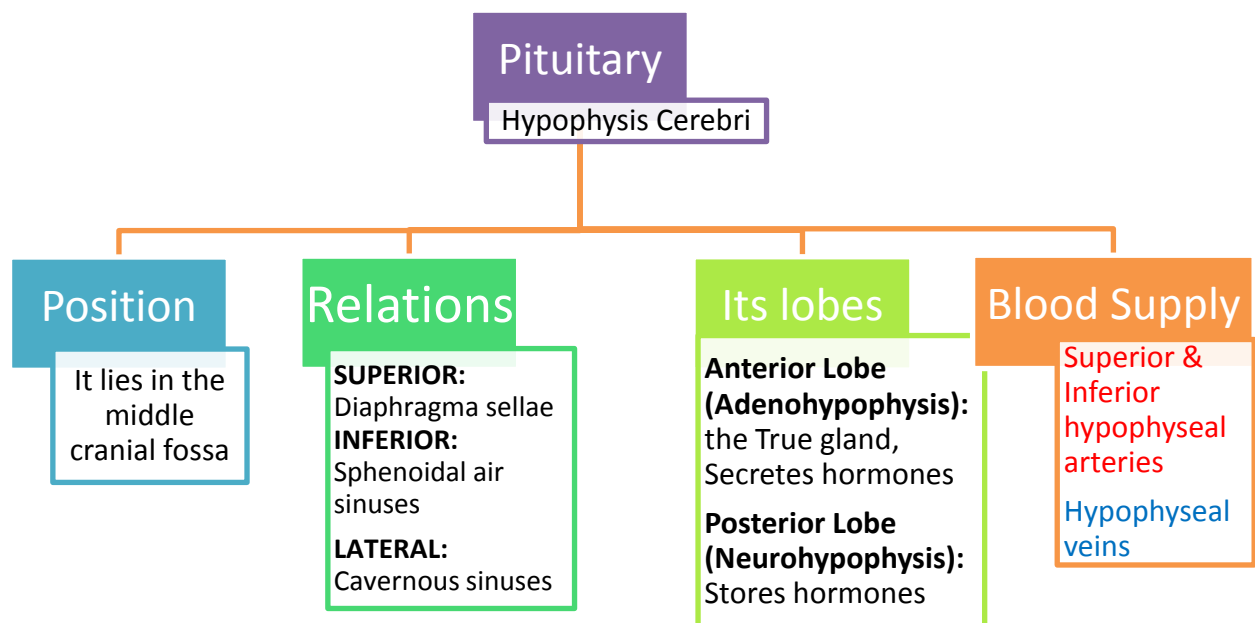


# Objectives:

## 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**.

## Mind Map:



<http://www.youtube.com/watch?v=ZfDXSKhNS4I>

<http://www.youtube.com/watch?v=piBMd796vcM>

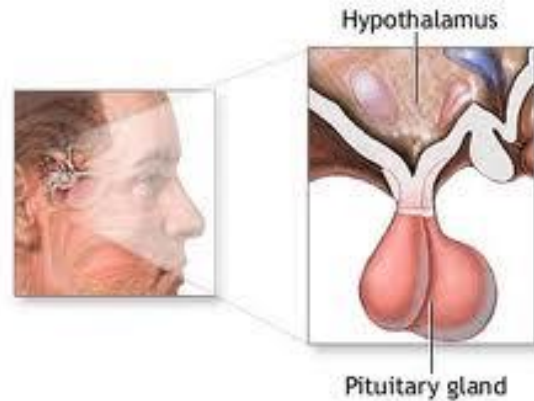




# PITUITARY GLAND (HYPOPHYSIS CEREBRI)

## - Position -

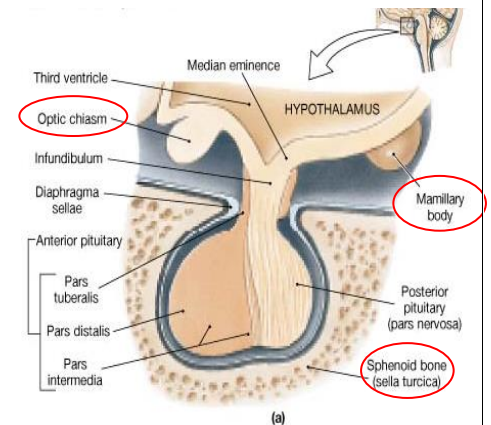
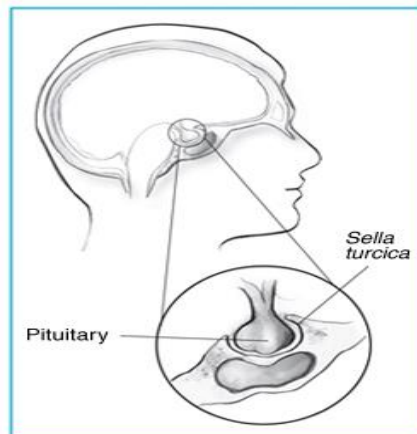
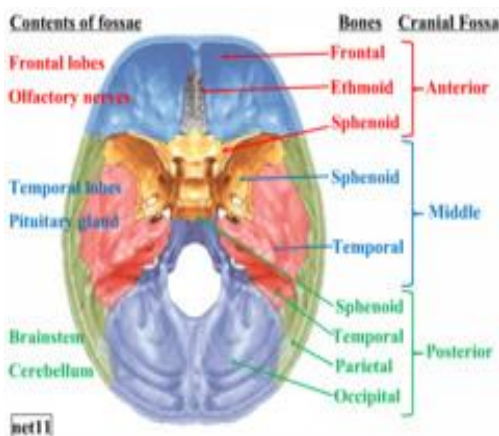
- \* ❖ It is referred to as **the master of endocrine glands.**
- ❖ It is a small **oval structure** 1 cm in diameter.
- ❖ It doubles its size **during pregnancy.**



\* It lies in **the middle cranial fossa**

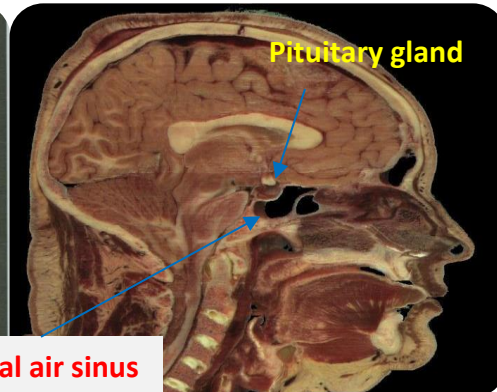
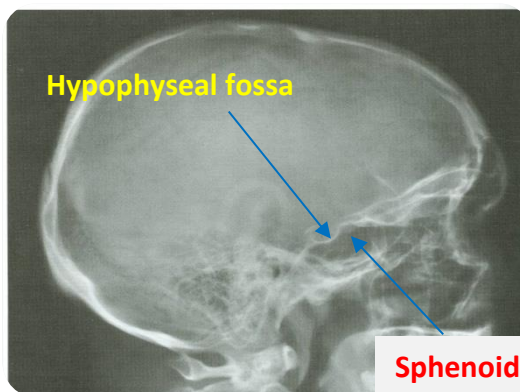
\* It is well protected in **sella turcica** (hypophyseal fossa) of body of sphenoid

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



X-RAY SKULL: LATERAL VIEW

SAGITTAL SECTION OF HEAD & NECK



Sphenoidal air sinus

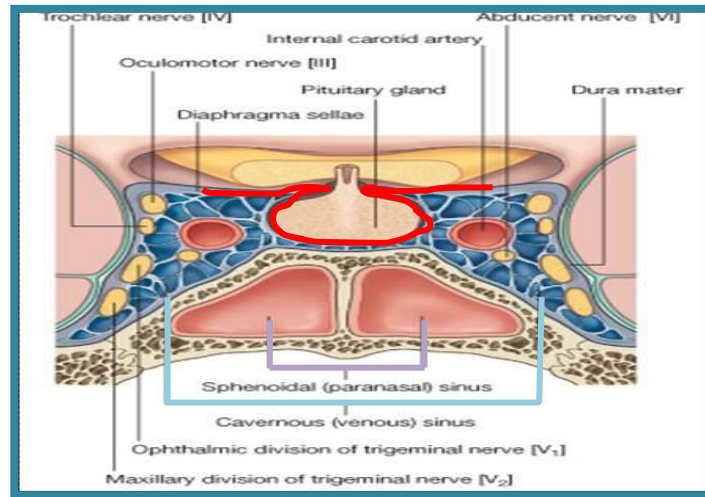


## - Important relations -

Superior : **Diaphragma sellae**

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

LATERAL:  
**Cavernous sinuses**



LATERAL:  
**Cavernous sinuses**

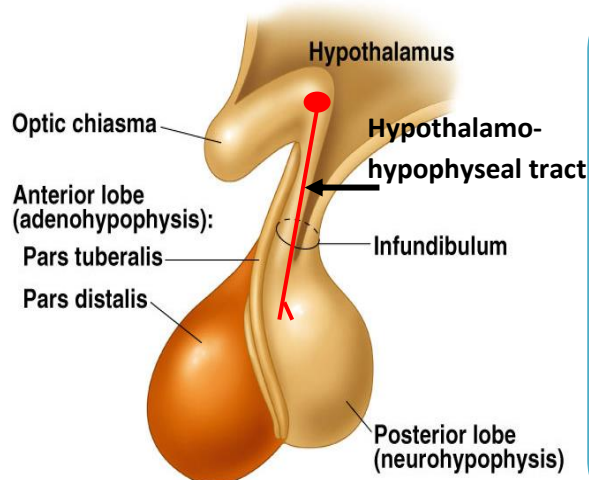
INFERIOR: Sphenoidal air sinuses

## - SUBDIVISIONS OF PITUITARY GLAND -

### Anterior Lobe

(**Adenohypophysis**) :

It is the True gland, **Secretes hormones**



### Posterior Lobe

(**Neurohypophysis**):

connected to hypothalamus through hypothalamo-hypophyseal tract, **Stores hormones** secreted by hypothalamic nuclei

# - Blood supply OF PITUITARY GLAND -

## Veins

### Hypophyseal veins

drain into **Cavernous Sinuses.**

## Arteries

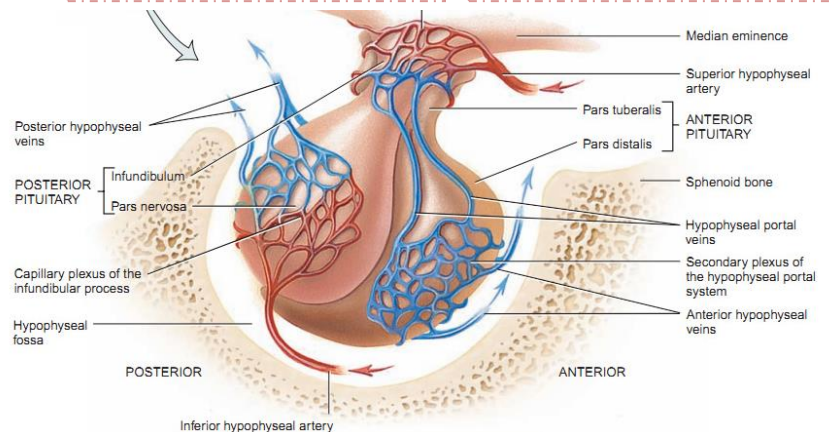
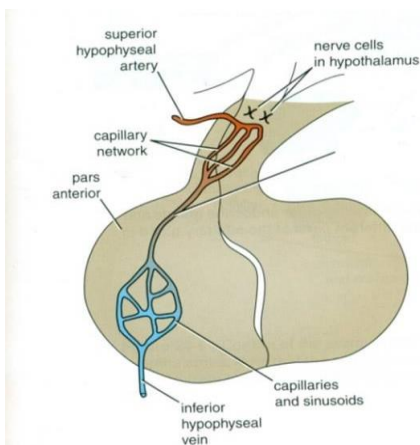
### Branches from Internal Carotid artery

### 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.

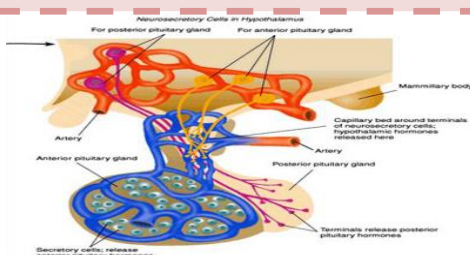


### Anterior Lobe :

Hormone-releasing & inhibiting factors produced by hypothalamus use **Hypophyseal Portal System** 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.





## Questions:

### 1-The pituitary gland lies in :

- A- Middle cranial fossa
- B- Anterior cranial fossa
- C- Posterior cranial fossa

### 2-The anterior relation of pituitary gland :

- A- Mamillary bodies
- B- Optic chiasma
- C- Hypothalamus

### 3-The inferior relation of pituitary gland :

- A- Cavernous sinuses
- B- Diaphragma sellae
- C- Sphenoidal air sinuses

### 4-only ONE of the answer is true about the anterior lobe of pituitary gland :

- A- It's the Neurohypophysis lobe
- B- connected to hypothalamus through hypothalamo-hypophyseal tract .
- C- Secretes hormones .

### 5-The Inferior hypophyseal artery supplies :

- A- Anterior lobe
- B- Posterior lobe
- C- infundibulum



**6 – Which one of the following structures is superior to the pituitary gland :**

- A- Mammillary bodies
- B- Diaphragma sellae
- C- Sphenoidal air sinuses

**7 – Which one of the following venous sinuses drains hypophyseal veins :**

- A- Superior sagittal
- B- Cavernous
- C- Transverse

**8 – Which lobe is connected to the hypothalamus by hypothalamo-hypophyseal tract :**

- A- Anterior lobe
- B- Lateral lobe
- C- Posterior lobe

**9 – The arterial supply of pituitary gland come from which artery :**

- A- Internal carotid
- B- Subclavian
- C- External carotid

**10 – The infundibulum is supplied by which artery :**

- A- Inferior hypophyseal artery
- B- Basilar artery
- C- Superior hypophyseal artery

**11 – which gland is referred to as the master of endocrine gland :**

- A- Pancreas
- B- Pituitary gland
- C- Adrenal gland



Q	Answers
1	A
2	B
3	C
4	C
5	B
6	B
7	B
8	C
9	A
10	C
11	B

**GOOD LUCK**

**Anatomy Team Leaders:**

**Fahad AlShayhan**

**&**

**Eman AL-Bediea**