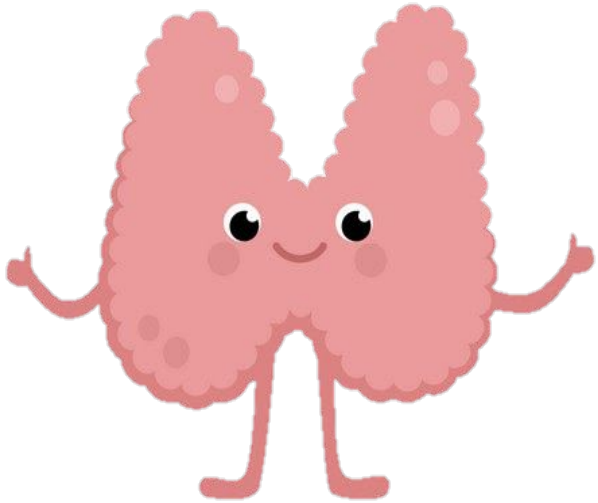
Anatomy Of The Pituitary Gland



Endocrine block-Anatomy-Lecture 1

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MED438
KING SAUD UNIVERSITY

Anatomy team
med 438

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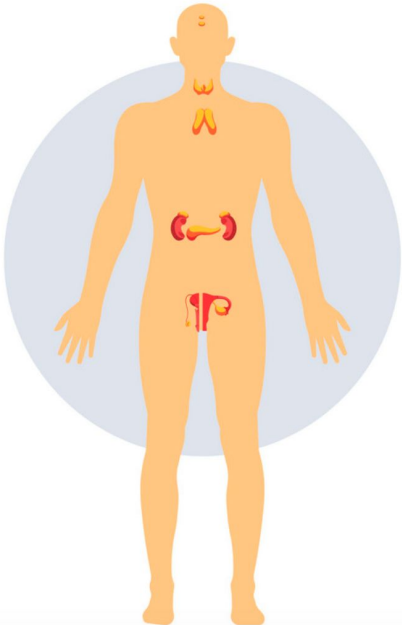
Objectives

Color guide :
Only in boys slides in Green
Only in girls slides in Purple
important in **Red**
Notes in Grey

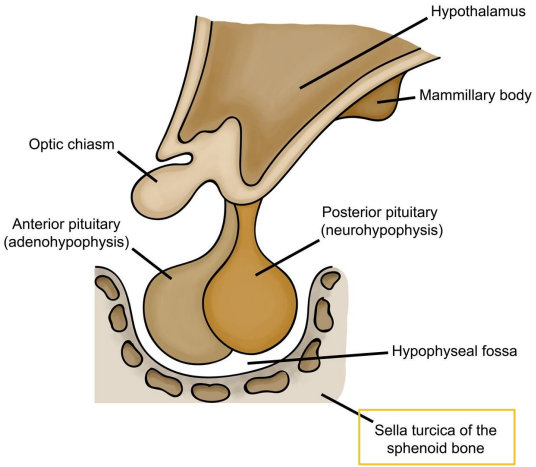
🍎 At the end of the lecture, students should be able to:

- 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



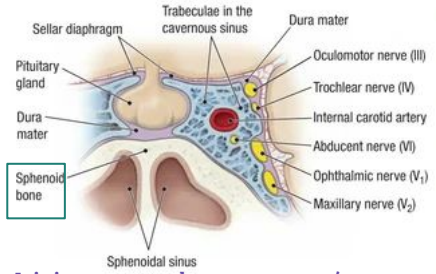
Pituitary Gland (Hypophysis Cerebri)

- 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.



Position:

1. lies in the middle cranial fossa in the hypophyseal fossa of the body of sphenoid bone
2. It is well protected in sella turcica of body of sphenoid
3. A fold of dura mater (Diaphragma sellae) covers it & has an opening for passage of infundibulum (pituitary stalk) connecting the gland to hypothalamus.



It is important to know cavernous' content

O: oculomotor nerve . T: trochlear nerve. O: ophthalmic branch of 5th. M: maxillary branch of 5th. C: internal carotid artery. A: Abducens nerve. T: trochlear nerve

O Tom cat

Relations:

Anterior	Posterior	Superior	Inferior	Lateral
optic chiasma	mammillary bodies	Diaphragma sellae	Sphenoidal air sinuses	Cavernous sinuses

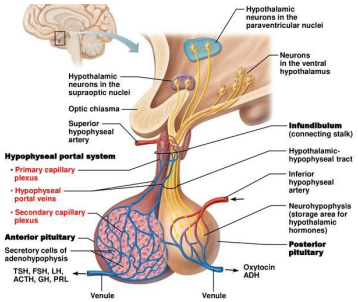
Pituitary Gland : Parts and Supply

Parts:

The gland is subdivided into:

Anterior lobe (adenohypophysis):

- true gland, secretes hormones
- Hormone-releasing & inhibiting factors produced by hypothalamus use hypophyseal portal system of vessels to reach the anterior lobe of pituitary gland



Posterior lobe (neurohypophysis):

- Receives a nerve supply from some of the hypothalamic nuclei (supraoptic & paraventricular)
- connected to hypothalamus through hypothalamo -hypophyseal tract, stores hormones secreted by hypothalamic nuclei
- Axons of these nuclei convey their neurosecretion to posterior lobe through hypothalamo-hypophyseal tract then it will pass into the bloodstream.

Supply:

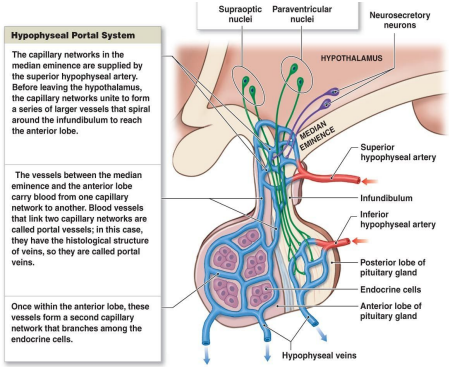
Arterial Supply

Branches of internal carotid artery:

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

Venous Drainage

- hypophyseal veins drain into cavernous sinuses.



QUIZ

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
B	B	A	B	C	C	D	B

Q1: Which one of the following structures is superior to the pituitary gland?

A. Optic chiasma

B. Diaphragma sellae

C. Mammillary bodies

D. Sphenoidal air sinuses

Q2: Which one of the following venous sinuses drains hypophyseal veins?

A.Superior sagittal

B. Cavernous

C. Transverse

D. Sigmoid

Q3: which of the following forms the hypophyseal portal system

A. Superior hypophyseal artery

B. inferior hypophyseal artery

C. hypophyseal veins

D. secondary capillary network

Q4: the Pituitary gland lie in ?

A. anterior cranial fossa

B. middle cranial fossa

C. posterior cranial fossa

D. inferior area of the skull

Q5: Which one of the following structures is inferior to the pituitary gland?

A. Paranasal sinuses

B. maxillary sinuses

C. Sphenoidal sinuses

D. ethmoidal air sinuses

Q6: Which of the following is a store and releasing centre of neurohormone?

A. Hypothalamus.

B. Anterior lobe of pituitary gland

C. Posterior pituitary gland

D. Intermediate lobe of pituitary

Q7: Which of the following gland is regarded as master gland?

A. Adrenal gland

B. Thyroid

C. Hypothalamus

D. Pituitary gland

Q8: The pituitary gland doubles its size during :

A. menstruation

B. pregnancy

C. menopause

D. all of the above

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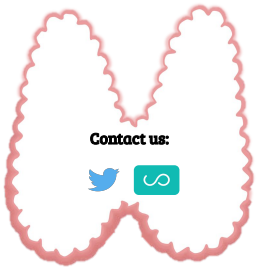

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