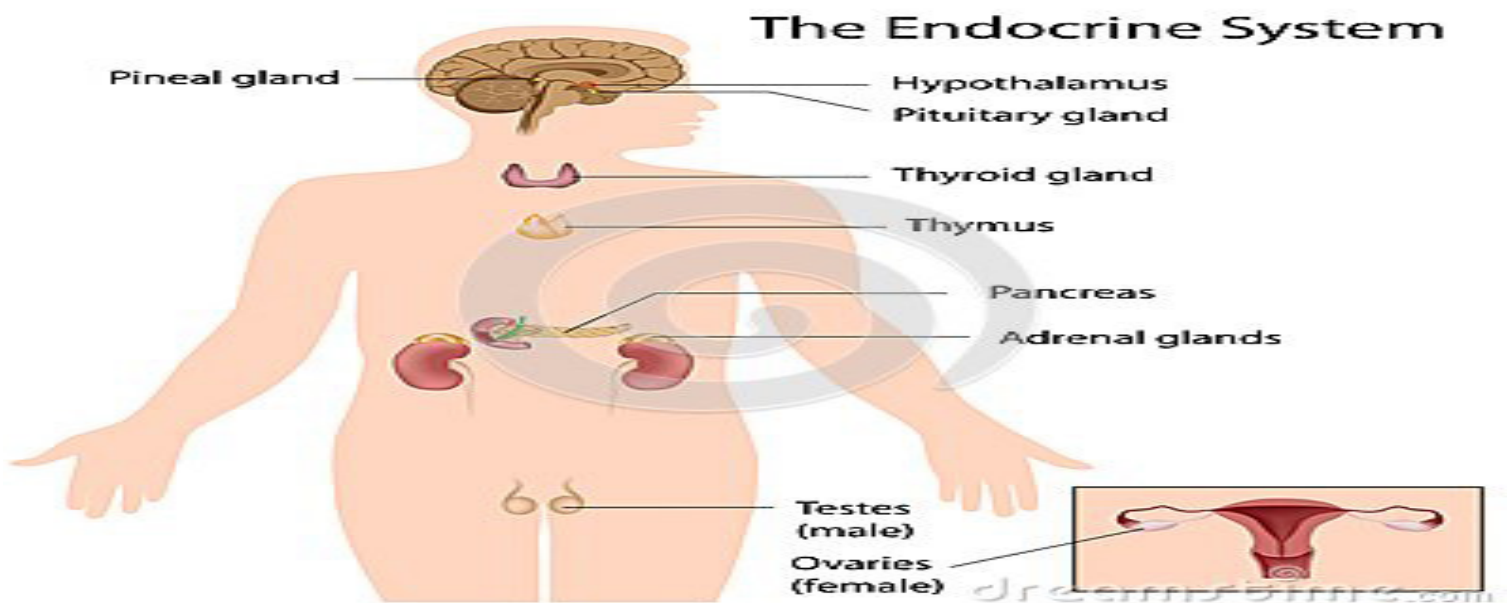


ENDOCRINE BLOCK FIRST WEEK



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Anatomy

ANATOMY OF THE PITUITARY GLAND

Q1) which one of the following structures is lateral to the pituitary gland?

- A. Optic chiasma
- B. Diaphragmasellae
- C. Mammillarybodies
- D. Sphenoidalairsinuses
- E. Cavernous sinuses

Answer:E

NOTE: choice "D" inferior to pituitary gland , Choice "B" Superior to pituitary

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

- A. Superiorsagittal
- B. Cavernous
- C. Transverse
- D. Sigmoid

Answer:B

Q3) Which of the following is the correct location of the pituitary gland?

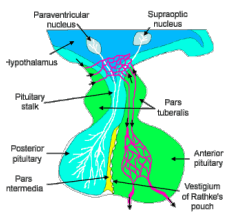
- A. hypophyseal fossa in the middle cranial fossa
- B. anterior cranial fossa
- C. posterior cranial fossa
- D. Not of from above

Answer:A

Q4) what is the arterial supply of pituitary gland?

- A. superior thyroid artery
- B. Inferior thyroid artery
- C. superior and inferior hypophyseal artery
- D. Non of above

Answer:C



Histology

Histology OF THE PITUITARY GLAND

Q1) All of the following are Basophilic except ?

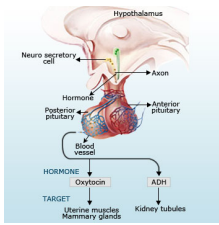
- A. Thyrotrophs
- B. Corticotrophs
- C. Gonadotrophs
- D. Mammotrophs
- E. Somatotrophs
- F. D-E
- G. A-D

Answer: F “They are acidophilic “

Q2)What is the function of Pitucytes:

- A. carries neurohormones from median eminence to adenohypophysis.
- B. Storage vasopressin (ADH)
- C. release of Oxytocin
- D. Support the axons of paras nervosa

Answer:D



Physiology



[1] INTRODUCTION OF ENDOCRINE

1- It acts as a first messenger:

- A- C-AMP
- B- C-GMP
- C- Calmodulin
- D- Calcium
- E- Calcitonin

Answer: E

2- The enzyme required for the synthesis of c-AMP is:

- A- Tyrosine Kinase
- B- Phospholipase C
- C- Adenylatecyclase
- D- G-Protein
- E- ATPase

Answer: C

3- Find the mis-match:

- A. Pancreas :somatostatin
- B. Thyroid gland : calcitonin
- C. Anterior pituitary :thyrotropin releasing hormone
- D. Adrenal medulla :catecholamines
- E. Adrenal cortex : mineralocorticoids

Answer: C

4- It has receptor in the cytoplasm:

- A. Insulin
- B. Glucagon
- C. Cortisol
- D. Growth hormone
- E. Oxytocin

Answer: C

5- the most appropriate option that represents an exocrine gland:

- A. Duct
- B. Blood
- C. Hormone
- D. Secretory vesicle

Answer: A

6- It may be called as master gland:

- A. hypothalamus
- B. pituitary gland
- C. thyroid gland
- D. pancreas
- E. adrenal gland

Answer: B

7- It has receptor in the nucleus:

- A. FSH
- B. TSH
- C. Calcitonin
- D. Thyroxin

Answer: D

8- Thyroid hormone and catecholamines are derived from:

- A. alcohol
- B. cholesterol
- C. tryptofan
- D. tyrosine
- E. glycine

Answer: D

9- Growth Hormone:

- A. Double polypeptide
- B. Glycoprotein
- C. Requires insulin for its growth promoting action
- D. Requires IGF for its growth promoting action
- E. Decreases gluconeogenesis

Answer: D

10- Hormones that are lipids that are synthesized from cholesterol:

- A. Protein
- B. Amino acid-derived
- C. Polypeptide
- D. Steroids
- E. Eicosanoids

Answer: D

11- this type of hormone must bind to a receptor protein on the plasma membrane of the cell:

- A. water soluble
- B. Lipid soluble
- C. Steroid
- D. Polypeptide
- E. A AND D

F. B AND C

Answer: E

12- Endocrine glands release hormones in response to:

- A. Hormones from other endocrine glands
- B. Chemical characteristics of the blood
- C. Neural stimulation
- D. All of the above

Answer: D

13- Name the eight major endocrine glands: **OPEN QUESTION**

Answer:

- 1-Hypothalamus
- 2-Pituitary
- 3-Thyroid
- 4-Parathyroid
- 5-Adrenals
- 6-Pineal Body
- 7-Reproductive organs (Ovaries & testes)
- 8-Pancreas

14- Name the three major groups hormones can be chemically classified into: **OPEN QUESTION**

Answer:

- 1-Steroids
- 2-Nonsteroid
- 3-Prostaglandins

[2] HYPOTHALAMO-PITUITARY AXIS

15- Oxytocin is secreted by:

- A. supra optic nuclei
- B. para optic nuclei
- C. para ventricular nuclei
- D. posterior pituitary
- E. uterus

Answer: C

16- Milk ejection during suckling is caused by:

- A. prolactin
- B. LH
- C. Oxytocin
- D. Progesterone
- E. Somatomammotroph

Answer: C

17- It is indispensable for the ovulation to occur:

- A. FSH
- B. LH
- C. Prolactin
- D. Estrogen
- E. Proesterone

Answer: B

18- ADH and Oxytocin require..... For their transport from hypothalamus to posterior pituitary:

- A. albumin
- B. globulin
- C. plasma proteins
- D. neurophysin
- E. freely in water

Answer: D

19- All hormones react to a negative feedback except:

- A. Progesterone
- B. Estrogen
- C. Prolactin
- D. Oxytocin
- E. None of these

Answer: D

21- The anterior pituitary secretes:

- A. Oxytocin
- B. Endorphins
- C. ADH
- D. TRH

Answer: D

[3] Anterior Pituitary gland

Which one of the following is wrong regarding the short term effect of GH:

- A. ↑ mobilization of FFAs from adipose tissue stores
- B. ↑ rate of glucose utilization throughout the body
- C. ↓ protein catabolism
- D. ↑ insulin resistance (↑ FFA)

Answer: B

What's the effect of Ghrelin on Growth hormone:

- A. Has no effect
- B. ↓ GH secretion
- C. ↑ GH secretion

Answer: C

The cause of Gigantism is:

- A. Decrease of GH during childhood
- B. Increase of Prolactine during childhood
- C. Decrease of GH during adulthood
- D. Increase of GH during childhood

Answer: D

Patient came to the hospital with enlarged hands and nose, wide supraorbital ridge and Protruded lower jaw and his length is normal. The patient most likely has:

- A. Gigantism
- B. Prolactinoma
- C. Acromegally
- D. cushing's

Answer: C Acromegally caused by ↑ GH secretion in adulthood.

Which one of the following is NOT a function of prolactin hormone:

- A. Stimulates the secretion of dopamine in median eminence
- B. Enhance the effects of gonadotropins
- C. Increases production of casein and lactalbumin

Answer: B

Man presented with galactorrhea, ginecomastia and he's infertile. Which one of the following this patient most likely has:

- A. Gigantism
- B. Prolactinoma
- C. Acromegally
- D. cushing's

Answer: B

[4] Physiology of the posterior pituitary gland

Q1: Which of the following is an inhibitory factor for the anti diuretic hormone ??

- A- increase serum osmolarity
- B- nausea
- C- ethanol
- D- decrease ECF volume

Answer C

Q2: one of oxytocin stimulus is ?

- A- conditioned response
- B- contraction of the cervix
- C- decrease estrogen level

Answer A

Such as (hearing infant crying)

Q3: both oxytocin and ADH are considered ??

- A- neurotransmitter
- B- neuropeptide hormones
- C- Paracrine

Answer B

Q4: excess ADH will lead to ?

- A- increase serum osmolarity
- B- dilute the urine
- C- hyponatremia

Answer C

Q5: Hypovolemia will be sensed by To stimulate ADH secretion ?

- A- osmoreceptors
- B- baroreceptors
- C- chemoreceptors

Answer B

Q6: ADH acts on Receptor in the via, as a second messenger ?

- A- V2 ,, distal convoluted tubule and collecting duct ,, cAMP
- B- V1a ,, proximal convoluted tubule and collecting duct ,, cAMP
- C- V2 ,, distal convoluted tubule and collecting duct ,, IP3
- D- V1b ,, distal convoluted tubule and collecting duct ,, IP3

Answer A

[5] diabetes insipidus

Q1: syndrome of inappropriate secretion of ADH (SIADH) is characterized by ??

- A- enhance water excretion
- B- physiological release of ADH
- C- non-physiological release of ADH

ANSWER C

Q 2: In central diabetes insipidus :

- A- there is excess ADH
- B-renal tubules fail to respond to circulating ADH
- C-collecting ducts are impermeable for water

ANSWER C (due to low ADH)

Q3; Which of the following is true regarding nephrogenic diabetes insipidus ?

- A-large volume diluted urine , high serum Na , elevated ADH
- B-concentrated urine , high serum Na , low ADH
- C-large volume diluted urine , low serum Na , excess ADH

ANSWER A

Q4; Which receptor might be unresponsive to ADH in a case of nephrogenic diabetes :

- A-V1a
- B-V1b
- C-V2

ANSWER C

Q5; Treatment of central DI ?.

- A- ADH antagonist
- B- ADH analogue
- C- Thiazides diuretics

ANSWER B

Q6: Regarding syndrome of inappropriate secretion of ADH (SIADH) ??

- A- low level of ADH
- B- serum hyperosmolarity and diluted urine
- C- could be caused by oat cell carcinoma (small cell cancer of the lung)

ANSWER C

Q7: syndrome of inappropriate secretion of ADH (SIADH) is treated by ?

- A- ADH antagonist
- B- ADH analogue
- C- Thiazides diuretics

ANSWER A

Q8: What are the typical presenting signs of diabetes insipidus?

- A. Hyperglycemia and polyuria
- B. Periorbital ecchymosis and blurred vision
- C. Polyuria and polydipsia
- D. Oliguria and hypoglycemia

ANSWER C

Q9: A patient is suspected of developing diabetes insipidus. Which of the following is the most effective assessment?

- A. Taking vital signs every 4 hours
- B. Monitoring blood glucose
- C. Measuring urine output hourly

ANSWER C



Medicine



[1] Anterior pituitary insufficiency

The best way to diagnose GH deficiency is by measuring which one of the following:

- A. GH level
- B. IGF-I level
- C. Insulin level

Answer: B because GH level is pulsatile we don't rely on it in diagnosis.

Patient presented with pendulous abdomen and red striae on examination the doctor notice bruises buffalo hump (fat pad). The patient most likely has:

- A. prolactinoma
- B. Cushing's syndrome
- C. Acromegally
- D. TSH-Producing adenoma

Answer: B Cushing's syndrome is caused by excessive cortisol. The patient might have also moon face, osteoporosis, high blood pressure and thin skin.

All the following adenomas we do Surgical resection except:

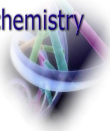
- A. Cushing's syndrome
- B. TSH-Producing adenoma
- C. Prolactinoma
- D. Central Hypothyroidism

Answer: C

Which one of the following is right regarding Central Hypothyroidism:

- A. Both TSH & free T4 and T3 will be Low
- B. Low TSH & high free T4 and T3
- C. High TSH & Low free T4 and T3
- D. Both are normal

Answer: A



General Mechanisms of Hormone Actions

Q1) Hormone that binds to a cell surface receptor and requires the second messenger camp is ?

- A) Antidiuretic hormone
- B) Cholecystokinin
- C) Calcitriol
- D) Gastrin

Answer: A

Q2) which of the following hormone are related to cGMP?

- A. Nitric oxide ,Atrial natriuretic peptide
- B. **Insulin,Erythropoietin**
- C. **GH & Prolactin**
- D. Angiotensin II

Answer: A NOTE: Choices “B & C” related to tyrosine kinase cascade

Q3) All of the following hormone are related to cAMP except ?

- A. α 2- Adrenergic & β - Adrenergic
- B. ACTH, FSH, LH & TSH
- C. ADH Renal V2-receptor
- D. Calcitonin , PTH & Glucagon
- E. α 1- Adrenergic & Extra-renal V1-receptor

Answer: E “The second messenger is calcium or phosphatidylinositol”

Q4) how does cAMP be inactive form?

- A. giving GTPase to convert GDP to GTP to block the activation of adenylyl cyclase
- B. Binding of α -subunit to $\beta\gamma$ -subunits
- C. Degradation of cAMP into AMP by phosphatase
- D. Dephosphorylation of protein substrate by phosphatase

Answer: B-D

Q5) G-proteins act as

- A. Hormone carriers
- B. Hormone receptors
- C. Second messengers
- D. Signal transducers

Answer:D

Q6) All the following statements about steroid hormones are true except?

- A) They are hydrophobic
- B) They require carriers to transport them in circulation
- C) Their receptors are intracellular
- D) They require cyclic cGMP as second messenger

Answer:D

Q7) All the following statements about Catecholamine hormones are true except?

- A. Hydrophilic
- B. They require cyclic cAMP as second messenger
- C. Plasma half-life is short
- D. Their receptors are intracellular

Answer: D

If you have any questions you want to add, please send it to

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Good luck

Team Leaders :

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"The good physician treats the disease; the great physician treats the patient who has the disease."
~William Osler