

تم تحميل هذا الملف من موقع المناهج الإماراتية



الملف ملخص درس الغدد الصماء glands Endocrine

موقع المناهج ← المناهج الإماراتية ← الصف التاسع المتقدم ← علوم ← الفصل الثاني

روابط مواقع التواصل الاجتماعي بحسب الصف التاسع المتقدم



روابط مواد الصف التاسع المتقدم على تلغرام

[الرياضيات](#)

[اللغة الانجليزية](#)

[اللغة العربية](#)

[التربية الاسلامية](#)

المزيد من الملفات بحسب الصف التاسع المتقدم والمادة علوم في الفصل الثاني

كل ما يخص الاختبار التكويني لمادة العلوم للصف التاسع يوم الثلاثاء 11/2/2020	1
وحدة 4 الجهاز الغشائي	2
علوم دليل المعلم الوحدة 22 الجهاز الطلائي والهيكلية والعضلي	3
دليل العلوم الجهاز الغشائي	4
وحدة 5 الجهاز الدوري	5

* What is endocrine system made of?

↳ Composed of glands.

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* What production? ماذا ينتج

↳ Hormones released into the blood stream to all body cells.

* Hormone:-

↳ is substance acts on target cell and tissues to produce a specific response.

الاستجابة معينة.

* Types of hormones: أنواع الهرمونات

① steroid hormones.

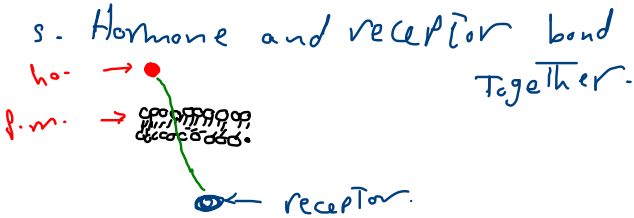
② non steroid hormones

(Amino acids h.)

Hormones

Steroid

- 1- Estrogen , testosterone
الاستروجين , التستوسترون
2. Affect the human reproductive system.
3. soluble in lipids?
diffuse through plasma membrane of target cell.
- u. Bind to receptor inside the cell.



Amino acids

- 1- Insulin , growth hormone.
- 2 - composed of amino acids.
3. Cannot soluble in lipids so cannot diffuse through plasma membrane.
- u. Bind to receptor out target cell.
- s. After bind, the receptor activates an enzyme on plasma membrane.



How work steroid hormones:-

1. soluble in lipids.
2. diffuse through plasma membrane.
3. Bind to receptor inside cell.
 - a. Hormone and receptor bind with DNA in nucleus.
 5. Build protein.

How work amino acids hormone?

1. Bind to receptor on plasma membrane.
2. Activate enzyme inside plasma membrane.
3. starting biochemical line leads to the desired response.

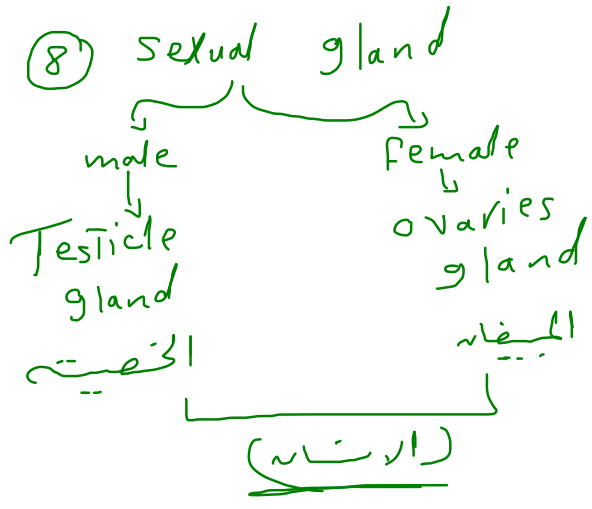
Endocrine glands
الغدد الصماء

→ Maintains homeostasis of the body.

→ Through sending signals with negative feedback.

8 glands:-

- ① Pituitary gland.
- ② Thyroid "
- ③ Parathyroid "
- ④ Adrenal "
- ⑤ Pineal "
- ⑥ Thymus "
- ⑦ Pancrease "



- ① Pituitary gland:-
↳ call master gland :-
a. regulates so many body function.
b. regulates other endocrine glands,
such as:-
Thyroids, adrenal, Testes
or ovaries.

↳ situated at the base of the brain.



* Types of pituitary hormones:

↳ GH affects the whole body.

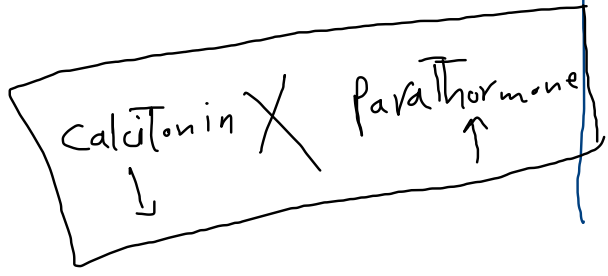
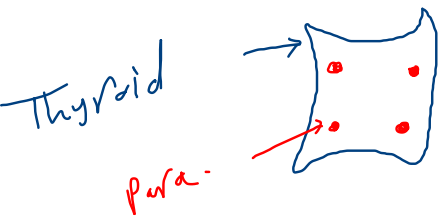
① regulates body growth by stimulating cell division in muscle and bone tissues.

② especially active childhood and adolescence, decrease when getting old.

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② Thyroid and parathyroid glands:-
↳ situated below and in front of the larynx.

on the back side to thyroid.



* Functions:-

1. Thyroid → Thyroxine, Calcitonin.

↳ increase rate of metabolism.

↳ decrease rate of calcium in blood.

↳ stimulating bones to absorption (Ca.)

2. Parathyroid → Parathormone

- increase blood calcium levels.

- stimulating bones to release (Ca.)

importance of Ca?

- Bone formation.
- Blood clotting
- nerve function
- muscle contraction.

How work these hormones in opposite?

by negative feedback.

cause of decrease Ca:

- not eating calcium-fortified food.
- soft drinks.

	Calcitonin	Parathormon
gland	Thyroid	Parathyroid
function	decrease Ca in blood.	increase Ca in blood
work	- deposition Ca in bones. - release Ca in urine - decrease absorption in testine	- drawing Ca from bones. - ve absorption Ca in kidneys - increase absorption in testine.
why	high level of Ca.	low level of Ca.

* Pancreas:-

↳ has crucial role in:-

① production of enzymes
digest carbohydrates,
protein, fats.

② secretes Insulin, Glucagon.

work Together To maintain
glucose (sugar) in
blood.

Insulin



- decrease rate
of glucose in
blood.

- send signals to
cell especially liver
and muscle cell.

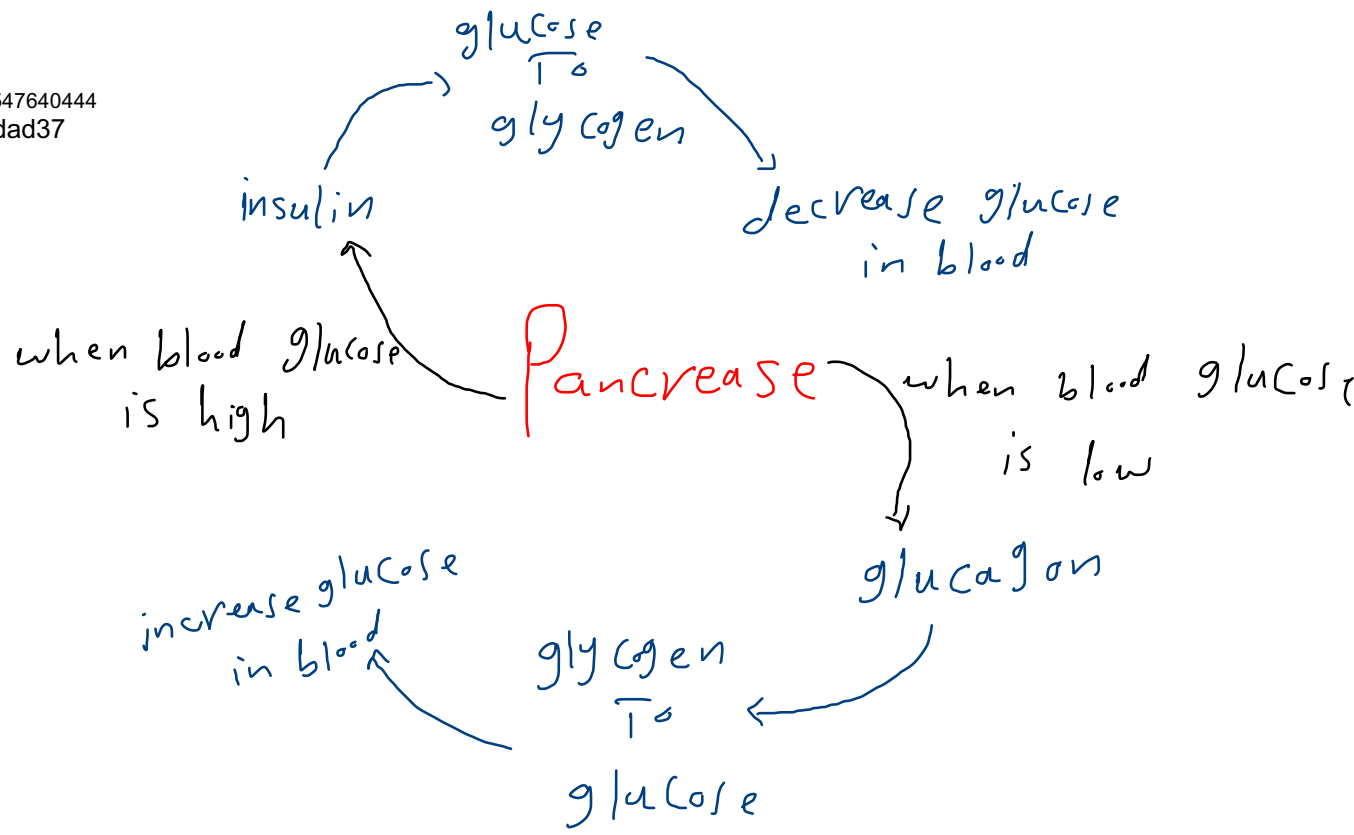
- Conversion
glucose \rightarrow glycogen.

Glucagon

- increase rate of
glucose in
blood.

- Binds To Liver
cell.

- conversion
glycogen \rightarrow glucose
↓
release into
blood.



* Diabetes disease:

- result from the body not producing enough insulin.
- // // not properly using insulin.

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Diabetes

Type 1

- Usually appears in people by age 20.
- occurs when body not produce insulin.

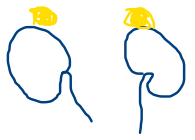
Complications :- المضاعفات

- ① coronary heart disease
- ② Retinal and nerve damage
- ③ Acidosis.
- ④ Low blood pH.

Type 2

- usually appears after age 40.
- 70-80% of diagnosed.
- occurs when cells insensitive to insulin.

* Adrenal gland si-
 → above the kidney.



→ 2 parts → cortex (outer)
 → marrow (inner)

cortex →  → marrow

* who controller in these hormones?
 - Sympathetic nervous system responding to stress like fight or flight.
 الكرو والفر

	cortex	marrow
place	outer	inner
Hormones	① Aldosterone ↳ Type: steroid. ↳ function: reabsorbing nat (sodium)	* Adrenaline (epinephrine) + (norepinephrine) cause:- ↳ sudden burst stressful situation.
	② cortisol ↳ Type: glucocord ↳ function:- - reduce inflammation - raises blood glucose levels.	functions:- ↳ increase ↳ heart rate ↳ blood pressure. ↳ breathing rate. ↳ sugar level.

Link to nervous system
الربط بالجهاز العصبي

hypothalamus:

maintains homeostasis of body. because it links between nervous system and endocrine glands.



produce **Oxytocin** & **ADH**
stored in posterior.

ADH

increase secretion

←
- when decrease amount of water in body.

- posterior secreted ADH from axons.

- ADH move in blood To kidneys

- Binds To receptor.

- kidneys absorbs more water.

- decrease water in urine.

- increase water level in blood.

decrease sec.

←
- when increase amount of water in body.

- decrease secreted ADH

- Urine less focused.

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Note :-

1. Nausea and vomiting stimulate production ADH.
2. Blood loss by 15-20% during bleeding increase ADH.



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Hormone	gland	function
Thyroxine	Thyroid	increase metabolism.
Calcitonine	thyroid	increase Ca levels.
Parathormone	Parathyroid	decrease Ca levels.
Insulin	Pancrease	decrease glucose (sugar)
Glucagon	Pancrease	increase glucose (sugar)
Aldosterone	cortex of adrenal	reabsorbing sodium (Na^+)
Cortisol	cortex of adrenal	raises glucose / reduce inflammation.
Adrenaline	marrow of adrenal	raises activities of body cell.
ADH	hypothalamus	maintain homeostasis water in body