

Endocrine Archive

Mid 2021

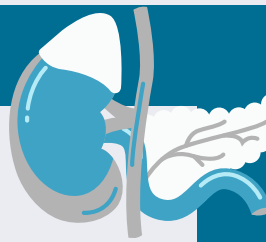
Done by:

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1) Nerve related to medial surface of thyroid gland: *Anatomy*

- A- external laryngeal nerve
- B- internal laryngeal
- C- recurrent laryngeal
- D- a&b
- E- a&c

Answer: E

2) One of the following is not effector protein: *Biochem 2*

- A- ion calcium channel
- B- adenylate cyclase
- C- phosphatidyl serin
- D- guanylate cyclase
- E- phosphodiesterase

Answer: C

3) Patient has pain & swelling in thyroid gland and he takes glucocorticoid, what do you think the mechanism of glucocorticoid? *Pharmacology 6*

- A- increase the immune system effect
- B- inhibition of PLA2
- C- Decrease blood pressure
- D- Lipogenesis

Answer: B

4) Calcitonin is important in all of the following except: *Physiology 4 + 6*

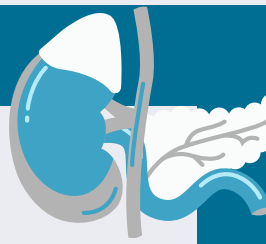
- A- hypercalcemia
- B- Paget's disease of bone
- C- metastatic bone cancer
- D- post menopausal osteoporosis
- E- hypocalcemia

Answer: E

5) About oxidative phase of PPP, the true statement is: *metabolism*

- A) will produce NADP+
- B) mediated by NADPH / NADH
- C) will produce energy that can be utilized in ETC
- D) Glucose 6-phosphate dehydrogenase is the regulatory enzyme

Answer: D



6) D2 (a variant of iodothyronine deiodinase) can be found mostly in: *Pharmacology 7*

- A) Liver
- B) Kidney & Thyroid
- C) Brain
- D) Central nervous system

Answer: D

7) The site for iodination of thyroglobulin is: *Histology*

- A) Parafollicular cells
- B) Cortex
- C) Follicular cells
- D) Thyroid lumen
- E) Blood

Answer: D

8) One of the following is a difference between Turner & Prader-Willi syndrome? *Pharmacology 1-2*

- A) Prader-Willi causes diarrhea
- B) Prader-Willi affects males only
- C) Turner affects females only

Answer: C

9) All of the following are features of diabetic retinopathy except: *Pathology DM*

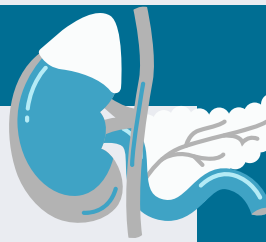
- A) Advanced proliferative retinopathy.
- B) Retinal hemorrhages.
- C) Neovascularization.
- D) Tractional retinal detachment
- E) Transudate

Answer: E

10) G6PDH deficiency is associated with all the following, except: *Metabolism*

- A) Kidney failure
- B) Fasting hypoglycemia
- C) Hyperlipidemia
- D) Muscle weakness

Answer: A



11) All of the following are essential amino acid except: *Metabolism Amino acid*

- A) Serine
- B) Lysine
- C) Valine
- D) Threonine
- E) Leucine

Answer: A

12) The origin of neurohypophysis: *Embryology*

- A- roof of the mouth
- B- diencephalon
- C- roof of the nasopharynx

Answer: B

13) All of the following are features of papillary carcinoma except: *Pathology*

- A- pseudoinclusion
- B- coffee nucleus
- C- vascular invasion
- D- fibrovascular core

Answer: C

14) All of the following associated with hypothyroidism except: *Pathology 2*

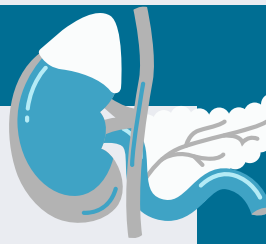
- A) weight gain
- B) cold intolerance
- C) slow heartbeat
- D) nervousness

Answer: D

15) Adult Refsum disease caused by defect in which enzyme: *metabolism Fatty acid*

- A) peroxisome
- B) alcohol dehydrogenase
- C) Phytanic acid oxidase
- D) keto thiolase

Answer: C



16) Which of the following contains 19 carbon atom : *Biochem 7*

- A- testosterone
- B- estrogen
- C- progesterone
- D- mineralocorticoid

Answer: A

17) A sign that is diagnostic to pituitary Adenoma : *Anatomy*

- A) muscle weakness
- B) bitemporal hemianopia
- C) cold sensitivity

Answer: B

18) Which of the following cause decrease insulin secretion: *Physiology 5*

- A- epinephrine
- B- ip3
- C- fatty acid
- D- amino acid

Answer: A

19) Which of the following Eicosanoids can do vasoconstriction & bronchoconstriction : *Metabolism - Eicosanoid*

- A) LTD4, LTE4
- B) PGE2, LTD4
- C) PGI2, PGE2
- D) LTB4, TXA2

Answer: A

20) Which of the following statements about antidiuretic hormone is true? *Physiology 3*

- A) It is synthesized in the posterior pituitary gland
- B) It increases salt and water reabsorption in the collecting tubules and ducts
- C) It stimulates thirst
- D) It has opposite effects on urine and plasma osmolarity

Answer: D



21) A 46-year-old man has "puffy" skin and is lethargic. His plasma thyroid-stimulating hormone concentration is low and increases markedly when he is given thyrotropin-releasing hormone. Which of the following is the most likely diagnosis? *Pathology* *مکرم من نبض*

- A) Hyperthyroidism due to a thyroid tumor
- B) Hyperthyroidism due to an abnormality in the hypothalamus
- C) Hypothyroidism due to an abnormality in the thyroid
- D) Hypothyroidism due to an abnormality in the hypothalamus
- E) Hypothyroidism due to an abnormality in the pituitary

Answer: D

22) One of the following is true about cushing syndrome: *Physiology + Pathology*

- A) Hypertension
- B) Virilization in female
- C) strong muscle and bone
- D) peripheral fat accumulation

Answer: A

23) Urea contains 2 nitrogen atoms, what are the sources of these atoms?

Select one:

metabolism Amino Acid

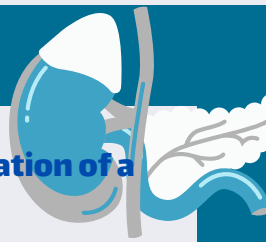
- A) Both are derived from aspartate
- B) One from ammonia and one from arginine
- C) Both are derived from ammonia
- D) One from ammonia and one from aspartate

Answer: D

24) In case of liver cirrhosis, ammonia is not detoxified and can cause brain encephalopathy. Which of the following amino acids can covalently bind ammonia, transport and store in a non-toxic form? *metabolism Amino Acid*

- A) Serine
- B) Aspartate
- C) Cysteine
- D) Glutamate

Answer: D



25) Which of the following anterior pituitary hormones plays a major role in the regulation of a nonendocrine target gland? *Physiology*

- A) Adrenocorticotrophic hormone
- B) Thyroid-stimulating hormone
- C) Prolactin
- D) Follicle-stimulating hormone
- E) Luteinizing hormone

Answer: C

26) During gluconeogenesis, the conversion of glucose 6-P to glucose is catalyzed by glucose-6-phosphatase. Which of the following statement is true about this reaction? *metabolism*

- A) The reaction occurs in mitochondria
- B) Abnormal glycogen accumulation in liver is a result of this enzyme deficiency
- C) Conversion of glucose 6-phosphate to glucose releases a molecule of ATP
- D) It is a highly active enzyme in skeletal muscles
- E) It can be reversed also by hexokinase and /or glucokinase

Answer: E

27) A patient has been exposed to a compound that increases the protons permeability across the inner mitochondrial membrane.

What would be expected to happen? *metabolism ETC*

Select one:

- a. Increased oxygen utilization
- b. Decreased pyruvate dehydrogenase activity
- c. Decreased malate-aspartate shuttle activity
- d. Increased ATP levels
- e. Increased FO/F1 ATP synthase activity

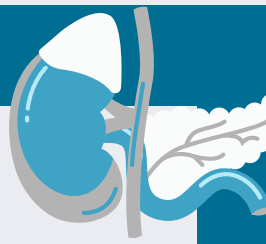
Answer: A

Explanation: increasing the permeability means that there is less energy produced, as a compensation mechanism the cell does more and more ETC utilizing more oxygen

28) Steroid is? *Biochem 1*

- A) sterol nucleus with alkyl group of cholesterol
- B) sterol nucleus without alkyl group
- C) sterol nucleus with methyl group in ring c and d of cholesterol
- D) sterol nucleus with methyl in D ring

Answer: C



29) One of the following doesn't match correctly: *Pathology*

- A) cortical atrophy – exogenous glucocorticoids
- B) diffuse hyperplasia – ACTH dependent Cushing syndrome
- C) macronodular hyperplasia – primary cortical hyperplasia
- D) adenoma – large necrotic mass & hemorrhage

Answer: D

30) All of the following are correct manifestations of type 1 diabetes, except? *Physiology 3*

- A) Polyuria
- B) Dehydration
- C) Weight loss
- D) ketoacidosis
- E) Hypoglycemia

Answer: E

31) All of the following are Goals of therapy of diabetes, except? *community*

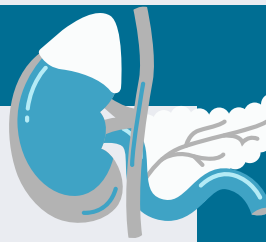
- A) HbA1C < 7.0 %
- B) Type 1 can be controlled by diet and lifestyle modification
- C) patients with diabetes should receive influenza vaccinations annually
- D) Metformin is the recommended first-line oral agent for newly diagnosed type 2 diabetes

Answer: B

32) Super high energy molecules stored energy in which of the following: *metabolism*

- A) bond
- B) electrons
- C) atoms

Answer: A



33) All true about surgical anatomy of thyroid, except? *Anatomy*

- A) The venous supply parallels to the arterial supply
- B) Parathyroid gland may be inside the thyroid
- C) the back of thyroid fixed by Berry ligament to the trachea

Answer: A

Explanation: not parallel

34) All of the following are stress hormones, except? *Physiology*

دقیقہ دکتور شریف

- A) Cortisol
- B) PTH
- C) Adrenaline
- D) ACTH
- E) Thyroxin

Anabolic
Thyroxine (Normal)
GH → (Insulin لونی)
Insulin
The most important = Androgen
Male sex hormone - Testosterone
Female sex (limited action)

stress
1- GH
2- cortisol
3- Glucagon
4- Thyroxine
5- Adrenaline
6- Noradrenaline

Answer: B

Explanation: Even if PTH can affect the heart and different organs by its receptors, it stills not considered as stress hormone, while thyroxine increases body metabolism and activate body functions that correlate with stress.

35) Which of the following is not true about intracellular receptors? *Biochem 3*

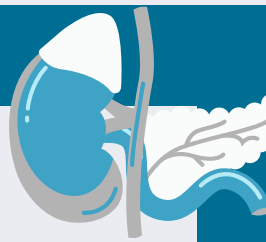
- A) thyroid hormones bind as heterodimers
- B) intracellular receptors dimerize before binding to DNA
- C) RXR is a part of heterodimers
- D) some ligands may inhibit the transcription of a specific gene
- E) steroid receptors bind as heterodimers

Answer: E

36) which of the following is not correct regarding pituitary tumors? *Pathology*

- A) corticotropin secreting adenoma has highest potential to become malignant
- B) form 10% of intracranial tumors
- C) prolactinoma is the rarest type

Answer: C



37) Rate limiting enzyme of fatty acid synthesis is: *Metabolism Fatty acid*

- A) citrate lyase
- B) acetyl CoA carboxylase
- C) malonyl CoA carboxylase
- D) acetyl transacylase
- E) fatty acyl transacylase

Answer: B

38) Regarding the proton pump activity in ETC, what is correct? *Metabolism ETC*

- A) forms a pore within inner mitochondrial membrane
- B) causes asymmetrical transfer of protons through inner mitochondrial membrane

Answer: B

39) which of the following is false regarding diagnosis of diabetes? *community*

- A) one 2-hour post prandial blood glucose test for symptomatic person is sufficient for diagnosis
- B) If random glucose test is >200 the patient will diagnose with diabetes
- C) glycated hemoglobin=5.6 indicates a risk of diabetes
- D) a+c

Answer: C

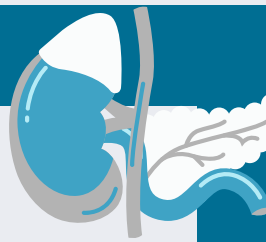
40) Von gierk's disease include all the following manifestations except: *metabolism* متلازمة
متلازمة تخزين الكالسيوم

- A) muscle cramps and fatigue after exercise
- B) fatty liver and hepatomegaly
- C) renal failure
- D) hyperlipidemia

Answer: C

41) glycolysis has ___ as the rate limiting enzyme, which is inhibited by ___ *Metabolism*
glycolysis 2

Answer: PFK-1, Citrate



42) The wrong statement about tyrosine kinase receptors is: *Biochem 2*

- A) a mutation of neu locus gene is noticed in some breast cancers
- B) Sos is activated by binding with GTP instead of GDP
- C) SH2 domain is involved in various signaling pathways
- D) SH2 domain binds with phosphorylated tyrosine residues
- E) RAS is connected to cell membrane by anchor

Answer: B

43) choose the wrong statement regarding adrenaline and it's receptors: *Biochem 2*

- A) beta 1 receptors found mainly in heart
- B) phospholamban inhibits the activity of SERCA
- C) heart rate is decreased due to inhibition of phospholamban activity
- D) beta 2 receptors are found in liver

Answer: C

44) A patient comes with sudden nausea and vomiting episodes, with symptoms of Cushing triad. One of the following is not a cause: *Pathology 4*

- A) diabetes insipidus
- B) meningitis
- C) syndrome of inappropriate ADH secretion
- D) brain tumor

Answer: A

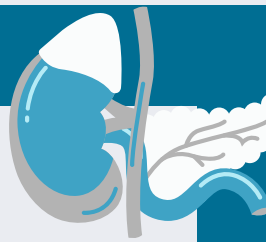
Explanation: Diabetes insipidus typically does not lead to hypertension, which is one of the components of Cushing's triad associated with increased intracranial pressure. In contrast, SIADH, meningitis, and brain tumors are conditions in which increased intracranial pressure is a primary symptom.

45) One of the following conditions is true as indication to use Octreotide drug :

Pharmacology

- A) Pediatric patients with short stature
- B) Growth hormone deficiency
- C) Acromegaly

Answer : C



46) Which one of the following is correct? *Biochem 2*

- A) Epinephrine increase C-AMP
- B) heart is major organ to Beta 2 receptors
- C) Epinephrine decreases C-AMP

Answer : A

47) One of the following is not regarding to Abnormalities in fructose metabolism

- A) fructosuria = deficiency in fructokinase
- B) HFI is sever condition
- C) fructose malabsorbtion = deficiency in GLUT5
- D) fructosuria are asymptomatic
- E) HFI cause fasting hypoglycemia because of depletion of fructose-1-phosphate that required for glycolysis & glycogenesis

Answer: E

48) which of the following enzymes increase in perforated peptic ulcer :

- A) ALP and AST
- B) creatinine kinase and phospholipase
- C) Amylase and Lipase

Metabolism enzyme

Answer: C

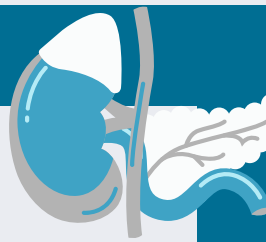
49) One of the following is best preparation management for septic shock:

Pharmacology

- A) cortisol
- B) cortisone
- C) hydrocortisone
- D) aldosterone
- E) DOCA

Answer: C

50) Drug used to treat woman with infertility? *Pharmacology 1-2*



- A) vasopressin
- B) follitropin
- C) cabergoline
- D) Bromocriptine

Answer: B

51) All of the following about α -glucosidase inhibitors is true, except? *Pharmacology*

- A) Acarbose is an example of them
- B) increase HbA1c
- C) Inhibit pancreatic α -glucosidase enzyme
- D) delays the carbs absorption

Answer: B

52) All Adverse effects of thyroid hormones, except? *Pathology*

- A) Tachycardia
- B) Anginal attacks
- C) Hyperthyroidism with high doses
- D) Arthralgia

Answer: D

53) Aldosterone: *physiology*

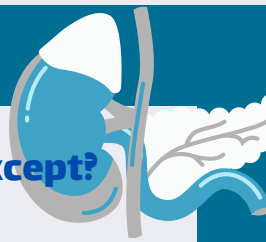
- A) decrease Na absorption from ECF
- B) increase NA absorption from ICF
- C) increase NA absorption from GIT

Answer: C

Explanation: aldosterone increases Na in blood in order to control low blood pressure. The most important sites for aldosterone action are GI and urinary systems

54) All of the following are related to high renin and high Aldosterone ,except?

Physiology



- A) Adrenal adenoma
- B) Hypotension
- C) Renal artery stenosis
- D) Hypokalemia

Answer: B

55) Which one of the following is true about free cholesterol: Biochem

- A) minimal amount in blood cause atherosclerosis
- B) increase cell membrane integrity
- C) hydrophobic
- D) three hydroxyl cholesterol

Answer: C

56) About hexokinase IV , all of the following are true, except: Metabolism Glycolysis I

- A) has high Km value and low affinity
- B) expressed in pancreas and liver
- C) add phosphate at carbon 1

Answer: C

57) Regarding non oxidative phase of PPP, which one is true : Metabolism P P P

- A) transketolase will trans 3 carbon atoms
- B) transaldolase will trans 2 carbon atoms
- C) mediated by NADPH
- D) produce intermidates in glycolysis

Answer : D



58) Which one of the following can Add to carbon molecule to elongation of fatty acid chain: *Metabolism Fatty acid*

- A) Acetyl CoA
- B) Malonyl CoA
- C) Pyruvate
- D) Glucose

Answer: B

59) Which one of the following is False regarding Glucagon receptor : *Biochem 2*

- A) phosphorylation by PKA
- B) It's activated by cGMP that phosphorylate by PKA

Answer: B

Explanation : The activation of the glucagon receptor typically involves the activation of a signaling cascade through cyclic AMP (cAMP), not cGMP

60) One from these insulin secretagogues mainly increase insulin release :

Pharmacology 4

- A) Repaglinide
- B) acarbose
- C) metformin
- D) pioglitazone

Answer : A

إِنِّي أُتَيْتُكَ بِهَذَا الْقَلْبِ، أُسَابِقُ حُرُوفِي، وَعَبْرَاتِي ..
!أُنَاجِيكَ، وَقَلْبِي هَذَا! بِكُلِّ سَوْدَاتِهِ، وَعَلَى عِلَاتِهِ يَا رَبِّي يَبْفِيكَ
قَدْ عَاتَ فِيهِ الْهَوَى حَتَّى أَهْلَكَه، وَمَطَافَ بِهِ الذَّنْبِ حَتَّى أُغْرَقَهُ، لَكِنَّهُ
يُشْهِدُكَ يَا اللَّهُ! أَنَّهُ لَمْ يَبْأَسْ وَلَمْ يَقْنَطْ، وَلَمْ يَجْزَعْ
أَحْمَدُ شُقَيْرِ رَحْمَةِ اللَّهِ -