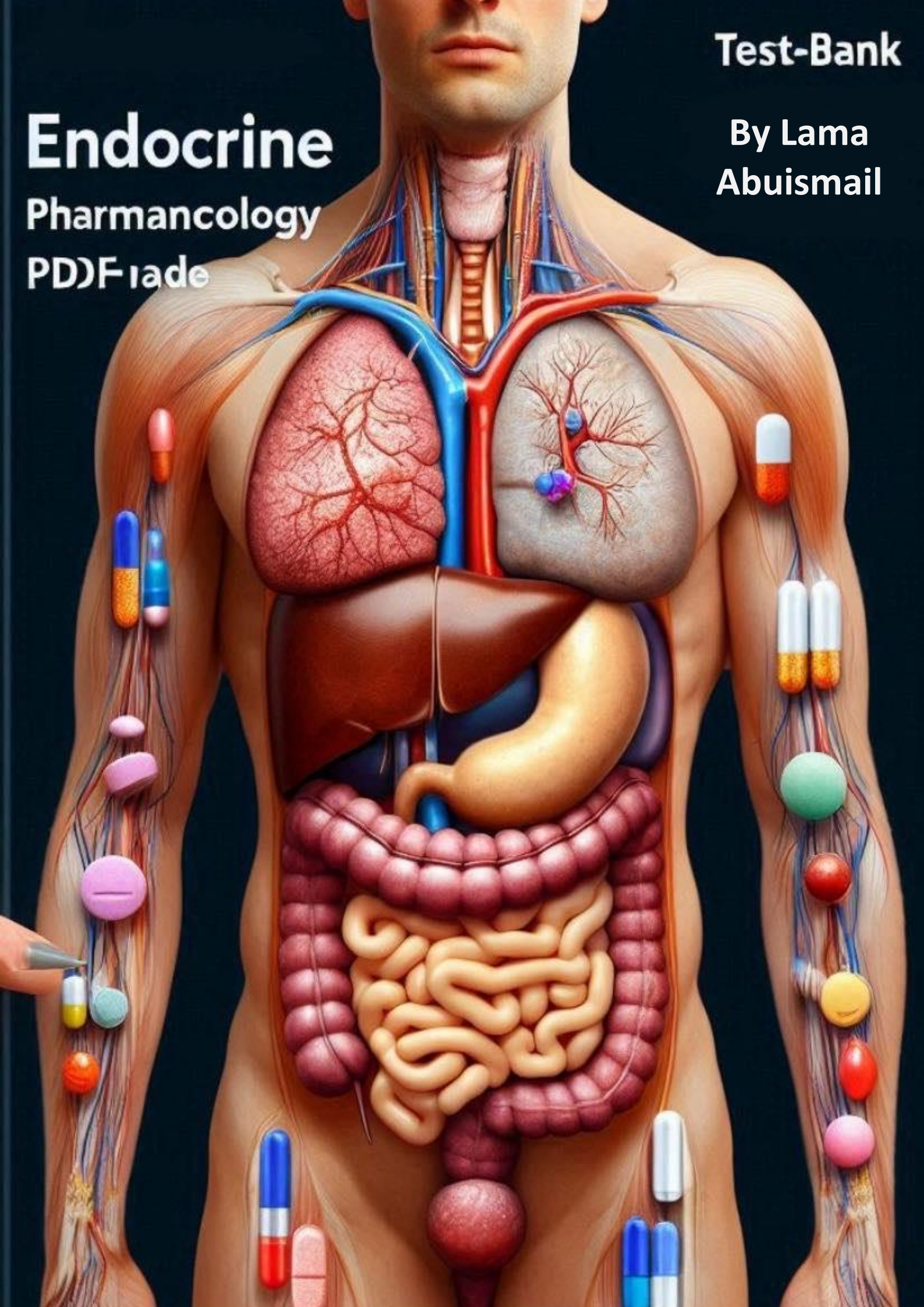


Test-Bank

By Lama
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Endocrine Pharmacology PDF made



Thyroid hormones lect.5

1. The enzyme responsible for the critical steps in thyroid hormone synthesis is comparable to which of the following in its function?*

- A. Deiodinase in converting T4 to T3
- B. Thyroid peroxidase in oxidation and coupling
- C. Lysosomal enzymes in hydrolysis of thyroglobulin
- D. TBG in hormone transportation

2. *Which enzyme plays a pivotal role in the peripheral conversion of a less active hormone to a more active form?*

- A. Thyroid peroxidase
- B. Deiodinase
- C. Lysosomal enzyme
- D. TBG

3. *Thyroid hormones are transported in the bloodstream primarily bound to which specific protein, ensuring their bioavailability?*

- A. Albumin
- B. Hemoglobin
- C. Thyroxine binding globulin (TBG)
- D. Transferrin

4. *The thyroid gland primarily produces a hormone that is subsequently converted to its more active form in peripheral tissues. What is the ratio of these hormones within the thyroid content?*

- A. 1:1
- B. 2:1
- C. 3:1
- D. 4:1

5. *What percentage of the more potent thyroid hormone is produced outside the thyroid gland through conversion?*

- A. 20%
- B. 50%
- C. 80%
- D. 100%

6. *Comparatively, which thyroid hormone demonstrates a higher affinity for nuclear receptor proteins, thus exerting a greater physiological effect?*

- A. T4
- B. T3
- C. Both equally
- D. Neither

7. *Which of the following effects is unlikely to result from the hormonal activity of the thyroid gland?*

- A. Enhanced growth and development
- B. Elevated cholesterol levels in the blood
- C. Increased gastrointestinal motility
- D. Enhanced lipolysis

8. *Increased sensitivity of tissues to sympathetic stimulation is a result of an upregulation in which type of receptors due to thyroid hormone activity?*

- A. Alpha-adrenergic receptors
- B. Beta-adrenergic receptors
- C. Dopaminergic receptors
- D. Serotonergic receptors

9. *Which thyroid hormone predominantly remains bound in the bloodstream, indicating a greater storage capacity and slower release into the tissues?*

- A. T3
- B. T4
- C. Both equally bound
- D. Neither

10. *The term 'cretinism' is associated with which endocrine disorder in children?*

- A. Hyperthyroidism
- B. Hypothyroidism
- C. Cushing's syndrome
- D. Addison's disease

11. *Which autoimmune condition is known for causing atrophy of the thyroid gland?*

- A. Graves' disease
- B. Addison's disease
- C. Hashimoto's thyroiditis
- D. Cushing's syndrome

Answer: C. Hashimoto's thyroiditis

12. *An individual presents with cold intolerance, lethargy, and weight gain despite decreased appetite. These symptoms most likely indicate:*

- A. Hyperthyroidism
- B. Hypothyroidism
- C. Diabetes mellitus
- D. Cushing's syndrome

Answer: B. Hypothyroidism

13. *In the treatment of hypothyroidism, which synthetic preparation is most commonly used due to its stable pharmacokinetic profile?*

- A. Thyroid USP
- B. Liothyronine sodium
- C. ℓ-thyroxine sodium
- D. Liotrix

14. *Which condition might result from the abuse of thyroid hormone preparations for weight loss?*

- A. Hypothyroidism
- B. Hyperthyroidism
- C. Addison's disease
- D. Diabetes insipidus

15. *Which of the following thyroid hormone preparations has the shortest half-life?*

- A. Liothyronine sodium
- B. ℓ-thyroxine sodium
- C. Thyroid USP
- D. Liotrix

16. *In hypothyroid patients, which clinical sign is often observed due to decreased stroke volume and heart rate?*

- A. Tachycardia
- B. Palpitations
- C. Bradycardia

- D. Hypertension

17. *A patient has undergone surgical removal of the thyroid gland. Which therapy is essential for managing this condition post-surgery?*

- A. Insulin therapy
- B. Hormone replacement therapy
- C. Antithyroid drugs
- D. Corticosteroid therapy

18. *Which of the following is not a typical symptom of hypothyroidism?*

- A. Weight loss with increased appetite
- B. Dry/thick skin
- C. Hair loss
- D. Hoarse voice

19. *A patient is prescribed a thyroid hormone preparation derived from bovine sources. What is a potential concern with this type of medication?*

- A. Short half-life
- B. Increased allergic reactions
- C. Low potency
- D. High cost

20. *Which type of thyroid hormone preparation contains both T4 and T3 in a 4:1 ratio?*

- A. Liothyronine sodium
- B. Thyroid USP
- C. Liotrix
- D. ℓ-thyroxine sodium

21. *Which of the following effects is NOT associated with the clinical use of thyroid hormones?*

- A. Weight reduction (abuse)
- B. Treatment of thyroid cancer
- C. Management of hyperthyroidism
- D. Hypothyroidism treatment

22. *Comparing the d-isomer to the l-isomer of thyroid hormone, which statement is correct regarding their effects?*

- A. The d-isomer is more potent in all respects
- B. The d-isomer is less potent in growth and development effects
- C. The l-isomer has a shorter half-life
- D. The d-isomer is less effective in reducing cholesterol levels

23.* A 29-year-old woman with Graves' disease is planning to get pregnant in the near future. Which of the following is the preferred treatment for her condition?

- a) Methimazole
- b) Propylthiouracil
- c) Radioactive iodine (^{131}I)
- d) Surgical thyroidectomy

24.* A patient who has undergone radioactive iodine therapy for Graves' disease should wait how long before conceiving?

- a) 1-2 months
- b) 2-3 months
- c) 4-6 months
- d) 6-12 months

25.* What is a major disadvantage of using radioactive iodine (^{131}I) therapy for hyperthyroidism?

- a) High risk of recurrent hyperthyroidism
- b) Induction of hypothyroidism
- c) Pulmonary fibrosis
- d) Allergic reactions

26.* Which of the following is a contraindication for the use of radioactive iodine (^{131}I) therapy?

- a) Hyperthyroidism
- b) Pregnancy
- c) Graves' ophthalmopathy
- d) Thyroid cancer

27.* A patient is diagnosed with manic depressive psychosis and is prescribed a medication with a narrow therapeutic window that also inhibits thyroid hormone release. Which medication is this?

- a) Lithium carbonate

b) Carbamazepine

c) Amiodarone

d) Sucralfate

28.* Which of the following is a side effect of lithium carbonate?

a) Pulmonary fibrosis

b) Ataxia

c) Hypothyroidism

d) Tachycardia

29.* A patient taking iodinated contrast media such as ipodate is likely to experience which of the following actions on thyroid hormones?

a) Increase in T4 to T3 conversion

b) Decrease in T4 and T3 release

c) Increase in thyroid hormone synthesis

d) Enhanced peripheral action of T3

30.* Which drug is known to reduce the absorption of thyroid hormones?

a) Rifampin

b) Sucralfate

c) Warfarin

d) Furosemide

31.* A patient is on rifampin for a bacterial infection. How might this affect their thyroxine (T4) medication?

a) Increase thyroxine absorption

b) Decrease thyroxine absorption

c) Increase thyroxine metabolism

d) Decrease thyroxine metabolism

32.* Which of the following drugs can displace thyroid hormones from protein binding sites, potentially altering their activity?

a) Salicylates (Aspirin)

b) Phenobarbital

c) Amiodarone

d) Calcium products

33.* A 27-year-old woman underwent near total thyroidectomy.

She was started on liothyronine. What hormone is produced in the peripheral tissues when liothyronine is administered?

a) Methimazole

b) T3

c) T4

d) TSH

Book questions:

A 24-year-old woman was found to have mild hyperthyroidism due to Graves' disease. She appears to be in good health otherwise. In Graves' disease, the cause of the hyperthyroidism is the production of an antibody that does which of the following?

- (A) Activates the pituitary thyrotropin-releasing hormone (TRH) receptor and stimulates TSH release
- (B) Activates the thyroid gland TSH receptor and stimulates thyroid hormone synthesis and release
- (C) Activates thyroid hormone receptors in peripheral tissues
- (D) Binds to thyroid gland thyroglobulin and accelerates its proteolysis and the release of its supply of T4 and T3
- (E) Binds to thyroid-binding globulin (TBG) and displaces bound T4 and T3

Answer:

The antibodies produced in Graves' disease activate thyroid gland TSH receptors. Their effects mimic those of TSH. The answer is B.

Grave disease first choice not book10. A 25-year-old woman presents with insomnia and fears she may have “something wrong with her heart.” She describes “her heart jumping out of her chest.” She feels healthy otherwise and reports she has lots of energy. Lab tests confirm hyperthyroidism. Which of the following is a drug that produces a permanent reduction in thyroid activity?

- (A) ^{131}I
- (B) Methimazole
- (C) Propylthiouracil
- (D) Thiocyanate (SCN^-)
- (E) Thyroglobulin

Answer:

Propylthiouracil and, to a much lesser extent, methimazole inhibit peripheral conversion of T4 to T3. Thyroglobulin is not a drug. Radioactive iodine is the only medical therapy that produces a permanent reduction of thyroid activity. Anions such as thiocyanate (SCN^-) and perchlorate (ClO_4^-) block the uptake of iodide by the thyroid gland through competitive inhibition of the iodide transporter. Their effectiveness is unpredictable and ClO_4^- can cause aplastic anemia, so these drugs are rarely used. The answer is A.

Which of the following is a sign or symptom that would be expected to occur in the event of chronic overdose with exogenous T4?

- (A) Bradycardia
- (B) Dry, puffy skin
- (C) Large tongue and drooping of the eyelids
- (D) Lethargy, sleepiness
- (E) Weight loss

Answer:

In hyperthyroidism, the metabolic rate increases, and even though there is increased appetite, weight loss often occurs. The other choices are symptoms seen in hypothyroidism. The answer is E.

Parathyroid hormones (lect.6)

1.* A 42-year-old woman presents with hypocalcemia. Which of the following statements about the regulation of Parathyroid Hormone (PTH) is correct?

a) PTH secretion increases when plasma calcium levels are above 5.5 mg/dl.

b) PTH secretion decreases when plasma calcium levels are below 3.5 mg/dl.

c) PTH secretion increases when plasma calcium levels are below 3.5 mg/dl.

d) PTH secretion is not affected by plasma calcium levels.

2.* Which tissue is the primary target for PTH's effect on increasing calcium and phosphate resorption?

a) Intestine

b) Bone

c) Kidneys

d) Liver

3.* PTH indirectly increases calcium absorption in the intestine by:

- a) Directly acting on intestinal cells
- b) Increasing vitamin D synthesis
- c) Decreasing phosphate absorption
- d) Increasing calcitonin secretion

4.* A 55-year-old man with hyperparathyroidism will most likely have which of the following effects on his kidneys?

- a) Increased excretion of calcium
- b) Decreased excretion of phosphate
- c) Increased reabsorption of calcium and increased excretion of phosphate
- d) Increased reabsorption of both calcium and phosphate

5.* Which form of Vitamin D is synthesized in the skin upon exposure to UV light?

- a) 1,25(OH)₂ cholecalciferol (Calcitriol)
- b) 25(OH) cholecalciferol (Calcifediol)
- c) 7-dehydrocholesterol
- d) Cholecalciferol (D3)

6.* Which of the following effects does calcitonin have on bone?

- a) Increases bone resorption
- b) Decreases bone resorption
- c) Increases bone formation
- d) Decreases bone formation

8.* Which statement is true regarding calcitonin's role in calcium homeostasis?

- a) Chronic excess of calcitonin leads to hypocalcemia.
- b) Removal of parafollicular cells causes hypercalcemia.

c) Calcitonin is more important in bone remodeling than in calcium homeostasis.

d) Calcitonin decreases calcium absorption in the kidneys.

9.* A patient with hypocalcemia might be expected to have which of the following changes in calcitonin levels?

- a) Increased calcitonin release
- b) Decreased calcitonin release
- c) No change in calcitonin release
- d) Increased PTH release

10.* A 45-year-old patient recently underwent a thyroidectomy and presents with tingling lips, muscle cramps, and seizures. Which condition is most likely?

- a) Hyperparathyroidism
- b) Hypoparathyroidism
- c) Primary hyperparathyroidism

d) Pseudohypoparathyroidism

12.* All of the following are symptoms of hypoparathyroidism except:

a) Bronchospasm

b) Cataracts

c) Polyuria

d) Carpopedal spasm

13.* What laboratory finding is indicative of hypoparathyroidism?

a) Increased blood calcium levels

b) Increased urinary cAMP levels

c) Decreased urinary calcium levels

d) Decreased blood phosphate levels

14.* Which of the following is the drug of choice for chronic hypoparathyroidism?

- a) Calcium salts
- b) Thiazide diuretics
- c) Calcitriol
- d) Teriparatide

15.* A 55-year-old man with chronic renal failure presents with symptoms of hypercalcemia, including nausea, polyuria, and kidney stones. Which type of hyperparathyroidism is most likely?

- a) Primary hyperparathyroidism
- b) Secondary hyperparathyroidism
- c) Tertiary hyperparathyroidism
- d) Pseudohypoparathyroidism

16.* Which of the following laboratory findings is associated with hyperparathyroidism?

- a) Decreased blood calcium levels
- b) Increased urinary phosphate levels
- c) Decreased urinary cAMP levels
- d) Increased blood phosphate levels

17.* What is the best treatment option for primary hyperparathyroidism?

- a) Low calcium diet
- b) Steroids
- c) Surgery
- d) Calcitonin

18.* All of the following drugs are effective in the management of hypercalcemia except:

- a) Furosemide
- b) Pamidronate
- c) Plicamycin
- d) Teriparatide

19.* Which of the following statements about hypoparathyroidism is false?

- a) It can be caused by thyroidectomy.
- b) It results in decreased blood calcium levels.
- c) It can be treated with calcium supplements.
- d) It is characterized by increased sensitivity to PTH.

20.* What is the primary cause of secondary hyperparathyroidism?

- a) Parathyroid adenoma
- b) Chronic hypocalcemia due to renal disease

c) Malabsorption syndrome

d) Idiopathic causes

21.* Which medication inhibits bone resorption and is used in the treatment of hypercalcemia?

a) Calcitonin

b) Thiazide diuretics

c) Furosemide

d) Plicamycin

22.* A patient with hypoparathyroidism is treated with vitamin D and calcium supplements. Which additional medication might be prescribed to reduce calcium excretion in the urine?

a) Furosemide

b) Thiazide diuretics

c) Calcitonin

d) Cinacalcet

23.* All of the following are characteristics of Paget's disease except:

- a) Increased bone resorption
- b) Organized bone formation
- c) Fractures
- d) Spinal cord injuries

24.* Which of the following is considered the most preferred drug class for the management of Paget's disease?

- a) Calcium supplements
- b) Biophosphonates
- c) Thiazide diuretics
- d) Vitamin D analogs

25.* Salmon calcitonin is effective in the management of all of the following conditions except:

- a) Paget's disease

b) Postmenopausal osteoporosis

c) Hypercalcemia

d) Hypoparathyroidism

26.* All of the following biophosphonates are used in the treatment of Paget's disease except:

a) Etidronate

b) Alendronate

c) Calcitriol

d) Zoledronate

27.* A 60-year-old woman with Paget's disease is prescribed a biophosphonate. Which of the following is likely to be included in her treatment regimen?

a) Calcitonin

b) Pamidronate

c) Teriparatide

d) Thiazide diuretics

28.* All of the following statements about the effects of Paget's disease on the bone are true except:

a) Demineralization of bone

b) Disorganized bone formation

c) Decreased bone resorption

d) Increased risk of fractures

29.* Which of the following is not an indication for the use of salmon calcitonin?

a) Osteoporosis

b) Paget's disease

c) Hypoparathyroidism

d) Hypercalcemia

30.* What is the primary mechanism of action of biophosphonates in the treatment of Paget's disease?

A decorative border of small, dark blue asterisks surrounds the text. The border is composed of a top row, a bottom row, and vertical columns on the left and right sides, all made of repeating asterisk symbols.

a) Increasing bone resorption

b) Decreasing calcium absorption

c) Inhibiting bone resorption

d) Increasing vitamin D synthesis

Pancreatic hormones

(lect. 7+8)

1.* Which of the following statements about Diabetes Mellitus is false?

- a) It is characterized by high blood sugar levels.
- b) It is primarily caused by insulin deficiency.
- c) It affects only carbohydrate metabolism.
- d) It is a major cause of heart disease and stroke.

2.* Which of the following is a characteristic feature of Type I Diabetes Mellitus?

- a) It is most commonly diagnosed in adults over 40.
- b) Patients often present with ketoacidosis.
- c) It represents 80-90% of all diabetes cases.
- d) It is strongly associated with obesity.

3.* All of the following are true about Type II Diabetes Mellitus except:

a) It is usually discovered accidentally after the age of 30-40 years.

b) Most patients are obese, and it is more common in females.

c) Ketoacidosis is common in patients with Type II DM.

d) Patients have a strong family history of the disease.

4.* Which of the following laboratory tests is used to diagnose diabetes?

a) Liver function test

b) Glycosylated hemoglobin (HbA1c)

c) Complete blood count (CBC)

d) Serum creatinine

5.* A 12-year-old child presents with weight loss, fatigue, polyuria, and polydipsia. Which type of diabetes is most likely?

- a) Type I Diabetes Mellitus
- b) Type II Diabetes Mellitus
- c) Gestational Diabetes
- d) Latent Autoimmune Diabetes of Adults (LADA)

6.* Which of the following statements about insulin resistance in Type II Diabetes Mellitus is true?

- a) Insulin resistance only occurs at the receptor level.
- b) It is uncommon in Type II Diabetes Mellitus.
- c) It can occur at pre-receptor, receptor, and post-receptor levels.
- d) Insulin levels are always low in insulin resistance.

7.* All of the following are late complications of diabetes except:

- a) Retinopathy
- b) Nephropathy
- c) Ketoacidosis
- d) Neuropathy

8.* Which of the following diagnostic tests measures long-term blood glucose control?

- a) Random blood sugar (RBS)
- b) Fasting blood sugar
- c) Glycosylated hemoglobin (HbA1c)
- d) Glucose tolerance test

9.* What is the primary metabolic disorder in diabetes mellitus?

- a) Only carbohydrate metabolism is affected.
- b) Only lipid metabolism is affected.

c) Only protein metabolism is affected.

d) Abnormalities in carbohydrate, lipid, and protein metabolism.

10.* Which form of insulin has slight insulin-like activity but is much less potent than insulin?

a) Preproinsulin

b) Proinsulin

c) Insulin

d) C-peptide

11.* Which of the following is devoid of any insulin-like activity?

a) A-chain

b) B-chain

c) C-peptide

d) Proinsulin

12.* The secretion of insulin is dependent on which ion?

- a) Sodium
- b) Potassium
- c) Calcium
- d) Chloride

13.* All of the following factors increase insulin release except:

- a) Glucose
- b) Glucagon
- c) Phenytoin
- d) Sulfonylureas

14.* Which of the following factors does not increase insulin release?

- a) Growth hormone
- b) Amino acids

c) Anticholinergics

d) Fatty acids

15.* All of the following are true about the biosynthesis of insulin except:

a) It starts in the rough endoplasmic reticulum (RER).

b) Proinsulin is converted to insulin in the Golgi apparatus.

c) Preproinsulin has the same potency as insulin.

d) C-peptide is a byproduct of insulin synthesis.

16.* Insulin binding to its receptor directly results in which of the following?

a) Decrease in glucose transport into cells

b) Activation of protein kinase cascades

c) Inhibition of glycolysis

d) Reduction in fatty acid synthesis

17.* All of the following processes are stimulated by insulin except:

- a) Glycogen synthesis
- b) Glycolysis
- c) Fatty acid synthesis
- d) Protein breakdown

18.* Which of the following is NOT a mechanism by which sulfonylureas increase insulin activity?

- a) Increase in number of beta cells
- b) Increase in peripheral cell sensitivity to insulin
- c) Increase in hepatic gluconeogenesis
- d) Increase in insulin binding to its receptors

19.* A 52-year-old patient with type 2 diabetes is prescribed a sulfonylurea. Which of the following is the major mechanism of action of sulfonylureas?

- a) Decrease in glucose absorption in the intestine

b) Increase in insulin release from beta cells

c) Increase in glucagon release

d) Decrease in somatostatin release

20.* Sulfonylureas exert their effects on beta cells through:

a) Voltage-dependent K⁺ channels

b) High-affinity sulfonylurea receptors linked to ATP-sensitive K⁺ ion channels

c) Voltage-dependent Na⁺ channels

d) High-affinity insulin receptors linked to Ca⁺⁺ channels

21.* Which drug interaction is likely to increase the effects of sulfonylureas?

a) Antacids

b) Propranolol

c) Anticholinergics

d) Phenytoin

22.* All of the following are side effects of sulfonylureas except:

a) Hypoglycemia

b) Agranulocytosis

c) Lipodystrophy

d) Hepatic dysfunction

23.* A 65-year-old woman is started on acarbose for type 2 diabetes. What is the primary mechanism of action of acarbose?

a) Increase in insulin sensitivity in peripheral tissues

b) Decrease in hepatic gluconeogenesis

c) Inhibition of alpha-glucosidase in the intestinal brush border

d) Increase in insulin secretion from beta cells

24.* A 70-year-old patient with type 2 diabetes and insulin resistance is prescribed pioglitazone. Which of the following best describes the mechanism of action of thiazolidinediones?

- a) Inhibition of hepatic glucose production
- b) Activation of PPAR-gamma receptors
- c) Inhibition of alpha-glucosidase in the intestine
- d) Stimulation of insulin secretion from beta cells

25.* Which incretin hormone is produced by L cells in the ileum and colon?

- a) Glucose-dependent insulinotropic polypeptide (GIP)
- b) Glucagon-like peptide-1 (GLP-1)
- c) Insulin-like growth factor-1 (IGF-1)
- d) Glucagon

26.* Which of the following drugs should be avoided in a patient taking sulfonylureas due to potential enhancement of hypoglycemic effects?

- a) Aspirin
- b) Antacids
- c) Beta-blockers
- d) Thiazide diuretics

27.* Which of the following statements about sulfonylureas is correct?

- a) They are effective in both type 1 and type 2 diabetes
- b) They decrease insulin binding to its receptors
- c) They are known to cause lipodystrophy
- d) They increase insulin release by binding to sulfonylurea receptors on beta cells

28.* Which of the following drugs is an orally effective selective DPP-4 inhibitor?

a) Exenatide

b) Linagliptin

c) Pramlintide

d) Canagliflozin

29.* What is the main therapeutic effect of synthetic incretin mimetics like Exenatide and Semaglutide in the management of type 2 diabetes?

a) Decrease in insulin sensitivity

b) Increase in hepatic glucose production

c) Increase in insulin and decrease in glucagon blood levels

d) Increase in fasting blood glucose levels

30.* Which drug is a synthetic analog to amylin, used as an adjunct medication in insulin-dependent diabetes?

a) Sitagliptin

b) Pramlintide

c) Bromocriptine

d) Canagliflozin

31.* A patient with type 2 diabetes is given a sympatholytic D2-dopamine agonist to manage postmeal plasma glucose levels. What drug is this patient likely taking?

a) Linagliptin

b) Tirzepatide

c) Bromocriptine

d) Pramlintide

32.* What is a primary action of alpha-glucosidase inhibitors such as Acarbose in managing type 2 diabetes?

a) Increase insulin secretion

b) Inhibit glucose absorption in the intestine

c) Increase glucagon release

d) Enhance insulin sensitivity in peripheral tissues

33.* Which of the following drugs mimics the physiological effects of GLP-1 by delaying gastric emptying and enhancing satiety?

a) Canagliflozin

b) Pramlintide

c) Bromocriptine

d) Linagliptin

34.* A 60-year-old patient with type 2 diabetes and high blood glucose levels despite metformin therapy is prescribed a new drug. The drug blocks the SGLT2 protein in the kidneys. Which drug is the patient likely taking?

a) Exenatide

b) Epalrestat

c) Dapagliflozin

d) Bromocriptine

35.* A patient with diabetes is treated with a drug that inhibits aldose reductase, aiming to reduce the complications of retinopathy, neuropathy, and nephropathy. Which drug is this patient likely using?

a) Ranirestat

b) Tirzepatide

c) Pramlintide

d) Bromocriptine

36.* Which drug, used in the management of type 2 diabetes, functions by increasing hypothalamic dopamine levels to inhibit excessive sympathetic tone?

a) Linagliptin

b) Bromocriptine

c) Semaglutide

d) Canagliflozin

37.* Which of the following is NOT a side effect of sulfonylureas?

- a) Hypoglycemia
- b) Agranulocytosis
- c) Lipodystrophy
- d) Hepatic dysfunction

38.* Which class of oral antidiabetic drugs is primarily used to decrease insulin resistance in patients with type 2 diabetes?

- a) Sulfonylureas
- b) Alpha-glucosidase inhibitors
- c) Thiazolidinediones
- d) Prandial glucose regulators

39.* Which of the following drugs mimics the physiological effects of GLP-1 by delaying gastric emptying and enhancing satiety?

a) Canagliflozin

b) Pramlintide

c) Bromocriptine

d) Linagliptin

40.* Which of the following statements about incretin mimetics is correct?

a) They increase glucagon release

b) They are only effective when used alone

c) They mimic or enhance the effects of GLP-1 and GIP

d) They decrease the sensitivity of beta cells to glucose

41.* A patient with diabetes presents to the ER with a coma. Which of the following drug classes should be considered in their immediate management?

- a) SGLT2 inhibitors
- b) Incretin mimetics
- c) Insulin therapy
- e) Alpha-glucosidase inhibitors

42. Important question (doctor has emphasized how important it is!!): What is the most dangerous side effect of insulin therapy:

- a) Allergy**
- b) lipodystrophy**
- c) Hypoglycemia**
- d) Indurition**