



# PHARMACOLOGY PAST PAPER

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CORRECTED BY NOOR ABU HANTASH

- Which of the following is NOT an adverse reaction of insulin:
- A. Insulin resistance.
- B. itching, redness, swelling, anaphylaxis shock.
- C. Hyperglycemia.
- D. Nausea, hungry, tachycardia.
- E. Lipodystrophy.
- Answer: C

- The following is a side effect shared by all steroids:
- A. Peptic ulcers.
- B. Virilization.
- C. Feminization.
- D. Salt water retention and hypertension.
- E. Osteoporosis.
- Answer: D

- The following is short-acting insulin that could be given S.C and I.V:
- A. Protamine zinc suspension.
- B. Isophane zinc suspension.
- C. Extended insulin zinc suspension.
- D. Insulin zinc suspension.
- E. Regular insulin.
- Answer: E

- The following insulin is widely used in insulin pumps:
- A. Insulin zinc suspension.
- B. Protamine zinc suspension.
- C. Insulin lispro.
- D. Regular insulin.
- E. Isophane zinc suspension.
- Answer: C

- The following is considered the major and most dangerous side effect to glucocorticoids (e.g. cortisol):
- A. Ulcers in the stomach.
- B. Salt and water retention due to aldosterone-like activity.
- C. Suppression to hypothalamus-pituitary-adrenal axis.
- D. Osteoporosis.
- E. Psychosis.
- Answer: C

- Ketoacidosis is best managed by administration of:
- A. Insulin lispro.
- B. Insulin zinc suspension.
- C. Regular insulin.
- D. Insulin glargine.
- E. Regular insulin + K<sup>+</sup>.
- Answer: E

- Diabetes insipidus is a major side effect to:
- A. Bromocriptine.
- B. Desmopressin.
- C. Growth hormone.
- D. Lithium carbonate.
- E. Dexamethasone.
- Answer: D



- All of the following are antithyroid drugs, EXCEPT:
- A. Iodide.
- B. Propylthiouracil.
- C. Propranolol.
- D. Radioactive iodide.
- E. Carbimazole.
- Answer: C

- Regarding sulfonylurea oral hypoglycemic agents, choose the wrong statement:
- A. Hypoglycaemia as a side effect to such class of antidiabetic agents is not frequent.
- B. As compared to first generation, second generation sulfonylureas are less potent.
- C. Their actions are mediated by interacting with specific receptors.
- D. They strongly bind plasma albumin (drug-drug interactions are common).
- E. They increase pancreatic insulin release and increase insulin affinity to its peripheral receptors.
- Answer: B

- Which of the following does NOT cause hyperprolactinemia:
- A. Pregnancy.
- B. High dose estrogen therapy.
- C. Reserpine.
- D. Dopamine.
- E. Stalk effect.
- Answer: D

- All the following are the Chronic complications of Diabetes mellitus EXCEPT:
- A. Strokes.
- B. Coronary heart disease.
- C. Renal failure.
- D. Diabetic ketoacidosis.
- E. Poor wound healing.
- Answer: D

- All the following are the Pharmacological actions of insulin EXCEPT:
- A. Inhibit lipolysis.
- B. Diminish hepatic glycogenolysis.
- C. Inhibit hepatic gluconeogenesis.
- D. Induction of gluconeogenesis.
- E. Promote hepatic glucose storage into glycogen.
- Answer: D

- Which of the following is unlike the others in its mechanism of action:
- A. Triamcinolone.
- B. Prednisolone.
- C. Cortisol.
- D. Dexamethasone.
- E. Metyrapone.
- Answer: E

- All the following are mechanisms of action of the sulfonylureas EXCEPT:
- A. Increase insulin receptor number and the affinity to insulin.
- B. Ameliorating insulin resistance.
- C. Direct stimulation of insulin release from the pancreatic B-cells.
- D. Inhibition of glucagon secretion by pancreas alpha cells.
- E. Induction of glucagon secretion by pancreas.
- Answer: E

- The following is considered the major therapeutic use to hormones:
- A. Diagnostic tools.
- B. Excessive hormonal production.
- C. Breast cancer.
- D. Replacement therapy.
- E. Bronchial asthma.
- Answer: D



- Sitagliptin is an example of:
- A. A synthetic prostaglandin
- B. An inhibitor to incretin metabolism
- C. An ultra short-acting insulin
- D. An antihistamine
- E. A serotonin agonist
- Answer: B

- T3 differs from T4 in all of the following, EXCEPT:
- A. Duration of action.
- B. Potency.
- C. Origin.
- D. Protein binding.
- E. Mechanism of action.
- Answer: E

- Hypoparathyroidism is best treated by administration of:
- A. Octreotide.
- B. Cortisone.
- C. Recombinant human parathyroid hormone.
- D. Spironolactone.
- E. Vitamin D.
- Answer: E

- Hyperparathyroidism is best treated by:
- A. Prednisolone.
- B. Vitamin D.
- C. Calcitonin.
- D. Cinacalcet (calcimimetic drug).
- E. Surgery.
- Answer: E

- Calcitonin:
- A. Is effective orally.
- B. Is produced in the parathyroid gland.
- C. Is a steroid hormone.
- D. Is used to control hypercalcemia.
- E. Increases the rate of bone turnover.
- Answer: D

- As compared to cortisol, dexamethasone:
- A. Has low affinity to the carrier protein (short plasma half-life but more affinity to nuclear receptors (long nuclear half-life)).
- B. Is less potent.
- C. Has shorter duration of action.
- D. Has one tenth the potency of cortisol as an antiinflammatory agent.
- E. Has less suppressant effect to the hypothalamic-pituitary- adrenal axis.
- Answer: A

- A 45 year old diabetic female patient who is on 100 units of insulin daily, was found to have normal blood levels of C-peptide. Normal levels of C-peptide in her blood indicate that she:
- A. Is taking also an oral hypoglycemic agent.
- B. Has normal pancreatic function.
- C. Has type I diabetes mellitus.
- D. Is taking too much insulin.
- E. Is taking human insulin.
- Answer: B

- Glucocorticoids have all of the following pharmacological effects EXCEPT:
- A. Antibacterial effect.
- B. Antiinflammatory effect.
- C. Antiallergic effect.
- D. Immunosuppresant effect.
- E. All answers are correct.
- Answer: A



- Which of the following glucocorticoids has the best anti inflammatory effect without suppressing hypothalamic-pituitary-adrenal axis:
- A. Dexamethasone.
- B. Triamcinolone.
- C. Cortisol.
- D. Prednisone.
- E. None of the above.
- Answer: E

- Regarding the pharmacological actions of steroids, which is false:
- A. Glucocorticoids used to suppress inflammation.
- B. Glucocorticoids used to suppress allergy.
- C. Beclomethasone is better used orally than topically.
- D. Glucocorticoids used in cases of tissue transplantation and lymphopoiesis.
- E. Glucocorticoids used in cases of eye and skin inflammations.
- Answer: C

- Regarding the steps involved in Synthesis of thyroid hormones which is false:
- A. T4 and T3 are released into the circulation.
- B. Iodide is taken up at the a basolateral cell membrane.
- C. T4 and T3 are released into the Golgi bodies.
- D. Polypeptide chains of g (thyroglobulin) are synthesized in the rough endoplasmic reticulum.
- E. Newly formed To is transported to the cell surface in small apical vesicles.
- Answer: C

- Which of the following is not considered a general characteristic to hypothalamic hormones and their synthetic analogs:
- A. Most are peptides or polypeptides.
- B. They have low molecular weight.
- C. They have short biological half-life.
- D. Most interact with surface membrane receptors.
- E. They are ineffective orally.
- Answer: E

- The secretion of this hormone is not regulated by the hypothalamus:
- A. Prolactin.
- B. LH.
- C. Human chorionic gonadotropin.
- D. Growth hormone.
- E. ACTH.
- Answer: C

- All of the following are true statements about the thiazolidinediones EXCEPT
- A. Thiazolidinediones may be hepatotoxic in some individuals.
- B. Thiazolidinediones increase the number of insulin receptors on the cell membrane surface.
- C. Thiazolidinediones bind a nuclear receptor in tissue termed PPAR- $\gamma$ .
- D. Thiazolidinediones are a novel class of drugs that were initially identified for their insulin- sensitizing properties.
- E. All of the above.
- Answer: b

- The main problem of metformin is that :
- A. It increases the risk of lactic acidosis.
- B. It increases the risk of ketoacidosis.
- C. It causes development of congestive heart failure.
- D. It causes hypoglycemia.
- E. All of the above.
- Answer: A

- Hypoglycemia rarely seen with these drugs when used as monotherapy EXCEPT:
- A. Metformin.
- B. Acarbose.
- C. Miglitol.
- D. Glyburide.
- E. All of the above.
- Answer: d



- In addition to its effects on stimulating glucose uptake by tissues, insulin has other physiological actions including:
- A. Increase hepatic glycogenolysis.
- B. Decreasing hepatic glucose storage into glycogen.
- C. Promoting hepatic gluconeogenesis.
- D. Inhibit lipolysis.
- E. All of the above.
- Answer: d

- Sulfonylurea receptor in B-cell membrane activation results in:
- A. ATP-sensitive K<sup>+</sup>-channel activation.
- B. Cellular membrane depolarization.
- C. Ca<sup>2+</sup> removal from the cell via voltage-dependent Ca<sup>2+</sup> channel.
- D. Glucose release.
- E. All of the above.
- Answer: b

- Treatment of Type 2 Diabetes include:
- A. Agents which decrease insulin secretion.
- B. Agents which decrease the sensitivity of target organs to insulin.
- C. Agents which increase glucose absorption.
- D. Insulin.
- E. All of the above.
- Answer: d

- Which of the following is considered a key issue or a major limitation in developing and manufacturing synthetic analogs to cortisol:
  - Answer: **aldosterone like activity of the steroid**
- Drug of the choice to treat paget's disease:
  - Answer: **Calcitonin**
- Pegvisomant is an example of:
  - Answer: **growth hormone antagonist**
- Which of the following hormones is not a peptide or a protein in nature:
  - Answer: **thyroxin**

- Which of the following is a thiazolidinedione oral:
- Answer: **Hypoglycemic agent**
  
- Which has both alpha and gamma agonistic activity to peroxisome proliferator activated receptor par's:
- Answer: **troglitazone**
  
- True regard octreotide:
- Answer: **somatostatin analog**

- Correct statement:
- Answer: **Dexamethasone shorter plasma half life, longer nuclear half life.**
  
- One of the following is not an effect of hyperglycemia:
- Answer: **Plasminogen inhibitor 1**
  
- Protamine:
- Answer: **Decrease the absorption of insulin**

- Wrong Regard TRH:
- Answer: **Ineffective orally**
  
- Drug of choice for pregnant women:
- Answer: **Propylthiouracil**
  
- A 45 years old diabetic female patient who is on 100 units of insulin daily, was found to have normal blood levels of C-peptide Normal levels of C-peptide in her blood indicates the she:
- Answer: **Has normal pancreatic function**

إِنَّ اللَّهَ وَمَلَائِكَتَهُ يُصَلُّونَ عَلَى النَّبِيِّ يَا أَيُّهَا الَّذِينَ آمَنُوا صَلُّوا عَلَيْهِ وَسَلِّمُوا تَسْلِيمًا

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