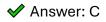
- 1. All of the following are true regarding carbonic anhydrase inhibitors EXCEPT:
 - A. They increase bicarbonate reabsorption in the PCT
 - B. They decrease aqueous humor production
 - C. They may reduce CSF formation
 - D. They can cause metabolic acidosis
 - E. They reduce intraocular pressure
 - ✔ Answer: A
- 2. Which of the following is NOT a typical adverse effect of acetazolamide?
 - A. Hyperchloremic metabolic acidosis
 - B. Renal potassium wasting
 - C. Hypercalcemia
 - D. Calcium phosphate stones
 - E. Hypersensitivity reactions
 - 🖋 Answer: C
- 3. All of the following are true about loop diuretics EXCEPT:
 - A. They inhibit NKCC2 transporter
 - B. They enhance prostaglandin synthesis
 - C. They increase reabsorption of Ca²⁺ in TAL
 - D. They cause hypokalemic metabolic alkalosis
 - E. They are highly protein-bound
 - ✔ Answer: C
- 4. Regarding loop diuretics, which statement is INCORRECT?
 - A. Ethacrynic acid is a sulfonamide derivative

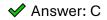
- B. They act on the thick ascending limb
- C. They can cause ototoxicity
- D. They reduce left ventricular preload
- E. They can enhance Mg²⁺ excretion

Answer: A

- 5. Thiazide diuretics increase calcium reabsorption by:
 - A. Inhibiting Na+/K+ ATPase
 - B. Activating apical calcium channels
 - C. Increasing Na+/Ca²⁺ exchange on the basolateral side
 - D. Blocking the NKCC2 cotransporter
 - E. Stimulating PTH release
 - ✔ Answer: C
- 6. All are adverse effects of thiazide diuretics EXCEPT:
 - A. Hyperlipidemia
 - B. Hypokalemia
 - C. Hyponatremia
 - D. Hypercalcemia
 - E. Hypermagnesemia
 - Answer: E
- 7. Thiazide diuretics are ineffective in:
 - A. Nephrogenic diabetes insipidus
 - B. Hypercalciuria
 - C. Acute renal failure
 - D. Hypertension
 - E. Edema of CHF

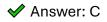


- 8. Which statement is FALSE regarding potassium-sparing diuretics?
 - A. Amiloride blocks ENaC channels directly
 - B. Spironolactone is a competitive aldosterone antagonist
 - C. Eplerenone causes gynecomastia
 - D. They reduce H+ secretion in the distal nephron
 - E. Hyperkalemia is a possible side effect



- 9. Which combination may lead to life-threatening hyperkalemia?
 - A. Thiazide + β -blocker
 - B. Loop diuretic + NSAID
 - C. Spironolactone + ACE inhibitor
 - D. Furosemide + mannitol
 - E. Amiloride + thiazide
 - ✔ Answer: C
- 10. All of the following are pharmacological actions of osmotic diuretics EXCEPT:
 - A. Increase water excretion
 - B. Increase Na+ reabsorption
 - C. Oppose ADH in the collecting duct
 - D. Increase renal blood flow
 - E. Reduce medullary hypertonicity
 - Answer: B
- 11. Mannitol is contraindicated in:
 - A. Intracranial hypertension

- B. Acute glaucoma
- C. Pulmonary edema
- D. Rhabdomyolysis
- E. Oliguric renal failure with intact volume status
- Answer: C
- 12. Which is NOT an expected effect of mannitol?
 - A. Headache
 - B. Hypernatremia
 - C. Hypokalemia
 - D. Volume expansion
 - E. Osmotic diarrhea (if given orally)
 - ✔ Answer: C
- 13. All of the following are features of thiazide diuretics EXCEPT:
 - A. Improve nephrolithiasis
 - B. Increase urinary calcium
 - C. Can be used orally
 - D. Enhance proximal tubular calcium reabsorption
 - E. Reduce blood pressure
 - ✔ Answer: B
- 14. Carbonic anhydrase inhibitors are LEAST effective in:
 - A. Glaucoma
 - B. Metabolic alkalosis
 - C. Treating edema
 - D. Acute mountain sickness
 - E. Epilepsy adjunct therapy



15. Which is NOT a feature of loop diuretics?

- A. Used in hypercalcemia
- B. Reversibly ototoxic
- C. Increase distal tubular Na+ delivery
- D. Decrease K+ secretion
- E. Cause metabolic alkalosis
- 🖌 Answer: D
- 16. Which of the following is true of eplerenone but NOT spironolactone?
 - A. Causes gynecomastia
 - B. Is a potassium-sparing diuretic
 - C. Inhibits aldosterone receptors
 - D. Has fewer endocrine side effects
 - E. Requires dose reduction in hepatic failure
 - ✔ Answer: D

17. Triamterene is associated with all EXCEPT:

- A. Interstitial nephritis
- B. Leg cramps
- C. Azotemia
- D. Hyperkalemia
- E. Hypercalcemia

✔ Answer: E

18. Which of the following diuretics can precipitate gout attacks?

A. Mannitol

- B. Acetazolamide
- C. Furosemide
- D. Spironolactone
- E. Amiloride

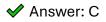
✔ Answer: C

19. Which diuretic would most likely cause photosensitivity?

- A. Furosemide
- B. Indapamide
- C. Spironolactone
- D. Ethacrynic acid
- E. Amiloride
- ✔ Answer: B

20. Which of the following statements about demeclocycline is TRUE?

- A. It inhibits ADH action in the collecting duct
- B. It is a selective V2 receptor antagonist
- C. It is preferred over conivaptan for SIADH
- D. It enhances water reabsorption in the kidney
- E. It is commonly used intravenously
- Answer: A
- 21. Conivaptan is used for:
 - A. Congestive heart failure
 - B. Diabetes insipidus
 - C. SIADH
 - D. Hypertension
 - E. Hypokalemia



- 22. Which is NOT a mechanism of diuretic-induced metabolic alkalosis?
 - A. Volume contraction
 - B. Increased aldosterone secretion
 - C. Enhanced Na+ delivery to distal nephron
 - D. H+ retention in distal nephron
 - E. Enhanced H+ secretion
 - ✔ Answer: D
- 23. All of the following cause hyperuricemia EXCEPT:
 - A. Loop diuretics
 - **B.** Thiazides
 - C. Spironolactone
 - D. Hypovolemia
 - E. Competition for organic acid transporter
 - ✔ Answer: C
- 24. Which diuretic class acts at the thick ascending limb?
 - A. Carbonic anhydrase inhibitors
 - B. Thiazides
 - C. Loop diuretics
 - D. Potassium-sparing diuretics
 - E. ADH antagonists

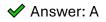
✔ Answer: C

- 25. Hypokalemia is NOT caused by:
 - A. Acetazolamide

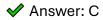
- B. Furosemide
- C. Hydrochlorothiazide
- D. Spironolactone
- E. Metolazone
- ✔ Answer: D

26. Which is LEAST likely to cause metabolic acidosis?

- A. Spironolactone
- B. Amiloride
- C. Acetazolamide
- D. Mannitol
- E. Indapamide
- Answer: E
- 27. Which diuretic is administered parenterally?
 - A. Metolazone
 - B. Hydrochlorothiazide
 - C. Chlorthiazide
 - D. Spironolactone
 - E. Triamterene
 - ✓ Answer: C
- 28. Carbonic anhydrase inhibitors can exacerbate hepatic encephalopathy due to:
 - A. Ammonia accumulation
 - B. Hyperkalemia
 - C. Hypovolemia
 - D. Hypoglycemia
 - E. Hypernatremia



- 29. Which diuretic is both secreted and filtered by the kidney and not metabolized?
 - A. Spironolactone
 - B. Amiloride
 - C. Mannitol
 - D. Furosemide
 - E. Triamterene



- 30. Which of the following pairs is mismatched?
 - A. Indapamide biliary excretion
 - B. Chlorthalidone long half-life
 - C. Triamterene leg cramps
 - D. Eplerenone gynecomastia
 - E. Ethacrynic acid phenoxyacetic acid derivative

✔ Answer: D