Pharmacology department

Dentistry faculty

Questions for the “Pharmacology” exam

1. Receptor mechanisms of drugs action. Characteristics of receptors.

Signaling pathways trough G protein-coupled receptors and secondary messengers.

2. Types of drug interactions. Effects of repeated administrations of drugs.

3. Basic pharmacokinetic processes. Absorption. Bioavailability. Elimination.

Excretion of drugs.

4. Safety of drug use. The concept of the breadth of therapeutic action and

Therapeutic index. Side effects. Adverse reactions (phenomena).

5. M-cholinomimetics. M,N-cholinomimetics. Classification. Pharmacological

effects. Indications for use. Side effects. Contraindications.

6. Anticholinergics. Classification. M-anticholinergics. Peripheral muscle relaxants. The main representatives of the group. Basic pharmacological effects. Side effects. Indications for use.

7. Adrenergic agonists. Classification. Main pharmacological effects associated with stimulation of adrenergic receptors. Indications for use. Side effects.

8. Adrenergic blockers: α-adrenergic blockers, β-adrenergic blockers. Basic pharmacological effects. Indications for use. Side effects.

9. Diuretics. Classification by localization of action. Mechanisms of diuretic actions. Indications for use. Side effects.

10. Antianginal drugs. Main groups. Mechanisms of antianginal action. Indications for use. Side effects.

11. Antiarrhythmic drugs. Classification. Sodium channel blockers. Potassium channel blockers. Classification. Indications for use. Side effects.

12. Drugs for the CHF treatment. Cardiotonic drugs. Cardiac glycosides. Mechanisms of action. Use. Side effects.

13. Basic antihypertensive drugs. Classification. Antihypertensive drugs affecting the RAAS. Mechanisms of action. Side effects.

14. Drugs, affecting hemostasis. Classification. Antiplatelet agents. Anticoagulants of direct and indirect types of action - comparative characteristics. Hemostatic agents. Use. Side effects.

15. Anxiolytics and sedative-hypnotic drugs. Features of the action and applications. Anticonvulsants. Mechanisms of action. Side effects.

16. Opioid analgesics. Classification, mechanism of action, effects, indications, use. Side effects, treatment in case of opioid analgesic overdose.

17. Medicines for relieving bronchospasm and for controlling bronchial asthma. Main groups, mechanisms of action. Side effects.

18. General and local anesthetics. Classification. Comparative characteristics of local anesthetics, their mechanisms of action, side effects, use for different types of local anesthesia.

19. Drugs for the treatment of gastric and duodenal ulcers. Main groups, mechanisms of action, side effects. Antiemetic drugs.

20. Steroidal anti-inflammatory drugs. Comparative characteristics of drugs, pharmacological effects, mechanisms of action, indications for use. Side effects that occur with long-term use of GCs and their mechanisms development.

21. Nonsteroidal anti-inflammatory drugs. Classification, mechanisms actions and pharmacological effects. Indications for use, side effects and mechanisms of their development.

22. Antiallergic drugs. Classification, mechanisms antiallergic action, side effects. Features of antihistamines drugs of the 1st and 2nd generations. Treatment of anaphylactic shock.

23. Medicines that affect thyroid function. Classification. Mechanisms of action and side effects of antithyroid drugs. Treatment of hypo- and hyperthyroidism.

24. Medicines that affect carbohydrate metabolism. Insulins. Classification, pharmacological effects and side effects. Synthetic hypoglycemic drugs. Classification, mechanisms of action and side effects.

25. Medicines affecting bone tissue and mineral metabolism. Features of action and use of drugs. Main side effects.

26. Antibiotics that disrupt the synthesis and integrity of the bacterial cell wall. Classification, mechanisms of action, spectrum of action, side effects. Use in dentistry.

27. Antibiotics that disrupt protein synthesis in a bacterial cell and disrupt integrity of the CPM. Classification, mechanisms of action, spectrum of action, side effects. Use in dentistry.

28. Antiviral agents and antifungal agents. Classification, mechanisms and spectrum of action, indications for use, side effects.

29. Metronidazole. Fluoroquinolones. Antituberculosis drugs. Classification, mechanisms and spectrum of action, side effects. Use.

30. Antitumor agents. Classification, mechanisms and spectrum antitumor effect, indications for use, side effects.