

## **Examination questions on Clinical Pharmacology for the 6th year students of the Faculty of International Students**

1. The goals and tasks of the discipline "Clinical Pharmacology", the main stages of development of clinical pharmacology, the interconnection with other natural science and special disciplines.
2. The nomenclature of drugs (International Nonproprietary Name (INN) and Trade Name (TN)).
3. Original and generic drugs. The study principles of the bioequivalence of generic drugs.
4. Clinical trials. The purpose, tasks and methods of clinical trials of drugs
5. Types and phases of clinical trials. Medical, methodological and ethical aspects of clinical trials.
6. Ethics Committee, its role and tasks.
7. Biological and therapeutic drug equivalence
8. The principles of evidence-based medicine (EBM) in clinical practice.
9. Clinical guidelines of diagnostic and treatment. Rules of prescribing and dispensing drugs. Prescription and non-prescription drugs.
10. Clinical pharmacology - the basis of rational pharmacotherapy. The basic principles of EBM.
11. Clinical pharmacokinetics. The characteristic of drugs' administration routes.
12. Drug interactions. Adverse drug reactions
13. Distribution of drugs in the body. Metabolism of drugs.
14. Basic pharmacokinetic parameters.
15. Bioavailability of drugs. Factors affecting the pharmacokinetics of drugs.
16. Features of pharmacokinetics of drugs with long-term use.
17. The main parameters of clinical pharmacodynamics. Dose-effect relationship. The relationship between pharmacokinetics and pharmacodynamics.
18. Combined use of drugs. Types of drug interactions. Polypharmacy.
19. Features of pharmacokinetics and pharmacodynamics of drugs in elderly patients, pregnant and lactating women.
20. Features of pharmacokinetics and pharmacodynamics of drugs in patients with liver and kidney diseases.
21. Identification, reporting and prevention of suspected adverse drug reactions. Notification of suspected adverse drug reactions. Patients reporting about the possible manifestations of adverse drugs reactions.
22. The concept of receptors, types of receptors. Types of interaction of drugs with receptors

23. Classification of antimicrobial drugs.
24. Clinical pharmacology of penicillins.
25. Clinical pharmacology of cephalosporins.
26. Clinical pharmacology of aminoglycosides.
27. Clinical pharmacology of lincosamides.
28. Clinical pharmacology of tetracyclines, sulfanilamides.
29. Clinical pharmacology of glycopeptides.
30. Clinical pharmacology of oxazolidinones.
31. Clinical pharmacology of quinolones.
32. Clinical pharmacology of fluoroquinolones.
33. Principles of combined antibiotic treatment. Monitoring of the effectiveness and safety of anti-infective treatment.
34. Classification of antiviral drugs.
35. Clinical and pharmacological characteristics of anti-influenza drugs (M2 inhibitors, neuraminidase inhibitors, inhibitors of enveloped virus membrane fusion, etc.)
36. Clinical and pharmacological characteristics of anti-herpes virus and antiretroviral drugs, interferons, vaccines.
37. Classification of antifungal drugs: for local use - polyene antibiotics, imidazoles, allylamines, other drugs; for systemic use - polyene antibiotics, imidazoles, triazoles, allylamines, pyrimidine derivatives.
38. Clinical pharmacology of antiparasitic drugs.
39. Clinical and pharmacological characteristics of nonsteroidal anti-inflammatory drugs.
40. Clinical and pharmacological characteristics of glucocorticoids.
41. Narcotic analgesics.
42. Centrally acting non-opioid analgesic drugs, classification, mechanism of action, side effects.
43. Analgesics with mixed mechanism of action.
44. Antitussive drugs with central, peripheral, mixed action.
45. Use of expectorant and mucolytic drugs.
46. Drugs for the relief of broncho-obstructive syndrome (beta-2-adrenomimetics, M-anticholinergics, methylxanthines, combined drugs).
47. Clinical and pharmacological characteristics and use of drugs for basic anti-inflammatory therapy of bronchial asthma (asthma controller medications): inhaled corticosteroids, leukotriene receptor antagonists, recombinant monoclonal antibodies.
48. Phytotherapy in pulmonology.
49. Clinical pharmacology of diuretics.

50. Clinical pharmacology of  $\beta$ -blockers.
51. Clinical pharmacology of slow calcium channel blockers.
52. Clinical pharmacology of angiotensin-converting enzyme inhibitors.
53. Clinical pharmacology of angiotensin II receptor blockers.
54. Clinical pharmacology of central alpha-2 and imidazoline receptor agonists.
55. Clinical pharmacology of other antihypertensive drugs:  $\alpha$ -blockers, renin inhibitors, aldosterone antagonists.
56. Clinical pharmacology of nitrates, sydnonimines, cardiocytoprotectors.
57. Clinical pharmacology of antiplatelet agents (drugs).
58. Drugs that correct lipid metabolism (statins, fibrates, polyunsaturated fatty acids).
59. Clinical and pharmacological characteristics of antiarrhythmic drugs (classification of Vaughan-Williams, mechanisms of antiarrhythmic action, indications and contraindications, safety monitoring).
60. Clinical pharmacology of class IA antirhythmic drugs.
61. Clinical pharmacology of class IB antirhythmic drugs.
62. Clinical pharmacology of class IC antirhythmic drugs.
63. Clinical pharmacology of class II antirhythmic drugs.
64. Clinical pharmacology of class III antirhythmic drugs.
65. Clinical pharmacology of class IV antirhythmic drugs.
66. Drugs used for cardiac conduction disorders.
67. Clinical and pharmacological characteristics of antisecretory drugs (proton pump inhibitors).
68. Clinical pharmacology of H<sub>2</sub>-histamine blockers.
69. Clinical pharmacology of M-anticholinergics, antacids.
70. Drugs that protect and enhance the regeneration of the gastrointestinal tract mucous membrane.
71. Helicobacter pylori eradication protocols.
72. Classification of antiemetic drugs.
73. Drugs that influence the gastrointestinal tract motor function.
74. Enzyme drugs for replasement therapy.
75. Clinical pharmacology of cholekinetic drugs and hepatoprotectors.
76. Antidiarrheal and laxative drugs.
77. Drugs, regulating intestinal microbiota.
78. Herbal medicine for the digestive system diseases.
79. Clinical pharmacology of direct and indirect anticoagulants.
80. Clinical pharmacology of thrombolytic drugs.
81. The main drugs, used to reduce the activity of the blood coagulation system: proaggregants, procoagulants, fibrinolysis inhibitors.

82. Clinical and pharmacological characteristics of antianemic drugs.
83. Indications and contraindications to the use of iron-containing drugs and cyanocobalamin. Efficacy criteria of pharmacological therapy.
84. Clinical pharmacology of sulfonylurea derivatives, biguanides, meglitinides, thiazolidinediones and incretins.
85. Insulin medicines. Indications and contraindications, methods of monitoring the effectiveness and safety.
86. Drugs for hypothyroidism replacement therapy.
87. Clinical pharmacology of antithyroid drugs.