Materials
for the Pharmacology exam, for the students of the IIIrd year, semester 5
2022-2023

General pharmacology

1. Determine pharmacokinetik parameters
2. Determine the advantages of the sublingual route of administration
3. Determine the advantages of the rectal route of administration
4. Determine the mechanisms of drug absorbtion
5. Determine the characteristics of drug absorbtion depending on the pH of the environment
6. Determine the mechanisms of drug penetration through membranes and barriers
7. Determine the characteristics of the passive transport of drugs
8. Determine the characteristics of the active transport of drugs
9. Determine the characteristics of free fraction of drugs
10. Determine the characteristics of the coupled fraction of drugs
11. Determine the characteristics of the volume of distribution of drugs
12. Determine the pathways of first stage of biotransformation of drugs
13. Determine the pathways of second stage of biotransformation of drugs
14. Determine the inducing drugs of liver microsomal enzymes
15. Determine the suppressive drugs of liver microsomal enzymes
16. Determine the consequences of induction of liver microsomal enzymes
17. Determine the consequences of suppresion of liver microsomal enzymes
18. Determine the factors that influence the renal elimination of drugs
19. Determine the mechanism of renal elimination of drugs
20. Determine the characteristics of renal elimination of drugs depending on the pH of the environment
21. Determine the concept of drug's half-life
22. Determine the concept of primary action of drugs
23. Determine the concept of pharmacodynamic action of drugs
24. Determine the concept of global pharmacological effect of drugs
25. Determine the typical mechanisms of drug action
26. Determine the phenomena of the associated administration of drugs
27. Determine the phenomena of the repeated administration of drugs
28. Determine the phenomena of the sudden suspension of drugs
29. Determine the parameters of drug safety
30. Determine the genetic polymorphism whose enzymes determine the pharmacokinetics of drugs
31. Determine the genetic polymorphism whose enzymes determine the pharmacodynamics of drugs
32. Determine the genetic polymorphism of phase II enzymes of metabolism
33. Determine the unwanted effects of drugs during pregnancy
34. Determine the phenomena of drug addiction
35. Determine the definition of therapeutic index
36. Determine the definition of therapeutic range

Venotropic drugs

1. Determine the direct-acting M-N-cholinomimetics
2. Determine the moderately acting reversible anticholinesterases
3. Determine the anticholinesterases with irreversible action
4. Determine M-cholinomimetics
5. Determine the effects of M-cholinomimetics on the eye
6. Determine the mechanism of miosis upon administration of M-cholinomimetics
7. Determine the mechanism of M-cholinomimetics on visual accommodation
8. Determine the effects of M-cholinomimetics on the digestive system
9. Determine the effects of M-cholinomimetics on the heart
10. Determine the effects of M-cholinomimetics on the bronchi
11. Determine the effects of M-cholinomimetics on the urinary system
12. Determine the effects of M-cholinomimetics on the exocrine glands
13. Determine the symptoms of intoxication with M-cholinomimetics
14. Determine the drug group used in M-cholinomimetic intoxication
15. Determine the symptoms of poisoning with organophosphorus compounds
16. Determine the stages of poisoning with organophosphorus compounds
17. Determine the drugs used in poisoning with organophosphorus compounds
18. Determine the indication of M-cholinomimetics
19. Determine the indication of anticholinesterases
20. Determine the effects of N-cholinomimetics
21. Determine M-cholinoblockers

22. Determine the effects of M-cholinoblockers on the eye
23. Determine the mechanism of mydriasis when taking M-cholinoblockers
24. Determine the mechanisms of M-cholinoblockers on visual accomodation
25. Determine the effects of M-cholinoblockers on the digestive system
26. Determine the effects of M-cholinoblockers on the bronchi
27. Determine the effects of M-cholinoblockers on the heart
28. Determine the effects of M-cholinoblockers on the urinary system
29. Determine the effects of M-cholinoblockers on the exocrine glands
30. Determine the symptoms of intoxication with M-cholinoblockers
31. Determine the group of drugs used in intoxication with M-cholinoblockers
32. Determine the indications of M-cholinoblockers
33. Define the short-acting ganglioblocker
34. Determine the medium-acting ganglioblocker
35. Determine the indications of ganglioblockers
36. Determine the side effects of ganglioblockers
37. Determine the antidepolarizing muscle relaxant
38. Determine the depolarizing muscle relaxant
39. Determine the mechanism of action of antidepolarizing muscle relaxants
40. Determine the mechanism of action of depolarizing muscle relaxants
41. Determine the indications of muscle relaxants
42. Determine the group of drugs for decurarization of antidepolarizing muscle relaxants
43. Determine the decurarization principle of depolarizing muscle relaxants
44. Determine alpha-beta-adrenomimetics
45. Determine peripherally acting alpha-2-adrenomimetics
46. Determine beta-2-adrenomimetics
47. Determine beta-1-adrenomimetic
48. Determine non-selective beta-adrenomimetic
49. Determine alpha-1-adrenomimetics
50. Determine alpha-2-adrenomimetics with central action
51. Determine the adrenomimetics that contribute to the release of the mediators
52. Determine the adrenomimetics that inhibit the reuptake of the mediators
53. Determine the adrenomimetic with mixed mechanism of action
54. Determine the group of adrenergic drugs that increase blood preasure
55. Determine the group of adrenergic drugs with stimulating effects on the heart
56. Determine the group of adrenergic drugs that lower blood preasure
57. Determine the group of adrenergic drugs that produce bronchodilatation
58. Determine the group of adrenergic drugs that increase the level of glucose
59. Determine the group of adrenergic drugs that reduce microcirculation
60. Determine the effects of alpha-beta-adrenomimetics on the heart
61. Determine the effects of alpha-beta-adrenomimetics on vessels
62. Determine the effects of alpha-beta-adrenomimetics on blood pressure
63. Determine the effects of alpha-adrenomimetics on blood pressure
64. Determine the effects of alpha-beta-adrenomimetics on microcirculation
65. Determine the effects of alpha-adrenomimetics on microcirculation
66. Determine the effects of alpha-beta-adrenomimetics on the respiratory system
67. Determine the effects of beta-adrenomimetics on the heart
68. Determine the effects of alpha-adrenomimetics on vessels
69. Determine the effects of dopaminomimetics on the heart
70. Determine the effects of dopaminomimetics at high doses
71. Determine the effects of dopaminomimetics at low doses
72. Determine the effects of dopaminomimetics at medium doses
73. Determine the effects of beta-adrenomimetics on metabolism
74. Determine the effects of alpha-beta-adrenomimetics on metabolism
75. Determine the effects of beta-adrenomimetics on the respiratory system
76. Determine the effects of alpha-adrenomimetics on the heart
77. Determine the mechanism of bradycardia caused by alpha-adrenomimetics
78. Determine the phases of action of epinephrine on blood pressure
79. Determine the phase of action of norepinephrine on blood pressure
80. Determine the indications of alpha-beta-adrenomimetics
81. Determine the indications of alpha-adrenomimetics
82. Determine the indications of alpha-2-adrenomimetics with peripherally action
83. Determine the indications of beta-2-adrenomimetics
84. Determine the indications of beta-1-adrenomimetics

85. Determine the indications of dopaminomimetics
86. Determine drugs uses in acute arterial hypotension
87. Determine the drug of choice in anaphilactic shock
88. Determine the groups of drugs used in rhinitis, conjunctivitis
89. Determine the drugs that produce tocolytic effect
90. Determine the side effects of alpha-beta-adrenomimetics
91. Determine the side effects of alpha-adrenomimetics
92. Determine the side effects of beta-adrenomimetics
93. Determine the non-selective alpha-adrenoblockers
94. Determine alpha-1-adrenoblockers
95. Determine the non-selective beta-adrenoblockers
96. Determine beta-1-adrenoblockers
97. Determine beta-adrenoblockers with vasodilatory action
98. Determine alpha-beta-adrenoblockers
99. Determine the effects of beta-adrenoblockers
100. Determine the effects of alpha-adrenoblockers
101. Determine the indications of beta-adrenoblockers
102. Determine the indications of alpha-adrenoblockers
103. Determine the indications of alpha-1-adrenoblockers
104. Determine the side effects of beta-adrenoblockers
105. Determine the side effects of alpha-adrenoblockers
106. Determine the dopamine blocking drugs
107. Determine the sympatholytic drugs
108. Determine the side effects of sympatholytic drugs
109. Determine the mechanisms of action of sympatholytic drugs

Drugs with action on CNS

1. Determine volatile inhalational general anesthetics
2. Determine gaseos inhalational general anesthetics
3. Determine the mechanisms of action of general anesthetics
4. Determine the general intravenous anesthetics groups
5. Determine short-acting intravenous general anesthetics
6. Determine medium-acting intravenous general anesthetics
7. Determine long-acting intravenous general anesthetics
8. Determine the groups of hypnotic drugs
9. Determine the hypnotics from the barbiturate groupe
10. Determine the hypnotics from the benzodiazepine groupe
11. Determine the hypnotics from the non-benzodiazepine groupe
12. Determine the hypnotics from the melatonin agonist groupe
13. Determine short-acting hypnotics
14. Determine medium-acting hypnotics
15. Determine long-acting hypnotics
16. Determine the mechanisms of hypnotic action of barbiturates
17. Determine the characteristics of the hypnotic action of barbiturates
18. Determine the effects of barbiturates
19. Determine the indications of barbiturates
20. Determine the side effects of barbiturates
21. Determine the mechanisms of hypnotic action of benzodiazepines
22. Determine the characteristics of hypnotic action of benzodiazepines
23. Determine the effects of benzodiazepines
24. Determine the indications of benzodiazepines
25. Determine the side effects of benzodiazepines
26. Determine the mechanisms of hypnotic action of non-benzodiazepines
27. Determine the characteristics of the hypnotic action of non-benzodiazepines
28. Determine the indications of non-benzodiazepines
29. Determine the side effects of non-benzodiazepines
30. Determine the mechanisms of hypnotic action of melatonin agonists
31. Determine the characteristics of the hypnotic action of melatonin agonists
32. Determine the indications of melatonin agonists
33. Determine melatonin receptor agonists as hypnotics
34. Determine orexin receptor antagonists as hypnotics
35. Determine the characteristics of orexin receptor antagonists as hypnotics
36. Determine the hypnotics used in sleep disturbance (initial hyposomnia)

37. Determine the hypnotics used in frequent night awakenings (intermittent hyposomnia)
38. Determine the hypnotics used in reducing the duration of sleep (terminal hyposomnia)
39. Determine the groups of symptomatic anticonvulsivants
40. Determine the groups of striated muscle antispasmodics (central muscle relaxants)
41. Determine the characteristics of the muscle relaxant effect of benzodiazepine
42. Determine the indications of benzodiazepines as central muscle relaxants
43. Determine the benzodiazepines used as central muscle relaxants
44. Determine the drug from the group of various central muscle relaxants
45. Determine the drugs used in major epileptic seizures
46. Determine the drug used in minor epileptic seizures
47. Determine the drug of choice in status epilepticus
48. Determine the drugs used in focal seizures of epilepsy
49. Determine the mechanisms of action of antiepileptic drugs
50. Determine the groups of antiparkinsonian drugs
51. Determine dopaminergic drugs as antiparkinsonian
52. Determine cholinergic drugs as antiparkinsonian
53. Determine the mechanisms of action of antiparkinsonian drugs
54. Determine the types of local action of ethyl alcohol
55. Determine the indications of ethyl alcohol in medicine
56. Determine the consecutiveness of the the influence of ethyl alcohol on CNS
57. Determine the effects of ethyl alcohol on the stomach depending on the concentration
58. Determine the metabolic changes in the liver under the action of ethyl alcohol
59. Determine the absorbtion characteristics of ethyl alcohol depending on the concentration
60. Determine the distribution characteristics of ethyl alcohol
61. Determine the metabolic pathways of ethyl alcohol
62. Determine the drugs used in treatment of alcoholism
63. Determine the mechanism of action of disulfiram
64. Determine the mechanism of action of naltrexone in alcoholism
65. Determine the groups of antimicrobials that can cause a disulfiram-type reaction
66. Determine the groups of drugs used as sedatives
67. Determine the indications of sedative drugs
68. Determine the groups of anxiolytic drugs
69. Determine short-acting anxiolytics
70. Determine medium-acting anxiolytics
71. Determine long-acting anxiolytics
72. Determine the mechanism of action of benzodiazepine anxiolytics
73. Determine the effects of anxiolytics
74. Determine the indications of benzodiazepine anxiolytics
75. Determine the side effects of benzodiazepine anxiolytics
76. Determine the typical antipsychotics
77. Determine the atypical antipsychotics
78. Determine the mechanisms of action of antipsychotics
79. Determine the effects of antipsychotics
80. Determine the mechanism of sedative effect of antipsychotics
81. Determine the mechanism of antipsychotic effect of antipsychotics
82. Determine the indications of antipsychotics in psychiatry
83. Determine the indications of antipsychotics in psychiatry
84. Determine the side effects of antipsychotics on CNS
85. Determine the ophthalmic side effects of antipsychotics
86. Determine the endocrine side effects of antipsychotics
87. Determine the cardiovascular side effects of antipsychotics
88. Determine the digestive side effects of antipsychotics
89. Determine the groups of thymoisoleptics
90. Determine the effects of thymoisoleptics
91. Determine the indications of normothymics
92. Determine the antidepressants that non-selectively inhibit the reuptake of monoamines
93. Determine the antidepressants that selectively inhibit the reuptake of serotonin
94. Determine the antidepressants that selectively inhibit the reuptake of noradrenalin
95. Determine the antidepressants that irreversibly inhibit monoamine metabolism
96. Determine the antidepressants that reversibly inhibit monoamine metabolism
97. Determine the effects of antidepressants
98. Determine the mechanisms of action of antidepressants
99. Determine the central side effects of heterocyclic antidepressants

100. Determine the peripheral side effects of heterocyclic antidepressants
101. Determine the side effects of MAOI antidepressants
102. Determine the groups of nootropics
103. Determine cerebrovasoactive nootropics
104. Determine the mechanisms of action of nootropics
105. Determine the effects of nootropics
106. Determine the indications of nootropics
107. Determine the side effects of nootropics
108. Determine the CNS stimulants from the phenylalkylamine group
109. Determine the CNS stimulants from the piperidine group
110. Determine the mechanisms of action of CNS stimulants from the amphetamine group
111. Determine the effects of CNS stimulants from the phenylalkylamine group
112. Determine the indications of CNS stimulants
113. Determine the side effects of CNS stimulants when used for a limited time
114. Determine the side effects of CNS stimulants when do chronic abuse
115. Determine the CNS excitatory effects of methylxanthines
116. Determine the indications of CNS stimulants from the group of methylxanthines
117. Determine the side effects of CNS stimulants from the group of methylxanthines in excessive doses
118. Determine the agonists of opioid analgesics
119. Determine the agonist-anatagonists of opioid analgesics
120. Determine the antagonists of opioid analgesics
121. Determine the centrally acting non-opioid analgesics
122. Determine the analgesic with mixed mechanism of action
123. Determine the groups of peripherally acting analgesics
124. Determine the mechanism of action of opioid analgesics at the systemic level
125. Determine the levels of achievement of the analgesic action of the opioid analgesics
126. Determine the result of the action of opioid analgesics at the level of the posterior horns of the spinal cord
127. Determine the result of the action of opioid analgesics at the level of the thalamus, hypothalamus, reticular formation
128. Determine the result of the action of opioid analgesics at the level of the cerebral cortex
129. Determine the action of opioid analgesics on the psychic sphere
130. Determine the centres that are stimulated by opioid analgesics
131. Determine the centres that are inhibited by opioid analgesics
132. Determine the effects of opioid analgesics on the digestive system
133. Determine the effects of opioid analgesics on the cardiovascular system
134. Determine the effects of opioid analgesics on the respiratory system
135. Determine the indications of opioid analgesics
136. Determine the side effects of opioid analgesics on the CNS
137. Determine the side effects of opioid analgesics on the digestive system
138. Determine the side effects of opioid analgesics on the respiratory system
139. Determine the side effects of opioid analgesics on the urinary system
140. Determine the mechanisms of action of paracetamol
141. Determine the indications of paracetamol
142. Determine the side effects of paracetamol
143. Determine the mechanisms of action of tramadol
144. Determine the indications of tramadol
145. Determine the side effects of tramadol
146. Determine the mechanisms of action of peripherally acting non-opioid analgesics
147. Determine the effects of peripherally acting analgesics
148. Determine the indications of peripherally acting analgesics

Antithrombotic, hemostatic and antianemic

1. Determine the groups of direct-acting anticoagulants
2. Determine the groups of antiplatelets
3. Determine the direct antagonists of factor Xa
4. Determine the direct antagonists of thrombin
5. Determine heparinoid drugs as anticoagulants
6. Determine indirect anticoagulant drugs
7. Determine the antiplatelet drugs that block the thromboxane A2 receptor
8. Determine the antiplatelet drugs that inhibit phosphodiesterase
9. Determine the antiplatelet drugs that inhibit cyclooxygenase
10. Determine the antiplatelet drugs that block purinergic receptors
11. Determine the antiplatelet drugs that reduce blood viscosity
12. Determine the antiplatelet drugs that block GPIIB/IIIA receptors

13. Determine the effects of standart heparin
14. Determine the mechanism of anticoagulant action of standart heparin
15. Determine the mechanism of anticoagulant action of low molecular weight heparins
16. Determine the mechanism of action of indirect anticoagulants
17. Determine the mechanism of antiplatelet action of clopidogrel
18. Determine the mechanism of antiplatelet action of acetylsalicylic acid
19. Determine the mechanism of antiplatelet action of pentoxifylline
20. Determine the mechanism of antiplatelet action of ridogrel
21. Determine the mechanism of antiplatelet action of abciximab
22. Determine the mechanism of antiplatelet action of dipyridamole
23. Determine the mechanism of antiplatelet action of prostaglandin analogs
24. Determine the effects of acetylsalicylic acid as an antiplatelet agent
25. Determine the idications of standart heparin
26. Determine the idications of low molecular weight heparins
27. Determine the idications of sulodexide
28. Determine the idications of indirect anticoagulants
29. Determine the idications of indirect fibrinolytics
30. Determine the idications of antiplatelet drugs
31. Determine the indications of dextrans as antithrombotics
32. Determine the side effects of standart heparin
33. Determine the groups of hemostatic drugs with systemic action
34. Determine the groups of hemostatic drugs with local action
35. Determine the indications of thrombin
36. Determine the indications of fibrinogen
37. Determine the indications of aprotinin
38. Determine the indications of synthetic antifibrinolytics
39. Determine the indications of calcium drugs as aggregants
40. Determine the indications of astringent drugs as hemostatic
41. Determine the indications of vasoconstrictor drugs as hemostatic
42. Determine the indications of vitamin K drugs
43. Determine the mechanism of action of vitamin K drugs
44. Determine the drugs used in hemolytic anemias
45. Determine the drugs used in hyperchromic anemias
46. Determine the drugs used in hypochromic anemias
47. Determine the drugs used in hypo- and aplastic anemias
48. Determine the indications of erythropoietin drugs
49. Determine the indications of iron drugs
50. Determine the effects of erythropoietin
51. Determine the drugs that stimulate leukopoiesis

Note:
Materials for preparation for exam:

1. **Ghicavîi V etc. Farmacologia, 2019**
2. **Courses of pharmacology**

Head of studies, department of pharmacology and clinical pharmacology T. Rakovskaia

Head of department of pharmacology and clinical pharmacology N. Bacinschi