

## **Materials**

**for self-preparing  
for license exam  
"KROK 2. PHARMACY"  
(*discipline – clinical pharmacy*)**

**faculty for foreign citizens' education**

## Introduction in Clinical Pharmacy

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| <p>Which of the listed preparations should be used as antidote and included into the first-aid kit required at factories where acute intoxications with arsenic, mercury, chrome and bismuth compounds are possible?</p> <p>A. <b>Unithiolum</b><br/>         B. Adrenalinum<br/>         C. Atropinum<br/>         D. Morphinum<br/>         E. Droperidolum</p> | <p>Which drug of the given below is a first aid antidote for acute poisoning caused by arsenic, mercury, chromium, and bismuth compounds?</p> <p>A. <b>Dimercaprol (Unithiol)</b><br/>         B. Prednisolone<br/>         C. Atropine<br/>         D. Adrenaline<br/>         E. Morphine</p>  |
| <p>A 38-year-old male patient with mercuric chloride intoxication has been delivered to the admission ward in grave condition. What antidote must be immediately administered the patient?</p> <p>A. <b>Unithiol</b><br/>         B. Dipyroxime<br/>         C. Atropine<br/>         D. Nalorphine<br/>         E. Izonitrozinum</p>                             | <p>Treatment of poisonings with inorganic mercury compounds includes the use of the following antidote:</p> <p>A. <b>Unithiol</b><br/>         B. Naloxone<br/>         C. Tetacinum-calcium<br/>         D. Desferal<br/>         E. Dexamethasone</p>  |
| <p>A patient with chronic heart failure, who has been taking cardiac glycosides, developed signs of glycoside intoxication. What antidote would be advisable in this case?</p> <p>A. <b>Unithiol (DMPS)</b><br/>         B. Vicasol (Menadione)<br/>         C. Protamine<br/>         D. Naloxone<br/>         E. Methionine</p>                                 | <p>During the treatment of chronic heart failure with digoxin in a patient having bradycardia, nausea, vomiting, blurred vision. Which drug is the antidote in this case?</p> <p>A. <b>Unithiol (2,3-Dimercapto-l-propanesul-fonic acid)</b><br/>         B. Tetacinum calcium<br/>         C. Dipiroximium<br/>         D. Amyl nitrite<br/>         E. Atropine sulphate</p> |
| <p>A child has accidentally drunk a solution that was used by his grandmother for glaucoma treatment. The solution turned out to be pilocarpine hydrochloride. What drug can be used as an antidote?</p> <p>A. <b>Atropinum</b><br/>         B. Carbacholinum<br/>         C. Aceclidinum<br/>         D. Benzohexonium<br/>         E. Pentaminum</p>            | <p>A patient suffering from trombophlebitis of his lower extremities has developed symptoms of heparin overdose. What drug can be used as an antidote?</p> <p>A. <b>Protamine sulfate</b><br/>         B. Phenindione (Phenilin)<br/>         C. Dipiridamol<br/>         D. Pentoxifylline<br/>         E. Theophylline</p>   |
| <p>A patient receives heparin for acute myocardial infarction. On the third day the patient developed hematuria and subcutaneous</p>  | <p>A patient receives heparin for acute myocardial infarction. On the third day the patient developed hematuria and</p>  |

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| <p>hematomas. What medicine should be prescribed as an antidote in this case?</p> <p><b>A. Protamine sulfate</b><br/> B. Vicasol (Menadione)<br/> C. Streptokinase<br/> D. Clopidogrel<br/> E. Acetylsalicylic acid</p>   | <p>subcutaneous hematomas. What medicine should be prescribed as an antidote in this case?</p> <p><b>A. Protamine sulfate</b><br/> B. Pancreatin<br/> C. Streptokinase<br/> D. Clopidogrel<br/> E. Acetylsalicylic acid</p>  |
| <p>A patient with signs of morphine intoxication has been delivered into an admission room. Name the necessary antidote:</p> <p><b>A. Naloxone</b><br/> B. Collargol<br/> C. Essentiale<br/> D. Ectericidum<br/> E. Trental (Pentoxifylline)</p>  | <p>What preparation is the specific antidote in case of intoxication with iron preparations?</p> <p><b>A. Deferoxamium</b><br/> B. Protamine sulfate<br/> C. Bemegridum<br/> D. Atropinum<br/> E. Penicillamine</p>  |
| <p>Which drug with antagonistic effect can be used to stop bleeding caused by prolonged use of neodicumarinum?</p> <p><b>A. Vikasolum</b><br/> B. Aminocapronic acid<br/> C. Etamsylate<br/> D. Fibrinoge<br/> E. Ascorbic acid</p>   | <p>A 45-year-old patient has been taking neodicumarinum for thrombophlebitis for two weeks. The regular blood test revealed a decrease in prothrombin concentration, microhematuria. Which drug should be used as neodicumarinum antagonist?</p> <p><b>A. Vicasol</b><br/> B. Protamine sulfate<br/> C. Sodium citrate<br/> D. Heparin<br/> E. Aminocaproic acid</p>             |
| <p>During a surgical operation the muscle relaxant tubocurarine chloride was used. What antagonist drug should be injected in order to allow the patient to breathe independently?</p> <p><b>A. Neostigmine</b><br/> B. Dithylinum<br/> C. Cytitonum<br/> D. Aethimizolum<br/> E. Benzohexonium</p> | <p>A 5-year-old child had accidentally drunk a bottle of eye drops. After 30 minutes the child developed shortness of breath, difficult swallowing, voice hoarseness, dilated pupils, hyperthermia. Which of the drugs might have induced the described manifestations?</p> <p><b>A. Atropine</b><br/> B. Adrenaline<br/> C. Mesatonum<br/> D. Pilocarpine<br/> E. Novocaine</p> |
| <p>A woman who has been treated for infiltrative focal tuberculosis for a long time complains of acute hearing impairment. Which of the following</p>   | <p>After the start of a treatment, a tuberculosis patient has developed red coloration of urine, saliva, and lacrimal fluid. What drug could have caused</p>   |

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| <p>preparations might be the cause of this side effect?</p> <p>A. <b>Streptomycin</b><br/> B. Isoniazid<br/> C. Ethambutol<br/> D. Rifampicin<br/> E. Ethionamidum</p>  | <p>such changes in this case?</p> <p>A. <b>Rifampicin</b><br/> B. Alcoholic iodine solution<br/> C. Isoniazid<br/> D. Ciprofloxacin<br/> E. Benzylpenicillin (Penicillin G) sodium salt</p>   |
| <p>A woman with open tuberculosis is undergoing in-patient treatment in the tuberculosis clinic. What drug was prescribed by her physician for etiotropic treatment?</p> <p>A. <b>Isoniazid</b><br/> B. Acyclovir<br/> C. Metronidazole<br/> D. Doxycycline hydrochloride<br/> E. Benzylpenicillin (Penicillin G)</p> | <p>For treatment of enteric infection a 36-year-old woman was prescribed a nitrofurantoin derivative that is poorly absorbed in the intestine and takes its effect along the intestinal tract. Name this drug:</p> <p>A. <b>Nifuroxazide</b><br/> B. Furacilin (Nitrofurantoin)<br/> C. Nitroxoline<br/> D. Furadonin (Nitrofurantoin)<br/> E. Nalidixic acid</p> |
| <p>From the pharmaceutical stock select a reversible anticholinesterase drug to be administered to the patients with atony of the intestine and urinary bladder in the postoperative period:</p> <p>A. <b>Proserin</b><br/> B. Phosphacolium<br/> C. Benzohexonium<br/> D. Atropine sulfate<br/> E. Dithylinum</p>    | <p>What antiprotozoal agent can be recommended to a female patient with trichomoniasis?</p> <p>A. <b>Metronidazole</b><br/> B. Primaquine<br/> C. Chloridinum<br/> D. Solusurminum<br/> E. Chiniofonum</p>  |
| <p>After a craniocerebral trauma a patient was administered pyracetam. This drug relates to the following pharmacological group:</p> <p>A. <b>Nootropic agent</b><br/> B. Nonnarcotic (nonopioid) analgetic<br/> C. Tranquilizers<br/> D. Anesthetic agent<br/> E. Neuroleptic</p>                                    | <p>A patient suffering from neurosis accompanied by anxiety and fear development was prescribed diazepam. What pharmacological effect makes it possible to apply the drug for this disease treatment?</p> <p>A. <b>Anxiolytic</b><br/> B. Antiarrhythmic<br/> C. Anti-inflammatory<br/> D. Hypotensive<br/> E. Antianginal</p>                                    |
| <p>What antibiotic has beta-lactam cycle in its structure?</p> <p>A. <b>Benzylpenicillin potassium salt</b><br/> B. Doxycycline hyclate<br/> C. Chloramphenicol<br/> D. Streptomycin sulfate<br/> E. Lincomycin hydrochloride</p>   | <p>At the end of the drug action drug addicts develop severe mental, neurological and somatic disorders. This complex of symptoms is called:</p> <p>A. <b>Withdrawal syndrome</b><br/> B. Tachyphylaxis<br/> C. Sensibilization<br/> D. Cumulation</p>  |

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| <p>Genetically induced adverse reaction to a certain drug is caused by various enzyme defects. Name this reaction:</p> <p>A. <b>Idiosyncrasy</b><br/> B. Withdrawal syndrome<br/> C. Steal syndrome<br/> D. Rebound effect<br/> E. Dysbiosis</p>  | <p>E. Tolerance</p> <p>A patient suffering from allergic rhinitis was prescribed ephedrine in form of nasal drops. The patient has significantly benefited from nasal instillation, and this stimulated him to use the drug every 2 hours. But under these conditions the drug appeared to be ineffective. What is the most likely cause of this phenomenon?</p> <p>A. <b>Tachyphylaxis</b><br/> B. Drug dependence<br/> C. Idiosyncrasy<br/> D. Allergy<br/> E. Cumulation</p> |
| <p>A patient has been receiving palliative treatment with morphine hydrochloride for a week. Following that the patient demands continuation of this treatment. What phenomenon has occurred in this case?</p> <p>A. <b>Dependence</b><br/> B. Tolerance<br/> C. Cumulation<br/> D. Potentiation<br/> E. Summation</p>  | <p>For thrombosis treatment a patient was prescribed a drug from the group of direct anticoagulants. What drug is it?</p> <p>A. <b>Heparin</b><br/> B. Fenilin (phenylinum)<br/> C. Syncumar<br/> D. Neodicumarin<br/> E. Vikasol</p>   |
| <p>Rifampicin is a cytochrome P450 inducer; therefore, its interaction with other chemically active drugs:</p> <p>A. <b>Can decrease concentration of other drugs</b><br/> B. Can increase concentration of other drugs<br/> C. Has no effect on concentration of other drugs<br/> D. Can result in binding with other metabolites<br/> E. Has no effect on toxicity of other drugs</p> | <p>A patient, who has been taking acetylsalicylic acid, has developed hemorrhages of mucous membranes. This phenomenon is associated with:</p> <p>A. <b>Inhibition of prothrombin synthesis</b><br/> B. Increased absorption in gastrointestinal tract<br/> C. Decreased absorption in gastrointestinal tract<br/> D. Disorder of protein binding<br/> E. Changed volume of distribution</p>  |
| <p>A patient with moderately severe pneumonia has been administered ceftriaxone 1 time per day. The drug should be taken once a day due to its following property:</p> <p>A. <b>Slow excretion</b><br/> B. Presence of bactericidal action</p>  | <p>An internship doctor prescribed his patient nifuroxazid from the group of nitrofurans for the treatment of urinary tracts infection. The doctor made a mistake because:</p> <p>A. <b>It cannot be absorbed from the digestive tract</b></p>  |

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| <p>C. Wide range of action<br/>D. Cumulative ability<br/>E. Poor absorption from the injection site</p>   | <p>B. It is excreted with urine in the inactive state<br/>C. It has nephrotoxic effect<br/>D. It has bacteriostatic effect<br/>E. It is excreted from the organism very slowly</p>  |
| <p>A patient being treated in the infectious disease ward for dysentery is administered phthalazol. What is the reason for phthalazol being used only for treatment of enteric infections?</p> <p>A. <b>The drug is not absorbed from the gastrointestinal tract</b><br/>B. The high degree of reabsorption in the kidneys<br/>C. Slowly eliminated from the body<br/>D. Rapidly absorbed in the gastrointestinal tract<br/>E. Rapidly excreted in unchanged form</p> | <p>Absorption of tetracycline preparations will be reduced when they are administered simultaneously with antacids. This is an example for:</p> <p>A. <b>Pharmacokinetic incompatibility</b><br/>B. Pharmaceutical incompatibility<br/>C. Pharmacodynamic incompatibility<br/>D. Drugs synergism<br/>E. Functional drugs antagonism</p>   |
| <p>A patient was prescribed an oral antibiotic for treatment and an antacid to remove heartburn symptoms. If the drugs are taken simultaneously their interaction can result in the following:</p> <p>A. <b>Antibiotic malabsorption</b><br/>B. Relative overdosage<br/>C. Inhibition of hepatic microsomal enzymes<br/>D. Mutual potentiation<br/>E. Acceleration of metabolism and excretion</p>  | <p>Advise an internship doctor on why iron preparations should not be administered together with antacids:</p> <p>A. <b>This causes malabsorption of iron</b><br/>B. This causes increased binding to blood proteins<br/>C. This prevents deposition of iron in the body<br/>D. This increases intoxication with iron preparations<br/>E. This accelerates elimination of iron preparations</p> |
| <p>When dispensing an antacid and ofloxacin in tablets, the dispensing chemist warned the customer that these drugs should be taken separately with 2- hour interval in between. Simultaneous taking of both drugs:</p> <p>A. <b>Decreases ofloxacin absorption</b><br/>B. Increases ofloxacin absorption<br/>C. Increases antacid effectiveness<br/>D. Decreases antacid effectiveness<br/>E. Increases risk of dysbiosis</p>  | <p>A patient suffering from epilepsy has taken phenobarbital for a long time and developed drug tolerance. What is the mechanism of this phenomenon development?</p> <p>A. <b>Acceleration of biotransformation</b><br/>B. Absorption process reduction<br/>C. Receptor's sensitivity enhancement<br/>D. Inhibition of biotransformation<br/>E. Accumulation of substances in the body</p>      |
| <p>In case of simultaneous use of metronidazole and oral anti-coagulants</p>  | <p>Simultaneous use of doxycycline hydrochloride and oral contraceptive</p>   |

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| <p>derived from coumarin patients must be warned about:</p> <ul style="list-style-type: none"> <li>A. <b>Potentialiation of anticoagulants effect and risk of bleeding</b></li> <li>B. Reduction of anticoagulants effect</li> <li>C. Potentialiation of metronidazole effect</li> <li>D. Reduction of metronidazole effect</li> <li>E. Higher neurotoxicity</li> </ul>  | <p>causes:</p> <ul style="list-style-type: none"> <li>A. <b>Reduction of oral contraceptives effectiveness</b></li> <li>B. Increase of oral contraceptives effectiveness</li> <li>C. Increase of antibacterial effect of doxycycline</li> <li>D. Reduction of antibacterial effect of doxycycline</li> </ul>   |
| <p>Simultaneous use of gentamicin and acyclovir tablets increases the risk of:</p> <ul style="list-style-type: none"> <li>A. <b>Nephrotoxicity</b></li> <li>B. Hepatotoxicity</li> <li>C. Cardiotoxicity</li> <li>D. Neurotoxicity</li> <li>E. Allergic reactions</li> </ul>   | <p>Simultaneous use of paracetamol and acetylcysteine causes:</p> <ul style="list-style-type: none"> <li>A. <b>Reduction of paracetamol hepatotoxicity</b></li> <li>B. Reduction of anti-inflammatory action of paracetamol</li> <li>C. Inhibition of paracetamol absorption</li> <li>D. Increase of mucolytic action of acetylcysteine</li> <li>E. Increase of paracetamol nephrotoxicity</li> </ul>                                      |
| <p>A patient who has taken phenobarbital for a long time was prescribed diclofenac sodium. However the anti-inflammatory effect of diclofenac appeared to be less than expected due to the pharmacokinetic interaction of these drugs. Such interaction might be the result of the following processes:</p> <ul style="list-style-type: none"> <li>A. <b>Accelerated drug metabolism in liver</b></li> <li>B. Decelerated drug metabolism in liver</li> <li>C. Reduced protein concentration in plasma</li> <li>D. Change of receptor sensibility</li> <li>E. Increased drug dosage</li> </ul> | <p>A patient suffering from moderately severe pneumonia was prescribed ceftriaxonum once a day. Prescription of ceftriaxonum once a day is due to the fact that the drug:</p> <ul style="list-style-type: none"> <li>A. <b>Is slowly eliminated from the body</b></li> <li>B. Has bactericidal effect</li> <li>C. Is pluripotential</li> <li>D. Accumulates in the lungs</li> <li>E. Is poorly absorbed from the injection site</li> </ul> |
| <p>Name the reason for the reduction of anticoagulant effect of syncumar when it is applied in combination with phenobarbital:</p> <ul style="list-style-type: none"> <li>A. <b>Phenobarbital activates microsomal liver enzymes</b></li> <li>B. Phenobarbital inhibits microsomal liver enzymes</li> <li>C. Development of syncumar allergy</li> <li>D. These drugs are antagonists</li> </ul>  | <p>A 25-year-old woman is in the third trimester of her pregnancy. During her regular examination, US detected a malformation in the fetus. Medical history of the patient shows that she was taking large doses of diazepam without prescription during her pregnancy. What type of side effect has occurred in this case?</p>  |

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| E. Mutual inactivation   | <b>A. Teratogenic</b><br>B. Embryotoxic<br>C. Fetotoxic<br>D. Carcinogenic<br>E. Mutagenic |
| Benzathine benzylpenicillin is the drug of choice for treatment of the following disease:<br>A. <b>Syphilis</b><br>B. Intestinalinfection<br>C. Pneumonia<br>D. Tonsillitis<br>E. Furunculosis |  |

### Clinical Pharmacy in Cardiology

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| A patient after acute myocardial infarction has been recommended to take acetylsalicylic acid for 3-4 months. What effect of acetylsalicylic acid would be most relevant for this patient?<br>A. <b>Antiplatelet</b><br>B. Antipyretic<br>C. Analgesic<br>D. Antiinflammatory<br>E. Spasmolytic | A patient, who had a case of cardiac infarction, is recommended to take acetylsalicylic acid to:<br>A. <b>Decrease thrombocyte aggregation</b><br>B. Decrease body temperature<br>C. Dilate coronary vessels<br>D. Decrease inflammation<br>E. Lower cholesterol rate                       |
| A 60-year-old patient, who had suffered a myocardial infarction, was prescribed acetylsalicylic acid as an antiaggregant. Specify the optimal daily dosage of acetylsalicylic acid for antiaggregatory effect:<br>A. <b>100 mg</b><br>B. 200 mg<br>C. 300 mg<br>D. 400 mg<br>E. 500 mg          | A 52-year-old patient had myocardial infarction and was discharged from the hospital after the stationery treatment. What daily dose of acetylsalicylic acid should be administered in order to prevent thrombosis?<br>A. <b>100 mg</b><br>B. 500 mg<br>C. 1000 mg<br>D. 200 mg<br>E. 50 mg |
| A dispensing chemist was addressed by a patient with the prescription of acetylsalicylic acid as antiaggregant. What daily dosage in grams should be recommended for him to take on a regular basis?<br>A. <b>0,1 – 0,3</b><br>B. 0,5-1,0<br>C. 1,0-2,0   | A patient with myocardial infarction has been given an intravenous injection of a direct-acting anticoagulant. Select it among the listed drugs:<br>A. <b>Heparin</b><br>B. Neodicumarinum<br>C. Vikasolum<br>D. Thrombin   |



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| <p>D. 2,0-3,0<br/>E. Over 4,0</p>   | <p>E. Calcium gluconate</p>  |
| <p>Which drug is used for thrombolysis in case of acute myocardial infarction?</p> <p>A. <b>Alteplase</b><br/>B. Acetylsalicylic acid<br/>C. Heparin<br/>D. Pentoxifylline<br/>E. Fraxiparine</p>   | <p>Which of the drugs listed below is used for thrombolytic therapy of myocardial infarction?</p> <p>A. <b>Streptokinase</b><br/>B. Heparinum<br/>C. Phenylinum<br/>D. Ticlopidine<br/>E. Acetylsalicylic acid</p>   |
| <p>A 46-year-old patient is diagnosed with cardiac infarction. What drug should be prescribed for thrombolytic therapy?</p> <p>A. <b>Streptokinase</b><br/>B. Nitroglycerine<br/>C. Spironolactone (Verospiron)<br/>D. Drotaverine hydrochloride<br/>E. Trimeperidine (Promedol)</p>  | <p>A patient suffering from essential hypertension has increased concentration of renin in blood plasma. Which pharmacological group should be preferred for this patient treatment?</p> <p>A. <b>ACE inhibitors</b><br/>B. <math>\alpha</math>-adrenoblockers<br/>C. Diuretics<br/>D. Blockers of calcium channels<br/>E. Sympatholytics</p>        |
| <p>A patient with a history of essential hypertension has been administered lisinopril. What is the mechanism of action of this drug?</p> <p>A. <b>It inhibits ACE</b><br/>B. It inhibits alpha-adrenergic receptors<br/>C. It inhibits beta-adrenergic receptors<br/>D. It stimulates beta-adrenergic receptors<br/>E. It inhibits M-cholinergic receptors</p> | <p>A 24-year-old patient has been suffering for diabetes mellitus type I for 8 years. Diabetic nephropathy provoked development of symptomatic arterial hypertension. Which of the following drugs is indicated for long-term therapy?</p> <p>A. <b>Enalapril</b><br/>B. Propranolol<br/>C. Clonidine<br/>D. Dibazol<br/>E. Dichlothiazide</p>       |
| <p>What hypotensive drug is an agent of choice for the patients suffering from arterial hypertension with concomitant type I diabetes mellitus?</p> <p>A. <b>Lisinopril</b><br/>B. Hydrochlorothiazide<br/>C. Atenolol<br/>D. Labetalol<br/>E. Carvedilol</p>   | <p>A patient with hypertension has been administered one of antihypertensive drugs. Blood pressure dropped back to normal, but the patient has developed a persistent dry cough. Which of the following drugs has such a side effect?</p> <p>A. <b>Enalapril maleate</b><br/>B. Propranolol<br/>C. Clonidine<br/>D. Furosemide<br/>E. Nifedipine</p> |
| <p>A patient was warned that taking the prescribed preparation might cause cough. What drug is it?</p>  | <p>A patient suffering from hypertension consulted a doctor about dry cough that was presumably provoked by</p>  |

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| <p>A. <b>Lisinopril</b><br/>         B. Clonidine<br/>         C. Phenihidine<br/>         D. Dichlothiazide<br/>         E. Metoprolol</p>  | <p>antihypertensive therapy. What antihypertensive drug had she been taking?<br/>         A. <b>Lisinopril</b><br/>         B. Atenolol<br/>         C. Nifedipine<br/>         D. Furosemidum<br/>         E. Hydrochlorthiazide</p>   |
| <p>A patient with essential hypertension complains of infrequent occurrences of dry cough. Clinical and X-ray examination of the respiratory organs revealed no pathologies. What drug from those taken by the patient can cause cough as a side effect?<br/>         A. <b>Captopril</b><br/>         B. Diltiazem<br/>         C. Hydrochlorothiazide<br/>         D. Nebivolol<br/>         E. Prestarium (Perindopril)</p> | <p>A patient who has been treated for hypertension complains of cough. Objective examination reveals no changes in the lungs. Which of the following drugs might have caused cough?<br/>         A. <b>Captopril</b><br/>         B. Amlodipine<br/>         C. Hypothiazide<br/>         D. Nebivolol<br/>         E. Clonidine</p>  |
| <p>A patient developed dry cough while undergoing pharmacotherapy for arterial hypertension. What group of drugs can be characterized by this side effect?<br/>         A. <b>ACE inhibitors</b><br/>         B. Calcium antagonists<br/>         C. Antipsychotics<br/>         D. Tranquilizers<br/>         E. Antacids</p>   | <p>A hypertensive patient has been administered lisinopril. What side effect is typical for this drug?<br/>         A. <b>Dry cough</b><br/>         B. Constipation<br/>         C. Increased appetite<br/>         D. Insomnia<br/>         E. Vomiting</p>   |
| <p>A hypertensive patient has been administered lisinopril. What side effect is typical for this drug?<br/>         A. <b>Dry cough</b><br/>         B. Constipation<br/>         C. Increased appetite<br/>         D. Insomnia<br/>         E. Vomiting</p>  | <p>A patient with arterial hypertension and chronic bronchitis suddenly developed dry cough and dyspnea; his body temperature remained without changes. It is known that the patient takes captopril. This phenomenon can be explained by increased synthesis of:<br/>         A. <b>Bradykinin</b><br/>         B. Angiotensin I<br/>         C. Renin<br/>         D. Aldosterone<br/>         E. Natriuretic peptide</p> |
| <p>A patient suffering from arterial hypertension and chronic bronchitis suddenly presented with dry cough and dyspnea. Body temperature remained unchanged. It is known that the patient takes captopril. These symptoms can be explained by increased generation of:</p>   | <p>A 56-year-old patient suffering from essential hypertension was prescribed an inhibitor of angiotensin converting enzyme (ACE) and a potassium-sparing diuretic. Such combination is:<br/>         A. <b>Unreasonable because it increases</b></p>   |

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| <p>A. <b>Bradyquinine</b><br/> B. Angiotensin-1<br/> C. Renin<br/> D. Aldosterone<br/> E. Natriuretic peptide</p>   | <p><b>risk of hyperkalemia development</b><br/> B. Reasonable because it decreases risk of hyperkalemia development<br/> C. Reasonable because it potentiates hypotensive effect of ACE inhibitor<br/> D. Unreasonable because it reduces hypotensive effect of ACE inhibitor<br/> E. Unreasonable because it increases risk of orthostatic collapse development</p>                                  |
| <p>Losartan as a part of treatment of arterial hypertension is contraindicated in case of:<br/> A. <b>Pregnancy</b><br/> B. Hyperglycemia<br/> C. Urine acid diathesis<br/> D. Hyperlipidemia<br/> E. Hypokalemia</p>   | <p>A pregnant woman complains of elevated blood pressure up to 160/100. What hypotensive drug should she use in this case?<br/> <b>A. Methyldopa</b><br/> B. Reserpine<br/> C. Enalapril<br/> D. Losartan<br/> E. Bisoprolol</p>  |
| <p>A patient with hypertension was administered metoprolol for the arterial pressure reduction. What is its mechanism of action?<br/> A. <b>Beta adrenoreceptor blockade</b><br/> B. Alpha adrenoceptor blockade<br/> C. Indirect adrenomimetic action<br/> D. Antispasmodic<br/> E. Angiotensinic receptors blockade</p>   | <p>A 54-year-old hypertonic patient undergoing pharmacotherapy developed bronchial spasm. His physician considers it to be a therapy-induced complication caused by the drug that belongs to the following group:<br/> <b>A. <math>\beta</math>-adrenergic blockers</b><br/> B. Calcium antagonists<br/> C. <math>\alpha</math>-adrenergic blockers<br/> D. Ganglionic blockers<br/> E. Diuretics</p> |
| <p>A 52-year-old patient complains of having increased arterial pressure for a month. She has a 5-year history of bronchial asthma. What group of hypotensive drugs should <b>NOT</b> be recommended this patient?<br/> A. <b><math>\beta</math>-adrenoreceptor blockers</b><br/> B. Calcium channel blockers<br/> C. Tranquilizers<br/> D. Angiotensin receptor blockers<br/> E. Diuretics</p> | <p>Which of the listed pharmacological groups of antihypertensive drugs is contraindicated the patients with bronchial asthma?<br/> A. <b>Beta-adrenergic blocking agent</b><br/> B. ACE inhibitor<br/> C. Calcium channel blockers<br/> D. Angiotensin receptors blockers<br/> E. Diuretics</p>  |
| <p>A 60-year-old patient has essential hypertension stage II, coronary disease, bronchial asthma. After pharmacotherapy correction the patient exhibited a bronchospastic attack, intensified dyspnea. What drug provoked this complication?<br/> A. <b>Propranolol</b></p>   | <p>A patient suffering from bronchial asthma was diagnosed with essential hypertension. What antihypertensive drug is contraindicated for this patient?<br/> A. <b>Propranolol</b><br/> B. Captopril<br/> C. Amlodipine</p>   |

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| <p>B. Nifedipine<br/>C. Euphyllinum<br/>D. Mucaltinum<br/>E. Salbutamol</p>  | <p>D. Hypothiazid<br/>(Hydrochlorothiazide)<br/>E. Verapamil</p>   |
| <p>Recommend a drug for the treatment of tachyarrhythmia episodes:<br/>A. <b>Propranolol</b><br/>B. Adrenaline<br/>C. Atropine<br/>D. Caffeine sodium benzoate<br/>E. Dobutamine</p>   | <p>A 35-year-old patient with tachycardia has been administered propranolol. Which of the following reactions may be caused by the use of beta-blockers?<br/>A. <b>Bronchospasm</b><br/>B. Drug dependence<br/>C. Cumulation<br/>D. Blood pressure rise<br/>E. Constipations</p>   |
| <p>What drug may cause the development of constipation in patients undergoing combined therapy for arterial hypertension?<br/>A. <b>Verapamil</b><br/>B. Furosemide<br/>C. Trimetazidine<br/>D. Pananginum<br/>E. Acetylsalicylic acid in small doses</p>  | <p>What drug may cause the development of constipation in patients undergoing combined therapy for arterial hypertension?<br/>A. <b>Verapamil</b><br/>B. Furosemide<br/>C. Trimetazidine<br/>D. Pananginum<br/>E. Acetylsalicylic acid in small doses</p>  |
| <p>A 48-year-old woman addressed a dispensing chemist with complaints of constipations developing after she had started treatment of her chronic cardiovascular disease. What drug can slow down intestinal peristalsis?<br/>A. <b>Verapamil</b><br/>B. Folicacid<br/>C. Losartan<br/>D. Ascorbic acid<br/>E. Enalapril</p>                            | <p>A 70-year-old patient consulted a doctor about elevated arterial pressure. He has a history of benign hyperplasia of prostate. What drug should be administered in this case?<br/>A. <b>Doxazosin</b><br/>B. Enalapril<br/>C. Propranolol<br/>D. Diltiazem<br/>E. Losartan</p>  |
| <p>A pharmacy customer complains of constricting, sometimes burning pain behind the sternum, with irradiation to the neck and left arm. The pain lasts for 5-10 minutes. What drug should be given to this customer for emergency aid?<br/>A. <b>Nitroglycerine</b><br/>B. Bisoprolol<br/>C. Digoxin<br/>D. Isosorbide dinitrate<br/>E. Nifedipine</p> | <p>A pharmacy customer complains of constricting retrosternal pain that irradiates into the left arm; he fears that he may die. The pain appeared suddenly after physical exertion. Name the first aid medicine in this case:<br/>A. <b>Nitroglycerine</b><br/>B. Metacycline<br/>C. Naphthyzin (Naphazoline)<br/>D. Panangin<br/>E. Riboxin (Inosine)</p> |
| <p>A 53-year-old woman suffers from ischemic heart disease and angina pectoris. What drug can be used to stop angina pectoris attacks?</p>   | <p>After an emotional stress a 60-year-old patient presented with chest pain irradiating to the left arm. Specify a drug</p>   |

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| <p>A. <b>Nitroglycerine</b><br/> B. Drotaverine hydrochloride<br/> C. Propranolol<br/> D. Dipyridamol<br/> E. Acetylsalicylic acid</p>   | <p>that relieves pain in this case:<br/> A. <b>Nitroglycerine</b><br/> B. Nifedipine<br/> C. Diltiazem<br/> D. Propranolol<br/> E. Metoprolol</p>   |
| <p>A patient, who is undergoing treatment for ischemic heart disease, after physical exertion felt an acute pain in the cardiac area. What drug can be prescribed in this case for quick relief of the pain syndrome?<br/> A. <b>Nitroglycerine</b><br/> B. Enalapril<br/> C. Corglycon (convallaloxin)<br/> D. Prazosin<br/> E. Captopril</p>   | <p>A 70-year-old patient with stenocardia claims that the pharmacy sold him a drug that relieved an attack of stenocardia but instead caused an acute bursting headache. What antihypertensive drug is this side effect typical for?<br/> A. <b>Nitrosorbide</b><br/> B. Amlodipine<br/> C. Nifedipine<br/> D. Trimetazidine<br/> E. Metoprolol</p>                           |
| <p>A woman suddenly developed an angina pectoris attack. To arrest the attack, she took a medicine that caused her a severe headache, facial hyperemia, and tachycardia. Such side effects are characteristic of the following group of drugs:<br/> A. <b>Nitrates</b><br/> B. Beta-adrenergic antagonists<br/> C. Alpha-adrenergic agonists<br/> D. Calcium channel blockers<br/> E. Antispasmodics</p> | <p>In order to arrest stenocardia attacks a patient takes nitroglycerin capsules. What is the rational way of the drug introduction?<br/> A. <b>Sublingual</b><br/> B. Peroral<br/> C. Rectal<br/> D. Inhalation<br/> E. Hypodermic</p>   |
| <p>A patient with angina pectoris takes long-acting nitrates. Consult him what side-effect is the most common for these drugs:<br/> A. <b>Headache</b><br/> B. Nausea<br/> C. Vomiting<br/> D. Diarrhea<br/> E. Constipation</p>   | <p>A patient with exertional angina pectoris had been taking isosorbide mononitrate orally for 2 months, when this drug lost its effectiveness. What is the likely cause of isosorbide mononitrate being no longer effective in this case?<br/> A. <b>Tolerance</b><br/> B. Physical dependence<br/> C. Cumulation<br/> D. Psychological dependence<br/> E. Sensitization</p> |
| <p>A patient has been taking isosorbide for stenocardia prevention for quite a long time. Now he notes a significant decrease in the effect of the drug. What is this phenomenon called?<br/> A. <b>Tolerance</b></p>  | <p>A 45-year-old man has been taking long-acting nitrates twice a day for a year. Currently the decrease in effectiveness of the pharmacotherapy is being observed. What side-effect can be suspected in the first place?</p>   |

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| <p>B. Cumulation<br/>C. Physical dependence<br/>D. Allergy<br/>E. Potentiation</p>   | <p>A. <b>Development of nitrate tolerance</b><br/>B. Progressing ischemic heart disease<br/>C. Progressing coronary atherosclerosis<br/>D. Myocardial infarction<br/>E. Impairment of coronary circulation</p>  |
| <p>6 months after treatment a patient with coronary heart disease developed tolerance to the prolonged-action nitrates. What drug with nitrate-similar effect should be recommended in this case?</p> <p>A. <b>Molsidomine</b><br/>B. Nifedipine<br/>C. Prazosin<br/>D. Verapamil<br/>E. Metoprolol</p>  | <p>A 63-year-old man suffering from ischemic heart disease was diagnosed with angle closure glaucoma. What group of drugs is <b>CONTRAINDICATED</b> in this case?</p> <p>A. <b>Nitrates</b><br/>B. <math>\beta</math>-adrenergic blockers<br/>C. Calcium antagonists<br/>D. Anticoagulants<br/>E. Statins</p> |
| <p>A patient with arterial hypertension, who takes captopril, was prescribed a potassium-sparing diuretic, spironolactone. What complication can develop in the patient due to this combination of drugs?</p> <p>A. <b>Hyperkalemia</b><br/>B. Hypocalcemia<br/>C. Hyponatremia<br/>D. Hypoglycemia<br/>E. Hypernatremia</p>   | <p>A hypertensive patient had been administered a diuretic as a part of the combined therapy. The administered drug caused hypokalemia. Specify this drug:</p> <p>A. <b>Hydrochlorothiazide</b><br/>B. Amiloride<br/>C. Spironolactone<br/>D. Allopurinol<br/>E. Triamterene</p>                              |
| <p>A patient with ischemic heart disease and chronic circulatory failure had been taking for a long time one of the drugs listed below. He developed hypokalemia, which resulted in cardiac rhythm disturbance and muscle weakness. What drug can lead to this complication as a side effect?</p> <p>A. <b>Furosemide</b><br/>B. Lisinopril<br/>C. Propranolol<br/>D. Nifedipine<br/>E. Spironolactone</p> | <p>Select a loop diuretic of strong, emergency and short-term action from the listed below:</p> <p>A. <b>Furosemide</b><br/>B. Clopamide<br/>C. Acetazolamide<br/>D. Spironolactone<br/>E. Triamterene</p>  |
| <p>A patient with heart failure has developed an electrolyte imbalance against the background of diuretic treatment with furosemide. What imbalance has the patient developed?</p> <p>A. <b>Hypokalemia</b><br/>B. Hypocalcemia<br/>C. Hyperkalemia<br/>D. Hypermagnesemia</p>   | <p>A 35-year-old patient has been prescribed a potassium-sparing diuretic. Select one such drug from the list:</p> <p>A. <b>Triamterene</b><br/>B. Prazosin<br/>C. Bisoprolol<br/>D. Furosemide<br/>E. Diltiazem</p>  |

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| E. Hypernatremia   |  |
| <p>Which of the following anti-hypertensive drugs has potassium-sparing action?</p> <p>A. <b>Triamterene</b><br/> B. Furosemide<br/> C. Prazosin<br/> D. Metoprolol<br/> E. Diltiazem</p>  | <p>Treatment course of essential hypertension includes diuretics. Which diuretic DOES NOT NEED to be combined with potassium preparations?</p> <p>A. <b>Triamteren</b><br/> B. Clopamide<br/> C. Dichlothiazide<br/> D. Furosemide<br/> E. Ethacrynic acid</p>   |
| <p>A 68-year-old female patient has been continuously taking furosemide for heart failure treatment. What drug should be used to prevent hypokalemia in patients taking furosemide?</p> <p>A. <b>Panangin</b><br/> B. Atp-long<br/> C. Mildronatum<br/> D. Trimetazidine<br/> E. Sustac forte</p>  | <p>A 67-year-old patient with chronic heart failure takes digoxin. In order to reduce its side effects the patient's doctor recommended to combine it with the followig drug:</p> <p>A. <b>Panangin</b><br/> B. Calcium gluconate<br/> C. Euphyllinum<br/> D. Hydrochlorthiazide<br/> E. Calcium chloride</p>  |
| <p>A 59-year-old patient has been using furosemide for a long time to treat his cardiac insufficiency. What drug for hypokalemia prevention should be used in the given case?</p> <p>A. <b>Panangin (Potassium aspartate and magnesium aspartate)</b><br/> B. Thiotriazolinum<br/> C. Acetylsalicylic acid<br/> D. Trimetazidine<br/> E. Enalapril</p> | <p>A 68-year-old man has been prescribed a hypolipidemic agent as a part of his combination therapy for ischemic heart disease. Name this drug:</p> <p>A. <b>Atorvastatin</b><br/> B. Nitroglycerine<br/> C. Lisinopril<br/> D. Nifedipine<br/> E. Hydrochlorothiazide</p>   |
| <p>A patient with atherosclerosis has been administered an anti-atherosclerotic agent. Specify this drug:</p> <p>A. <b>Phenofibrate</b><br/> B. Ascorbic acid<br/> C. Pyracetam<br/> D. Dexamethasone<br/> E. Phenylbutazone</p>   | <p>A 65-year-old male patient complains of nausea, vomiting, lethargy, seeing yellow spots in front of his eyes. The patient takes daily 0,25 mg of digoxin, 100 mg of aspecardum, 50 mg of metoprolol. What pathological condition is this syndrome typical for?</p> <p>A. <b>Glycoside intoxication</b><br/> B. Food poisoning<br/> C. Withdrawal syndrome<br/> D. Tachyphylaxis<br/> E. Hypersensitivity reaction</p> |
| <p>A 43-year-old woman has come to a pharmacy with complaints of sharp headache in the occipital area, palpitations, «visual snow» in her eyes, nausea; her BP is 180/110</p>  |  |

mm Hg. These symptoms correspond with:

- A. **Hypertensive crisis**
- B. Migraine attack
- C. Exertional angina pectoris attack
- D. Cervical osteochondrosis
- E. Acute conjunctivitis



## Clinical Pharmacy in Pulmonology

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| <p>A female patient with pneumonia has been administered doxycycline hydrochloride. This drug relates to the following group of antibiotics:</p> <ul style="list-style-type: none"> <li>A. <b>Tetracyclines</b></li> <li>B. Aminoglycosides</li> <li>C. Macrolides</li> <li>D. Cephalosporins</li> <li>E. Penicillins</li> </ul>                | <p>In course of pharmacotherapy of bronchitis a patient was found to have dyspeptic disorders, photodermatitis, liver dysfunction. Which of the prescribed drugs might have caused these manifestations?</p> <ul style="list-style-type: none"> <li>A. <b>Doxycyclin</b></li> <li>B. Paracetamol</li> <li>C. Ascorbic acid</li> <li>D. Acetylcysteinum</li> <li>E. Codeine phosphate</li> </ul>             |
| <p>Select the optimal antibacterial drug for the treatment of mycoplasma pneumonia:</p> <ul style="list-style-type: none"> <li>A. <b>Rovamycin</b></li> <li>B. Gentamicin</li> <li>C. Penicillin</li> <li>D. Ampicillin</li> <li>E. Amoxiclav</li> </ul>  | <p>A 26-year-old patient was diagnosed with community-acquired pneumonia provoked by mycoplasma. Choose the appropriate antimicrobial preparation for the patient treatment:</p> <ul style="list-style-type: none"> <li>A. <b>Rovamycine</b></li> <li>B. Amoxicillin</li> <li>C. Gentamycinum</li> <li>D. Benzylpenicillinum</li> <li>E. Amoksiklav</li> </ul>  |
| <p>A pregnant woman fell ill with severe pneumonia. Which of these antimicrobials should be administered to this patient?</p> <ul style="list-style-type: none"> <li>A. <b>Cefotaxime</b></li> <li>B. Gentamicin sulfate</li> <li>C. Tetracycline hydrochloride</li> <li>D. Ofloxacin</li> <li>E. Biseptol</li> </ul>                           | <p>A female patient in the first trimester of pregnancy has been diagnosed with acute pyelonephritis. What is the antibiotic drug of choice for treating this patient?</p> <ul style="list-style-type: none"> <li>A. <b>Amoxicillin</b></li> <li>B. Norfloxacin</li> <li>C. Gentamicin</li> <li>D. Chloramphenicol</li> <li>E. Amikacin</li> </ul>  |
| <p>A gravida in her 20th week of gestation got ill with pneumonia. What chemotherapeutical drug may be administered with no risk for the fetus development?</p> <ul style="list-style-type: none"> <li>A. <b>Benzylpenicillinum</b></li> <li>B. Gentamycin</li> <li>C. Sulfalenum</li> <li>D. Laevomycesinum</li> <li>E. Ofloxacinum</li> </ul> | <p>A 6-year-old child with pneumonia had been administered an antibiotic. After treatment the child lost the hearing (became deaf). What group of antibiotics might have caused this complication?</p> <ul style="list-style-type: none"> <li>A. <b>Aminoglycosides</b></li> <li>B. Cephalosporins</li> <li>C. Macrolides</li> <li>D. Natural penicillins</li> <li>E. Semi-synthetic penicillins</li> </ul> |
| <p>A patient, who has undergone treatment for community-acquired pneumonia, complains of</p>  | <p>A 65-year-old man with community-acquired pneumonia was prescribed</p>   |

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| <p>hearing impairment. What antibacterial drug could result in such a side-effect?</p> <p>A. <b>Gentamicin</b><br/> B. Amoxicillin/clavulanate<br/> C. Cefazolin<br/> D. Ciprofloxacin<br/> E. Clarithromycin</p>  | <p>antibiotic agent amikacin. It should be kept in mind, that amikacin has the following side-effect:</p> <p>A. <b>Ototoxicity</b><br/> B. Red coloring of urine<br/> C. Vomiting<br/> D. Increased blood pressure<br/> E. Decreased blood pressure</p>  |
| <p>A 63-year-old woman suffering from diabetic nephropathy with functional disturbance of the kidneys needs etiotropic treatment for focal pneumonia. What drug is CONTRAINDICATED in this case?</p> <p>A. <b>Aminoglycosides</b><br/> B. Natural penicillins<br/> C. Synthetic penicillins<br/> D. Macrolides<br/> E. Combined penicillins</p>                                | <p>Treatment of a patient who has developed an attack of bronchial asthma for the first time should be started with:</p> <p>A. <b>Inhalation of <math>\beta_2</math>-agonists</b><br/> B. Inhalation of glucocorticosteroid<br/> C. Agonists parenterally<br/> D. M-anticholinergic drugs<br/> E. H<sub>2</sub>-histamine blockers</p>                               |
| <p>A patient with bronchial asthma was prescribed salbutamol that has led to relief of bronchospasm symptoms. This is associated with stimulation of:</p> <p>A. <b><math>\beta_2</math>-adrenoreceptors</b><br/> B. <math>\alpha_1</math>-adrenoreceptors<br/> C. Muscarinic cholinoreceptors<br/> D. Acetylcholine synthesis<br/> E. <math>\beta_1</math>-adrenoreceptors</p> | <p>Select a drug for the treatment of bronchial asthma from the group of <math>\beta_2</math>-agonists:</p> <p>A. <b>Salbutamol</b><br/> B. Aminophylline<br/> C. Atrovent<br/> D. Ketotifen<br/> E. Beclomethasone</p>  |
| <p>A patient with bronchial asthma has been administered a drug from the group of beta-adrenergic agonists. Specify this drug:</p> <p>A. <b>Salbutamol</b><br/> B. Diazepam<br/> C. Doxycycline hydrochloride<br/> D. Nitroglycerine<br/> E. Digoxin</p>   | <p>When fenoterolum for inhalations is not available in a pharmacy, it can be substituted by the following drug from the group of bronchoselective beta-2-adrenomimetics:</p> <p>A. <b>Salbutamol</b><br/> B. Isadrinum<br/> C. Metacinum<br/> D. Ephedrinum<br/> E. Euphyllinum</p>   |
| <p>Bronchodilatory effect of short-acting <math>\beta_2</math>-adrenoceptor agonist salbutamol develops after:</p> <p>A. <b>5-10 minutes</b><br/> B. 20-30 minutes<br/> C. 45-60 minutes<br/> D. 2-3 hours<br/> E. 4-6 hours</p>   | <p>A 40-year-old patient suffers from bronchial asthma and cardiac rhythm disturbance in form of bradyarrhythmia. Drugs of which pharmacological group should be administered for bronchospasm elimination?</p> <p>A. <b>Muscarinic receptor blockers</b><br/> B. Beta-adrenoceptor blockers<br/> C. Muscarinic cholinomimetics<br/> D. Anticholinesterase drugs</p> |

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| <p>A 40-year-old patient has a history of bronchial asthma and heart rhythm disorders in form of bradyarrhythmia. Bronchospasm can be eliminated by the drugs of the following pharmacological group:</p> <ul style="list-style-type: none"> <li>A. <b>M-cholinergic antagonists</b></li> <li>B. <math>\beta</math>-blockers</li> <li>C. <i>M</i>-cholinomimetics</li> <li>D. Cholinesterase inhibitors</li> <li>E. Muscle relaxants</li> </ul>   | <p>E. Muscle relaxants</p> <p>A 67-year-old patient who undergoes treatment for bronchial asthma presents with limb tremor, headache, insomnia, extrasystole. What drug might have caused such symptoms?</p> <ul style="list-style-type: none"> <li>A. <b>Theophylline</b></li> <li>B. Prednisolone</li> <li>C. Tavegyl</li> <li>D. Intal</li> <li>E. Acetylcysteine</li> </ul> |
| <p>During an asphyxiating attack the patient with bronchial asthma was given intravenously a drug that caused nausea, headache, excitation, and palpitations as side effects. What drug can cause such reaction?</p> <ul style="list-style-type: none"> <li>A. <b>Euphylline (Aminophylline)</b></li> <li>B. Prednisolone</li> <li>C. Ambroxol</li> <li>D. Suprastin (Chloropyramine)</li> <li>E. Papaverine hydrochloride</li> </ul>   | <p>A patient has a history of chronic bronchitis. Recommend him an expectorant which can be purchased at a pharmacy to facilitate the expectoration of thick and viscous mucus:</p> <ul style="list-style-type: none"> <li>A. <b>Ambroxol</b></li> <li>B. Falimint</li> <li>C. Glauvent</li> <li>D. Libexin</li> <li>E. Salbutamol</li> </ul>                                   |
| <p>A 5-year-old boy suffering from pneumonia has problems with mucus expectoration. A doctor prescribed him a mucolytic drug that stimulates surfactant synthesis. Name this drug:</p> <ul style="list-style-type: none"> <li>A. <b>Ambroxol</b></li> <li>B. Carbocisteine</li> <li>C. Mucaltin</li> <li>D. Acetylcysteine</li> <li>E. Potassium iodide</li> </ul>  | <p>A 46-year-old pharmacy customer suffers from chronic bronchitis and needs a medicine to facilitate expectoration of thick viscous sputum. What drug is indicated in this case?</p> <ul style="list-style-type: none"> <li>A. <b>Ambroxol</b></li> <li>B. Oxeladin</li> <li>C. Salbutamol</li> <li>D. Butamirate</li> <li>E. Codeine phosphate</li> </ul>                     |
| <p>A 45-year-old man complains of wet cough. He has been suffering from chronic bronchitis for 20 years. The patient is a smoker. He needs a mucolytic agent that will facilitate expectoration and production of surfactant. What drug can be recommended to the patient in this case?</p> <ul style="list-style-type: none"> <li>A. <b>Ambroxol</b></li> <li>B. Thermopsis preparations</li> <li>C. Licorice root</li> <li>D. Proteolytic enzymes</li> <li>E. Potassium iodide</li> </ul> | <p>Recommend a patient with acute bronchitis a mucolytic drug that facilitates expectoration:</p> <ul style="list-style-type: none"> <li>A. <b>Acetylcysteine</b></li> <li>B. Glaucine</li> <li>C. Loratadine</li> <li>D. Diclofenac sodium</li> <li>E. Drotaverine hydrochloride</li> </ul>  |

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| <p>A 24-year-old man suffers from exacerbation of chronic bronchitis. This condition is accompanied by production of a small amount of viscous sputum. What drug is indicated to facilitate the expectoration in this case?</p> <p><b>A. Acetylcysteine</b><br/>         B. Oxeladin<br/>         C. Fenoterol<br/>         D. Ipratropium bromide<br/>         E. Budesonide</p> | <p>What pharmacological group of drugs <b>CANNOT</b> be combined with expectorants?</p> <p><b>A. Antitussive drugs</b><br/>         B. Decongestants<br/>         C. Polyvitamins<br/>         D. Antibacterial drugs<br/>         E. Mucolytic agents</p>  |
| <p>A 46-year-old man came to a dispensing chemist complaining of a dry cough. What antitussive drug can he be recommended?</p> <p><b>A. Oxeladin</b><br/>         B. Sodium bicarbonate<br/>         C. Tripsin<br/>         D. Acetylcysteine<br/>         E. Bromhexine</p>   | <p>A patient, who has been taking an expectorant, has developed complaints of hypersalivation, rhinitis, and itching skin rashes (signs of iodism). What medicine can cause these side effects?</p> <p><b>A. Potassium iodide</b><br/>         B. Mucaltin<br/>         C. Infusion of Thermopsis grass<br/>         D. Ammonium chloride<br/>         E. Ambroxol syrup</p>                |
| <p>Which of the following drugs should be used for prevention of bronchial asthma attacks?</p> <p><b>A. Cromolyn sodium</b><br/>         B. Salbutamol<br/>         C. Drotaverine<br/>         D. Diphenhydramine hydrochloride<br/>         E. Ambroxol</p>   | <p>A patient with chronic bronchitis gets glaucine hydrochloride at a pharmacy. The patient must be warned about the following typical side effect of this drug:</p> <p><b>A. Arterial pressure drop</b><br/>         B. Excitation of the central nervous system<br/>         C. Irregular heartbeat<br/>         D. Increased intraocular pressure<br/>         E. Allergic skin rash</p> |

## Clinical Pharmacy in Rheumatology

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| <p>A 33-year-old woman who has been treated for chronic polyarthritis for a long time complains about arterial pressure rise, change of adipose tissue distribution, menstrual cycle disorder. What preparation has she taken?</p> <p><b>A. Prednisolone</b><br/>         B. Indometacin<br/>         C. Butadion<br/>         D. Synaflan<br/>         E. Diclofenac sodium</p> | <p>Examination of a patient who has been treated for rheumatoid arthritis for a long time revealed hyperglycemia. What drug might have caused it?</p> <p><b>A. Dexamethasone</b><br/>         B. Diclofenac sodium<br/>         C. Ibuprofen<br/>         D. Chloroquine<br/>         E. Levamisole</p> |
| <p>A 43-year-old patient with a severe</p>   | <p>A 52-year-old patient has been diagnosed</p>   |

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| <p>form of rheumatoid arthritis has been administered a certain drug for background therapy. Specify this drug:</p> <ul style="list-style-type: none"> <li>A. <b>Methotrexate</b></li> <li>B. Diclofenac sodium</li> <li>C. Nimesulide</li> <li>D. Prednisolone</li> <li>E. Methylprednisolone</li> </ul>  | <p>with gouty arthritis, phase 2. What drug should be basic in treatment of this patient?</p> <ul style="list-style-type: none"> <li>A. <b>Allopurinol</b></li> <li>B. Hydrochlorothiazide</li> <li>C. Paracetamol</li> <li>D. Furosemide</li> <li>E. Penicillin</li> </ul>   |
| <p>A 34-year-old patient suffering from systemic lupus erythematosus takes methylprednisolone. On examination the patient's blood calcium is revealed to be below. A doctor suspects osteoporosis development. It is necessary to prescribe the patient calcium preparations and:</p> <ul style="list-style-type: none"> <li>A. <b>Vitamin D<sub>3</sub></b></li> <li>B. B-group vitamins</li> <li>C. Vitamin C</li> <li>D. Vitamin A</li> <li>E. Vitamin E</li> </ul> | <p>It is necessary to prescribe non-steroid anti-inflammatory drug for patient with rheumatoid arthritis and concomitant duodenal ulcer. Which drug is the drug of choice in this case?</p> <ul style="list-style-type: none"> <li>A. <b>Celecoxib</b></li> <li>B. Acetylsalicylic acid</li> <li>C. Paracetamol</li> <li>D. Analgin</li> <li>E. Diclofenac sodium</li> </ul>                      |
| <p>A 57-year-old patient is diagnosed with rheumatoid arthritis. Anamnesis states peptic ulcer disease. What nonsteroidal anti-inflammatory drug can be recommended for this patient?</p> <ul style="list-style-type: none"> <li>A. <b>Celecoxib</b></li> <li>B. Diclofenac</li> <li>C. Aspirin</li> <li>D. Indometacin</li> <li>E. Mefenamic acid</li> </ul>  | <p>Help the doctor to select a drug from the group of non-steroidal anti-inflammatory drugs, which is an inhibitor of COX-2 and does not damage the stomach:</p> <ul style="list-style-type: none"> <li>A. <b>Celecoxib</b></li> <li>B. Acetylsalicylic acid</li> <li>C. Indomethacin</li> <li>D. Paracetamol</li> <li>E. Diclofenac sodium</li> </ul>  |
| <p>Which anaesthetic, anti-inflammatory, the least harmful for the stomach preparation can be recommended to a patient with exacerbation of rheumatoid arthritis?</p> <ul style="list-style-type: none"> <li>A. <b>Celecoxib</b></li> <li>B. Diclofenac sodium</li> <li>C. Acetylsalicylic acid</li> <li>D. Ibuprofen</li> <li>E. Indometacinum</li> </ul>   | <p>A patient with osteoarthritis (gonarthrosis) and peptic gastric ulcer in anamnesis must be prescribed a NSAID (nonsteroidal anti-inflammatory drug). What drug would be the most safe for this patient?</p> <ul style="list-style-type: none"> <li>A. <b>Meloxicam</b></li> <li>B. Acetylsalicylic acid</li> <li>C. Ibuprofen</li> <li>D. Indometacin</li> <li>E. Metamizole sodium</li> </ul> |
| <p>A pharmacy received a new generation nonsteroid anti-inflammatory drug "meloxicam" that mainly blocks cyclooxygenase-2. What advantages does this preparation have in comparison with other nonsteroid anti-inflammatory drugs?</p>   | <p>Which of the following nonsteroid anti-inflammatory agents has the least harmful effect on mucosa of gastrointestinal tract?</p> <ul style="list-style-type: none"> <li>A. <b>Nimesulide</b></li> <li>B. Diclofenac</li> </ul>   |

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| <p>A. <b>Minimal side effect on alimentary tract</b></p> <p>B. Evident myospasmodic action</p> <p>C. Interferonogenic properties</p> <p>D. Minimal side effect on hematogenesis</p> <p>E. Significant inhibition of protease activity</p> | <p>C. Indomethacin</p> <p>D. Piroxicam</p> <p>E. Acetylsalicylic acid</p> |
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# Clinical Pharmacy in Gastroenterology

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| <p>A 20-year-old man suffers from chronic hyperacid type B gastritis. Choose the antisecretory agent.</p> <ul style="list-style-type: none"> <li>A. <b>Omeprazole</b></li> <li>B. Drotaverine hydrochlorid</li> <li>C. Clarithromycin</li> <li>D. Levofloxacin</li> <li>E. Metoclopramide</li> </ul>   | <p>A patient suffering from stomach ulcer was prescribed an antiulcer drug that also reduces secretion of hydrochloric acid and inhibits <i>Chelicobacter pylori</i>. What drug is it?</p> <ul style="list-style-type: none"> <li>A. <b>Omeprazole</b></li> <li>B. Gastrocepine</li> <li>C. Maalox</li> <li>D. Famotidine</li> <li>E. Almagel</li> </ul>  |
| <p>A 44-year-old man was diagnosed with chronic hyperacid gastritis. What pharmacological group of drugs would be the most advisable in this case?</p> <ul style="list-style-type: none"> <li>A. <b>Proton pump inhibitors</b></li> <li>B. Inhibitors of protein-degrading enzymes</li> <li>C. Beta-blockers</li> <li>D. Glucocorticosteroids</li> <li>E. Alpha-blockers</li> </ul>  | <p>During anti-<i>Helicobacter</i> quadrotherapy patient's feces colored black. What drug could have caused this effect?</p> <ul style="list-style-type: none"> <li>A. <b>Bismuth subcitrate</b></li> <li>B. Omeprazole</li> <li>C. Amoxicillin</li> <li>D. Clarithromycin</li> <li>E. Metronidazole</li> </ul>   |
| <p>A man with gastric ulcer is prescribed anti-<i>Helicobacter pylori</i> therapy. On the 3rd day the patient developed black coloring of feces. What had caused such changes?</p> <ul style="list-style-type: none"> <li>A. <b>Bismuth subcitrate</b></li> <li>B. Omeprazole</li> <li>C. Metronidazole</li> <li>D. Tetracycline</li> <li>E. Tinidazole</li> </ul>   | <p>A patient with peptic ulcer disease has developed black-colored feces during combined pharmacotherapy. Name the drug that can be the cause of this development:</p> <ul style="list-style-type: none"> <li>A. <b>Bismuth subcitrate</b></li> <li>B. Famotidine</li> <li>C. Omeprazole</li> <li>D. Lansoprazole</li> <li>E. Ranitidine</li> </ul>   |
| <p>In the course of clinical instrumental examination a 45-year-old patient was diagnosed with chronic <i>helicobacter</i>-associated type B gastritis. What group of drugs should be prescribed first of all?</p> <ul style="list-style-type: none"> <li>A. <b>Anti-<i>Helicobacter pylori</i> agents</b></li> <li>B. Prokinetic agents</li> <li>C. Antacids</li> <li>D. Reparative drugs</li> <li>E. Anti-Muscarinic agents</li> </ul> | <p>A patient suffering from stomach ulcer was prescribed almagel. Which of its pharmacological properties is intended for treatment of this pathology?</p> <ul style="list-style-type: none"> <li>A. <b>HCl neutralization</b></li> <li>B. Local anaesthetization</li> <li>C. Blocking the H<sub>2</sub>-histamine receptors</li> <li>D. Blocking the muscarinic cholinoreceptors</li> <li>E. Anti-inflammatory action</li> </ul> |
| <p>A patient with cholelithiasis should be administered the following drug for the dissolution of cholesterol gallstones:</p>  | <p>Several cholesterol gallstones are detected in the gallbladder of a woman. Choose the drug to dissolve and excrete</p>   |

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| <p>A. <b>Ursodeoxycholic acid</b><br/>B. Gamma-aminobutyric acid<br/>C. Acetylsalicylic acid<br/>D. Citric acid<br/>E. Mefenamic acid</p>   | <p>the stones:<br/>A. <b>Ursodeoxycholic acid</b><br/>B. Papaverine<br/>C. Domperidone<br/>D. Loperamide<br/>E. Platyphyllin</p>   |
| <p>A patient has a history of cholelithiasis. What drug should be administered to prevent biliary colic?<br/>A. <b>Magnesium sulfate</b><br/>B. Almagel<br/>C. Contrycal<br/>D. Bisacodyl<br/>E. Pancreatin</p> | <p>A patient has chronic pancreatitis with apparent presentations of pancreatic exocrine hypofunction. Which of the following drugs would be the most advisable in this case?<br/>A. <b>Pancreatinum</b><br/>B. Drotaverine<br/>C. De-Nol<br/>D. Omeprazole<br/>E. Acidin pepsinum</p> |

### Clinical Pharmacy in Hepatology

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| <p>A man with a long history of chronic hepatitis has been diagnosed with pneumonia. Which of the following antibacterial drugs can be applied in this clinical situation?<br/>A. <b>Amoxicillin</b><br/>B. Tetracycline<br/>C. Biseptol<br/>D. Rifampicin<br/>E. Vancomycin</p> | <p>A man with a long history of chronic hepatitis has been diagnosed with pneumonia. Which of the following antibacterial drugs can be applied in this clinical situation?<br/>A. <b>Amoxicillin</b><br/>B. Tetracycline<br/>C. Biseptol<br/>D. Rifampicin<br/>E. Vancomycin</p> |
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### Clinical Pharmacy in Haematology

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| <p>A 36-year-old patient complains of general weakness, somnolence, increased brittleness of nails, loss of hair. The patient was diagnosed with iron-deficiency anemia. What drug should be prescribed for treatment?<br/>A. <b>Ferric sulfate</b><br/>B. Cyanocobalamin<br/>C. Folic acid<br/>D. Myelosanum (Busulfan)<br/>E. Riboxin (Inosine)</p> | <p>A patient who has been suffering from gastric diseases for a long time is found to have hyperchromic anemia. Which of the following drugs is applied for this pathology treatment?<br/>A. <b>Cyanocobalamin</b><br/>B. Ascorbic acid<br/>C. Unithiol<br/>D. Ferrum Lek<br/>E. Oxyferriscorbone</p> |
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| <p>To treat iron-deficiency anemia the following drug is usually prescribed:</p> <ul style="list-style-type: none"> <li>A. <b>Ferroplex</b></li> <li>B. Furagin (Furazidinum)</li> <li>C. Corticosteroids</li> <li>D. Heparin</li> <li>E. Vicasol (Menadione)</li> </ul> |  |
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### Clinical Pharmacy in Nephrology

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| <p>A 25-year-old man is diagnosed with acute pyelonephritis of moderate severity. What drugs should be prescribed for etiotropic therapy?</p> <ul style="list-style-type: none"> <li>A. <b>Antimicrobial agents</b></li> <li>B. Glucocorticoids</li> <li>C. Nonsteroidal antiinflammatory drugs</li> <li>D. Anticholinesterase drugs</li> <li>E. Antiarrhythmic drugs</li> </ul>         | <p>A female patient in the first trimester of pregnancy has been diagnosed with acute pyelonephritis. What is the antibiotic drug of choice for treating this patient?</p> <ul style="list-style-type: none"> <li>A. <b>Amoxicillin</b></li> <li>B. Norfloxacin</li> <li>C. Gentamicin</li> <li>D. Chloramphenicol</li> <li>E. Amikacin</li> </ul> |
| <p>A 28-year-old pregnant woman (8-9 weeks) after clinical examination and laboratory analysis was diagnosed with acute pyelonephritis. What empiric antibacterial therapy will be optimal in this case?</p> <ul style="list-style-type: none"> <li>A. <b>Amoxicillin</b></li> <li>B. Norfloxacin</li> <li>C. Chloramphenicol</li> <li>D. Gentamicin</li> <li>E. Tetracycline</li> </ul> | <p>What is the drug of choice for the treatment of acute pyelonephritis in a pregnant woman in the I trimester?</p> <ul style="list-style-type: none"> <li>A. <b>Amoxicillin</b></li> <li>B. Norfloxacin</li> <li>C. Biseptolum</li> <li>D. Gentamicin</li> <li>E. Chloramphenicol</li> </ul>  |
| <p>A 12 weeks pregnant patient has been hospitalized with symptoms of acute cystitis. What antibiotic can be recommended in this case?</p> <ul style="list-style-type: none"> <li>A. <b>Amoxicillin</b></li> <li>B. Ciprofloxacin</li> <li>C. Gentamicin</li> <li>D. Metronidazole</li> <li>E. Tetracycline</li> </ul>   | <p>A 43-year-old patient was brought into an admission room with renal colic attack. What group of drugs would be the most effective for attack relief?</p> <ul style="list-style-type: none"> <li>A. <b>Antispasmodics</b></li> <li>B. Cholagogues</li> <li>C. Antacids</li> <li>D. Hepatoprotectors</li> <li>E. Antibiotics</li> </ul>           |
| <p>Exacerbation of urolithiasis has caused a renal colic in the patient. What drug must be administered to arrest the colic?</p> <ul style="list-style-type: none"> <li>A. <b>Drotaverine hydrochloride</b></li> <li>B. Siliborum</li> <li>C. Almagel</li> <li>D. Aethimizolum</li> </ul>  | <p>Select a loop diuretic of strong, emergency and short-term action from the listed below:</p> <ul style="list-style-type: none"> <li>A. <b>Furosemide</b></li> <li>B. Clopamide</li> <li>C. Acetazolamide</li> <li>D. Spironolactone</li> </ul>  |

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| E. Neostigmine methylsulfate  | E. Triamterene |
| Which of the following diuretics SHOULD NOT be administered to patients with impaired hearing?<br>A. <b>Furosemide</b><br>B. Spironolactone<br>C. Clopamide<br>D. Indapamide<br>E. Chlorthalidone |                |

## Clinical Pharmacy in Endocrinology

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| <p>A 15-year-old patient has been first diagnosed with type I diabetes mellitus. Which antihyperglycemic drug should be administered in this case?</p> <p>A. <b>Insulin</b><br/> B. Metformin<br/> C. Diabetone<br/> D. Glurenorm<br/> E. Glibenclamide</p>   | <p>A 17-year-old patient complains of persistent thirst, dry mouth, frequent urination, increased appetite. Blood glucose is at the rate of 11 mmol/l. The patient has been diagnosed with diabetes mellitus type I. What drug is indicated for treatment?</p> <p>A. <b>Insulin</b><br/> B. Maninil<br/> C. Glibenclamide<br/> D. Acarbose<br/> E. Asparcamum</p> |
| <p>An 18-year-old girl was hospitalized with complaints of polyuria, dry skin, loss of weight, and general weakness. She was diagnosed with diabetes mellitus type I, first diagnosed. What drug should be taken first in the course of the therapy?</p> <p>A. <b>Insulin</b><br/> B. Exenatide<br/> C. Metformin<br/> D. Glibenclamid<br/> E. Arphasetin</p>                         | <p>A 24-year-old patient after a thorough examination was diagnosed with type 1 diabetes mellitus for the first time. What antihyperglycemic agent should be prescribed in this case?</p> <p>A. <b>Insulin</b><br/> B. Glibcnclamide<br/> C. Metformin<br/> D. Etacrynic acid<br/> E. Urea</p>  |
| <p>A woman with diabetes mellitus has developed hypoglycemia after insulin overdose. What measures should be taken at the first signs of hypoglycemia?</p> <p>A. <b>Give the patient a sugar lump to eat and a cup of warm sweetened tea</b><br/> B. Introduce 0.1% adrenaline solution subcutaneously<br/> C. Give nitroglycerine sublingually<br/> D. Make an insulin injection</p> | <p>A woman with diabetes mellitus has injected herself with 30 units of insulin. After that she developed weakness and acme to the pharmacy to ask for help. In the pharmacy she lost her consciousness and developed convulsions. What should she be given immediately?</p> <p>A. <b>Glucose</b><br/> B. Insulin<br/> C. Glibenclamid</p>                        |

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| <p>E. Make an intramuscular injection of caffeine</p>  | <p>D. Butamide (Tolbutamide)<br/>E. Metformin</p>  |
| <p>What drug is used to treat hyperthyroidism?<br/><b>A. Mercazolil (Thiamazole)</b><br/>B. Oxytocin<br/>C. Prednisolone<br/>D. Metformin<br/>E. Insulin</p>   | <p>A 48-year-old patient has undergone incomplete amputation of the thyroid gland. Choose the drug for replacement therapy in case of hypothyroidism:<br/><b>A. L-thyroxin</b><br/>B. Hydrocortisone<br/>C. Insulin<br/>D. Metoprolol<br/>E. Prednisolone</p>  |
| <p>Help the doctor to select a drug for the replacement therapy after the thyroid gland removal:<br/><b>A. L-thyroxine</b><br/>B. Insulin<br/>C. Prednisolone<br/>D. Parathyroidin<br/>E. Mercazolilum</p>   | <p>A female 49-year-old patient complains of compressing headache in the occipital region, dizziness, increased AP. The patient has a history of diabetes mellitus type II. What diuretic DOES NOT affect the blood glucose level?<br/><b>A. Indapamide</b><br/>B. Furosemide<br/>C. Hypothiazide<br/>D. Ethacrynic acid<br/>E. Urea</p> |
| <p>Which of the listed antibacterial drugs <b>should NOT be administered</b> to a patient with diabetes mellitus type II being treated with glibenclamid?<br/><b>A. Co-trimoxazolium</b><br/>B. Midecamycin<br/>C. Gentamycinum<br/>D. Benzylpenicillinum<br/>E. Doxycycline</p> |  |

## Clinical Pharmacy in Allergology

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| <p>A patient had been given an injection of 0,25% novocaine solution for the purpose of anaesthetization. Suddenly the patient developed red spots, intense sweating, tachycardia, bronchospasm, edema of nasal mucosa. What is the cause of this complication?</p> <ul style="list-style-type: none"><li>A. <b>Immediate allergy</b></li><li>B. Delayed allergy</li><li>C. Local irritation</li><li>D. Tachyphylaxis</li><li>E. Withdrawal syndrome (Abstinence syndrome)</li></ul> | <p>A patient after bee's stings has angioedema (Quincke's edema). Which drug should be immediately inject to eliminate this condition?</p> <ul style="list-style-type: none"><li>A. <b>Epinephrine hydrochloride</b></li><li>B. Sodium chloride</li><li>C. Platyphyllini hydrotartras</li><li>D. Atropine sulfate</li><li>E. Anaprilinum</li></ul> |
| <p>A patient is 20 years old. After she was stung by a bee the patient developed Quincke's disease; rash in the form of blisters and papulae appeared on her torso. First aid in this case should start with administering the following drug:</p> <ul style="list-style-type: none"><li>A. <b>Prednisolone</b></li><li>B. Penicillin</li><li>C. Fresh frozen plasma</li><li>D. Rheopolyglukin (Dextran)</li><li>E. Haemodes</li></ul>   | <p>A patient with atopic dermatitis presented to the hospital. Which drug with anti-inflammatory and antiallergic effect should be administered to this patient?</p> <ul style="list-style-type: none"><li>A. <b>Prednisolone</b></li><li>B. Aethamidum</li><li>C. Oxytocin</li><li>D. Insulin</li><li>E. Retabolilum</li></ul>                    |
| <p>What drug should be used first in case of anaphylactic shock?</p> <ul style="list-style-type: none"><li>A. <b>Prednisolone</b></li><li>B. Dibazol (Bendazol)</li><li>C. Fexofenadine</li><li>D. Euphyllin (Aminophylline)</li><li>E. Loratadine</li></ul>   | <p>A bus driver addressed a pharmacy due to his suffering from allergic rhinitis. What antihistamine with minimal sedative action can you recommend?</p> <ul style="list-style-type: none"><li>A. <b>Loratadine</b></li><li>B. Clemastine</li><li>C. Astemizole</li><li>D. Diphenhydramine</li><li>E. Chloropyramine</li></ul>                     |

## Pharmaceutical Care

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| <p>A 25-year-old patient with frequent migraine attacks has been prescribed sumatriptan. Specify the mechanism of its action:</p> <p>A. <b>Selective agonist of 5-HT<sub>1</sub>-serotonin receptors</b></p> <p>B. Selective antagonist of 5-HT<sub>1</sub>-serotonin receptors</p> <p>C. Nonselective β-blocker</p> <p>D. Stimulator of β-adrenergic receptors</p> <p>E. Selective β-blocker</p>                               | <p>One of the substances listed below is NOT a vitamin:</p> <p>A. <b>Calcium gluconate</b></p> <p>B. Calcium pangamate</p> <p>C. Calcium pantothenate</p> <p>D. Ergocalciferol</p> <p>E. Nicotinic acid</p>  |
| <p>A 60-year-old man has come to a pharmacy with complaints of impaired twilight vision, dry sclera, cracked and peeling skin. The dispensing chemist suspected hypovitaminosis and recommended the customer to take the following drug after consultation with the physician:</p> <p>A. <b>Retinol acetate</b></p> <p>B. Tocopherol acetate</p> <p>C. Ergocalciferol</p> <p>D. Vicasol (Menadione)</p> <p>E. Ascorbic acid</p> | <p>A 35-year-old female customer came to a pharmacy to purchase a medicine for the prevention of influenza. Which of the following drugs can be recommended?</p> <p>A. <b>Rimantadine</b></p> <p>B. Acyclovir</p> <p>C. Ribavirin</p> <p>D. Ganciclovir</p> <p>E. Lamivudine</p> |
| <p>A 36-year-old woman with herpetic rash on her lips has come to a pharmacy. Recommend her a drug for topical treatment:</p> <p>A. <b>Acyclovir</b></p> <p>B. Fluconazole</p> <p>C. Levofloxacin</p> <p>D. Metronidazole</p> <p>E. Amikacin</p>  | <p>What topical antiviral agent should be recommended to the patient with herpetic lesions on the lips?</p> <p>A. <b>Acyclovir</b></p> <p>B. Arbidol (Umifenovir)</p> <p>C. Amizon (Enisamium iodide)</p> <p>D. Aflubin</p> <p>E. Anaferon</p>                                   |
| <p>A patient with arterial hypertension was administered a non-prescription drug for symptomatic treatment of rhinitis. What pharmaceutical form should be recommended the patient in order to reduce as much as possible the likelihood of development of undesirable systemic vasoconstriction?</p> <p>A. <b>Ointment</b></p> <p>B. Gel</p> <p>C. Drops</p> <p>D. Aerosol</p> <p>E. Tablets</p>                               | <p>How long can vasoconstrictors for symptomatic treatment of rhinitis be used?</p> <p>A. <b>5-7 days</b></p> <p>B. 1 month</p> <p>C. 2 weeks</p> <p>D. 3 weeks</p> <p>E. 5 weeks</p>  |

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| <p>What is the most suitable drug that can be recommended for the treatment of rhinitis accompanying an ARVI in a 7-month-old child?</p> <p>A. <b>0,9% warm water solution of NaCl</b><br/> B. Naphthyzin<br/> C. Galazolin<br/> D. Pinosol<br/> E. Boromentol ointment</p>                | <p>A pregnant woman with signs of acute rhinitis came to a pharmacy. What drug for symptomatic treatment of rhinitis will be the safest in this case?</p> <p>A. <b>Salt solutions based on iso- and hypotonic sodium chloride solutions</b><br/> B. Beclomethasone preparations<br/> C. Essential oil-based preparations<br/> D. Cromoglicic acid preparations<br/> E. Xylometazoline preparations</p> |
| <p>A patient complaining of stuffy nose, fatigability, and headache came to a dispensing chemist. What medicine should be recommended to treat stuffy nose in this case?</p> <p>A. <b>Xylometazoline</b><br/> B. Paracetamol<br/> C. Dexamethasone<br/> D. Acyclovir<br/> E. Lactulose</p> | <p>A young mother has come to a pharmacy to buy an antipyretic drug for her 3-month-old infant. What dosage form would you choose for the infant?</p> <p>A. <b>Suppositories</b><br/> B. Tablets<br/> C. Capsules<br/> D. Spray<br/> E. Lozenges</p>   |
| <p>A 3-year-old child is intolerant to paracetamol. What antipyretic drug can be taken instead?</p> <p>A. <b>Ibuprofen</b><br/> B. Acetylsalicylic acid<br/> C. Nimesulide<br/> D. Naproxen<br/> E. Diclofenac sodium</p>  | <p>A woman asked a pharmacist to dispense an antipyretic for an 8-month-old child. Which drug should be recommended?</p> <p>A. <b>Paracetamol</b><br/> B. Acetylsalicylic acid<br/> C. Indomethacin<br/> D. Diclofenac sodium<br/> E. Piroxicam</p>  |
| <p>Mother of a 2-month-old child came to a pharmacy and asked for a febrifuge. What drug should be recommended for the child?</p> <p>A. <b>Paracetamol</b><br/> B. Nimesulide<br/> C. Acetylsalicylic acid<br/> D. Indometacinum<br/> E. Diclofenac sodium</p>                             | <p>What drug can be recommended for symptomatic treatment of muscle pain in a 5-year-old child?</p> <p>A. <b>Paracetamol</b><br/> B. Acetylsalicylic acid<br/> C. Diclofenac sodium<br/> D. Indomethacin<br/> E. Celecoxib</p>   |
| <p>A woman in the III trimester of pregnancy has an acute respiratory viral disease accompanied with body temperature rise up to 39°C. Which of the drugs should be recommended?</p> <p>A. <b>Paracetamol</b><br/> B. Celecoxib<br/> C. Indomethacin</p>                                   | <p>A 26-year-old pregnant woman (III trimester of pregnancy) complains about body temperature rise up to 39°C. What febrifuge may be recommended in this case?</p> <p>A. <b>Paracetamol</b><br/> B. Aspirin<br/> C. Diclofenac<br/> D. Analgin<br/> E. Indometacin</p>   |

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| <p>D. Acetylsalicylic acid<br/>E. Diclofenac sodium</p>  |  |
| <p>Reye syndrome (encephalopathy, fatty degeneration of liver) develops as a side effect in children suffering from fever of viral origin when they take the following medicine:<br/><b>A. Acetylsalicylic acid</b><br/>B. Celecoxib<br/>C. Ibuprofen<br/>D. Metamizole sodium<br/>E. Paracetamol</p>                                    | <p>A woman with chronic bronchitis was prescribed azithromycin. After a time, she developed complaints of abdominal pain and distension, diarrhea, nausea, and vomiting. What side effect is observed in this patient?<br/><b>A. Dysbiosis</b><br/>B. Chondrotoxicity<br/>C. Photosensitization<br/>D. Allergic response<br/>E. Nephrotoxicity</p> |
| <p>A 32-year-old woman that had been undergoing antibiotic therapy for her pneumonia has developed intestine disbacteriosis. What drugs should she be prescribed?<br/><b>A. Probiotics</b><br/>B. Immune-response modulating agents<br/>C. Choloretics<br/>D. Antacids<br/>E. Antispasmodics</p>   | <p>Specify the drugs recommended for prevention and correction of dysbiotic problems caused by antibiotic therapy:<br/><b>A. Probiotics</b><br/>B. Antacids<br/>C. Prokinetics<br/>D. Uroseptics<br/>E. Choloretics</p>  |
| <p>A 74-year-old man came to the pharmacy. He had been prescribed ampicillin for antibiotic treatment of dysenteric gastroenterocolitis. What group of drugs should be recommended for dysbiosis prevention in this case?<br/><b>A. Probiotics</b><br/>B. Antacids<br/>C. Enzymatic agents<br/>D. Sorbents<br/>E. Immunosuppressants</p> | <p>A 25-year-old female patient had been taking antibiotics for 7 days, the disease was complicated by the development of intestinal dysbiosis. This complication should be treated by the drugs of the following group:<br/><b>A. Probiotics</b><br/>B. Antispasmodics<br/>C. Choloretics<br/>D. Antacids<br/>E. Adaptogens</p>                   |
| <p>A 42-year-old man with community-acquired pneumonia was prescribed a long-term antibiotic treatment. What drugs should be prescribed to this patient to prevent development of dysbiosis?<br/><b>A. Probiotics</b><br/>B. Antitussive drugs<br/>C. Antispasmodics<br/>D. Mucolytic agents<br/>E. Expectorants</p>                     | <p>A 54-year-old patient who has been suffering from hyperacidic gastritis for several years was prescribed almagel. What pharmacotherapeutical complications on the part of digestive organs may be expected in the first place?<br/><b>A. Constipation</b><br/>B. Nausea<br/>C. Anorexia<br/>D. Emesis</p>                                       |

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| <p>What antacid can cause constipations, osteoporosis, and encephalopathy when taken for a long period of time?</p> <p><b>A. Aluminium hydroxide</b></p> <p>B. Sodium bicarbonate</p> <p>C. Calcium carbonate</p> <p>D. Sodium alginate</p> <p>E. Magnesium oxide</p> | <p><b>E. Diarrhea</b></p> <p>A 28-year-old woman came to a pharmacy complaining of constipation that developed after antacid treatment. What drug could be the cause of this symptom?</p> <p><b>A. Aluminium-containing drugs</b></p> <p>B. Magnesium-containing drugs</p> <p>C. Calcium carbonate</p> <p>D. Simethicone</p> <p>E. Ranitidine</p> |
| <p>A patient with iron-deficiency anemia was prescribed iron sulfate. What side effect is characteristic for iron preparations?</p> <p><b>A. Constipation</b></p> <p>B. Elevated blood pressure</p> <p>C. Dysbiosis</p> <p>D. Osteoporosis</p> <p>E. Bradycardia</p>  | <p>Which preparation from the group of laxative agents <b>IS NOT</b> to be administered in case of intoxication with CNS-inhibiting substances?</p> <p><b>A. Magnesium sulfate</b></p> <p>B. Sodium sulfate</p> <p>C. Vaseline oil</p> <p>D. Bisacodyl</p> <p>E. Guttalax</p>   |