

1. Routes of drug administration
2. Basic pharmacokinetic parameters and processes
3. Drug absorption, first pass effect
4. Bioavailability, AUC
5. Drug distribution, volume of distribution
6. Drug elimination, $t_{0.5}$, K_E , Cl
7. Drug metabolism - phases, examples
8. Influence of drugs on inhibition and induction of enzymes
9. Drug excretion
10. Pharmacokinetics of repeated and continual drug administration
11. Drug dosage regimen, continual and intermittent administration
12. Pharmaceutical forms - overview and their influence on pharmacokinetics
13. Therapeutic monitoring of drugs (TDM)
14. Dose – response curves
15. Pharmacogenetics, genetic polymorphism
16. Pharmacological mechanism of drug effects
17. Specific drug effect – targets for drug action
18. Types of adverse drug reactions
19. Drug receptors theory - types of receptors, agonism, antagonism..
20. Tolerance, tachyphylaxis, resistance
21. Drug addiction
22. Therapeutic index
23. Influence of concomitant diseases on drug effect, polypharmacy
24. Drug allergy (hypersensitivity), idiosyncratic reactions
25. Drug interactions- overview, pharmacokinetic interactions
26. Drug interactions- overview, pharmacodynamic interactions
27. Drug interactions- overview, pharmaceutical/technological interactions
(incompatibilities)
28. Synergism, antagonism in drug effects (pharmacokinetics, pharmacodynamics)
29. Factors influencing the drug effect (related to drug, related to organism)
30. Pharmacotherapy in pediatric population, effects of pregnancy

31. Pharmacotherapy in elderly
32. Czech pharmacopoea
33. Drug anamnesis; patient's compliance
34. Pharmacoeconomy
35. Experimental pharmacology, preclinical research
36. Drug life-cycle
37. Preclinical and clinical trials
38. Pharmacovigilance
39. General principles of therapy of drug intoxication, specific antidotes and mechanisms of their effects