



**Катедра по Фармакология,  
токсикология и фармакотерапия**

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## Requirements for Colloquium in Toxicology before State Exam

Academic year 2023/2024

The students write about one of the topics included in the following syllabus. The topic is chosen randomly on the day of the colloquium. The time limit for the colloquium is **30 minutes**.

### Topics in toxicology:

1. Absorption of xenobiotics in the organism - „gates of entrance” and absorption. Specifics related to the entrance route. The fate of the xenobiotics in the human body.
2. Distribution, biotransformation, and excretion of xenobiotics. Possibilities for pharmacological influence on the toxicity.
3. Mechanisms of the toxic action of xenobiotics – direct cytotoxicity and free-radical processes. Examples. Toxicity of paracetamol - mechanism, manifestations and treatment. Antioxidants.
4. Mechanisms of the toxic action of xenobiotics - sulfhydryl (-SH) groups, and specific receptor proteins. Enhancing the toxic effect. Cyanide intoxications - routes of entry, mechanism, manifestations and treatment.
5. Natural (physiological) antitoxic defense – components, types, and mechanisms.
6. Drugs, used for treatment of poisonings - antidotes. Types, mechanism of action, examples.
7. Organ toxicity – liver toxicity, mechanisms of liver injury. Examples – drugs, chemicals, toxins of biological origin. Intoxication with *Amanita phalloides* - manifestations and treatment.
8. Organ toxicity – neuronal toxicity. Types, mechanisms, examples. Drug poisonings - benzodiazepines, antipsychotics, opioid analgesics. General characteristics and principles of treatment.

9. Organ toxicity – poisons with primary gastrointestinal toxicity. Types, mechanisms, examples of toxicants. Drug poisonings - NSAIDs, salicylates, iron salts, etc. Manifestations, treatment and prevention.
10. Intoxications with ethyl alcohol, methyl alcohol and ethylene glycol. Manifestations, treatment and prevention.

Prepared by: .....  .....

Assoc. Prof. E. Apostolova, Pharm D, Ph.D.



Approved by: .....

Prof. L. Psychev, MD, PhD, MHM