

STUDY POINTS

Principles of Toxicology

MyToxCert study points can be used to focus areas of study and preparation. The study point does not contain specific information that would lead you to the diagnosis or correct answer but would instead direct you to learning and reference materials.

Principles of Toxicology Study Points

Laboratory Studies and Monitoring

- Therapeutic drug monitoring
- False positive and negative drug tests by immunoassay and GC/MS
- Laboratory assay to determine the presence of opioids
- Metabolism and detection of opioids
- Adulteration of urine samples to mask the presence of drugs of abuse

Pharmacokinetics, Pharmacodynamics, Toxicokinetics, and Toxicodynamics

- Pharmacokinetics and area under the curve (AUC)
- Immediate and modified release pharmacokinetics
- Metabolism of prodrugs
- Metabolism and detection of opioids
- Extracorporeal removal of toxins

Drug Interactions

- Drug-drug interactions between anticoagulants and treatment for COVID-19
- Drug interactions CYP3A4
- Drug interactions with medications and orange juice

Toxin Actions and Metabolism

- Actions of chemotherapeutics
- Differences in binding affinities (Kd) for the mu opioid receptor
- Anti-hypertensive medications
- Abuse of prescription medications
- Adverse effects of vasopressors
- Metabolism of sedative-hypnotics
- Heparin versus low molecular weight heparin
- Adverse effects of octreotide
- Colchicine and podophyllin toxicity
- Complications of anticoagulant therapy
- Causes of hemolysis in G6PD deficiency
- SSRI metabolism
- Mechanism of ketamine and PCP analgesia

Lactation and Breast Milk

- Transfer of drugs from maternal serum to breast milk
- Measures of drug content in breast milk
- Heavy metal contamination of breast milk

Withdrawal Syndromes

- Features of withdrawal syndromes
- Drug discontinuation syndromes

Plants and Mushrooms

- Clinical effects of poisonous plants
- Cardiac glycoside toxicity
- Plants that cause leukopenia
- Clinical effects of toxic mushrooms
- Trichothecene mycotoxins

Additional Topics

- Exposure histories consistent with child abuse or neglect

January 2024