

Drugs and the Body - Study Guide

Know the following terms and concepts:

Pharmacokinetics

Drug Absorption

Factors affecting the crossing of membranes: diffusion, lipid solubility.

Ways of crossing cell membranes: Channels, Active Transport, Diffusion

Drug Ionization

Relationship of drug ionization with lipid solubility.

Steps to oral absorption.

Factors affecting rate of oral absorption.

Influence of pH on drug absorption.

First pass metabolism of orally administered drugs.

Advantages and disadvantages of administering drugs orally.

Advantages and disadvantages of administering drugs through injection.

Advantages and disadvantages of administering drugs through inhalation.

Other routes of drug administration.

Immediate Release vs Delayed Release vs Extended Release Medications.

Barriers to drug distribution:

Protein Binding,

Blood Brain Barrier,

Storage in Fat

How can protein binding lead to drug interactions?

Tight Junctions

When is the blood brain barrier ineffective or absent?

Area Postrema

Metabolism

What is the primary organ for drug metabolism?

Hepatic Microsomal Enzymes

Metabolites

How does metabolism generally affect the psychoactive characteristics of a drug?

Factors affecting drug metabolism.

How are drugs and metabolites usually eliminated from the body?

Effect of urine pH on drug excretion.

Other routes of drug elimination besides renal pathways.

Drug Half-Life

Does the “placental barrier” protect the fetus from psychoactive drugs?

Risks of drug exposure to the fetus:

Acute Toxicity,

Teratogenic effects,

Neonatal abstinence syndrome.

Why the concern about drugs administered to the mother during childbirth?