

Study Guide for NR 293 Exam 1

Chapter 2

Define the common terms used in pharmacology

- o **Pharmacokinetic**- the study of what the body does to the drug; involves the processes of absorption, distribution, metabolism, and excretion
- o **Pharmacodynamics**- the study of what the drug does to the body; involves drug–receptor relationships.
- o **First-pass effect**- initial metabolism in the liver of a drug absorbed from the GI tract before the drug reaches systemic circulation through the bloodstream
- o **Bioavailability**- a measure of the extent of a drug absorption for a given drug and route (from 0% to 100%)
- o **Protein-binding**
- o **Onset of action**- time required for a drug to elicit a therapeutic response after dosings
- o **Peak Effect** – the time required for a drug to reach its max. Therapeutic response
- o **Duration of action**- the length of time the concentration of a drug in the blood or tissues is sufficient to elicit a response
- o **Half-life** – in pharmacokinetics, the time required for half of an administered dose of drug to be eliminated by the body, or the time it takes for the blood level of a drug to be reduced
- o **Therapeutic index**- ratio between toxic and therapeutic concentrations of a drug
- o **Trough level**- lowest blood level; the lowest concentration of a drug reached in the body after it falls from its peak level, usually measured in blood sample for therapeutic drug monitoring
- o **Peak level**- highest blood level. Concentration of a drug in the body after administration, usually measured in a blood sample for therapeutic drug monitoring.
- o **Agonist**- drug that binds to and stimulates the activity of one or more receptors in the body
- o **Antagonist**- drug that binds to and inhibits the activity of one or more receptors in the body; also called inhibitors

Type of therapy:

- o **Acute therapy**- often involves more intensive drug treatment and implemented in acutely ill (those with rapid onset of illness) or critically ill; often needed to sustain life or treat disease
- **Ex:** vasopressors to maintain BP and cardiac output after open heart surgery
 - **Ex:** intensive chemotherapy for pt with newly diagnosed cancer
 - **Maintenance therapy**- doesn't eradicate problems the pt may already have but will prevent progression of a disease or condition; used for treatment of chronic illnesses