

Basics of Pharmacology

Pharmacology is studied to discover the most effective medications that cause the least amount of problems for patients. The drug cycle consists of four phases: absorption, distribution, metabolism, and excretion. Each phase has implications for the health-care worker. Health-care professionals must know how best to administer medications for optimal absorption into the bloodstream. For effective care and education of the patient, they must also know where the medications will be distributed and any possible negative side effects. Health-care professionals must be vigilant about knowing how a drug is metabolized and what symptoms or laboratory test results to watch for that may indicate a potential issue. Finally, understanding how drugs are excreted and being aware of potential issues related to drug cumulation are critical. Health-care professionals are the patient's best advocate.

*Chapter 1 discusses the history and evolution of pharmacology. In this chapter, we look at the science of pharmacology, how medications affect the body, how they interact with each other to produce either a positive or negative effect on the body, and why it is important as a prescriber to understand these effects and interactions. We begin by looking at **pharmacokinetics**, which is the study of how the body absorbs, distributes, and excretes drugs (the drug cycle). We learn what happens once medications are ingested, injected, or applied.*

LEARNING OUTCOMES

At the end of this chapter, you should be able to:

- 2.1 Define key terms.
- 2.2 List the four steps in the drug cycle and their effects on the body.
- 2.3 Differentiate between the therapeutic level and potency of a drug.
- 2.4 Describe how drugs can interact.
- 2.5 Differentiate between a side effect and an adverse reaction.
- 2.6 Compare and contrast the usefulness of different drug resources.