1 Introduction to Drugs and Pharmacy

OBJECTIVES

After reading this chapter, the student will be able to:

1. Describe the development and purpose of the *United States Pharmacopeia* (USP) and the *National Formulary* (NF)
2. Describe the central features of a typical drug monograph
3. Compare and contrast significant drug regulation and control federal laws and their impact on pharmacy
4. Explain the concept of pharmaceutical care
5. Summarize the Code of Ethics for Pharmacists of the American Pharmacists Association
6. Summarize the Code of Ethics of the American Association of Pharmaceutical Scientists (AAPS)

A drug is defined as an agent intended for use in the diagnosis, mitigation, treatment, cure, or prevention of disease in humans or in other animals (Food, Drug, and Cosmetic Act, 1938). One of the most astounding qualities of drugs is the diversity of their actions and effects on the body. This quality enables their selective use in the treatment of a range of common and rare conditions involving virtually every body organ, tissue, and cell.

Some drugs selectively stimulate the cardiac muscle, the central nervous system, or the gastrointestinal tract, whereas other drugs have the opposite effect. Mydriatic drugs dilate the pupil of the eye, and miotics constrict or diminish pupillary size. Drugs can render blood more coagulable or less coagulable; they can increase the hemoglobin content of the erythrocytes, reduce serum cholesterol, or expand blood volume.

Drugs termed emetics induce vomiting, whereas antiemetic drugs prevent vomiting. Diuretic drugs increase the flow of urine; expectorant drugs increase respiratory tract fluid; and cathartics or laxatives evacuate the bowel. Other drugs decrease the flow of urine, diminish body secretions, or induce constipation.

Drugs may be used to reduce pain, fever, thyroid activity, rhinitis, insomnia, gastric acidity, motion sickness, blood pressure, and mental depression. Other drugs can elevate mood, blood pressure, or activity of the endocrine glands. Drugs can combat infectious disease, destroy intestinal worms, or act as antidotes against the poisoning effects of other drugs. Drugs can assist in smoking cessation or alcohol withdrawal or can modify obsessive–compulsive disorders.

Drugs are used to treat common infections, AIDS, benign prostatic hyperplasia, cancer, cardiovascular disease, asthma, glaucoma, Alzheimer disease, and male impotence. They can protect against the rejection of transplanted tissues and organs and reduce the incidence of measles and mumps. Antineoplastic drugs provide one means of attacking the cancerous process; radioactive pharmaceuticals provide another. Drugs may be used to diagnose diabetes, liver malfunction,