chapter **47**

Drugs for Asthma and Other Bronchoconstrictive Disorders

Objectives

AFTER STUDYING THIS CHAPTER, THE STUDENT WILL BE ABLE TO:

1. Describe the main pathophysiologic characteristics of asthma and other bronchoconstrictive disorders.
2. Discuss the uses and effects of bronchodilating drugs, including adrenergics, ipratropium, and theophylline.
3. Differentiate between short-acting and long-acting inhaled beta$_2$-adrenergic agonists in terms of uses and nursing process implications.
4. Discuss the uses of anti-inflammatory drugs, including corticosteroids, leukotriene modifiers, and mast cell stabilizers.
5. Discuss reasons for using inhaled drugs when possible.
6. Differentiate between "quick relief" and long-term control of asthma symptoms.
7. Discuss the use of antiasthmatic drugs in special populations.
8. Teach clients self-care and long-term control measures.

Critical Thinking Scenario

Gwen, a 12-year-old middle schooler, was recently diagnosed with asthma. She uses two inhalers four times a day, in addition to using a rescue inhaler during periods of dyspnea. She also is taking peak flow measurements. As the school nurse, you are responsible for overseeing Gwen's care while she is in school.

Reflect on:

- The developmental level of 12-year-olds. How might this affect Gwen's feelings about having asthma and complying with treatment?
- What asthma triggers might be present in the school environment?
- School regulations usually require that all medication be kept in the nurse's office. What impact might this have if Gwen experiences an asthma attack?
- Develop an educational program on asthma for middle schoolers. How might Gwen and other students with asthma participate?

OVERVIEW

The drugs described in this chapter are used to treat respiratory disorders characterized by bronchoconstriction, inflammation, mucosal edema, and excessive mucus production (asthma, bronchitis, and emphysema). Asthma is emphasized because of its widespread prevalence, especially in urban populations. Compared with whites, African Americans and Hispanics have a higher prevalence and African Americans have a higher death rate from asthma. However, the differences are usually attributed to urban living and lesser access to health care rather than race or ethnic group. Occupational asthma (ie, asthma resulting from repeated and prolonged exposure to industrial inhalants) is also a major health problem. Persons with occupational asthma often have symptoms while in the work environment, with improvement on days off and during vacations. Symptoms sometime persist after termination of exposure. Asthma may occur at any age but is especially common in children and older adults. Children who are exposed to allergens and airway irritants such as tobacco smoke during infancy are at high risk for development of asthma.