

# chapter 38

## Drugs for Tuberculosis and *Mycobacterium avium* Complex (MAC) Disease

### Objectives

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

1. Describe characteristics of latent, active, and drug-resistant tuberculosis infections.
2. Identify populations at high risk for developing tuberculosis.
3. List characteristics, uses, effects, and nursing implications of using primary antitubercular drugs.
4. Describe the rationale for multiple drug therapy in treatment of tuberculosis.
5. Discuss ways to increase adherence to anti-tubercular drug therapy regimens.
6. Differentiate the advantages and disadvantages of directly observed therapy (DOT).
7. Describe factors affecting the use of primary, secondary, and other drugs in the treatment of multidrug-resistant tuberculosis (MDR-TB).
8. Describe *Mycobacterium avium* complex disease and the drugs used to prevent or treat it.

### Critical Thinking Scenario

John Phillips, a homeless person with a history of drug and alcohol abuse, comes to the emergency department with a productive cough, complaints of night sweats, and fatigue. The physician suspects tuberculosis (TB) and orders a purified protein derivative (PPD) skin test, chest x-ray, and sputum for acid-fast bacilli.

#### Reflect on:

- ▶ The necessary infection control measures to use before TB is confirmed or ruled out.
- ▶ Why multidrug treatment would be important if TB is confirmed.
- ▶ Factors that affect compliance with drug treatment for John Phillips and a plan to improve and monitor compliance.
- ▶ How long Mr. Phillips will require drug treatment, and how you can evaluate when the TB is cured.

### OVERVIEW

Tuberculosis (TB) is an infectious disease that usually affects the lungs (>80% of cases) but may involve most parts of the body, including lymph nodes, pleurae, bones, joints, kidneys, and the gastrointestinal (GI) tract. It is caused by *Mycobacterium tuberculosis*, the tubercle bacillus. In general, these bacilli multiply slowly; they may lie dormant in the body for many years; they resist phagocytosis and survive in phagocytic cells; and they develop resistance to antitubercular drugs.

Tuberculosis commonly occurs in many parts of the world and causes many deaths annually. In the United States, active disease has waned to a historical low level. However, there are now large numbers of people with inactive or latent tuberculosis infection. Contributing factors include increased exposure during a resurgence of active disease between 1985 and 1992, immigration from countries where the disease is common, and increasing numbers of people with conditions or medications that depress the immune system.