TB Elimination

# Treatment of Drug-Susceptible Tuberculosis Disease in Persons Not Infected with HIV

## Introduction

In February 2003, the American Thoracic Society (ATS), the Centers for Diseases Control and Prevention (CDC), and the Infectious Diseases Society of America (IDSA) released new guidelines for the treatment of TB. This fact sheet will provide key points about culture-positive pulmonary TB from these guidelines; however, please refer to the *Treatment of Tuberculosis*[1] for complete recommendations.

Treating TB disease benefits not only the individual patient but the community as a whole. Thus, any health care provider undertaking treatment of a patient with TB, whether a public health or private practitioner, is assuming a public health function that includes the responsibility for not only prescribing an appropriate regimen but also ensuring the patient's adherence to the regimen until treatment is completed.

## Recommended Regimens

There are 10 drugs currently approved by the U.S. Food and Drug Administration (FDA) for treating tuberculosis (TB). Of the approved drugs, the first-line anti-TB agents that form the core of treatment regimens include

- isoniazid (INH),
- rifampin (RIF),
- ethambutol (EMB), and
- pyrazinamide (PZA).

Regimens for treating TB have an *initial phase* of 2 months, followed by a choice of several options for the *continuation phase* of either 4 or 7 months. The continuation phase should be extended to 28 weeks for patients who have cavitation on the initial chest film *and* positive sputum cultures after 2 months of treatment. Treatment completion is determined by the number of doses ingested over a given period of time. Although basic TB regimens are broadly applicable, there are modifications that should be made under special circumstances (i.e., HIV infection, drug resistance, pregnancy, or treatment of children). Listed below are the basic regimens; please refer to *Treatment of Tuberculosis*[1] for all options for the treatment of drug-susceptible TB.

A continuation phase of once-weekly INH/rifapentine can be used for HIV negative patients who do not have cavities on the chest film *and* who

| Preferred Regimen | Alternative Regimen | Alternative Regimen |
|---|---|---|
| Initial Phase<br>Dailey INH, RIF, PZA, and EMB* for 56 doses (8 weeks) | Initial Phase<br>Dailey INH, RIF, PZA, and EMB* for 14 doses (2 weeks), then twiceweekly for 12 doses (6 weeks) | Initial Phase<br>Thrice-weekly INH, RIF, PZA, and EMB* for 24 doses (8 weeks), |
| Continuation Phase<br>Daily INH and RIF for 126 doses (18 weeks)<br>***or***<br>Twice-weekly INH and RIF for 36 doses (18 weeks) | Continuation Phase<br>Twice weekly INH and RIF for 36 doses (18 weeks) | Continuation Phase<br>Thrice-weekly INH and RIF for 54 doses (18 weeks) |

*EMB can be discontinued if drug susceptibility studies demonstrate susceptibility to first-line drugs.

have negative acid-fast bacilli (AFB) smears at the completion of the initial phase of treatment.

## Case Management

Patient-centered case management should be used in the treatment strategy with an adherence plan that includes directly observed therapy (DOT). DOT is a strategy in which a health care worker or another designated person watches the TB patient swallow each dose of the anti-TB drugs. All patients taking drugs fewer than 7 days per week (e.g., 1, 2, 3, or 5 days a week) *must* receive DOT.

## Follow-up Evaluations

Sputum specimens for microscopic examination and culture should be obtained from patients diagnosed with TB at a minimum of monthly intervals until two consecutive specimens are negative on culture. It is critical to obtain a sputum specimen at the end of the initial phase (2 months) to determine if the continuation phase should be extended. In addition, it is essential that patients have clinical evaluations at least monthly to identify possible adverse effects of the anti-TB medications and to assess adherence. All patients with TB should have counseling and testing for HIV.

## For More Information

1. Centers for Disease Control and Prevention. Treatment of Tuberculosis. *MMWR* 2003;52(No. RR-11). www.cdc.gov/mmwr/PDF/rr/rr5211.pdf

Errata
www.cdc.gov/mmwr/preview/mmwrhtml/mm5351a5.htm