

# TB Elimination

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

### Introduction

Treating tuberculosis (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 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 disease 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 TB*<sup>1</sup> for all options for the treatment of drug-susceptible TB.

### Basic TB Treatment Regimens

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

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

A continuation phase of once-weekly INH and rifapentine can be used for HIV-negative patients who do not have cavities on the chest film and who 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 disease 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 disease 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](http://www.cdc.gov/mmwr/PDF/rr/rr5211.pdf)

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