

# Tuberculosis (TB)

## *A Guide for the Health Provider*

In India, two people become sputum-positive for TB every minute. One sputum-positive patient can infect 10–15 individuals a year. The Revised National Tuberculosis Control Programme aims to stop the spread of TB by curing patients. The key of this strategy is to cure TB through Directly Observed Treatment at a time and place convenient to the patient. **The responsibility of curing the patient and thus the success of the programme is in your hands.**

## **WHAT IS TUBERCULOSIS?**

Tuberculosis (TB) is an illness which spreads from a diseased person to a healthy one. Germs of TB spread through the air when untreated patients cough or sneeze. TB mainly affects the lungs; but it can also affect other parts of the body (brain, bones, glands, etc.)

### **WHEN SHOULD TUBERCULOSIS BE SUSPECTED?**

TB should be suspected if a person has cough for 3 weeks or more. You should promptly take such persons to the Medical Officer.

Other symptoms of TB are:

- fever, especially rising in the evening
- pain in the chest
- loss of weight
- loss of appetite
- coughing up of blood

### **HOW CAN TUBERCULOSIS BE DIAGNOSED?**

- The best way to diagnose lung TB is by examining the sputum under the microscope. Germs of TB can be seen with a microscope.
- Three samples of sputum should be examined for accurate diagnosis.
- For TB diagnosis, X-ray is more expensive and less accurate than sputum examination, but may be necessary for some patients.

## WHAT IS THE TREATMENT FOR TUBERCULOSIS?

Tuberculosis can be cured. Directly Observed Treatment, Short-course (DOTS) is the most effective way to ensure cure.

There are three categories of treatment: Categories I, II and III and each has an Intensive Phase and Continuation Phase. During the Intensive Phase, you must directly observe the patient swallowing every dose of medicine. During the Continuation Phase, at least the first dose of medicine every week must be taken by the patient under your direct observation, while the other two doses are taken by the patient himself. The patient must bring the previous week's blister pack when coming to collect the next week's blister pack.

During the intensive phase, medicines are to be taken thrice-weekly (three times a week) on alternate days. Thrice-weekly treatment is as effective as daily treatment. If a patient does not receive treatment on the scheduled day, you should trace the patient and give him treatment on that day or the following day. But the next dose should be given as scheduled.

Upon completing 22 doses of the Intensive Phase (Category I and III patients) and 34 doses of the Intensive Phase (Category II patients), the patient should give 2 samples of his sputum for testing, so that, when his full Intensive Phase doses are completed the results of these tests are available. If sputum is negative, the patient begins drugs for the Continuation Phase. If sputum is positive, the Medical Officer may extend the patient's Intensive Phase of treatment.

## CATEGORY-I (CAT-I)

### ● Treatment (6 months)

Intensive Phase — Months 1 and 2

Continuation Phase — Months 3 to 6



sputum container

### ● Sputum examination

1. At month 0 (time of detection of TB)

Medicines started (RED BOX)

2. Again at 2 months

If sputum is negative — Continue medicines and have sputum examined again at 4 and 6 months.

If sputum is positive — Intensive Phase is extended for 1 month and medicines for this period will be provided separately.

— Ensure that sputum is examined again at 3, 5 and 7 months of treatment.

### ● Medicines

- 24 doses for 2 months of Intensive Phase

- 18 combipacks for 4 months of Continuation Phase

***In the Intensive Phase, medicines are to be taken by the patient under your direct observation. In the Continuation Phase, at least the first dose of medicine is to be taken by the patient under your direct observation and the patient must bring the blister pack of the previous week of treatment.***

## CATEGORY-II (CAT-II)

- **Treatment (8 months)**

Intensive Phase — Months 1, 2 and 3

Continuation Phase — Months 4 to 8



sputum container

- **Sputum examination**

1. At month 0 (time of detection of TB)

Medicines started (BLUE BOX)

2. Again at 3 months

If sputum is negative — Continue medicines and have sputum examined again at 5 and 8 months.

If sputum is positive — Intensive Phase is extended for 1 month and medicines for this period will be provided separately.

— Ensure that sputum is examined again at 4, 6 and 9 months of treatment.

- **Medicines**

- 36 doses for 3 months of Intensive Phase

- Injections for first 2 months treatment

- 22 combipacks for 5 months of Continuation Phase

***In the Intensive Phase, medicines are to be taken by the patient under your direct observation. In the Continuation Phase, at least the first dose of medicine is to be taken by the patient under your direct observation and the patient must bring the blister pack of the previous week of treatment.***

## CATEGORY-III (CAT-III)

- **Treatment (6 months)**

Intensive Phase — Months 1 and 2

Continuation Phase — Months 3 to 6



sputum container

- **Sputum examination**

1. At month 0 (time of detection of TB)

Medicines started (GREEN BOX)

2. Again at 2 months

If sputum is negative — Continue medicines and have sputum examined again at 6 months.

If sputum is positive — Refer the patient to the Medical Officer for change of treatment.

- **Medicines**

- 24 doses

for 2 months of Intensive Phase

- 18 combipacks for 4 months of Continuation Phase

***In the Intensive Phase, medicines are to be taken by the patient under your direct observation. In the Continuation Phase, at least the first dose of medicine is to be taken by the patient under your direct observation and the patient must bring the blister pack of the previous week of treatment.***

## **SIDE-EFFECTS OF ANTI-TB DRUGS**

Anti-tuberculosis drugs are generally safe. In some cases side-effects may occur. If you notice any of the following side-effects, stop the drugs and refer the patient to the Medical Officer immediately.

- Yellow colouration of the skin and eyeballs (jaundice)
- Blurry vision
- Dizziness or hearing loss during the Intensive Phase of Category II patients.

**HOW TO READ AND MARK A TREATMENT CARD**

The Treatment Card for each patient will be prepared by the Medical Officer. A duplicate copy of the Treatment Card will be given to you along with the patient's medicine box.

The Treatment Card has two sides:

**Front:** Intensive Phase (I.P.)

and

**Back:** Continuation Phase (C.P.)

**Intensive Phase**

**Category of treatment**

The Medical Officer will put a tick (✓) indicating the category of treatment (I, II or III). The number of tablets/capsules of each drug to be given during the Intensive Phase will also be written.

**Month and date of starting treatment**

When the patient starts treatment, write the month in the first column.

Tick (✓) the date when each dose of medicine is swallowed under your direct observation.

**Front:** Intensive Phase (I.P.)

**REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME**

**Treatment Card**

State: Madhya Pradesh City/District: Sagar Code district/subdistrict: 015  
 Name: Lakshmi Sex: M  F  Age: 32 years Patient TB No./year: 122  
 Complete address: 4, Krishna Nagar, Sagar Health Unit: PHI-10  
 Name and address of Contact Person: Parvati Devi  
10 Ram Nagar, Sagar Name of DOT provider: Joshi

**Disease Classification**

Pulmonary  
 Extra-pulmonary  
 Site: \_\_\_\_\_

**Type of Patient**

New  Relapse  
 Transfer in  Failure  
 Treatment after default  Other (specify) \_\_\_\_\_

Month	Date	Lab No.	Smear result	Weight
0	<u>2/4</u>	<u>389</u>	<u>2+</u>	<u>40 kg</u>
2/3				
4/5/6				
6/7/8/9				

**I. INITIAL INTENSIVE PHASE—Prescribed regimen and dosages:**

Tick (✓) the appropriate Category below.

**Category I**

New case (pulmonary smear-positive, seriously ill smear-negative, or seriously ill extra-pulmonary)

**Category II**

Retreatment (relapse, failure, treatment after default)

**Category III**

New case (pulmonary smear-negative, not seriously ill; or extra-pulmonary, not seriously ill)

**Write number of tablets or dose of streptomycin in the boxes below.**

3 times/week

<u>2</u>	<u>1</u>	<u>3</u>	<u>3</u>
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H R Z E

H: Isoniazid R: Rifampicin

3 times/week

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H R Z E S

Z: Pyrazinamide E: Ethambutol

3 times/week

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H R Z

S: Streptomycin

**Tick (✓) appropriate date when the drugs have been swallowed under direct observation.**

Month	Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
<u>April</u>						✓			✓		✓		✓			✓		Not Given	✓	✓												

<b>17</b>
Not Given

If a dose is not given as scheduled be sure to mention this on the card on the day it was scheduled to be taken.



**Back: Continuation Phase (C.P.)**

**Continuation Phase**

The Medical Officer will put a tick mark (✓) indicating the category of treatment (I, II or III). He will also indicate the number of tablets/ capsules of each drug to be given during C.P.

Mark an 'X' on the day when the drug is first swallowed by the patient under DOT. A horizontal line should then be drawn (X —) through the remaining days of the week for which the drug is being supplied.

Month Day	1	2	3	4	5	6	7	8	9	10
July			X —							

**II. CONTINUATION PHASE**

(see Guidelines)

II

Prescribed regimen and dosages

Category I   
 New case  
 (pulmonary smear-positive, seriously ill smear-negative, or seriously ill extra-pulmonary)

Category II   
 Retreatment  
 (relapse, failure, treatment after default)

Category III   
 New case  
 (pulmonary smear-negative, not seriously ill; or extra-pulmonary, not seriously ill)

**Write number of tablets per dose in the boxes below.**

3 times/week

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H R

3 times/week

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H R E

3 times/week

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H R

Enter 'X' on date when the first dose of drugs has been swallowed under direct observation and draw a horizontal line (X —) to indicate the period during which medicines will be self-administered.

Month Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Remarks:

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## TELL YOUR PATIENTS

- Tuberculosis can be fully cured by modern medicines if regular and complete treatment is taken.
- The complete course of medicines must be taken regularly as prescribed without any interruption, otherwise a more serious form of TB may develop.
- Follow-up sputum examinations are important and must be done to check progress.
- Any person with cough for three weeks or more should be taken to the Medical Officer promptly and have 3 sputum samples examined.
- Diagnosis and treatment of TB are free of cost at government health centres.

*In India TB kills one person every minute  
— more than 1000 people every day.*

*YOU, the Health Provider,  
can help save many lives.*

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***Directly Observed Treatment, Short-course (DOTS) —  
the key to cure***

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