

Leprosy can be easily  
cured with MDT.  
Available free of charge at all  
health centres



Leprosy Elimination Group  
World Health Organisation  
CH-1211 Geneva 27  
Switzerland

Internet: [www.who.int/lep](http://www.who.int/lep)  
Email: [ee@who.int](mailto:ee@who.int)  
Fax: +41 22 791 48 50



## Guide to **Eliminate Leprosy** as a Public Health Problem

Multidrug therapy cures leprosy, stops  
transmission and prevents disabilities.  
Available free of charge at all health centres.

First Edition 2000



World Health Organization

# Guide to **Eliminate Leprosy** as a **Public Health Problem**

Multidrug therapy cures leprosy, stops transmission and prevents disabilities.  
Available free of charge at all health centres.



World Health Organization

To eliminate leprosy  
we need to detect  
all patients and cure  
them with MDT.



# Contents

- 5 **The Final Push to Eliminate Leprosy**
- 8 **What Is Leprosy?**
- 10 **How to Diagnose Leprosy**
  - 10 Signs of Leprosy
  - 14 Which Signs are not Leprosy
  - 15 How to Examine a Patient for Leprosy
  - 16 How to Test for Sensory Loss
- 18 **Treating Leprosy**
  - 18 How to Classify Leprosy
  - 19 Five Simple Steps to Start MDT
  - 20 MDT Regimens
  - 22 Information for the Patient
  - 25 Accompanied MDT
  - 26 Sample Patient Card
  - 27 Key Tasks at the Health Centre to Provide MDT
  - 28 Important Points about MDT
  - 30 When Treatment is Completed
- 32 **Management of Complications**
  - 32 Leprosy Reactions
  - 34 Common Side Effects of MDT
  - 36 Simple Measures to Prevent Disabilities
- 38 **How You Can Eliminate Leprosy from Your Community**

# The Final Push to Eliminate Leprosy

Leprosy will be eliminated when we detect all patients and cure them by using multidrug therapy (MDT).

Elimination means bringing the disease burden down to a very low level. This will lead to a reduction in the source of infection, so that leprosy is likely to disappear naturally as it already has in many parts of the world. WHO has defined “elimination” as a prevalence rate of less than 1 case per 10,000 inhabitants.



**Improving access to leprosy diagnosis and treatment is crucial.**



**MDT should be available free of charge at all health centres.**



We need to dispel  
the fear of leprosy...



**This final push to eliminate leprosy involves:**

Making leprosy diagnosis and treatment available, free of charge, at all health centres, particularly in endemic areas.

Enabling every health worker to diagnose and treat leprosy.

Dispelling the fear of leprosy, improving awareness of its early signs, and motivating people to seek treatment.

Ensuring that all leprosy patients are cured.

**This guide should help you to:**

Diagnose leprosy cases based on clinical signs.

Cure all leprosy patients with a **complete course** of MDT.

**Manage complications** and prevent disabilities.

Set up good records to **keep track of patients** and the local leprosy situation.

**Give correct information** about leprosy to the community.

...and improve  
awareness  
of its early signs.



# What Is Leprosy?

Leprosy is a communicable disease caused by bacteria. It mainly affects the skin and nerves. It progresses slowly with an average incubation period of 3 years. Leprosy can affect all ages and both sexes. Leprosy can be cured. MDT kills the bacteria and stops the spread of the disease. Leprosy patients can lead completely normal lives. If detected early and treated with MDT, leprosy will not lead to deformities.



**Patients can lead completely normal lives.**



**The best way to prevent the spread of leprosy is to treat all patients with MDT.**

# How To Diagnose Leprosy

## Signs of Leprosy

A leprosy patient is someone who:  
has a skin patch or patches with a definite loss of sensation;  
and has not completed a full course of treatment with multidrug therapy.

### **Leprosy patches:**

Can be pale or reddish or copper-coloured;  
Can be flat or raised;  
Do not itch;  
Usually do not hurt;  
Lack sensation to heat, touch or pain;  
Can appear anywhere.

### **Other signs of leprosy include:**

Reddish or skin-coloured nodules or smooth, shiny diffuse thickening of the skin without a loss of sensation



**Leprosy patches...**

**...can be pale or reddish or copper-coloured.**

**...can be flat or raised.**



# Leprosy patches...

...can appear anywhere.

...usually do not hurt.

...do not  
itch.

...lack sensation  
to heat, touch or pain.

Leprosy can be  
diagnosed  
on clinical signs  
alone.





## Which signs are not leprosy?

### **Skin patches...**

- ...present from birth (i.e. birth marks);
- ...where there is normal feeling;
- ...that itch;
- ...that are white, black or dark red;
- ...with scaling of skin;
- ...that appear or disappear suddenly and spread fast.



## How to Examine a Patient for Leprosy

Examine the skin in daylight or in a well-lit room. Examine the whole body, taking care to respect the patient's privacy.

Ask the patient if the patch itches. If so, it cannot be leprosy.

Test only one or two skin patches for sensory loss.

If there is a definite loss of sensation, it is leprosy.

Ask about treatment received in the past.

A person who has completed a full course of MDT very rarely needs further treatment.

Look for any visible disability of eyes, face, hands and feet.

When in doubt about the diagnosis, always send the patient to the nearest referral centre.

**If you suspect leprosy  
without sensory loss or have  
any doubts, please refer.**

## How to Test for Sensory Loss

Take a pointed object such as a pen.  
**Show the person** what you are going to do.  
Lightly touch the skin with the pen.  
Ask the person to point to where they felt the pen.  
Now ask them to close their eyes so that they cannot see what you are doing.  
**Lightly touch the centre of the most prominent skin patch** and ask them to point to where they felt the pen.  
Repeat the procedure on normal skin and on the same patch again.  
**If the person feels nothing on the skin patch, it is leprosy. Start treatment immediately.**



**Generally leprosy should not be diagnosed without a definite loss of sensation.**

# Treating Leprosy

## How to Classify Leprosy

Leprosy is classified into paucibacillary or multibacillary leprosy based on the number of patches.

**1–5 patches?**

**It is paucibacillary (PB) leprosy. Treatment: 6 PB blister packs.**



**More than 5 patches?**

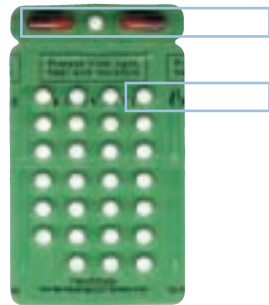
**It is multibacillary (MB) leprosy. Treatment: 12 MB blister packs.**

## Five Simple Steps to Start MDT

- 1 Count the number of skin patches** in order to classify the type of leprosy into PB (1–5 patches) or MB (more than 5 patches). If in doubt, classify as MB.
- 2 Inform the patient** and anyone accompanying the patient **about the disease and its treatment** (see page 22). Encourage them to ask questions and clear up any doubts.
- 3 Give the patient the first dose** at the health centre. Show them **which drugs** from the MDT blister pack should be taken **once a month and which every day**.
- 4 Give the patient enough blister packs** to last until their next visit. Arrange the time and place of the visit. If it is difficult for them to come to the health centre, give them the full course of treatment (see page 25).
- 5 Fill out the patient card** (see page 26).

# MDT Regimens

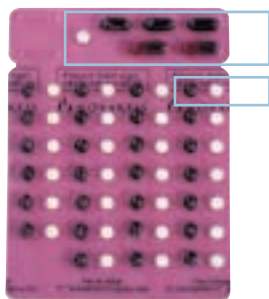
Each blister pack contains treatment for 4 weeks.



## PB adult treatment:

- Once a month:** Day 1  
 – 2 capsules of rifampicin (300 mg X 2)  
 – 1 tablet of dapsone (100 mg)
- Once a day:** Days 2–28  
 – 1 tablet of dapsone (100 mg)
- Full course:** 6 blister packs

PB adult blister pack

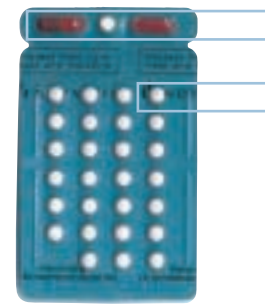


## MB adult treatment:

- Once a month:** Day 1  
 – 2 capsules of rifampicin (300 mg X 2)  
 – 3 capsules of clofazimine (100mg X 3)  
 – 1 tablet of dapsone (100 mg)
- Once a day:** Days 2–28  
 – 1 capsule of clofazimine (50 mg)  
 – 1 tablet of dapsone (100 mg)
- Full course:** 12 blister packs

MB adult blister pack

**It is crucial that patients understand which drugs they have to take once a month and which every day.**

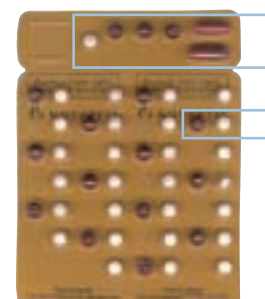


## PB child treatment (10–14 years):

- Once a month:** Day 1  
 – 2 capsules of rifampicin (300 mg+150 mg)  
 – 1 tablet of dapsone (50 mg)
- Once a day:** Days 2–28  
 – 1 tablet of dapsone (50 mg)
- Full course:** 6 blister packs

PB child blister pack

For children younger than 10, the dose must be adjusted according to body weight.



## MB child treatment (10–14 years):

- Once a month:** Day 1  
 – 2 capsules of rifampicin (300 mg+150 mg)  
 – 3 capsules of clofazimine (50 mg X 3)  
 – 1 tablet of dapsone (50 mg)
- Once a day:** Days 2–28  
 – 1 capsule of clofazimine every other day (50 mg)  
 – 1 tablet of dapsone (50 mg)
- Full course:** 12 blister packs

MB child blister pack

For children younger than 10, the dose must be adjusted according to body weight.

# Information for the Patient

## **About leprosy...**

They will be cured of leprosy if they take the drugs in the blister packs as advised.

**They must complete a full course of treatment:** 6 blisters for PB patients and 12 blisters for MB patients.

**The drugs stop the disease from spreading.**

**Patients can lead normal lives.** They can live at home, go to school, work, play, get married, have children, participate in social events...

## **... their treatment**

**The MDT blister packs are free of charge.**

They should keep the blister packs in a dry, safe, and shady place and out of the reach of children.

If the drugs are spoiled (changed colour, broken), the health worker will replace them.

## **... possible problems**

The medicines will turn their urine red and their skin darker. Patients should not worry: both will return to normal once the treatment is completed.

**They must go immediately to a health centre if they have any problems** (pain, fever, malaise, new lesions, muscle weakness ...).

They should return for a check-up after they complete their treatment.

If they already have disabilities, tell them how to protect themselves from injuries (see page 36).

Leprosy can be  
easily cured.





**Accompanied MDT ensures that patients have the full course of treatment.**

## Accompanied MDT

**Accompanied MDT** has been designed to **address a frequent problem in field programmes**. Patients often have to interrupt their treatment because of a shortage of drugs at the health centre, poor access to the health services or simply because no one is at the health centre when they come to collect their treatment.

**Accompanied MDT gives patients a choice:** they can collect their treatment at regular intervals from the health centre or **take the entire course with them when diagnosed**. Patients should choose someone close to them to accompany them with their treatment.

### How to use Accompanied MDT

Give patients their first MDT dose at the health centre. Ask patients if they want to take all the blister packs with them or if they would prefer to collect them from the health centre at regular intervals. If they choose Accompanied MDT, give PB patients 6 PB blister packs and MB patients 12 MB blister packs. **Make sure that every patient and accompanying person understand the treatment, how to take the drugs, as well as possible problems (see page 22).** Reassure patients that they can lead normal lives. If problems do occur, tell patients to come back. Ask patients to return after their treatment is complete.

# Sample Patient Card

# Key Tasks at the Health Centre to provide MDT Services

Identification Data (name, address, age, etc.):						
<b>Number of skin lesions</b>			Remarks (Any complaints, referrals, other events like default and death)			
<b>Classification</b>	PB (1-5 patches)	MB (more than 5)				
<b>Date of detection</b>						
<b>Visible disability on detection</b>	Yes	No				
<b>Date of first dose of MDT</b>						
<b>Number of doses given</b>	2	3				
	7	8	9	10	11	12 last dose for MB
<b>Accompanied MDT given</b>	Yes	No				
<b>Date of cure</b>						

**Make leprosy diagnosis and treatment available, free of charge, on every working day.**  
 Keep adequate stocks of all four types of MDT blister packs (child and adult MB/PB).  
 Keep a **simple register** to record the drugs received and distributed, and the remaining balance.  
 Maintain a **simple recording and reporting** system to keep track of patients under your care.  
**Display posters** on leprosy at the health centre and in public places.



**Keep adequate stocks of MDT at your health centre.**

# Important Points about MDT

## **Safety**

MDT is very safe and effective in curing leprosy.

**MDT is safe during pregnancy.**

MDT is safe for patients being treated for tuberculosis (TB) as well as those who are HIV-positive.

Rifampicin is common to the treatment of leprosy and TB and must be given in the doses required for TB.

## **Treatment**

**Give MDT free of charge** to all leprosy patients.

**Help ensure that patients complete their treatment.**

Give patients enough blister packs to last until their next visit.

Use **Accompanied MDT** for all patients who find it difficult to visit the health centre regularly.

If a person cured of leprosy presents new skin patches with definite loss of sensation, consider this as a case of relapse. Re-treat with appropriate MDT regimen.

## **MDT supplies**

Do not use MDT blister packs

- beyond the expiry date
- if the drugs are damaged, or have changed colour, or if a capsule is broken

**Keep MDT blister packs in a cupboard** or a wooden box.

If MDT blister packs for children are not available, remove tablets from an adult pack for the appropriate dose.



**MDT is very safe  
and effective  
in curing leprosy.**



## When Treatment is Completed

**Congratulate the patient** for the successful completion of treatment.

Thank family and friends who accompanied the patient for their support.

Reassure patients that **they are completely cured of leprosy.**

**If patches are still visible**, reassure the patient that **these will gradually disappear.**

If disabilities exist, tell patients how to protect themselves from injuries (see page 36).

Tell them to return to the health centre if they have any questions or problems.

In the rare cases where patients may see a new skin patch, they must come back for checkup.

**Enlist the patient's support to:**

- spread the message in their community that leprosy is curable and treatment is free,
- **to advise people with similar patches to go to the health centre.**



**Leprosy should be just  
a closed chapter  
in the life of a person.**

# Management of Complications

## Leprosy Reactions

Patients can develop reactions, which are part of the natural course of the disease. Reactions **are not** a side effect of MDT. They are the body's response to leprosy and do not mean that the disease is becoming worse or that the treatment is not working.

### Signs of reactions include:

Existing skin lesions become **reddish and swollen**;  
Painful **reddish** nodules appear;  
Peripheral nerves become **painful, tender and swollen**;  
**Signs of nerve damage** such as loss of sensation and muscle weakness;  
**Fever and malaise**;  
Hands and feet may be swollen.

## Managing Reactions

If a patient has any of these symptoms, he or she must go immediately to a health centre for treatment. **Reactions require urgent treatment with special medicines as they can lead to irreversible deformities.**

Give aspirin or paracetamol to reduce pain and fever. Advise the patients to rest as that is essential.

**Maximum dose of prednisolone is 1 mg per kg of body weight.**

If you have a course of corticosteroids (e.g. prednisolone), please administer:  
40 mg daily for weeks 1 and 2,  
30 mg daily for weeks 3 and 4,  
20 mg daily for weeks 5 and 6,  
15 mg daily for weeks 7 and 8,  
10 mg daily for weeks 9 and 10,  
5 mg daily for weeks 11 and 12.

It is important that you examine the patient and reduce the dose of corticosteroids every two weeks.



**Patients must continue to take MDT during a reaction.**

**Reactions are not a side effect of MDT.**



# Common Side Effects of MDT

## **Red coloured urine**

This is due to the colour of rifampicin, which is taken once every month. This lasts for only a few hours after taking the drug. Please assure patient that it is harmless.

## **Darkening of skin**

This is due to clofazimine used daily for treating MB patients. This is harmless and will disappear within a few months after completing the treatment. Please encourage patient to take the medicines regularly.

## **Allergy**

As with any medicine, some patients may be allergic to one of the drugs in MDT. Most commonly there will be severe itching and red/dark spots on the skin. In such cases, ask the patient to stop taking the medicines and refer him or her to the nearest hospital.



**Over 10 million people  
have been cured  
of leprosy with MDT.**

# Simple measures to prevent disabilities

Patients with insensitive hands or feet injure themselves without noticing it. These wounds can get infected and over time, lead to irreversible deformities. The wounds should be managed just as you would any other cuts or wounds, dry skin, or eye problems.

The best way to prevent disabilities is early diagnosis and prompt treatment with MDT.



Whenever you refer a patient, write down details of the complaint, when this first occurred and medicines taken. Send this note with the patient to show to the doctor.

Care of feet	
<b>Feet with dry cracks and fissures</b>	Advise to soak feet for 20 minutes every day in water and apply cooking oil /vaseline regularly. Advise to use shoes or slippers to protect their feet from injury.
<b>Blister on the sole or between toes</b>	Dress blister with clean cloth. Apply cotton wool and bandage.
<b>Feet with ulcers without any discharge</b>	Clean the ulcer with soap and water. Cover with clean dressing. Advise rest.
<b>Feet with ulcers with discharge</b>	Clean the ulcer. Apply antiseptic dressing. Advise rest. If no improvement in 4 weeks, refer to hospital.

Care of hands	
<b>Injury on hand while working/cooking</b>	Clean wound and apply clean dressing. Advise rest. Advise to use a cloth to protect the hands when touching hot or sharp objects.
<b>Hands with dry cracks and fissures</b>	Advise to soak hands for 20 minutes every day in water and to apply vaseline or cooking oil regularly.

Care of eyes	
<b>Patient presents with red eye, pain, blurring of vision and discharge</b>	Give aspirin or paracetamol. If available apply 1% atropine drops and steroid ointment. Keep eye covered with a pad. Whenever possible, advise to go to the hospital.
<b>Patient with injury on cornea (corneal ulcer)</b>	Apply antibiotic ointment. Keep eye covered with a pad. Wherever possible, advise to go to the hospital.

# How You Can Eliminate Leprosy From Your Community

Look out for skin lesions during your routine activities.  
Diagnose leprosy and start MDT treatment immediately.  
Give Accompanied MDT to all patients who cannot visit the health centre regularly.  
Encourage patients to complete the full course of treatment.  
Keep adequate stocks of MDT at the health centre.

Inform the community that:

- skin patches without sensation, which do not itch, can be leprosy,
- **treatment to cure leprosy is available free of charge** at all health centres,
- **the drugs stop the spread of leprosy,**
- **early treatment prevents disabilities,**
- **patients who have completed their treatment are cured even if they have deformities,**
- patients can lead perfectly normal lives.

Display posters about leprosy in public places.  
Enlist the support of others (e.g. community leaders, teachers, religious authorities and traditional practitioners) to **spread positive messages about leprosy.**



**You can eliminate leprosy  
from your community!**

This document is not a formal publication of the World Health Organization (WHO), and all rights are reserved by the Organization.

The document may, however, be freely reviewed, abstracted, reproduced and translated, in part or in whole, but is not for sale nor for use in conjunction with commercial purposes.

WHO/CDS/CPE/CEE/2000.14