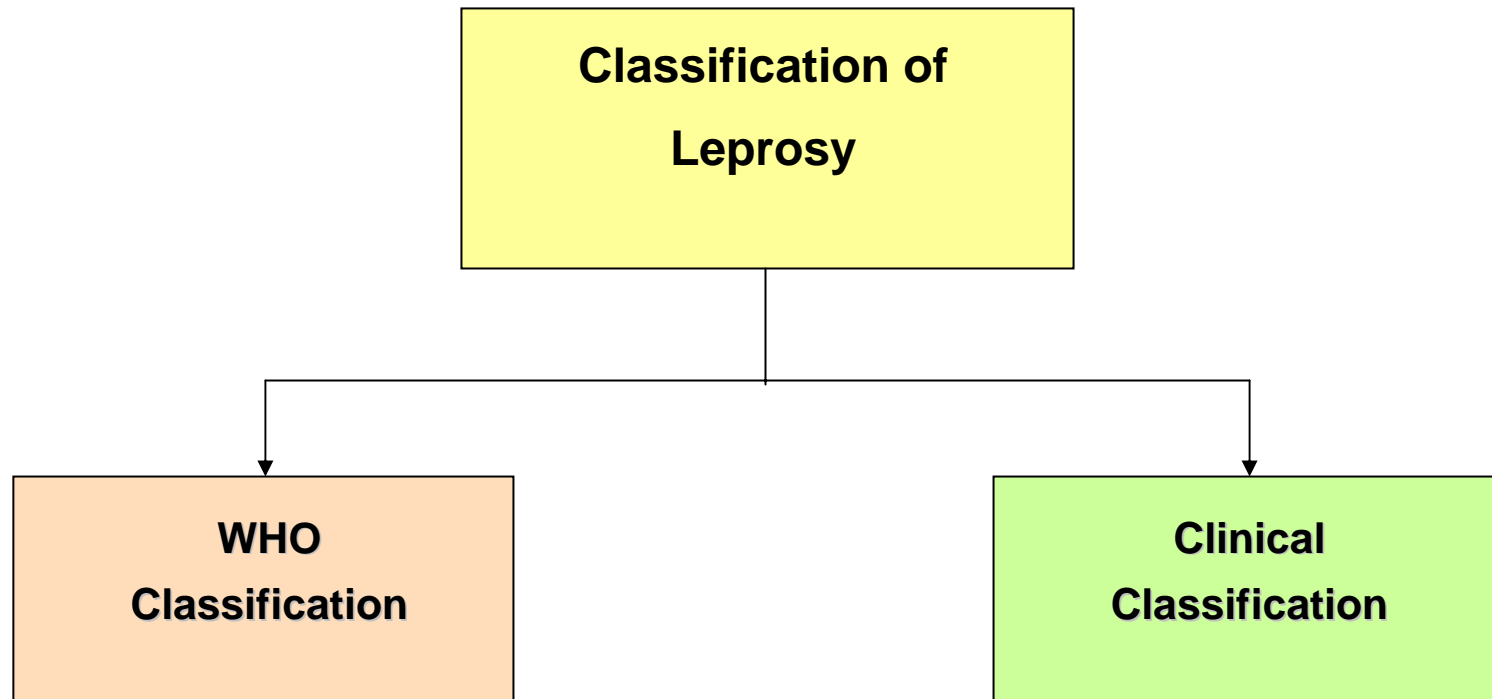


Classification of Leprosy



WHO Classification :

Two types: Purpose of treatment .

1. Paucibacillary Leprosy (PB)
2. Multibacillary Leprosy (MB)

Based on:

Number of skin lesions

Number of nerves involved

	Paucibacillary Leprosy (PB)	Multibacillary Leprosy (MB)
Skin Lesions :	<p>1 to 5 lesions</p> <p>Asymmetrical</p> <p>Definite Loss of sensation</p>	<p>> 5 lesions</p> <p>Towards Symmetrical</p> <p>Loss of sensation</p> <p>(May be / May not be)`</p>
Nerve Lesions:	<p>Only 1 nerve involved</p>	<p>2 or more nerve involved</p>

Clinical Classification :

Ridley and Joppling classified leprosy clinically into the following :

1. Tuberculoid (TT)
2. Borderline Tuberculoid (BT)
3. Mid Borderline (BB)
4. Borderline Lepromatous (BL)
5. Lepromatous (LL)

BB Leprosy is immunologically the least stable , and therefore the rarest .

Pure Neural Leprosy :

In all forms of leprosy , at least one peripheral nerve is attacked by *M. Leprae* , though this may not have any clinical evidence .

Leprosy can involve nerves without any skin changes .
This unusual occurrence is called **Pure Neural Leprosy** .

Leprosy is a unique infectious disease, which exhibits a wide spectrum of signs and symptoms .

These various signs and symptoms represent :

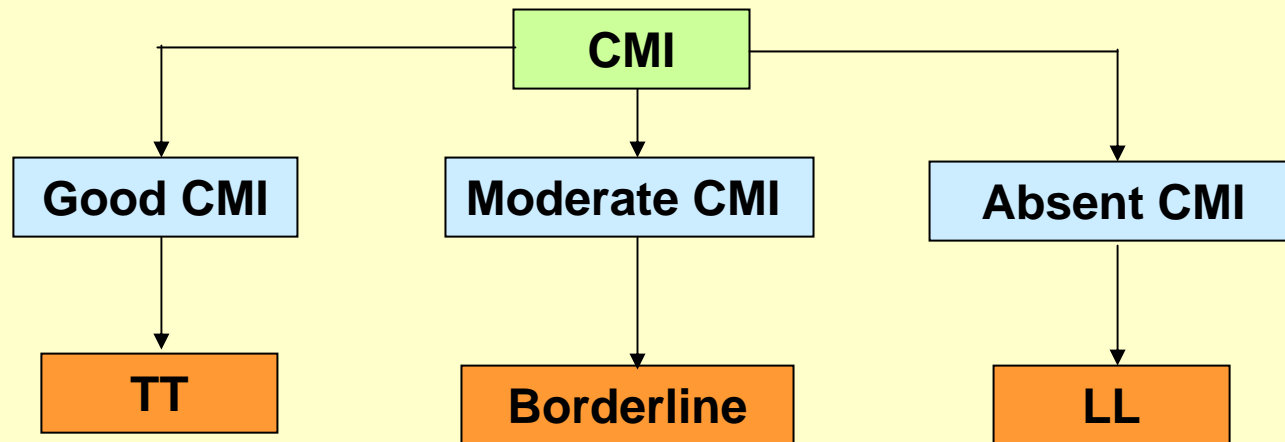
1. Patient's ability to contain the bacilli

2. Bacillus' ability to adapt as a human parasite

when the patient's ability fails, he gets clinical form of disease M. Leprae seldom kills its host .

Cell Mediated Immunity (CMI): Most importantly which the
Infection is contained
Healing takes place .

Determinant of clinical features



CMI to M. Leprae is absent or suppressed : Lepromatous

Leprosy

Bacilli multiply and accumulate:.

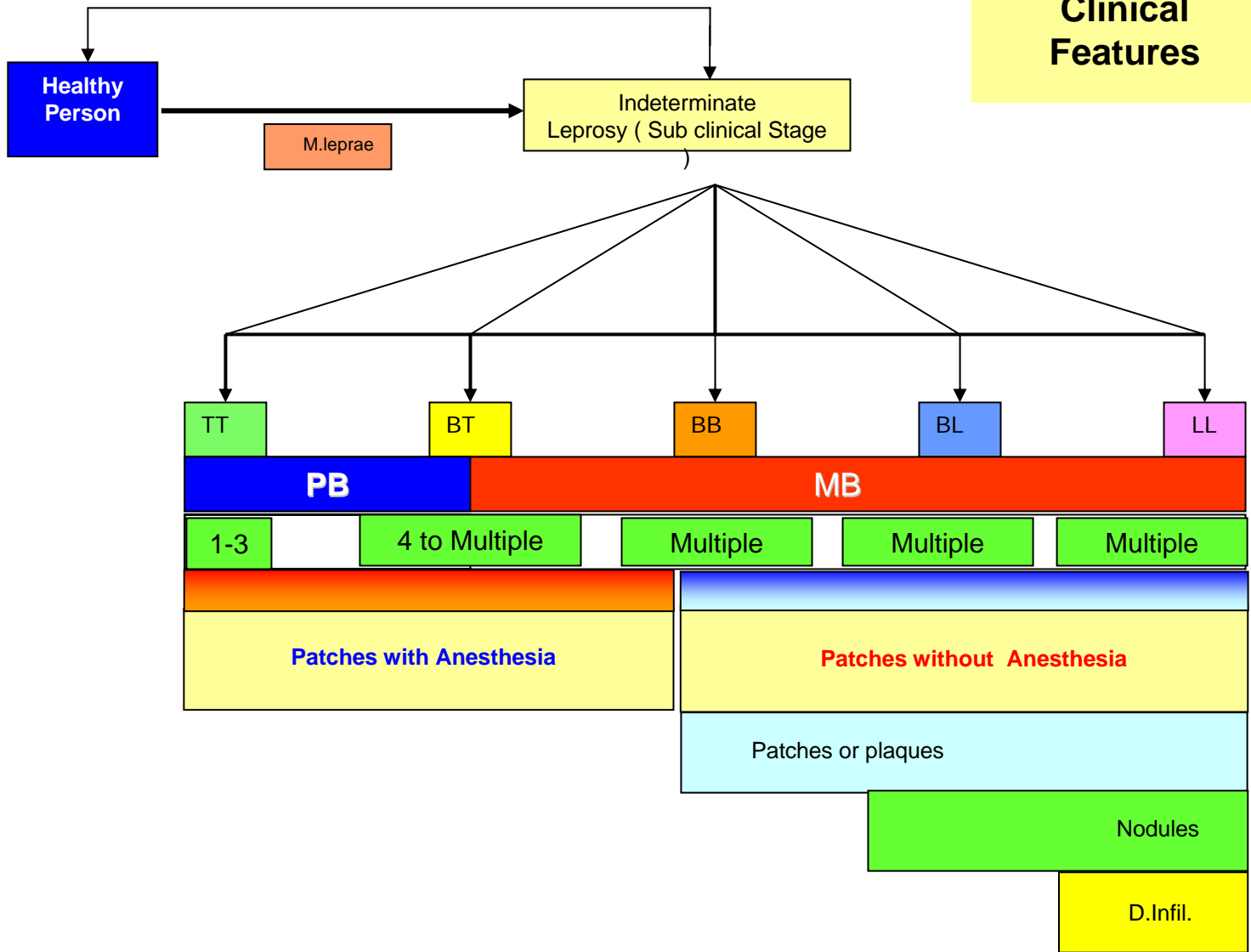
If CMI is present : Tuberculoid Leprosy

Infection localized

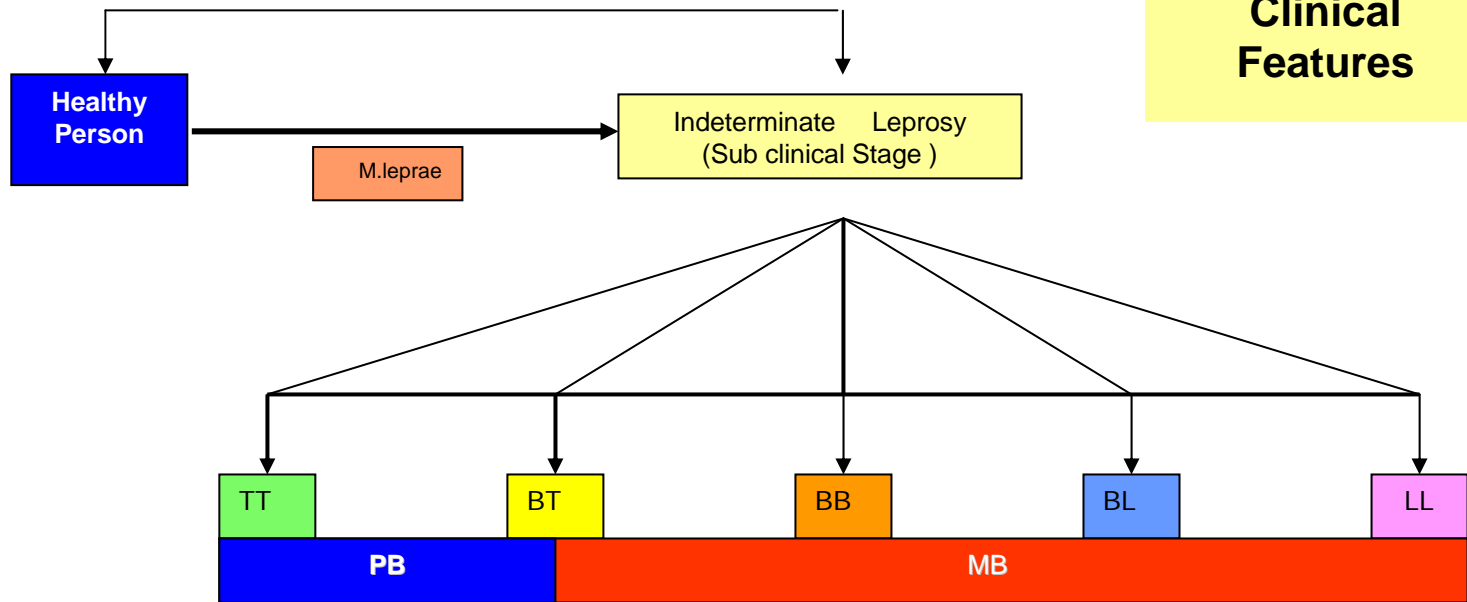
Tends to heal.

Between these Extremes: Spectrum of Borderline leprosy,

Clinical Features



Clinical Features



	TT	BT	BB	BL	LL
No. of Patches	1-3	4 to multiple	Multiple	Multiple	Multiple
Size of Patches	Big	Big	Medium to Small	Small	Small
Anesthesia	+++	++	+ / -	-	-
Border	Clear	Clear	Clear at some places	Slightly ill-defined	Ill - Defined
Symmetry	Asymmetrical	Asymmetrical	Symmetry starts	Symmetrical	Symmetrical

Treatment of Leprosy

Criteria for grouping

S. No.	Characteristic	PB (Pauci bacillary)	MB (Multi bacillary)
1	Skin lesions	1 – 5 lesions	6 and above
2	Peripheral nerve involvement	No nerve / only one nerve	More than one nerve
3	Skin smear	Negative at all sites	Positive at any site

Treatment of leprosy & std. regimen

- Cap Rifampicine: 10 mg/ kg body weight (bw)
- Cap Clofazimine: 1 mg /kg bw daily and 6 mg/kg bw for monthly dose
- Tab Dapsone: 2 mg /kg bw daily

PB Adult: For people with PB leprosy and 15 years of age or more

MB Adult: For people with MB leprosy and 15 years of age or more

PB child: For people with PB leprosy and 10-14 years of age

MB child: For people with MB leprosy and 10-14 years of age

Advantages of Multi Drug Therapy (MDT)

- Safe, minimal side effects and increased patient compliance
- Kills the bacilli
- Stops progress of the disease
- Prevents further complications and reduces chances of relapse
- Renders LAP non-infectious,
- Reduces transmission and spread of disease
- Reduces chances development of resistance
- Reduces duration of the treatment
- Available in blister pack; easy to dispense, store and take

Indications for prescribing MDT

New case of leprosy: Person with signs of leprosy who have never received treatment before.

Other cases: Under NLEP all previously treated cases, who need further treatment are recorded as “**other cases**” including migrants

- **Relapse cases of PB/MB**

- **Reentered for treatment (include defaulters)** - Previously treated cases, clinical assessment shows requirement of further treatment

- **Defaulter:**

 - PB** 6 pulses in nine consecutive months

 - MB** 12 pulses in 18 consecutive months

Indications for prescribing MDT

- **Referred cases:** Patient referred for completion of treatment \ Carries a referral slip
- **Change in classification:** Appearance of more lesions
- **Cases from outside the state & Temporary migration or cross border cases:**
- **Indigenous case:** Residing for more than six months likely to stay till completion of treatment,

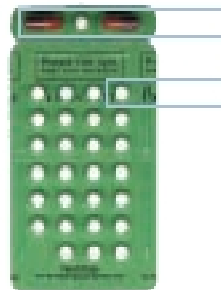
MDT regimen & doses

Type of leprosy	Drugs used	Frequency of Administration on Adults (children in bracket)	Dosage (adult) 15 years & above	Dosage (Children 10-14 years)	Dosage Children Below 10 years	Criteria for RFT
MB leprosy	Rifampicin	Once monthly	600 mg	450mg	300mg	Completion of 12 monthly pulses in 18 consecutive months
	Clofazimine	monthly	300 mg	150 mg	100mg	
	Dapsone	Daily Once	100 mg	50 mg	25mg	
	Clofazimine	Daily for adults (every other day for children)	50 mg	50mg	50mg (alternate day, not daily)	
PB leprosy	Rifampicin	Once monthly	600 mg	450 mg	300mg	Completion of 6 monthly pulses 9 consecutive months
	Dapsone	Daily	100 mg	50 mg	25mg daily or 50 mg alternate day	

MDT Regimens

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

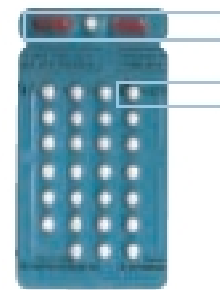
Each blister pack contains treatment for 4 weeks.



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

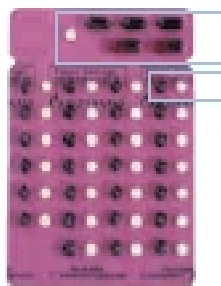


PB child treatment (10-14 years):

- 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

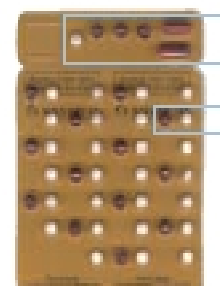
For children younger than 10, the dose must be adjusted according to body weight.



MB 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



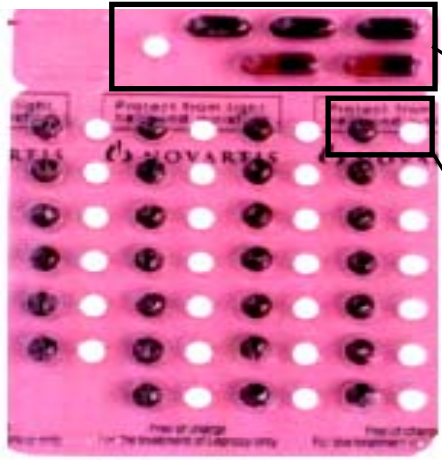
MB child treatment (10-14 years):

- 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

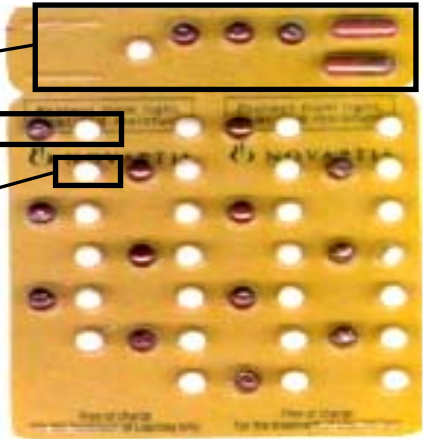
MB child blister pack

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

MDT Blister packs



MB (Adult) Blister pack

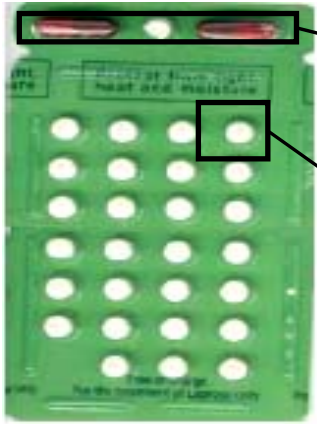


MB (Child) Blister pack

First dose of the month

Doses for alternate day

Daily dose from second day



PB (Adult) Blister pack



PB (Child) Blister pack

First dose of the month

Daily dose from second day

Before and after treatment



Before and after treatment



Side effects of Dapsone

	Common side effects	Signs and symptoms	What to do if side effects occur
Minor	Anaemia	Paleness inside the lower eyelids, tongue and fingernails, Tiredness, oedema of feet and breathlessness	Give anti-worm treatment and iron and folic acid tablets. Continue dapsone.
	Abdominal symptoms	Abdominal pain, nausea, and vomiting with high doses	Symptomatic treatment. Reassure the patient Give drug with food
Serious	Severe skin complication (Exfoliate dermatitis) Sulphone hypersensitivity Haemolytic anaemia	Extensive scaling, itching, ulcers in the mouth and eyes, jaundice and reduced urine output Itchy skin rash	Stop Dapsone. Refer to hospital immediately. Never restart.
	Liver damage (Hepatitis)	Jaundice (yellow Colour of skin, eyeballs and urine) Loss of appetite and vomiting	Stop Dapsone. Refer to hospital. Restart after the jaundice subsides
	Kidney damage (Nephritis)	Oedema of face and feet. Reduced urine output	Stop Dapsone. Refer to hospital

Side effects of Rifampicin

	Side effects	Signs and symptoms	What to do if side effects occur
Minor adverse effects	Red discoloration of body fluids	Reddish coloration of urine, saliva and sweat	Reassure the patient and continue treatment
	Flu like illness	Fever, malaise and body ache	Symptomatic treatment
	Abdominal symptoms	Abdominal pain, nausea, and vomiting	Symptomatic treatment. Reassure the patient Give drug with food
Serious adverse effects	Hepatitis (liver damage)	Jaundice (yellow colour of skin, eyeballs and urine). Loss of appetite and vomiting	Stop Rifampicin. Refer to hospital. Restart after the jaundice subsides.
	Allergy	Skin rash or Shock, purpura, renal failure	Stop Rifampicin

Side effects of Clofazimine

Side effects	Signs and symptoms	What to do if side effects occur
Skin pigmentation (Not Significant)	Brownish-red discoloration of skin, urine, and body fluids	Reassure the patient, it disappears after completion of treatment
Acute Abdominal symptoms	Abdominal pain, nausea and vomiting on high doses	Symptomatic treatment. Reassure the patient Give drug with food If intractable stop clofazimine
Ichthyosis (diminished sweating)	Dryness and scaling of the skin, itching	Apply oil to the skin. Reassure the patient.
Eye	Conjunctival dryness	Moistening eye drops/ frequent washing of eyes

Criteria to restart course of MDT

- **Relapse of Leprosy:** confirmed by laboratory.
- **Drop out cases:** Discontinued MDT > 3 months in PB
> 6 months in MB leprosy
Active signs of leprosy.
- **Active disease persists / new signs developed within a year,**
- **Suspicion of drug resistance**

Basic principles for management of ocular lesions

- **Immediate referral:** Impairment of vision
Red painful eye,
Infrequent blinking,
Lag-ophthalmos
- **Start MDT:** if not taken previously
- **Manage conjunctivitis:** frequent cleaning of eye
Tropical antibiotic application
Rest to the eye by padding.
- **Eyelashes:** < 5 or > 5
- **Follow up treatment** as advised
- **Self care:** After acute phase is over. (Refer section on POD)
- **No perception of light'** (NPL): Incurably blind