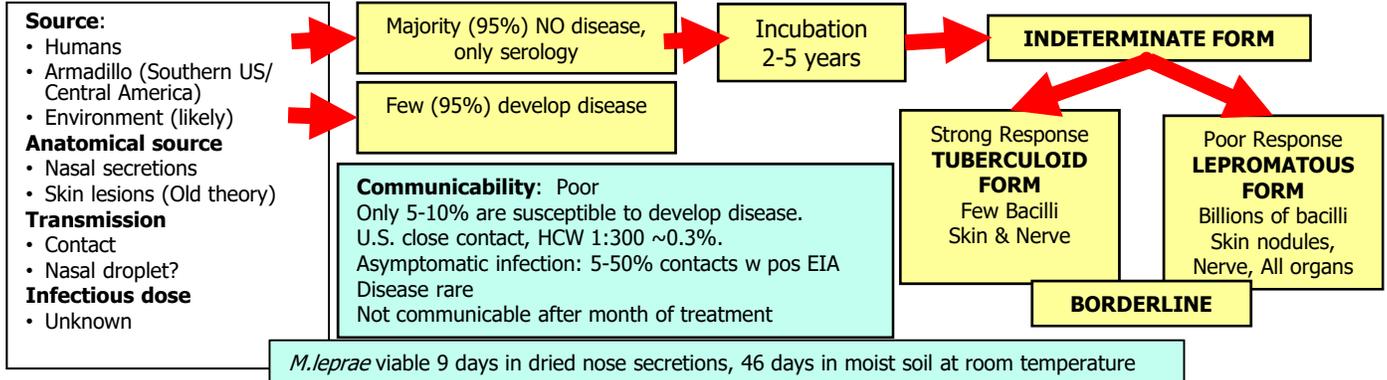


# Hansen's Disease (Leprosy)

## Epidemiology



## Diagnosis

### INDETERMINATE

- Single hypopigmented or erythematous skin lesion
- Heal spontaneously, remain permanently or progress into other form
- Sensibility (thermal, light touch, pin prick) impaired.



### TUBERCULOID

- Few (1 to 3) skin lesions
- Large (3 to 30 cm) macules.
- Hypopigmented or erythematous.
- Well defined border, rough, scaly
- Periphery raised, Center flat
- Erythematous or hyperpigmented or hypopigmented.
- Sensibility lost, no perspiration
- Enlarged nerves, deformities



### LEPROMATOUS

- SKIN:** Nodules /papules
  - Numerous, in Cold areas: Earlobes,
  - Loss of eyebrows & eye lashes
- ORGANS** most become involved:
  - Nasal congestion, epistaxis,
  - Laryngeal inflammation, Eye lesions,
  - Renal involvement, Testicular atrophy



### ULCERATION:

- From repeated trauma on anesthetic areas
- Feet: poorly fitting shoes, walking barefooted
- Anesthetic hands exposed to injuries:
- Secondary infection of ulcers common.



### BONE INVOLVEMENT:

Secondary infection

- osteomyelitis
- bone absorption
  - Fingers & toes most affected
  - Direct invasion of bones by *M. leprae*
- bone destruction: nasal bones, hard palate
- Concomitant mucous membrane involvement
- nasal septum perforation.

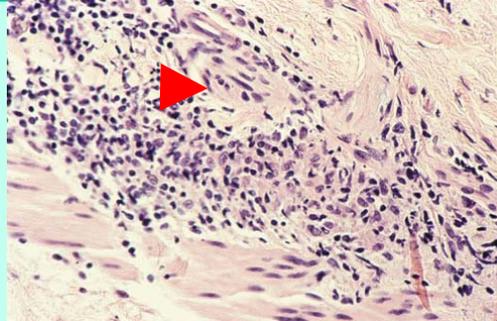


### DIAGNOSIS

- Clinical exam (Skin, nerves)
- Skin smear
- Biopsy
  - RT-PCR in tissue



Skin smear of LEPROMATOUS filled with Acid Fast Bacilli



Skin biopsy specimen showing noncaseating granulomas in the superficial dermis along with small nerves surrounded by chronic inflammation, characteristic of TUBERCULOID leprosy

## Treatment

### Adults

#### Tuberculoid (TT & BT) (WHO classification Paucibacillary, "PB")

Agent	Dose	Duration
Dapsone	100 mg daily	12 months, and <u>then therapy discontinued</u>
Rifampicin	600 mg daily	

#### Lepromatous (LL, BL, BB) (WHO classification Multibacillary, "MB")

Agent	Dose	Duration
Dapsone	100 mg daily	24 months, and <u>then therapy discontinued</u>
Rifampicin	600 mg daily	
Clofazimine <sup>b</sup>	50 mg daily	



## CONTROL / PREVENTION

### CASE FINDING

**1-Identifying Suspects** is the primary goal of case finding.

--Keep aware of leprosy and always suspect a **discolored patch with loss of sensation**.

--Ask for history of familial leprosy, stay in foreign countries, travel history, direct contact with armadillos or soil contaminated with armadillos

--Suspects should be referred to a **dermatologist**

**2-Self-reported armadillo contact:** As more people become aware of the armadillo connection, people ask about leprosy. Promote **Self Detection** through health education about long incubation period and early signs.

**3-ALL new cases should be treated**, even paucibacillary cases. Although a proportion of these cases can heal without therapy, there is no way to tell which one will heal and which one will get worse.

**4-Report new cases to OPH** which maintains a register of leprosy cases

**5-Start a Case Investigation** following the diagnosis of a new case. The purpose of this investigation is to provide epidemiological information:

--Patient's identity, address, ethnic group, birth, education, employment, contact information for follow up

--Baseline clinical information: Description of early signs, date of onset on the patient, and,

--Contact with armadillo or humans with leprosy

**6-Refer the patient to the Hansen's Disease Program**



### CONTAINMENT

#### **ISOLATION IN HEALTH CARE FACILITY: STANDARD PRECAUTION**

**Quarantine** was used for many centuries as the only way to prevent spread of the disease. It has not proven very efficient. Patients knowing they would be isolated for a long period of time avoided medical care and attempted to hide their disease. Although they were isolated when the diagnosis became obvious, it was usually very late. At that time, most contacts were already contaminated. Infectious cases become noninfectious within a few weeks or months following the initiation of treatment.

#### **COMMUNITY ISOLATION OF THE PATIENT IS NO LONGER NECESSARY.**

Common sense and hygienic precautions with regards to an infectious case are sufficient.

#### **HOSPITALIZATION**

Following the diagnosis of a new case, hospitalization is not systematically recommended before starting treatment. The major medical indication for hospitalization is in the event of a REACTION to drug therapy. Severe reactions may lead to severe disabilities and death.

#### **FOLLOW-UP OF KNOWN CASES**

One must understand the public's prejudices toward leprosy. Persons with leprosy have been unfairly and irrationally ostracized and sequestered for many years. An understandable and common reaction from patients is to refuse any control from anyone. A great deal of tact is necessary in dealing with these cases.

#### The **National Hansen's Disease Programs**

(NHDP) provides, free of charge:

- Antibiotics for Hansen's disease
- Pathology diagnostic services
- Physician visits at NHDP and clinics in 15 cities and Puerto Rico

For details, contact the NHDP:

Phone 1-800-642-2477, weekdays 9 am to 5:30 pm ET

[www.hrsa.gov/hansens-disease](http://www.hrsa.gov/hansens-disease)

#### **SOCIAL PROBLEMS OF LEPROSY**

Social and cultural factors in leprosy control have serious implications on the leprosy patients. **The ancient practice of isolation and statement about leprosy in religious texts has helped perpetuate the stigma of leprosy in many countries.**

**EDUCATE THE PUBLIC:** It is desirable that the community have a wholesome attitude toward leprosy as a communicable disease.

**EDUCATE THE PATIENT:** Ascertain the patient's knowledge, thoughts about leprosy. Misconceptions should be corrected. Present basic facts. Several interviews may be useful to repeat and reinforce the teaching. Common to patients with leprosy is the fear that the diagnosis will become known by others. The practitioner must respect this desire for confidentiality.

--Points to emphasize to the patients are: 1-Necessity for regular treatment and surveillance; 2-Good prognosis with regular treatment;

3-possibility of reactions and necessity to seek medical care; 4-In case of disabilities, teach how to cope with insensitive hands, insensitive feet and eye care.

**EDUCATE THE FAMILY:** The family and close contacts of the case may have been exposed to the leprosy bacilli. Teach how to check for early signs of leprosy; change in skin color, change in skin sensitivity, nodules in any part of the body, change in motor function. Stress the need to obtain medical evaluation if warranted. Answer any questions the contact may have regarding leprosy.

**EDUCATE YOUR COLLEAGUES:** Many health professionals hold similar misconceptions about leprosy. Opportunities should be used to correct these misconceptions and to provide education regarding leprosy.