

LEPROSY (Hansen's Disease)

1. **Agent:** *Mycobacterium leprae*, an acid-fast, gram-positive bacillus.
2. **Identification:**
 - a. **Symptoms:** Lesions of skin, often enlargement of peripheral nerves, with consequent anesthesia, muscle weakness and contractures. Major types:

Lepromatous (LL): Many bacilli present, decreased cell-mediated immunity (CMI), diffuse skin lesions, invasions of upper respiratory tract, lymphoid system and some viscera. Erythema nodosum leprosum (ENL) may occur, as well as Lucio reaction.

Borderline (BL, BB, BT): Bacilli present and CMI unstable; includes features of both major types.

Tuberculoid (TT): Few bacilli present, increased CMI, usually localized with discretely demarcated lesions, early in nerve involvement; may heal spontaneously in 1-3 years.

Indeterminate: A benign form, relatively unstable, seldom bacteriologically positive. These cases may evolve toward lepromatous form or the tuberculoid form, or may remain unchanged indefinitely.

Arrested leprosy: Under control with adequate medication.

Complications: Residual paralysis and anesthesia leading to trophic ulcers; amyloid renal disease; chronic glomerulonephritis. Reversal reactions may destroy tissue abruptly.
 - b. **Differential Diagnosis:** Other peripheral neuropathies, chronic dermatological lesions, tuberculosis, syphilis, yaws, etc.
 - c. **Diagnosis:** Characteristic tissue changes, nerve enlargement, history of immigration from endemic area, identification of acid-fast bacilli in tissue.
3. **Incubation:** Average 3-6 years; range, 7 months to 20 years.
4. **Reservoir:** Human. Wild armadillos have been found infected; transmission to humans is uncertain.
5. **Source:** Not established. Presumed to be nasal discharges, skin lesions.

6. **Transmission:** Not established. Presumed to be via nasal discharges and skin lesions. Close household contact, genetic factors and immune response thought to be important.
7. **Communicability:** Mildly communicable as long as solid viable bacilli are demonstrable. Irregularly stained organisms probably noninfectious within 3 months of continuous therapy with a sulfone or alternative specified drug.
8. **Specific Treatment:** Dapsone (DDS); rifampin; rifampicin; clofazimine (B663). Some DDS resistance reported; therefore, combined chemotherapy may be used. DDS may be used as prophylaxis.
9. **Immunity:** None.

REPORTING PROCEDURES

1. **Reportable.** Sections 2500 and 2582, *California Code of Regulations*.

2. Report Forms:

LEPROSY SURVEILLANCE (CDC 52.18, 6/93) required for all new cases.

LEPROSY CASE/CONTACT SURVEILLANCE (H-1442, 5/78)

a. CASE:

Submit **CDC 52.18** immediately on all types (LL, BL, BB, BT, TT, Indeterminate and Arrested Leprosy), and **H-1442** when changes occur or special follow-up has been requested.

Submit **H-1442** June 15 and December 15 only on LL, BL, and BB cases who:

- missed appointments or have been uncooperative in their follow-up at LAC+USC.
- go to a private doctor or clinic other than LAC+USC.
- have an address change.
- are closed to follow-up (i.e., completed treatment, lost, died, etc.).
- are in need of special assistance or follow-up by request of their PMD, clinic, or LAC+USC-MC.

- b. **CONTACTS:** Submit **H-1442** as needed when follow-up has been requested by ACDC, or when closed to follow-up.

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3. Epidemiologic Data:

- a. Establishment of rapport with patient takes precedence over obtaining routine epidemiologic data.
- b. Aliases, occupation, current symptoms.
- c. Contact with persons with leprosy.
- d. Place of birth, travel/residence in endemic areas from birth to present. Dates of entry into United States and California.
- e. Type of leprosy, active/inactive.
- f. Biopsy: date, results.
- g. Disability or deformity.
- h. Current medical supervision.
- i. List of family members and other close household contacts.

CONTROL OF CASE, CONTACTS & CARRIERS

Investigate within 14 days. Review record of LL, BL, and BB cases semi-annually in June and December for need to visit or telephone.

CASE:

1. All LL, BL, and BB to remain under medical supervision until released by Chief, ACDC.
2. All TT, BT, Indeterminate and Arrested Leprosy to remain under medical supervision until released by their physician.
3. Restrictions to be determined by leprologist and Chief, ACDC.

CONTACTS:

Contacts are defined as persons who have been in close, continuous household contact for a month or more within 5 years prior to diagnosis or during any period of inadequate treatment. Persons residing with cases in areas of endemicity are particularly vulnerable. Secondary cases acquired in California are rare.

1. Contacts to all types of leprosy should be examined when case first diagnosed.
2. Contacts to LL, BL, and BB: Minimum yearly examination for 5 years from last exposure.

3. Contacts to TT, BT, Indeterminate and Arrested Leprosy: Initial examination, then as recommended by physician.

CARRIER: Not applicable.

PREVENTION-EDUCATION

CASE & CONTACTS:

1. Clarify misconceptions regarding leprosy.
2. Encourage patient to remain under medical care.

CASE:

1. Stress importance of taking prescribed medications and following treatment plan.
2. Watch for drug reactions and report to physician.
3. Dispose of nasal and lesion discharges in a sanitary manner.
4. Explain the relationship of anesthetic areas to possible injury.
5. Teach daily examination of stocking-glove (foot-hand) anesthetic area.
6. Teach safety measures to prevent burns, ulcers, injuries, etc.
7. Inform patient of availability and importance of rehabilitation and reconstructive surgery when indicated.
8. Encourage hospitalization when recommended.

DIAGNOSTIC PROCEDURES

Specimen: Biopsy or smear taken from active lesion for examination of acid-fast bacilli.