

LEPROSY
(Hansen's Disease)
Fact Sheet
(Last updated 5 May 11)

Agent: *Mycobacterium leprae*, a bacillus that multiplies very slowly. This organism cannot be grown in bacteriological media or cell cultures.

Brief Description: Leprosy, or Hansen's disease, is a chronic bacterial disease that is spread from person to person via respiratory droplets. Most cases worldwide are found in Africa, Asia, and Latin America. Cases in the United States are usually in immigrants and refugees. Leprosy mainly affects the skin and nerves, and left untreated can cause permanent damage to the skin, nerves, limbs, and eyes. However, leprosy is curable with multi-drug antibiotic therapy.

Reservoir: Humans are the only reservoir of significance. A disease similar to experimental leprosy has been found in the U.S. in armadillos and natural transmission to humans has been suggested.

Mode of Transmission: Leprosy is spread from person-to-person through respiratory droplets and requires close contact. Indirect transmission (e.g., through contact with dried nasal secretions) is highly unlikely. Most individuals are not susceptible to infection with *M. leprae*.

Incubation Period: Leprosy has a long incubation period typically ranging from 9 months to 20 years.

Clinical Description: Signs associated with leprosy in humans fall into four categories:

- Tuberculoid (paucibacillary) leprosy. Signs of tuberculoid leprosy are typically milder than in other forms of the disease and often include one or a few (i.e., less than 5) well-demarcated hypopigmented skin lesions, frequently with active, spreading edges and a clearing center, as well as peripheral nerve swelling or thickening.
- Lepromatous (multibacillary) leprosy. Lepromatous leprosy is most commonly recognized by the presence of multiple erythematous (i.e., red) lesions found in a bilateral, symmetrical distribution, particularly on the face, hands, or feet. Other symptoms may include thickened dermas and nasal congestion or epistaxis.
- Borderline (dimorphous) leprosy. Skin lesions or macules characteristic of both the tuberculoid and lepromatous forms of leprosy indicate borderline leprosy.
- Indeterminate leprosy. The primary sign of indeterminate leprosy is the presence of early lesions, typically hypopigmented, without developed features of either the tuberculoid or lepromatous forms of leprosy.

Diagnostic Testing:

- A. *Skin smears*
1. Staining for acid-fast bacilli
 2. Measures total bacillary load



B. Skin biopsy

1. Full-thickness biopsy
2. Elliptical or punch biopsy is acceptable

Laboratory Criteria for Diagnosis:

Confirmatory:

- Demonstration of acid-fast bacilli in skin or dermal nerve, obtained from the full-thickness biopsy of a lepromatous lesion

Case Classification:

- *Confirmed:* a clinically compatible case that is laboratory confirmed

Treatment: Leprosy is curable with antibiotics. Multi-drug therapy is very effective and infected individuals are considered non-infectious after only a few doses of antibiotics. Depending on the form of leprosy, treatment may last for as long as 3 to 4 years but typically ranges from 6 to 12 months. The most common antibiotics used to treat leprosy are dapsone, rifampin, and clofazimine. Other antibiotics such as clarithromycin, ofloxacin, levofloxacin, and minocycline are also used. For consultation regarding treatment, contact the National Hansen's Disease Program in Baton Rouge at 1-800-642-2477 weekdays 9am-5:30pm EST or at <http://www.hrsa.gov/hansens>.

Reporting: Report all cases of leprosy within 7 days to your local health department, District Health Office, or the Epidemiology Branch at 404-657-2588. Case information can also be submitted electronically through the State Electronic Notifiable Disease Surveillance System (SendSS) at <http://sendss.state.ga.us> or by mailing the Notifiable Disease Report form to the Georgia Division of Public Health.

References:

1. Centers for Disease Control and Prevention. Hansen's Disease (Leprosy). http://www.cdc.gov/nczved/divisions/dfbmd/diseases/hansens_disease/technical.html
2. Heymann, D.L., ed. Leprosy. In: Control of Communicable Diseases Manual. 18th ed. Washington, D.C., American Public Health Association, 2004:302-306.
3. National Hansen's Disease (Leprosy) Program. <http://www.hrsa.gov/hansens>
4. World Health Organization. Leprosy Fact Sheet. <http://www.who.int/mediacentre/factsheets/fs101/en>