

# Leprosy

## Reporting Obligations

Leprosy is designated as a disease of public health significance and is reportable under the Ontario Health Protection and Promotion Act. Report all suspect and confirmed cases within **one business day** to the health unit.

### REPORTING FORM

## Epidemiology

### Aetiologic Agent:

*Mycobacterium leprae* (*M. leprae*) is the bacterium which causes leprosy. It is an obligate intracellular, acid-fast bacillus that can be Gram-stain variable.

### Clinical Presentation:

A chronic bacterial disease characterized by the involvement primarily of skin as well as peripheral nerves and the mucosa of the upper airway. The skin involvement can be either nodular/popular or restricted to the level of the skin. Clinical diagnosis is based on complete skin examination.

The following characteristics are typical of the major forms of the disease:

- Tuberculoid: one or a few well-demarcated, hypopigmented and anesthetic skin lesions, frequently with active spreading edges and a clearing center; peripheral nerve swelling or thickening also may occur
- Lepromatous: a number of erythematous papules, plaques, or nodules or an infiltration of the face, hands and feet with lesions in a bilateral and symmetrical distribution that progress to thickening of the skin
- Borderline (dimorphous): skin lesions of both above characteristics and
- Indeterminate: early lesions, usually hypopigmented macules, without developed tuberculoid or lepromatous features

### Modes of transmission:

Unclear. Likely transmitted from nasal mucosa of an infected person to the skin and respiratory tract of another person via droplets from the nose and mouth, during close and frequent contact with untreated cases.

### Incubation Period:

9 months to 20 years with an average of 4 years for tuberculoid leprosy and 8 years for lepromatous leprosy.

### Period of Communicability:

Infectiousness is lost in most instances within a day of treatment with multidrug therapy.

## Risk Factors/Susceptibility

Infection among close contacts of cases is frequent, however clinical disease occurs only in a small proportion of those infected; the form of leprosy depends on the ability to develop cell-mediated immunity.

## Diagnosis & Laboratory Testing

Lab confirmation of infection with clinically compatible signs and symptoms: Positive Acid-Fast stain, histopathological report from skin or nerve biopsy, or Nucleic acid amplification test (NAT) for *M. leprae*.

### TESTING INFORMATION & REQUISITION

## Treatment & Case Management

Treatment should be under the direction of an infectious disease specialist; refer to World Health Organization (WHO) treatment recommendations. Medications are provided at no cost in Ontario.

No restrictions in employment or attendance at school are indicated for persons whose disease is regarded as noninfectious.

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. Initial examination of contacts should take place, and then periodic examination of household and other close contacts for skin lesions is recommended annually for up to five years after the last contact with an infectious case.

Public Health will follow up as needed.

## Patient Information

### PATIENT FACT SHEET

## References

1. [Ministry of Health, Infectious Diseases Protocol - Ontario Public Health Standards, 2022.](#)

## Additional Resources

1. Heymann, D.L. Control of Communicable Disease Manual (21st Ed.). Washington, American Public Health Association, 2022.
2. [Public Health Ontario, Leprosy, October 2019.](#)
3. [World Health Organization, "Interruption of transmission and elimination of leprosy disease", July 2023.](#)