



Brief Note on Leprosy

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DESCRIPTION

Leprosy is a chronic infection caused by *Mycobacterium leprae* bacteria. It can affect the skin and the nerves of the hands and feet as well as the eyes and the lining of the nose. In some cases, leprosy can also affect other organs, such as the kidneys and testicles in men. If left untreated, leprosy can cause deformities of the hands and feet, blindness, and kidney failure. The skin lesions and deformities can be very disfiguring and are the reason that historically people considered infected individuals outcasts in many cultures. Although human-to-human transmission is the primary source of infection, three other species can carry and (rarely) transfer *M. leprae* to humans: chimpanzees, monkeys, and nine-banded armadillos. The disease is termed a chronic granulomatous disease, similar to tuberculosis, because it produces inflammatory nodules (granulomas) in the skin and peripheral nerves over time. Today, there is effective treatment and the disease can be cured. There is no longer any justification for isolating persons with leprosy. The disease can affect the skin, mucous membranes, and eyes and some of the nerves that are located outside the central nervous system (peripheral nerves). These are primarily the nerves of the hands, feet, and eyes, and some of the nerves in the skin. In severe, untreated cases, loss of sensation, muscle paralysis of hands and feet, disfigurement, and blindness may occur.

Leprosy has traditionally been classified into two major types, tuberculoid and lepromatous. Patients with tuberculoid leprosy have limited disease and relatively few bacteria in the skin and nerves, while lepromatous patients have widespread disease and large numbers of bacteria. Tuberculoid leprosy is characterized by a few flat or slightly raised skin lesions of various sizes that are typically pale or slightly red, dry, hairless, and numb to touch (anesthetic). Lepromatous leprosy is at the other end of the spectrum, with a much more generalized disease, diffuse involvement of the skin, thickening of many peripheral nerves, and at times involvement of other organs, such as eyes, nose, testicles, and bone. There are

also intermediate subtypes between these two extremes that are commonly known as borderline leprosy. The intermediate subtypes are borderline tuberculoid, midborderline, and borderline lepromatous leprosy. Borderline leprosy and the subtypes are characterized by more extensive disease than polar tuberculoid, with more numerous skin lesions and more nerve involvement, but not as widespread disease as in lepromatous leprosy. Indeterminate leprosy refers to a very early form of leprosy that consists of a single skin lesion with slightly diminished sensation to touch. It will usually progress to one of the major types of leprosy.

Symptoms of leprosy

Leprosy progresses very slowly. Most people who have leprosy do not develop symptoms for at least a year after being infected by the bacteria. In most cases, it takes 5 to 7 years for symptoms to develop. Leprosy damages the nerves and muscles. It may cause sores, lesions, lumps, and bumps to appear on the skin. There are 2 types of leprosy: tuberculoid leprosy and lepromatous leprosy. Tuberculoid leprosy is the less severe and less contagious form of the disease. Lepromatous leprosy is more severe and generalized. It is also more contagious. This type of leprosy may affect organs such as the kidneys, testicles (in men), eyes, and nose.

Causes of leprosy

Leprosy is not very contagious. You can't catch it by touching someone who has the disease. Most cases of leprosy are from repeated and long-term contact with someone who has the disease. Doctors believe that leprosy might be passed from person to person. This happens by breathing in droplets that get into the air when infected people cough or sneeze. Most people who come in contact with *M. leprae* do not develop leprosy. However, people whose immune systems are weakened from chronic disease (such as diabetes, HIV, AIDS, or heart disease) may be more likely to develop leprosy. This is because their immune systems are not strong enough to fight the bacteria.

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