

THE DISEASE

1 What is leprosy?

Leprosy is caused by bacteria called *Mycobacterium leprae*. It is an infection that affects the skin and the nerves of the hands and feet and can also cause problems in the eyes and nose.

2 Why is leprosy also called Hansen's disease?

The medical name for leprosy is Hansen's disease. Dr. Armauer Hansen of Norway was the first to see the leprosy germ under a microscope. This was 1873, and Hansen's discovery was revolutionary. The evidence was clear: a germ (*Mycobacterium leprae*) causes leprosy. It was not hereditary, a curse, or from sin.

3. How does it spread?

It is believed that leprosy spreads through nasal route. Most people will never develop the disease even if they are exposed to the bacteria. Of the world's population, 95% have a natural immunity to leprosy.

5 Is leprosy a genetic disease?

No, Most people with leprosy do not have other family members affected, although occasionally several members of one family are affected.

6. Can other people get leprosy from a patient?

Patients on medicine for leprosy do not spread the disease. When a person is placed on medication, most of the bacteria are killed within a day. It is not necessary to isolate a person with leprosy at any time. Also, it is NOT transmitted through sexual contact or pregnancy.

7 What are the earliest signs of leprosy?

The most common first sign is usually a patch on the skin that may be slightly red, darker, or lighter than normal skin. The patch may also become numb, dry and have hair loss.

Some of these patches may slowly increase in size and new patches may appear on other parts of the body. More often they appear on the arms, legs, or back. Sometimes the only sign may be numbness and tingling in a finger or toe.

8 What tests can be done to make the diagnosis?

A physician diagnoses leprosy through clinical examination supported by skin smears. This is done by making a small incision into the skin. A small amount of tissue fluid is obtained and examined in the laboratory for the bacteria. There are no blood tests for leprosy.

9. How is it treated?

All newly diagnosed persons take three medications: Dapsone, Rifampin, and Clofazimine. They may be taken for six months or twelve months depending on the type of disease.

Most persons with leprosy take their medications at home. They continue their regular jobs and daily activities.

The medications now available are very effective in killing the bacteria. The disease can be cured if the medications are taken as prescribed.

10 What side effects do the medications have?

MDT is very safe and effective

Dapsone: Some people may have a mild anemia. Very rarely, other blood problems have been reported.

Rifampin: rarely rifampin will cause abnormal liver tests, but the problem clears when the medication is stopped. It may cause a harmless redness orange color in the urine, sweat, or tears.

Clofazimine: Clofazimine has virtually no side effects except some darkening of the skin. This effect slowly fades when the medication is stopped.

11 What is a leprosy reaction?

Reaction is the body's immunological response to the dead bacteria in the body. When patients begin taking medications, the bacteria are killed quite rapidly. The dead bacteria remain in the body for a period of time. Sometimes it takes long time for the dead bacteria to be completely cleared from the body.

During this time the body may react against these dead bacteria. This can cause pain and swelling in the skin and nerves and other parts of the body. This is what is known as a reaction. A reaction does not mean the disease is getting worse, or that the medication has stopped working. It is not an allergic reaction to the medication. It means that the body is reacting or fighting against the dead bacteria.

These bacteria may have been killed by the body's resistance to the bacteria or by the medication or both. This is why some persons develop reactions before they even start on medication. Reactions cause redness or swelling of the skin spots already present and painful nodules. There may be pain and swelling in the hands and feet, and painful nerves in the arms and legs. Fever and muscle aches may also occur. The eyes could be red and painful in some cases.

During reactions there is increased risk of damage to nerves in the eyes, hands and feet. Treating reaction quickly can prevent nerve damage and other severe sequel.

12 Why are the medications continued if reactions occur?

If medications that kill bacteria are not given, the bacteria would multiply again and disease would get worse.

13 How are reactions treated?

Reactions can be treated with medications such as prednisone or others like it may be required to prevent nerve damage during reaction. During the reactions, the risk of nerve damage and disabilities in hands, feet, or eyes can occur and must be considered against the risk of side effects. If prednisone is given at the lowest effective dose and for the shortest time possible, the risk of serious side effects is quite low treated with prednesolene. Thalidomide is another medication used to treat one type of reaction. It is very effective and can be used instead of prednisone in some persons. It has fewer side effects than prednisone. Thalidomide can cause severe birth defects if given to pregnant women. It is not given to women of childbearing age except under very special condition and strict medical in patient supervision.

14 What happens to pregnant women who have leprosy?

MDT is be safety given in pregnancy

PREVENTING DISABILITY

1 What happens to the eye in leprosy?

Leprosy can affect the eyes in several ways. The ability to feel something in the eye may be lost, making it easier for damage to occur. It can also cause dry eyes by decreasing tear production. Tears protect the eye by keeping it moist and healthy. Bacteria can invade the cooler part of the eye. Reactions may also involve the eye and may cause a painful "red eye." This is an emergency and must be attended to by an eye doctor immediately to prevent loss of vision.

2 What type of nerve damage occurs?

Leprosy can damage the peripheral nerves and nerves in the skin. This damage can lead to:

- Loss of sweat and oil gland function which causes dry and cracked skin on the hands and feet.
- Loss of the ability to feel light touch or, with more severe damage, loss of protective sensation. Protective pain sensation prevents burns, cuts, and exposure to dust, and exposure to destructive pressures to the hands and feet.
- Weakness of the eyelids, preventing proper closure of the lid which protects the eye.
- Loss of strength in the hands and feet. With severe nerve damage of the hands and feet, there is paralysis of the small muscles, leading to "clawing" of the fingers and toes.

3. What can be done to care for disabilities?

- Taking care of skin
- Carefully (and slowly) sand off any dead, thickened skin or calluses. An emery board or fine sandpaper will help remove the dead skin without causing injury. Never use a sharp blade on insensitive skin.
- For dryness, soak hands and feet in warm water once a day for 20 minutes, pat dry, and apply petroleum jelly or oil to all skin areas except between the toes. Do not use soaps or bubble baths while soaking.
- Do not use hot water bottles or heating pads on areas that have lost feeling.
- Taking care of eyes
- Use artificial tears twice a day for dryness.
- Check eyes in a mirror every day for redness or for anything that may irritate the eyes.
- Wear sunglasses for protection against the glare of the sun, dust and wind. Wraparound glasses and wide-brimmed hats offer good protection.
- Report pain, redness, or changes in vision to your nurse, doctor, or healthworker.
- Taking care of hands
- Inspect hands daily for cuts, blisters or warm, red areas. Protect open wounds from dirt and moisture with bandages. Injuries are a route for infection. If you notice swelling, redness, or increased temperature of an area, consult your doctor, nurse, or healthworker immediately.

- Consult a doctor if you experience numbness, weakness or tingling in your hands.
- Wear gloves when cooking, gardening, or working with tools.
- Use long-handled utensils when cooking.
- Taking care of feet
- Inspect feet every day for warm, red areas that are signs of inflammation. You can use a mirror to check the bottom of your feet. Contact your doctor or nurse if you have an open wound (ulcer) on the bottom of your foot.
- Cut toenails straight across and file. Do not cut calluses or corns, or use corn removers.
- Wear socks with shoes.
- Do not walk barefoot, even inside a home.
- Check your shoes for torn lining, rough spots, or objects inside shoes that can injure feet.

4 What about footwear?

With soft insole such as MCR footwear should be used in patients who have lost sensation over the sole of the foot. The footwear also should have a backstrap to prevent the footwear from sliding off. MCR footwear is given every six months to PAL at their nearest health facility.

5. What option does a PAL with deformity has for operative correction

- If PAL has

Hand deformity (Claw and wrist drop), Foot deformity (Foot drop, Claw toes), Eye deformity (lagophthalmos, Other lid abnormalities) can get register for RCS or Health worker also advise or enrol for Reconstructive surgery of affected part either in camps or Regional leprosy training and research institute, Raipur. There is also provision of Incentives to the BPL patients under scheme