

Leptospirosis is a bacterial disease of humans and animals. It is caused by leptospira bacteria that are found in infected animal urine and animal tissues. Leptospirosis is treated with antibiotics.

Leptospirosis

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What is leptospirosis?

Leptospirosis is a bacterial disease of humans and animals. It is caused by *Leptospira* bacteria that are found in infected animal urine and animal tissues.

What are the symptoms?

- Common initial symptoms of leptospirosis are fever, severe headache, sore muscles, chills, vomiting, and red eyes. These symptoms can mimic other diseases, such as influenza, and diagnosis is often difficult. Some people do not have all of these symptoms.
- Some people with leptospirosis go on to develop severe disease. This can include Weil's disease, which is kidney failure, jaundice (yellow colouration of the skin and eye balls which indicates liver disease), and haemorrhage into skin and mucous membranes. Meningitis (inflammation of the lining of the brain) and bleeding in the lungs can also occur. Most people who develop severe disease require hospitalisation and severe leptospirosis can sometimes be fatal.
- Symptoms usually develop 5 to 14 days (can range from 2 to 30 days) following infection and last from a few days to 3 weeks or longer.

How is it spread?

- *Leptospira* bacteria usually enter the body through skin cuts or abrasions, and occasionally through the lining of the mouth, nose, and eyes
- Outbreaks are usually associated with exposure to flood water contaminated with the urine from infected animals
- Many different animals can harbour *Leptospira* bacteria in their kidneys
- Water, soil and mud that has been contaminated with animal urine can be the source of infection
- Eating contaminated food or drinking contaminated water has occasionally been responsible for transmission
- Person to person transmission is rare.

Who is at risk?

- People at risk are those who have close contact with animals or who are exposed to water, mud, soil, or vegetation that has been contaminated with animal urine
- Some occupations are at higher risk e.g. farmers especially sugar cane and banana farmers, veterinarians, abattoir workers
- Some recreational activities that involve contact with contaminated water or soil can also allow leptospirosis to be transmitted e.g. camping, gardening, bushwalking, white water rafting, and other water sports
- Although leptospirosis is relatively rare in Australia, it is more common in warm and moist regions such as northeastern NSW and Queensland. Men are affected more often than women
- Recovery from leptospirosis infection can be slow. People can have a chronic-fatigue-like illness that lasts for months. Others can have persistent headache or depression

- Occasionally the bacteria can persist in the eyes and cause chronic eye inflammation.
- Because there are many different strains of *leptospira* bacteria, it is possible for someone to be infected with another strain and develop leptospirosis again.

How is it prevented?

There are a number of ways to prevent leptospirosis.

For people who work with animals:

- Cover cuts and abrasions with a waterproof dressing;
- Wear protective clothing (for example, gloves, eye shields or goggles, aprons and boots) when working with animals that could be infected, especially if there is a chance of contact with urine
- Wear gloves when handling cattle placentas or stillborn or aborted calves or carcasses
- Shower after work and wash and dry hands after handling potentially infected material
- Do not eat or smoke while handling animals that may be infected. Wash and dry hands before smoking or eating.

For other people:

- Avoid swimming or wading in water where there is a possibility of contamination with animal urine
- Cover cuts and abrasions with waterproof dressings, especially before coming into contact with soil, mud or water that may be contaminated with animal urine
- Wear footwear outdoors, especially when walking in mud or moist soil
- Wear gloves when gardening
- Control rodents by cleaning up rubbish and removing food sources that are close to housing
- Do not feed raw offal to dogs
- Wash hands with soap, as *Leptospira* bacteria are quickly killed by soap, disinfectants, and drying.

How is it diagnosed?

A doctor can diagnose leptospirosis through a blood test. Usually, two blood tests taken more than two weeks apart are required to make the diagnosis. Occasionally, the bacteria can be grown from blood, cerebrospinal fluid, and urine.

If you become sick in the weeks following possible exposure to animal urine or a contaminated environment, it is important to tell your doctor about the exposure.

How is it treated?

Leptospirosis is commonly treated with antibiotics such as doxycycline or penicillin. Because the testing can take some time and the disease can be severe, a doctor may choose to start antibiotics prior to confirming the diagnosis with tests. Antibiotic treatment is thought to be most effective if started early in the disease.

What is the Public Health response?

Laboratories are required to notify cases of leptospirosis to the local public health unit. Where cases may be linked, public health staff will investigate to determine common exposures and ways to contact the source of infection.

For further information please call your local public health unit on 1300 066 055 or visit the New South Wales Health website www.health.nsw.gov.au