

# Leptospirosis

## What is leptospirosis?

Leptospirosis is a worldwide waterborne zoonotic disease caused by the *Leptospira* bacteria, of which there are more than 250 different types. It is most common in tropical and subtropical climates. It is usually a self-limiting infection though it can be potentially life-threatening.

## How is it spread?

The bacteria can be found in both domestic and wild animals, including pigs, cattle, rats, dogs, possums, bats, deer and foxes. Rats are considered the most important source of leptospirosis worldwide. Humans can become infected with the bacteria through contact with water, wet soil or vegetation that is contaminated with the urine of infected animals. Cuts or grazes on people's skin, prolonged immersion of skin and contact with mucous membranes including the mouth, nose and eyes are common transmission routes. The bacteria may be excreted in the urine of infected people, however the disease is rarely passed from person to person.

## Where the disease is found

Leptospirosis occurs worldwide. In the Northern Territory (NT) the Fogg Dam / Harrison Dam area outside of Darwin is home to a large population of the native 'dusky rat' (*Rattus colletti*), which are likely to carry the bacteria. People are known to have become infected in this area. Other areas associated with cases include Oenpelli, Finnis River, Tipperary station, rural Darwin and Katherine district but generally areas around water, especially after flooding, are risk areas. In the NT there are usually 1-4 cases notified per year, however, an outbreak of 10 cases occurred in early 2021 among cattle workers.

## Who is at risk?

People at risk are those who have close contact with potentially infected animals or who are exposed to water, mud, soil or vegetation that has been contaminated with infected animal's urine. Occupations associated with increased risk of infection are abattoir workers, farmers, veterinarians, rice and sugarcane field workers. Some recreational activities also increase the risk of exposure and include camping, bushwalking, gardening, white water rafting, kayaking and hunting in at risk areas. A number of cases in the NT have been in turtle and duck/goose hunters and in those working with crocodiles, including crocodile egg collecting.

## Signs and Symptoms

Symptoms generally occur 5-14 days after exposure, but may range from 2 to 30 days. The illness lasts from a few days to 3 weeks or longer. The initial symptoms usually include a sudden onset of fever with headaches, chills, severe muscle pain (particularly in the legs) and reddened eyes. Cough, chest pain, abdominal pain, diarrhoea and vomiting can also occur. Most people who are infected have mild symptoms that resolve without complications or have no symptoms at all. Some people with leptospirosis will go on to develop more severe disease (called Weil's disease) with symptoms including jaundice (yellow skin or eyes), bleeding, breathing difficulties and confusion. In rare cases leptospirosis can be fatal.

## Treatment

Prompt specific antibiotic treatment, as early as possible in the illness is essential because it reduces the likelihood of developing severe disease. The antibiotics used may include penicillin or doxycycline as determined by a doctor. Other treatments are supportive and aimed at minimising the impact of any complications that may arise.

## Prevention

There is no human vaccination against leptospirosis. Vaccinations against some strains of leptospira are available for dogs, cattle and pigs. The public, employers and those working in hazardous occupations need to be aware of the disease and the way it is spread. In some instances preventative antibiotics may be considered after discussion with infectious disease/public health physicians.

To help protect yourself against leptospirosis you can do the following:

- avoid swimming or wading in water that may be contaminated
- cover all cuts or abrasions with waterproof dressings
- thoroughly wash hands and arms in soapy water after handling animals or carcasses, or after coming into contact with liquids that may be contaminated
- shower thoroughly after contact with potentially contaminated water or soil
- do not touch your mouth, nose, eyes (and especially do not smoke) while handling animals that may be infected
- wash and dry hands before smoking or eating
- wear gloves, eye shields, aprons and boots at all times when handling animals or liquids contaminated with the urine of animals
- prevent contamination of living and recreational areas with the urine of infected animals, including keeping working dogs out of the house yard
- control rodents by removing rubbish and food sourced from close to housing
- do not feed dogs raw offal or feral meat because this may infect them.

## Related information

- [Zoonoses - animal diseases that can affect humans](#)
- [Remote health services](#)
- [Find a community care centre](#)

## Contact

For more information contact the Public Health Unit's Centre for Disease Control in your region.

The full list of contacts of contacts can be found at [NT Health](#).

Location	Address	Phone	Fax	Email
Darwin	Ground Floor, Building 4 Royal Darwin Hospital Rocklands Drive Tiwi NT 0810	(08) 8922 8044 1800 008 002	(08) 8922 8310	<a href="mailto:CDCSurveillance.DARWIN@nt.gov.au">CDCSurveillance.DARWIN@nt.gov.au</a>
Katherine	O'Keefe House Katherine Hospital Gorge Road Katherine NT 0850	(08) 8973 9049	(08) 8973 9048	<a href="mailto:CDC.Katherine@nt.gov.au">CDC.Katherine@nt.gov.au</a>
Tennant Creek	Schmidt Street Tennant Creek NT 0860	(08) 8962 4259	(08) 8962 4420	<a href="mailto:CDC.Barkly@nt.gov.au">CDC.Barkly@nt.gov.au</a>
Alice Springs	Disease Control Unit Lower Ground Floor Eurilpa House, 25 Todd Street Alice Springs NT 0870	(08) 8951 7540	(08) 8951 7900	<a href="mailto:CDC.alicesprings@nt.gov.au">CDC.alicesprings@nt.gov.au</a>
Nhulunbuy	Corner Mathew Flinders Way and Chesterfield Court Nhulunbuy NT 0880	(08) 8987 0357	(08) 8987 0500	<a href="mailto:CDCGove.DoH@nt.gov.au">CDCGove.DoH@nt.gov.au</a>