

Leptospirosis

Leptospirosis is New Zealand's most common occupationally acquired infectious disease, and one of the most common diseases transmitted from animals to humans. Transmission of the bacteria is usually by contact with urine from infected animals but also from contaminated water, as the bacteria thrive in moist conditions. The infection most commonly enters through cuts and cracks in the skin, e.g. through bare hands or feet, or through the membranes of the eyes, nose and mouth. An infected animal can shed up to a million organisms per millilitre of urine, making it a very "easy" infection for humans to catch. The disease is present in almost all animal types.

The ESR Communicable Disease Centre statistics recorded a peak of 875 cases a year in 1971. After a campaign by the Women's Division of Federated Farmers (now Rural Women New Zealand) in 1973-74, voluntary vaccination of dairy cattle began. This caused a dramatic reduction in cases affecting dairy farmers. In 1979, there were 19 cases per 100,000 of population. By 1982, this had dropped to 4.5 per 100,000. While vaccination has reduced the risk to dairy farmers, it is thought that at least 10% of herds are still unvaccinated and people working with these animals on and off-farm are at high risk.

SYMPTOMS OF LEPTOSPIROSIS IN HUMANS.

- "Dreadful" headaches, severe and persistent; high fever, sometimes with hallucinations or nightmares; sensitivity to light (photophobia); sweating; nausea and/or vomiting; muscle pain (myalgia); back pain; loss of appetite; mood changes.
- Also jaundice (yellow eyes or skin from liver damage); breathing problems; vision problems; diarrhoea; skin problems.

Symptoms can develop very rapidly — between morning and afternoon milking. Patients speak of "crashing" or collapsing, being unable to see or move or not remembering anything before waking up in hospital. At least half of the people who are diagnosed with severe forms of leptospirosis will be hospitalised, some for a month or more, many requiring intensive care. A number of people have been very close to death, with families called to their bedside. Long-lasting effects can occur when the leptospires damage the liver or kidneys.

- Recent Health Waikato statistics show an average stay in hospital of 5 days. Most people who get a severe case find it physically impossible to go back to work within 2 months. Most do then go back to work — especially if they are farmers — but it can be at least a year before they regain anything like the energy that they had before.

LEPTOSPIROSIS & OSH

Leptospirosis is a significant hazard which can cause serious harm. A case of leptospirosis is regarded as "serious harm" and the risk of being infected is a "significant hazard." Many of the duties in the HSE Act are qualified by the words "take all practicable steps." Responsible people are required to take all steps considered reasonably practicable. A step is "practicable" if it is possible or capable of being done.

Therefore, failure to take all practicable steps to prevent leptospirosis among employees, contractors or workplace visitors (like vets!) may be considered a breach of the Act for which a prosecution may result.

A claim by an individual person that he or she did not know what to do about a hazard would not be successful if the hazard was widely known to others in the industry and safeguards were in place, or if they chose not to use the current body of knowledge about the hazard. The courts have referred to the current, “up-to-date” body of knowledge that is available to people. Failure to be familiar with this knowledge, or to follow it, is failing to take all practicable steps.

A vaccination programme is essential for the control of leptospirosis on farm.

In cattle, Leptospira infection can cause jaundice, anaemia leading to “red-water” or bloody coloured urine, and even death in young animals. In older animals abortions can occur. Cows are the maintenance hosts for one type of leptospirosis that can remain in the kidneys and be shed in the urine for an indefinite period. Vaccination to prevent infection and the development of carrier animals is the best strategy and must start with calves.

Calves should be vaccinated at about 4-6 months of age, as maternal antibodies protect the calves until this time, and will stop the vaccine working. Two doses of vaccine 4-6 weeks apart are essential to establish primary immunity. A 7 in 1 vaccine can be given at an earlier age, but a third injection is required in May-June to align the animals with the herd's annual vaccination as immunity only lasts 12 months. A yearly booster for all cows, heifers & bulls that stay on the farm is required.

When purchasing new stock ensure that you check vaccination status, as unvaccinated animals can be carrying the bacteria in their kidneys with no symptoms. If you are unsure of the animals status they can be treated with a particular antibiotic to help clear infections and a primary vaccination course should be given.