

## **Public service announcement**

There have been recent reports of outbreaks of Leptospirosis in Sydney. All affected cases have been reported in the Inner West (Surry Hills, Glebe). Leptospirosis is caused by infection with filamentous, gram-negative motile bacterial spirochetes of the genus *Leptospira*. Favouring warm, moist environments, ponds and stagnant water and areas exposed to flooding may provide conditions suitable for the spirochetes to survive for months. Reservoir hosts allow continued contamination of the environment (most often rats).

Dogs, as incidental hosts, may become infected through contact with the spirochetes in food, water and bedding. *Leptospira* may penetrate mucous membranes and macerated or broken skin; the incubation period is around 7 days. Incidental hosts tend to develop more severe clinical signs and shed for longer periods. Leptospirosis can be suspected in any dog with:

- Nonspecific clinical signs like lethargy, vomiting and diarrhea
- Azotemia
- Glucosuria
- +/- elevated liver enzymes



The University of Sydney is currently undertaking a study to determine which serovars are involved in this outbreak and if there is any specific source of infection which can be identified; ethics approval is pending.

If presented a case you suspect may be leptospirosis; important information to ask is:

- Any contact with rats
- Any contact with stagnant water (eg ponds)
- Any location the dog has been in the last 14 days

PPE is IMPERATIVE as Leptospirosis is considered zoonotic.

In suspicious cases we would recommend:

- Collect a urine and EDTA sample BEFORE giving antibiotics – send to IDEXX for PCR
- Collect a serum sample – send to IDEXX for antibody testing (this will help to identify the serovar), perform another titre 2 weeks later to determine if there is seroconversion, this will help us to determine the serovar responsible for infection
- Start treatment with IV fluids and antibiotics. IV penicillin derivatives such as ampicillin or amoxicillin are recommended initially however will not clear the organisms from the kidneys. To clear the infection oral doxycycline (5mg/kg BID or 10mg/kg SID) should be given for 14 days.
- The animal should be isolated from other animals and only be handled with appropriate PPE. We currently recommend isolation for 72 hours after the start of antibiotics.
- The owner should be advised to seek medical advice.
- It would be great to collect samples from animals (including cats) that have been in contact with the infected dog

Please report any suspicious cases to us and keep some serum, EDTA and urine samples if you can (please freeze samples).

You will get many requests for vaccination against Leptospirosis in the next few days to weeks. We would recommend vaccinating against Leptospirosis if the dog lives in the Inner West or city area or goes for walks in these areas. So far there have been no reported cases from other Sydney areas but we cannot exclude that cases will emerge in other areas as well. We are currently using the Protech C2i vaccine which covers for *Leptospira interrogans* serovar Copenhageni only. Before vaccination it would be great if you could collect:

1. Serum tube
2. Urine sample (can be free catch)
3. EDTA sample

Please put these samples in the freezer. We are happy to collect samples from your clinic.

If you have a suspicious case, samples to collect or questions please contact:

Dr Christine Griebisch Dr med vet DipECVIM-CA (Small Animal)  
EBVS® European Veterinary Specialist in Small Animal Internal Medicine  
Senior Lecturer in Small Animal Medicine, Unit Head Medicine  
Sydney School of Veterinary Science, University Veterinary Teaching Hospital Sydney  
65 Parramatta Road, 2050 Camperdown NSW AUSTRALIA  
email: [christine.griebisch@sydney.edu.au](mailto:christine.griebisch@sydney.edu.au) T +61 2 9351 3437, F +61 2 9351 7436