

## **LEPTOSPIROSIS**

**What is leptospirosis?** Leptospirosis is a disease caused by spiral shaped bacteria called spirochetes. It occurs world-wide and affects many wild and domestic animals as well as humans. It can cause serious kidney and/or liver damage.

**How does a human or animal contract leptospirosis?** The spirochetes are passed in the urine of infected patients. The spirochetes penetrate mucous membranes or gain access through a cut or abrasion in the skin after contact with infected urine or the contaminated environment. The organisms prefer a warm moist environment --- muddy soil, stagnant water. Spirochetes are killed swiftly by freezing. Infection is most likely to occur during the late summer and fall.

**What animals spread leptospirosis?** A short list includes: Rats, mice, cattle, dogs, horses, swine, squirrels, foxes, skunks, reptiles, voles, shrews, opossums, hedgehogs.

**What signs should I look for in case my pet becomes infected?** Signs of illness vary depending on the species of animal infected. Most signs are non-specific: fever, loss of appetite, vomiting, and joint pain. In dogs, signs of illness may be mild enough not even to warrant a trip to the veterinarian...or it may result in kidney and/or liver failure. Patients recovering from infection may shed the spirochetes for months. In general, younger animals are more severely affected than older ones. For more information regarding the disease in humans go to [http://www.cdc.gov/ncidod/DFBMD/diseaseinfo/leptospirosis\\_g.htm](http://www.cdc.gov/ncidod/DFBMD/diseaseinfo/leptospirosis_g.htm).

**How is leptospirosis diagnosed?** Recovery of the organism is always best; however it is not easy to do with leptospirosis. There are blood tests that can be performed but sometimes the results are difficult to interpret. Often a patient is treated for leptospirosis on the basis of history, physical findings, and results of kidney and liver function tests while more specific tests that are more time-consuming are pending in the laboratory.

**How is leptospirosis treated?** Usually a two-staged antibiotic therapy is used: first penicillin is used to stop organism reproduction in the patient and second a tetracycline is used to clear the spirochetes from the kidneys.

**How do I prevent the disease?** There is vaccine that can be used in dogs. However, there are 180 types of leptospire in the environment with only 4 being included in leptospirosis vaccines. Vaccine is available for the most commonly found organisms in the environment. However, the vaccine does not protect against the other 176. It is important to control rodents in the pet's environment and remove any standing water and "swampy" soil.

**You've been talking about dogs --- what about my cat?** Cats seem to be naturally immune to developing the DISEASE called leptosporosis. However, antibodies to leptospirosis have been found in cats. This indicates that they can become infected with

the organism and become carriers which could expose humans and other pets in the household to leptospirosis. There is no vaccine against leptospirosis available for cats.

**So why the big flap about leptospirosis? My pets are only in my back yard.** Years ago leptospirosis was considered to be a disease of the rural community. However, with people moving away from cities into the rural community, there is a greater chance for exposure to the urine of wildlife. Also, as we move to more rural areas, it puts pressure on the native wildlife resulting in their increasing relocation into our cities. Refer to **What animals spread leptospirosis?**