

Leptospirosis

Dogs become infected by leptospire when abraded skin comes into contact with the urine of an infected host. The organisms quickly spread through the bloodstream leading to fever, joint pain, and general malaise which can last up to a week. The organism settles in the kidneys and begins to reproduce, leading to further inflammation and then kidney failure. Depending on the type of leptospire involved, other organ failure (especially liver) can be expected as well. Make no mistake, leptospirosis is a life-threatening disease.

Symptoms include fever, depression, loss of appetite, joint pain, nausea, excessive drinking, jaundice, excess bleeding brought on by low platelet count.

People can also become infected. The infection in humans As the Centers for Disease Control and Prevention monitor leptospirosis cases in people it seems that one third come from contact with infected dogs and one third come from contact with rats (usually through field work). The same disease symptoms occur in humans as would be seen in a canine infection.

The species *Leptospira interrogans* has been classified into subtypes called SEROVARS. Over 200 serovars have been named.

Blood testing to detect antibodies against *Leptospira interrogans* can be performed.

Fortunately, *Leptospira interrogans* is sensitive to penicillin, a readily available antibiotic. After penicillin has been used to stop leptospire reproduction and limit bloodstream infection, tetracycline derivatives are used to clear leptospire from the kidneys. Since tetracyclines and penicillins are not a good concurrent combination, often a combination of a penicillin with a fluoroquinolone type antibiotic (such as enrofloxacin) is used to cover both phases of the infection. Intravenous fluids are crucial to support blood flow through the damaged kidneys so that recovery is possible. Any areas at home that have been contaminated with urine should be disinfected with an iodine based product and gloves should be worn in cleaning up any urine.

Prognosis is guarded depending on the extent of organ damage.

VACCINATION REACTIONS ARE COMMON!

Vaccination against *Leptospira interrogans* is only available for the serovars called canicola, grippityphosa, pomona and icterohaemorrhagiae. As a result of long standing use of this vaccine, it is hard to assess how important it is to vaccinate against leptospirosis. Most recent outbreaks involve serovars for which vaccination does not exist. Vaccination against the four serovars mentioned is commonly included in the basic distemper shot (DHLPP - the L stands for leptospirosis). The vaccine can be made up to omit the leptospirosis portion. Of all the sera in this basic vaccine, it seems to be the leptospirosis portion that is associated with hives, facial swelling, and even life-threatening vaccination reactions much more than any of the other fractions. If there is any question of an animal having a vaccine reaction, leptospirosis vaccine is left out of the mix. Vaccination will reduce the severity of disease but will not prevent infected dogs from becoming carriers.