

Leptospirosis

A Serious Threat to Working Dogs? (2002)

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In early 2002 I was contracted to train a number of dogs for a high end Security Company to work in a closed and controlled research environment. The new and interesting part was the very strict medical screening and various quarantines had to be complete. Over the years I thought I had developed a great process for testing dogs, which included both physical testing for potential and medical screening. I quickly learned I was missing something that could potentially be devastating to our industry.

About a week after I had the first group of dogs tested, I received a call from the lead Veterinarian who informed me that one of the dogs had tested positive for Leptospirosis. My first thought was how was that possible? All dogs are vaccinated against Leptospirosis, aren't they?

I was quickly informed that Leptospirosis comes in many different types and most dogs are only vaccinated against two types or "*pathogenic strains*", *icterohaemorrhagiae* and *canicola*. However, over the last ten years a number of Veterinary Medical Publications have stated that the most common canine types are now *grippotyphosa*, *pomona* and *bratislava*. To make matters worse I was informed that Fort Dodge Laboratories has recently made available vaccine against *grippotyphosa* and *pomona*, however there was no vaccine for *bratislava*.

As I started to do some research I was amazed not only how serious of a health risk Leptospirosis (particularly *Bratislava*) is, but also how secretive it could be and the number of Working Dogs it could be affecting. We have likely lost a number of Working Dogs in North America to this disease without ever knowing it. This is what I think every Canine Supervisor and Handler should know.

Leptospirosis a highly contagious disease caused by the bacteria (*bacterial spirochete*). It affects both dogs and humans and can be transferred between species. It has many different strains (*servovars*) and as many as 200 have been identified worldwide. Up to eight strains can cause disease in dogs and as previously stated, only two of these strains are commonly vaccinated against; and vaccines presently only exist for four of the eight disease causing pathogens.

Many dogs with Leptospirosis **show no signs at all** of the disease. However, it can cause renal failure, blindness, problems in the genital tract or central nervous system, as well as abortion and death. A dog may carry and be contagious without showing any signs of the disease. Dogs maybe lethargic, jaundice, have fever, vomiting, anorexia and show signs of kidney or eye infections and muscle soreness. Leptospirosis is often mis-diagnosed.

Infection is most commonly caused by skin or mucous membrane contact with infected urine, often in water. Large human contacts have occurred in swimming areas. In a kennel environment the ingestion of urine-contaminated water is a serious threat.

Leptospirosis is difficult to diagnose. A blood test (*micro agglutination test*) is standard and it measures antibodies against serovars. I understand it is best to conduct two tests about 10 days apart and compare the results. Many things may interfere with the test and there is some controversy over the significance of results. Additionally, serum tests may show negative on an infected dog early in the disease which makes this a very challenging situation for you and your Veterinarian.

The prevalence of this disease is scary. Two of the last seven dogs I tested from the Czech Republic were positive for Leptospirosis – *bratislava*. A survey conducted in Michigan found that 37% of the 224 dogs tested positive for Leptospirosis – *bratislava*.

Hopefully, this brief article will alert many of you to the dangers of Leptospirosis. This is a disease that has historically had devastating effects on pig populations and was thought to be under control in North America. After researching Leptospirosis - *bratislava*, I can't help but wonder about the number of Working Dogs I have seen over the years with some mystery disease and shortened careers

Talk to your Veterinarian!

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