

## Chagas Disease

Chagas disease, or American trypanosomiasis, is caused by a parasite (*Trypanosoma cruzi*) and is spread by reduviid, or “kissing,” bugs. These insects become infected after biting an animal or person who has Chagas disease. The infected insects can spread the infection to other animals and people by depositing feces on the skin; the feces is then accidentally rubbed into the bite wound produced by the infected insect, an open cut, the eyes, or the mouth. The disease can also be acquired by eating an infected insect. Additionally, pet food and water bowls can be contaminated with feces from infected insects that, if ingested, may spread the disease.

Chagas disease has been detected in dogs in Texas and several other states, including the neighboring states of Louisiana and Oklahoma. There are three stages of infection: acute, latent, and chronic. Clinical signs in the acute stage include listlessness, lymphadenopathy, pale mucous membranes, and hepatosplenomegaly. Furthermore, sudden, unexplained death can occur, especially in puppies. The latent stage can be prolonged with the clinical signs appearing to regress. The chronic stage is marked with right-sided cardiac dysfunction, arrhythmias, ascites, pleural effusion, and hepatomegaly; it is often misdiagnosed as age-related chronic heart failure in elderly dogs. Survival time from the onset of disease varies greatly. The heart, upon postmortem examination, can be enlarged and show multiple white streaks or spots as a result of the damage done by the parasite.

Although the trypanosome can be found throughout the state, it is more prevalent in Central and South Texas. During studies conducted in South Texas in 1999, 7.5% of 375 tested stray dogs were positive for Chagas' antibodies. Additionally, 18% of 132 tested coyotes were seropositive, and 40% of tested vector insects were positive for the disease-causing trypanosome.

For diagnostic purposes, serum samples may be sent to the Texas Veterinary Medical Diagnostic Laboratory (TVMDL). In addition, heart tissue may be submitted for histopath and culture. Contact the TVMDL for specific information on specimen submission and laboratory fees.

If a patient is confirmed positive for Chagas disease, veterinarians are encouraged to notify the Texas Department of State Health Service's Zoonosis Control Branch. This will assist in establishing a clearer picture of the incidence and geographic distribution of Chagas disease. Notification can be made via the Regional Zoonosis Control Program, the Zoonosis Control Branch in Austin (800-252-8239), fax (512-776-7454), or email (The.Vet@dshs.state.tx.us).