



# State of Louisiana

Louisiana Department of Health  
Office of Public Health

## Chagas Disease in Dogs

Gary A. Balsamo, DVM, MPH&TM, State Public Health Veterinarian

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Chagas disease or American Trypanosomiasis is an infectious disease caused by a protozoa, *Trypanosoma cruzi*. Many different species of kissing bugs (triatomine bugs), the insect vectors of Chagas disease, are present in the Gulf States, including Louisiana. These insects are capable of transmitting several strains of *Trypanosoma cruzi* to wild animals (e.g. armadillos, opossums, rodents, squirrels, and raccoons); in fact, it is thought that all mammals are susceptible to infection. In studies conducted in Louisiana and other southern states, the prevalence of antibodies to this agent in wild species has been found to be very high, ranging from 29% to 50%. Although domestically transmitted cases of Chagas disease to humans are extremely rare, dogs are at greater risk of acquiring the infection. In areas where human infections are common (poorer areas of Latin America), dogs can be major reservoirs of the disease. In the United States, opossums, armadillos, raccoons and some rodents serve as major reservoirs. Opossums are unique hosts because the organism can complete its entire life cycle in the opossum, without transmission from the insect vector.

Chagas disease transmission to dogs is often through the oral route:

- consumption of the feces of the kissing bug;
- consumption of feed contaminated with the feces of the kissing bug, or the bugs themselves. It is wise to prevent pet food from getting contaminated.
- consumption of flesh from opossums, raccoons, armadillos, and rodents (small mammals). It is recommended to keep dogs from being exposed to the carcasses of wild animals. Usually wild animals do not show signs of disease.

Chagas disease in dogs consists of acute, latent, and chronic phases.

- Acute phase:
  - after an incubation period of five to 42 days, a febrile illness that may include diarrhea, lethargy, exercise intolerance, gait abnormalities, neurologic signs (tics, seizures), lymphadenopathy, and tachycardia. In some cases, hepatomegaly and splenomegaly may be noted.
    - Dogs may show only a few of the above signs.
    - Acute onset congestive heart failure can occur, usually in dogs two years old and younger.
- Latent phase: months to years
- Chronic phase: congestive heart failure and tachycardia, occasionally sudden death
  - Often dogs are co-infected with canine heartworm disease. The congestive heart failure signs of both diseases are very similar.

Prevention of Chagas disease in dogs:

- Check housing for the presence of kissing bugs. If kissing bugs or other insects are discovered, utilize products that are certified to be safe for use in canines, or consult a licensed exterminator.
- Improve canine housing conditions.
  - Do not use wood or other materials with cracked or absorptive surfaces.
  - Seal concrete surfaces.
  - Fill and seal cracks.
- Remove wood, brush, and rock piles near canine housing.
- Have pets sleep indoors, when possible, especially at night.
- Keep outdoor pet resting areas clean.
- Seal cracks and gaps around walls, roofs, and doors in homes.
- Lights on kennels may attract insects of all types, including kissing bugs. One should consider this if considering relocating animal quarters.

Chagas disease is under-diagnosed in dogs because the same population of dogs (primarily outside dogs) is the population with an extremely high incidence of heartworm disease. In the southeastern United States, reports of Chagas disease in dogs have increased in recent years, but increased awareness of the disease has been responsible for much of this increase. A Louisiana State University researcher recently found that dogs in some animal shelters within Louisiana exhibited very high seropositivity, on the order of 30% to 50 %; of course, these are mostly outside/stray dogs. Since both Chagas and canine heartworm disease may cause congestive heart failure, the two infirmities are often confused. Therefore, it is also beneficial to prevent heartworms by utilizing available preventatives.

Diagnosis of the disease can be made by identification of stages of the organism in tissues, molecular diagnostics, or serology. Laboratories that perform molecular testing may be difficult to locate.

Benznidazole and Nifurtimox are the typical drugs recommended for treatment of Chagas disease; however, both drugs require approval from the United States Centers for Disease Control and Prevention (CDC), and are generally not available to veterinarians. Symptomatic treatment for the disease's effects are recommended.