

Lyme Disease in Domestic and Companion Animals



Swollen joints in a dog with Lyme disease (31).

Domestic animals (dogs, cats, horses, cows, and goats) can become infected with Lyme disease bacteria and develop clinical disease. Lameness and swollen joints, fever, lymph node enlargement, reduced appetite, and a reluctance to move are the usual symptoms in these animals. Disease is more common in dogs and relatively less frequent in cats. Most dogs in a Lyme disease endemic area will eventually become infected (based on positive serology) due to their high exposure to ticks and some will develop disease each year. Limb and joint arthritis is the most frequent symptom in canine Lyme disease; cardiac, neurological, ophthalmic, and a unique renal involvement is less common. Lyme nephritis in dogs often results in the death of the animal, even with aggressive treatment. Animals are treated with antibiotics (tetracycline or penicillin-group) and nonsteroidal anti-inflammatory drugs for symptomatic relief. Most dogs respond dramatically to antibiotic treatment within days and will make a complete

recovery. Chronic disease appears rare and a lack of response to therapy may suggest another diagnosis. Other disease processes, which should be ruled out, include rheumatoid arthritis, infectious arthritides, and other tick-borne diseases such as Rocky Mountain spotted fever and ehrlichiosis. However, studies have shown infection and antibody titers may persist in dogs after efficacious treatment. It is not clear if a reoccurrence of disease is due to another tick exposure or from the initial infection. Some data suggests that treatment in the absence of clinical disease for seropositive dogs or those with a history of tick bite may be indicated. Prevention of disease in companion animals is covered in the host management section.

Additional sources of information about tick-associated diseases

The Centers for Disease Control and Prevention, National Center for Infectious Diseases, Division of Vector-Borne Infectious Diseases, P.O. Box 2087, Fort Collins, Colorado, 80522 and Division of Viral and Rickettsial Diseases, 1600 Clifton Road, NE, MS G-13, Atlanta, Georgia 30333. The CDC-NCID web site (www.cdc.gov/ncidod/index.htm) provides details on the natural history, epidemiology, signs & symptoms, diagnosis, treatment, prevention & control for several zoonotic diseases.

State health departments can provide information on the incidence of Lyme disease and other tick-borne illnesses in the state. There is usually a division or department that handles Lyme disease and other vector-borne diseases. Statistics are sometimes available on a department's web site.

Lyme disease foundations or groups can provide information or patient support. These include the American Lyme Disease Foundation, Inc. (ALDF), Mill Pond Offices, 293 Route 100, Somers, New York 10589 (telephone 914-277-6970, fax 914-277-6974, e-mail: inquire@aldf.com, web site: www.aldf.com) and the Lyme Disease Foundation (LDF), One Financial Plaza, Hartford, CT 06103 (telephone 860-525-2000, hotline 800-886-LYME, e-mail: Lymefind@aol.com, website: www.Lyme.org).