

LYME DISEASE IN TEXAS

Lyme disease is the most common vector-borne disease in the U.S. From 1994-2006, an average of 74 cases was reported annually in Texas. Many diagnosed cases are not reflected in official statistics due to restrictive reporting criteria. Lyme is largely unrecognized in Texas so it is often misdiagnosed by doctors who are not familiar with its clinical presentation.



Borrelia burgdorferi The causative agent of Lyme disease, *Borrelia burgdorferi*, was first identified in Texas in 1984. Lyme disease is now known to be endemic to Texas. Patients with Lyme disease reside in each of the 11 public health regions in Texas.

Texans are at risk of Lyme disease both from native sources and those brought in by migrating birds and animals, as well as from travel to other endemic areas. Visitors to any undeveloped countryside are at considerable risk of being bitten by ticks that carry the Lyme disease bacteria. Ticks may also be picked up in high grass, on golf courses, school playgrounds, greenbelts, farms, ranches, and in private yards. Anyone who engages in outdoor pursuits may be exposed to Lyme disease and should take proper precautions. Additionally, pets can bring ticks into the home, placing household members at risk.

There are six reportable tick-borne illnesses in Texas: babesiosis, ehrlichiosis (including anaplasmosis), Lyme disease, Rocky Mountain spotted fever, tularemia, and tick-borne relapsing fever. Additionally, a Lyme-like illness known as STARI (Southern Tick-Associated Rash Illness), transmitted by the Lone Star Tick, is reportable as Lyme disease.

Failure to report these diseases is a Class B misdemeanor under the Texas Health and Safety Code, Section 81.049, but this provision is rarely, if ever, enforced. Texas is a passive surveillance state, and it is likely that there is considerable under-reporting of tick-borne illnesses. The U.S.

Centers for Disease Control and Prevention (CDC) estimates that only ten percent of Lyme disease cases in the U.S. are reported.

Greater public awareness is needed for prevention, and physician education based on current research is needed for proper diagnosis and treatment. Contrary to the assertions of many physicians, Lyme disease is not a rare illness that is easy to avoid, difficult to acquire, and simple to diagnose; nor is it easily treated and cured. The longer the time elapsed between a tick bite causing infection and the diagnosis and treatment of Lyme disease, the more likely the illness will be serious and long lasting, and the cost of treatment very high.

Tick-borne illnesses can be extremely debilitating and even deadly. Failure to diagnose and treat aggressively leads to disability, which can be comparable in intensity and effect to that caused by congestive heart failure. Early detection and treatment is critical, and aggressive treatment is needed at every stage.

Many doctors in Texas believe that Lyme disease is not endemic to the state, and patients are often told that there is no Lyme disease in Texas. As a result, many patients must go out of state for diagnosis and treatment.

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May is
Lyme Disease
Awareness Month

The foregoing information is for educational purposes only. It is not intended to replace or supersede patient care by a healthcare provider. If an individual suspects the presence of a tick-borne illness, that individual should consult a healthcare provider who is familiar with the diagnosis and treatment of tick-borne diseases.

For more information about Lyme disease, visit:

www.txlda.org
www.lymediseaseassociation.org
www.ilads.org
www.ticktexas.org
www.standupforlyme.org
www.lymeinfo.net
www.lymenet.org

Tick Bites Can Be
Dangerous

What
is



LYME DISEASE

Please support the
Texas Lyme Disease Association
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The Texas Department of State Health Services
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LYME DISEASE

Lyme and related illnesses are infectious diseases usually transmitted by a tick bite. Reported in 49 U.S. states and many foreign countries on six continents, Lyme is caused by a spirochete, a spiral-shaped bacterium (*Borrelia burgdorferi*), that may possibly persist in the body for years if not properly treated with antibiotics. Early detection and immediate treatment at the acute stage of the disease provide the most successful chance for a cure.

The etiology of Lyme disease is still not completely understood. The illness produced by the Lyme borrelia can take many forms, so it is often referred to as the new "Great Imitator." Diagnosis is complex and must be made on a clinical basis by an experienced practitioner. To date, there is no definitive blood test for Lyme disease, although certain tests may be used to support a clinical diagnosis. Physicians take several factors into account, including potential exposure to a tick bite and other vectors, and a range of symptoms. A bull's eye rash is the only certain sign of Lyme disease, but many patients do not develop a rash, and many are unaware of a bite.

Lyme disease is often complicated by one or more tick-borne co-infections, including babesiosis, ehrlichiosis, anaplasmosis, bartonellosis, and Rocky Mountain spotted fever. These co-infections must also be diagnosed and treated for a successful outcome.

SIGNS AND SYMPTOMS

Lyme disease can begin with mild flu-like symptoms which typically include extraordinary fatigue. The initial symptoms have been found to occur as many as eight weeks after a tick bite. About half of patients notice a skin rash (*erythema migrans*) days or even weeks later. These early symptoms usually lessen or even disappear, although they may recur on a regular basis. Left untreated, a series of multi-systemic problems can then develop and worsen over time, sometimes with periods of greater intensity every three to four weeks.

Symptoms include but are not limited to:

General

Flu-like symptoms including fever, fatigue, headache (mild to migraine-like), sore throat, muscle aches.

Skin

One or more *erythema migrans* (EM) rashes which vary in size and shape; may have concentric rings



One type of Lyme disease rash

of varying shades of red, purple, or bruised-looking skin, or be uniformly discolored; may be warm, smooth or bumpy to the touch; may itch; may be necrotic (crusty/oozing).

Multiple rashes per bite or rashes not at site of bite are indications of disseminated disease. Later skin problems include *lymphocytoma* (a benign nodule or tumor) and *acrodermatitis chronica atrophicans* (ACA) (discoloration/degeneration usually of the hands or feet).

Nervous System

Nerve conduction defects (weakness/paralysis of limbs, loss of reflexes, tingling sensations in the extremities); severe headaches; stiff neck; meningitis; dizziness; fainting; cranial nerve involvement (change in smell/taste; difficulty chewing, swallowing, or speaking; hoarseness or vocal cord problems; facial paralysis known as Bell's palsy; drooping shoulders; inability to turn head; double vision; wandering or lazy eye; drooping eyelid; light and/or sound sensitivity; change in hearing); stroke; abnormal brain waves or seizures; sleep disorders; cognitive changes (memory problems, confusion, disorientation, decreased concentration); behavioral changes (depression, personality changes, panic attacks); mental illness (sudden onset with no previous history of mental illness).

Heart and Blood Vessels

Conduction issues including irregular beats; atrial fibrillation; heart block; myocarditis; chest pain; vasculitis.

Lungs

Difficulty breathing; pneumonia.

Eyes

Vision changes (blindness, retinal damage, optic atrophy); red eye, conjunctivitis, seeing spots; inflammation or pain in various parts of the eyes.

Joints and Muscles

Migratory joint pain, intermittent or chronic, usually asymmetrical; swelling; TMJ and other cranial facial pain. Muscle pain, inflammation, cramps, or loss of tone.

Stomach, Intestines

Nausea; vomiting; diarrhea; loss of appetite; anorexia; unexplained weight loss or gain.

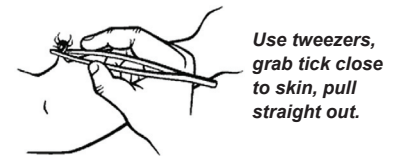
PREVENTION

Because diagnosis and treatment of Lyme disease is still evolving, prevention is critical. Wear light-colored clothing so that crawling ticks can easily be seen. Tuck pant legs into boots or socks so that ticks do not have access to skin. Use insect repellents with DEET or Permethrin in high-risk areas. Use tick and flea preventatives on your pets. Inspect yourself, your children, and your pets frequently for ticks, and remove any attached ticks promptly using proper removal procedures.

A tick removal kit with instructions is available from the American Red Cross. For instructions to collect and submit for testing live ticks that were attached to a human host, call the Texas Department of State Health Services at (512) 458 7111.

Take a color photograph of any rash that develops to show your doctor. Place a ruler, or other identifiable object, next to the rash to show size.

Rx



Use tweezers, grab tick close to skin, pull straight out.

TREATMENT

Treatment options depend upon the stage of the disease and severity of symptoms, and must be tailored to the individual needs of each patient. Chronic, or late stage, Lyme may be treated with combinations of oral, injected, and/or intravenous antibiotics, and treatment often requires rotations of combinations of various classes of antibiotics over an extended period of time to suppress the infection. While there are treatment successes, failures do occur, and much more research is needed to understand and eradicate the extremely complex bacteria that cause Lyme and related diseases.