

# NEWS



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## LYME BORRELIOSIS

Lyme borreliosis is a multisystem disease caused by a spirochete, *Borrelia burgdorferi*. The spirochete is transmitted to humans by the bite of an infected tick. The early or acute phase of the disease is characterized by fever, malaise, fatigue, and an annular skin lesion, erythema migrans (EM) (Figures 1 & 2). This lesion starts as an erythematous non-pruritic macule or papule and extends to form an expanding red ring with central clearing. The initial lesion usually disappears in 3-8 weeks. In the absence of antibiotic therapy, a late or chronic phase occurs weeks or months after the acute phase.

The late or disseminated phase consists of cardiac, neurologic, or rheumatologic abnormalities. Ten to twenty percent of patients experience one or more neurologic symptoms including cranial neuropathy (commonly Bell's palsy), peripheral radiculopathy, or meningitis. Up to 10% of patients experience cardiac abnormalities including tachycardia, bradycardia, or varying degrees of atrioventricular block. These abnormalities may last for days or weeks.

The usual rheumatologic abnormality is episodic arthritis affecting primarily the knees, but also the elbows, shoulders, hips, and ankles. Early in the disease, many patients have migratory polyarthralgias without swelling of the joints. Doxycycline or amoxicillin are effective in alleviating the symptoms of the

early phase and help prevent the abnormalities of the late or disseminated phase.

In humans, *B. burgdorferi* has been isolated from blood, skin lesions, and cerebrospinal fluid. *B. burgdorferi* is transmitted to humans by the bite of an infected tick. Horse flies, deer flies, and fleas may also play roles in transmission. Maternal-fetal transmission has also been reported.

*B. burgdorferi* has been isolated from *Amblyomma*, *Ixodes*, and *Dermacentor* tick species. It has also been isolated from cat fleas. Generally an *Ixodes* tick must be attached for over 24 hours before the spirochetes are transmitted. The length of feeding time for other possible vectors is yet unknown.

In Texas, a confirmed case of Lyme borreliosis is defined as a patient with physician diagnosed EM or with cardiac, neurologic, and/or rheumatologic abnormalities and a positive laboratory test result. In 1991, 294 cases of possible Lyme borreliosis were reported to the TDH Epidemiology Division, but only 57 patients met the definition for a confirmed case. In 1991, ten of the 57 definite cases had cerebrospinal fluids positive for *B. burgdorferi* by polymerase chain reaction (PCR) tests.

As illustrated in Figure 3, the 57 definite cases in 1991 were from Texas counties. A high

percentage of these, 44%, resided in five counties in the Dallas-Fort Worth area. However, sporadic cases were also identified throughout Texas.

The majority (68%) of cases in 1991 were female. Cases ranged in age from 2-84 years; median age was 38.5 years. The overwhelming majority (93%) of cases were white.

Fifteen patients experienced at least one lesion described as EM. Five patients reported two or more lesions. The lesions ranged in size from 4 to 10cm. In the majority (64%) of cases, the lesions were located on the legs or thighs. Patients with EM had onset of symptoms in each month from March through October. Thirty-six patients experienced neurologic abnormalities and 21 patients experienced rheumatologic abnormalities. None of the patients died.

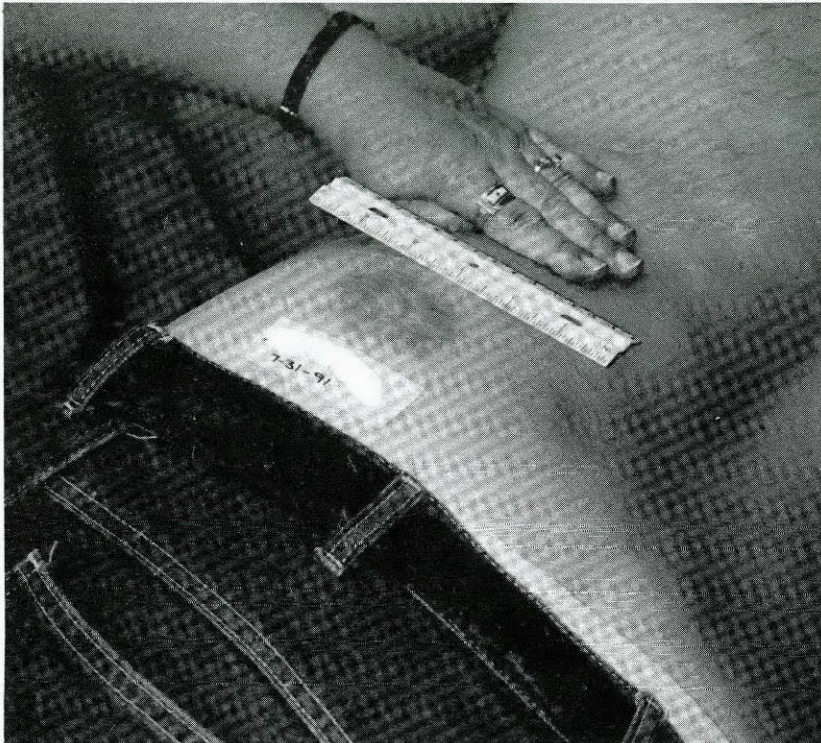
Only twelve patients recalled an attached tick before the onset of symptoms. Three patients recalled multiple flea bites but no exposure to ticks.



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TDH.

More

**Figure 1.**  
**Erythema migrans (7/31/91)**



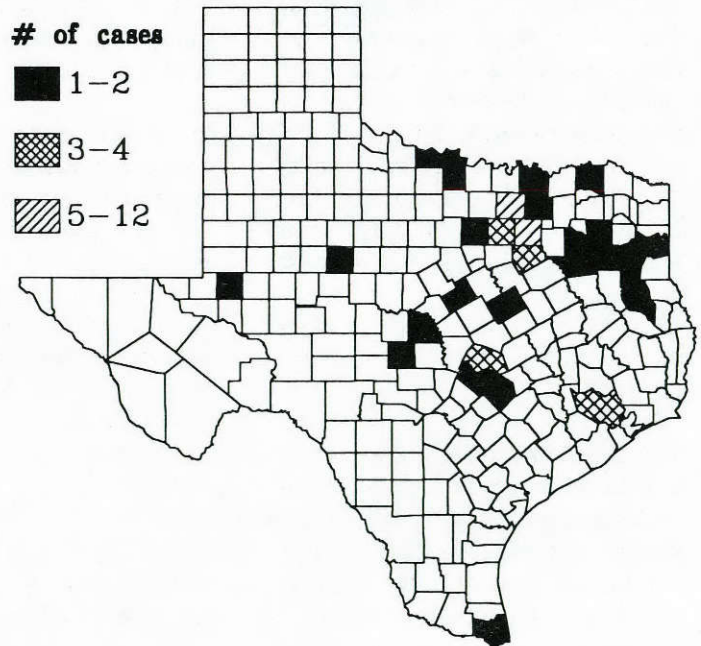
Serologic testing for Lyme borreliosis is available through the TDH Bureau of Laboratories. Approximately 1.0ml of serum is required. There is a charge of \$10.00 per specimen. The Laboratory utilizes a polyvalent enzyme immunoassay (EIA) and an IgM-specific EIA.

A pretreatment culture of *B. burgdorferi* from clinical specimens is currently performed. Tissues or fluids that may be cultured include skin (by biopsy or needle aspirate), cerebrospinal fluid, and synovial fluid. Instructions for collecting and handling these types of specimens can be obtained through the Laboratory by telephone at (512) 458-7228.

**Figure 2.**  
**Erythema migrans (6/6/91)**



**Figure 3.**  
**Reported cases of Lyme borreliosis in Texas by county of residence, 1991**



**GLUTARALDEHYDE-BASED STERILANTS –  
ADDITIONAL INFORMATION**

In the *Texas Preventable Disease News*, Vol. 52, No. 12, published June 13, 1992, an article appeared titled: "**Recall of Selected Glutaraldehyde-Based Sterilants**".

subject of a lawsuit. On June 18, 1992, a US District Court in Colorado issued a preliminary injunction prohibiting the release of the test data or results by the US government.

Please be advised that the test results which led to the conclusions in the article are the

Any additional information will be published in subsequent issues.



**Texas Minority Health  
Strategic Planning Conference**

**A Closer Look at the Impact of Infectious Diseases on Minorities**

**Building Partnerships for Change**

**Doubletree Hotel  
Austin, Texas**

**September 9-11, 1992**

This is a working conference where the issues impacting the health of minority Texans will be the focus of analysis, intervention and action. Your input is critical to the development of meaningful policy. Become a part of an ongoing commitment to improve the health and survival of Texas minority communities.

**Conference Registration Form**

Complete this registration form and send with a \$35.00 check, written to the Texas Health Foundation, to P.O. Box 26399, Austin, Texas 78755-0399, by August 21, 1992.

PLEASE PRINT:

Name/Title \_\_\_\_\_

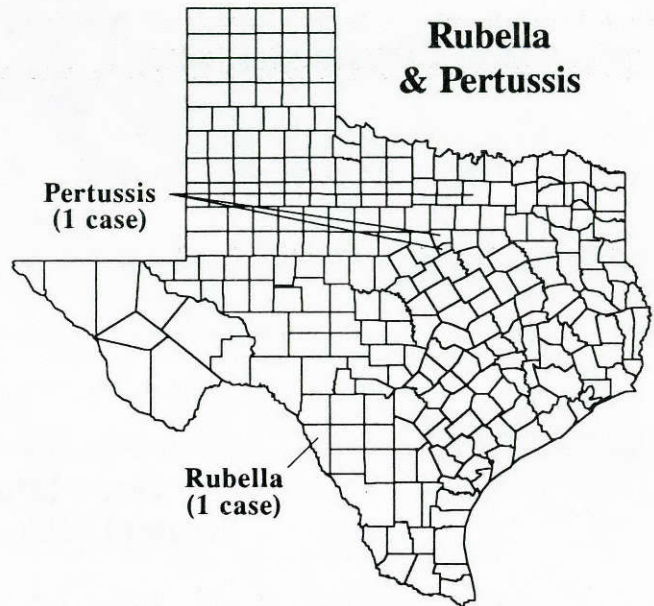
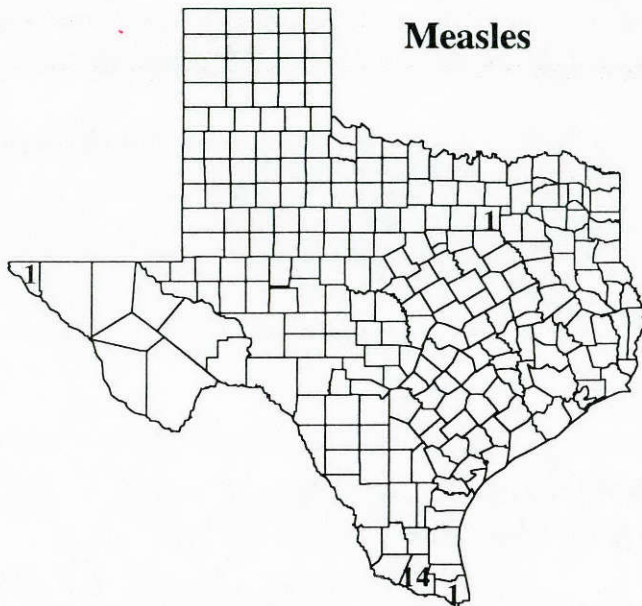
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**VACCINE-PREVENTABLE DISEASE UPDATE \***

Suspected/Confirmed Cases Reported With  
Onsets From July 12-25, 1992  
Weeks 29-30



**Summary of Suspected/Confirmed Cases Reported YTD:**

	Latest Onset Date	Total This Period	YTD Total
MEASLES	07/25/92	17	1,406
RUBELLA	07/16/92	1	100
PERTUSSIS	07/25/92	3	60

\* Total cases with onset dates during reporting period

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