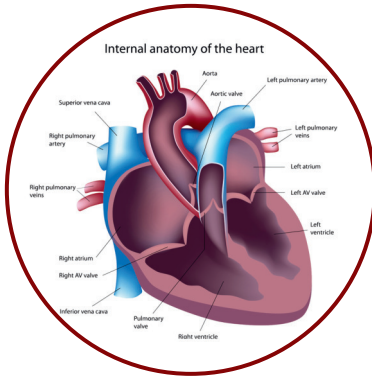




Lyme Disease Symptoms Compiled by the LDA

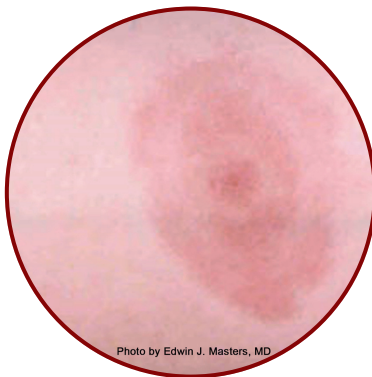
Printable Reference

www.LymeDiseaseAssociation.org



Cardiac/Pulmonary

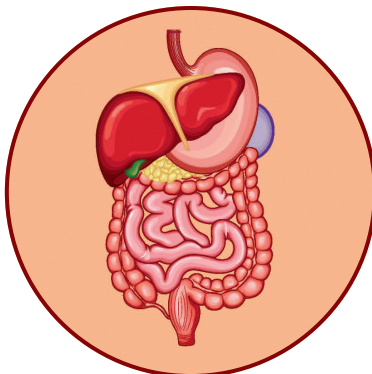
- Chest pain or rib soreness
- Shortness of breath
- Heart palpitations
- Pulse skips
- Heart block
- Heart murmur



Lyme Rash

Only about 9% get the classic bull's eye rash. Others may get another type of Erythema Migrans (EM) rash or may get no rash at all. Rash at other than bite site may be disseminated disease. Symptoms may occur days or months after a tick bite.

According to the Centers for Disease Control & Prevention (CDC) surveillance criteria, an erythema migrans (EM) rash in an endemic area, means Lyme disease. In a non-endemic area, a rash requires a positive test. The CDC criteria are for surveillance purposes, not diagnosis.



Gastrointestinal

- Nausea or vomiting
- GERD
- Change in bowel function (constipation, diarrhea)
- Gastritis
- Abdominal cramping
- Cystitis
- Irritable bladder or bladder dysfunction
- Newly diagnosed irritable bowel syndrome (IBS)





Musculoskeletal

- Joint/muscle pain in feet
- Ankle pain
- Shin splints
- Joint pain or swelling
- Stiffness of the joints, neck or back
- Muscle pain or cramps that migrate
- Temporomandibular joint dysfunction (TMJ/TMJD jaw pain)
- Neck creaks & cracks
- Neck stiffness



Neurological

- Muscle twitching
- Headache
- Tingling, numbness, burning or stabbing sensations
- Facial paralysis (Bell's palsy)
- Dizziness, poor balance
- Increased motion sickness
- Light-headedness, wooziness
- Difficulty walking
- Tremor
- Confusion
- Difficulty thinking/concentrating/reading
- Forgetfulness
- Poor short-term memory
- Disorientation (getting lost, going to wrong place)
- Difficulty with speech
- Double or blurry vision
- Eye pain
- Blindness, increased floaters
- Increased sensitivity to light or sound
- Buzzing or ringing in ears
- Ear pain
- Decreased hearing
- Seizure activity
- White matter lesions
- Low blood pressure



Neuropsychiatric

- Mood swings
- Violent outbursts
- Irritability
- Depression
- Disturbed sleep (too much, too little, early awakening)
- Personality changes
- Obsessive – compulsive disorder (OCD)
- Paranoia
- Panic/anxiety attacks
- Hallucinations



Reproductive

- Testicular pain/pelvic pain
- Menstrual irregularity
- Milk production (lactation)
- Sexual dysfunction or loss of libido



Other Symptoms

- Fever, sweats, or chills
- Weight change (loss or gain)
- Fatigue, tiredness
- Hair loss
- Swollen glands
- Sore throat
- Difficulty swallowing
- Swelling around the eyes
- Burning in feet, swelling

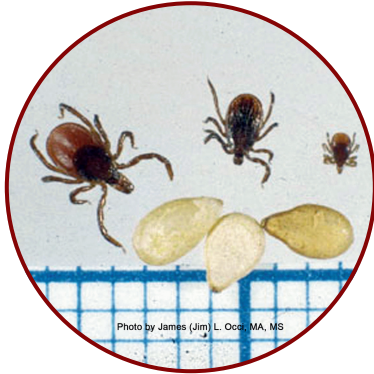
Lyme Transmission

Not all patients recall a tick bite. Studies vary as to how long the tick must be attached in order to transmit Lyme disease. The longer an infected tick is attached, the greater the chance of contracting Lyme disease. Lyme can be transmitted through the placenta.



Lyme from *Borrelia mayonii*

Another strain of Borrelia that causes Lyme



Early Symptoms:

- Fever
- Headaches
- Rash
- Neck pain Later

Later Symptoms:

- Arthritis

Differences from *Borrelia burgdorferi* may include:

- Nausea & vomiting
- Diffuse rashes
- Higher concentration of bacteria in blood

Symptoms reviewed by Elizabeth Maloney, MD; President, Partnership for Tick-Borne Diseases Education

Visit www.LymeDiseaseAssociation.org/lyme-tbd/medical/lyme-disease-symptoms for additional resources.

