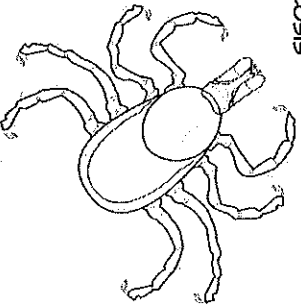
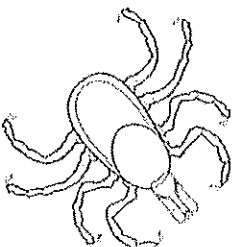


Did you know Lyme Disease can mimic the following diseases/conditions ...

ADD (Attention Deficit)
 ADHD (Attention Deficit Hyperactivity Disorder)
 Allergies
 ALS (Lou Gehrig's) Amyotrophic lateral sclerosis
 Alzheimer's disease
 Anorexia
 Anxiety/Panic attacks
 Arthritis: Rheumatoid
 Arthritis: Juvenile
 Arthritis: Osteoarthritis
 Arthritis: Ankylosing spondylitis
 Arthritis: Infectious
 Arthritis: Reactive
 Asthma
 Ataxia: poor muscle coordination
 Autoimmune diseases
 Bell's Palsy
 Bipolar Disorder
 Candidiasis
 Cardiac Disorders
 Carpal tunnel syndrome
 Celiac disease
 Chronic Fatigue Syndrome
 Chronic Mononucleosis
 Conjunctivitis
 Crohn's disease
 Cystitis
 Depression
 Diabetes



Encephalitis
 Endocarditis
 Episcleritis
 Epstein-Barr virus
 Erectile Dysfunction
 Fibromyalgia
 Gastroesophageal Reflux (GERDS)
 Gout
 Guillain-Barré syndrome
 Hearing Disorders
 Heart Attack Symptoms
 Heart Disorders
 Hypoglycemia
 Interstitial cystitis
 Iritis
 Irritable Bowel Syndrome
 Joint pain
 Keratitis
 Kidney disease
 Lactose intolerance
 Lupus
 Ménières disease
 Meningitis
 Menstrual Irregularity
 MS Multiple Sclerosis
 Myofascial pain syndrome
 Narcolepsy
 Ocular myalgias
 Ocular myasthenia gravis



Optic neuritis
 Parkinson's disease
 Pars planitis
 Peripheral Neuropathy
 Photophobia
 Polymyositis
 Pseudo tumor
 Psychiatric disorders (bipolar)
 Purpura
 Raynaud's syndrome
 Recurring bladder infections
 Respiratory Insufficiency
 Ringworm
 Scleroderma
 Sjogrens Syndrome
 Sleep Disorders
 Stress-related illness
 Stroke
 Swollen testicles
 Syphilis
 Testicular Pain
 Thyroid problems
 Tingling / Numbness
 TMJ (jaw pain)
 Transient or permanent blindness
 Uveitis
 Vasculitis
 Vertigo
 Vitritis



Clinical suspicion of tick-borne diseases:
 Unexplained illness, flu-like symptoms, malaise, muscle aches, joint pain, neck pain, rash, Bell's palsy, cardiac disturbances, neurological symptoms, sleep disturbances.

Erythema migrans (target lesion or bull's-eye rash)

YES

- No laboratory testing needed confirmed Lyme disease. Treat for Lyme disease AND Test for Tickborne Disease Panel by PCR

- SCREEN FOR
- Borrelia burgdorferi* Antibodies (Total by ELISA) OR *B. burgdorferi* C6 Peptide Antibodies (Total by ELISA) AND Tickborne Disease Panel by PCR (screens for *Babesia microti*, *Anaplasma phagocytophilum*, *Ehrlichia chaffeensis* AND Serological Tests for Bartonellosis, Rickettsiosis and Tularemia

- Negative (all tests)
- Positive Babesia
- Positive *Anaplasma phagocytophilum*
- Positive *Ehrlichia chaffeensis*
- Positive Bartonellosis
- Positive Tularemia
- Positive Rickettsiosis
- Positive or indeterminate for Lyme

No further testing on initial specimen. Test convalescent specimen. Retest in 30 days.

Treat based on test results. See attachment.

Retest in 3 - 6 months.

<4 weeks after onset of disease

≥4 weeks after onset of disease

ORDER *B. burgdorferi* Antibodies IgM and IgG by immunoblot

ORDER *B. burgdorferi* Antibodies IgG by immunoblot

IgG - IgM +

IgG + IgM -

IgG - IgM -

IgG -

IgG +

Follow-up with IgG immunoblot (within 30 days)

Retest in 3 - 6 months.

Consider causes of false-positive ELISA, such as:
 Syphilis
 Rheumatoid arthritis
 Acute mononucleosis
 HIV
 Subacute Bacterial endocarditis
 Systemic lupus
 Periodontitis

Retest in 3 - 6 months.

If Lyme still suspected or immunocompromised ORDER *Borrelia* Species by PCR

Positive

Negative

Lyme disease highly unlikely

Retest in 3 - 6 months.

Wakeup Early alert
 use with cell.

The regimens listed below are guidelines only and may need to be adjusted depending on a patient's age, medical history, underlying health conditions, pregnancy, status or allergies. Consult an infectious disease specialist for the most current treatment guidelines or for individual patient treatment decisions.

PATHOGEN	AGE	DRUG	DOSAGE	MAXIMUM	Duration, DAYS (RANGE)
LYME	Adults	Doxy/cycline	100 mg twice per day	N/A	14 (14-21)
		Cefuroxime axetil	500 mg twice per day	N/A	14 (14-21)
		Amoxicillin	500 mg 3 times per day	N/A	14 (14-21)
		Amoxicillin	50 mg/kg per day in 3 divided doses	500 mg per dose	14 (14-21)
LYME	Children	Doxy/cycline	4 mg/kg per day in 2 divided doses	100 mg per dose	14 (14-21)
		Cefuroxime axetil	30 mg/kg per day in 2 divided doses	500 mg per dose	14 (14-21)
ANAPLASMOSIS / EHRlichiosis	Adults	Doxy/cycline	100 mg twice per day orally or IV	N/A	10
		Doxy/cycline	4 mg/kg per day orally or IV in 2 divided doses	100 mg per dose	10
ANAPLASMOSIS / EHRlichiosis	Children less than 8 years of age or older moderate illness	Doxy/cycline	4 mg/kg per day orally or IV in 2 divided doses	100 mg per dose	4-5 OR approx. 3 days after resolution of fever
		Doxy/cycline	4 mg/kg per day given orally or IV in 2 divided doses	100 mg per dose	4-5
ANAPLASMOSIS / EHRlichiosis	Children less than 8 years of age severe illness without Lyme disease	Doxy/cycline	4 mg/kg per day given orally or IV in 2 divided doses	100 mg per dose	to complete a 14 day total course of antibiotic therapy
		Amoxicillin	50 mg/kg per day in 3 divided doses	500 mg per dose	to complete a 14 day total course of antibiotic therapy
ANAPLASMOSIS / EHRlichiosis	Children less than 8 years of age severe illness with Lyme disease	Amoxicillin	50 mg/kg per day in 3 divided doses	500 mg per dose	to complete a 14 day total course of antibiotic therapy
		Cefuroxime axetil	30 mg/kg per day in 2 divided doses	500 mg per dose	to complete a 14 day total course of antibiotic therapy
BABESIOSIS	Adults	Atovaquone	750 mg orally every 12 hrs	N/A	7-10
		Azithromycin	500-1000 mg on day 1 AND 250-1000 mg orally once per day thereafter	N/A	7-10
BABESIOSIS	Children	Atovaquone	20 mg/kg every 12 hours	750 mg per dose	7-10
		Azithromycin	10 mg/kg once per day on day 1 AND 5 mg/kg once per day thereafter orally	500 mg per dose on day 1 AND 250 mg per dose thereafter	7-10
ROCKY MOUNTAIN SPOTTED FEVER	Adults	Quinine	8 mg/kg orally every 8 hours	650 mg per dose	7-10
		Doxy/cycline	100 mg twice daily, orally or IV	N/A	At least 3 days after the fever subsides and until evidence of clinical improvement is noted which is typically for a minimum total course of 5-7 days.
ROCKY MOUNTAIN SPOTTED FEVER	Children	Quinine	8 mg/kg orally every 8 hours	650 mg per dose	7-10
		Doxy/cycline	2.2 mg/kg body weight per dose twice daily, orally or IV	Consult a pediatric infectious disease specialist	At least 3 days after the fever subsides and until evidence of clinical improvement is noted which is typically for a minimum total course of 5-7 days.
TULAREMIA	Adults	Gentamicin	5 mg/kg IM or IV daily (with desired peak serum levels of at least 5 mcg/ml)	N/A	10
		Streptomycin	1 g IM twice daily N/A	N/A	10
TULAREMIA	Children	Ciprofloxacin	400 mg twice daily, orally or IV		10
		Doxy/cycline	100 mg twice daily, orally or IV		14-21
TULAREMIA	Children	Gentamicin	2.5 mg/kg IM or IV 3 times daily		10
		Streptomycin	15 mg/kg IM twice daily	2 g/day	10
TULAREMIA	Children	Ciprofloxacin	15 mg/kg IV or 1 g daily orally		10

Prescribe ONLY 1

The regimens listed below are guidelines only and may need to be adjusted depending on a patient's age, medical history, underlying health conditions, pregnancy status or allergies. Consult an infectious disease specialist for the most current treatment guidelines or for individual patient treatment decisions.

PATHOGEN	AGE	DRUG	DOSAGE	MAXIMUM	DURATION, DAYS (RANGE)
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		Cefuroxime axetil	500 mg twice per day	N/A	14 (14-21)
		Amoxicillin	500 mg 3 times per day	N/A	14 (14-21)
		Amoxicillin	50 mg/kg per day in 3 divided doses	500 mg per dose	14 (14-21)
		Doxycycline	4 mg/kg per day in 2 divided doses	100 mg per dose	14 (14-21)
LYME	Children	Cefuroxime axetil	30 mg/kg per day in 2 divided doses	500 mg per dose	14 (14-21)
		Doxycycline	100 mg twice per day orally or IV	N/A	10
ANAPLASMOSIS / EHRlichiosis	Adults	Doxycycline	4 mg/kg per day orally or IV in 2 divided doses	100 mg per dose	10
		Doxycycline	4 mg/kg per day orally or IV in 2 divided doses	100 mg per dose	4-5 OR approx. 3 days after resolution of fever
ANAPLASMOSIS / EHRlichiosis	Children less than 8 years of age or older moderate illness	Doxycycline	4 mg/kg per day given orally or IV in 2 divided doses	100 mg per dose	4-5
		Doxycycline	50 mg/kg per day in 3 divided doses	500 mg per dose	to complete a 14 day total course of antibiotic therapy
ANAPLASMOSIS / EHRlichiosis	Children less than 8 years of age severe illness with Lyme disease	Amoxicillin	50 mg/kg per day in 3 divided doses	500 mg per dose	to complete a 14 day total course of antibiotic therapy
		OR			
ANAPLASMOSIS / EHRlichiosis	Children less than 8 years of age severe illness with Lyme disease	Cefuroxime axetil	30 mg/kg per day in 2, divided doses	500 mg per dose	to complete a 14 day total course of antibiotic therapy
		Atovaquone	750 mg orally every 12 hrs	N/A	7-10
		Azithromycin	500-1000 mg on day 1 AND 250-1000 mg orally once per day thereafter	N/A	7-10
		OR			
BABESIOSIS	Adults	Clindamycin	300-600 mg IV every 6 hours OR	N/A	7-10
			600 mg orally every 8 hours	N/A	7-10
		Quinine	650 mg orally every 6-8 hours	N/A	7-10
		Atovaquone	20 mg/kg every 12 hours	750 mg per dose	7-10
		Azithromycin	10 mg/kg once per day on day 1 AND 5 mg/kg once per day thereafter orally	500 mg per dose on day 1 AND 250 mg per dose thereafter	7-10
BABESIOSIS	Children	OR			
		Clindamycin	7-10 mg/kg IV OR orally every 6-8 hours	600 mg per dose	7-10
ROCKY MOUNTAIN SPOTTED FEVER	Adults	Quinine	8 mg/kg orally every 8 hours	650 mg per dose	7-10
		Doxycycline	100 mg twice daily, orally or IV	N/A	At least 3 days after the fever subsides and until evidence of clinical improvement is noted which is typically for a minimum total course of 5-7 days.
ROCKY MOUNTAIN SPOTTED FEVER	Children	Doxycycline	2.2 mg/kg body weight per dose twice daily, orally or IV	Consult a pediatric infectious disease specialist	At least 3 days after the fever subsides and until evidence of clinical improvement is noted which is typically for a minimum total course of 5-7 days.
		Gentamicin	5 mg/kg IM or IV daily (with desired peak serum levels of at least 5 mcg/mL)	N/A	10
TUJAREMIA	Adults	Streptomycin	1 g IM twice daily N/A	N/A	10
		Ciprofloxacin	400 mg twice daily, orally or IV	N/A	10
		Doxycycline	100 mg twice daily, orally or IV		14-21
TUJAREMIA	Children	Gentamicin	2.5 mg/kg IM or IV 3 times daily		10
		Streptomycin	15 mg/kg IM twice daily	2 g/day	10
		Ciprofloxacin	15 mg/kg IV or 1 g daily orally		10

Prescribe ONLY 1

Use early about use anti-Lyme

Clinical suspicion of tick-borne diseases:
 * Unexplained illness, flu-like symptoms, malaise, muscle aches, joint pain, neck pain, rash, Bell's palsy, cardiac disturbances, neurological symptoms, sleep disturbances.

Erythema migrans (target lesion or bull's-eye rash)

YES

- No laboratory testing needed confirmed Lyme disease.
- Treat for Lyme disease.
- AND
- Test for Tickborne Disease Panel by PCR

NO

- SCREEN FOR
- Borrelia burgdorferi* Antibodies (Total by ELISA) OR
 - B. burgdorferi* C6 Peptide Antibodies (Total by ELISA) AND
 - Tickborne Disease Panel by PCR (screens for *Babesia microti*, *Anaplasma phagocytophilum*, *Ehrlichia chaffeensis* AND
 - Serological Tests for Bartonellosis, Rickettsiosis and Tularemia

Negative (all Tests)

Positive Babesia

Positive *Anaplasma phagocytophilum*

Positive *Ehrlichia chaffeensis*

Positive Bartonellosis

Positive Tularemia

Positive Rickettsiosis

Positive or indeterminate for Lyme

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<4 weeks after onset of disease

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ORDER *B. burgdorferi* Antibodies IgG by immunoblot

IgG - IgM +

IgG + IgM -

IgG - IgM -

IgG +

Lyme

Lyme

Lyme

Lyme

Lyme

Follow-up with IgG immunoblot (within 30 days)

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Retest in 3 - 6 months.

Retest in 3 - 6 months.

Consider causes of false-positive ELISA, such as:
 Syphilis
 Rheumatoid arthritis
 Acute monoucleosis
 HIV
 Systemic lupus
 Subacute Bacterial endocarditis
 Pericarditis

If Lyme still suspected or immunocompromised ORDER Borrelia Species by PCR

Positive

Negative

Lyme

Lyme disease highly unlikely

Retest in 3 - 6 months.