

# The Expert's Guide to Protect Your Family From Ticks



**3MOMS**  
**ORGANICS**



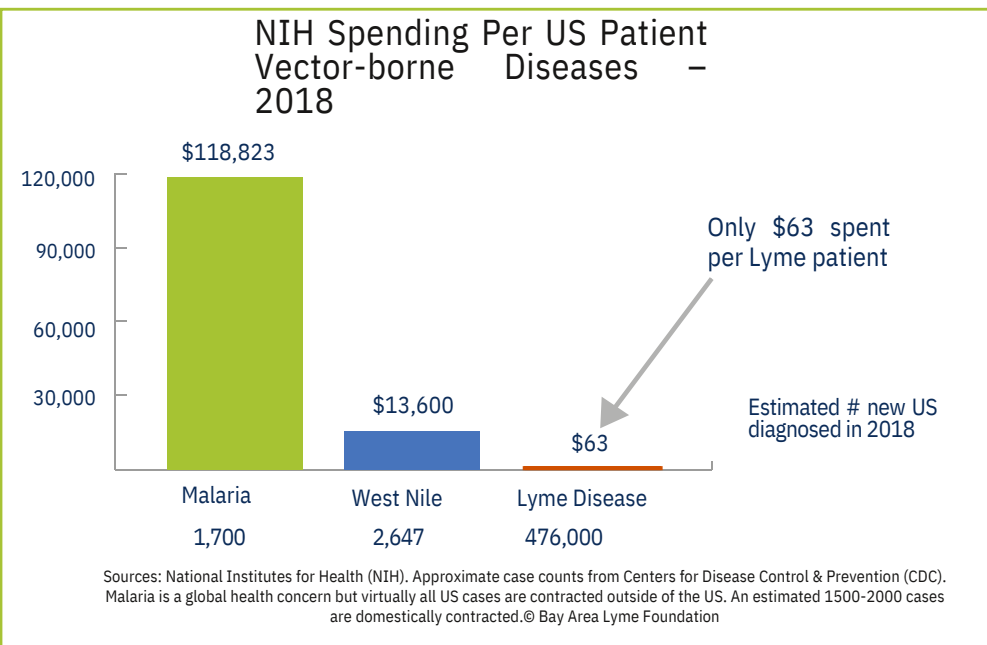


# About Lyme Disease

Lyme disease is the fastest growing vector-borne illness in the US. It is an infectious disease caused by the bacteria *Borrelia burgdorferi* transmitted to humans by the bite of an infected blacklegged tick. Untreated, Lyme disease can become a severely debilitating disease affecting joints, the heart, the brain, and/or the central nervous system. More than two million Americans are struggling with persistent Lyme disease. With limited awareness and an expanding geographic footprint, Lyme disease has become a prevalent public health threat.



## Lyme disease is easy to get and can be hard to cure



## MYTHS OF LYME DISEASE

Getting the facts about Lyme is not always easy. There are many misconceptions about Lyme disease.

**MYTH:** Everyone with Lyme disease gets a telltale bulls-eye rash.

**REALITY:** Recent studies show that less than 50% develop a bulls-eye, and the CDC estimates that 30% of people never develop any type of skin rash.

**MYTH:** Lyme disease is a Northeast problem.

**REALITY:** Lyme disease has been reported in all 50 states, and ticks carrying the bacteria that cause Lyme disease are widespread throughout the United States.

**MYTH:** Antibiotics cure everyone.

**REALITY:** Statistics show that at least 20% of patients continue to exhibit symptoms even after antibiotic treatment.

**MYTH:** If the test is negative, you don't have Lyme.

**REALITY:** Current diagnostics are less than 50% accurate.

## Helpful Resources

If you suspect an infection from a tick bite, please seek out a Lyme and tick-borne disease specialist in your area.

<https://www.ilads.org>

<https://www.bayarealyme.org>

<https://www.lymedisease.org>

Protect yourself & your family from ticks & mosquitos,  
Say goodbye to itching, redness, and worries about  
dangeous tick-borne illnesses.

100% EPA Compliant  
Smells Amazing  
DEET-Free

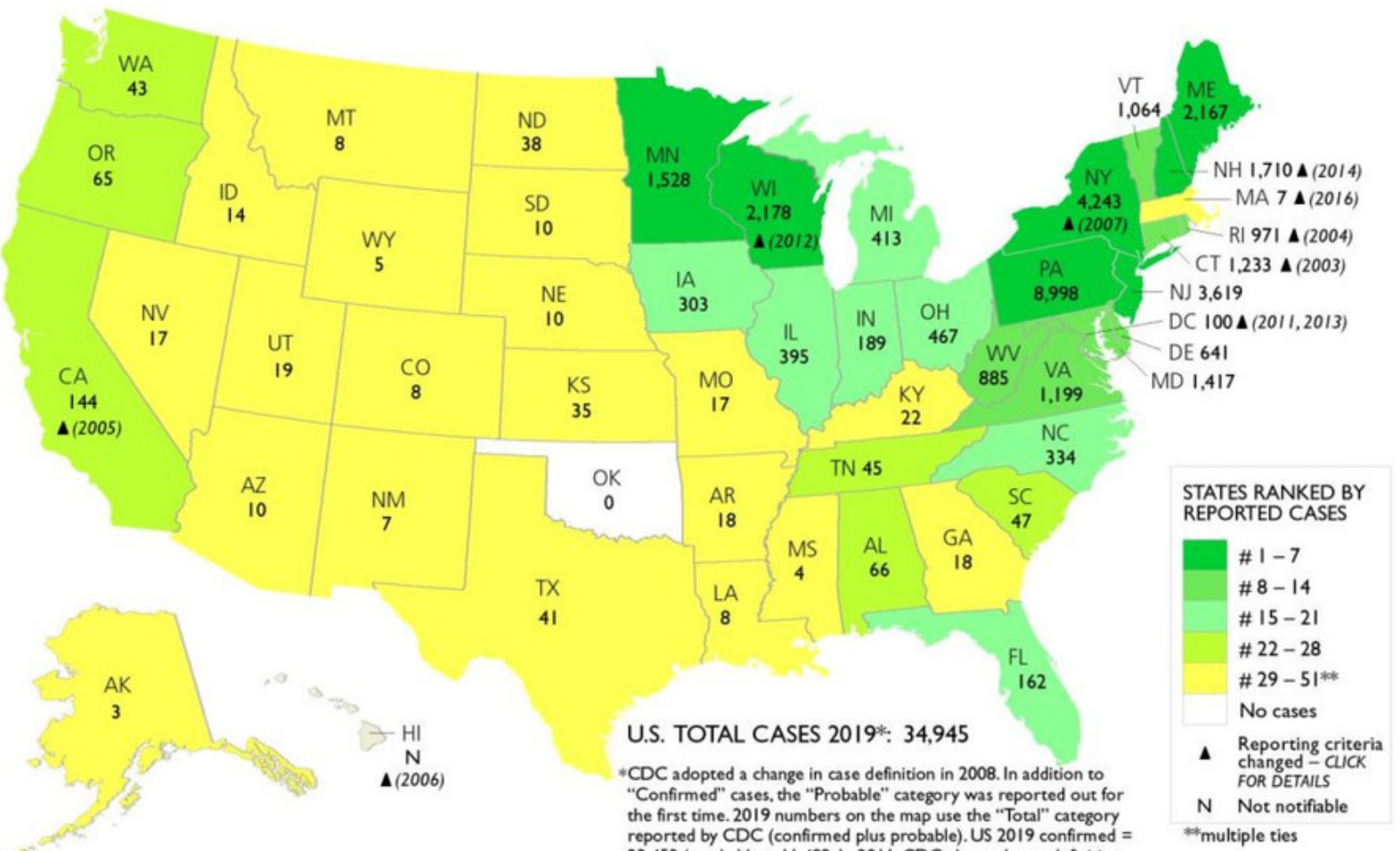


Get Your Bottles On [3momsorganics.com](https://www.3momsorganics.com)





## LYME DISEASE ASSOCIATION (LDA) U.S. LYME DISEASE REPORTED CASES 2019\*



Source: Data compiled from CDC pub. data (DVBD)  
©2021 Lyme Disease Association, Inc.  
www.LymeDiseaseAssociation.org

Become familiar with the  
"tick risk" in your area!

# Found a tick?



Stay calm...remove the tick as soon as possible.

1. Using pointy tweezers, grasp the tick as close to the skin as possible.
2. Lift the tick STRAIGHT OUT to pull it out of the skin. Do not twist.
3. If the tick is alive, place it inside a sealed zip-lock bag or sealed vial with a piece of moist paper towel or swab of moist cotton.
4. If tick is dead, save the tick in a zip-lock bag or vial. Do NOT store the tick in alcohol or any other substance as it may compromise testing.
5. Label the bag with the date, time, and area of the body the tick was removed
6. Wash your hands and the bite with soap and water or antiseptic



Image © Tick Encounter.org

## REMOVING TICKS SAFELY:

Grasp the tick as close to the skin as possible. Pull straight out, calmly and quickly.



## Know the stats:

Ticks may carry a number of different bacteria, each responsible for different tick-borne diseases. The most common pathogen is *Borrelia burgdorferi*, the bacteria responsible for causing Lyme disease.

- Over 476,000 new cases of Lyme disease annually in the US
- Greatest incidence of Lyme is among school-age children
- In California, tick season is year-round
- Infected ticks are found in 42 of 58 counties in California
- Lyme is reported in all 50 states
- Infection rates vary by location (even park-to-park and county-to-county)

Ticks have dirty mouths! A single tick bite can transmit other diseases besides Lyme, often referred to as co-infections. Understanding the possibility of these other infections and knowing their symptoms will help you get the proper diagnosis and treatment.

Some of the most common tick-borne diseases include:

- Anaplasmosis• Ehrlichiosis• Tick Paralysis
- Babesiosis• Rocky Mountain spotted fever• Tick-borne relapsing fever
- Bartonella
- Colorado tick fever• Southern tick-associated rash illness (STARI), Tularemia

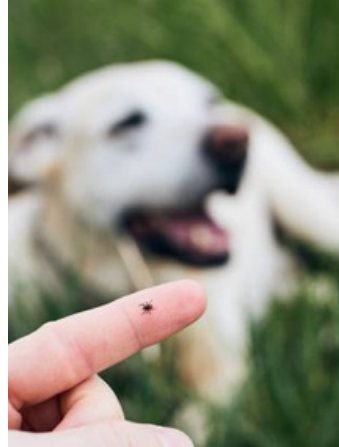
## Prevention is Key!

- Walk in the middle of the trail, avoiding questing ticks on the grassy edges and leaf litter
- Conduct THOROUGH tick-checks DAILY, especially during showers
- After being outdoors, dry clothes in the dryer on high for 10-20 minutes to kill any ticks
- Wear light-colored clothing to more easily spot ticks
- Ticks crawl UP, so tuck pants into socks
- Monitor for any new symptoms for months after possible tick exposure and seek medical care from an experienced medical provider

# LYME DISEASE FAST FACTS



- 1 Lyme disease is the fastest-growing vector-borne disease in the US.
- 2 The CDC estimates that there are up to 500,000 new cases of Lyme annually.
- 3 The current “gold standard” diagnostic test misses up to 70% of acute or early-stage infections.
- 4 20–30% of patients develop long-term health issues, even after antibiotic treatment, and develop what is described as persistent or chronic Lyme.
- 5 Lyme disease is just one of many bacterial infections that can be transmitted to humans from infected ticks.
- 6 There are over a dozen different pathogens (bacteria, viruses, and parasites) that infected ticks can transmit to humans.
- 7 Ticks carry multiple pathogens that cause disease other than Lyme in humans, including anaplasmosis, babesiosis, Colorado tick fever, ehrlichiosis, Lyme disease, Pacific Coast tick fever, Rocky Mountain spotted fever, tularemia, tick-borne relapsing fever, and other coinfections.
- 8 There are eight known species of ticks located around the US that vector pathogens to humans.
- 9 Children ages 8–15 have the highest incidence of Lyme disease—they may need help with tick-checks (or be reminded to do them).
- 10 Ticks are found everywhere—in domestic gardens, near beaches, and even in urban parks.
- 11 Tick populations are growing and their range is expanding throughout the US—ticks and infected ticks are in previously unrecorded geographical regions.
- 12 In the Western and Southern US, “tick season” is year-round and ticks are continually active, although potential exposure typically peaks in the spring and early summer.
- 13 Ticks can be so tiny (the size of a poppy seed or smaller) that many people never see the tick that bit them and are completely unaware that they have been infected.
- 14 Less than half of people bitten by ticks develop a tell-tale “bullseye” rash which is often what doctors look for to diagnose Lyme disease.
- 15 The presentation of the rash can be extremely variable depending on age, skin tone, race, and other factors. At least 20–30% of people never develop a rash.
- 16 Wild mammals are the typical reservoirs for tick-borne diseases—including deer, squirrels, rabbits, mice, and other animals. Ticks feed on these animals and become infected.
- 17 Ticks can be tested for pathogens, dead or alive—Keep the tick moist by wrapping it in a piece of damp paper towel. Go to [www.tickreport.com](http://www.tickreport.com) or [www.ticknology.org](http://www.ticknology.org) for information.
- 18 Pets can get sick, too. Dogs and horses should be tested for Lyme and other tick-borne infections.



# Symptoms of Lyme Disease

The CDC estimates nearly 500,000+ new cases of Lyme disease each year. Lyme disease has three stages. While, without treatment, each stage and its symptoms usually progress into the next, the rate at which Lyme disease spreads varies significantly. If you are experiencing symptoms, document them and then talk with your doctor.



## 1. EARLY LOCALIZED

Days or weeks after infection

- Skin rash (see examples below)
- Headaches or stiff neck
- Flu-like symptoms, including fever or chills
- Muscle and joint pain
- Fatigue or lack of energy
- A small bump or redness at tick bite
- Swollen lymph nodes

## 2. DISSEMINATED

Weeks or months after infection

- Multiple skin rashes
- Heart palpitations\*
- Fainting/syncope\*
- Pain or numbness in arms and legs
- Extreme joint pain
- Profound fatigue
- Headaches and lack of energy
- Bell's palsy (facial paralysis)\*
- Poor memory or inability to concentrate

## 3. LATE DISSEMINATED

Months or even years after infection

- Arthritis, particularly in knee or near point of infection
- Nervous system problems, including numbness and tingling in hands, legs, feet, or back
- Stiff neck, severe headaches, or migraines\*
- Problems with memory, hearing and vision\*
- Chronic debilitating fatigue
- Mood or sleep disorders
- Inflammation of heart or brain\*

\* For heart or neurological symptoms seek medical care immediately

## Lyme Disease Skin Rash

More than 30% of patients never get the telltale bull's-eye skin rash typically associated with Lyme disease. While this ring-like rash is usually indicative of Lyme disease, the rash can take many forms or may not present at all. You should also watch for other symptoms.

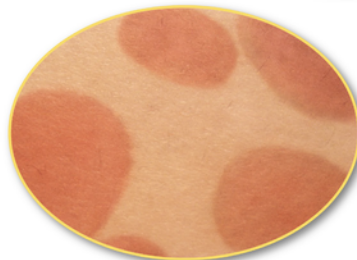
Blistering Lesions



Uniformly Red Lesions



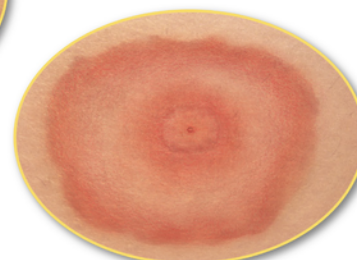
**Erythema migrans can present itself in many different forms**



Disseminated Lesions



Blue-Red Lesions



Bulls-eye (Target)/Central Clearing Lesions

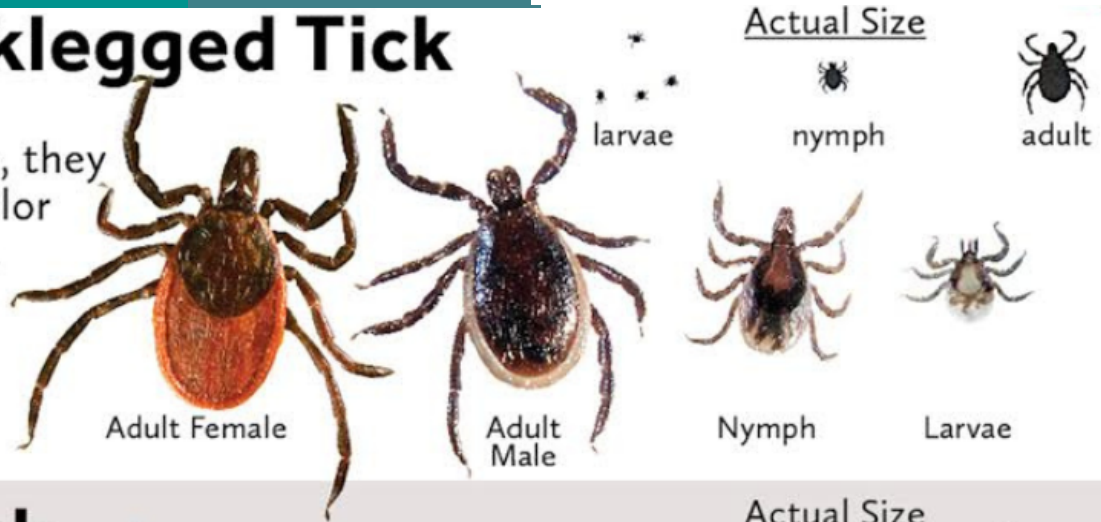
Visit one of these reputable sites for more information: [www.ilads.org](http://www.ilads.org), [www.bayarealye.org](http://www.bayarealye.org), [www.lymedisease.org](http://www.lymedisease.org)

# TICK ID

## Deer or Blacklegged Tick

*Ixodes scapularis*

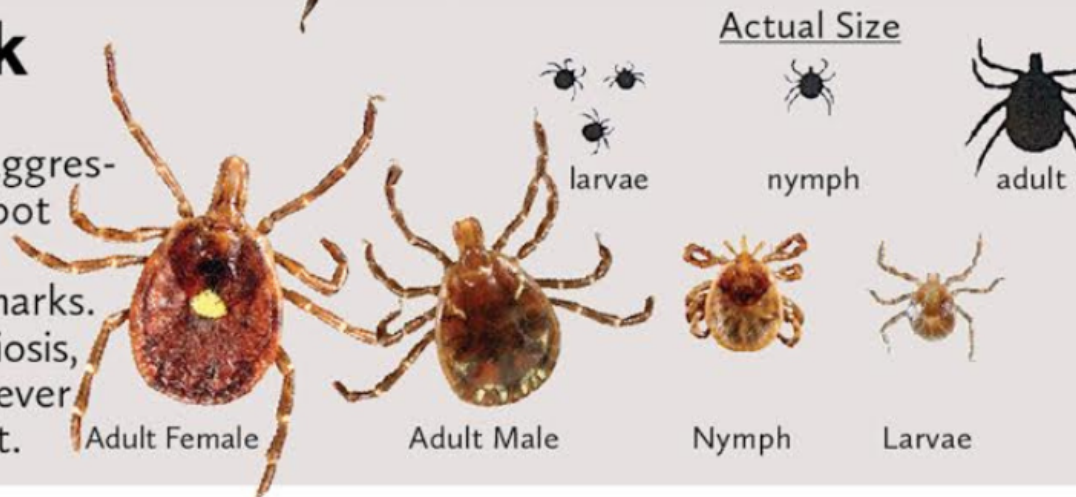
With no white markings, they are brown to black in color and are very, very small. Both nymph and adult stages can transmit diseases such as Lyme and Babesiosis.



## Lone Star Tick

*Amblyomma americanum*

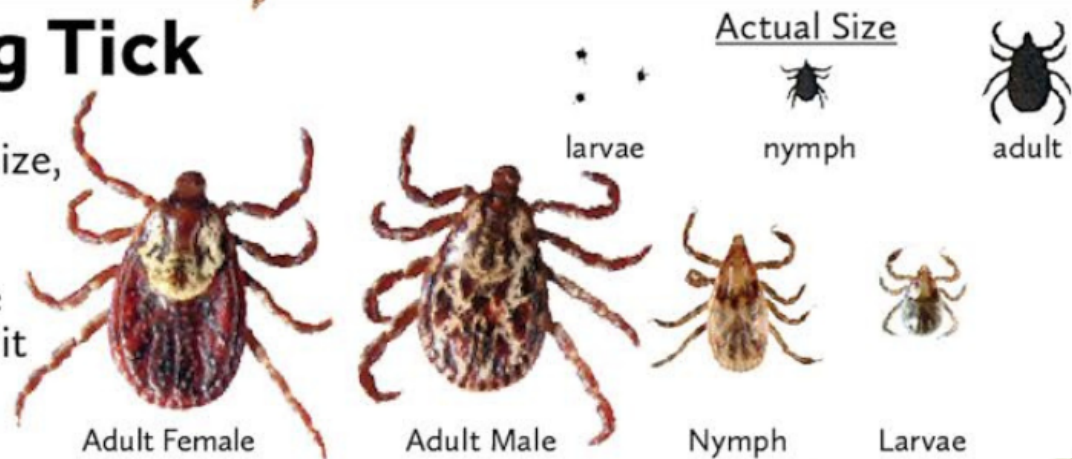
Tannish red. Females are aggressive with a light-colored spot at center on their back. Males have light-colored marks. Their bite can cause Ehrlichiosis, Rocky Mountain Spotted Fever and an allergy to red meat.



## American Dog Tick

*Dermacentor variabilis*

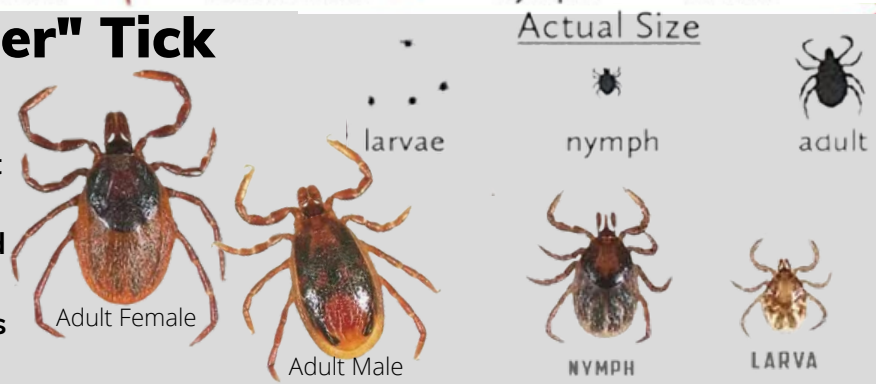
Larger than the others in size, brown to reddish brown with gray-silver markings on their backs, behind the mouth. Its bite can transmit Rocky Mountain Spotted Fever and Tularemia.



## Western Blacklegged "Deer" Tick

*Ixodes pacificus*

The western blacklegged tick is very small with a reddish color. Its habitat along the US West Coast distinguishes it from the deer tick, which is found in the eastern United States. Western Blacklegged ticks are known to transmit Lyme disease, Babesiosis, *Borrelia miyamotoi*, and Anaplasmosis to humans.



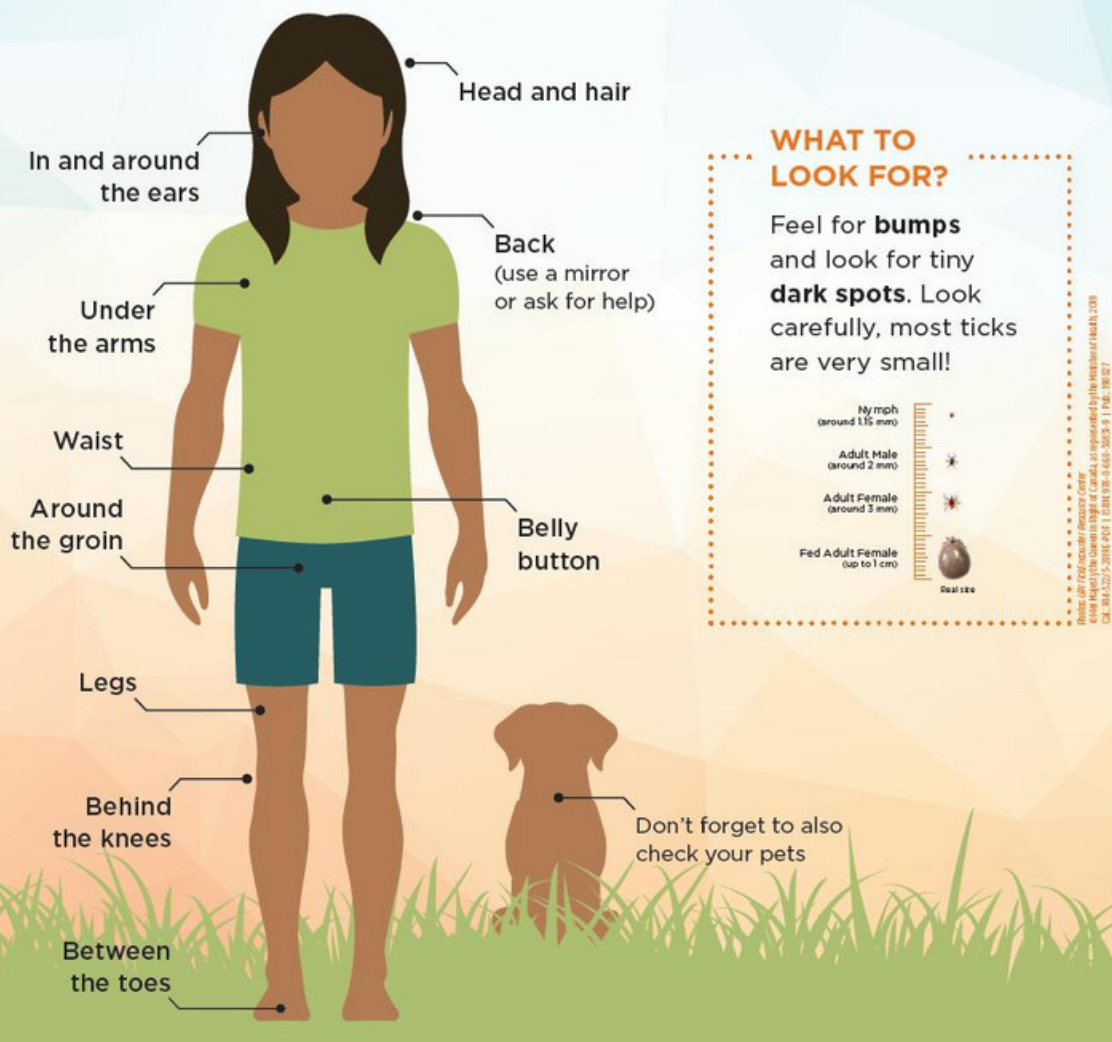


# CHECK FOR TICKS!

## TOP 10 TICK HIDING SPOTS ON YOUR BODY

Tick checks are one of the ways you can prevent Lyme disease and other infections spread by ticks.

**Check your entire body**, especially:



### WHAT TO LOOK FOR?

Feel for **bumps** and look for tiny **dark spots**. Look carefully, most ticks are very small!



Images of Tick-Feeder Recovery Center  
© 2018 TickWise Insect Repellent  
Call: 888-222-5288 | Email: info@tickwise.com

Check your body for ticks every day after being outside and when you shower.

Ticks feel like tiny bumps or tags on your skin. Check your armpits, groin, waistline, neck, hair, ears, chest (women: around the bra area), back, in between toes, and behind knees.

**ACTUAL SIZE!** 

- Treat clothing and shoes with Permethrin\*
- Use insect repellent on your skin
- Wear long-sleeved shirts and pants



See a doctor ASAP if you suspect an infection!

- Headaches, fever and chills
  - Fatigue, muscle and joint aches
  - Rash, swollen lymph nodes
- Note: Symptoms vary greatly from person to person and depends on the type of infection the tick has transmitted.

# WHERE TO

Check your dog for Ticks



## AROUND TAIL

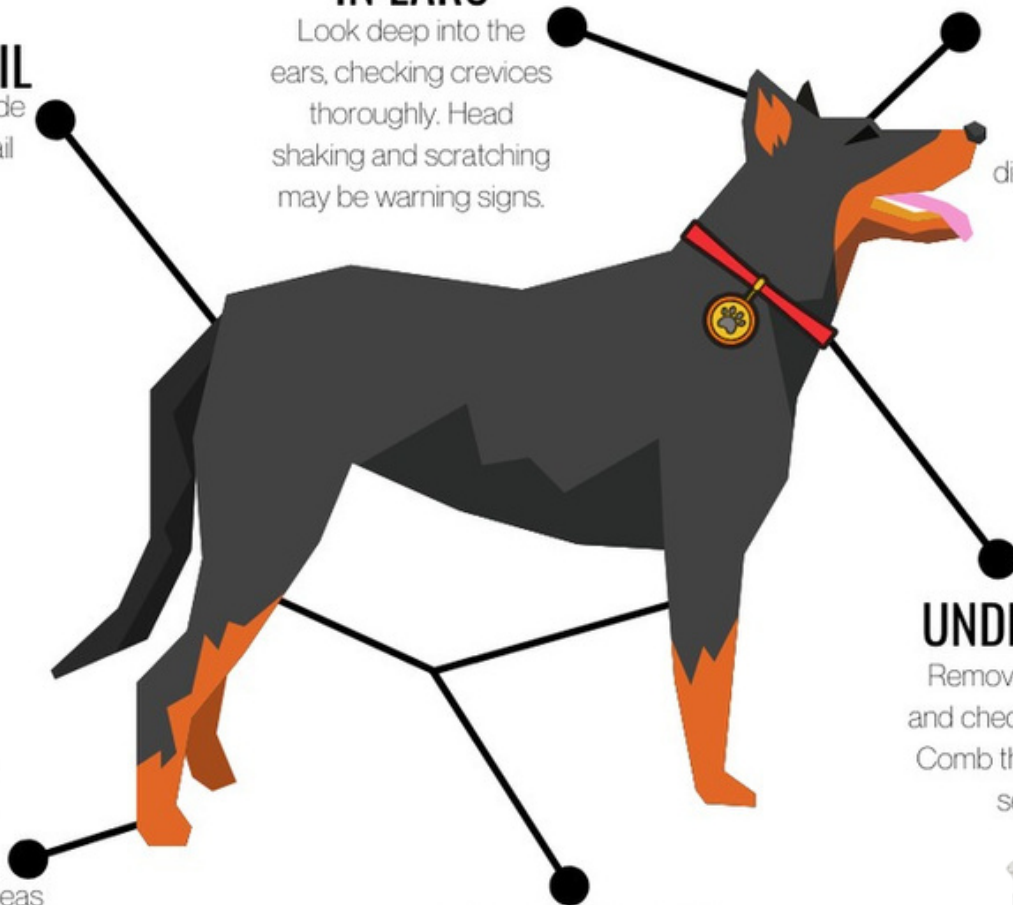
Check the underside and base of the tail

## IN EARS

Look deep into the ears, checking crevices thoroughly. Head shaking and scratching may be warning signs.

## AROUND EYELIDS

Ticks can easily be mistaken for eye discharge or a skin tag.



## BETWEEN TOES

Look in between toetas and on the bottom of the feet near foot pads

## UNDER COLLAR

Remove the collar often and check area thoroughly. Comb through thick fur to see the skin.

## BETWEEN LEGS

Check between the front and back legs, focusing on armpits and skin folds.

