

## Signs and Symptoms of Lyme Disease

Symptoms usually start a few days to several weeks after being bitten.

The first sign is often a pink or red rash (erythema migrans) around the site of the bite. It can gradually spread to form a large circle or patch up to 50-75 centimetres (20-30 inches) diameter if left untreated. It is not usually raised, itchy or painful and clears up rapidly with antibiotic treatment.



Typical early symptom of Lyme disease: gradually spreading pink rash (erythema migrans) around the site of bite (photo: 7 days after bite)

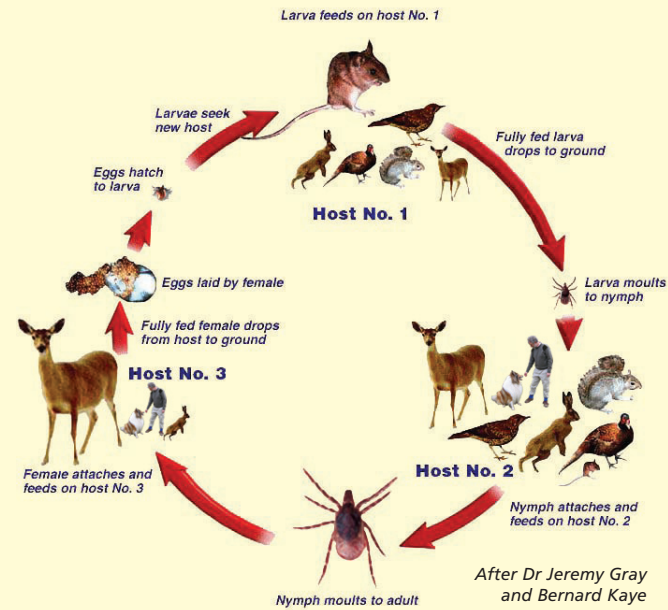
Sometimes the rash may be very faint, and it can also be difficult to see on darker skins. Rashes appearing within a few hours of a tick bite are not caused by Lyme disease, but could be allergic reactions or infections from common skin organisms. Flu-like symptoms may occur, with headaches, chills, tiredness, muscle pains, joint aches and fever. These symptoms could last several weeks without treatment, but usually settle quickly with correct antibiotic treatment.

More serious complications sometimes develop weeks or months after an infected bite in patients who did not receive early treatment. These include; facial palsy, pain, tingling or loss of sensation or movement difficulties in arms, legs or trunk. Some patients may have been unaware of a tick bite or rash and the diagnosis of Lyme disease could be delayed or missed because of lack of recognition of their risk.

## Treatment

Early treatment with recommended antibiotics is highly effective and should prevent complications developing. Longstanding infection may require longer courses or intravenous antibiotics, so early recognition and treatment is important.

## Life cycle of the Deer Tick (*Ixodes ricinus*)



*The relative size of the animals (including Man) approximates their significance as hosts for the different tick life cycle stages in a typical woodland habitat. Larvae rarely carry Borrelia and their bites are not a significant risk.*

The life cycle usually takes 3 years. Although the peak feeding time is late spring/early summer with a lesser peak in autumn, tick activity (and the risk of tick bites) can extend beyond these periods in favourable weather conditions.

### Useful websites:

European Union Concerted Action on Lyme Borreliosis (EUCALB): <http://meduni09.edis.at/eucalb>

Centers for Disease Control and Prevention: [www.cdc.gov/ncidod/dvbid/lyme/index.htm](http://www.cdc.gov/ncidod/dvbid/lyme/index.htm)

Health Protection Agency: [www.hpa.org.uk](http://www.hpa.org.uk)

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Just a Tick ...

Tick Bites and  
Lyme Disease



Lyme disease, also called Lyme borreliosis, is an illness caused by the bacterium *Borrelia burgdorferi*, which lives in the gut of some ticks. Most ticks do not carry the bacteria, but infection could be passed on to people bitten by infected ticks. To be safe you should assume that any tick bite is potentially infectious. Infected ticks are found in many parts of the country, including the New Forest, East Anglia, West Country, English and Welsh Uplands and the Scottish Highlands. They also occur in other parts of Europe and North America.



Deer are important carriers of ticks

### Prevention is Best - be tick aware

When in grassy, brushy or woodland areas:

Keep your skin covered. Wear trousers rather than shorts or a skirt. Tuck your trouser bottoms into socks, and wear shoes or boots rather than sandals. Wear a long-sleeved shirt, with the cuffs fastened. These precautions will keep ticks on the outside of your clothes, where they can be spotted and picked off.

Insect repellents containing DEET are useful as an additional precaution.

Examine yourself and your children for ticks every three to four hours and at the end of the day. Brush off clothing before going indoors and check that pets do not bring ticks into the home on the fur. Check your skin thoroughly for any attached ticks after returning from a tick-infested area, paying particular attention to armpits, groin, backs of knees, the waistband area and also the scalp and ears, especially in young children.

Remove any attached ticks as soon as you can.

Use veterinary tick and flea repellents or tick collars on pets.

If you regularly work\* in a tick-infested area don't wear your work clothing to go home in. Work clothing can be permethrin-impregnated to reduce the risk of being bitten.

\*Lyme disease acquired through work involving exposure to ticks is a reportable occupational disease under RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995)

### If you have been bitten...

**Don't panic. Remove the tick as soon as possible.**

Even if the tick is carrying infection it is very unlikely to transmit it in the first few hours of its feed, so early removal is a very effective prevention measure.

Grasp the tick as close to the skin as possible, using fine tweezers or finger nails, and pull firmly and steadily without jerking or twisting. Don't rush. Try not to squeeze or crush the tick's body. Sometimes, tick mouth parts can break off from the body and remain in the skin. This is unlikely to increase the risk of Lyme disease, but common skin organisms could cause infection. Apply a skin disinfectant once the tick has been removed.

Specially designed tick extractors are available from veterinary practices and pet shops. They are inexpensive and particularly useful for people who are likely to have frequent tick exposure.

**Never** apply heat, e.g. lighted cigarette ends or match heads, to attached ticks.

**Do not use** chemicals such as alcohol, nail polish remover, petroleum jelly or aromatic oils to ticks prior to removal. These substances may possibly cause increased infection risk by stimulating the tick to regurgitate saliva into the bite wound.

Check for redness around the site of the bite.

If you are concerned in any way or become unwell, see your doctor as soon as possible.



Follow manufacturers instructions when using tick extractors.

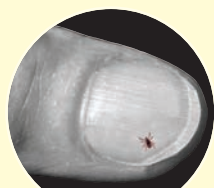


### What to look for

Ticks are tiny spider-like creatures found in grassy or wooded areas. They attach themselves to passing animals (small and large domestic and wild animals, depending on the particular stage of the tick's lifecycle) and people, and then actively crawl about until they find a suitable site; they then start to feed by biting through the skin and sucking blood. They may take three to five days to complete their blood meal, and then drop back into the undergrowth.

#### Deer Tick (*Ixodes ricinus*)

The peak periods for tick feeding are in late spring and early summer (April - July) and to a lesser extent in the autumn (September - October). There may also be a risk of tick bites at other times of the year if the weather is mild.



Nymph on thumbnail - actual size



Adult on thumbnail - actual size



Engorged adult female tick after feeding - actual size

