

Lyme Disease - frequently asked questions

What is Lyme disease?

It is an infection caused by a spiral shaped bacterium called *Borrelia burgdorferi* that is transmitted to humans by bites from infected ticks. The infection is *not* transmitted directly from person to person, nor from the bites of other types of insect, nor from animals.



Erythema migrans

What symptoms can it cause?

The most common and often only symptom is a rash called *erythema migrans*, which gradually spreads from the site of the tick bite. The rash can cover a large area and last for weeks if untreated. Some patients may also have 'flu-like symptoms.

More serious symptoms may appear in untreated patients in the following weeks or months. These can affect the nervous system, joints and rarely the heart or other tissues. None of these is unique to Lyme disease.

What are the complications?

Nervous system symptoms include facial palsy (weakness of the muscles of the face), meningitis and nerve inflammation that may lead to pain, disturbance of sensation or clumsiness of movement. Encephalitis (brain inflammation) is a rare complication.

Some patients develop arthritic symptoms (joint pains) which usually settle down after antibiotic treatment. A few patients, who are genetically predisposed, may have more persistent arthritis, which takes longer to resolve.

Lyme disease, like many other infections, may trigger a post-infection syndrome similar to chronic fatigue syndrome in a small proportion of patients, despite appropriate antibiotic treatment. This condition does not respond to prolonged or repeated courses of antibiotics.

Can Lyme disease be treated?

Yes, with antibiotics, usually doxycycline or amoxicillin. Early treatment usually clears the rash within several days and helps to prevent the development of complications.

More serious symptoms also respond to antibiotic treatment, but the symptoms may be slower to resolve because damaged tissue takes time to heal. Nervous system symptoms such as meningitis or nerve inflammation may require treatment with intravenous antibiotics. Detailed studies have shown excellent long-term outcomes for most people who receive appropriate treatment.



Tick feeding on a human

What are ticks?

They are tiny spider-like creatures commonly found in woodland and heathland areas. Unfed ticks may only be the size of a poppy seed. They usually feed on blood from mammals and birds but will occasionally bite humans. Peak times of the year for tick bites are late spring and early summer and in the autumn, but there may be a low level of tick feeding activity during mild weather conditions at other times of the year. Ticks usually take between three and five days to complete their blood meals. The risk of transmitting infection from an infected tick is low in the first 24 hours that it is attached, so early removal of the tick greatly lowers the risk of transmitting infection.

Are all ticks infected?

Tick populations are found in many areas of the United Kingdom, but only a minority of ticks in any area are infected with *B. burgdorferi*. As a precautionary measure, any tick should be regarded as potentially carrying infection, but the actual risk will vary from area to area. Areas where infection is acquired include Exmoor, the New Forest, the South Downs, parts of Wiltshire and Berkshire, Thetford Forest, the Lake District, the Yorkshire moors and the Scottish Highlands. About 20% of confirmed cases annually are reported to have been acquired abroad - in the United States, France, Germany, Austria, Scandinavia, and eastern European countries.

How can Lyme disease be prevented?

There is no vaccine available so **be tick aware!**

- Remember that they are often very small and difficult to see
- Avoid tick bites by keeping skin covered as much as possible when visiting a tick-infested area
- Consider using insect repellents
- Check the skin for any ticks that have become attached and remove them promptly by the following method (Lyme Disease Association Guidelines)
- Check thoroughly for attached ticks at the end of the day, including skin folds such as armpits and groins
- Brush off clothes and pet's coats before returning indoors to remove any unattached ticks that might later seek a feed.
- Consult your GP if a rash or other symptoms develop within a few weeks of a tick bite – remember to mention that you are concerned about Lyme Disease. You will require a blood test which may have to be repeated a few weeks later.

How to remove ticks (Lyme Disease Association Guidelines)

- **Use tweezers as close to the skin as possible**
- **Pull tick straight out**
- **Apply antiseptic**

Examples of rash:

