

Visitor Safety in the Countryside Group

Ticks and Lyme disease

Lyme disease is a bacterial infection you might get after being bitten by hard-bodied (Ixodid) ticks that are infected by the bacterium *Borrelia burgdorferi*. These ticks pass the bacterium to humans as they feed on your blood. Most cases of Lyme disease are treated successfully with antibiotics. But, if left untreated, it can infect the heart, joints and nervous system.

How common is it?

The disease is rare in the UK. The Health Protection Agency recorded 813 cases in England and Wales in 2008. Excluding the 91 cases where the infection was definitely acquired overseas, this represents 1.33 cases for every 100,000 of the population.

Health Protection Scotland recorded 285 cases in 2008. Using the Office for National Statistics population estimate for Scotland (5,144,200 for 2007) this represents 5.5 cases for every 100,000 of the population.

Where do you catch it?

The disease is usually found in people who have visited areas where ticks are present. The ticks are commonly found in woods, heaths, moorland and also in suburban parkland. They favour long grass, bracken and heavy undergrowth and require a temperate humid environment. They are less frequently found in coniferous forests and at altitudes above 650 metres.

Areas inhabited by deer are particularly suitable habitats for ticks. They are also found on birds (including grouse and pheasants), small mammals (such as mice and voles), hares, squirrels, foxes, sheep, cattle, horses and dogs. The ticks can wait in vegetation for a passing host. Not every tick infested area has a high risk of Lyme disease and not all ticks carry the bacteria.

People have caught the disease in holiday and outdoor activity destinations such as the New Forest, Exmoor, the Lake District, the Scottish Highlands and Islands, North York Moors, Thetford Forest, and the South Downs. Anywhere that Ixodid ticks are present is a potential risk area. They are known to be in suburban areas like Richmond Park.

At least 50% of infections acquired in the UK are known to have been acquired in southern counties of England.

Quite a number of the cases (perhaps 15% to 20%) have been acquired abroad.

How do you catch it?

Peak times of the year for tick bites are late spring, early summer and autumn.

Ticks are very small (about the size of a poppy seed) and can easily be overlooked. Most ticks are not infected with the bacteria that cause Lyme

disease. Even if a tick is infected, it may not spread the bacteria in the first few hours of its feed, so there is a low risk of infection if a tick is removed quickly.

A tick bite usually looks like a lump with a small scab on the skin surface at the site of the bite. Most people with Lyme disease then develop a reddish skin rash in a ring shape, and this may be the only sign of infection. The rash spreads out from the site of a bite after 3 to 30 days. Other common symptoms with early Lyme disease include tiredness, headache, joint pains, and flu-like symptoms.

Without treatment, these symptoms may last for weeks or even longer. Rarely, there are serious complications, and in some cases, these can occur several years later.

Early detection and treatment with antibiotics helps to relieve the symptoms and shorten the illness. For this reason, it is important to be aware of the indicators, so that treatment can be given early. People showing symptoms should advise their doctor that they have been in an area where ticks might be found.

Risk control measures

The principal control is to make visitors more aware of the possibility of Lyme disease and of ways to avoid it. This typically includes:

- education to generate awareness of the disease
- advice on ways to reduce the likelihood of tick bites
- information on how to remove ticks from the skin
- information on how to recognise symptoms of the disease

If you manage a site where you know infected ticks may be present, you should consider whether it is necessary to alert visitors. Some park managers place warning notices and/or provide leaflets at entry points or car parks. Where access is uncontrolled, it might be possible to provide information to known user groups.

An example of a leaflet issued by the Arnside and Silverdale Area of Outstanding Natural Beauty and used by the British Mountaineering Council can be downloaded from the BMC website:

<http://www.thebmc.co.uk/Download.aspx?id=297>

Further Research

Forest Research together with the Universities of Oxford and Surrey are part way through a research project. Details can be found on the website:

www.forestresearch.gov.uk/animaldiseaserisks

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KD Oct09