

## **Lyme disease**

Lyme disease is caused by bacteria that are widespread in Europe, North America and parts of Asia. The bacteria are transmitted to humans by the bite of an infected tick.

Lyme disease is the most common tick-borne infectious disease in Slovenia. It occurs throughout the country and around 5,000–7,000 cases are reported annually. The risk of infection is the highest from February to November. Mild winters and wet springs favour the occurrence of ticks.

### **The cause**

The disease is caused by bacteria belonging to the spirochete family, the *Borrelia burgdorferi sensu lato* complex, which includes at least 3 species that are pathogenic for humans: *Borrelia burgdorferi sensu stricto*, *B. afzelii* and *B. garinii*.

### **Incubation period**

The incubation period for the first stage is usually between 3 and 32 days after infection. The second and third phases of the disease can occur months or years after infection.

### **Transmission**

Lyme disease is transmitted to humans by the bite of an infected tick (*Ixodes ricinus* in Europe). The tick becomes infectious by sucking the blood of an infected animal, most commonly small forest mammals and birds, but also larger animals, which are a natural reservoir for the bacteria. So far, there is no evidence of human-to-human transmission. Lyme disease during pregnancy does not pose a risk to the foetus if treated appropriately.

### **Susceptibility for infection**

Anyone exposed to infected tick bites is susceptible to developing the disease. Prior infection does not offer protection against the disease.

### **Symptoms and signs of the disease**

Lyme disease usually progresses in three stages. In the first stage of the disease (3–32 days after the bite of an infected tick), characteristic changes appear on the skin. A painless redness develops, spreading slowly over the skin, fading in the middle and taking the shape of a ring. A skin lesion can be a single lesion or several on different parts of the body. It is important to distinguish a normal allergic skin reaction, which may appear immediately at the site of the bite, from the characteristic skin lesions of Lyme disease. Skin lesions are not always present. In the second and third stages of the disease (which can be months or years after infection), many organs or organ systems become affected: skin, nerves, joints, muscles, eyes and heart.

### **Treatment**

Lyme disease is treated with antibiotics. Early recognition of the disease is important, as treatment is usually very effective in the first stage of the disease.

### **Prevention of infection**

The most important measures to reduce the risk of Lyme disease are to prevent tick bites and to quickly remove a tick that has already latched on.

Following the recommendations can help reduce the risk of infection:

- Wear light-coloured clothing that covers as much of your body as possible.
- Use tick repellents.
- When returning from the countryside, carry out a thorough body check, paying attention to hairy parts of the body, skin folds, the ears, armpits and groin.

If you see a tick that is already attached, remove it as soon as possible (and in the correct way), as the likelihood of transmission is greatly reduced by removing the attached tick as soon as possible.

To properly remove a tick, use a pair of pointed tweezers to grasp the tick as close to the skin as possible and pull it out in a steady motion. The tweezers should not be rotated left or right, but pulled straight up. Do not use oil, cream, kerosene or other ointments to remove ticks from the skin.

There is no vaccine to prevent the disease.