key points

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Lyme disease, also known as Lyme borreliosis, is caused by infection with *Borrelia burgdorferi sensu lato* (*B. burgdorferi s.l.*) complex, a Gram-negative spirochaete bacterium. Infection in humans takes place through tick bites.

In principle, Lyme disease may affect every organ of the body and may manifest in different stages. Early localised or disseminated stages are characterised by erythema migrans, lymphadenosis benigna cutis, facial palsy and arthritis and the later stages by arthritis, acrodermatitis chronica atrophicans or encephalomyelitis. The incubation time of the earlier stages varies from several days to months and that of the later stages from weeks to months or even years.

Lyme arthritis commonly manifests mono- or oligo- articularly (< 5 joints). Most frequently the knee joint is affected, followed by the ankle, wrist and elbow. The work-up of Lyme arthritis should include a careful history including residence in, or time spent visiting, an endemic region, previous history of tick bite(s), and erythema migrans. In order to confirm a diagnosis of Lyme arthritis clinical findings and specific IgG antibodies are necessary. A lack of IgG antibodies practically rules out Lyme arthritis. Antibodies can be detected even years after infection(s) in asymptomatic individuals with previous Lyme disease treated with antibiotics.

In general, the prognosis of Lyme disease is assumed to be good, in particular after antibiotic therapy of early manifestations. The therapy recommendations for adults are tetracyclines or aminopenicillin or a third-generation cephalosporin. After infection, immunity against *B. burgdorferi sensu lato* cannot necessarily be assumed, hence, reinfections are possible.