



Ticks



HOW TO AVOID A TICK BITE

- Avoid areas with many ticks such as tall grass, shrubland and woodland. The risk of tick bites on regular walking trails is low.
- Cover your skin when walking in areas with many ticks.
- Wear long trousers with covered ankles.
- Protect yourself with a tick repellent or mosquito spray.
- Wear light-coloured clothing. This makes it easier to spot the tick.

Upon walking in areas with ticks, check your clothes, hair and skin carefully. Remember that ticks are small and can be difficult to spot. Ticks often prefer hidden, moist and thin-skinned places such as the back of the knees, groin, armpits and the area behind the ears. Children's hair and scalps should be checked carefully.



The brochure has been developed by the following institutions in Denmark, Norway and Sweden: Statens Serum Institut, Norwegian National Advisory Unit on Tick-borne Diseases and Smittskydd Skåne, as a part of the EU-InterReg ØKS-project, ScandTick Innovation.



Folkhälsomyndigheten



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WHAT IS A TICK?

A tick is a small bloodsucking spider-like animal (arachnid). Ticks feed on blood from birds, reptiles and mammals (including humans). There are over 900 different tick species in the world. In the Nordic countries, the sheep tick (*Ixodes ricinus*) is the most common.

The tick has four stages of development: Egg, larva, nymph and adult. The larvae, nymphs and adults are all able to suck blood.

WHERE DO TICKS LIVE?

Ticks are commonly found in Scandinavia in areas with favourable conditions. They thrive in humid and shady places such as tall grass, shrubland or woodland. Ticks can also be found in gardens. They are vulnerable to drought.

Ticks are usually active from April to November. If the temperature is above 5 °C in winter, they can still be active.

CAN A TICK BITE MAKE YOU SICK?

Ticks themselves are not dangerous, but they may be carriers of bacteria and viruses that can be transmitted through the tick's bite and cause disease in animals and humans.

The *Borrelia*-bacteria can cause borreliosis (Lyme disease), which is the most common tick-borne disease in Europe, though studies from the Nordic countries show that in areas with many ticks, the risk of getting infected by a tick bite is very low – around 2%. The *Borrelia*-bacteria is contained in the tick's gut. Hence, if you get bitten by a tick it usually takes at least 24 hours before the bacteria is transmitted.

Therefore, if a tick bites you, remove it as quickly as possible.



Tick Borne Encephalitis (TBE) is another disease transmitted by ticks. TBE is rarer than borreliosis and is caused by a virus. Only a small number of ticks are infected with the virus. Most infected people do not get any symptoms; however, some experience flu-like symptoms, while others experience serious illness such as brain inflammation. TBE-virus can be transmitted shortly after the tick has bitten.

Vaccination against TBE is available but not against borreliosis. Vaccination against TBE is recommended for those who live or frequently visit areas where the TBE-virus can be found.

HOW TO REMOVE TICKS

To remove a tick, use a pair of tweezers, a tick removal tool or your nails. Grasp the tick as close to your skin as possible and pull it straight out. Do not be alarmed if the tick's mouthparts remain in the skin. This does not increase the risk of tick-borne diseases.

WHEN SHOULD I SEE A DOCTOR?

After a tick bite, a 1-2 cm blue/red zone around the tick bite may appear. This is normal and does not mean that you have been infected with *Borrelia*.

See your doctor if you experience a red rash (Erythema migrans) that develops around the tick bite and that has

a diameter of more than 5 cm. A rash is the most common symptom of borreliosis and may appear 3-30 days after a tick bite. Erythema migrans is an early local infection of the skin.

Erythema migrans should **ALWAYS** be treated with antibiotics. It is not necessary to take a blood sample.

In a minority of *Borrelia*-infected persons (10-15%), the infection spreads to other organs and tissues in the body. In the Nordic countries, it is often observed that the *Borrelia*-bacteria can spread to the nervous system (neuroborreliosis). In some cases, the *Borrelia*-bacteria can spread to the joints (borrelia arthritis). Symptoms usually appear 1-2 months after the tick bite. Many of those infected do not remember the tick bite or having a rash.

Contact your doctor if you experience one or more of the following symptoms:

- Rash that could be Erythema migrans
- Facial paralysis
- Radiating pain with or without paralysis in the back/ arms/legs and/or a sensory distortion of the skin
- Flu-like symptoms such as headache, sensitivity to light, malaise, fever, muscle and joint pain
- Swelling and oedema in the knee joint or in one of the other big joints.



Erythema migrans is often ring-shaped with a clear central area (bull's eye).



Erythema migrans could also have a more even colour - the rash can be bright red or pale pink.



Atypical Erythema migrans with a "spotted" look.