

Information sheet about pathogens in humans – vaccinations keep you safe!

What is TBE?

Tick-borne encephalitis (TBE) is an inflammation of the brain and meninges caused by viruses. The pathogens are found in many European countries, Russia and Asia. The TBE virus spreads primarily in small rodents such as mice. It is then transmitted to humans by infected ticks. Cases of TBE are mostly observed in spring and summer through to autumn and also occasionally in winter.

How is TBE transmitted?

By tick bites

The TBE virus is often transmitted by ticks. A tick bite can enable the viruses to enter the human bloodstream. However, not every bite from a tick leads to a TBE infection.

Through foodstuffs

Very rarely, people can infect themselves by drinking unpasteurized milk from goats or sheep and in exceptional cases also from cows.

What symptoms do the sufferers show?

Signs of the TBE disease typically occur in two phases. However, most of those infected (about 70 to 95%) remain free of symptoms or the disease will not progress into the second phase.

- ▶ First, sufferers have flu-like symptoms such as a fever, headache, aching limbs and generally feel unwell. The tick bite has often been forgotten by now and the symptoms are mistakenly attributed to a common cold. For most sufferers, the disease progresses no further.
- ▶ After a period of up to one week without symptoms, some of the sufferers develop inflammation of the meninges, the brain (encephalitis) or the spinal cord (myelitis). Symptoms include a return of fever as well as a headache, muscle ache and problems with the nervous system. If the disease takes a serious course, it may result in paralysis of the arms and legs, difficulty with swallowing and speech, respiratory paralysis and severe drowsiness.
- ▶ The headache, drowsiness, difficulty concentrating and imbalance, for example, may persist for several months **as a consequence**. Recovery without any consequences is also still possible later. However, permanent damage can also occur. Approximately 1% of the sufferers die from the disease.

What's the incubation period – and how long are you contagious?

If the disease breaks out, this usually happens 1 to 2 weeks after the tick bite and rarely up to 4 weeks after it.

The sufferers are not contagious.

Who is particularly at risk?

Since 2007, risk areas are designated every spring in Germany, in which the risk of infection with TBE is increased. People living in risk areas or traveling to risk areas are particularly at risk. Frequent stays outdoors in the countryside, for example, involving contact with grass or low bushes or close contact with animals that spend time outdoors (e.g. dogs), are other risk factors for a tick bite. In Germany, risk areas are mainly located in Bavaria, Baden-Württemberg, South Hesse, South-eastern Thuringia, Saxony and South-eastern Brandenburg. Individual districts in other federal states have also been affected. An overview of current TBE risk areas in Germany can be found at www.rki.de/fsme.

People aged 40 and over are at increased risk of developing a severe case of the TBE disease. The elderly in particular are more prone to complications.

What should I do if I fall ill?

- ▶ There is no special treatment for the TBE disease, so only the symptoms are treated. Severe courses should be treated in hospital and may even require intensive care.
- ▶ After surviving a TBE infection, those affected are usually immune, so they cannot initially become infected a second time. Those who continue to be exposed to a TBE risk should nevertheless refresh their immune protection after 3 to 5 years with a vaccination, as there is insufficient experience on how long this immune protection lasts.

How can I protect myself?

Vaccination

Vaccination against TBE is recommended in the following cases:

- ▶ People who live in TBE risk areas and spend a lot of time outdoors.
- ▶ Travelers in regions with a specific TBE risk in Germany and abroad, if they are likely to come into contact with ticks.
- ▶ Professions such as forest wardens/workers or hunters in TBE risk areas.

Three vaccinations are required to establish vaccine protection. A booster vaccination should be given after 3 years. Subsequent booster vaccinations are then required every 5 years. Depending on the vaccine used, a booster vaccination should be given every 3 years from the age of 50 or 60. If a virus has already been transmitted, a subsequent vaccination can no longer prevent the infection.

Important facts: Ticks can transmit various pathogens. In addition to TBE, this includes, for example, Lyme disease, a bacterial infection, against which there is no preventive vaccination.

Avoid tick bites

Ticks are active from temperature of around 5 °C. They are mainly found in undergrowth or shrubs, as well as in tall grasses and loose piles of leaves. From there, the ticks are wiped off and carried along unnoticed by people or animals as they pass by. Ticks usually travel over the body or clothing for a while before the bite occurs.

- ▶ If you are hiking through bushes and tall grass, jogging or picking berries, wear closed shoes, long trousers and long sleeves. Pull your socks up over your trouser cuffs.
- ▶ Choose the brightest clothing possible so that the tiny ticks are easier to see and remove.
- ▶ Before spending time in forests or fields, apply tick repellent to protect your skin. Note: Tick repellent only works for a short period and does not offer complete protection.
- ▶ Never touch wild animals such as hedgehogs as they often carry ticks.
- ▶ Even if you take precautions, check your body thoroughly for ticks after spending time outdoors. Ticks prefer protected skin areas wherever possible. Therefore, be especially careful to check your head and hairline, behind your ears, around your neck, under your armpits, on your elbows, navel, groin, genital area and the backs of your knees.
- ▶ If you should discover a tick on your body, remove it as quickly as possible. It is best to use tweezers or a special tick removal tool. Do not pour oil or glue on the animals.
- ▶ Seize the tick near its head and as close as possible to your skin and carefully pull it out. Once removed, disinfect the small wound around the bite mark carefully.

Where can I get more information?

Your local health authority can provide you with further advice. Since TBE must be reported, it has information on the latest situation and experience in dealing with the disease.

More (specialist) information is also available online from the Robert Koch Institute (www.rki.de/fsme).

For more information on infection control through vaccination, please visit the Federal Centre for Health Education website (www.impfen-info.de).



STEMPEL

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