



So that tick bites do not have any unpleasant repercussions.

**HOW TO PROTECT
YOURSELF FROM
TICKS AND
INFECTIONS.**

SMALL ANIMALS. WHICH CAN CAUSE BIG PROBLEMS.

The very idea of being attacked by a small blood-sucking parasite is very unpleasant for us humans. Ticks can also pose a serious threat because they carry a variety of viruses and bacteria. If these are transmitted by a bite, we can develop serious diseases. For example, Lyme disease or tick-borne encephalitis, or TBE for short.

The latter can trigger inflammation of the central nervous system and meninges. We would therefore like to provide you with more detailed information on how you can protect yourself with a vaccination and other measures.

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Up to 1.50 m high: Attention, tick danger!

**DANGER
RECOGNISED.
DANGER
AVERTED.**

What are ticks and where do they live?

Ticks belong to the arachnids, more precisely: to the mites. Around 900 species are known, of which the shield tick is the most common in Europe, e.g. the common wood tick, the dog tick, the sheep tick and the alluvial forest tick.

The animals mainly live up to 1.50 metres above the ground, in grass, bushes and undergrowth in meadows, woods, gardens and parks. If a tick is swiped, it can easily become attached to a person or animal.

Who is at risk?

Anyone who spends a lot of time in nature and engages in outdoor activities, such as playing and working in the garden, picking flowers, walking, hiking, fishing, camping and picnicking. In addition: Dog and cat owners whose pets are outside.

Occupational groups working outdoors are also at risk: in forestry, timber and agriculture, hunting and the military.¹

Outdoor Nature
Game Camping
Sports Hiking
Garden Fishing
Walks Forest



What is TBE?

Tick-borne encephalitis (TBE) is a viral infection of the central nervous system (CNS) and is transmitted by the bite of an infected tick. TBE becomes increasingly severe with age.

How common is TBE?

In Europe alone, TBE occurs in at least 27 countries. A detailed map of the German risk areas can be found on page 20.



How is it transmitted?

Infection occurs through a tick bite, approx. 0.1 - 5% of ticks are infected with the virus.²

What happens in the body?

The virus enters the body through the bite of an infected tick. It multiplies in the skin cells and lymph nodes and then enters the bloodstream. It then reaches the brain and causes inflammation of the central nervous system.

CAUTION: RISK OF CONFUSION.

What are typical TBE symptoms?

In most people, the infection goes unnoticed or causes only mild symptoms. A few days to a few weeks after the tick bite, symptoms similar to those of flu can occur. Our recommendation: Always consult your doctor if you have any complaints.



How does the disease progress?

In the first phase, TBE often starts like the flu, with general malaise, exhaustion, fever, headaches and aching limbs. In some people, the symptoms worsen and can be a sign of an attack on the central nervous system. In this second phase, the infection can lead to inflammation of the meninges, brain and spinal cord, with sometimes severe courses and long-lasting consequential damage.

These include: Symptoms of paralysis, respiratory weakness, balance disorders, as well as swallowing and speech disorders.²

Phase 1

- 🦋 GENERAL MALAISE
- 🦋 EXHAUSTION
- 🦋 HEADACHE
- 🦋 FEVER $\geq 38^{\circ}\text{C}$

Phase 2

- 🦋 FEVER $\geq 40^{\circ}\text{C}$
- 🦋 MENINGITIS (inflammation of the brain and spinal cord)
- 🦋 ENCEPHALITIS (inflammation of the brain)
- 🦋 MYELITIS (inflammation of the spinal cord)

VACCINATION INSTEAD OF INFECTION.

Why is vaccination so important?

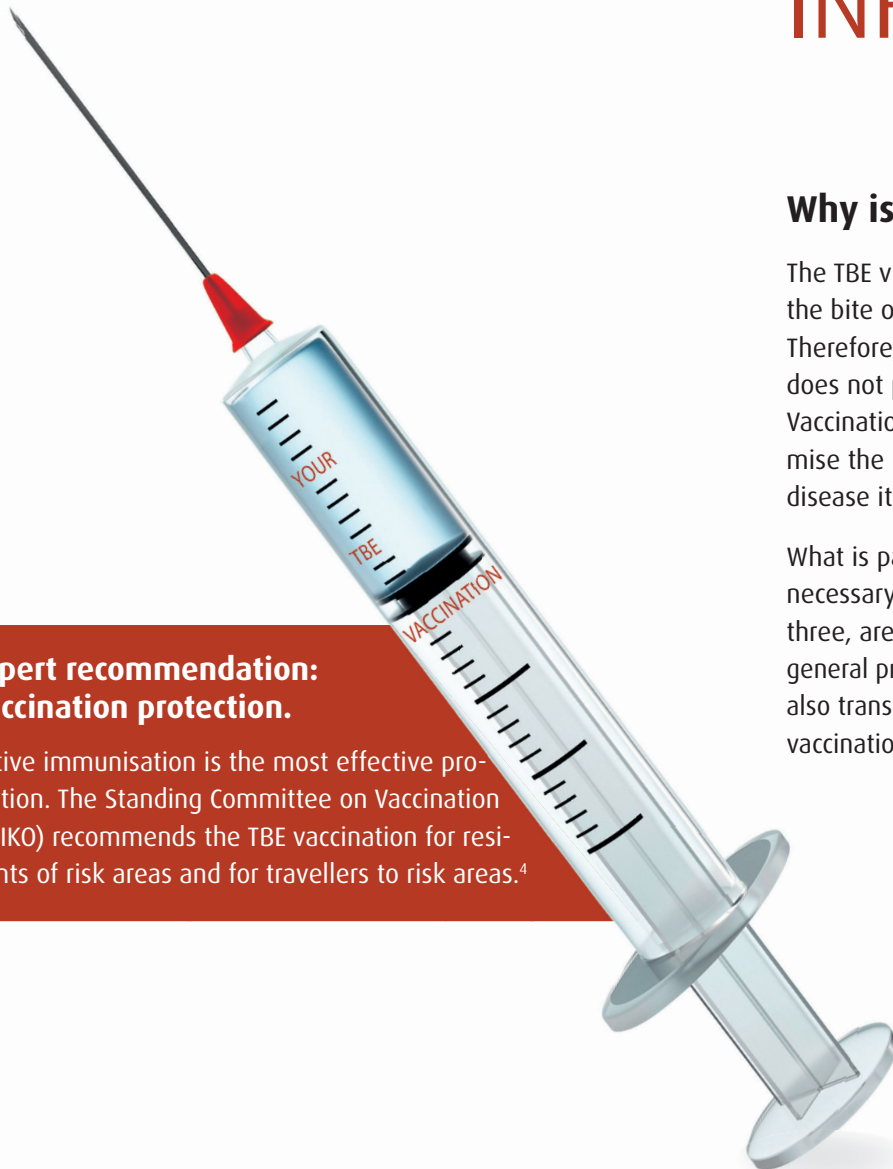
The TBE virus can be transmitted directly after the bite of an infected tick.

Therefore, even removing the animal quickly does not provide reliable protection against TBE. Vaccination is therefore the best way to minimise the risk of infection, especially as the disease itself cannot be treated causally.

What is particularly important here? That all necessary vaccination appointments, usually three, are kept.³ And that you also observe the general protective measures. Because ticks can also transmit other diseases for which there is no vaccination yet.

Expert recommendation: Vaccination protection.

Active immunisation is the most effective protection. The Standing Committee on Vaccination (STIKO) recommends the TBE vaccination for residents of risk areas and for travellers to risk areas.⁴



PREVENTION IS THE BEST PROTECTION.

What else can ticks transmit?

In addition to TBE, for example, Lyme disease pathogens can also be found. If flu-like symptoms occur a few days to a few weeks after the sting, often in conjunction with a ring-shaped reddening at the sting site, please contact your doctor.

If left untreated, Lyme disease can affect the joints, nervous system, skin or heart for weeks or even years after the bite, causing permanent disabilities. In contrast to TBE, there is no Lyme disease vaccination. Therefore, the best protection is the prevention of tick bites.⁵





Did you know? Ticks should not remain in the skin for more than 24 hours.

What can you do yourself against ticks?

Wear suitable clothing

Long sleeves and trouser legs provide protection.



Avoid undergrowth, grasses and bushes

Ticks live up to 1.50 metres above the ground.

Use tick repellent

Apply generously to clothing and skin.



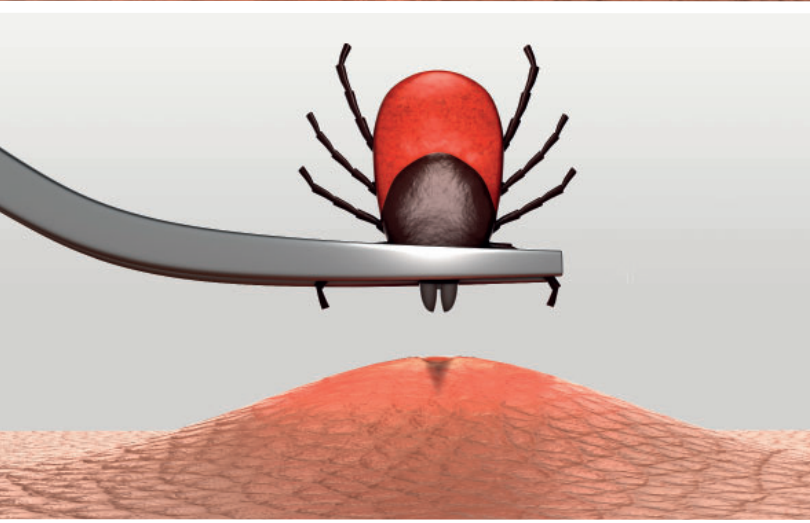
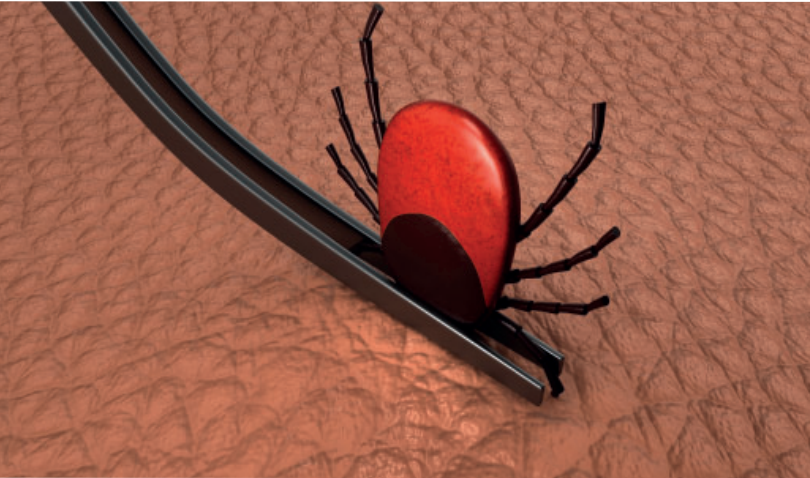
Remove ticks

Check your body carefully after outdoor activities.



Make sure you are vaccinated

Talk to your doctor about a TBE vaccination/booster.



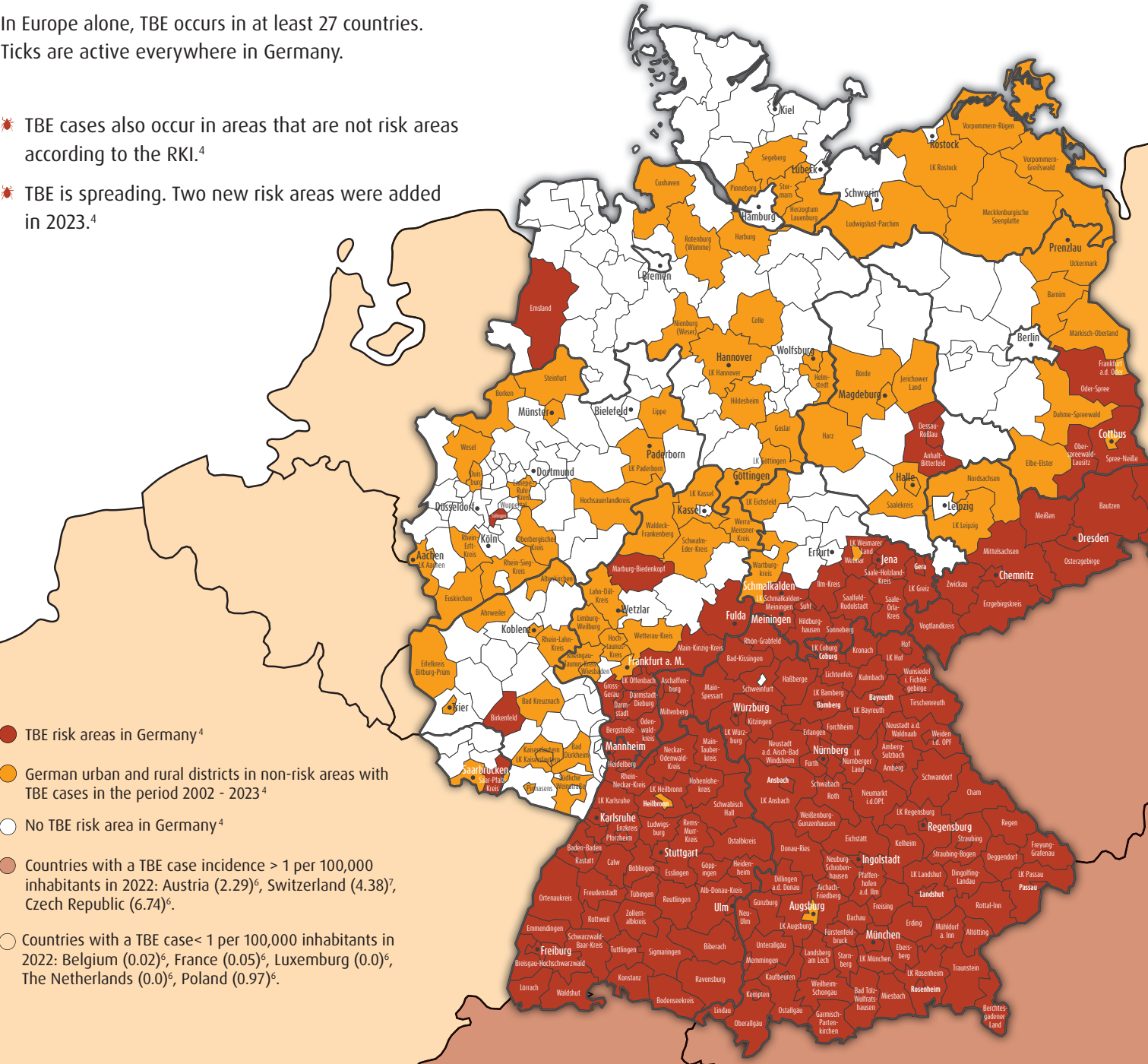
How do you remove ticks?

- Remove ticks as quickly as possible.
- Grasp the animal as close to the skin as possible with tweezers, tick tweezers or a tick card.
- If such aids are not available, the tick can be removed with the fingernails. Here too, grasp the tick as close to the bite site as possible.
- Pull the animal upwards slowly and in a controlled manner without squeezing it.
- Disinfect the puncture site immediately after removing the tick.
- Wash your hands thoroughly with soap and water.
- If the tick proboscis or parts of the biting apparatus remain in the wound, usually visible as a small black dot, a slight inflammation can occur, which is usually harmless. These foreign bodies are usually rejected after some time. Do not attempt to remove these foreign objects by poking around the wound.
- Do not crush live ticks, but immerse them in alcohol.
- Dispose of the animal in a sealed bag or container tightly wrapped with adhesive tape.
- Avoid home remedies such as nail varnish, Vaseline, oil or heat application.

What risk areas are there?

In Europe alone, TBE occurs in at least 27 countries.
Ticks are active everywhere in Germany.

- TBE cases also occur in areas that are not risk areas according to the RKI.⁴
- TBE is spreading. Two new risk areas were added in 2023.⁴



TBE RISK

Danger in Europe

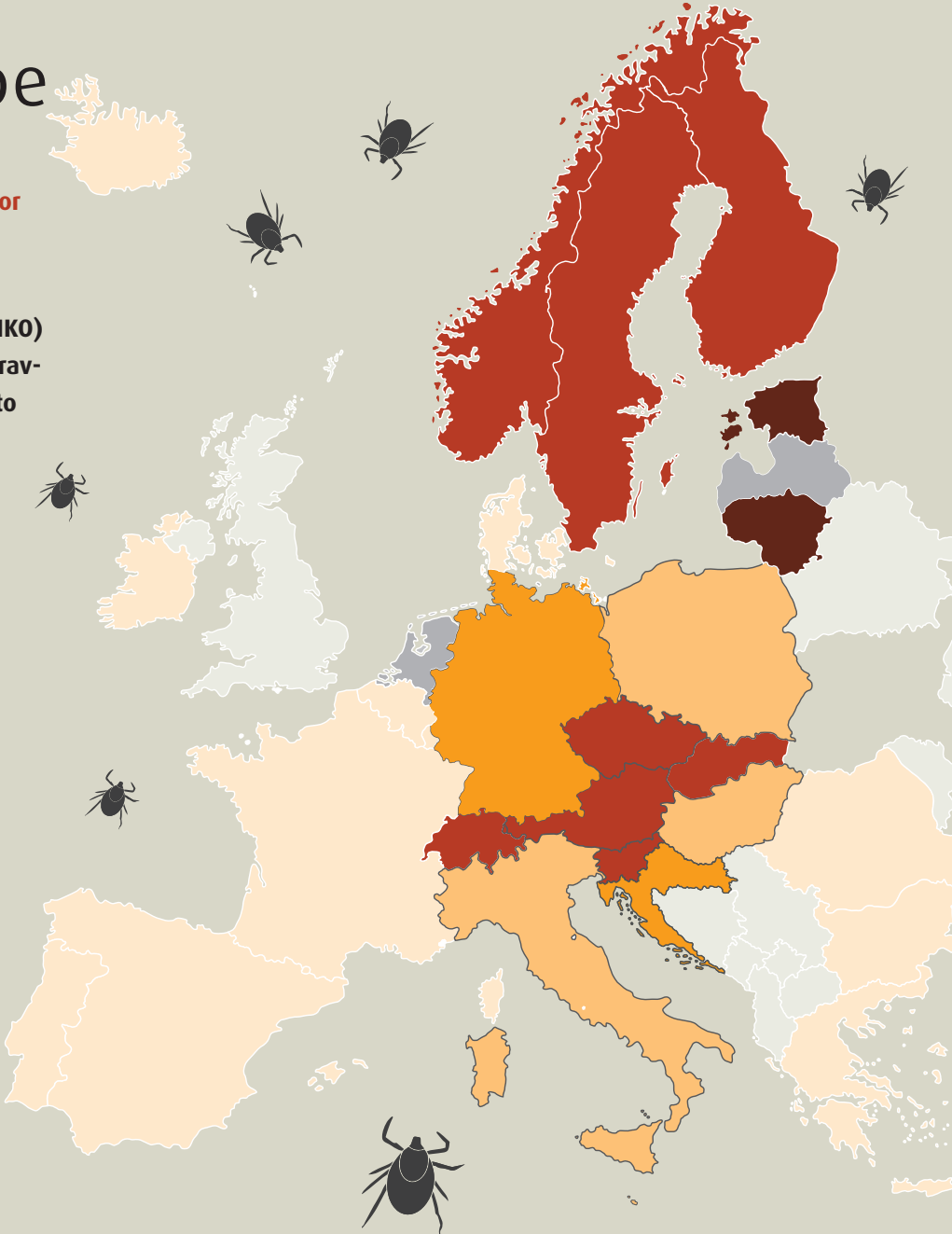
Talk to your doctor about a TBE vaccination or booster before travelling.

The Standing Committee on Vaccination (STIKO) also recommends the TBE vaccination as a travel vaccination for people who are exposed to ticks in TBE risk areas outside Germany.⁸

Notification rate of confirmed cases per 100,000 inhabitants⁶

- 0.00 – 0.09
- 0.10 – 0.49
- 0.50 – 0.99
- 01.00 – 9.99⁷
- ≥ 10.00
- No notified data
- Not included

Map adapted from ECDC, Surveillance Atlas of Infectious Diseases, TBE, Confirmed Cases, Notification Rate 2022.



Do you enjoy spending time in the great outdoors? Or are you living or travelling in a risk area?

TALK TO YOUR DOCTOR ABOUT TBE VACCINATION OR VACCINATION BOOSTER.



For more information on TBE:
mein-impfschutz.de

1. <https://www.ecdc.europa.eu/en/tick-borne-encephalitis/facts/factsheet>
(last accessed on 25/11/2021)
2. https://www.rki.de/DE/Content/Infekt/EpidBull/Merkblaetter/Ratgeber_FSME.html
(last accessed on 25/11/2021)
3. <https://www.rki.de/SharedDocs/FAQ/FSME/FSME-Impfung/FSME-Impfung.html>
(last accessed on 25/11/2021)
4. Robert Koch Institute. TBE: Risk areas in Germany (as of: 03/2023).
Epid Bull 2023;9:3–22. DOI 10.25646/11176.
5. <https://www.rki.de/SharedDocs/FAQ/Borreliose/Borreliose.html>
(last accessed on 25/11/2021)

