CONDITION

Tick bite

A tick bite happens when a small blood-feeding tick attaches to your skin.

WHAT IT IS
Skin attachment by a blood-feeding tick

BODY SYSTEM
Skin; sometimes whole body through transmitted infection

MAIN SYMPTOMS
Attached tick, red bump, itching, mild soreness

WHAT CAUSES IT
Tick attachment; sometimes infection carried in saliva

HOW IT IS DIAGNOSED
Tick identification, skin examination, and exposure history

MAIN TREATMENT
Prompt removal, skin cleaning, and symptom monitoring

CAN IT BE CURED?
Yes - removal ends exposure; skin usually heals

IS IT AN EMERGENCY?
Sometimes - breathing trouble, fainting, or new weakness

LONG-TERM OUTLOOK
Most heal fully; infections may need further treatment

Overview

A tick bite happens when a tick attaches to your skin and feeds on blood. Ticks are small relatives of spiders. They are often found in grass, woodland, brush, gardens, and places used by wildlife.

Many bites cause only a small area of redness or irritation. Some people do not notice the bite because tick saliva can make the skin less sensitive. A feeding tick may remain attached for hours or days and become larger as it takes in blood.

The bite matters because some ticks carry bacteria, viruses, or parasites. These can cause illnesses such as Lyme disease, Rocky Mountain spotted fever, babesiosis, or tick-borne encephalitis. The infections found in ticks differ greatly between countries and regions.

Most tick bites do not result in an infection. The risk is affected by the type of tick, where the

bite occurred, how long it was attached, and whether it carried a germ. Removing an attached tick promptly is the most useful immediate action.

Symptoms

You may see a tick attached to the skin. An unfed tick can be as small as a poppy seed, while one that has fed may look rounded or swollen.

A simple local reaction can include:

These changes can appear soon after the bite and usually settle. They do not, by themselves, mean that an infection has been transmitted.

Watch for symptoms that develop during the following days or weeks. These may include fever, chills, headache, unusual tiredness, muscle aches, swollen glands, or a new rash. Different tick-borne infections cause different patterns, and not everyone develops the same symptoms.

An expanding rash can be a sign of Lyme disease. It usually grows over several days and may become round or oval. It does not always look like a target or "bull's-eye," and it may not be painful or itchy. This is different from a small patch of irritation that appears immediately around the bite.

Some tick-related illnesses can cause severe headache, confusion, facial weakness, shortness of breath, unusual bleeding, or problems with balance or movement. These symptoms need prompt medical assessment.

- A small red bump
- Mild itching, tenderness, or swelling
- A tiny scab after the tick is removed
- Redness limited to the area around the bite

Causes and risk factors

A tick bite occurs when a tick crawls onto your body, anchors its mouthparts in the skin, and begins feeding. It may release saliva into the bite. If the tick is carrying an infectious organism, that organism may sometimes pass through the saliva during feeding.

Risk is higher when you spend time in places where ticks live, including wooded areas, long grass, scrub, leaf litter, and land used by deer or other wildlife. Gardening, hiking, camping,

hunting, and outdoor work can increase exposure.

Ticks may also enter homes on clothing, equipment, or pets. A tick found on a pet can crawl onto a person, although it does not jump or fly.

Other factors affecting risk include:

For Lyme disease, transmission becomes more likely the longer an infected blacklegged tick remains attached. Other infections may be transmitted on a different timeline, so every attached tick should be removed as soon as it is found.

- The local tick species and infections present in the area
- The season, although ticks may be active whenever conditions are suitable
- Clothing that leaves skin exposed
- An attached tick that is not found promptly
- Travel to a region with different tick-borne infections

Diagnosis

If the tick is still attached, seeing and identifying it can confirm the bite. If it has already fallen off, the cause of a small skin mark may be uncertain. A healthcare professional may consider its appearance, recent outdoor exposure, travel, and any symptoms that followed.

There is no blood test that confirms an uncomplicated tick bite. Tests are used when symptoms suggest a particular tick-borne infection.

Lyme disease blood tests look for antibodies, which are proteins made by the immune system. These antibodies can take time to develop, so testing immediately after a bite may not give useful information. An expanding rash typical of Lyme disease may be diagnosed from its appearance and exposure history rather than an early blood test.

Testing the removed tick is generally not a reliable way to decide whether you need treatment. A tick may test positive without having transmitted an infection, and a negative result may not exclude other exposures. Local public health services may still ask for ticks as part of surveillance or species identification.

Treatment and management

Remove an attached tick promptly. You do not need to wait for medical help if you can remove it safely.

To remove it:

Do not twist, crush, burn, or cover the tick with petroleum jelly, nail polish, or another substance. These methods may delay removal or injure the skin.

If a small part of the mouth remains, do not repeatedly dig into the skin. If it cannot be lifted easily with clean tweezers, the skin will often push it out as it heals. Seek advice if the area becomes increasingly painful, swollen, warm, or filled with pus.

You may wish to photograph the tick and bite, and note the date and place where the exposure occurred. This information can be useful if symptoms later develop.

Antibiotics like amoxicillin or doxycycline are not routinely needed after every tick bite. In some regions, a healthcare professional may offer preventive antibiotic treatment after a clearly high-risk blacklegged tick bite if it can be started soon after removal. The decision is based on the tick species, local Lyme disease risk, attachment time, timing, age, pregnancy, allergies, and other health factors.

If a tick-borne infection develops, treatment is chosen for that specific illness. Some infections need antibiotics, while others need different treatment or supportive care.

- Use clean, fine-tipped tweezers
- Grasp the tick as close to the skin as possible
- Pull upward with steady, even pressure
- Clean the bite and your hands with soap and water or an antiseptic
- Dispose of the tick in a sealed container or bag, in alcohol, or by wrapping it securely in tape

Complications

Most bites heal without complications. Possible problems include a local skin infection, an allergic reaction, or an illness transmitted by the tick.

A local skin infection may cause spreading redness, warmth, worsening pain, pus, or fever. A small amount of redness immediately after removal is more often irritation than infection.

Tick-borne illnesses differ by location. Lyme disease can affect the skin, joints, nerves, or heart if it is not treated. Other infections may affect blood cells, the brain, the lungs, or several organs. Early medical assessment is important when symptoms develop after possible tick exposure.

Rarely, a toxin in tick saliva can cause tick paralysis. This produces increasing weakness, often

beginning in the legs and moving upward. Removing the tick usually stops further exposure, but urgent medical care is needed because breathing muscles can be affected.

Some tick bites can contribute to alpha-gal syndrome, an allergy to a sugar found in meat and other products from mammals. Reactions are often delayed for several hours after eating and can include hives, stomach symptoms, swelling, or breathing difficulty.

Prevention

Not every tick bite can be prevented, but you can reduce exposure and find ticks before they have fed for long.

When entering tick habitat:

Permethrin should not be applied directly to the skin unless the product label specifically allows it. Follow age, pregnancy, application, and washing instructions for any repellent.

After being outdoors, check your clothing, equipment, pets, and entire body. Pay particular attention to the scalp, hairline, ears, armpits, waist, groin, behind the knees, and between the toes. Showering soon after coming indoors can help remove ticks that have not attached.

Putting dry clothing in a hot tumble dryer may kill ticks. Washing alone may not do so unless the water is hot enough for the fabric.

Keeping grass short, removing leaf litter near frequently used areas, and placing play or seating areas away from brush may reduce ticks around a home. These steps lower risk but cannot make an outdoor area completely tick-free.

- Wear closed shoes, long trousers, and long sleeves when practical
- Tuck trousers into socks so crawling ticks are easier to see
- Use an approved insect repellent according to its label
- Treat clothing and outdoor equipment with a permethrin product intended for that use
- Walk near the centre of trails and avoid brushing against vegetation

Living with it and what to expect

After removal, a small bump or mild redness may remain for several days. It should gradually improve rather than expand or become more painful. Avoid scratching, since broken skin is more likely to become infected.

You can usually continue normal activities after an uncomplicated bite. Check the area and pay

attention to your general health over the following weeks. A dated photograph can help you tell whether redness is staying small or spreading.

If no infection or allergic problem develops, a tick bite usually has no lasting effect. Routine long-term appointments are not needed for a healed bite without symptoms.

If a tick-borne illness develops, the course depends on the specific infection and how it affects you. Many bacterial infections respond well to appropriate treatment, although tiredness or other symptoms may take time to settle. Some complications, such as nerve problems, joint inflammation, or alpha-gal syndrome, can require follow-up over months or longer.

A previous tick bite does not reliably protect you from another bite or from future tick-borne infection. Continue using prevention measures during later outdoor activities.

When to get medical help

Call emergency services if you develop trouble breathing, swelling of the tongue or throat, fainting, severe confusion, a seizure, or rapidly increasing weakness. These may be signs of a serious allergic, neurological, or infectious problem.

Seek urgent medical advice if you develop:

Tell the healthcare professional when and where the possible bite occurred, including recent travel.

Contact a healthcare service promptly after a newly removed tick if you are in an area where Lyme disease is common and think the tick was attached for a long time. Preventive treatment, when appropriate, has a limited time window.

Routine advice is reasonable if you cannot remove the tick, cannot identify what is attached, or are concerned about the bite. A small stable bump without other symptoms can usually be monitored at home.

- An expanding rash after possible tick exposure
- Fever, severe headache, marked tiredness, or widespread aches
- Facial drooping, numbness, weakness, or difficulty walking
- Chest pain, a racing or unusually slow heartbeat, or faintness
- A spotted or purple rash, especially with fever
- Spreading redness, worsening pain, or pus at the bite

Common questions

How long can a tick stay attached?

A tick may feed for several days if it is not found. It often becomes larger and more rounded while feeding. Remove it as soon as you notice it rather than trying to estimate exactly how long it has been there.

Does every tick bite cause Lyme disease?

No. The tick must be a species capable of carrying the Lyme disease bacteria, it must be infected, and transmission must occur during feeding. Risk also differs by location and attachment time.

Should I save the tick?

You can photograph it or keep it temporarily in a sealed container if local health services recommend identification. Routine commercial testing of the tick usually cannot show whether an infection was transmitted to you.

Is a red mark after a tick bite normal?

A small area of redness or a bump soon after removal is common. Get medical advice if the redness expands over several days, becomes increasingly painful or warm, drains pus, or occurs with fever or other symptoms.

Can the tick's head stay in my skin?

Small mouthparts can occasionally remain after removal. They do not continue transmitting infection once the tick's body is gone. Avoid digging deeply for them; seek help if they are not easily removed or the skin becomes inflamed.

Do I need a blood test after a tick bite?

Usually not if you have no symptoms. Early testing may be negative before antibodies develop and cannot predict whether you will become ill. Testing is chosen when your symptoms and exposure suggest a particular infection.

Sources

- Centers for Disease Control and Prevention: What to Do After a Tick Bite , tick removal and follow-up guidance
- Centers for Disease Control and Prevention: Clinical Care and Treatment of Lyme Disease , diagnosis, treatment, and post-exposure considerations

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- Lantos PM, et al. Clinical Practice Guidelines by IDSA, AAN, and ACR: Prevention, Diagnosis and Treatment of Lyme Disease , Clinical Infectious Diseases , 2021;72(1):e1-e48
- US Environmental Protection Agency: Find the Repellent That Is Right for You , registered repellents and label-based use
- NHS: Insect bites and stings , tick removal, self-care, and signs requiring medical help