CONDITION

Mountain fever

Mountain fever is a tick-borne viral infection that causes fever, headache, muscle aches, and tiredness.

WHAT IT IS
Tick-borne viral infection called Colorado tick fever

BODY SYSTEM
Whole body and blood

MAIN SYMPTOMS
Fever, headache, muscle aches, severe tiredness

WHAT CAUSES IT
Colorado tick fever virus spread by infected ticks

HOW IT IS DIAGNOSED
Blood PCR early; antibody tests later

MAIN TREATMENT
Rest, fluids, and symptom relief

CAN IT BE CURED?
Yes - most infections clear naturally

IS IT AN EMERGENCY?
Sometimes - confusion, seizure, or breathing trouble

LONG-TERM OUTLOOK
Most recover fully; tiredness may last weeks

Overview

Mountain fever usually means Colorado tick fever , a viral infection spread by infected ticks. It occurs mainly in mountainous parts of the western United States and western Canada.

The virus is carried by the Rocky Mountain wood tick. A person can become infected when an infected tick attaches and feeds. The infection does not normally spread through everyday contact with another person.

Mountain fever often causes a sudden fever, headache, body aches, and marked tiredness. The fever may improve for a few days and then return. Most people recover with rest, fluids, and care for their symptoms.

The condition matters because its symptoms can resemble other infections spread by ticks.

Some of those infections, including Rocky Mountain spotted fever, need prompt antibiotic treatment. Medical assessment and testing can help tell them apart.

Despite the similar names, mountain fever is not the same as acute mountain sickness , which is caused by travelling to high altitude too quickly. It is also not the same as Rocky Mountain spotted fever, which is caused by bacteria rather than a virus.

Symptoms

Symptoms usually begin within 1 to 14 days after an infected tick bite. You may not remember being bitten because ticks can be small and may attach in a hidden area.

Common symptoms include:

Some people develop a sore throat or a mild rash. A rash is not a main feature, so its absence does not rule out the infection.

The fever may follow a two-stage pattern. It improves or disappears for a short time and then returns. This is sometimes called a biphasic fever , meaning a fever with two separate phases.

Blood tests may show fewer white blood cells, which help fight infection, and fewer platelets, which help blood clot. These changes do not always cause noticeable symptoms.

Most infections are mild to moderate. Less commonly, the virus affects the brain or the tissues around it. Possible symptoms include confusion, unusual sleepiness, a stiff neck, seizures, or problems with balance. These need urgent assessment.

- Sudden fever and chills
- Headache, often behind the eyes
- Muscle and joint aches
- Severe tiredness or weakness
- Sensitivity to light
- Nausea, vomiting, or abdominal discomfort

Causes and risk factors

Mountain fever is caused by Colorado tick fever virus. The main carrier is the Rocky Mountain wood tick, scientifically named Dermacentor andersoni .

These ticks are found in wooded, brushy, and grassy areas, often at moderate or high elevations. Exposure is more likely during the warmer months when ticks are active. Local

timing differs with climate, altitude, and weather.

Your chance of exposure may be higher if you spend time:

The virus is not spread by coughing, touching, sharing food, or other routine contact. Rare transmission through donated blood has occurred because the virus can remain in red blood cells after symptoms improve.

A tick bite does not mean that you have mountain fever. Most ticks are not carrying this virus, and many other conditions can cause similar symptoms.

- Hiking, camping, hunting, or working outdoors
- In mountainous areas of the western United States or Canada
- Walking through long grass, brush, or wooded ground
- Around pets or equipment that can carry unattached ticks indoors

Diagnosis

A healthcare professional will ask about your symptoms, recent travel, outdoor activities, and possible tick exposure. Mention time spent in mountain or wooded areas even if you did not see a tick.

Mountain fever is confirmed with specialised blood testing. During the early stage, a PCR test can look for the virus's genetic material. This is often most useful during the first week of illness.

Antibody tests look for proteins made by your immune system in response to the virus. These antibodies may take two or more weeks to become detectable. A later blood sample may therefore be needed if an early antibody test is negative.

A complete blood count may show low white blood cell or platelet levels. These findings can support the diagnosis but cannot confirm it because many infections cause similar changes.

Testing may also be needed for other tick-borne infections. This is important because antibiotics like amoxicillin or doxycycline do not treat mountain fever but may be needed for a bacterial infection such as Rocky Mountain spotted fever. Treatment for a suspected bacterial infection may begin before every result is available.

Treatment and management

There is no specific antiviral treatment that has been proven to clear Colorado tick fever virus.

Antibiotics do not work against it because antibiotics treat bacteria, not viruses.

Care usually focuses on easing symptoms while your immune system clears the infection. This may include rest, enough fluids to prevent dehydration, and suitable medicine for fever or pain.

Ask a healthcare professional or pharmacist which fever medicine is appropriate for you. Aspirin is generally avoided, especially in children and teenagers. Mountain fever can lower platelet levels, and aspirin can increase bleeding risk. Aspirin is also associated with a rare but serious childhood condition called Reye syndrome when used during some viral infections.

If nausea makes drinking difficult, small and frequent amounts of fluid may be easier to tolerate. Signs of dehydration include a dry mouth, dark urine, passing very little urine, and dizziness when standing.

People with severe symptoms may need hospital care. Treatment there can include fluids through a vein, monitoring of blood counts, seizure treatment, breathing support, or other care based on the complication.

Complications

Most people recover without lasting complications. Severe problems are uncommon, but they can occur.

The virus can sometimes affect the brain or the lining around the brain. This may cause encephalitis , meaning inflammation of the brain, or meningitis , meaning inflammation of its protective lining. Symptoms can include severe headache, stiff neck, confusion, seizures, or reduced alertness.

A low platelet count can increase the chance of bruising or bleeding. Serious bleeding is unusual, but blood in vomit or stool, uncontrolled bleeding, or widespread unexplained bruising needs urgent assessment.

Other reported complications include inflammation affecting the heart or other organs. These are not typical of an uncomplicated infection.

Children may be more likely than adults to develop nervous system complications. Anyone with worsening neurological symptoms should receive emergency care.

Prevention

There is no vaccine for mountain fever. Not every tick exposure can be prevented, but reducing tick bites lowers the chance of infection.

When you are in tick habitats:

Check less visible areas such as the scalp, behind the ears, armpits, waist, groin, behind the knees, and between the toes.

Remove an attached tick promptly with clean, fine-tipped tweezers. Grasp it close to the skin and pull upward with steady pressure. Do not twist, crush, burn, or cover it with petroleum jelly. Clean the bite area and your hands afterward.

If you have been diagnosed with mountain fever, tell a blood donation service before donating. The virus can remain in red blood cells after you feel better, so the service may require a waiting period.

- Use an insect repellent registered for use against ticks
- Treat clothing and outdoor equipment with permethrin as directed
- Wear long trousers and tuck them into socks where practical
- Walk near the centre of trails and avoid brushing against vegetation
- Check your body, clothing, children, pets, and equipment afterward
- Shower soon after returning indoors

Living with it and what to expect

The main illness commonly lasts several days to a few weeks. Fever may stop and return before settling completely. Headache and muscle aches usually improve as the fever passes.

Tiredness and weakness can continue for several weeks. Returning to work, school, exercise, or outdoor activity gradually may be more manageable than trying to resume everything at once. Rest when symptoms increase, and keep drinking enough fluid.

An uncomplicated infection does not usually cause ongoing organ damage. The virus may remain detectable in red blood cells for a time, but this does not mean that everyone has continuing symptoms or remains unwell.

Arrange routine follow-up if your fever is not settling, symptoms return after improving, or tiredness continues to interfere with daily life. Follow-up may include checking blood cell counts or reconsidering whether another infection is present.

Recovery is not identical for everyone. Age, the severity of the initial infection, complications, and other health conditions can affect how quickly strength returns.

When to get medical help

Contact a healthcare professional promptly if you develop fever, severe tiredness, headache, or muscle aches after a tick bite or after spending time in a western mountain area. Do not wait for a rash, since mountain fever often causes no rash.

Seek urgent same-day care if you have:

Call emergency services for:

These symptoms do not prove that mountain fever is the cause. They can occur with several conditions that need rapid assessment.

- Repeated vomiting or difficulty keeping fluids down
- Very little urine, faintness, or other signs of dehydration
- Worsening headache, unusual bruising, or bleeding
- Fever that is persistent, returns, or is getting worse
- Symptoms that improve and then become significantly worse
- Confusion, difficulty waking, or loss of consciousness
- A seizure
- Severe breathing difficulty
- A severe headache with a stiff neck or new weakness
- Heavy or uncontrolled bleeding

Common questions

Is mountain fever the same as altitude sickness?

No. Mountain fever is a viral infection spread by ticks. Altitude sickness develops when the body does not have enough time to adjust to lower oxygen levels at high altitude. The two conditions can occur in similar places but have different causes.

Is mountain fever the same as Rocky Mountain spotted fever?

No. Mountain fever, or Colorado tick fever, is caused by a virus. Rocky Mountain spotted fever is caused by bacteria and is treated with antibiotics. Their early symptoms can overlap, so medical assessment is important.

Can mountain fever spread from person to person?

It does not spread through ordinary contact, coughing, or sharing food. Rare transmission

through donated blood has occurred because the virus can remain in red blood cells for a period after infection.

Will I need antibiotics for mountain fever?

Antibiotics do not treat the virus that causes mountain fever. However, a healthcare professional may prescribe antibiotics if another tick-borne bacterial infection is possible. Do not stop prescribed treatment based only on a suspected mountain fever diagnosis.

How long does mountain fever last?

Fever and body aches often settle within days to a few weeks. The fever may disappear and then return once. Tiredness can last for several weeks, especially after a more intense illness.

Can I get mountain fever more than once?

Infection is thought to produce long-lasting immunity, so a second confirmed infection appears uncommon. You should still prevent tick bites because ticks can carry other infections.

Sources

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