CONDITION

Field fever

Field fever is a form of leptospirosis caused by contact with water or soil contaminated by infected animal urine.

WHAT IT IS
Acute bacterial infection affecting the whole body

BODY SYSTEM
Whole body, especially kidneys and liver

MAIN SYMPTOMS
Sudden fever, headache, muscle aches, red eyes

WHAT CAUSES IT
Leptospira bacteria from infected animal urine

HOW IT IS DIAGNOSED
Blood or urine PCR and antibody tests

MAIN TREATMENT
Antibiotics and supportive hospital care when severe

CAN IT BE CURED?
Yes - antibiotics usually clear the infection

IS IT AN EMERGENCY?
Sometimes - breathing difficulty or reduced urination

LONG-TERM OUTLOOK
Most recover, but severe organ damage can be life-threatening

Overview

Field fever is an older name for a form of leptospirosis , an infection caused by Leptospira bacteria. The name reflects its link with outdoor work and exposure to wet soil, mud, or surface water contaminated by the urine of infected animals.

Rodents are important carriers, but livestock, dogs, and wild animals can also carry the bacteria. An animal may appear healthy while releasing bacteria into its urine.

The bacteria can enter your body through broken or softened skin, or through the eyes, nose, or mouth. Infection may follow work or recreation in floodwater, rivers, farms, drainage systems, or other wet environments.

Some infections cause a short, flu-like illness. Others affect the kidneys, liver, lungs, heart, or

tissues around the brain. Early symptoms can resemble many other infections, so exposure history and laboratory testing are important.

Symptoms

Symptoms usually begin suddenly. They can appear 2 to 30 days after exposure, although 5 to 14 days is typical.

Common symptoms include:

Some people develop a rash. Others have mild symptoms or no symptoms at all.

The illness may improve and then return. This is sometimes called a two-phase , or biphasic, illness. During the later phase, inflammation may affect organs or the tissues surrounding the brain and spinal cord.

Signs of more serious illness can include yellow skin or eyes, reduced urination, chest pain, shortness of breath, coughing blood, confusion, or unusual bleeding. Yellowing caused by liver problems is called jaundice .

- Fever and chills
- Severe headache
- Muscle aches, often affecting the calves or lower back
- Red eyes without much discharge
- Nausea, vomiting, diarrhoea, or abdominal pain
- Marked tiredness

Causes and risk factors

Field fever is caused by Leptospira bacteria. Infected animals release the bacteria in their urine. The bacteria may survive for weeks or months in suitable warm, wet conditions.

You can become infected through direct contact with animal urine or through contaminated water, mud, soil, food, or drink. The risk is higher when contaminated water reaches a cut, graze, skin rash, or the moist surfaces of the eyes, nose, or mouth. Long exposure to water can soften apparently unbroken skin and make entry easier.

Activities linked with exposure include:

Risk is influenced by local climate, flooding, sanitation, animal populations, and the type of work or activity. The infection is more common in tropical areas but can occur in many parts of

the world.

Spread between people is very uncommon. Field fever is not normally caught through ordinary social contact.

- Farming, veterinary work, sewer work, and animal handling
- Cleaning places affected by rodents
- Wading or swimming in untreated freshwater
- Adventure racing, camping, or military training
- Contact with floodwater or mud after heavy rain

Diagnosis

Symptoms alone cannot confirm field fever. A clinician will consider recent travel, flooding, outdoor activities, work, freshwater contact, and exposure to rodents or other animals.

Blood tests may check for kidney or liver injury, changes in blood cells, and other signs of inflammation. These results help assess severity but do not identify the infection by themselves.

Tests that can confirm leptospirosis include:

The best sample depends partly on when symptoms began. An antibody test may be negative early because antibodies have not yet developed. A later sample may therefore be needed.

Bacterial culture is possible, but it is slow and requires specialist methods. Treatment may begin before confirmation when symptoms and exposure make leptospirosis a strong possibility.

- PCR testing , which looks for bacterial genetic material in blood, urine, or other samples
- Antibody testing , which checks whether your immune system has reacted to the bacteria
- Microscopic agglutination testing , or MAT, a specialised antibody test often performed in reference laboratories

Treatment and management

Antibiotics like amoxicillin or doxycycline are used to treat field fever. Treatment is generally started as early as possible rather than waiting for every laboratory result.

Mild illness can often be managed with an oral antibiotic, fluids, rest, and treatment for fever or

pain. The antibiotic selected is based on factors such as illness severity, pregnancy, age, allergies, and local practice.

Severe illness requires hospital care. Antibiotics may be given into a vein. Monitoring and supportive treatment may include:

Fluid treatment must be managed carefully when the kidneys, heart, or lungs are affected.

Do not use leftover antibiotics or rely on antibiotics obtained without an assessment. Other infections can cause similar symptoms, and the right treatment may differ.

After severe illness, follow-up blood and urine tests may be needed to check whether kidney or liver function is returning toward normal.

- Intravenous fluids and careful management of body salts
- Oxygen or breathing support
- Dialysis if the kidneys cannot adequately filter the blood
- Treatment for bleeding, low blood pressure, or heart complications

Complications

Many people recover without complications. However, leptospirosis can sometimes cause widespread inflammation and organ injury.

Possible complications include:

Severe lung bleeding, major kidney injury, or failure of multiple organs can be life-threatening. These complications are reasons for urgent hospital treatment, not the expected course for everyone with field fever.

- Acute kidney injury
- Liver inflammation and jaundice
- Meningitis, meaning inflammation around the brain and spinal cord
- Bleeding in the lungs and severe breathing problems
- Inflammation of the heart muscle or an abnormal heart rhythm
- Low blood pressure and failure of several organs

Prevention

Field fever cannot always be prevented, especially during floods or when exposure is part of

essential work. Reducing contact with potentially contaminated animal urine, water, and soil lowers the chance of infection.

Practical precautions include:

Do not assume water is safe because it looks clean. During flood cleanup, follow local public health advice and use protective equipment suited to the task.

Vaccines for some animals may reduce illness, but vaccinated animals can still require veterinary care and control measures. Human vaccines are not widely available in many countries.

- Avoid swimming or wading in potentially contaminated freshwater
- Keep floodwater away from your eyes, nose, mouth, and broken skin
- Cover cuts with waterproof dressings before wet or muddy work
- Wear waterproof gloves, boots, and suitable protective clothing
- Wash exposed skin after contact with mud, floodwater, or animals
- Use safe drinking water and avoid swallowing untreated surface water
- Store food securely and reduce rodent access to homes and workplaces

Living with it and what to expect

Most people with mild field fever recover over days to a few weeks after appropriate care. Fever and severe aches usually improve before energy levels fully return.

Tiredness, weakness, headache, or muscle discomfort can continue for several weeks. Recovery after kidney, liver, lung, or nervous system complications may take longer and may require specialist follow-up or rehabilitation.

Leptospirosis is usually an acute infection rather than a condition that steadily worsens for years. It does not normally remain contagious through everyday contact. Having had it does not provide reliable protection against every type of Leptospira , so another infection is possible after a new exposure.

Keep routine follow-up appointments if you had abnormal kidney or liver tests, needed hospital care, or still have symptoms. Seek a review sooner if recovery stops progressing, fever returns, or new symptoms develop.

When to get medical help

Arrange prompt medical assessment if you develop fever, headache, muscle aches, vomiting, or red eyes after contact with floodwater, untreated freshwater, rodents, livestock, or animal urine. Mention the exposure and when it occurred.

Routine follow-up is appropriate for lingering tiredness or mild aches that are gradually improving. Contact a healthcare service if symptoms persist, return, or interfere with drinking, eating, urination, or normal activity.

Seek urgent medical help for:

Call emergency services for severe breathing difficulty, coughing blood, collapse, or difficulty waking. These symptoms can indicate serious lung, circulation, or organ problems.

- Yellow skin or eyes
- Much less urine than usual
- Repeated vomiting or inability to keep fluids down
- New confusion, severe drowsiness, or a stiff neck
- Chest pain, fainting, or an irregular heartbeat
- Unusual bruising or bleeding

Common questions

Is field fever the same as leptospirosis?

Field fever is an older term usually used for leptospirosis associated with outdoor, agricultural, or freshwater exposure. Because the term is not very precise, healthcare services and laboratories generally use the name leptospirosis.

Can I catch field fever from another person?

Person-to-person spread is very uncommon. Most infections come from contact with urine from infected animals or with contaminated water, mud, or soil. Normal household or social contact is not considered a usual route of infection.

Can I get field fever from floodwater?

Yes. Floodwater may carry animal urine and contaminated soil. Risk is greater if the water enters your eyes or mouth, or touches damaged or water-softened skin. Contact does not mean you will become ill, but symptoms afterward need prompt assessment.

How long does field fever last?

A mild illness may improve over several days to a few weeks. Tiredness and muscle weakness

can last longer. Severe organ complications may require weeks or months of recovery and medical follow-up.

Will I need a hospital stay?

Not everyone does. Mild infections may be treated outside hospital if you can drink, take treatment, and remain medically stable. Kidney problems, jaundice, breathing symptoms, bleeding, confusion, low blood pressure, or severe dehydration usually require hospital assessment.

Can field fever come back?

Symptoms can briefly improve and then return during the same infection. A separate future infection is also possible because there are many types of Leptospira , and immunity to one type may not protect against another.

Sources

- Centers for Disease Control and Prevention. About Leptospirosis
- Centers for Disease Control and Prevention. Clinical Overview of Leptospirosis
- Centers for Disease Control and Prevention. CDC Yellow Book : Leptospirosis
- World Health Organization. Human Leptospirosis: Guidance for Diagnosis, Surveillance and Control . 2003
- European Centre for Disease Prevention and Control. Leptospirosis factsheet
- Haake DA, Levett PN. Leptospirosis in humans. Current Topics in Microbiology and Immunology . 2015;387:65-97. doi:10.1007/978-3-662-45059-8_5