



## Who

*Rickettsia* infections may cause human disease on six continents. Infection is more common in rural and suburban locations. All travelers are at risk of acquiring infection during travel to endemic areas. Transmission occurs throughout the year but is increased during outdoor activities.



## What

The causative bacteria all belong to the *Rickettsia* genus of which some occur worldwide, while others occur only in certain geographic regions. Many live in host animals, like rats and mice and are spread to people by rat or cat fleas, body lice, ticks or mites that have previously fed on an infected animal. The rickettsial pathogens may be subdivided into the spotted fever group, the typhus group, the scrub typhus group, and a rest group.



## Where and when

Tick-borne rickettsioses are mainly reported among those who go on safari in Africa. Mediterranean spotted fever may occur in southern Europe, Africa, India, and the Middle East. Rocky Mountain spotted fever occurs throughout much of the Western Hemisphere, including cases reported from Central and South America. Scrub typhus is endemic to Japan, Southeast Asia, the Indian subcontinent and parts of Russia. Flea-associated rickettsioses are globally distributed, particularly in coastal regions with large rodent populations. Epidemic typhus can occur in refugee camps or homeless populations where body lice are prevalent.

## Prevention

No vaccine is available for preventing infections. Travelers should minimize exposure to lice, fleas, ticks, and mites during travel and to animal reservoirs when traveling in endemic areas. The proper use of insect or tick repellents, self-examination after visits to vector-infested areas, and wearing protective clothing are ways to reduce risk.



## Symptoms

Most rickettsioses cause moderate illness, but some spotted fevers may be fatal in 20%–60% of untreated cases. Common symptoms that typically develop within 1–2 weeks after infection include fever, headache, intense muscle pains, nausea, or vomiting. Many infections are accompanied by a rash or sometimes an eschar ('tache noire') at the inoculation site of the tick or mite bite.



## Treatment

Antimicrobial therapy, generally administered for 5-7 days, has resulted in a marked reduction in the mortality of severe infections. Most patients can be treated with oral doxycycline as an outpatient. Azithromycin can be used as an alternative agent for individuals with mild disease.

## In case of infection

Treatment of *Rickettsia* infection should begin when the disease is suspected and while awaiting confirmatory testing, as certain infections can be rapidly progressive. Prompt treatment is essential and results in improved outcomes. Confirmation of the diagnosis is currently mainly achieved by detection of antibodies in blood.