

# Leptospirosis

## Traveler Summary

### Key Points

- Leptospirosis, which occurs worldwide, is an acute bacterial infection acquired mainly through contact with freshwater or soil contaminated with urine of infected animals.
- Risk is high for travelers going to endemic areas who engage in water sports in contaminated freshwater bodies, camp or hike in standing water (especially during or shortly after heavy rain), or who reside in rodent-infested areas.
- Symptoms are highly variable and include sudden fever, chills, severe muscle aches, jaundice, and headache.
- Consequences of infection rarely occur but can include kidney and/or liver failure and meningitis (worsening headache, eye pain, light sensitivity, and mental status changes).
- Prevention includes avoiding exposure to potentially contaminated water, soil, or animal urine. Doxycycline taken before and during exposure can reduce risk of infection in persons at high risk.
- No vaccine is available.

### Introduction

Leptospirosis is an acute bacterial infection resulting in symptoms such as sudden high fever, chills, headache, and abdominal pain. Transmission is through direct contact with contaminated freshwater, soil, or animal urine.

### Risk Areas

Leptospirosis occurs worldwide, especially during (or soon after) rainy seasons in most temperate and tropical areas. Cases among US travelers going to the Caribbean and Central America have occurred following heavy rainfall and flooding. Cases among European travelers have most commonly been acquired in Southeast Asia; leptospirosis is the most common cause of life-threatening infections in travelers going to that region. About 100 to 200 new cases per year are reported in the US, more than half of which occur in Hawaii. Outbreaks in urban areas are frequently associated with the presence of infected rodents and dogs in the community.

### Transmission

Leptospirosis is acquired through direct contact with contaminated freshwater, soil, or animal urine (via open skin or mucous membranes of the eyes, nose, or mouth). Leptospire gain access to the body through skin lesions or abrasions, the lining of the mouth, or waterlogged skin after prolonged immersion.

Rarely, the bacteria is transmitted through inhalation of contaminated aerosols or consumption of infected tissues.

### Risk Factors

Risk is high for adventure travelers who engage in water sports (such as swimming, rafting, or kayaking) in contaminated freshwater bodies, or hiking, biking, or camping in areas of standing water (such as puddles or ponds), especially during (or soon after) periods of heavy rainfall. Persons residing in rodent-infested areas and/or whose activities expose them to animals or heavily contaminated environments are also at risk.

### Symptoms

Symptoms most commonly occur in 2 main phases, with disease severity ranging from mild (90% of cases) to severe. The first phase typically occurs 5 to 14 days (range: 2-30 days) following exposure, with chills, fever, headache, and muscular and abdominal pain lasting for about 1 week. The second phase presents with meningitis symptoms (worsening headache, eye pain, light sensitivity, and mental status changes) and jaundice.

### Consequences of Infection

Serious illness rarely occurs, but complications can include kidney and liver failure, shock, cardiac abnormalities, and death.

## Need for Medical Assistance

Travelers who develop symptoms of (or suspect exposure to) leptospirosis should seek medical attention for evaluation of the need for postexposure treatment, which may include antibiotics.

## Prevention

Avoid the risk behaviors described above. Wear protective clothing or footwear during recreational activities that might involve exposure to contaminated water or soil. Carefully wash or avoid fresh vegetables grown in soil with suspected contamination. Observe hand hygiene (frequent, thorough handwashing). Doxycycline, as prescribed by a health care provider, can also prevent leptospirosis infection.

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