

QUICK LINKS**Bartonellosis—TRAVELER INFORMATION**

- [Introduction](#) • [Transmission](#) • [Risk Factors](#) • [Symptoms](#) • [Prevention](#)
- [Need for Medical Assistance](#)

Traveler Information

BARTONELLOSIS**INTRODUCTION**

Bartonellosis is a potentially fatal disease caused by the bite of a sand fly carrying the *Bartonella* bacteria (*B. bacilliformis*). The acute phase of the disease is called "Oroya fever," while the chronic phase is characterized by distinctive skin lesions known as "verruca peruana" (or Peruvian wart). There are other human diseases associated with members of the genus *Bartonella* (e.g., trench fever, cat-scratch disease), but none of these other *Bartonella* infections are a travel-related risk.

TRANSMISSION

Bartonellosis is transmitted by the bite of infected sandflies. These sandflies are very small (about one-third the size of most mosquitoes) and noiseless. They prefer to rest during the day in cracks in the walls of homes or in termite hills, tree trunks, fissures in the ground, and rodent burrows. Most of the sandflies biting activity is at dusk, night, or before sunrise, but they can bite during the day if disturbed in their resting areas. The bite is usually painless but can become very itchy shortly after it occurs. Symptoms of Oroya fever typically develop 3 to 4 weeks after the bite but can take as long as 16 weeks to appear. The chronic phase develops weeks or months later; these lesions sometimes are the first sign of infection.

RISK FACTORS

Most infecting bites occur outdoors, near the insects' breeding and resting sites. The highest risk is for persons sleeping outside without suitable clothing. Transmission seems to occur year-round in the endemic areas. The risk for short-term travelers is low, but the recent increase in adventure travel and eco-tourism will likely increase the possibility of transmission for visitors to the endemic areas.

Human bartonellosis is confined to an area of the South American Andes in Peru, and Ecuador. Altitude is also a factor, with the endemic zone ranging from 500 to 3,400 meters above sea level.

Most cases occur in Peru, typically in the river valleys of the West Andes and, less commonly, the inter-Andean valleys of the central and east Andes. More recently, the disease has emerged in 2 areas not traditionally considered endemic, the high jungle of the departments of Amazonas, Cajamarca, and Huanuco, and the rural valley of Cuzco. While the Amazonas focus is located in a relatively remote area around the Utcubamba River valley, the Cuzco focus includes high-altitude areas in the Sacred Valley of the Incas near Cuzco city, a region that attracts significant numbers of backpackers and other travelers.

In Ecuador, most cases are reported from Loja, Guayas, and the Zamora Chinchipe province, where outbreaks have been occurring since 1938. Since 1987, bartonellosis has expanded into the lowland province of Manabi in a milder, mostly cutaneous form.

SYMPTOMS

Bartonellosis typically involves 2 stages:

The acute phase (Oroya fever) is characterized by fever, malaise, headaches, weakness, muscle aches, and exhaustion. As the disease progresses, other symptoms occur, such as anemia, enlarged kidney and spleen, swollen lymph glands, and mental status changes. Seizures, pulmonary edema, and generalized connective tissue edema can occur in some patients. If left untreated, this phase carries a fatality rate of up to 90%.

The chronic phase (verruca peruana) begins 2 to 8 weeks after recovery from the acute phase (or sometimes without a previously recognizable acute phase). It is characterized by the appearance of lesions that can persist for months or years and can be

accompanied by local pain and intermittent systemic symptoms.

PREVENTION

There is no vaccine for bartonellosis. Therefore, persons in an area where this disease occurs should avoid exposure to sandflies, particularly during the night and early morning hours, when biting is most likely. Observe standard insect precautions, but remember that the tiny sandflies can penetrate standard mosquito nets. DEET-based insect repellents are generally effective.

NEED FOR MEDICAL ASSISTANCE

Persons who suspect that they may have acquired bartonellosis should contact an experienced healthcare provider as soon as possible. Oroya fever is a very serious, potentially fatal illness, but early diagnosis and treatment can drastically reduce the potential for a fatal outcome.

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