

Transmission

Cat scratch disease (CSD), *Bartonella henselae*

People can get CSD from the scratches of domestic or feral cats, particularly kittens. The disease occurs most frequently in children under 15. Cats can be infested with infected fleas that carry *Bartonella* bacteria. These bacteria can be transmitted from a cat to a person during a scratch. Some evidence suggests that CSD may be spread directly to people by the bite of infected cat fleas, although this has not been proven.

CSD occurs worldwide, wherever cats live. Stray cats may be more likely than pets to carry *Bartonella*. In the United States, most cases of CSD occur in the fall



**Vectors of
Bartonella spp.
infections**

and winter.

Ticks may carry some species of *Bartonella* bacteria, but there is currently no causal evidence that ticks can transmit *Bartonella* infection to people through their bites.

Trench fever, *Bartonella quintana*

Trench fever is transmitted by the human body louse. Because of its association with body louse infestations, trench fever is most commonly associated with homelessness or areas of high population density and poor sanitation. Trench fever received its name during World War I, when many soldiers fighting in the European trenches were infested with infected body lice and became sick with the disease.

Trench fever occurs worldwide. Cases have been reported from Europe, North America, Africa, and China.

Carrión's disease,



Bartonella bacilliformis

Carrión's disease, formerly known as bartonellosis, is transmitted by bites from infected sand flies (genus *Lutzomyia*). Carrión's disease only occurs in the Andes Mountains at 3,000 to 10,000 ft. in elevation in western South America, including Peru, Colombia, and Ecuador. Most cases are reported in Peru.

A few cases of Oroya fever and verruga peruana (Peruvian warts) have been reported in travelers who returned from the Andean highlands in South America, but the risk is low. Much is still unknown about which animals may be a part of the natural cycle of this disease.

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Content source: [Centers for Disease Control and Prevention](#), [National Center for Emerging and Zoonotic Infectious Diseases \(NCEZID\)](#), [Division of Vector-Borne Diseases \(DVBD\)](#)



Sand fly



Vectors of Bartonella infections include fleas, body lice, and sand flies.