

Q fever/Query fever

The disease

Q fever is a disease caused by *Coxiella burnetii*, a species of bacteria-like agents that are distributed globally. Cattle, sheep, goats, dogs, cats, birds, rodents, and ticks commonly carry the bacteria. The bacteria is excreted in milk, urine, and feces of infected animals. The bacteria is resistant to heat, drying and many common disinfectants.

Cause

- Inhalation of the organism from air that contains airborne infected material
- Drinking contaminated milk
- Eating contaminated food

Symptoms

Only about one-half of all people infected with *C. burnetii* show signs of illness. **Severe** cases begin with a sudden onset of one or more of the following:

- High fever (up to 104 -105° F)
- Severe headache
- Confusion
- Sore throat
- Chills
- Sweats
- Body fatigue and discomfort
- Pains in the muscles
- Non-productive cough
- Nausea
- Vomiting
- Diarrhea
- Abdominal pain
- Chest pain

The fever usually lasts for 1 to 2 weeks. Weight loss can occur and persist for some time. 30-50 % of patients with a symptomatic infection will develop pneumonia. Most patients will recover to good health within several months without any treatment. Only 1-2 % of people with acute Q fever die of the disease.

Chronic Q fever, characterized by an infection that persists for 6 months or more is uncommon but severe. A serious complication of chronic Q fever is endocarditis, an inflammation of the heart valves.

The incubation period for Q fever varies depending on the number of organisms that initially infected the patient, but is usually 20 days. Those who recover from the infection may possess lifelong immunity against re-infection.

The risk

In the United States, Q fever outbreaks have resulted mainly from occupational exposure involving veterinarians, meat processing plant workers, sheep and dairy workers, livestock farmers and researchers at facilities housing sheep.

Prevention

- Appropriate disposal of animal birth products
- Restrict access to barns and laboratories used in housing potentially infected animals
- Use only pasteurized milk and milk products
- Quarantine imported animals

Treatment

Doxycycline is the treatment of choice for acute Q fever. Antibiotic treatment is most effective when initiated within the first 3 days of illness. Therapy should be started again if the disease relapses.

A vaccine for Q fever has been developed and has successfully protected humans in occupational settings in Australia. This vaccine is not commercially available in the United States.