

Coxiella burnetti

Q Fever

C. burnetti is a risk group 3 bacterium and a select agent in the United States. It is considered a **reproductive pathogen** as infection can cause placental localization, which can lead to spontaneous abortion, stillbirth, premature delivery, and intrauterine growth restriction. Other adverse outcomes include miscarriage, premature birth, and low birth weight.

How can I be exposed to *C. burnetti*?

- Exposure occurs most commonly by inhalation of contaminated aerosols from amniotic fluid, placenta, or contaminated wool from farm animals.
- Transmission can also occur through direct or indirect contact with infected animals and their dried excreta, hides, straw, wool, and fertilizer.
- Laboratory workers may be exposed by exposure to aerosols, ingestion, or parenteral inoculation. *C. burnetti* accounts for the highest number of rickettsial laboratory acquired infections (LAI) and second highest number of all LAIs up to 1976.

How can I protect myself from exposure?

- Avoid direct skin contact by wearing protective clothing and gloves.
- Avoid mucous membrane exposure by using eye/face protection for procedures that may produce splashes.
- Avoid respiratory exposure by using a biosafety cabinet or other primary containment device and wearing a respirator for procedures that may produce aerosols, particularly centrifugation, resuspension of pellets, and washing.
- The use of needles, syringes, and other sharp objects should be strictly limited, and additional precautions should be taken when working with animals.

What should I do if I think I've been exposed?

Wash the affected area immediately for 15 minutes with soap and water and seek medical attention. Notify EHS for required reporting to CDC.

What symptoms should I look for after a potential exposure?

Symptoms can vary widely. Acute Q Fever can present as flu-like illness, febrile illness including severe headaches, cough, muscle pain, joint pain, pericarditis, chills, weakness, malaise, and severe sweats. Pneumonia is caused by inhalation of aerosols. Hepatitis is a common manifestation of Q Fever in some countries.

How long does it take for symptoms to develop?

Symptoms develop between 13-28 days if acquired through the respiratory route. Symptoms can appear 24-48 hours when acquired through other routes, such as needlestick or animal bite.

Is there a treatment or vaccine?

Treatment includes a regimen of antibiotics. Vaccines are not available for use in the United States; the only licensed vaccine is exclusively available in Australia.

Can I transmit it to other people?

While rare, transmission has been reported among hospital staff and autopsy attendants.

Can I transmit it to my pets?

No, transmission is from animals to humans.

Can it survive on surfaces?

C. burnetti can withstand harsh environmental conditions, surviving in soil, contaminated buildings, food, and fomites for years.

See Pathogen Safety Data Sheet for More Information

