

## Q FEVER


**Background:**

Q fever is a zoonotic disease caused by the bacteria *Coxiella burnetii*, a rickettsial agent. Cattle, sheep and goats are the primary reservoirs in naturally-occurring illness and infection occurs from inhalation of organisms during handling and processing of animals. As a bio-weapon, Q fever would be an incapacitating agent and would not be expected to cause a high percentage of fatalities. Person-to-person transmission is not expected to occur.

**Incubation Period:**

Usually 10 to 40 days

**Signs/Symptoms:**

- 1) One-half of all exposed individuals will be asymptomatic (seroconversion only).
- 2) Acute cases may resemble a flu-like illness or atypical pneumonia and include high fever, severe headache (retro-orbital pain), general malaise, myalgias, confusion, sore throat, chills, sweats, nonproductive cough, nausea, vomiting, diarrhea, abdominal pain and chest pain  (*meningismus in children*).
- 3) The fever may last 1 to 2 weeks.
- 4) Pneumonia may develop in 30 to 50 percent of symptomatic patients.
- 5) Abnormal liver function tests may be seen.
- 6) Most patients recover without treatment.
- 7) Chronic infection is uncommon but may occur with resulting endocarditis.
- 8) Mortality rate is low (1 to 2 percent).

**Laboratory and Diagnostic Testing:**

Call the local department of public health and IDPH with all suspected cases of *Coxiella burnetii* infection. Confirmation is made by specialized antibody testing by ELISA or fluorescent antibody testing.

**Treatment:**

There is not a commercially-available vaccine for Q fever.

Category	Initial Therapy	Duration
Adults	Doxycycline: 100 mg PO, BID <b>or</b> Tetracycline: 500 mg PO, QID <i>Quinolones, chloramphenicol and trimethoprim-sulfamethoxazole also are probably effective</i>	15 to 21 days
Children > 8 years old	Doxycycline: If ≥ 45 kg, 100 mg PO, BID If < 45 kg, 2-5 mg/kg BID (maximum dose 200 mg/d)	15 to 21 days
≤ 8 years old	Co-trimoxazole: 4 mg/kg BID <b>or</b> Chloramphenicol: 12.5 mg/kg PO, BID	15 to 21 days

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Category	Prophylaxis	Duration
Adults	Doxycycline: 100 mg PO, BID <i>or</i> Tetracycline: 500 mg PO, QID	Treat for 5 to 10 days. Treatment may be started 8 to 12 days after exposure. If started prior to this time, onset of illness may be delayed, but not prevented.
Children	Doxycycline: 100 mg PO, BID <i>or</i> Tetracycline: 25-50 mg/kg PO, QID	Treat for 7 to 14 days. Treatment may be started 8 to 12 days after exposure. If started prior to this time, onset of illness may be delayed, but not prevented.

If a patient develops endocarditis, a multiple antibiotic regimen to include a tetracycline is recommended.