

## **Q-FEVER**

**Q-Fever is an acute febrile Rickettsial disease caused by *Coxiella burnetti*. Cattle, sheep and goats are the primary reservoirs of *C. burnetti*. Organisms are excreted in milk, urine, and feces of infected animals. Most importantly, during birthing, the organisms are shed in high numbers within the amniotic fluids and the placenta. These organisms are resistant to heat, drying, and many common disinfectants, and this enables them to survive for long periods in the environment. Humans are often very susceptible to the disease, and very few organisms may be required to cause infection.**

### **TRANSMISSION**

Airborne dissemination of bacteria from barnyard dust that contains dried placental material, birth fluids, and excreta of infected herd animals commonly transmit q-Fever. Airborne particles containing organisms may be carried downwind for one-half mile or more. Ingestion of contaminated milk, followed by regurgitation and inspiration of the contaminated food, is a less common mode of transmission. Other modes of transmission to humans include tick bites and human-to-human transmission, but these are rare.

### **SYMPTOMS**

Only about half of all people infected with *C. burnetti* show signs of clinical illness. The incubation period is 2-3 weeks. Most acute cases begin with sudden onset of one or more of the following: high fevers (up to 104-105 F), severe headache, sore throat, chills, sweats, non-productive cough, nausea, vomiting, diarrhea, abdominal pain, and chest pain. Fever usually lasts for 1-2 weeks. Weight loss can occur and persist for some time. Thirty to fifty percent of patients with a symptomatic infection will develop hepatitis. In general, 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.

### **WHO IS AT RISK?**

Occupational exposure, involving veterinarians, meat processing plant workers, sheep and dairy workers, livestock farmers, and researchers at facilities housing sheep have been the cause of Q-fever outbreaks. Prevention and control efforts should be directed primarily toward these groups and environments.

### **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. A vaccine is not commercially available in the United States.

### **PREVENTION**

Standard precautions include wearing gloves when handling items or surfaces potentially soiled with blood or body fluids, and non-intact skin. Masks should be worn in coughing, and gowns to prevent potential splash or splattering. In addition, public health education should be used. Use only pasteurized milk or milk products; vaccinate individuals engaged in research with pregnant sheep or live *C. burnetti*; quarantine imported animals; appropriately dispose of placenta, birth products, fetal membranes, and aborted fetuses at facilities housing sheep and goats; and ensure that holding facilities for sheep are located away from populated areas.