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Q Fever

What is Q fever?
Q fever (Query fever) is an infectious disease that spreads from animals (cattle, sheep and goats) to humans. Q fever is caused by a bacteria called *Coxiella burnetii*. *C. burnetii* can survive for months and even years in dust or soil.

Cattle, sheep and goats are the main sources of *C. burnetii* but other animals can also infect people, including domesticated pets and birds. Animals can carry the Q fever bacteria in tissues involved in birth such as the uterus, placenta and birth fluids. The bacteria are also found in milk, urine and feces of infected animals.

What are the symptoms of Q fever?
Only about 40% of all people infected with *C. burnetii* show signs of clinical illness. Most acute cases of Q fever begin with sudden onset of one or more of the following within two weeks of exposure:

- high fever
- fatigue
- muscle soreness
- chills and/or sweating
- severe headache
- general feeling of sickness and loss of appetite
- dry cough
- loss of appetite
- nausea, vomiting, diarrhea, abdominal pain (more common in children)

Approximately 20-40% of patients with symptomatic infection will develop pneumonia while 40-60% of patients will have abnormal results on liver function tests. Pregnant women who are infected may be at risk for early delivery or miscarriage.

Rarely, a small percentage of ill patients develop chronic Q fever. Chronic Q fever is a severe disease that presents months to years after an acute infection. Endocarditis (inflammation of the inside lining of the heart chambers and heart valves) is the major form of chronic disease.

How do people get Q fever?
People get infected by inhaling infectious droplets and contaminated dusts/particles generated by animals or animal products. People can also get Q fever by drinking unpasteurized milk or dairy products infected with the bacteria and through skin contact. Human-to-human transmission rarely occurs.
**Who is at increased risk for Q fever?**

Anyone who works outdoors and is in contact with infected soil or dust and who has contact with animals, animal products or animal waste.

Some of the occupations at increased risk for Q fever include the following:

- Farmers, ranchers and farm workers in contact with cattle, sheep and goats.
- Stockyard workers, truck drivers, people who service the trucks and visitors to animal auctions.
- Meat packers, rendering plant workers, hide and wool handlers.
- Hunters and trappers.
- Laboratory animal researchers and support staff.
- Workers who care for pets and livestock, including veterinary personnel, pet shop workers and zoo attendants.
- Certain groups of medical and health care workers who have contact with blood, sputum or tissue from infected patients.

**How do I know if I have Q fever?**

Your healthcare provider can order laboratory tests that will show if you are infected with Q fever. Laboratory tests for Q fever measure antibodies that circulate in the blood. Antibodies are protective substances that the body produces as a defense against infectious diseases. Q fever can be diagnosed in patients who develop these antibodies in their blood after being infected by the bacteria *C. burnetii*.

**Is there treatment for Q fever?**

Antibiotics can be given to treat acute Q fever. Patients usually recover quickly when treatment is started within the first three days of symptoms. For chronic Q fever, a combination of antibiotics may be required and have to be taken for several months. Q fever is rarely fatal. Untreated chronic Q fever may be fatal in patients with existing heart disease.

**What can I do to prevent Q fever?**

Workers who have contact with animals, animal products and animal waste should be informed about the disease, its characteristics and the nature of the risk. Procedures should be developed to prevent the release and spread of the Q fever bacteria within the workplace. Procedures include disinfecting or sterilizing areas that may be contaminated with the Q fever bacteria, promoting personal protective measures and workplace hygiene (e.g. proper disposal of birth tissues, use of protective clothing, appropriate respiratory devices).

Avoid consumption of unpasteurized dairy products; *C. burnetii* can be found in the milk of infected animals.

**Where can I get more information?**

For more information about Q fever call Toronto Public Health at 416-338-7600, TTY 416-392-0658.