

Q fever

What is Q fever?

Q fever is a disease caused by the bacterium *Coxiella burnetii*. The disease can occur in two forms: acute (short-term) and chronic (long-term). Q fever has been reported from most parts of the world. However, this disease is rare in the U.S., with fewer than 175 cases reported per year during 2005-2013. A total of 21 cases were reported in Virginia during 2005-2013.

Sheep, cattle and goats sometimes carry *C. burnetii*. It may rarely be carried by cats, dogs, rabbits, birds, rodents and ticks. The organism can survive for long periods in the environment (e.g., in dust, wool, straw, fertilizer, etc.).

Who gets Q fever?

Anyone can get Q fever. However, people with frequent animal exposures (such as veterinarians, researchers, meat workers, and sheep and dairy farmers) are at the most risk.

How is Q fever spread?

Q fever is very rarely spread from person to person. The most common way of becoming infected is by breathing in dust contaminated by the birth fluids, urine, or feces of infected animals. Direct contact with contaminated materials, such as wool, straw, or fertilizer has also been associated with Q fever. In addition, Q fever may very rarely be caused by breathing in *C. burnetii* carried by the wind, by drinking raw milk from infected cows, or by receiving blood or bone marrow transfusions from infected people.

What are the symptoms of Q fever?

About half of the people who get Q fever do not have any symptoms. People who develop acute Q fever may have a sudden onset of fever (up to 105° F), severe headache, muscle aches, and a general feeling of illness. Fever usually lasts for one to two weeks, but may last as long as two months. More severe illness may include pneumonia or inflammation of the liver (hepatitis), heart (myocarditis/pericarditis), or brain (meningitis/encephalitis). Infection during pregnancy can cause miscarriage. A small percentage of people infected with *C. burnetii* develop chronic Q fever. This most often involves infection of the heart valves, but can appear as hepatitis, bone infection (osteomyelitis), or chronic fatigue.

How soon after exposure do symptoms appear?

Symptoms of acute Q fever usually appear within two to three weeks after exposure. Chronic Q fever may occur months to years after exposure.

How is Q fever diagnosed?

Q fever is diagnosed through special laboratory tests on blood.

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What is the treatment for Q fever?

Specific antibiotics can be prescribed by a doctor to treat Q fever. To be effective, treatment should start immediately and continue for several weeks. Chronic Q fever may require years of treatment with antibiotics and possibly heart valve replacement.

How can Q fever be prevented?

Avoid sources of infection and properly disinfect and dispose of animal materials such as hides, bedding, etc. People operating cow and sheep sheds, barns, and laboratories that use such animals should restrict access to these facilities and use precautions. Milk from cows, goats, and sheep should be consumed only if pasteurized. No isolation or exclusion is necessary for persons with Q fever. A Q fever vaccine is not available for use by the general public.

Could Q fever be used for bioterrorism?

Yes. *C. burnetii* is one of the agents that could be used for bioterrorism because it is highly infectious, it is easy to obtain, and it would be easy to spread. Release of Q fever as a bioterrorism agent would likely be in the form of an aerosol.

How can I get more information about Q fever?

- 1) If you have concerns about disease, contact your healthcare provider.
- 2) Call your local health department. A directory of local health departments is located at <http://www.vdh.virginia.gov/LHD/index.htm>.
- 3) Visit the Centers for Disease Control and Prevention website at <http://www.cdc.gov/qfever/>.