Q fever

What is Q fever?

Q fever is a condition caused by the bacterium Coxiella burnetii.

Q fever is usually an acute (immediate) illness, but sometimes it can lead to a chronic (long-term) illness.

Where is the disease found?

Q fever is a disease that occurs around the world.

In Australia the disease is present in all jurisdictions including the Northern Territory, although it is more common in New South Wales and Queensland.

How it is spread?

The bacteria are carried by animals, mostly cattle, sheep and goats but may also be carried by a wide variety of other species of livestock, domesticated pets and wild animals. It is also found in the environment (dust and soil). Infected animals are often well and may not show signs of disease but in some cases, it can lead to miscarriage, still birth and infertility of the animal.

Infection in humans usually occurs by inhalation of the bacteria contained in fine aerosol particles from infected animals shed in the placental (afterbirth, blood, milk, urine or faeces).

Humans can also be infected indirectly from contaminated dust in the environment, which may be a long way from the original source. These bacteria are highly infective and can survive in the environment for a long period of time as they are resistant to heat, drying and common disinfectants.

Less commonly Q fever may be caused by drinking unpasteurised infected milk, by bites from infected ticks or through cuts or skin wounds from contaminated equipment or the environment. Human to human transmission is thought to be very rare.

Incubation

Symptoms occur 2-4 weeks after infection occurs but can be as short as 4 days and as long as 6 weeks.

What are the symptoms?

About 60% of people with Q fever will have no symptoms or only mild symptoms. Q fever can however present with an acute severe flu-like illness, in which they develop one or more of the following symptoms:

- sudden onset of high fever and chills
- profuse sweating

- severe headache (especially behind the eyes)
- muscle pain
- fatigue
- rash
- non-productive cough
- nausea / vomiting / loss of appetite

Some people with acute Q fever may develop pneumonia (chest infection) and hepatitis (inflammation of the liver) during the course of the illness.

Most people make a full recovery from acute Q fever. Death from acute Q fever is rare.

In 1-5% of people, Q fever may persist and cause chronic infection after months or years. Most commonly this affects the heart valves, particularly if there is already underlying valve damage or artificial valves. Chronic bone infection or infection of the blood vessels can also occur.

Up to 20% of those infected develop a post Q fever fatigue syndrome.

Who is at risk?

Occupational groups most commonly at risk include:

- abattoir and meat processing workers
- agricultural and livestock workers
- veterinarians and veterinary nurses
- people visiting stockyards or those coming in contact with infected animal secretions and products of conception
- animal transport workers
- shearers/wool processing workers

How is it diagnosed?

Your doctor can diagnose Q fever based on symptoms, clinical examination and blood samples. Two or more blood samples on separate occasions are usually required to confirm the diagnosis.

What is the treatment?

Antibiotic treatment, usually 14 days of doxycycline is the most effective treatment for acute Q fever. Further treatment may be needed in chronic Q fever or if there are complications.

How can Q fever be prevented?

- Educate workers and the public on the sources of infection
- Emphasise the importance of showering after working in at risk settings and washing clothes as infected particles may be carried on clothing

- Use of personal protective equipment (ppe) and appropriate disposal of birth products from any animals that come in contact with humans
- Unpasteurised milk products should not be consumed.
- Minimise dust and aerosols in slaughter and animal housing areas

Is there a vaccine?

- Vaccination is available for those at increased risk of Q fever to protect against the disease.
- To avoid unnecessary reactions to the Q fever vaccine, a pre-vaccination skin test and a blood test are performed.
- A national Q fever vaccination register stores information about vaccination, vaccine providers and testing (see www.qfever.org).

Contact

For more information contact your nearest Centre for Disease Control.

Location	Phone
Darwin (Top End Region)	(08) 8922 8044 1800 008 002
Katherine (Big Rivers Region)	(08) 8973 9049
Tennant Creek (Central Australia Region)	(08) 8962 4259
Alice Springs (Central Australia Region)	(08) 8951 7540
Nhulunbuy (East Arnhem Region)	(08) 8987 0357

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