

Q fever



Q fever is a bacterial infection that can cause a severe flu-like illness. For some people, Q fever can affect their health and ability to work for many years. The bacteria are spread from animals, mainly cattle, sheep and goats. Even people who do not have contact with animals may be infected. A safe and effective vaccine is available to protect people who are at risk. Screening is required to identify who can be vaccinated.

What is Q fever?

Q fever is a disease caused by the bacterium *Coxiella burnetii*. It is spread to humans from cattle, sheep and goats and a range of other domestic and wild animals. Even people who do not have contact with animals may be infected.

What are the symptoms?

Many infected people have no or few symptoms. People who do become sick often have a severe flu-like illness. Symptoms begin about 2-3 weeks after coming into contact with the bacteria and typically include:

- high fevers and chills
- severe 'drenching' sweats
- severe headaches, often behind the eyes
- muscle and joint pains
- extreme fatigue (tiredness)

Patients may also develop hepatitis (inflammation of the liver) or pneumonia (infection of the lungs). Without treatment, symptoms can last from 2-6 weeks. Illness often results in time off work, lasting from a few days to several weeks. Most people make a full recovery and become immune to repeat infections. Occasionally, people develop chronic infections up to 2 years later which can cause a range of health issues including heart problems (endocarditis). This is more common for pregnant women, people with weakened immune systems or previous heart problems. About 10% of patients who are sick with acute Q fever go on to suffer from a chronic-fatigue-like illness which can be very debilitating for years.

How is it spread?

People usually get infected by breathing in the Q fever bacteria that is in the air or dust. Cattle, sheep and goats are the main sources of infection, however a wide range of animals including domestic and feral dogs and cats, feral pigs, horses, rabbits, rodents, alpacas, camels, llamas, foxes, and Australian native wildlife (including kangaroos, wallabies and bandicoots) can also spread the bacteria to humans. Infected animals often have no symptoms. The bacteria can be found in the placenta and birth fluids (in very high numbers), urine, faeces, blood or milk of animals who are infected with or carry the bacteria. The bacteria can survive in the soil and dust for many years and be spread over several kilometres by the wind.

You can get infected with Q fever by:

- breathing in the bacteria that is in the air or dust:
 - while birthing, slaughtering or butchering infected animals (especially cattle, sheep or goats). These activities carry a very high risk of infection.
 - when handling infected animals, infected animal tissues, fluids or excretions or animal products or materials that have been infected including wool, hides, straw, manure fertiliser and clothes (e.g. washing clothes worn when birthing, butchering or slaughtering animals)
 - while herding, shearing or transporting animals
 - while mowing grass contaminated by infected animal excretions
 - when visiting, living or working in/near a high-risk industry
- direct contact with infected animal tissue or fluids on broken skin (e.g. cuts or needlestick injuries when working with infected animals)
- drinking unpasteurised milk from infected cows, sheep and goats.

Who is at risk?

Workers in the following occupations are at high risk of Q fever:

- abattoir and meat workers
- livestock and dairy farmers and farm workers
- shearers, wool classers/sorters, pelt and hide processors
- stockyard/feedlot workers and transporters of animals, animal products and waste
- veterinarians, veterinary nurses/assistants/students and others working with veterinary specimens
- wildlife workers working with high-risk animals (including Australian native wildlife)
- agriculture college staff and students (working with high-risk animals)
- laboratory workers (working with the bacteria or with high-risk veterinary specimens)
- animal shooters/hunters
- dog/cat breeders, and anyone regularly exposed to animals who are due to give birth
- people whose work involves regular mowing in areas frequented by livestock or wild animals e.g. council employees, golf course workers or staff of mowing businesses in regional and rural areas.

All workers who enter workplaces in which Q fever may be present are also at risk of infection. This includes tradespeople, contractors, labour hire workers, sales representatives, buyers and council workers.

Other people may be at risk of Q fever through contact with high-risk animals outside of work. Infections have also occurred in regional and rural areas by breathing in infected dust and particles in the environment.

Other people at increased risk of Q fever include:

- family members of those in high-risk occupations (from contaminated clothes, boots or equipment)
- people living on or near a high-risk industry (e.g. neighbouring livestock farms, stockyards housing cattle/sheep/goats, meatworks, land being fertilised with untreated animal manure)
- visitors to at-risk environments (e.g. farms, abattoirs, animal saleyards and agricultural shows)
- horticulturists or gardeners in environments where dust, potentially contaminated by animal urine, faeces or birth products, is aerosolised (e.g. lawn mowing)

How is it prevented?

A safe and effective vaccine (Q-VAX®) is the best way to prevent Q fever infection. Vaccination is highly recommended for people who work or intending to work in high-risk occupations. Vaccination is also recommended for everyone aged 15 years and over who has the potential to be exposed to Q fever during activities outside of work, or in the environments in which they live or visit.

For those who are not immune (through vaccination or past infection), the following measures can reduce the risk of infection:

- wash hands and arms thoroughly in soapy water after any contact with animals
- wear a properly fitted P2 mask (available from pharmacies and hardware stores) and gloves and cover wounds with waterproof dressings when handling or disposing of animal products, waste, placentas, and aborted fetuses. This should not be considered a substitute for Q fever vaccination.
- wear a properly fitted P2 mask when mowing or gardening in areas where there are livestock or native animals
- wash animal urine, faeces, blood and other body fluids from equipment and surfaces where possible
- remove and wash dirty clothing, coveralls and boots worn during high-risk activities in outdoor wash areas. Avoid taking these items home to reduce the risk of infection to your household. If you do take them home, bag and wash them separately (should only be handled by those immune to Q fever)

How is it diagnosed?

The initial suspicion of a Q fever diagnosis is based on symptoms and an understanding of the possibility of coming into contact with the bacteria in the previous 6 weeks. Make sure your doctor is aware if you belong to one of the risk groups described above. Blood tests are required with repeated testing two to three weeks after symptoms begin to confirm the diagnosis.

How is it treated?

Early treatment with antibiotics can get you better sooner and reduce your risk of long-term complications. It is important to seek early medical attention if you develop symptoms of Q fever and are in one of the groups at risk of infection. Chronic (long-term) Q fever infection may require long-term antibiotics.

What is the public health response?

Laboratories must notify the local public health unit of any confirmed Q fever cases. Public health unit staff investigate each case to determine the likely source of infection, identify other people at risk of infection, ensure control measures are in place and provide information to cases.

Further information

See related factsheets [Q fever vaccination](#), [Q fever and farms](#) and [Q fever for veterinary staff](#).

For further information please call your local public health unit on **1300 066 055**.