



# Q fever

## What is Q fever

Q fever is a disease caused by the *Coxiella burnetii* bacteria. The disease is a zoonosis, which can be transmitted from animals to humans. The bacteria can be found in cattle, sheep and goats. Apart from a few countries, the disease is spread all over the world. It is not known how widely it is spread in Danish cattle herds. Several herds might be infected without it being realized.

## Q fever in animals

Most of the infected animals do not show any symptoms. Small ruminants are more sensitive and where symptoms are shown the disease might cause miscarriages, still-born or weak offspring, retained afterbirth, uterus infections and reproduction problems. Animals can develop into healthy infection carriers. This means that once the bacteria is in the herd, it can stay there for years.

There is no well-documented treatment for the animals, but hygienic measures can be taken to reduce dissemination of the disease.

## Q fever in humans

The biggest risk in a herd infected with *Coxiella burnetii* is that it should transmit to humans. Most of them, 60%, show no symptoms, but about 40% fall ill. The majority experience a mild course of influenza-like symptoms with fever, headaches, tiredness and muscle pain. Pregnant women, who are infected, risk having a miscarriage.

About 5% of the infected must be hospitalised and the condition might be chronic and serious if not treated. The symptoms are tiredness, difficulty in breathing, swollen joints, swollen body, pneumonia, hepatitis, fever – and in some cases inflammation of heart or brain.

*Q fever in humans can be treated with antibiotics.*

Cattle, sheep and goat farmers as well as inseminators, veterinarians and slaughterhouse workers are at larger risk of being infected.

## How Q fever is spread

The bacteria spreads especially via microscopic drops and dust from afterbirth, flux from the uterus, amniotic fluid and miscarried fetuses. The infection is predominantly transmitted via inhalation and the bacteria is thereby very infectious. On rare occasions infection occurs from drinking unpasteurized milk. The bacteria can only propagate in animals but it is very resistant and could survive in the environment for several years.



Photo: Jens Jørgensen, Dansk Landbrugs Medier

## Precautions

One should always be aware of the symptoms of Q fever in oneself and the animals. One might experience more miscarriages and other reproduction problems in the animals.

- Consult a doctor if you have influenza-like symptoms for more than five days
- Ask about being tested for Q fever
- A close fitting mouth mask can be useful when assisting during calving, removal of the afterbirth or any abortion material
- Remove all material that has been used during calving as it could spread disease. Burn afterbirth and membranes or dig it properly into the soil
- Pregnant women and people with severe chronic conditions, such as heart trouble, should not assist during calving or have contact with materials that have been used during calving
- Do not drink unpasteurized milk from the herd
- Q fever must be reported. The veterinarian should therefore be contacted if there is any suspicion of Q fever in the herd.

## Suspected or infected herds – what happens?

The disease can be established in the herd by blood testing for antibodies or by demonstration in the abortion material or afterbirth.

If positive tests are found in the herd, the Food and Health Departments (Fødevarestyrelsen og Sundhedsstyrelsen) will be briefed. Maybe, if the animals are found to be positive, the medical officer of health will recommend that the family, employees and others in contact with the herd, should be tested.

Q fever found in a herd will not result in any restrictions on the herd or the local area. Neither will the farm be put under supervision by the authorities.

At the moment eradication of Q fever is not possible as circumstances and knowledge of the disease are not totally clarified. Q fever is not included in the cattle breeders compensation scheme.

## The role of Danish Cattle (*Dansk Kvæg*)

The most important role of Danish Cattle is to advise and inform of the transmission of the disease from animals to humans. This is done together with the authorities and the Serum Institute (*Statens Seruminstitut*). Other countries are more experienced in handling Q fever. Therefore, among other initiatives, a co-operation with a Dutch research laboratory has been established to exchange research achievements in Q fever.

Danish research institutes also arrange studies in Denmark with, among other things, the intention to clarify how many Danish herds are infected. Further, a study, to establish the possible affect of Q fever to reproduction problems in cows, is carried out.

## Ask us

If you have any questions regarding Q fever, please contact Danish Cattle, Dpt. of Veterinary Conditions and Raw Milk Quality (*Dansk Kvægs afd. for Veterinære Forhold og Råvarekvalitet*) telephone 8731 2000.