Q FEVER

WHAT IS Q FEVER?

Q fever is caused by the bacterium Coxiella burnetii. First recognised in Australia in the 1930s when workers at a Brisbane meat processor became sick with a fever, it was called ‘Query’ fever as the cause of the illness was unknown; this was later shortened to Q fever. The bacterium survives well in air, soil, water and dust and can also be spread on fomites such as wool, hides, clothing, straw and packing materials. C. burnetii has been weaponised and is considered a Category B biothreat agent.

Humans acquire Q fever from animals (domestic and wild) which are infected, sometimes without any apparent symptoms. Q fever can be acute or chronic causing potentially long-term consequences. Acute Q fever has an incubation period of 2 to 3 ½ weeks but this can range from 4 days to 6 weeks. Symptoms include rapid onset of high fever, rigors, profuse sweats, extreme fatigue, muscle and joint pain, severe headaches and photophobia (sensitivity to light). As the disease progresses individuals usually have evidence of hepatitis, sometimes with obvious jaundice, and a proportion of individuals develop pneumonia which is usually mild, but can necessitate mechanical ventilation. Rarely, neurological complications can ensue such as meningitis and encephalitis. If left untreated the illness will last for 1 to 3 weeks and may be accompanied by substantial weight loss.

The most common chronic manifestation caused by C. burnetii is subacute endocarditis, which might not become obvious for 5 years. Less common presentations include granulomatous lesions in bones, joints, liver, lung, testes and soft tissues. In about 10 to 15 % of individuals, post-Q fever fatigue syndrome (QFS) is a late onset outcome of infection.

WHERE IS IT FOUND?

Q fever occurs almost everywhere in the world. In Australia, cattle, sheep and goats are the main reservoir although it can also be found in bandicoots, kangaroos and dogs.

RISK TO TRAVELLERS

The risk of contracting Q fever among Australian meat workers has been estimated to be 1 in 300 unvaccinated workers per year. There are approximately 600 Q fever cases in Australia each year, of which around 300 occur in Queensland. Q fever is a serious infectious disease that can cause severe complications such as extreme fatigue, or heart and liver damage. An uncomplicated Q fever case is estimated to cost around $7000 to treat, with 2 to 4 weeks of sick leave expected. Around 20% of cases are more severe, leading to long-term complications requiring up to 6 months of sick leave.

Those at risk are mostly workers from the livestock and meat industries, such as abattoir workers, farm workers, livestock transport workers and also veterinarians and visitors to areas of risk.

WHAT IS Q FEVER VACCINATION?

There is an effective vaccine against Q fever; however it can have severe side effects in persons who have already had the disease.

Before vaccination a person must have a: 1. Blood test 2. Skin test 3. Detailed history taken

These tests are undertaken to avoid unwanted vaccine side-effects and if any of them are positive it is likely the individual would react badly to the vaccine.

The blood and skin test must be done on the same day and the person must return to the doctor 7 days later to have the skin test read.

If both blood and skin test are negative, the person can be vaccinated. The vaccine then takes around 2 weeks to
become effective and the individual must not visit an abattoir during this time.

**SCHEDULE**

For adults and adolescents aged 15 years and over, 0.5 ml of Q fever vaccine is given by sub-cutaneous injection (assuming both blood and skin tests are negative).

**LEVEL OF PROTECTION**

The vaccine is believed to be long-lasting (in excess of 5 years). Until further information becomes available, revaccination or boosters doses are not recommended.

**POSSIBLE SIDE EFFECTS**

Up to 50% of those vaccinated will have local tenderness, redness and swelling at the injection site.

In around 10% of vaccine recipient’s side effects will include mild influenza-like symptoms, such as headache, fever, chills and minor sweating.

Skin reactions such as redness are common 3 to 4 days after skin testing, however these generally resolve by day 7 when the skin test is read.

A very rare side effect in individuals (mainly women) who were skin and anti-body test-negative at the time of vaccination and did not have an immediate reaction after vaccination, is some 1 to 8 months later a hardened skin lesion develops at the inoculation site. The site of the original skin test may also become positive, presumed to be as a result of a late developing immune response. The lesions do not worsen or evolve into an abscess: they gradually reduce in size and disappear over a period of some months without treatment.

Note: People who have been vaccinated against Q fever should be encouraged to be placed on the QFever register, which holds copies of all Q fever vaccination records (if individuals wish to be included). Each person registered will receive a vaccination card from the Register and this can be presented to prospective/current employers.

More information on Q Fever is available during your pre-travel consultation with Travelvax. Call 1300 360 164 for the location of the clinic nearest to you.