

Coxiella burnetii (OLD VERSION)

Coxiella burnetii is a small gram-negative bacterium. It is not in the Rickettsial genus, but is closely related and is an obligate intracellular organism that requires CoA and NAD for survival. However, unlike the other Rickettsial infections, *Coxiella* is not transmitted by an arthropod vector, does not cause a rash, and has a negative Weil-Felix reaction. Instead, *Coxiella burnetii* is commonly acquired via inhalation of spores from cattle placenta and is the cause of Q fever. Symptoms include pneumonia and flu like symptoms. Treatment with tetracycline or doxycycline can reduce the symptomatic duration of illness.



PLAY PICMONIC

Gram-Negative Bacteria

Graham-cracker Negative-devil with Bacteria

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No Arthropod Vector

Negative Anti-tick/insect Vector

Unlike the other Rickettsial infections, *Coxiella* does not have an arthropod vector through which it is transmitted.

No Rash

Negative Rash

Unlike the other Rickettsial infections, *Coxiella* does not cause a rash.

Negative Weil-Felix

Negative Whale

A Weil-Felix reaction is seen in patients with Rickettsial infections other than *Coxiella*. When patient serum with Rickettsial antibodies is mixed with *Proteus* antigens, the antirickettsial antibodies cross-react to *Proteus* O antigens and cause agglutination. Unlike the other Rickettsial infections, *Coxiella* causes a negative Weil-Felix reaction.

Cattle Placenta

Cattle Placenta

This organism is common in cattle, sheep, and goats and can be acquired via inhalation of spores from contaminated birthing products like cattle placenta. Due to this mode of transmissions, at risk occupations include veterinary personnel, farmers, and shearers.

Q Fever

(Q) Queen Fever-beaver

Q fever is the disease caused by *Coxiella burnetii* and commonly manifests as flu-like symptoms with fever, malaise, myalgia, nausea, vomiting, and diarrhea. During the course of disease, it can progress to a pneumonia, which can result in life-threatening acute respiratory distress syndrome.

Pneumonia

Nude-Mona

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Flu-like Symptoms

Thermometer and Ice-bag

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