

## Brucella

Brucella is a genus of gram negative coccobacilli that is the cause of brucellosis. It is transmitted by ingestion of infected food, commonly unpasteurized milk or goat cheese, as well as inhalation of aerosols or direct contact with infected animals. The organism is known to proliferate inside lymph nodes causing lymphadenopathy and can reside inside macrophages. Inability to completely eliminate the organism from the body causes granulomas in some patients. The most common symptoms of Brucellosis include an undulating fever with sweating and arthralgia. Antibiotics like doxycycline and gentamicin are effective against the bacteria.



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### Characteristics

#### Gram-Negative

[Graham-cracker Negative-devil](#)

This bacteria stains Gram negative due to relatively thin peptidoglycan layer in the cell wall.

#### Coccobacillus

[Cockeyed-rod](#)

A coccobacillus is a type of rod-shaped bacteria that reflects an intermediate shape between a sphere and a rod. These bacteria are short and wide, resembling cocci.

#### Unpasteurized milk

[Unpasteurized milk from cow's udders](#)

Brucellosis is transmitted by ingestion of infected food, commonly unpasteurized milk or goat cheese, as well as inhalation of aerosols or direct contact with infected animals.

#### Goat cheese

[Goat offering Cheese](#)

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#### Inside macrophages

[Characters Inside Mac-men](#)

The organism can reside inside macrophages, leading to the inability to completely rid the body of the organism.

### Signs and Symptoms

#### Lymphadenopathy

[Lymph-lime-add \(+\)](#)

The organism is known to proliferate inside lymph nodes causing lymphadenopathy.

## Granulomas

### Granny-llama

Brucella infection can lead to the formation of granulomas, which are organized collections of immune cells attempting to wall off the bacteria. These can be necrotizing, exhibiting a central core of dead tissue, or non-caseating, lacking such necrosis. The presence and type of granuloma vary and can affect various organs, notably the liver and bone marrow.

## Undulating fever

### Fever-beaver on Undulating-roller-coaster

Brucellosis is also called undulating fever, which means that it has a wave-like pattern that waxes and wanes. This is characteristic of Brucellosis as well as several other diseases that accompany symptoms of malaise, weakness and fatigue.

## Treatment

### Doxycycline

#### Dachshund-cycling

Doxycyclin is a tetracycline antibiotic that is highly effective against this bacterium due to the ability to kill intracellular organisms.

### Gentamicin

#### Magenta-gentleman-mouse

Gentamicin is an aminoglycoside antibiotic that is highly effective against this bacterium.