



## What is Bovine Johne's Disease?

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*Bovine Johne's (pronounced 'yo-nees') disease is a fatal wasting disease of cattle, goats, alpaca and deer. Bovine Johne's disease is often abbreviated to BJD, and is far more common in dairy herds than in beef herds.*

### What causes BJD?

BJD is caused by the bacterium *Mycobacterium paratuberculosis*. These bacteria can survive 12 or more months in a favourable environment, such as swampy or wetter areas of a farm.

### What are the signs of BJD?

Cattle are usually infected when less than 12 months of age. However, due to a long incubation period, clinical disease is often not seen until the affected animal is 4 or 5 years or older. Signs may appear after a period of stress such as calving, poor nutrition, heavy milk production or any other cause.

As the bacteria lodge and multiply in the wall of the small intestine, the cow responds by producing inflammatory cells. This combination of bacteria and cells leads to a thickening and distortion of the gut wall. Eventually the gut fails to absorb water and nutrients. In dairy cattle, the first sign is often a drop in milk production. Affected animals then develop chronic diarrhoea. Cattle gradually lose weight and become emaciated, while still maintaining a good appetite. They may also develop 'bottle jaw', a swelling under the jaw.



Figure 1. Cow showing signs of BJD

### How are cattle infected with BJD?

Cattle up to twelve months are most susceptible to infection, particularly calves less than 3 months old. Infected cattle shed bacteria in their manure and contaminate the environment before showing signs of BJD. However, the greatest contamination comes from animals showing signs of BJD. Calves become infected as they drink from an udder contaminated with manure, or eat or drink feed or water contaminated by manure.

Calves can also become infected while in the cow's uterus, however this is less common. When a cow is showing signs of BJD, there is a 50% chance that the calf will be infected before birth. However, if a cow is infected but not yet showing signs, there is only a 9% chance of the calf being born infected. Up to 35% of cattle showing signs of BJD and 10% of those not yet showing signs will shed the bacteria in their milk. When calves drink this milk they can become infected.

### What is the treatment for BJD?

There is no treatment for BJD. While certain antibiotics may provide some temporary relief, infected cattle will inevitably die.

### Further information

Further information about BJD can be obtained from Animal Health staff at your nearest DPI office or on the DPI external web site:

<http://www.dpi.vic.gov.au/farming/bjd>.

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