



Johne's disease

What is Johne's disease?

Johne's disease (also called paratuberculosis) is a common disease in cattle caused by bacteria (*Mycobacterium paratuberculosis*). Cattle of all ages are affected, although most infections occur in calves when they are less than 6 months old.

After infection, signs of the disease may take 3 to 5 years to appear. During this time, Johne's bacteria invade the lining of the gut (small intestine). In response, the intestine cells thicken and lose the capacity to absorb nutrients.

How is Johne's disease transmitted?

- Passed from the mother to the calf
- Newborn calves may eat contaminated manure or milk
- Adults: It is rare for adults to be infected, but can happen if cattle share food contaminated by an infected cow

What are the signs of Johne's disease in animals?

Even without showing clear symptoms, Johne's disease can decrease milk production and fertility and increase mastitis.

The primary signs of the disease include:

- **Body condition.** Animals lose weight even while eating normally (Figure 1).
- **Manure.** Constant diarrhea – usually with no blood or mucous, beginning at calving or other stressful periods.
- **Response to treatment.** Animals do not respond to treatment.
- **Fever.** Animals may show fever from time to time.

Secondary signs can include swelling below the mouth (bottle jaw) - which is similar to fluid accumulation seen with severe, chronic parasitism.

What can be done to treat Johne's disease?

Treatment. There is no treatment for Johne's disease.

Prevention. Keep areas clean and try to avoid animals eating food or drinking water contaminated with manure. The bacteria in manure can live in the environment, or in feed and water for months and still be able to infect.

Removal. If an animal is infected, it should be immediately removed from the herd. It is important to remember that symptoms appear just prior to death, so other animals in the herd may already be infected and spreading the disease.

Prepared by **Rebecca Atkinson (SIU), Maria P. Santibanez and Mark Bell 2012**

References: Johne's Disease in Dairy Cattle (1998) by John Adaska (California Veterinary Diagnostic Laboratory) and John Kirk (Veterinary Medicine Extension, Veterinary Medical Teaching and Research Center, Tulare, CA); Johne's Disease Fact Sheet (2003) by John H. Kirk, DVM, MPVM Extension Veterinarian School of Veterinary Medicine University of California Davis, Tulare, CA. <http://www.vetmed.ucdavis.edu/vetext/home.html>

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Figure 1. Cow with Johne's disease. (Source: Dr. Michael Collins and Dr. Elizabeth Manning, University of Wisconsin – Madison, School of Veterinary Medicine)