

## Johne's Disease in Goats

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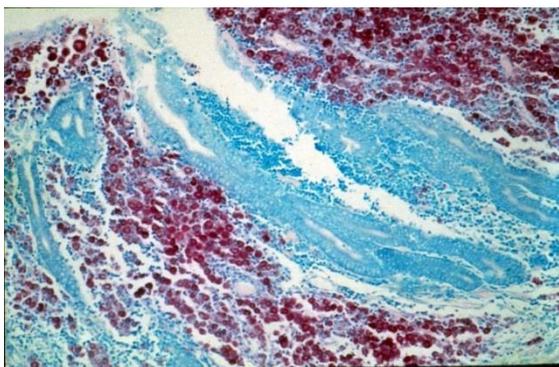
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Johne's disease (pronounced "Yo Knees") is an incurable wasting disease of adult goats. There are 3 distinct strains of Johne's disease in Australia - the bovine or cattle strain and the sheep or ovine strain and the less common bison strain. Unfortunately goats can get both the sheep and cattle strains, although the bovine strain is the more common. Johne's disease is related to the one that causes tuberculosis, another chronic wasting disease, but affecting the lungs instead of the gut.

### The Responsible Bacteria

The bacteria responsible for Johne's disease is *Mycobacterium avium* subspecies *paratuberculosis* and is closely related to the bacteria that causes tuberculosis. Research has shown that the bacteria can survive for a many months in the soil. For this reason if destocking then ideally 2 summers are needed to be sure that no bacteria can survive on any property. Horses can graze the property during destocking.



The bacteria turn the goat's gut into a bacterial production factory and these bacteria then go out in the goats' faeces and infect other animals. These bacteria, stained red, are shown above.

### Clinical Signs

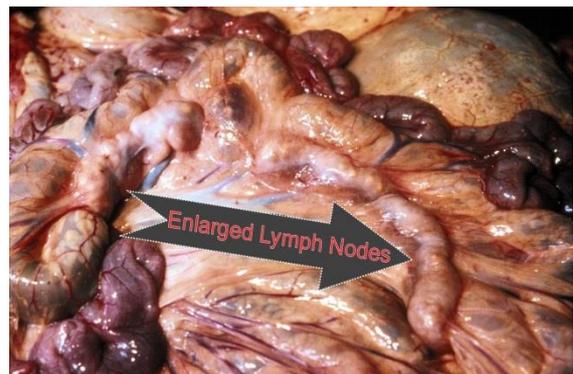
Clinical signs can be very slow to show up and initially the goat or other ruminant, will start to shed bacteria in the faeces long before any signs appear.



Later the clinical signs are wasting, rough coat and only sometimes towards the end of life, some scouring or loose faeces. Often affected goats just look like a "wormy" or "skinny" goat.

### Post-Mortem Signs

The signs can be easily missed and if present, enlarged gut lymph nodes are an indication of Johne's disease. In order to be sure, it is necessary to send many samples away to a laboratory. The samples are specified on page 65 of the MAP Manual. The photo below shows a line of enlarged lymph nodes below the small gut. The gut lining is sometimes thickened and with obvious folds.



## How can I ensure my goats never get this disease?

Only buy goats (sheep, alpacas, llamas or cattle) from herds in the official Market Assurance Program (MAP) for Johne's disease. Three year accreditation is better than one year and is better than check tested. You can search for herds at this website [http://edis.animalhealthaustralia.com.au/public.php?page=mapsearch&aha\\_program=3](http://edis.animalhealthaustralia.com.au/public.php?page=mapsearch&aha_program=3)

If buying a property on which to keep goats, check if it has been used by ruminants and their Johne's disease status – or buy a horse property. This also helps with worm and footrot control.

Improving your goat herd hygiene helps reduce the spread but won't prevent Johne's disease i.e. never feed goats on the ground (use troughs instead), provide clean water without faecal contamination, quarantine new goats until tested for disease carrier status, and try not to mix goats of different age groups. Also every dead goat found soon enough, should be post-mortemed so that the cause of death can be identified.

## Treatment

There is NO treatment.

## Vaccination

While there is a vaccination registered for cattle and for sheep and goats, these do not provide full protection and cannot even guarantee that vaccinated animals will not shed the bacteria. The vaccine can cause large reactions at the site and also are very dangerous if accidentally injected into the human handler. Also once vaccination has commenced in a herd, only faecal samples, and not blood samples, can be used to advance to the next level in the Market Assurance Program (MAP). Vaccinated herds have "V" after their MAP level.

Why bother? Vaccination can slow the spread of Johne's disease in the herd, aids in control, reduces shedding and also increases the age of goats before clinical signs occur, reducing the economic loss. In areas with neighbouring herds with Johne's disease or if Johne's has been diagnosed in a herd, vaccination is the most economic method of control.

## How do I find an accredited vet?

Only an accredited veterinarian, who has done the online training, can help you gain MAP accreditation. You just need to search the database for such a vet in your town.

<https://apav.animalhealthaustralia.com.au/index.php?page=searchvet>

### Further Information

MAP Manual for Johne's disease in goats

<https://www.animalhealthaustralia.com.au/what-we-do/endemic-disease/maps/goatmap/>

National Goat Health Statement

<https://www.farmbiosecurity.com.au/toolkit/declarations-and-statements/>

National Kid Rearing Plan -

[https://www.animalhealthaustralia.com.au/wp-content/uploads/2016/01/National-Kid-Rearing-Plan16\\_WEB.pdf](https://www.animalhealthaustralia.com.au/wp-content/uploads/2016/01/National-Kid-Rearing-Plan16_WEB.pdf)

Slideshare presentations on Johne's disease

<http://www.slideshare.net/SandraBaxendell>

Webinar about Johne's disease

<https://www.youtube.com/watch?v=ZGFuAn3tI5Q&t=580s>

These US sites:

<https://johnes.org/>

Last updated September 2019 See blogs on [www.goatveto.com.au](http://www.goatveto.com.au) for more information