



Arthritis

Key Messages

1. Arthritis costs the sheep industry \$39 million annually due to:
 - a. significant wastage on farm, from poor growth rates and deaths and
 - b. losses at the abattoirs due to trimming and condemnations.
2. Management changes can have significant impact on the level of arthritis in flocks.

What is arthritis?

Arthritis in sheep is caused by a bacterial infection of the joints. It usually occurs in young sheep when bacteria localise in the joints after entering the body through the umbilical cord (navel ill) or any wound. Arthritis causes lameness and a reduced growth rate.

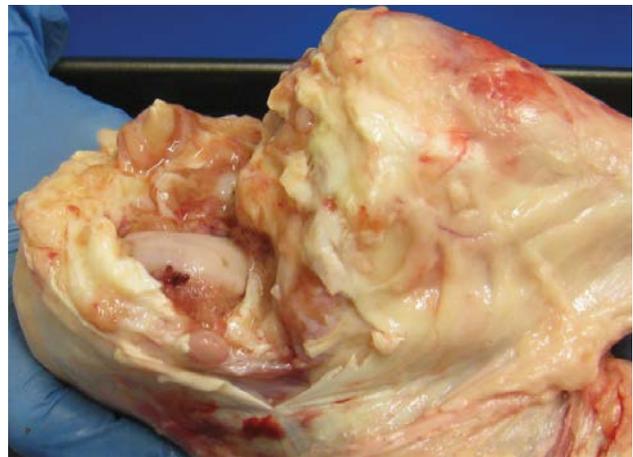
How does it occur?

Any wounds, especially in young sheep, increase the risk of arthritis. Shearing increases the risk by around four times, while sheep that are mulesed are seven times more likely to have arthritis. Dog bites and grass seeds are also routes through which bacteria can enter the body and cause arthritis.

Disease on farm

Arthritis is caused by a number of different environmental bacteria. Some produce pus in the joint and others cause inflammation of the joint and lameness without the production of pus for example *Erysipelothrix (Erysipelas)* and *Chlamydia*.

Initially affected animals are depressed, with hot swollen joints. They show signs of stiffness and lameness, have difficulty rising, and are reluctant to move. Some mildly affected sheep may appear to warm out of their lameness after exercise. The pus producing bacteria often cause a more severe lameness with hot swollen, and very painful joints. Some affected sheep will show no outward signs of lameness on farm.



Joan Lloyd.

Figure 1 Arthritis in a stifle joint showing thickening of the joint capsule and erosion on the cartilage.

The disease occurs throughout Australia with an average of 2% of lambs/weaners affected and 1% of adults. Losses on farm occur due to mortalities in some affected lambs, and weight losses of between 3.0 and 4.5 kg compared to unaffected sheep. Many severely affected sheep are unmarketable and must be culled.

Disease picture at the abattoir

Arthritis affected carcasses are trimmed up to the level of a clean joint. This results in an average loss of 3kg per carcass. If more than four joints are affected then the whole carcass is condemned.

February 2016

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Treatment

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1. Lambing paddocks

- Lambing paddocks should be well drained and free of mud with adequate grass cover.

2. Marking, mulesing and shearing all increase the incidence of arthritis so:

- Aim for a clean and dust free environment – consider temporary yards in a clean, grassy paddock, that minimises the distance lambs have to walk.
- Avoid wet/muddy conditions and try to perform procedures in mild weather before fly numbers build up.
- Minimise the amount of time lambs are held in yards, minimise lamb separation from ewes, and don't overcrowd stock as this will increase faecal contamination of fresh wounds.
- Place lambs onto their feet when released from the cradle – again to avoid contamination of fresh wounds.

- Use sharp and clean marking equipment – disinfect marking equipment and change disinfectant regularly.
- Minimise/avoid lamb and ewe separation as stress is not ideal for wound healing.
- Allow ewes and lambs to walk slowly back to their paddock from the yards and avoid driving which causes crowding and dust.
- Allow shearing wounds to heal before dipping (at least 2 weeks) and ensure dip fluid is clean, with an appropriate bacteriostat (disinfectant) and dip sheep by age, youngest to oldest (and don't reuse or top up fluid).

3. Vaccination

- In most areas *Erysipelas* is the most common infectious cause of arthritis. In surveys at abattoirs the bacteria *Erysipelas* is isolated from 23-52% of infected joints. If you suspect *Erysipelas* as the cause of your problem, consider vaccinating ewes against it pre-lambing, to protect lambs at marking. Excellent results have been achieved through the use of Eryvac® in cases where *Erysipelas* is the cause.
<https://www.zoetis.com.au/product-class/vaccine-products/eryvac-for-sheep.aspx>
- Consult your experienced sheep vet to assist in diagnosing the cause of arthritis on your property.