



## Sheep arthritis

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Arthritis in sheep is an inflammation of the joints of the legs, resulting in loss of production, loss of carcase value and deaths. The incidence of arthritis in Western Australian lambs at abattoirs during the 1990's was about one per cent, while an average of 1.4 per cent of lambs were culled on-farm due to the condition. However, there are individual properties where high levels of arthritis occur every year, despite efforts to ensure a clean working environment at marking.

### How is it caused

The main cause of arthritis in sheep is when bacteria enter the body via broken skin.

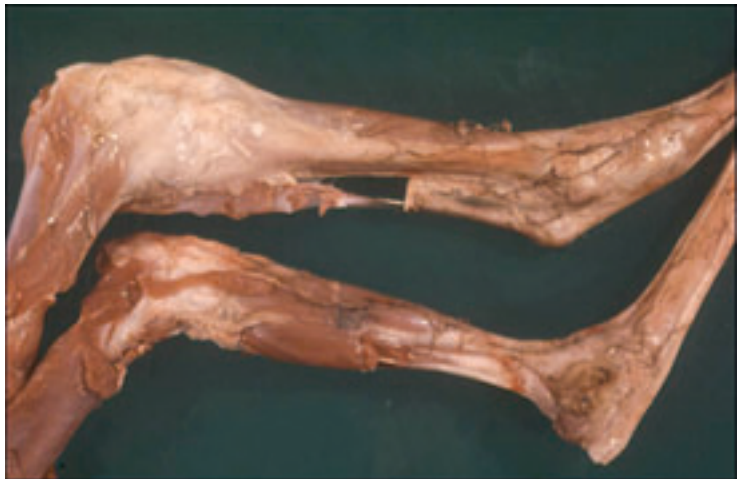
The common times when a lamb will be susceptible to arthritis in this way are;

- at, or soon after birth with infection through the umbilical cord;
- through marking wounds, ie ear marking, tailing, castration;
- through the mulesing wound;
- through shearing wounds; and
- at other times, for example dog bites or dipping.

There are several different bacteria that may be implicated in arthritis. The most common is *Erysipelothrix rhusiopathiae*, an organism that is thought to be capable of surviving in the environment for long periods of time.

In studies done in pigs it was found that the erysipelas bacteria live in the tonsils of healthy animals, providing a constant source of contamination. Although similar studies have not been done in sheep, it is likely that the bacteria do survive in healthy animals and provide the source of infection for arthritis in lambs. Identification of the causative bacteria on an individual farm is done by a veterinarian taking cultures from an infected joint.

In a study carried out into erysipelas arthritis during the 1990's, it was found that mulesing increased the risk of arthritis by seven times, and shearing lambs increased the risk by four times. Other factors increasing the risk were holding lambs in the yards after shearing and treating the mulesing wound with powders.



### What to look for - signs

Signs appear within 2-14 days after infection. Affected joints become swollen, hot and painful, resulting in the lamb becoming reluctant to move, with a stiff, stilted gait or obvious lameness. The knee, elbow, hock and stifle are frequently affected. Lambs lose condition and may die, while those that recover rarely do well.

### How is it treated?

In most field situations, by the time the sheep are noticeably lame, treatment is too late to have a chance of success. However, if arthritis is diagnosed early during the course of the disease, treatment with antibiotics may produce reasonable results.

### Some tips for prevention

- If possible do not mules or shear lambs destined for slaughter;
- Carry out marking and mulesing in a clean, dust free area;
- Place lambs on their feet when released from the marking cradle;
- Disinfect utensils effectively and regularly;
- Change disinfectant if soiled with dirt, faeces or blood;

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- Avoid applying powders or disinfectants to the surface of the mulesing wound;
- Do not allow dogs to bite sheep when mustering or yarding; and
- Vaccinate - where arthritis is a problem despite the above measures, and is caused by *Erysipelothrix rhusiopathiae*, a vaccination program could be implemented.
- Keep needles new and sharp, changing after every 100 – 200 sheep.
- Regularly disinfect needles after each race or after 40 – 60 sheep

## Vaccine Storage

- Store the vaccine in a refrigerator at 2-8°C – do not freeze.
- Keep surplus vaccine in a small esky with ice bricks while in the yards.
- Check the use by date and discard outdated vaccine.

Vaccination of ewes prior to lambing will protect the lamb for the first eight (8) weeks of life. Previously unvaccinated ewes need to be vaccinated twice initially with at least four (4) weeks between doses, and then once every year. Vaccination should be done about four (4) weeks before lambing starts. If arthritis is affecting weaners or older sheep then vaccination of lambs can be done at marking with a booster 4-6 weeks later.

## Vaccination technique

- Handle animals carefully to avoid injury and bruising.
- Vaccinate into the loose skin behind the ear or cheek to avoid damage to the valuable carcase meat.

## Biosecurity

Livestock, machinery, fodder and people can introduce animal and plant diseases, weed seeds and pests. Develop a biosecurity plan for your farm to reduce the risk of introducing these problems.

For sheep purchases, ask the vendor for an Animal Health Statement which covers OJD, footrot, lice, brucellosis, drenching and vaccination history.