Arthritis is inflammation of the joints, usually in the legs, and leads to permanent changes within the joints. When multiple joints are affected, the condition is referred to as polyarthritis. Most cases of arthritis begin in lambs before weaning as a result of bacteria entering the body via broken skin.

**Economic Consequences**

**On Farm**
- Reduced growth rate/weight loss – can be significant
- Culling – sheep unable to walk on all four legs are not fit to load and must not be transported for slaughter. They must be culled on farm.
- Cost of treatment

**At the Abattoir**
- Trimming – affected legs are trimmed to the level of a clear joint. This can result in a significant reduction in carcass/dressed weight.
- Carcass condemnation – carcasses with more than 4 joints affected are condemned.

**What Causes Arthritis/Polyarthritis?**

Numerous different types of bacteria can cause arthritis in sheep, including *Erysipelothrix*, *Chlamyphila*, *Streptococcus* and other bacteria that are normally present in the environment. The bacteria gain access to the body through broken skin or the umbilical cord, entering the bloodstream, settling and multiplying in the joints. Susceptible times for the entry of these bacteria include:

1. **At or soon after birth** – via the umbilical cord.
2. **Any time a wound is created** – especially at marking/mulesing or shearing but also via dog bites and grass seed penetrations.

**What Might Be Seen On Farm?**

In the early stages of disease the sheep will be depressed and have hot, swollen and painful joints. They may have a stiff gait, have difficulty rising or walking (lambs/sheep that prefer to lie down), the lameness is often more severe after standing and may appear to ‘warm out’ of the lameness. Some cases may show no signs on farm.

**Treatment**

If caught early before permanent joint damage has occurred, treatment can be successful. Treatment usually involves antibiotics and may vary depending on the type of bacteria present. Your veterinarian will be able to provide more information about treatment options on your farm.
Arthritis/Polyarthritis

Prevention
Good management can assist in decreasing the chance of arthritis affecting your flock. Prevention involves minimising the chance of bacterial contamination of wounds and encouraging rapid wound healing.

1. **Paddock management during lambing**
   - Rotate lambing paddocks each year and reserve ‘clean’, grassy paddocks for lambing.

2. **Marking/mulesing and shearing**
   - Mulesing and shearing lambs markedly increases the risk of arthritis (4-7 times increased risk).
     - Aim for a clean and dust free environment – consider temporary yards in a clean, grassy paddock.
     - When possible perform in mild weather – avoid wet/muddy conditions and be mindful of fly numbers.
     - Avoid holding lambs in yards; if unavoidable 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/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 and dip youngest to oldest (don’t reuse or top up fluid).

3. **Maximise wound healing**
   - Avoid disturbing (re-yarding) for 3-4 weeks after any wound is created.
   - Prevent fly strike – consider applying a fly strike preventative at mulesing (but must be dry at time of mulesing).
   - Keep lambs dry and avoid long, wet grass.

4. **Vaccination**
   - Consider vaccinating ewes against *Erysipelothrix*, pre-lambing to protect lambs at marking. Excellent results have been achieved through the use of Eryvac® in cases where *Erysipelothrix* is the causative bacteria.

For Further Information
Contact either Livestock Biosecurity Network’s Dr Patrick Kluver 0499 077 213 or VFF Livestock Biosecurity Project Officers 1300 882 833.