COMMON CONDITIONS CAUSING LAMENESS

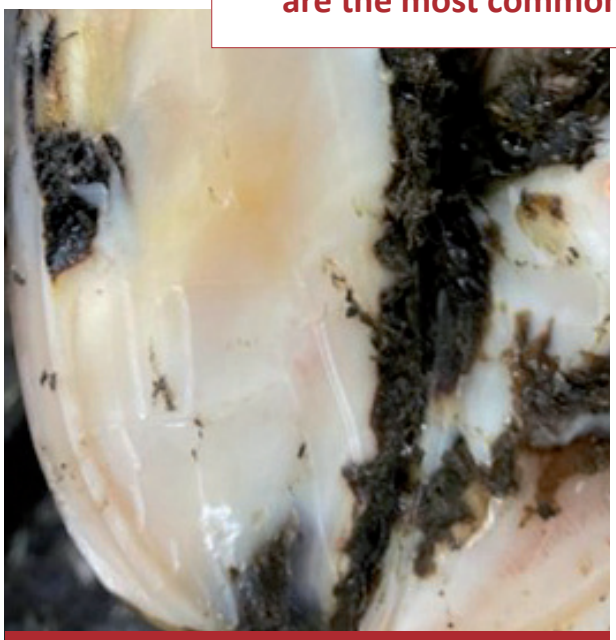
Ger Cusack, Hoof HealthCheck Technical Working Group Member

The majority of cows that become lame do so as a result of problems in the lower limb in the region of the hoof. While upper limb injuries do occur, these cause only a small proportion of the lameness cases we see on Irish dairy farms.

Common conditions causing lameness in Irish dairy cows

- White line disease
- Sole bruising
- Sole ulcer
- Foul in the foot
- Mortellaro (Digital Dermatitis)

In grazing herds, white line damage and sole bruising are the most common hoof lesions that we see.



White line disease

Sole Bruising

When it comes to deciding how best to treat conditions such as white line disease, the results of a study carried out at Nottingham University are worth considering.

This involved a large number of cows that were mildly lame (AHDB Mobility Score 2 on a scale from 0 to 3, with 0 being 100% sound and Mobility Score 3 being obviously lame). All these cows suffered from claw horn lesions such as white line disease, sole haemorrhage/bruising or sole ulcer. Cows with Mortellaro lesions were excluded.

Treatment	Percentage Non-Lame After 5 Weeks (Mobility Score 0 or 1)
Trim only	69%
Trim + Block	72%
Trim + Anti-inflammatory	76%
Trim + Block + Anti-inflammatory	85%

Thomas et al (2015). Journal of Dairy Science

The application of a block to the sound claw has clear benefits. It gives the cow immediate pain relief by taking pressure and concussion away from the affected claw. Blocks are particularly helpful during the grazing season. Cows that are lame graze for shorter times, have reduced dry matter intake, have reduced milk yield, and tend to lose body condition. The application of a block to the sound claw mitigates these effects and, in many cases, enables the affected cow to remain part of the main herd.

It is reasonable to conclude that the hooves of cows that are affected by conditions such as white line disease, sole bruising or sole ulcer, suffer damage to not only the horn capsule, but also the deeper tissues. These include the corium, the laminae and the pedal bone. The addition of non-steroidal anti-inflammatory (e.g., ketoprofen x 3 days) may reduce the inflammatory effect and reduce the longer-term damage that occurs in these deeper tissues. As this medication is a prescription only medicine, consult your veterinary surgeon for advice about the use of such products.

If we regard mobility scores of 0 or 1 as a cure, in this study of recently lame (2 weeks or less) cows, the cure rate was in the range 69-85%.

In a further study, the same researchers selected cows with Mobility Score 2 or 3 that had been lame for at 4 weeks or longer. The same treatment protocols were employed as the group in the first study.

The findings in this group were in stark contrast to the first study. If we define cure as a cow returning to Mobility Score 0 or 1, the cure rate in this group was extremely low. This was true in the case of all four treatment protocols.

The results of these studies at Nottingham University clearly demonstrate that early detection and prompt treatment of lame cows greatly improves treatment outcomes.

The take home message here is clear. To achieve good treatment outcomes when treating lame cows, they need to be treated early in the course of the lameness condition. To quote Roger Blowey MVB MRCVS, recognised UK expert in the field of lameness, "a lame cow is an emergency and needs to be treated as such".

Sole ulcers

Foul-in-the-foot

Mortellaro lesion

Sole ulcers

This type of ulcer is treated by appropriate hoof trimming and the application of a block to the sound claw. The use of a non-steroidal anti-inflammatory drug (NSAIDS) injection could also be considered based on advice of your vet.

Foul-in-the-foot

This is a bacterial infection affecting the soft tissue between the claws. Injectable antibiotic treatment is the appropriate treatment. Seek the advice of your farm vet.

Mortellaro lesion

Mortellaro (also known as digital dermatitis) is a bacterial infection affecting the skin in the region of the hoof. The incidence of Mortellaro has risen steadily in recent years and hoof trimmers and vets report seeing it on many of the farms visited.

It causes an extremely painful erosion of the skin, resulting in flat strawberry-like lesions that can be up to 5 centimetres in diameter. This condition is contagious, and if left unnoticed and unchecked, has the potential to spread rapidly through the herd.

To achieve best treatment outcomes, detect early and treat lame feet affected with Mortellaro as promptly as possible. These feet should be lifted, cleaned, dried with a paper towel, and sprayed with topical oxytetracycline daily for 3 days. This treatment will cure the vast majority of Mortellaro lesions and ensure few recur. As oxytetracycline spray is an antibiotic, consult with your vet before using it.