



Massey University

Veterinary Teaching Hospital

SUSPENSORY LIGAMENT SPRAIN

The suspensory ligament is attached to the back of the upper cannon and knee (in the front legs) or hock (in the hind legs), runs downwards close to the back of the cannon and divides into two branches each of which attaches to a sesamoid bone, at the back of the fetlock, before ending attached to the upper pastern. The suspensory ligament supports the fetlock and protects it from hyperextension (i.e. dropping too low) at exercise.

How does the suspensory ligament become damaged?

The ligament and its branches are strong but only slightly elastic. Excessive stress such as can occur when landing after a jump or at fast speeds can over-stretch the ligament resulting in damage. The damage may be only slight tearing of fibres attaching to the sesamoid or cannon bones. Using ultrasound scan examination often a 'core defect' i.e. a linear 'hole' can be seen in the centre of the body of the ligament or in a branch of the ligament where a number of fibres have ruptured. With severe injury, complete rupture may occur, but this is fortunately uncommon.

What signs indicate damage to the suspensory ligament?

Signs of injury vary with the site of the injury and the severity of the damage. Some horses show lameness which becomes worse with exercise but improves with rest, others show persistent lameness or none at all. There is usually thickening of the affected region of the leg with warmth and tenderness present. If the ligament is ruptured, the fetlock will 'sink' towards the ground, fully or partly, depending on the completeness of the rupture.

Can my horse make a full recovery?

In many cases the answer is yes. Minor damage to suspensory attachments, body and branches will usually repair given sufficient time off work. This usually means box rest initially with physiotherapy such as cold hosing to reduce inflammation. A period of walking only exercise follows, the duration of which depends upon the initial amount of damage. In cases of complete rupture or where a fragment of bone has broken away with the damaged ligament (avulsion fracture), the outlook is much worse, even with several months rest, and euthanasia may be required on the grounds of incurable suffering.

What can be done to diagnose the injury and follow the repair process?

An initial diagnosis is based on the results of clinical signs, i.e. heat, swelling and lameness, nerve blocks, radiographic (x-ray) and ultrasound examinations. Ultrasound scans are the most useful way to follow the healing process. Depending on the degree of damage, follow-up scans should be performed at one and three months and certainly before any significant increase in exercise level. Any increase in exercise should be made gradually to avoid over stretching the incompletely healed tissues.

In cases where the damage is localised to the cannon bone attachment, injection of anti-inflammatory drugs (such as corticosteroids) may be used to reduce inflammation and allow exercise to continue for a specific purpose. This approach carries the risk that further, more serious damage may occur and is not recommended.

Is the injury likely to recur?

Ligaments are made up of fibres which run along their length in a regular, well-organised manner. When ligament fibres are damaged some heal in a criss-cross pattern rather than lengthways. Therefore, the healed tissue will always be a little weaker in the healed areas than the original ligament was. However, if the horse is given sufficient time for repair and a careful and sensible approach is made to re-introduction to exercise, re-injury is less likely to occur.