



Standing MRI: Opening a window to your jumpers foot

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[Back to Articles...](#)

A 1,000lb horse will place up to 1,230lbs of pressure on its coffin joints just at the trot. Imagine the forces at play during a hand gallop, or landing from a fence, not to mention the torque on the foot during a fast jump-off with sharp turns. There are high athletic demands placed on a horse in order to excel in Show Jumping. Unfortunately due to the nature of the sport, it is not uncommon to see lameness originating in the foot.

In the past, lameness localized to the foot has been broadly diagnosed as “Navicular Syndrome”, words which even today can strike a fear response in any horse owner. As veterinary medicine continues to evolve, we have developed a better understanding of what structures within the foot may be injured, as well as how different treatments can be utilized to assist with recovery. Regional anesthesia (nerve blocks), radiography (x-rays), and ultrasonography are diagnostic tools that equine practitioners can use to help diagnose foot pain. Nerve blocks can localize the injury to the foot, radiography can assess the bone, and ultrasound can evaluate a small portion of structures within the hoof capsule. While all three play important roles in diagnosing injuries, they each have their own limitations that cannot give us the whole picture when it comes to injuries.

To overcome the limitations of routinely used diagnostic imaging, we can use magnetic resonance imaging (MRI). MRI uses a large magnet and radio waves to provide details about bone and soft tissue structures that are not attainable with radiography and ultrasonography. Historically for application in equine practices, the horse would need to be anaesthetized and would need to lie down, which carries with it several risks. In 2003, Hallmarq released a veterinary standing MRI that revolutionized how we can image horses. The standing MRI allows for the horse to stand during the procedure, which lowers the risk to the horse and reduces the cost to the client by eliminating the need for general anesthesia. A wealth of information can be collected from MRI scans, as they more precisely distinguish what structures within the foot may be contributing to clinical symptoms. This is why MRI is currently considered the gold standard diagnostic tool when evaluating lameness originating from the foot. The use of MRI allows for a more specific diagnosis of foot lameness instead of a generalized diagnosis of “Navicular Syndrome.”

With a more complete diagnosis, your veterinarian can implement a more targeted treatment protocol. Treatment and rehabilitation is dependent on the nature of the injury, which is why it is important to know what structures within the foot are contributing to the lameness. In comparison, trial and error treatment plans with stall rest may actually result in higher costs, longer down time, and include a large “unknown” factor about further structure breakdown and re-injury.



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[Back to Articles...](#)

In Western Canada, there are currently two standing MRIs. One is operated by Paton & Martin Veterinary Services out of Aldergrove, BC and the other is at the University of Saskatchewan in Saskatoon, SK.

“MRI: I'm very glad I did it. We'd still be trying to figure out the problem, if we hadn't made the decision to do it... It seems expensive at first, but when you consider how much money could be spent trying to diagnose and treat the issue without success, it turns out to be a bargain.”

-TS

Warmblood with coffin bone fracture, and deep digital flexor tendon injury which had initially presented similar to a hoof abscess or deep sole bruise