

Revolutionary EqueStride Boot

By Georgina Roberts

The key to successful tendon rehabilitation in sport horses lies in good basic understanding of how tendons work. Too often with horses we do things "the way we've always done them", but now South Africa has an opportunity to be up to date with the rest of the world when it comes to diagnostics and treatments.

Local vets, teaming up with an international team, are proud to welcome the EqueStride boot to our shores. This is not a fad, and it is not an experiment – the EqueStride boot has been designed by a world-renown European veterinary professor and specialist in equine orthopaedic surgery, and a Formula 1 engineer, based on a thorough understanding of how tendons need to be managed for optimal healing. There are one hundred and fifty of these carbon-fibre, custom sized, padded and specially-fitted "moonboots" in the world, and due to specific interest there are now ten available for use in SA. Combined with a cutting-edge and revolutionary system of diagnostics, moderation, and treatment, leg pathologies now have the chance to heal to pre-injury strength.

To understand the concept of the EqueStride boot, we first need to understand how tendons heal best. With any tendon damage, the body sends a rush of cells to fill the gaps and begin healing. These initial cells, however, are not specific cells, i.e. tendon cells, but an inferior basic skin-type cell. Vets then often use platelet replacement therapy – or increasingly the introduction of IGF (growth hormone) – to speed up the healing process. The problem is that although there is an influx of cells, these cells do not know how to behave. As with an injury to our skin, they become scar tissue in an effort for maximum strength. But scar tissue is not elastic so is considered sub-quality tissue, which leaves the tendon compromised for future sports. Now think of human athletes – instead of confining them during a process of healing, we give them limited and controlled movement, appropriate to the level of damage. We have seen many a horse rider in a knee-brace, and this operates on the premise of a "lock" being in place so that the joint cannot extend beyond its capability while healing. As the knee strengthens up, the physiotherapist in charge will adjust the mobility to gradually allow more and more movement, and all the while the athlete maintains an appropriate level of exercise. The benefits of this are enormous: the main one being that instead of transforming into tough immobile scar tissue, the cells in the area of healing mimic the tendon / ligament cells, and adopt their properties. The tissue heals with minimal scarring, but appropriate strength and elasticity



that we would expect from a leg without trauma. With the correct monitoring it is literally as good as before, plus the athlete has not suffered atrophy of the surrounding muscle structures, which is liable to cause secondary injury, and a modicum of inherent fitness is maintained. On top of all of this, the mental wellness of the patient remains intact, instead of frustration causing them to possibly forgo correct rehab and reinjuring themselves prematurely.

The EqueStride boot is the equine equivalent, and so essential to an athlete who cannot be asked politely to "take it easy"! The tendons are attached from the back of the knee to the pedal (hoof) bone, and are thus responsible for the flexion of the foot



and fetlock. Tendons become injured in hyper-extension, such as in full gallop, landing impact after a jump, or any time that the tension exceeds the current weight-bearing ability – the structure

can withstand an incredible 3.5 tonnes of pressure! This is fitness- and strength-appropriate, so an unconditioned or fatigued tendon is more at risk through high-pressure work, but also in accidents. This boot allows an injured (or "at risk") tendon to stay weight-bearing while controlling motion. In other words, no more box rest! An injured horse would be fitted with the boot on its most limited setting, allowing the horse to walk, trot, and even canter while allowing only a controlled range of motion – the horse cannot move the joint in a negative way which would further injure the structure. This means that there is no muscular atrophy, no naughty frustrated horses, no scar tissue, and as a bonus it draws tendon rehabilitation time from a year down to just three months.

Already we are seeing the first success stories in SA, where incorporating the EqueStride boot has given life back to both foals and top-level show jumpers. Dr Henk Oeffers, the Dutch vet behind the importation of this technology, works in conjunction with Pretoria-based Dr Ingrid Cilliers – by using the UTC scanner, a mobile tendon scanner that is one of only fifteen in the world, guesswork is removed at identifying "at risk" structures. Whereas regular sonography can pinpoint lesions (already damaged areas), the UTC scanner can monitor healing and identify possible weak points before they are injured; this is usually the point where owners insist that their horse is "off", but there is not yet a clinical pathology. Thus, an injury could be completely avoided, but the UTC is just a diagnostic support tool - the EqueStride boot can

be used safely under any therapy, incorporating the tried-and-tested concept of early exercise.

There is a tale about a woman who cuts the bottom off a chicken every time she roasts it. "Mummy, why do we do it like this?" her daughter asks. "Well because that's how we've always done it," her mother replies. But mother ponders this, and decides to ask HER mother why they cut the bottom off the chicken – "Well dear," granny laughs, "I didn't have a big enough roasting pan when you were growing up!"

In order for scientific advances, we need people who constantly ask "Why" and try to improve on it. When it comes to horses, we find ourselves favouring tradition over progressiveness, often to our, and our horses', own detriment. We have an opportunity here to step our veterinary care up onto the platform of our international counterparts, increasing the work life of our equine athletes and best friends.

Henk will be sharing his new tendon diagnostic and rehab protocol at a presentation on the 20 August 2016 at Equifox Park Conference Centre.

For more information on the upcoming talk, visit the Equilife Facebook page.

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