

DR NICK ROE IS A VETERINARIAN, 4* EVENTER, WORLD CUP SHOWJUMPER, LECTURER IN EQUINE STUDIES AND A REGISTERED THOROUGHBRED TRAINER. IN THIS ARTICLE HE COVERS.....

TENDONS

PART TWO

THERAPY

1: ACUTE STAGE (0 - 48 HRS)

The main goal of the initial therapy is to minimise inflammation. Inflammatory products cause more damage and more fluid or oedema to build up, and the more of this and the longer it hangs around, the more scar tissue is laid down.

ICE: Cold therapy for twenty minutes twice a day has a very good anti-inflammatory effect. There are various ice boots available, but not all of them keep the leg cold for twenty minutes. Check the skin temperature is cold after you remove the ice boots. Canvas ice boots that have a long zip and go above the knees are ideal. Otherwise, you can teach most horses to stand with their leg in a bucket of water, slowly adding ice.

BANDAGING: A good pressure bandage with plenty of cotton wool applies pressure to any swelling that is present and keeps the tissue planes collapsed to prevent the undesirable fluid within the tendon.

REST: Stable rest is essential to limit any further damage.

PHARMACOLOGICAL: Non-steroidal anti-inflammatories (such as Bute and Finadyne) at the higher dose rates are essential to limit the initial inflammatory response. Short acting corticosteroids can be used in the first forty-eight hours only. Hyaluronic acid, BAPN and PSGAG's have been injected in and around the lesions but there is insufficient proof of their benefits.

2: SUB-ACUTE STAGE (DAY 2 - 21)

The main aims of this stage are to stop the spread of inflammation to normal tendon, reverse the acute inflammation, minimise permanent damage and start the repair process to maximise orderly and functional tendon repair.

HOT & COLD THERAPY:

This can be achieved by using sweat wraps between ice treatments. A good sweat wrap is to put a layer of glad wrap under your pressure bandage.

Continue this for up to six days. The idea being to remove as much of the tissue fluid before the fibroproliferative phase begins. Once this phase begins, it becomes more and more difficult to remove this fluid as it is converted into scar tissue.

NON-STEROIDAL ANTI-INFLAMMATORY DRUGS (NSAIDs): Bute should not be continued for more than three weeks.

Therapeutic ultrasound is very good at increasing the rate of healing and limiting the amount of scar tissue. Speak to your vet about accessing therapeutic ultrasound.

CONTROLLED EXERCISE: It is now time to start the tedious part of recovery from tendon strains, and that is a gradually increasing amount of controlled exercise. Two ten minute hand held walks are a good place to start. If the horse is highly strung or at peak fitness while confined in a stable, then it might be worth while to ask your vet to prescribe sedation for the first few walks.

SURGICAL TREATMENT: Options include tendon transplantation, carbon fibre implantation and fragment injection, tendon splitting and superior check ligament desmotomy, all of which involve a lengthy period of rest, a fair amount of cost, a graded exercise program and it is questionable whether success is due to the surgery or all of the other things that you have done as part of the horse's treatment plan.



Ice Boot

3: REMODELLING STAGE (> DAY 21)

The main aim of this stage is to guide the repair process to produce a functional tendon i.e. minimise scar tissue, keep the fibres aligned as well as possible and maintain tendon gliding function.

Continue with the therapeutic ultrasound. No need to continue bandaging. Keep the horse confined until around day sixty.

CONTROLLED EXERCISE: The regime must be tailored to suit the individual horse, the severity of the strain and the facilities and time schedule of the owner/carer. Scar tissue reaches 50% of its eventual strength six to eight weeks after the initial injury, so only light exercise is recommended until sixty days.

PROGRESSIVE LOADING: It is essential in the program that every step is a slow and gradual one, so that overloading and fatigue does not occur. Light exercise means up to forty minutes of hand walking. The next step is to ride the horse at the walk for about fifteen minutes a day, this would be approximately three months after the initial injury (day 120). Shortly after starting to ride is a good time to have another ultrasound. At any time during this program if signs of inflammation occur then start anti-inflammatory treatment immediately and organise another ultrasound.

At around three months it is time for the big move to life outside of the stable. This is a delicate step as most of our steeds will be dying to buck and gallop around after three months in a confined stable. So, try exercising the horse as you did the day before, but in a small day yard that hopefully you have access to. It is also helpful to have a companion pony always within sight to keep your horse company.

By day 150, and hopefully all going well, you are now up to about an hour's walking (now how many walk pirouettes can you practice in an hour!?) and you can progress to trot. Starting at five minutes and adding five minutes every two weeks until day 210, you can now add canter, increasing by five minutes every two weeks. By day 270 you can gradually increase to jumping a little bit and by day 330 you can maybe go to a combined training day, where you will be sure to win the dressage test because you have had ten months of doing flatwork!!

Before any step up in the training program it is advisable to check the progress of healing via an ultrasound examination.

The use of hills is a very good way to develop cardiovascular fitness as well as improve musculoskeletal strength. Hills remove the need for speed to get the heart rate up. This is a good thing, as the faster you go the harder it is to judge the onset of your horse's fatigue and the more likely you are going to re-damage the tendon.

SWIMMING: Swimming is very good for the development of cardiovascular fitness but as there is no loading on muscles or tendons it should only be used in conjunction with a controlled exercise and progressive loading program. Water treadmills or water walkers are excellent for rehabilitation post tendon strains.



TREADMILLS: In the last fifteen years, the use of equine treadmills have become increasingly common. For about \$40,000-\$80,000 you can have one of these very useful tools, or a local racing trainer or equestrian centre may already have one that you can use/hire. The surface is consistent, you can have up to a 6 degree incline, speed/intensity is very well controlled, they work rain hail or shine and the work out is without the weight of a rider on the horse's back. Associate Professor Allan Davie from the Australian Equine Racing and Research Centre has spent many years working with treadmills and elite horses and has customised programs available.

As you can see if you have a tendon injury and you want to give it your best shot, then in the next twelve to eighteen months you will get very good at timing every ride to the second and noticing every change in the skin temperature on the back of your horse's legs. But for the chance of achieving your goals in the sport with the horse that you love, it is well worth the perseverance to achieve a successful outcome.