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### Staying Sound Post-Tendon Injury

I have a 4-year-old unraced but race-trained off-track Thoroughbred (OTTB) gelding who was given to me after he bowed his right front tendon (it was a 30% core lesion). I rehabbed his tendon with hand walking and wrapping, then controlled turnout, and was rewarded with him being cleared by the vet to go to rehab work sooner than expected, but I gave him an additional three months of controlled moving to large pasture turnout time off.

When I restarted him under tack, we followed veterinary instructions about slowly easing into things. I've always kept a close eye on his legs, and they have been cold and tight since the original tear.

We have started over crossrails about two months ago now, and he has taken exceptionally well to jumping and his new career. Now I am looking into making him an eventer, and I want to keep him healthy, happy, and sound for as long as possible! He is already on a joint and tendon supplement and gets liniment after hard works or shows, and is poulticed and wrapped if needed. What else can I do for my boy to help him stay sound?

Andy Armstrong, via e-mail

Many Thoroughbreds are retired from racing due to a bowed front superficial digital flexor (SDF) tendon, and fortunately with correct rehabilitation and management most of these individuals are able to pursue successful second careers as pleasure and show horses.

When a Thoroughbred racehorse develops a bowed tendon, I think it is essential to fully evaluate the horse in order to determine any predisposing factors. The most common secondary finding in my practice is a chronic and often low-grade or undetectable lameness problem in the opposite front limb (typically fetlock or knee pain) that has caused the horse to persistently overload the healthy leg and eventually cause breakdown of the SDF tendon on the good side. Conformation and shoeing can play a role in injury development in any equine athlete, so consider these factors as well. Identifying and addressing these predisposing problems is critical for both the immediate post-injury period and for long-term successful management of a recovered tendon.

Initial tendon injury management should always include rest and cold therapy, and in many cases we may employ more intensive techniques such as ultrasound-guided injection of platelet-rich plasma or stem cells directly into the lesion, or surgery to release the SDF's accessory ligament in order to alleviate some tension on the tendon. The most critical aspect of successful tendon rehabilitation is a sufficient rest period followed by a cautious and regimented return to performance on a gradually increasing plane of exercise. Ideally, your veterinarian will perform an ultrasound exam every four to six weeks, or at least before significant increases in athletic stress are planned, allowing he or she to track the tendon's progress and ensure that it is responding positively to therapy and exercise.

It sounds like your horse was very well-managed and has recovered unevenly from the acute SDF injury. The most important factors to consider now for maintaining long-term tendon health are:

1. The presence of other musculoskeletal injuries that could cause him to exert too much stress on the healed tendon. The main considerations include opposite limb arthritis and foot pain. Many OTTBs are not blessed with great feet, so you have to make sure he is comfortable on both and not leaning away from a sore side. You have probably had flexion tests and X rays taken at some point, so you are aware of potential areas of joint pain that could also cause asymmetrical weight-bearing. This allows you to monitor for early signs of trouble and discuss appropriate management with your veterinarian.
2. Maintaining regular shoeing intervals with an appropriate toe length and foot balance is very important for healthy limb mechanics, as well as to help prevent foot soreness. Off-track Thoroughbreds are very prone to the long toe-underrun heel conformation, combined with thin soles and a predisposition to foot bruising. Most need the shoes for protection and regular farrier visits to maintain optimal foot balance and hoof health.
3. Choosing a style and level of competition that is appropriate for each individual to prevent overstressing an old injury and potentially causing a new one. Although the tendon is technically healed, the type of collagen deposited in the tear is more like scar tissue with less elasticity and ability to withstand extreme strain than the original healthy tissue. If you hope to move up a level in workload or competition and are unsure if that tendon is up to the task, your veterinarian can perform serial manual and ultrasound exams during your months of preparatory training, as well as during the competition season, to monitor the tendon's size and fiber pattern. This will provide feedback about how well it is adapting to increased strain. If there is any sign of inflammation or swelling, hopefully you will have caught it early enough to prevent a serious setback.

While there is no way to guarantee that an old tendon injury won't flare up someday, these three factors are the key preventive measures to help ensure years of enjoyment with your horse.