

Rest and Rehabilitation: A New Outlook on Recovery
By Mikayla Swirski

“Call in and schedule his first recheck in 4 weeks. We can assess how he is doing and adjust his rehab program then.” These were the words that signalled the beginning of my horse’s rehabilitation journey. Unfortunately, like many horse owners before me, my horse had suffered an injury that would require rest and a slow return to work. I remember feeling focused, but slightly anxious as I anticipated the ups and downs I would face in the months ahead.

My horse, Hank, had injured his right front leg. While Hank’s comfort level on his right front limb was important, my veterinarian explained that we would also focus on developing strength in other areas. My horse’s injury required a period of rest prior to beginning the bulk of his rehabilitation program so he lacked balance, had reduced core strength, and showed poor muscling over his topline. To give Hank the best chance of recovery we had to work on improving these deficits while also keeping him comfortable on his right front leg. The goal wasn’t just to get Hank back into work after this injury, it was to see how we could affect his long-term soundness as well.

While there are world-class rehabilitation centres that have access to equipment such as underwater treadmills and salt water spas, my horse’s rehabilitation took place at home. While this limited my access to some tools it also allowed us to develop a creative approach to Hank’s rehab. Most of the components of Hank’s program did not require significant equipment, it only required my own time and commitment. We looked at the work done by Dr. Hilary Clayton, a veterinarian who has extensively studied equine lameness, biomechanics, and rehabilitation, and started Hank’s rehab with groundwork exercise that have shown to have a beneficial effect on balance, and core strength.

One exercise involved asking Hank to shift his weight and maintain his balance. This was achieved by gently pulling on Hank’s withers or tail, which required him to activate the stabilizing muscles in his forelimbs and hind limbs. We wanted him to work on his abdominal strength so we included an exercise to help him lift through his lumbosacral area. By running my hands in the groove between his semitendinosus and biceps femoris muscles I encouraged Hank to round through his back, working his core muscles. Hank’s favourite exercise was carrot stretches. During this exercise I used a treat to entice him to stretch his neck into different positions. We asked him to round through his neck and back by putting his chin to his chest, carpus, or fetlocks and we asked him to stretch laterally by bringing his chin to his girth, flank, and eventually his hind fetlock. These stretches helped Hank increase the size of his multifidus muscles, a group of muscles that acts as vertebral stabilizers.

As Hank progressed we added in more difficult exercises to increase the range of motion in his forelimbs and hind limbs. Using cat collars and small, light pieces of chain we made tactile bracelets for Hank’s pasterns. When these bracelets are placed around the pastern and move against the skin the horse’s proprioceptive system interprets the bracelets as an obstacle in the

limb's path. This causes the horse to temporarily increase flexion in different parts of the legs until the horse becomes accustomed to the sensation. As Hank's rehab progressed we added in ground poles in-hand and under saddle to further increase Hank's range of motion and muscle strength. As Hank gained strength we could adjust the spacing, height, and frequency of the pole sessions to further his progress. These exercises helped strengthen him while also adding mental stimulation and variety to his work sessions.

When I started Hank back under saddle my veterinarian introduced me to the equine ridden ethogram. This ethogram contains a list of behaviours that can indicate musculoskeletal pain if the horse performs them while under saddle. The ethogram was generated after extensively studying the behaviour of sound and lame horses under saddle. If a horse displays eight or more of these behaviours under saddle, the horse is most likely suffering from musculoskeletal pain while being ridden. While some of the behaviours are more obvious signs of discomfort, like bucking and rearing, other behaviours on the list are more subtle, like repeatedly opening and closing the mouth, repeated changes of head position, or a constantly swishing tail. With this ethogram in mind I could better tailor my rehabilitation rides to make sure I was strengthening my horse, but not working too far past his comfort limit.

My horse's rehabilitation was a constant oscillation of highs and lows. Every day I carefully wrote down how each rehab session went so I could track patterns in my horse's progress. On a disappointing day it was easy to feel like I made no headway since the beginning of the program, but when I looked back through my notes at where we started it was easier to see the largely positive outcome. Overall my horse's rehabilitation program made me more in tune with my horse, and provided me the exciting opportunity to learn more about equine rehabilitation. It has affected how I will approach equine lameness as a practicing veterinarian, and it has shown me that through proper rehabilitation a horse can come back stronger and better able to do his job.

References:

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Mikayla Swirski pictured here with her horse Hank is one of three recipients of the 2020 Ride & Tie scholarship award, presented annually to a deserving veterinary student(s). Mikayla was born and raised in British Columbia, Canada. She obtained a biology degree in 2017 and then started vet school at the Western College of Veterinary Medicine where she finished her degree in April 2021