



Horsepower Technologies' FastTrack device is designed to help horses safely return to movement after sustaining soft tissue injuries.

TAKING AWAY INSULT AFTER INJURY

Horsepower Technologies is hoping to reinvent recovery of lower-limb injuries.

By Arden Cone

Photos Courtesy Horsepower Technologies

For decades the treatment for lower-limb soft tissue injuries in horses has involved one crucial ingredient: stall rest. Then after months of that treatment, horses undergo a slow and steady return to activity.

As any horseperson knows, that method leaves much to be desired. Do you *really* want to do walk sets on a horse that has been cooped up in a stall for three months? There are medical disadvantages to the method too. Studies on soft tissue injuries in human athletes have shown that an earlier return to movement is beneficial for recovery and future soundness.

The problem with horses, however, is that they don't know how much movement is too much. Any horse coming off stall rest is likely to buck, play and run in the paddock, potentially worsening the injury. But thanks to Horsepower Technologies

and its FastTrack device, the recovery process for horses with these lower-limb ligament injuries might be facing a revolution.

Founder Wendy Drumm had the idea for FastTrack eight years ago after she lost her horse Gio to a fracture in the short pastern bone. Drumm partnered with Dr. Carl Kirker-Head, MB, MA, the Marilyn M. Simpson Chair in Equine Medicine at Tufts University (Massachusetts), to find out where advancements in technology were necessary.

"They started looking at the state of the industry," says Tory Thompson, senior manager of business development and marketing at Horsepower Technologies. "[She saw] how many horses were suffering due to soft tissue injuries that never fully healed, or [injuries that] started out as lesions and turned into ruptures because the horse, as soon as [it] went back to work, overextended [the leg]."

Thompson clarified that FastTrack is

not like a splint. Instead it's designed to be similar to a human knee brace.

"It's meant to promote mobilization, but in a safe, mechanically controlled environment," she says.

FastTrack's patented SafeStop feature, a dial on the side of the device, allows the veterinarian to set the maximum angle of flexion.

"It limits the range of motion in the fetlock joint," Thompson says. "If you've ever had an ACL injury, one of the key factors is preventing the hyper, over-extension of those already injured ligaments."

The horse can walk, trot, canter and even go under saddle with the SafeStop dial set.

"At the max permissible extension—that's when the brace actually activates and stops that fetlock from overextending—they have a very natural gait, and we've gone through a lot of testing to make sure it was going to be comfortable to be worn," says Thompson.

The brace's polyurethane shell is surrounded by an exoskeleton of aircraft-grade aluminum, which absorbs shock and bears weight. Because of this feature, and because the fit on the leg is so precise, the device can offload the horse's weight from its soft tissues onto its strong cannon bone.

The thermoformable padding takes a mold of the leg when warmed with the specialized heating apparatus included within the kit, providing maximum comfort while eliminating the risk of pressure sores. Correctly measuring the leg and forming the mold is crucial, so it should only be done by a veterinarian. The detailed instructions and videos make the step-by-step process easy for equine practitioners to follow.

Horsepower Technologies only sells the FastTrack device to veterinarians, but after the set-up process is complete, the horse's caretaker can manage the daily use of the product, in accordance with the veterinarian's instructions.

The company put the device through testing at its Cambridge, Massachusetts, engineering firm, Manta Design, as well as at its veterinary laboratory at Tufts University's Cummings School of Veterinary Medicine. Kirker-Head, now the chief veterinary officer at Horsepower Technologies, is overseeing all the research conducted on test horses.

The feedback from the company's early test cases has been positive. Although there aren't yet official statistics on how the product speeds recovery, Kirker-Head is



Because set-up of the FastTrack's SafeStop dial requires an expert, the device is only sold to veterinarians, but horse owners can manage daily care after an initial fitting.

injured both of those injuries.”

For Thompson, seeing FastTrack make a difference has been a rewarding experience. “Having the veterinarian call us up and say that this really prevented the horse from rupturing the tendon or ligament again was really profound,” she says. “And the horse is back, healthy and happy. He is without FastTrack—back to normal life.”

A more recent case involved a race horse that had bowed his tendon multiple times.

“They just didn't know what to do because it kept reoccurring,” says Thompson. “The vet called me up and said, ‘Do you think this is an applicable case?’ And I said, ‘Absolutely. If it prolongs the horse's life—absolutely.’ A bowed tendon—you don't think you'd have to euthanize the horse, but in some cases, you just don't have any other option. That horse is still in the FastTrack and working through mending his tendon. That was a powerful case that we continue to treat.”

In the future, Horsepower Technologies hopes to create another device, SoundTrack, to help avoid soft tissue injuries.

The product is only sold in pairs—horses always wear two to prevent overcompensating with the uninjured limb—and each set is \$3,000. For more information, visit the company's website at horsepowertech.com. 📞

documenting the field trials.

“Our very first FastTrack that we put on a horse commercially was a horse out of the University of Tennessee,” Thompson says. “That horse had suffered a superficial digital tendon injury and also a suspensory branch injury. We treated him with the FastTracks, and several times throughout his rehab, the horse kicked up, got frisky [and] started jumping around. The veterinarian swears that without FastTrack, he would have re-