

BY AMANDA DUCKWORTH

**THE CONCEPT OF HYDROTHERAPY** and horses is not a new one. Racehorses in Australia routinely go for a swim in the ocean while their American counterparts are often seen having their legs hosed down after a spin around the track.

From prepping yearlings for the sales to helping an injured horse with rehabilitation, in addition to being an aid for general fitness, formalizing water's use as a preventative measure and a healing technique has become more accepted among horsemen. With that, hydrotherapy options for horses continue to grow and so does the need for education and research about best practices.

"Most of the purported benefit is due to the ability to maintain or improve conditioning without unnecessarily over-stressing a particular injury," explains Dr. Henry Adair in his paper "Aquatic Therapy for Conditioning and Treatment of Tendon and Ligament Injuries."

"The most common forms to achieve this effect are via underwater treadmill

or swimming pool. Both are safe when used properly; however, devastating results may occur if used by untrained individuals or treating conditions in which these modalities are contraindicated.

### Cold water therapy gains acceptance

"Proper diagnosis of the condition, having properly trained personnel, acclimation of the horse, and having specific treatment protocols are necessary for optimum results to be obtained."

As with any other kind of treatment, what will prove most effective for a horse depends on its situation, and it is important to work with a qualified individual

when it comes to selecting the best course of action for each horse.

Swimming builds strength and provides cardio, but it also requires the horse to have its head in an unnatural position. One of the reasons the water treadmill continues to grow in popularity is the amount of control the caregivers can have. Water treadmills come in different varieties, which means some of the choices include hot or cold water, in-ground or above ground, and an incline or no incline, all while allowing the horse to maintain a natural posture.

"Biomechanically, they are going to go how they should, and they get a little help from the buoyancy," said Dr. Julie Vargas, who heads up the medicine and rehabilitation divisions of Spy Coast Farm near Lexington. "It has several advantages. It is going to add the fitness function, and the concussive forces are muted, but we still want a bit of the concussion. You use the water to help what you are working with.


"If you are wanting to start work, the treadmill concept is making everything consistent. You are asking for the work, but not in a questionable environment. It is the same, every single step. Nothing is different. As you are starting a horse back, that is what you want. Eventually you need change, but it helps bridge the gap, and most of them really like it. They get bored on a dry treadmill, but as soon as that water comes in, a lot of them play in it. You can tell they enjoy it. It is still work, but it's different than the monotony of hand walking or a dry treadmill."

Spy Coast, which specializes in sport horses but also caters to the local Thoroughbred population, has several underwater treadmills, all with different options. It depends on the horse's needs as to which is best suited for a particular client.



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## HEALTH ZONE

Hydrotherapy

“The underwater treadmill gives you control,” Vargas said. “Every case is a little different, but for horses starting back to work, you have more control when you put them on the water versus not. You have a resistance factor, a bit of buoyancy, and a decrease in concussive forces, which all benefit the horse.

“It’s controlled resistance work, and we don’t really have another way to do that in rehab. We can’t make them lift weights, but you can change the water level and incline and speed of these treadmills. We use the cold water way more than we use the warm—we use it eight times out of 10—but the warm water is really good for arthritic horses or ones working on range of motion post op.”

In October 2018, the *Journal of Equine Veterinary Science* published research titled “International Survey of Equine Water Treadmills—Why, When, and How?” that took a look at how equine water treadmills were being used around the world.

“Water treadmills (WTs) are becoming increasingly popular as rehabilitation and training tools,” explained the researchers. “Concerns have been raised among equine professionals about injury development/exacerbation after WT use, and little knowledge of optimal WT use is available. The aim of this study was to determine how WTs are being used, using an international survey-based approach, with a view to informing future research.

“Significant differences between training and rehabilitation sessions were identified (deeper water, slower walk speed, and longer duration for training compared to rehabilitation;  $P \leq .023$  for all three variables). Water treadmills were most frequently used for rehabilitation in horses with ligament and tendon injuries. Water treadmill habituation is important, and protocols were similar between venues. Water treadmills’ usage was 60%/40% between training/rehabilitation with protocols varying significantly between venues.”

Alicia Bradshaw, who is the manager of Spy Coast’s rehab and fitness center, has worked in the field for more than a decade and is encouraged by both the acceptance of horsemen when it comes to the value of hydrotherapy and the fact research is being done.

“With horses, if you try to go out and walk one and something scares it, it can rip apart everything you just did,” she said. “With water treadmills, it is very controlled. As we add more work for them, they are able to increase that range of motion. Depending on what they had surgery for, we can decide how deep we want the water. Do we want them to step out or reach longer? Things like that.

“We’ve been doing it awhile, but no one was collecting the data. It’s exciting that it is getting recognition now, and people are collecting research.”

Although it might sound similar to a water treadmill, the cold water spa is another aspect of hydrotherapy that is gaining popularity for horses, but it is used in a very different way.

Unlike the water treadmill where horses are constantly moving, the cold water spa requires them to stand still, as the near freezing salt water works on their lower legs to take out heat and inflammation.

“In the Thoroughbred industry, the cold spa is really taking off,” said Bradshaw. “Different than some of the other disciplines, these horses go out and train hard every day, pounding the ground at a relatively fast speed. The cold spa is really big for the Thoroughbred world because people use it as a preventative.

“They go out there, they gallop, and then they run them through that ice bath when they are done and suck those legs down tight. A lot of times you can keep things from developing. It’s like pro athletes who go and get in ice baths after they work-out. It’s the same thing. You can do all four legs at once, and it is really, really cold. Ours is 35 degrees and very hypertonic.”

The high salt content in the water increases its density, which in turn increases pressure. In addition to providing preventative treatment, it is good for wound care and rehab as well because the pressure aids in fluid and waste dispersal.

“If you think about it, the deeper you go in salt water, the more pressure you get,” said Vargas. “You get that for the lymphatic return and edema. It is a detox effect for sucking edema out of the leg. Acute injuries, when there is heat, it can help a lot.”

While many horses adapt to the water treadmills relatively quickly, Vargas notes the cold water spa can take a bit more getting used to.



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“Chemical sedation is important, especially the first time,” she said. “All they have to do is stand there. They don’t have to move, and shouldn’t move. In the treadmill, they are moving so they don’t really mind the time passing, but the cold spa is about 20 minutes total, and they can get bored.”

Although standing in what is essentially a very cold water box goes against many horses’ instincts, with proper introduction and care, many grow to like the treatment. However, some do not and will never be good candidates for the therapy, no matter how beneficial it might be for them.

“We try to make it a good experience from the start, and we will gradually back them off of drugs,” said Bradshaw. “Most of them are fine, but we have had a couple we absolutely couldn’t do it with because it can get very dangerous if a horse is too worked up. Safety for your people and for your horse is always a priority.”

In addition to sedation, keeping

things peaceful around the horse as it is accepting this new type of treatment is also important. Once they adjust to the concept, many of them thrive.

“Racetrack people know the value of ice,” said Bradshaw. “They’ve used it for years, and it’s been a great therapy. The cost of putting in a machine like this isn’t cheap, but trainers now have them in their barns and farms have them on site. You can get all four legs at once, at the same temperature and pressure, and you can’t beat that.

“The horses just have to trust you, and they have to believe you aren’t trying to hurt them. Most horses get to where they don’t resent it at all. They are like, ‘OK, load me in; I’m fine,’ because they know they will feel better when they come out. They love it.”

As technology and research surrounding hydrotherapy for horses continue to advance, the cost of equipment has started to decrease and acceptance has grown. Both as a preventative mea-

sure and as a rehab tool, hydrotherapy has a lot of value.

“I do think human medicine has this figured out, and they put a lot of emphasis on physical therapy after an injury,” said Vargas. “We are just figuring out how important that is in equine medicine. We can do a surgery all day long, but unless it is followed up with rehab, it’s not as effective as it could be.

“You are probably not getting the most out of a surgery or joint injection if you are not following it up with some appropriate care and therapy. Back in the day if your horse got an injury, it went in a stall for 30 or 60 days. Now, we don’t really do that. There are very few injuries where they are completely stall bound, and the sooner you can get them out and get motion into a soft tissue injury, or even a boney injury, it is important.” **BH**

*Amanda Duckworth is a freelance writer based in Lexington.*



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