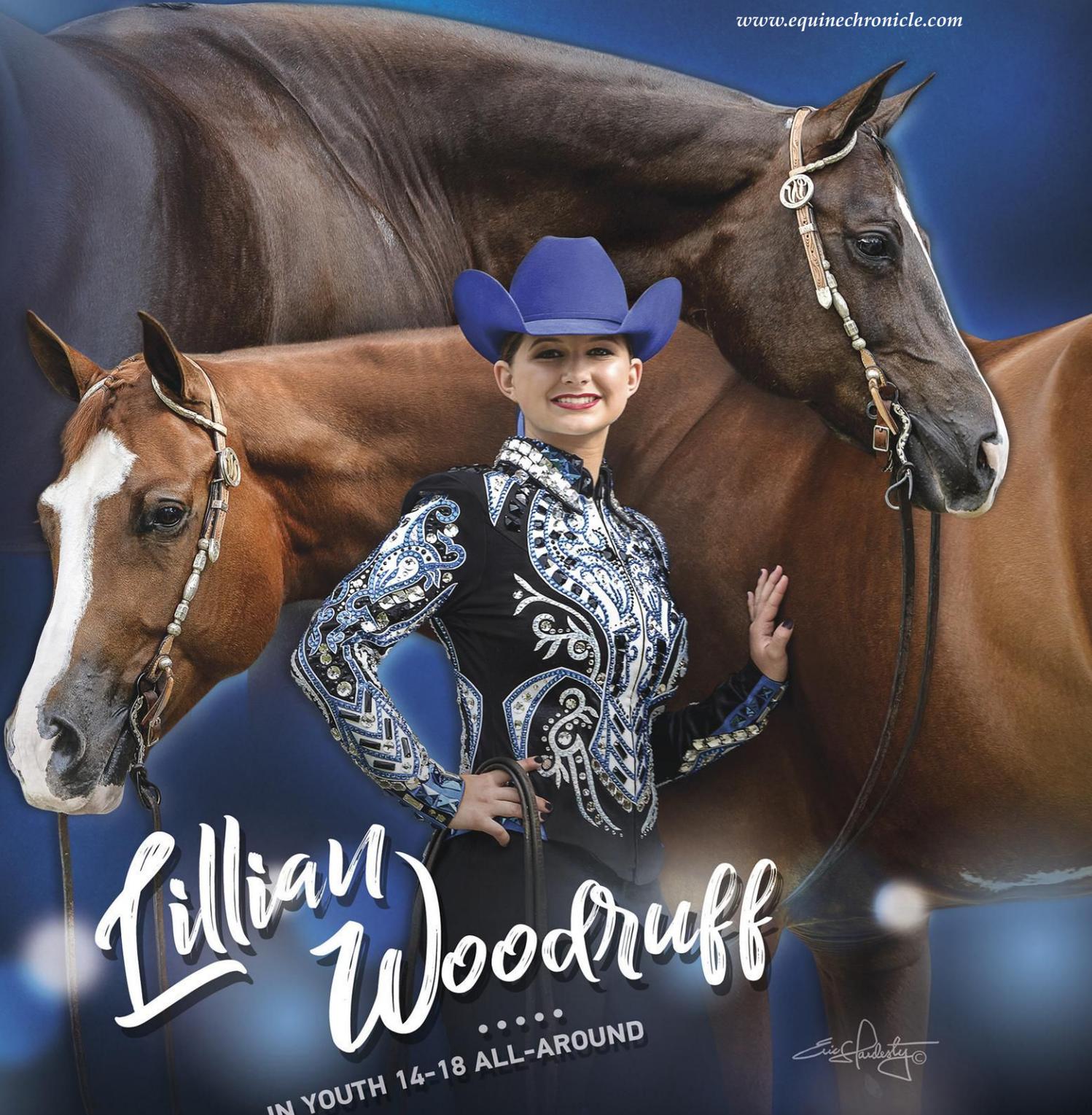


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SHOCKWAVE THERAPY

Scary Name, Scary Good Results

The term “shockwave therapy” might seem scary, but it’s really one of the few scientifically backed therapies for horses recovering from injury or general maintenance.

By: Megan Arszman



“There’s a reason it’s covered by insurance—the efficacy is there. It’s proven that it works.”

What is Shock Wave Therapy?

Extracorporeal shock wave therapy (ESWT) is a non-invasive therapy that’s used to stimulate collagen fiber orientation, which encourages the reorientation of repair tissue. A certified veterinarian uses a probe connected to the shock wave unit, which emits a high-pressure sound wave in pressure surges. These waves penetrate fluid and soft tissue and are absorbed by denser structures (ligaments and bone). These sound waves then stimulate blood flow, encourage new blood vessel development, and accelerate cellular metabolism in the ligaments. The waves also produce an analgesic effect with a reduction in inflammation in the affected area.

Dr. Brad Cumper of Saginaw Valley Equine Clinic in Saginaw, Michigan, points out that shock wave therapy is vastly different from radial pulse therapy (RPT), which has also been marketed as shock wave therapy by some veterinarians.

Radial pulse therapy, which acts like a small mechanical jackhammer, can only penetrate small, superficial areas, while true shock wave energy, which relies on sound energy, penetrates deeper, larger areas. While ESWT penetrates to the cells further into the body, RPT affects the tissue that’s closer to the surface. “Because the ligament-bone interface is so large, shock wave therapy works best in backs and the dorsal spinous processes, as well as the suspensory ligament in the performance horse,” Dr. Cumper explains. “The PulseVet machine gives superior pain relief, as well as the ultrasound healing qualities on the collagen fibers that make up the regenerative elastic healing that we’re looking for in preventing scar tissue formation, which is critical

Your veterinarian stands up after inspecting your horse’s long, delicate legs, and you shudder when he says your horse has a suspensory injury. Years ago, that diagnosis was almost a black flag for any horse’s career, but now, veterinary advances have made rehabilitation and recovery from a suspensory injury just a blip on the radar.

The PulseVet shock wave therapy system is the only therapy system that’s backed by years of studies, showing how the modality is not only beneficial for soft tissue injuries, such as suspensory ligament injuries, but also for routine maintenance and care.

“Unlike other modalities found in the field, shockwave therapy has over a decade of hard published research. That’s why it’s covered by equine and small animal insurance,” says Trudy Gage, Director of Equine Sales and Client Education for PulseVet.

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Shockwave Therapy: Scary Name, Scary Good Results

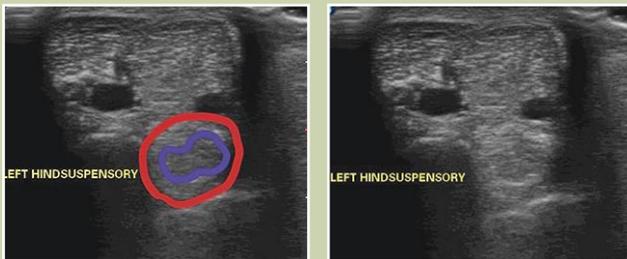
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for preventing re-injury.”

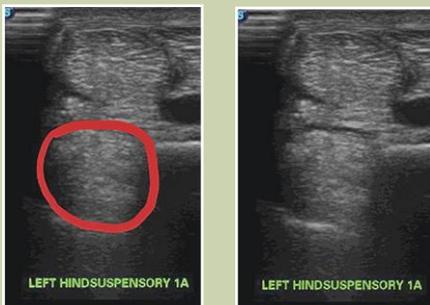
Using ESWT for Healing

The most popular use of ESWT is for healing of soft-tissue injuries such as suspensory ligament issues. The suspensory ligament supports your horse's fetlock, and is a common site of injury for all performance horses. The ligament's job is to stretch and let the fetlock sink under the horse's weight, absorbing shock, and then spring back as weight is moved off that leg. Constant repetitive movement can weaken and tear the ligament.

Before ESWT, time was the most common therapy used to



Images of Wilbur's Injury Before Treatment



Images of Wilbur's Injury After 3 months with Shock Wave

heal a suspensory injury. Now, the healing process is fast-forwarded, thanks to the PulseVet machine.

“When you see macro lesions in the suspensory on the ultrasound, typically these horses will take four to six months to recover,” explains Dr. Cumper. “We like to use the first 120 days of healing to treat with shock wave therapy—we'll treat on Day 0, Day 30, and Day 60. If a horse has soreness in the suspensory, but we cannot see lesions on the ultrasound, we may bump up our treatment to Day 0, Day 14, and Day 28.”

Dr. Cumper explains that acting fast with suspensory injuries is important, because within three hours of treatment, the shock waves start to excrete growth factors, ushering quality healing in the area.

Lori Murphy, an AQHA Select exhibitor, knows firsthand how much of a difference treatment with ESWT can make. After her horse, Envy Me Sleepin, tore his suspensory, she was devastated.

“I had friends who, 10 years ago, had horses with the same injury, and there wasn't a good outcome,” Murphy says. “Of course, that was 10 years ago, prior to the use of shock wave therapy. So, I'll admit, I cried.... a lot.”

Murphy was encouraged to reach out to Dr. Cumper to discuss the protocol for “Wilbur's” injury. After religiously going through the treatment protocol prescribed by Dr. Cumper, Murphy was slowly able to bring the gelding back to working condition. They recently earned a ROM and qualified for the 2017 AQHA Select World Championship Show in Hunter Under Saddle.

Using ESWT for Pain Relief

One little known phenomena Dr. Cumper is excited about with ESWT is how the therapy can be used for pain relief in horses. When an MRI shows bone edema (bruising, as a result of the pulling nature of the ligament as it attaches back of the bone), ESWT has been shown to decrease the sensitivity to local pain in that tissue.

“You see this four- to eight-day pain relief period with the shock wave therapy,” Dr. Cumper says. “I think the reason why this therapy works so well for this type of pain relief is because the sound wave hits the bone and bounces back, so you get double the effect of the sound wave traveling through the soft tissue to the bone, and then it bounces off the bone to come back through that soft tissue.”

Dr. Cumper has used ESWT to treat numerous modality issues and periods of equine pain relief from kissing spines to osteoarthritis. However, while you would think that since ESWT is a godsend for treating suspensory injuries, routine shock wave maintenance is worthwhile for suspensory maintenance, Dr. Cumper says that isn't necessarily the case. “Using ESWT on the suspensory doesn't provide the care you thought it would—they're either sore or not sore in the suspensory,” he says.

Using ESWT for Maintenance

In the last five years, Dr. Cumper has seen an increase in using ESWT for maintenance. For example, the stallions at BSB Quarter Horses receive treatment with PulseVet different times during breeding season, mostly aimed towards their backs and hind legs.

“The most popular area that I use shock wave therapy for maintenance is the back and the hocks,” Dr. Cumper says. “Also, horses that you would inject or give pain medicine for arthritis, yet there is still an issue with stride length differentiation, see a better response when you add ESWT.”

“It's amazing how sore stallions can get in their hamstrings from jumping onto and off the dummy,” says Kim Donovan, co-owner of BSB Quarter Horses in Sturgis, Michigan.



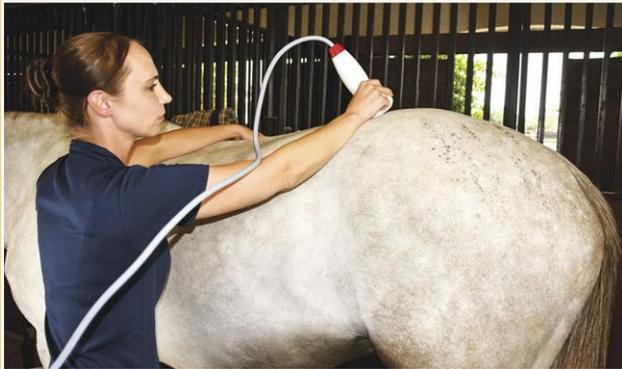
Envy My Sleepin

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Using Shock Wave for Maintenance



A Veterinarian administers ESWT for maintenance on the back and the hocks.



The stallions at the breeding facility, including multiple World and Reserve World Champion AQHA sire Too Sleepy To Zip, started receiving ESWT treatments for maintenance six years ago and Donovan has seen a vast improvement in the stallions' performances and general well-being.

"Any time that a horse is comfortable—it doesn't matter what he's doing—he's going to give you 100 percent," she says. "We see a huge difference in their semen quality, their soundness, and their temperament. Breeding season takes a toll on the stallions, but they no longer get worked up when they go into the breeding shed, because we feel they're more comfortable."

In the past, the stallions received multiple joint injections for maintenance, but now they're only injected once a year in conjunction with their treatments. The farm's veterinarian, Dr. Joanna Bronson, treats their backs, loins, hamstrings and hocks once a month during breeding season, and then perhaps two times total during the off-season.

"Our stallions just love their treatments," Donovan says. "They will lean into the probe, lick their lips, and almost fall asleep. They're not disturbed by the sounds."

Is There Anything ESWT Can't Do?

Dr. Cumper had a Barrel Racing horse come to him after hitting a metal barrel with his stifle. Even after a month on NSAIDs and antibiotics, the wound wasn't fully healing, and the horse still wasn't 100 percent sound.

"I decided to try using the shock wave machine, and within two days of that first treatment he was no longer limping," Dr. Cumper says. "I just wanted to try the shock wave therapy, because it's non-invasive, and, yet, after 30 days of treatment on high-powered medicine and no real results, one session with the shockwave device and he was already returning to normal."

Dr. Hill agrees that the reach of shockwave therapy is just starting to be discovered. "I've had so many situations that ESWT has benefitted, and it's surprised me," he says. "If I have a sore muscle, or a sore joint that I can no longer inject, or any type of ligament issue, I'm always prescribing ESWT because it's so beneficial."

"However, every case and every horse is different," Dr. Hill cautions. "Some horses respond to some things better than others, so it's important to keep that in mind."

Tips for Horse Owners

While shock wave therapy is starting to become more popular, not every equine veterinarian is going to have the PulseVet machine. But for specialty clinics like Dr. Cumper and Dr. Hill's, they not only can bring the machinery to the farm, but to major horse shows such as the All American Quarter Horse Congress, APHA or AQHA World Show.

"If I had to choose one machine to take with me on the road, it'd be the PulseVet," Dr. Cumper says. "It has the biggest effect. At events like at the Congress and the futurities, you have babies being ridden hard for the first time and for much longer than they're used to at home. Because of this, they start to develop acute soft tissue discomforts in the gluteal region, around the femur, hamstrings, and up the loin. These aren't horses that necessarily have lesions you'd find on an ultrasound, they're just sore, and the shockwave takes the soreness out for a five-day period."

Because of the cost of PulseVet, specialists caution that a typical treatment can run horse owners \$330-400. Anything less than \$300 might not be true shockwave therapy, but instead radial pressure, and it's important for horse owners to understand what treatment their horse is getting. Gage encourages horse owners to do their research and talk with rehabilitation specialists about the appropriate treatment protocol for your horse. If you see a PulseVet veterinarian or Gage at one of the major events this summer, stop by and speak with them about the science behind the healing.

PulseVet is the official shockwave therapy of the Western Pleasure Super Sires and the United States Equestrian Federation (USEF).

