UltrOZ At-Home Ultrasound System

We got impressive results and found it simple to use.

During the 60 days we used the UltrOZ LITUS therapy device, we saw beneficial results, and we believe this tool has a viable future in the equine physical therapy world.

TRADITIONAL SHOCKWAVE.
The benefit of extracorporeal shockwave therapy, aka “acoustic shockwave,” isn’t new. Horses with sore joints, bad backs or soft-tissue injuries have benefited tremendously. In most cases where extracorporeal shockwave is applied, the horse is brought to a hospital, although it can be performed on the farm if your vet is willing to do so.

Traditional therapeutic shockwave is intense and must be sedated. The “shocks” are uncomfortable to painful, and the machine is loud. However, it’s quick. A typical session entails between 1,000 and 1,500 shocks in 5 minutes. The sessions are generally repeated three or four times in a month, and it’s expensive, at around 40¢ per shock plus sedation for each session. (40¢ x 1,500 = $600.)

The benefits are clear: Acoustic shockwave can increase blood flow to damaged tissues (speeds healing), numb nerve endings to reduce pain, penetrate deep into tissues, and loosen stiff joints. But we’d like to be able to provide this therapy without all of the hassles. That’s where UltrOZ comes in.

Rather than create a high-intensity acoustic shockwave that is emitted on a fast interval, UltrOZ emits a low-intensity soundwave over a long period of time. This Low Intensity Therapeutic Ultrasound (LITUS) system was developed at the Cornell Veterinary Hospital.

The wearable system is designed for daily use (2 to 6 hours), secured in a neoprene wrap and run by a rechargeable battery pack.

We tested the system and were pleased. So much so, that we felt most horses could be left unattended wearing it. Ultimately, it offers the same effect on the tissues that acoustic shockwave does, it just works “long and low” rather than “high and tight.”

SAFEGUARDS. The UltrOZ doesn’t cause discomfort like the high-intensity acoustic shockwave. It will also shut off if the technology detects the tissue is becoming too hot. Its preset clinical levels can’t be modified, so the user can’t injure the horse by choosing an incorrect setting. Basically, you charge it, strap it on, and let it work.

Here’s how it works: The system comes with one ultrasound transducer that plugs into a battery pack, which is about the size of the keychain control that we use to unlock our cars. The transducer head is secured to the inside of a neoprene wrap and then positioned onto the desired site with ultrasound gel. The wrap is secured to the leg (much like a gallop boot) and the battery pack fits neatly into a pocket on the outside.

DRAWBACKS. The chance to provide therapeutic ultrasound for a horse with an acute injury or a chronic condition is valuable. But sometimes therapy must be halted due to unavoidable time constraints (like the owner working for a living). The fact that this system can be applied and left without supervision is a plus.

However, neoprene is known to cause skin problems in horses (fungus, bacteria, hair loss, etc.). It can cause excessive sweating because it doesn’t breathe. The manufacturer made this version of the neoprene “skin friendly” as possible by lining it with cloth, and it’s easily washable.

We didn’t see any skin problems, despite the wraps being on for extended periods of time, so we’d consider the neoprene concern likely limited to sensitive horses.

Some horses may fiddle with the wraps. If left unattended for long periods of time, as is the case with this therapy system, your horse may pull the wrap loose. To protect your investment, UltrOZ offers an extended warranty. If your horse destroys a unit, they will repair or replace it. Of course, they can’t provide replacements forever. The representatives will work with owners to figure out solutions to horses that are hard on systems. Difficult horses may need to be cross-tied during the therapy, with supervision.

The hair does have to be clipped in order for the system to work. Depending on the area, the clipping may make your horse look a little... well, patchy. Again, not a huge concern vs. the benefits.

BOTTOM LINE. Although you don’t need a vet to use this device, it’s a good idea. You should have a firm diagnosis and anticipated prognosis before treatment.

We found that the UltrOZ therapy has a proven beneficial effect. We also think that, when you consider traditional by-veterinarian acoustic shockwave session costs $500 to $750, the cost is reasonable. Plus, there’s no pain. That’s big.
Case Report 1: Alex, a Dutch Warmblood gelding

The UltrOZ system was used on 21-year-old Alex for 60 days on both hocks. His hocks are both mildly arthritic and, usually, he receives cortisone injections annually. The system was used in place of injections. On average, Alex’s owner had him wear the units on his hocks five days per week for approximately four hours per day.

The UltrOZ made a noticeable positive difference. The longer it was used, the better he performed. On the off days, Alex was stiff and short-strided when warming up. He also didn’t perform as dynamically as he did when the ultrasound was used.

The trial was not without problems, though. Immediately when the system came out of the box, the holder inside the wrap that secures the ultrasound head in place came apart. The pouch that holds the head is secured by a special glue to the inside of the wrap. The situation was remedied by some super glue. When asked about this problem, the manufacturers indicated they’re using a new epoxy. In addition, one of the unit battery chargers didn’t work out of the box. When asked about this, the company indicated that they were checking all of the units to assure that they were functional.

Case Report 2: Rupert, a Quarter Horse gelding

We tried UltrOZ on Rupert’s knees. At only 8 years old, his incredible reining/cow horse career has left him with arthritic knees. Despite joint supplements and cortisone injections, Rupert still comes out of his stall stiff every morning. Once he has had a chance to move around a bit and stretch his legs in turnout, he looks much better.

We used UltrOZ on Rupert for two weeks. The owners applied regular standing wraps to the front cannon bone region, providing a support system to “hold up” the UltrOZ unit on the knee. The owners left the system on overnight. Surprisingly, the system was often still working the next morning, beyond its reported maximum 6-hour charge. The wraps were flexible enough to stay on, even with Rupert laying down.

The results were undeniable. When he wore the UltrOZ wraps, he walked out of his stall with much greater ease. He was able to bend his knees and didn’t show resistance when picking out a hoof. We’d say that, without UltrOZ wraps, he was an 8 out of 10 on the lameness/pain scale. With UltrOZ, he came out at around a 4 overall. Applying the system cut his lameness in half by the end of the trial.

Rupert showed improvement after just one treatment. However, he did gradually get better over the two-week period, which suggests that the therapy has an escalating effect on the target area. This may be attributed to a gradual decrease in inflammation with continued therapy and/or to the fact that the owners moved the transducer head to different locations on the knees each night.