

Portable ultrasound now available for horses

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David Eldredge, Cornell polo coach, with a horse wearing a portable ultrasound device.

Healing for horses has gone portable.

UltrOZ Elite Therapy System is the first wearable, therapeutic [ultrasound system](#) for the equine market. Nearly the size of an [iPod Nano](#), these battery-operated systems fit within specially engineered neoprene leg wraps. With the device, horses can exercise or feed in the pasture unencumbered while receiving up to six hours of unsupervised ultrasound therapy.

ZetrOZ LLC, a business spinoff from Cornell's Department of Biomedical Engineering, has begun selling the device at FarmVet, a large distributor of equine products, as its initial distributor.

For years, veterinarians have used ultrasound to reduce inflammation and promote healing in horses, but the equipment was bulky. The new device is simple to attach to a horse and provides comfort and reduces pain.

Ultrasound is [acoustic wave](#) energy that stimulates [cellular activity](#) through [mechanical vibrations](#) and micro-massage tissue at a cellular level. Ultrasound accelerates and compresses the inflammatory phase of healing, increases local circulation, boosts cellular permeability, improves collagen synthesis, decreases edema, and causes the release of cytokines and natural analgesics for pain control.

UltrOZ's unique and versatile system provides a consistent, controlled, easy-to-use method of providing long-term ultrasound therapy, said George Lewis, a Cornell medical ultrasound researcher and founder of the spinoff company.

Lewis' hope for the device is to help people as well as animals of all types, and to make this medical therapy available to people at a low cost and minimal invasiveness.

"Once it has [FDA approval](#) and people are wearing these systems worldwide, I hope that they will find themselves next to the Icy Hot patch on the shelves of consumer health stores," said Lewis, who developed his first portable ultrasound prototype as a graduate student at Cornell.

About two of every three competitive horses suffer an injury or [chronic condition](#), and most can benefit from prolonged ultrasound therapy, he said. UltrOZ is recommended for use on injured tendons, splints, muscle tear, arthritis and bone fracture repair. The therapy is entirely nonpharmaceutical and can be used on performance horses without risk of side effects or testing complications.

The UltrOZ Elite Therapy system was tested by equine veterinarians and therapists at the Rood and Riddle and Hagyard equine hospitals. Veterinarians reported increased bone healing, quick reductions in inflammation due to splints, and increased rates of healing in tendon and ligament injuries.

Provided by Cornell University

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