Hyper-Targeted PEMF Editorial

Title: **Advanced Applications of Pulsed Electro-Magnetic Field Technology on Horses.**

A vast number of clinical studies now support the use of PEMF therapy in both animals and humans. These benefits range from bone healing, wound healing, arthritis and associated inflammation, and even improving recovery times post surgery by reducing pain and edema.

PEMF energy penetrates through tissue of all types, allowing for effective non-invasive delivery of the therapy. Other physiological benefits include; high increases in blood flow, an accelerated reduction of inflammation (in the locally treated area), increases in cell metabolism, cellular membrane permeability, and production of more nitric oxide resulting in a more regulated blood flow to promote healing. It's been well established by modern science that the root of most diseased states is chronic inflammation.

Any natural therapy that reduces inflammation/swelling and increases circulation will have a profound effect on healing and the overall health of the body. For the equine athlete, the beneficial effects of PEMF are harnessed to treat tendon/ ligament injuries, sore backs, stifles, shoulders, chronic hock soreness, non-union fractures, laminitis, stone bruises/ abscesses, ulcers, slow healing wounds, and even colic.

PEMF therapy is a natural alternative to drugs and invasive medical procedures and is becoming widely accepted and utilized among natural health advocates. This safe, natural, and noninvasive therapy is worth exploring for yourself and your animal friends.

GENERAL EQUINE APPLICATION

Over the last several years, the equine industry has seen the introduction of High-Powered PEMF systems into race tracks, stables and barns. Using specially designed delivery loops, a technician can target known problem areas like joints and major muscle groups on the horse. For most equine athletes, after

short treatments over several days, owners and trainers can generally see and feel an improvement in the way the horse moves.

The PEMF Field provides beneficial outcomes on equine tendon and ligament injury, sore backs, sore stifles, chronic hock soreness, sore shoulders, non-union fractures, laminitis, stone bruises, and non-healing wounds.

THE EFFICACY OF A MULTI-POWERED PEMF DEVICE

To be effective, the device must create a PEMF strong enough to completely penetrate the injured area at a therapeutic level. The challenge is that the strength of a PEMF signal dissipates rapidly with increased distance from a PEMF loop. Many times an injured area can be several inches or more below the skin. If the PEMF device is not properly designed, the PEMF will drop below therapeutic levels before reaching the site of injury, rendering the PEMF therapy less effective.

Deep blockages, scarring and trauma of connective tissue, ligaments, etc., may be present in the area being treated. The magnetic field radiates only so far, as the body's skin, muscles, sinew, fat, bone and muscle tissues hinder the penetration of the magnetic field. When using a Multi-Powered PEMF device, maximum penetration can be achieved as the intensity setting and resulting gauss levels are increased.

Equine Use

After 20 years of Equine PEMF applications Veterinarians and Equine Care Specialists are now requiring very specific application protocols on targeted body parts as follows:

- Hoofs - The hoof is a primary anchor in the overall health and well- being of a horse. Without healthy hoofs a horse will inevitably suffer. Popularity and effectiveness of the Hoof Pro System where PEMF applications are delivered from under the Hoof.

- Poll - use of PEMF on the Poll has shown to be effective in reducing stress and anxiety.

- Jaw - Applications for TMJ are challenging when a traditional loop is applied. The Mag Disc is a perfect ergonomic fit and able to properly target the area requiring treatment.

- Stifle - The inside of the stifle is too small an area for a traditional PEMF loop to fit. The Mag Disc easily fits inside the stifle.

- Under the abdomen - Application for Colic can be challenging. The Mag Disc is able to target very specific areas of the abdomen and provide deep penetration into the intestinal tract.

The HERO and Hyper-Targeted PEMF

Newly released HERO PEMF Technology has been designed for Hyper-Targeted applications on both humans and animals. When an area of the body requires a highly focused PEMF signal, the use of traditional PEMF loop applications becomes unwieldy, as the area the loop covers is too large. Proprietary series of Mag Discs now focus the entire PEMF signal into an ¾” to 1 ½ “ in diameter area increasing the Gauss output by a measure of 5 to 8 fold over that of a traditional loop applicator. A highly focused PEMF signal then penetrates much deeper into the targeted body part. Where the traditional loop application generates 800 gauss at a high setting, a Mag disc (at that same setting) will generate 5,100 gauss. A white handheld 2.5” diameter Wand, with a 6” handle, can be used as an alternative accessory.

Economic and the 110 Volt Outlet Alternative

While the Mag Disc and Hoof Pro Kit have been available since 2015, it required the purchase of an EquiPulse PEMF model ranging from $10,000 to $25,000. While EquiPulse PEMF Technology is a versatile device applied for a variety of medical indications, the cost can be prohibitive for Buyers who seek a high powered PEMF device at a more economical cost.

The HERO is now available in 2 models with a base price of $1995.00 for the HERO X1 and $2495.00 for the HERO X2. The new HERO NANO is a very small X1 version priced at $2250, with $200 of the NANO PRO sale being donated to an Equine Charity.

Buyers can then build their HERO with optional accessories. All HERO devices can be powered by a 12-Volt adapter or the optional HERO Power Bank, which is capable of providing a HERO with 3-15 continuous hours of power and eliminates the need for access to an electrical outlet to operate!

Summary

Both small and large animal veterinary practices are adapting to the currently evolving animal care landscape. Unsurprisingly, the priorities of pet owners and large animal caretakers are critical drivers of change and include preference for non-invasive, non-toxic, at-home treatments that are as feasible and well-tolerated as possible. There is also increasing emphasis on rehabilitation for chronic conditions and postoperative recovery and “prehabilitation” to reduce the risk of injury or chronic disease, or to condition an animal before surgical repair, competition or work.

Early PEMF devices lacked systematic evidence. Natural skepticism of the utility of PEMF was compounded by unscrupulous marketing, unsubstantiated claims, and unproven, unregulated devices. However, in the last 30 years, clinicians and scientists have developed a significant volume of research involving cell models, animals, and humans demonstrating the biological effects and clinical value of PEMF treatment for a variety of conditions.

Advancement of this field has significance for both human and veterinary medicine, particularly in the areas of pain management, mitigation of inflammation, bone healing, and wound healing. The most rigorous and compelling research has been conducted on devices that are regulated by the FDA.