A Class of Its Own – Pulsed Electromagnetic Field Therapy (PEMF)

The effects of exposure to pulsed electromagnetic fields are well-documented, compared to static magnets. Benefits include:

- Accelerated fracture healing
- Accelerated healing and higher success rate in bone fusion operations
- Relief of pain
- Protective effects on joint cartilage
- Reduction of inflammation
- Improved blood flow through muscle and blood vessel growth
- Stimulation of intervertebral disk cells.

Some experts claim the benefits of PEMF come from the electrical current used to generate it. But it’s a moot point. The fact is: It works.

Pulsed electromagnetic therapy heals because it penetrates much deeper than a static magnetic field. Bones can be treated with the wraps on the skin surface rather than having to be implanted. The fields can penetrate to reach spinal structures, hip, the sacroiliac joint, shoulder joint and deeply into large muscle groups.

We used the Respond Systems Equine Bio-Pulse equipment (800-722-1228, www.respondsystems.com). We’ve used both the original system and the newer Bio-Pulse Sentry with 7 possible settings (compared to the original 3). The system consists of a mesh blanket with a rechargeable battery pack and embedded coils. Also available is a neck wrap, hock wraps, leg wraps with hoof coil (can be put on upside down to treat the knee). These connect to the blanket, which also has a built-in 30-minute timer. Stand-alone Maxi Pulse units are hock or leg and hoof wraps with their own battery, and the Iron Foot PEMF pad, a mat design the horse stands on. Blanket and wrap materials are extremely durable.

One of our test horses was a young gelding with thrombosis (clotting) in both of the major arteries to the hind legs. He could move around comfortably at a walk but within 1 to 2 minutes of trotting he would develop severe pain. When treated with PEMF before exercise, he could go 10 minutes before starting to get uncomfortable. The treatment did not cure his problem, but it did maximize blood delivery to the muscle before exercise so that he could make the most possible of the blood available to him.

Back pain in horses has a wide spectrum of potential causes but limited diagnostic options due to the horse’s size. Over the past 11 years, we’ve never had a horse with back pain that didn’t respond dramatically to PEMF. There are likely exceptions to this, such as a horse with an acute fracture, but in the horses we have treated we’ve had a positive response in a short time.

The PEMF blanket is also effective at relaxing the back and muscles before riding. Warm-up time required to make the horse supple is greatly reduced.

Results with joints, from acute inflammation to chronic arthritis, have also been good. We especially like combined ice and PEMF therapy for “hot” joints. Compared to ice alone for the same treatment time (two ½ hour sessions per day), swelling resolves in half the time. We see pain reductions of 1 to 2 lameness grades within three days (very old horses with extremely advanced arthritis may not respond as well).

Rentals are available, but purchase prices are: Biopulse Standard Blanket (3 settings) $3,595; Pony Pulse (3 settings) $1,995; Biopulse Sentry (7 settings) $4,775; Hock boots $490/pair, Leggings with Hoof coil $665/pair; Myers Neck Wrap $795; Maxi-Pulse Hock boots $795 each. Maxi-Pulse Legging $895 each; Iron Foot PEMF Pad $3,295.