by Kim F. Miller

Functional Electronic Stimulation

Southern California veterinarian sees increasing interest in new sporthorse therapy.

It's a good thing veterinarian Alison Baileys, DVM, cVMA opted for an ambulatory mode of business when she established her practice in Southern California five months ago. Being mobile enables her to keep up with rapidly growing interest in a relatively new therapeutic treatment: Functional Electronic Stimulation.

FES seeks to "replicate the body's own natural functions by stimulating the cyclic activity of muscle contraction and relaxation, thereby returning the muscle to a more normal functioning pattern," explains the 2016 UC Davis Veterinary School graduate. She learned of FES while interning for one of the country's top sporthorse care facilities, Virginia Equine Imaging. The internship included working with horses competing on the Wellington, FL circuit, a hub of high performance hunter, jumper and dressage action.

Research on the use of FES began in humans and focused on victims of spinal cord injuries. In this field, progress in regenerating nerve function was often to little avail because the muscles atrophied severely while the nerves recovered. FES stimulates normal, smooth contraction and relaxation of the muscles, maintaining their integrity while the nerves recovered.

In equines, FES has a wide range of applications, from horses with injury or wear-and-tear induced muscle atrophy to those in good shape who benefit from its body balancing effects. For horses on stall rest, FES helps keep the muscles active and in shape and can augment normal conditioning routines.

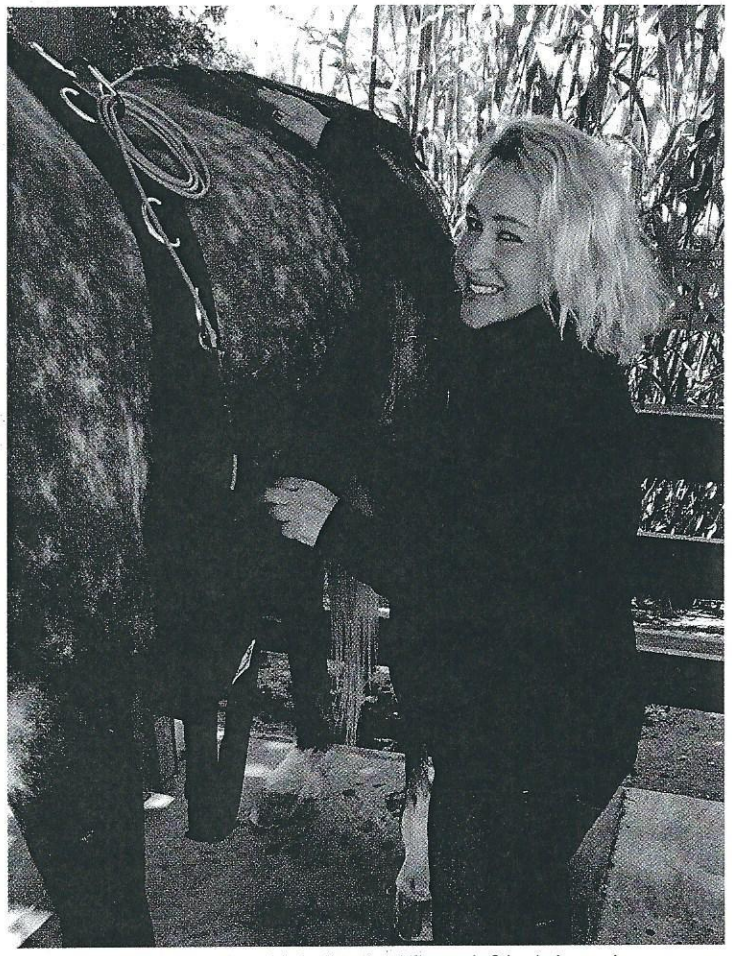
"The horses I see the best response from are those with poor topline, muscle atrophy, general back pain or chronic inflammation of the sacroiliac joint. Jumping, for example, is very hard on the SI joint," Dr. Baileys explains. "However, horses don't have to have a specific injury or issue to benefit from it. It releases muscle tension in a way that really changes their way of going."

An experienced rider herself, Dr. Baileys says the FES treatments most often manifest as improved symmetry in the horse's body. She recently experienced this first hand, riding a horse coming off of rehab for an injury on his right hind leg. "As a result of that injury, he was very asymmetrical on the left and carried his haunches to the right," she explains. "After treatment, he was much straighter on both sides, and had a much bigger, looser canter stride."

Used on horses without any soundness issues, FES produces results that owners most often describe as more symmetrical. That's exactly how top hunter rider Jenny Karazissis described the results of FES when Dr. Baileys treated the young hunter, Big Shot. The results made a believer of the champion hunter rider/trainer for Far West Farms. (*California Riding Magazine*, Sept. 2017)

How It Works

FES is delivered via a pad containing electrodes. It's placed on the horse's pelvis or back and secured by a surcingle. The electrodes can be taken out of the pad and placed on different muscle groups around the body, like the neck and shoulder. Existing asymmetries in those muscles can be evident to the layperson. "You'll often see a horse shift to the left or right during the treatment," Dr. Baileys says. "Then you'll see the imbalance work out during the treatment." Part of the benefit is creating muscle memory that teaches the muscles to work in balance with each other.



Alison Baileys, DVM, with the Functional Electronic Stimulation equipment.

Treatment protocols vary, but a typical routine is a set of three, one-hour sessions, divided equally between focus on the back and on the pelvis. Ideally the first two occur within a 24-hour period with no riding or structured activity in between. "We're trying to get the body to accept the signal from the machine and not the brain," Dr. Baileys explains of why it's better not to ride in between. The third treatment happens between five and seven days after the second.

After the first series, a typical maintenance routine involves spacing out the sessions at increasing intervals, starting at one week apart and up to a month. "Horses who have chronic issues or are coming back from an injury usually need more treatments closer together before they can go to the longer intervals." At the other end of the spectrum, horses already feeling good often benefit from a one-time session before a show performance.

When Dr. Baileys was trained in FES during her internship back east, the majority of FES clients were in the jumping and eventing disciplines. In returning to her native Southern California, Dr. Baileys reconnected with friends and acquaintances established during her junior and amateur riding years, which included riding her own Taché Rouge to the 2007 USEF National Junior Hunter Championship. She's found especially keen interest from hunter-owning clients. FES' effectiveness with hunters may be more pronounced than with jumpers or eventers because these horses usually don't require as much intense physical preparation to succeed in their line of work. "It helps with their general fitness level," she notes.

Based in San Juan Capistrano, Dr. Baileys specializes in sports medicine, advanced diagnostic imaging and treating the whole horse. She is an FEI permitted treating veterinarian and is certified in veterinary medical acupuncture. Functional Electronic Stimulation is still relatively new in equine veterinary care and Dr. Baileys is one of only a few California veterinarians trained in its application.

She hopes to return to competing one day and currently appreciates catching an occasional ride at Mary Morrison's Ivy Gate Farm. The way FES is catching on, however, time to ride may not be a reality for some time.