



## Elastic Kinesiology Tape Is Eye-Catching, But Is It Effective?

*Does this colorful tape showing up on human and equine athletes help heal and improve performance, or is it just well-marketed pseudoscience?*

BY GLENYE CAIN OAKFORD

**Y**ou've seen it everywhere from the 2012 Olympic beach volleyball players to the Rolex Kentucky Three-Day Event horses: strips of brightly colored tape laid in patterns

across an athlete's muscles. But what is it? What is it supposed to do? And does it work?

Broadly speaking, it's called kinesiology tape, although in the equestrian world it's often better known as Equi-

Practitioners use elastic kinesiology tape like Equi-Tape® on horses with the theory that it improves circulation of blood and lymph by lifting the skin and thereby speeding healing, relieving pain, and supporting joints and muscles. DUSTY PERIN PHOTO

Taping. That's thanks largely to Dr. Beverly Gordon, a chiropractor and founder of the Equi-Tape® company, which has been marketing elastic kinesiology tape for horses under that name for several years.

Whether you're talking horses or humans, the idea behind it is much the same and goes back to concepts proposed by Japanese chiropractor and acupuncturist Dr. Kenzo Kase in the 1970s. Kase claimed that his technique using elastic kinesiology tape could improve the circulation of blood and lymph to muscles and joints by lifting the skin—and thereby

speeding healing, relieving pain, and supporting joints and muscles.

The principle is the same in horses, but the tape itself is somewhat different, according to Gordon. "It's elastic kinesiology tape, which is similar," she said. "It has the same theories and principles working behind it. The difference is that the Equi-Tape was designed specifically for use on horses. The adhesive is different, the fabric is a certain grade, and one of the biggest differences is that there is a specific taping methodology that goes with it called Equi-Taping method. This Equi-Taping method has applications and techniques specifically geared toward taping horses."

This taping technique is divided into two categories, one for use during athletic training and one for therapeutic use outside of training.

"The Equi-Taping method is, specifically, how much stretch do you use where, and how do you account for improving the adhesiveness of the tape when there's hair," Gordon said, noting that Equi-Tape training also accounts for other differences between human and equine applications, such as using the tape outdoors and on patients who might be covered in fly spray or grooming products and who are regularly bathed.

"The theory behind elastic kinesiology tape is that there's an intrinsic relationship between the tape and the skin," said Gordon. "The skin has quite a bit of receptors in it, and the tape can help signal those receptors and decompresses the skin, and as it decompresses the skin, it increases circulation. As it increases circulation, it also helps move toxins away from the area and oxygen and other nutrients in the blood into the area, so it helps with healing that way.

"We're still developing it," she continued. "We keep adding new applications. The more we do it, the more certified Equi-Taping practitioners we have, the better minds we have working in unison on taping horses and the best way to do it, the research behind it, the more we're learning. It's taken off so well because there's so much validity to it."

### Too Good To Be True?

But critics, both in human and veterinary medicine, dismiss the ideas behind kinesiology taping as unscientific nonsense.

"Pseudoscience," said David Ramey, DVM, an equine veterinarian, lecturer and researcher who works on performance and pleasure horses in southern California. "The 'theory,' as

presented, is physiological mumbo-jumbo and nonsensical," he continued. "With so much information out there concluding that it's not effective in humans (although there are some individual studies that occasionally show effects), it's pretty wishful thinking that the hoped-for effects would somehow appear in horses, where muscles are larger, skin is



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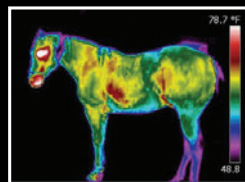
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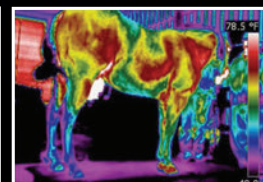
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thicker, there's hair, etc.”

Skeptics say it's not clear how tape on top of a horse's hair, or even closer to the skin when the hair is clipped, might have an effect on circulation around muscles below the skin. Like human skin, equine skin can vary in thickness. Human epidermis—the outermost skin layer—is 1.5 millimeters at its thickest, while the thicker underlying dermis is about 3 millimeters at its thickest point, along the back. Horses' skin thickness averages 3.8 millimeters but can be as thick as 4.57 millimeters in some areas and some breeds.

Given kinesiology taping's 40-year history, there is surprisingly little in the way of quality research and controlled clinical studies into either kinesiology tape or its horse-world counterpart, and this has fueled skepticism.

One of the tape's few randomized, double-blind clinical trials in humans reported in 2008 that a group of young people (average age 20 years) with rotator cuff problems who used kinesiology tape initially showed improvement in pain, but within a week their outcomes were no better than a control group's. Another randomized, controlled clinical trial also found no effect on circulation or muscle performance in 61 healthy people.

There are other literature surveys that also suggest possible improvement in short-term pain reduction for musculoskeletal injuries. One concluded, “This systematic review found insufficient evidence to support the use of KT following musculoskeletal injury, although a perceived benefit cannot be discounted. There are few high-quality studies

examining the use of KT following musculoskeletal injury.”

A 2012 analysis of 97 research articles published in the journal *Sports Medicine* found 10 that met criteria requiring data reporting and use of a control group. From those studies, analysts concluded kinesiology taping “may have a small beneficial role” in improving strength and range of motion, “but further studies are needed to confirm these findings.”

More recently, a 2014 analysis of scientific studies in humans reported in *Journal of Physiotherapy*: “Overall, Kinesio Taping was no better than sham taping/placebo and active comparison groups. In all comparisons where Kinesio Taping was better than an active or sham control group, the effect sizes were small and probably not clinically significant or the trials were of low quality.”



Many riders are incorporating elastic kinesiology tape into their everyday horse care routine in order to relieve pain and support muscles and joints, as is demonstrated here by Michelle Maguire and Reagan. DIGITAL HOOFPRIINTS PHOTO





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Because elastic kinesiomy tape is used to improve blood and lymph circulation, practitioners may use it on lower limbs for everything from support to preventing a horse from stocking up.

PHOTO COURTESY OF DR. BEVERLY GORDON

### Taking It To The Field

Gordon says her company has no immediate plans to conduct its own controlled clinical trials. But she describes growing interest in Equi-Taping from her equestrian clients and among people wanting to gain Equi-Tape certification in applying the tape. She's unfazed by the paucity of controlled clinical trials.

"There are a lot of therapies we've used over the years that we really don't have a lot of scientific reasons for why they work," she said, citing acupuncture and chiropractic as examples. "There have been so many modalities that have become successful because they've been proven successful in the clinical field, not in clinical trials."

Gordon points to the fact that professional athletes use elastic kinesiomy tape, despite widely reported doubt over its effectiveness in humans beyond a placebo effect. "These are athletes that, over the years, it has proven to help them so much that when they can choose any modality to use, they choose elastic kinesiomy tape," she said. "It's becoming more and more popular."

"If there was no validity to it, and if it didn't have some reproducible benefit, don't you think they would have stopped using it by now?" she asked.

Equi-Tape's website—which sells rolls of Equi-Tape for \$14.95 each and advertises two-day Equi-Taping courses for \$699—features testimonials from riders and horse owners who say their horses showed immediate pain reduction, increased relaxation and lowered swelling after taping. One, a dressage rider and trainer who described Equi-Taping a Grand Prix dressage horse for a suspensory problem, wrote: "There is no doubt the Equi-Tape does reduce inflammation and allows the horses to be more comfortable."

Four-star eventer Sinead Halpin is a believer, too. She recommends using an equine physiologist to apply the tape and suggests clipping horses to improve the tape's adhesion.

"I don't know how it does what it does, but it really does relieve pain, and it's very supportive," Halpin said of her own experience wearing the tape. For the horses, Halpin said she uses tape in conjunction with multi-radiance laser therapy and an Equilibrium massage pad on Manoir de Carneville. That combination, she says, has helped "Tate" with back soreness.

"It seems to help, and it certainly doesn't hurt," Halpin said. "You can run your fingers down the horse's back, and he'll kind of drop out from underneath you. Using the laser, pad and KT tape on his back, if you run your fingers in the same place, the pain reaction is gone. It just encourages positive muscle growth so they can work through the pain that they're going to deal with in that kind of high-stress job that they do. I think every little bit helps."



But for others who've used the tape, the jury is still out. Phillip Dutton, a two-time Olympic gold medalist in eventing, also initially used elastic kinesiology tape on himself and liked the results. "I felt that it really made a difference, just in aching muscles and sore backs, that sort of stuff," he said. "As far as the benefits to the horse, I'm not 100 percent convinced of it, because with the hair and all that it doesn't stay on nearly as well as it does in humans. So I'm on the fence about how effective it is. I didn't see a great difference in the horse."

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Gordon, a chiropractor for humans and horses, said she started taping horses three or four years ago.

"My background is in exercise physiology and biomechanics, and I am a rider," she explained. "With the biomechanical evaluations that I had been doing and the fact that I had found so much success with elastic kinesiology tape in humans, it was a natural crossover to horses."

Working with horses, Gordon says she's found her Equi-Taping technique effective at everything from speeding healing to relaxing tight muscles to supporting joints.

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“Depending on the assessment you have of any given particular condition, your physiological goal will determine how much stretch you put on it,” Gordon said.

To relax tight muscles, you’d apply a certain amount of stretch, she continued, “but you’d use a different amount of stretch if you wanted to support, for instance, a fetlock in a horse. The stretch would be quite different, and where on the tape you stretch is going to be quite different, as well. When you do a taping for a relaxation of a muscle, the lifting of the skin is certainly a very big consideration. When you’re doing a taping to support a joint, the lifting of the skin is also a consideration, it still increases circulation, but we now have to add a support element as well.

“For instance, polo ponies, they could use a lot of support,” she continued. “We use Equi-Tape a lot on ankles of polo ponies, and they use it when they play, when they’re in action. The stretch of the tape allows the fetlock to drop with its full range of motion, but it helps with the recoil back into the normal range. So it’s giving that joint a little bit more support by helping it recoil, so that the tape is doing some of the work of some of the ligaments and the other tissues. It takes away some of the strain and work those other tissues have to do while allowing a full range of motion.”

### Making An Educated Decision

Although research on Equi-Tape’s efficacy in horses is scarce, its supporters point to their own experiences with individual animals and thermography data that suggest putting the tape on can increase blood flow, at least to the surface of the skin in that area, said Dr. Joan Norton, an equine veterinarian and owner of Norton Veterinary Consulting and Education Services in Noblesville, Ind.

“Whether or not that would give that horse a benefit in performance or healing is difficult to say because they’ve not done anything where they’ve shown horses can jump faster, longer or higher,” Norton said. “In theory, increasing blood flow is going



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DUSTY PERIN PHOTO

to increase all of the factors that the body needs to heal, and certainly in some of the harder places that we have to heal—like tendons and ligaments that naturally have such low blood flow just because of the way they’re designed—a lot of our therapies, like shockwave and PRP [platelet-rich plasma therapy], are designed to either increase blood flow or increase the concentration of those natural molecules that they need to heal that area. So you’d think that increasing blood flow might help. But, unfortunately, it’s difficult to say in this case.

“Controlled clinical trials are so important because they take any kind of bias out of the science of it,” added Norton. “By doing these controlled trials, you can really let the numbers speak for themselves, and it forces you to have a much larger group of animals studied—not just one or two cases, but 30 or 40 or even more—to see if there really is an associa-

tion between treatment and an effect. Like a lot of unproven therapies and nutraceuticals, they’re unlikely to harm the horse, but it’s hard for us to say that they’re helping the horse.”

If you do try Equi-Tape on a sore or injured horse, Norton cautioned not to let confidence in the tape prompt you to push the horse farther or faster than you otherwise would, and involve your veterinarian in any treatment and rehabilitation discussions.

Gordon, meanwhile, encourages horsemen to give the brightly colored elasticated tape strips a try for themselves.

“If you are a skeptic, I would tell you, ‘Next time you have a problem, put elastic kinesiology tape on yourself and see what happens,’” said Gordon. “Of course, I would expect you to have someone do a proper assessment and proper application, but see what happens.”