

# Simple Taping Might be Superior to Complicated Protocols

By Ed Le Cara, DC, PhD, ATC, CSCS



**K**inesiology tape (K-tape) is gaining popularity with healthcare providers, patients, and athletes. As a sports chiropractor who is also an athletic trainer, I have been using different types of tapes for a variety of reasons. Standard taping is primarily used to lock a joint down or create a mechanical change in the tissue. K-tape is a flexible tape designed to support while still allowing full range of motion (ROM). This different philosophy led me to take whatever K-tape education I could find. In 2004, it was hard to find a K-tape course, but when a local course was offered, I jumped at the opportunity to get educated about its use.

When I first learned how to use conventional tape, it was difficult to get the outcome that I wanted (comfort and support). It took a lot of practice to get my ankle tape jobs to look and feel good. When I teach Sports I at Palmer West, I tell students that if they want to tape an ankle properly, they will have to do more than 100 different ankles. Perfect practice makes perfect, and for the most part, the programming for conventional taping makes sense. I cannot say the same for the K-tape education that I received.

We were told many times that if we didn't K-tape exactly as we were taught, the taping wouldn't work. These strict parameters didn't sit well with me because some of the protocols were just too confusing or didn't make sense. For example, to inhibit a muscle, we were taught to tape from insertion to origin (I to O). To facilitate a muscle, we were taught to tape from origin to insertion (O to I). Luckily, a study helped shed some light on the importance of keeping the strict protocols in place. Lee, Chang, Chang, and Chen<sup>11</sup> presented research at the 2012 Annual Conference of Biomechanics in Sports. Lee's study titled "The effect of applied direction of kinesio taping in ankle muscle strength and flexibility" examined the effect of applied direction of kinesio taping (KT) in ankle range of motion and calf muscle strength. The ankle plantar flexor muscle strength and ankle dorsiflexion ROM were assessed in knee flexion and knee extension before and after taping. Two applied directions, heel to popliteal fossa (insertion to origin of calf muscles) and popliteal fossa to heel (origin to insertion of calf muscles), were applied over both sides of the calf muscles, respectively. The results did not show a significant difference by applying the tape in one direction or the other.

*"Any intelligent fool can make things bigger, more complex, and more violent. It takes a touch of genius—and a lot of courage—to move in the opposite direction."*

—Albert Einstein

Other studies have seen similar results on range of motion

affect, no matter which direction the tape was applied. Yoshida and Kahanov<sup>10</sup> applied K-tape on the lower trunk and found ROM of trunk flexion produced a gain of 17.8 cm compared with the non-K-tape group. Merino, Mayorga, Fernández, and Torres-Luque<sup>7</sup> found that hip and lower back flexibility had a significant increase in sit and reach distance after K-tape was applied. González-Iglesias, Fernández-de-Las-Peñas, Cleland, Huijbregts, and Del Rosario Gutiérrez-Vega<sup>3</sup> assessed cervical range of motion before and after taping, and revealed that all directions of the cervical spine movement had significantly improved. These studies also applied K-tape from insertion to origin direction.

Another point of emphasis in the education I received was making sure that convolutions (wrinkles in the skin) appeared during the taping process. The convolutions appear to lift the skin to create more of a decompression effect on the underlying tissue. A recent 2014 article<sup>12</sup> noted that there was no difference in low back pain outcomes when having convolutions in the skin from the tape compared to a group without convolutions. This alludes to less mechanical changes with the K-tape and more of a neurosensory change (afferent stimulation to the brain via the skin). Ultimately, more research needs to be done to determine the exact mechanisms that are influenced by kinesiology tape

In conclusion, keep in mind what one of my favorite people, Chris Frankel, PhD(c) (and the smartest person in fitness) has been known to say, "All programming is wrong. Some is better than others." We need to keep exploring and experimenting with ways to get better outcomes with our patients. Move well. Be well.



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