

KinesioTape

Does the Evidence Stick?

K-tape/Kinesiotape is made with cotton fiber, is thin, conforms to the body, is stretchable to over double its length, and can be worn for 3-5 days for therapeutic benefit.

Many elite-level athletes have been seen wearing some form of kinesiotape for competition



Andy Murray wearing KT tape



James Harden wearing KT tape

Part of a family

K-tape is one of the many brands of cotton-fiber, stretchable tapes out there on the market.

Since its inception in the 1970s, other brands have emerged including:

- Rocktape
- KT Tape
- Perform Tex tape
- Aku tape
- SpiderTech tape

Although the many brands of tape may boast 'tighter weaves', 'stronger adhesive', 'pre-cut', or 'twin-groove adhesive patterns', all propose the same therapeutic benefits, and are extremely similar in design.

How does it work?

The theory is that when applied on stretch, Kinesiotape can lift the skin away from the muscle and effectively creates space between the layers of fascia, in which the blood vessels, lymphatic vessels, and nerves can be found. By lifting the skin away from the muscle, Kinesiotape changes the pressure differential underneath the skin to allow for improved perfusion of the area with *ground substance*, which includes the water and proteins responsible for the lubrication and nutrition of the connective tissue cells.

In areas of dysfunction due to myofascial adhesions, the layers become stuck together, and muscles can become facilitated (hypertonic/contracted) or inhibited (hypotonic/'offline'). When Kinesiotape is applied to the skin, it decompresses the area of dysfunction, improves the influx of ground substance, and can benefit people in a number of ways:

Proposed benefits of K-tape:

- Reduced pain
- Improved circulation and lymphatic drainage
- Improved proprioception (sense of the body's position and movement in space)
- Muscle strength and activity (increase/decrease in muscle tone)
- Reduced muscle fatigue and muscle soreness

What the Research Shows:

Does K-tape help with...

...Pain? **Yes.**

- Evidence is mixed, but several lower quality studies suggest k-tape may help reduce pain
- My take:
 - o K-tape may be used as an adjunct to physiotherapy treatment. It may feel good, but will not get to the root of the problem. The theory is, by activating sensory fibers in the skin, it can change the sensory input from that area, and impede the pain signal. It may be more useful with acute pain.

...Proprioception (sensation of your body in space)? **Maybe.**

- Very few studies of good quality exist
- One quality study found K-tape *does not* improve joint position sense at the ankle.
- Several lower quality studies suggest that K-tape may improve static balance, particularly in individuals with previous ankle injuries.
- My take:
 - o K-tape can serve as a reminder for postural awareness and can bring attention to an area of the body, especially if the patient is aware of the intention of the tape. It can be very individual-specific.
 - e.g. taping as a reminder to maintain optimal scapular posture

...Edema & swelling? **Yes & No.**

- One study found K-tape may help to reduce edema when accompanied by standard lymphatic drainage vs. standard lymphatic drainage alone
- In another study, K-tape did not help with breast cancer related lymphedema
- My take:
 - o I have personally seen k-tape help to reduce hematomas, and there are compelling images and accounts of K-tape reducing swelling and edema. This isn't great evidence, but I believe it is enough to give it a try.

...Strength? **No.**

- High-quality evidence indicates K-tape does *not* improve muscle strength regardless of application technique (facilitation/inhibition)
- My take: Many studies have looked into this, and the evidence is conclusive. K-tape does not improve strength.

...Muscle fatigue and Delayed-Onset Muscle Soreness? **No.**

- The research on this is minimal. So far, k-tape is considered to have no effect on muscle fatigue or delayed onset muscle soreness.

References

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- Andy Murray image courtesy of Jag Gundu/Cynthia Lum: <http://fortune.com/2014/08/30/from-the-u-s-open-to-a-target-near-you-the-business-behind-sports-tape/>
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