Presented by Drew Freedman, BCTMB, CKTS

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Tale of the Tape

Back in the 70's, kinesiology tape was originally developed by Dr. Kenso Kase, a chiropractor in Japan. Dr. Kase was looking for a better way to gain more effective and reliable results for his patients. He developed a tape that was aimed at mimicking the skin that provided support but wouldn't inhibit movement. Dr. Kase's two key hypothesizes were that the tape has the ability to "lift the skin" as well as "target sensory receptors". I've had the great pleasure of meeting Dr. Kase, and must say, he's an amazingly passionate, charismatic and brilliant man.

Popularity of the tape began to spread in Europe and Asia, but it wasn't until the mid-nineties that it was introduced to the US. It was first introduced at the National Athletic Trainers Association Conference back in 1995 in Oregon. Back then, I served as an athletic trainer at the University of South Florida. I remember seeing the tape in our training room, but we all just thought it was just like any other tape, but it was WAY to stretchy, so we disregarded it and went on doing our prophylactic and McConnell tapings. In 1999, at the Tour de France, Lance Armstrong was seen wearing the tape and commented that he did not know what the tape really did, but it was like "Magic Tape" because it helped him win…..we all know now that the magic he was referring too was NOT in the tape…but I digress.

It wasn't until 2008 when Kinesio donated over 5000 rolls of tape to the Olympic village, that the US population started to see this new and color method of taping. This brought about an explosion of competition to the Kinesio brand. This isn't to say that others weren't out there already, but the amount of taping brands has risen exponentially since that time and there are well over 70 different brands of tape on the market today. Kinesio had done a good job of cornering the market with their brand of tape, but imitation is the fondest form of flattery, and the market became flooded with other brands of tape. I compare this taping explosion to that of the sneaker at the turn of the century. Can tell me who invented the first 'running shoe' in the US?

Not Likely, and NO, it's not NIKE.

In 1892, the U.S. Rubber Company introduced the first rubber-soled shoes in the country. I only mention this as an example because I think that kinesiology tape is following a similar path. Now a day there are 100's of brands of sneakers all made in a similar way, but each touting its brand to be the best based upon some "x" factor (special foam, air cushions, lightweight

materials, Vibram soles etc.). Similar to sneakers, consumers will make their choice of tape based upon how it looks and who else is wearing it; first, and how well it works second.

Unfortunately, just as a sneaker won't make you run faster or jump higher, neither can kinesiology tape. The determining factor in being able to get a positive response to either your new sneakers or your new tape depends mostly upon the person, not the product. If I put on a pair of Nike's, I won't be able to "Be Like Mike" and win 6 NBA Championships. The same rule applies to the effectiveness of KT. I won't be able to win Olympic Gold like Kerri Walsh because I wear her brand of tape. It comes down to the appropriate application of the tape in conjunction with sound manufacturing and application practices.

What makes any kinesiology tape so effective is that it mimics the elasticity of the skin. It's similar to a rubber band in that it has the ability to stretch and recoil. Other common taping methods, such as McConnell or Leuko taping are very rigid kinds of taping methods that are applied for the purpose of limiting any movement.

It's important to understand that kinesiology taping is not aimed at replacing other effective uses of other kinds of taping approaches any more than it is aimed at replacing ultrasound, stim, stretching or even massage, chiro or PT. ***Kinesiology taping is simply an additional rehab solution like the rest of these methods. The ability for the tape to allow both support and mobility as well as aid in recovery, makes for an excellent additional rehab solution to add to for your treatment strategy.*** When considering Kinesiology tape, you should first understand what its properties are, so you can make an informed decision about whether you are using the appropriate tape. As I have mentioned, there are plenty of brands to choose from, however, most are being churned out of the same factories in the Far East at rate that is way too difficult to keep pace with. They're simply being shipped with different labels, but ultimately are all the same, unless the brand takes the time to design its own unique manufacturing specs. Kinesiology tape is no different than anything else that can be massed produced. Toilet paper is toilet paper, but we can always tell the difference between Charmin and the grocery store brand.

The success of your applications typically falls upon the applicator as well as the tools they choose to use. The right tape in conjunction with sound clinical reasoning and proper assessment will determine the success of your taping. There is nothing magical about the tape. It takes a certain amount of skill and knowledge to be effective.

Take the time to understand how a company manufactures its tape. Normally, the companies that have made the effort to place their unique branding on the paper backing and/or on the front of the tape, such as distinctive cutting lines, logos, stretch indicators etc., have also likely taken the time to be certain that they are using a high-quality cotton & hypoallergenic heat activated acrylic adhesive. Companies like Theraband Kinesiology Tape.

Another important aspect of a high-quality tape relies heavily on how it is constructed. The cotton fabric must be woven with the warp and weft at right angle to each other and the elastic

warp thread must be able to maintain its elasticity throughout the entire application period. The longitudinal thread must run parallel to the outer edges of the tape. Some tapes will run diagonally to the outer edge, therefore the outer most threads of the threads become severed and will easily fray and not be able to handle the tension being placed upon the tape, hence decreasing wear ability times.

The reality is that the economical solution may not be the best choice when deciding on what tape to use. If you go on a site like Amazon, you may find a roll of tape for $3 and another for $12 and think "I can get 4 of these roles for the price of 1 of those". Or you may find the exact same brand of tape on a reputable site like Massage Warehouse for $12 and see it on Amazon for $8. How the tape is stored after manufacturing is one of the biggest reasons for tape to cause irritations, as well as lose longevity in the application. As a rule of thumb, always purchase a product that is going to be applied to a patient from a reputable resource. In the end the economic solution may lead to skin reactions and negative outcomes, which in turn will lead to loss of patient confidence and potentially loss of the patient to a competitor. The margins in the cost of a role of tape are so great, that you'll easily turn a profit from a $15 roll of tape, even if you make mistakes with an application and need to reapply. As in any business, there are places where we can always cut corners to help the bottom line. However, never at the risk of patient safety.

Tape Function

The primary function of the tape is to act as both a communicator and a facilitator in the healing process. The desired application is dependent upon the therapist's particular approach to correcting the dysfunction. The tape is not magic, any more than your patients may consider your hands to be magic wands. How many of you have heard from your patients that 'you' are amazing, or 'you' have helped me so much. Granted what we can do with our hands to help our patients is indeed a gift, yet we are only assisting the body in what it does naturally. The body can often take care of itself, adapt and heal all on its own. Our role as professionals is to assist in that process by either helping to facilitate the process or to instigate the process, say by addressing trigger points, or removing adhesions with the use of some cross-fiber friction. The body can do this too, but we know that the system can become bogged down post injury and benefits from external assistance like our hands, Tens units, ultra sound and analgesics such as BioFreeze and Kinesiology Tape.

If you take the appropriate amount of time to practice, integrate and understand how kinesiology tape can impact the systems of the body and compliment your work, you'll soon see how, not only patient outcomes will begin to improve because of the tape's effectiveness. By applying the tape as an extension of your work, use it to serve as a communicator with the patient, consciously and unconsciously.

So many times, we give recommendations for our patients to follow in their daily activities, but they typically only recall our instructions when they are past the point of no return and have re-aggravated all the great work you achieved prior. I try to instill the reality into my patients, that

I only spend an hour out the 24 in a day with them. Their compliance and efforts are integral in the overall success of a realistic treatment approach. I have always been of the belief that if you do not communicate to a patient the importance of THEIR role in the recovery of an injury and the success is based solely on what YOU do, you'll inevitably fail them. And not unlike the consumer who thinks the roll of tape they just purchased was worthless, they will likely consider you in the same way.

As an example, if we can use this tape to provide sensory input to the tissues for conditions like upper or lower cross conditions, we can significantly improve patient compliance due to the tapes ability to remind them when they are slumping into a poor posture that will lead to exacerbating a condition.

Tape Properties

- Tape is designed to mimic the elasticity of the skin.
- May stretch up to 40-60% of original length. Some brands go to 100%.
- 100% Cotton–Makes it breathable. Some brands may have anywhere from 2-10% spandex or Rayon as well to make the tape lighter
- Water Resistant- This means that the adhesive is resistant to water when applied correctly, not the cotton. The cotton still gets wet, however, as I will explain in a moment, it's the breathability of the tape that allows for it to not stay wet. There are waterproof tapes out there, but the process of water proofing makes them heavier and therefore alters sensory input and the true purpose behind taping.
- Latex free and hypoallergenic: No tape can guarantee that someone will not have a reaction. However, the quality of the tape in conjunction with how it is stored will make a huge difference. I also want to mention here that not all skin irritations are allergy related. When applying the tape to various parts of the body, skin can be more sensitive in some areas than others. The tensile load that is being placed upon the skin can also cause the skin to get irritated.
- Heat activated acrylic adhesive: This is an integral quality of a good tape. It's the adhesive that will determine the ultimate longevity of the application. This is why we will discuss later the importance of "activating the adhesive" when applying. Also, keep in mind that some brands will claim to have the "strongest adhesive" or may even offer a pre-spray to enhance the adhesive. Stronger adhesives often correlate to greater skin irritations. In manufacturing, there is a delicate balance to what is considered a good adhesive.
- The acrylic adhesive is applied in a wave like or sine pattern that allows it to move effortlessly with the body. In between the adhesive is where there is room for moisture to escape, allowing the tape to dry quickly.
- When applied correctly, the tape will be effective for 3-5 days, depending upon the type of application and the normal wear and tear. I have seen the tape remain adhered for over a week, however, I have done multiple stretch tension tests that show after about 5 days, depending upon the degree of tape tension, the tape loses its' ability to recoil.

Therefore, although it remains "stuck", it's not really doing what it was originally applied to do.

Precautions

When working with any population, it's always important to clearly identify any foreseeable issues from the application of kinesiology tape, especially with children. Children have more sensitive skin than most adults. This is why it is so important to keep in mind any contraindications that may preclude the use of kinesiology tape.

Many of the indications below are similar to what we consider for use on the adult population, but keep in mind that you will likely be discussing these with parents, so they know how to observe an application of the duration of its use.

- Skin sensitivity: prior to applying kinesiology tape, you should be confident that the child's skin is capable of handling the adhesive as well as the tensile load being placed upon it. This is why it is always recommended to apply a test strip to an area like the abdomen or inner thigh where the skin is typically more sensitive. Once a test patch has been worn for 3-5 days with no issues, you can proceed to tape other areas. If at any time during a test patch phase or in the midst of the wearing of an application, that you notice any of the following, immediately remove the tape.
- Reddened areas, raised skin rashes and in severe cases, blistering
- Itching: pulling of the tape or increased irritability may be a sign of skin sensitivity. Note: This may also indicate that the tape was not properly applied (too much stretch to the tape, tissue or both)
- Excessive traction on the anchor may cause bruising or the skin to breakdown. This is why anchors and ends should always be applied with 2-3 inches of NO tension, below and above the target areas.
- Perspiration can be caught between the tape and adhesive, causing a rash. Always be sure you are applying the tape to clean, dry areas.
- Skin redness or irritation may occur if the tape has been worn for several weeks. This is why it is recommended to ask your patients to remove the tape prior to their visit (24hrs). This will allow some time for the skin to repair.
- Use proper removal techniques: At times, skin may remain adhered to the adhesive. This is why we educate to pull the skin away from the tape as you roll the tape off in the direction of hair growth.
- Do not do any circumferential taping. This may result in compromised circulation. Warning signs can include tingling, pain, swelling and/or pins & needles
- Children with decreased sensation should be monitored more carefully.
- If taping for swelling or circulatory issues, be sure applications are monitored closely
- The use of skin prep sprays may be used, but always use with precaution

- Some children may benefit from an additional skin buffer such as milk of magnesia. Applies with a cotton ball or gauze. Once dried, excess powder is wiped off. The tape won't stick if the coat is too thick.
- Always consult a physician if you working with infants or in neonatal intensive care units
- Never expose the heat to HIGH heat sources such as hair dryer or heated seats. Patients should be instructed to pat the tape dry when exiting the shower or pool.

Terminology

In order for any system to function optimally, it must be both simple to implement and easy to understand. This is what we have accomplished with our K-Cuts Taping System. We have taken the time to simplify a universal approach to applying ANY brand of kinesiology tape effectively as well as a means for professionals to both easily understand and explain its function to their patients and each other. Use the following terms when applying and explaining the use of kinesiology tape.

Key Terms:

Therapeutic Zone: Center section of tape that covers the treatment area. Always apply the proper amount of stretch to the tape before adhering the tape to the therapeutic zone.

Ends*: Section of tape used to secure the therapeutic zone. Do not place any tension on your ends prior to adhering to skin.

Anchor: The first section of tape applied to the skin, with no tension, prior to laying down the therapeutic zone.

**The first piece of tape is also called the 'anchor' in your 'Anchor' applications.*

Methods of application:

Zone Method: The first section of tape is applied to the therapeutic zone, with the desired amount of stretch, prior to applying to the skin. Next, the 'Ends' are laid down with no tension.

Anchor Method: The first section of tape applied to the skin, with no tension is known as the 'Anchor'. Next, appropriate stretch is applied to the tape to cover the therapeutic zone, prior to adhering to skin. The last section, the 'End', is laid down with no tension.

Key Points for Success:

Lower Tape Tension: *SHORTER TAPE = TAPE BUNCHING = GREATER LIFT*
Higher Tape Tension: *LONGER TAPE = GREATER STORED ENERGY = STRONGER RECOIL*
50% Tape Tension: *COMPARABLE LIFT & RECOIL*

WHEN IN DOUBT; REASSESS, REAPPLY

TAKE ADVANTAGE OF THIS SPECIAL OFFER FOR FSMTA GUESTS

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