Kinesiology Taping

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ATHLETICO
PHYSICAL THERAPY

Kinesiology Taping

- No Conflicts of Interest to declare

  - The views expressed in these slides and today's discussion are mine
  - My views may not be the same as the views of my colleagues
  - Participants must use discretion and professional judgement when using the information contained in this presentation

Kinesiology Taping

Learning Objectives

- Participants will
  - Understand the theories kinesiology taping is based upon
  - Be able to determine the best application of tape based upon stage of healing of the injury
  - Be able to perform taping applications to commonly affected structures
  - Understand cautions and contraindications to performing the taping
  - Be able to apply functional tapings for common injuries

Kinesiology Taping

- Kinesiotaping
- MOTUS Taping
- Rock Taping
- KT Taping
- Physiotaping
- Etc., etc., etc…….

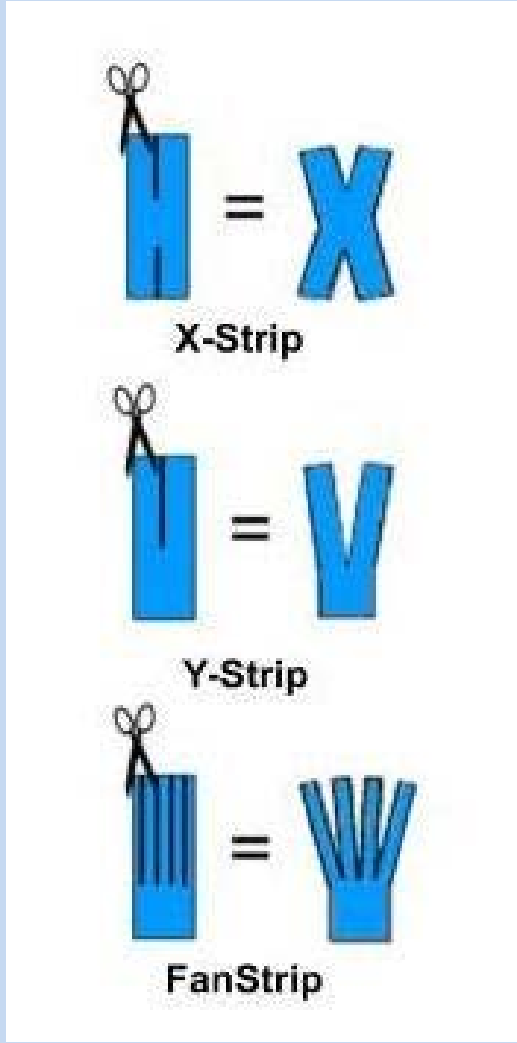
What is it called?

Useful Tape Terms

- Length- The backing of most tape is marked in approximately 2 in squares. The length of tape can be referred to in how many squares.
- Anchors- Each application has an anchor at each end. These anchors are applied with no tension and are usually 1 square, or about 2 in long. Applications with high tension may require 2 squares on each end.
- Tissue Tension- All tapings should be applied with the tissue in the maximum amount of tension the patient will allow.
- Convolutions- Wrinkles. Although this goes against everything an athletic trainer stands for, wrinkles in the tape is a *good* thing. It demonstrates lift and movement of the tissue.

Cuts of Tape

- I Strip- Single strip of tape, as is, right out of the box
- Y Strip- an I strip cut longitudinally
- X Strip- an I strip cut longitudinally on both ends
- Fan strip- several longitudinal cuts to allow several small fingers to cover a large area



Kinesiology Taping

Goals of Taping

1. Reduce pain
2. Improve motion and function
3. Promote tissue repair
4. Reduction of inflammation and edema

Kinesiology Taping

IS IT-

- Medicated?
- Psychosomatic?
- MAGIC?????

How does it work?

Functions of the tape

- Lifting of the tissue
  - Lifting of the tissue allows flow of the lymphatic fluids and decompresses areas that are compressed due to fluid accumulation from edema.
- Direct input to the central nervous system
  - The directional pull of the tape gives direct feedback to the central nervous system via the mechanoreceptors
- Direct support of an injured structure
  - Cueing or restriction of a joint's motion or muscle's action
- Corrective cueing of a dysfunctional movement pattern
  - Use of a combination of the above techniques to restore normal function from a pathological movement pattern

Important Concepts to Remember

Reciprocal Inhibition

- The action of the agonist inhibits the action of the antagonist

Golgi Tendon Organ

- A proprioceptive sensory organ at the origin and insertion of muscle that senses changes in muscle tension.

Mechanoreceptors

- A sensory organ or cell in the skin and fascia that responds to mechanical stimuli such as touch

Kinesiology Taping

- Inflammation
- Regeneration
- Remodeling

The goal of the taping application should match the phase of injury

Phases of Repair

Inflammatory Phase

This is the phase of the injury with the greatest amount of pain and fluid accumulation.

Taping Goals-

- Promote fluid circulation
- Pain reduction

Inflammatory Phase

Tape Application

- Light tension
- Coverage of a large area

Regeneration or Repair Phase

The body begins laying down collagen to repair the damaged tissue

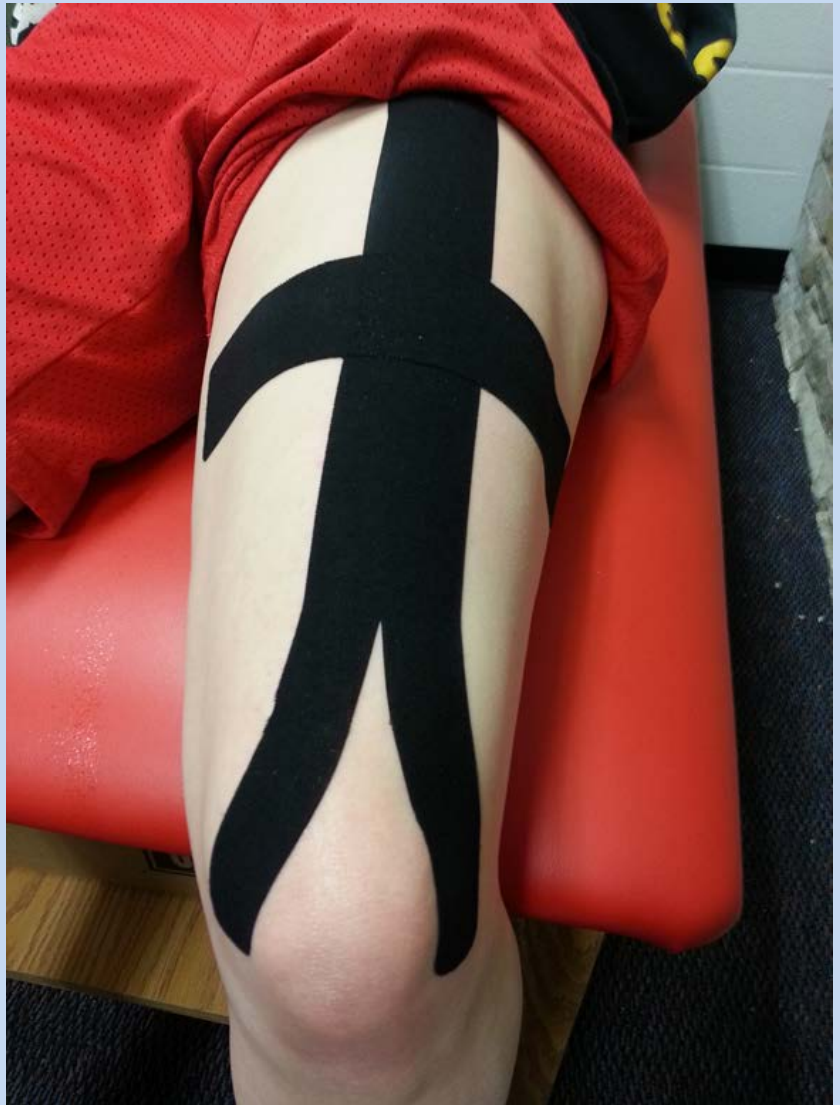
Taping Goals

- Enhance tissue repair by helping to normalize the physical stress on organized connective tissue by assisting or dampening muscle actions
- Can be a valuable asset during rehabilitation

Regeneration or Repair Phase

Taping Application

- Muscle assist/activation- Tape originates at muscle origin and runs along the muscle fibers to the insertion with moderate tension
- Muscle dampening/inhibition- Tape originates at muscle insertion and runs along the muscle fibers to the origin with light tension



Regeneration or Repair Phase

Taping Application

- The decision of whether to assist or dampen the muscle must be determined by the applying practitioner. Knowledge of the contributing dysfunction/pathology should be utilized in the decision

Kinesiology Taping

Assist

- Supraspinatus & Infraspinatus
- Lower and Middle Trapezius
- Gluteus Maximus/Medius
- Hamstrings

Dampen

- Biceps
- Pectoralis Minor
- Upper Trapezius/Scalenes
- Lumbar Erectors
- Rectus Femoris

Common Applications

Remodeling Phase

- The phase when the newly laid collagen finishes organizing
- This is when most of our athletes are back to play (if not sooner)

Taping Goals

- Affecting of the mechanoreceptors to help promote functional adaptation

Remodeling Phase

Taping Application

- Moderate to high tension application of the tape
- Sprains- may directly approximate and support the injured ligament
- Strains- may be applied directly to the muscle, its antagonist or the GTO

Common Additional Tapings

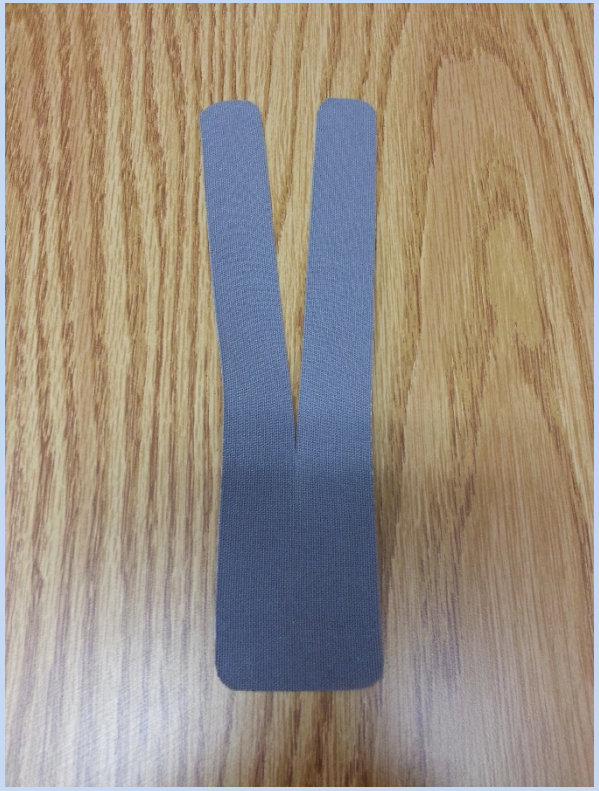
- Fascial Taping- a light tension strip, commonly cut in a Y, designed to give a subtle fascial “pull”. Can be very effective in pain management.
- Space Strip- a light to moderate tension strip commonly utilized for local pain reduction. These can be layered for additional tissue lift.
- Mechanical Strip- a moderate to high tension strip aggressively applied with pressure inward to the tissue. This can be used as local support to a painful muscle or joint, as well as used to cause functional adaptations.
- Functional Strip- a high tension strip specifically designed to restrict a joint movement to avoid a painful end range.

Cautions!

- Apply only to appropriate patients/athletes
  - Do not apply to fragile skin (elderly, open or newly healed wounds)
  - Although most of the tapes are hypoallergenic, some people may have skin reactions (fair skinned, latex allergies)
- More is not better
  - This tape provides sensory input to the central nervous system. Overstimulation can have adverse complications (nausea, vomiting, syncope)
- There is little evidence based proof to these tapings. Most is anecdotal.

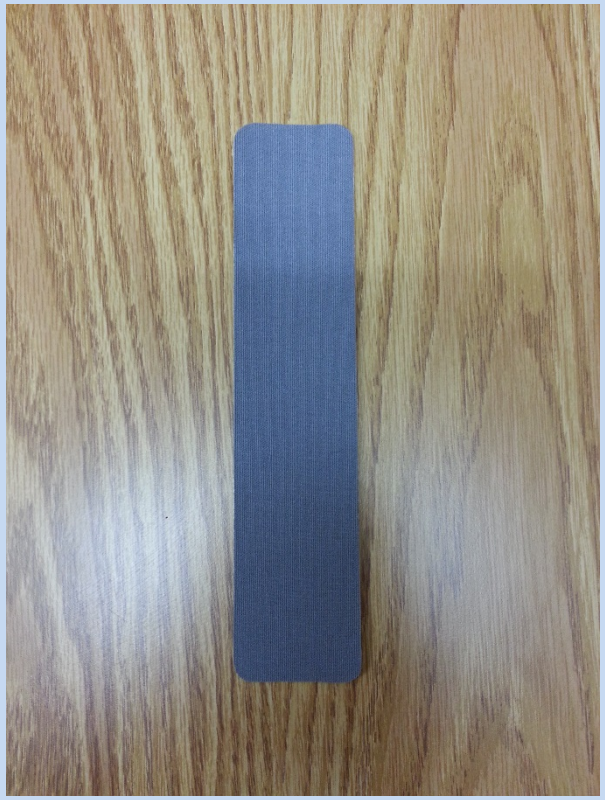
Cautions!

- There is no one right way to do a taping. Don't be intimidated looking a seemingly complex tape job.
- One size does not fit all. This does not work on all patients.
- This is a helpful tool, but does not replace the skills and professional abilities of an athletic trainer providing treatment and rehabilitation to an athlete/patient.



Activation/Inhibition

- **ACTIVATION**
  - I or Y Strip
  - Moderate tension
  - Apply origin to insertion
- **INHIBITION**
  - I or Y Strip
  - Light tension
  - Apply insertion to origin
- **<u>Practice</u>**
- Supraspinatus (I strip)
- Deltoid (Y Strip)
- Lower Cervical Extensors (Y Strip)



Space/Decompression

- I strip with backing split in middle
- Light tension
- May by combined with additional strips

- **<u>Practice</u>**
- AC Joint
- Iliac Crest
- Lateral Epicondyle

Mechanical Correction/ Tissue adaptation

- I, Y or X strip
- Moderate to Severe tension
- Consider using a slightly longer anchor due to high tension

- **<u>Practice</u>**
- Anterior shoulder
- Patellar tendon
- Lateral patella

Kinesiology Taping

Lymphatic Drainage/ Fluid Dynamic Taping

- Light tension
- Fan Strip
- Drains toward anchor. Anchor either to lymph nodes or major muscle

- **Practice**
- Knee
- Ankle

Functional Applications

Impingement Syndrome
(Shoulder)

Functional Applications

Low Back Pain

Functional Applications

Patellafemoral Pain

THANK YOU!

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