COMMON UE INJURIES IN SPORTS

- Rotator cuff: tendinitis, tear or instability
- Biceps tendonitis
- Lateral and medial epicondylitis at the elbow
- Gamekeeper’s thumb/APL tendonitis/instability of thumb

MCCONNELL VS KINESIO TAPE

JENNY MCCONNELL PT FROM AUSTRALIA
- Rigid tape
  - White: cover roll
  - Brown: kinesiotape

KENZO KASE DC FROM JAPAN
- Elastic tape
  - Colors: no difference except preference

CLASSIC MCCONNELL TAPING FOR LATERAL PF TRACKING

- Rigid
- Tape to support or restrict
- Most known for patellar tracking conditions
- Extrapolated to scapular control
- Could also use on hip alignment

MCCONNELL KNEE TAPING

- Rigid

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KINESIO TAPING

- 20+ years in USA
- Kinesio taping Association established in 1984
- Nippon Sports Science University added Kinesio taping to curriculum in 1992
- Introduced to the NATA in USA in 1995
- Introduced to the rehab community in 1997
- Medicare code for kinesio taping established in 2001. Use CPT code 97112 = Neuro Musc Re-ed which is a time based code (follow 8 rule)

PRINCIPLES

- O to I: Facilitate a weakened muscle:
  - Example: Deltoid. Prox to Distal
- O to I = Fixed to Moveable
- Superior to Inferior

PRINCIPLES

- I to O: Relax a cramping or over-contracted muscle.
  - Ex: Gastroc. Distal to Prox.
- Moveable to Fixed
- Inferior to Superior
  - Example: Lateral epicondylitis. Tape from hand to elbow.
- Relaxation effects:
  - Effects are from the lift of the skin, or convolutions, that increases the space between the skin and the muscles
  - Promotes the flow of lymphatic fluid

PATTERNS FOR K TAPE

- “I” = 1” or 2” width
- “Y” = anchor is base; tails are ends
- “X” = good for unloading joint (hip)
- “Fan” = lymphatic pattern or plantar fasciitis
- Button holes = 1” I strips for fingers and toes

“I” STRIPS FOR SHOULDER TAPING

KINESIO TAPING FOR SHOULDER PAIN WITH “Y” STRIP
KINESIO TAPING TIPS

- **Tension on tape**: 0-25-50-75-100% tension
  - 0%: good for bruising and lymphedema
  - 25-50%: good for most overuse sports injuries
  - 75-100%: good for maximizing support to an unstable joint: ie, ankle.
- Round the edges of the tape: stays on better and catches on clothes less

K TAPE FOR BRUISING

PASSIVE AND DYNAMIC SHOULDER ROTATION RANGE IN UNINJURED AND PREVIOUSLY INJURED OVERHEAD THROWING ATHLETES AND THE EFFECT OF SHOULDER TAPING

- Jenny McConnell, DPT, Cyril Donnelly, MS, Samuel Hamner, MS, James Dunne, MS, Thor Besier, PhD
- © 2012 by the American Academy of Physical Medicine and Rehabilitation
- Vol. 4, 111-116, February 2012

GLENO-HUMERAL, (GH), HEAD REPOSITIONING TAPE

MCCONNELL RESEARCH CONT’D

- **Who**: 26 athletes (Stanford athletes in volleyball, baseball or tennis)
  - 7 injured
  - 19 uninjured
  - Taped and threw ball supine
- **Findings**:
  - Shoulder taping decreased the dynamic range of IR-ER ROM of the previously injured athlete, so that it was nearer the dynamic range of the uninjured athlete.
  - Shoulder taping might provide increased protection for the injured athlete by decreasing the dynamic IR-ER ROM and by facilitating better shoulder and scapular muscle control

BRACING AND TAPING FOR LIMITING SHOULDER AROM

- **Key**: know the directions you want to control
- No quality studies support or refute the effectiveness of bracing or taping to prevent shoulder injury
- Dynamic stabilization is important, and treatment intervention should include scapular stabilization and shoulder strengthening and motor control exercises.

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2ND TAPING STUDY: UNIVERSITY OF THE SCIENCES IN PHILADELPHIA

- DPT capstone project
- 11 local athletes at Archbishop John Carroll High School in Radnor with pain in their shoulder
- Athletes from baseball, softball, volleyball and lacrosse
- All sports that require overhead shoulder motion

INTERVENTIONS

- No Tape
- Kinesio Tape
- McConnell Tape

HIGH SCHOOL ATHLETES SHOULDERS TAPED:

- McConnell
- Kinesio
- No tape

Athletes completed three activities
- overhead volleyball serve
- overhead baseball throw
- lifting a weighted box overhead

FINDINGS:

- Significant improvement with both tapes compared to not taping
- McConnell Taping technique decreased pain levels in all three functional activities
- Kinesio Taping technique decreased pain levels during the baseball throwing activity

THE CLINICAL Efficacy OF KINESIO TAPE FOR SHOULDER PAIN: A RANDOMIZED, DOUBLE-BLINDED, CLINICAL TRIAL

- MARK D. THELEN, PT, DSc, OCS
- JAMES A. DAUBER, PT, DPT, DSc, OCS
- PAUL D. STONEMAN PT, PhD, OCS
- Journal of Orthopaedic & Sports Physical Therapy; volume 38; number 7; july 2008; pg 389
- Prospective, randomized, double-blinded, clinical trial using a repeated measures design
- Objective: To determine the short-term clinical efficacy of Kinesio Tape (KT) when applied to college students with shoulder pain, as compared to a sham tape application.

THE CLINICAL Efficacy OF KINESIO TAPE FOR SHOULDER PAIN: A RANDOMIZED, DOUBLE-BLINDED, CLINICAL TRIAL

- METHODS AND MEASURES:
  - Forty-two subjects with rotator cuff tendonitis/impingement
  - Randomly assigned to 1 of 2 groups: therapeutic KT group or sham KT group.
  - Subjects wore the tape for 2 consecutive 3-day intervals
- RESULTS:
  - The therapeutic KT group showed immediate improvement in pain-free shoulder abduction (P < .005) after tape application
- CONCLUSION:
  - KT may be of some assistance to clinicians in improving pain-free active ROM immediately after tape application for patients with shoulder pain.

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SHOULDER STABILITY TAPING

• Patient position: Sitting in neutral with arm supported in approximately 30-45 degrees of abduction. Keep elbow in line with shoulder. Sit tall.
• Prep: Skin protective barrier along path of tape to be applied.
• Tape: 3-4 white (cover roll) and 3-4 brown (leukotape) depending on the size of the arm.
• 1st white: anchor at deltoid tuberosity of the middle deltoid and gently pull up and anchor at or slightly above the AC joint.
• 2nd white: anchor at anterior deltoid and gently pull up and anchor at or above the AC joint.
• 3rd white: anchor at posterior deltoid and gently pull up and anchor at or above the AC joint.
• 1-3 brown: apply EXACTLY on top of the first three pieces with the same amount of pull.
• Patient directions: Leave tape on for 1-2 days, remove slowly, check skin. Remove sooner if symptoms increase.

MCCONNELL DELTOID UNLOADING FOR STABILITY

KINESIO SHOULDER STABILITY TAPING

• Overuse: tape distal to proximal (wrist to elbow);
• 25-50% stretch on kinesio tape
• Can use counter force strap in conjunction with tape
• Can use wrist splint in conjunction with tape to decrease use of hand and gripping activities to rest the elbow

LATERAL AND MEDIAL EPICONDYLIITIS K TAPE

TENNIS AND GOLFER’S ELBOW

TENNIS ELBOW

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THUMB SPICA TAPING

THUMB/ APL TAPING

THUMB/ APL TAPING WITH GOLF CLUB

MANAGEMENT
- Label tape for patient/take pictures or video with patient’s phone
- 2-3 days on; ok to get wet; take off slowly!
- Blow Dry tape on low heat only not high heat due to glue on tape
- Teach athlete how to tape themselves if able

SUMMARY
- Taping is adjunct to other treatment interventions
- Compression is ageless/timeless treatment for sports injuries
- Wean off tape when able
- Participate in case studies or case series research projects

THANK YOU

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