CHALLENGES IN THE TRAINING ROOM: TO TAPE OR NOT TO TAPE?
ATHLETIC TRAINERS
DAILY SCHEDULE

8 AM. - TAPE ANKLES
9 AM. - TAPE ANKLES
10 AM. - TAPE ANKLES
11 AM. - TAPE ANKLES
LUNCH - SAVE THE WORLD
1 PM. - TAPE ANKLES
2 PM. - TAPE ANKLES
3 PM. - TAPE ANKLES
4 PM. - TAPE ANKLES
5 PM. - TAPE ANKLES
Objectives

- Discuss Taping principles
- Explore the 3 primary types of tape used in training room
- Establish theories and evidence for use of taping techniques
- Provide examples and common uses of tape in Division I athletic training room
Taping Principles

- Requires psychomotor skills and scientific principles to guide use
- Taping and bracing are adjuncts to performance and do not replace sound rehab and training
- Main indications are prophylactic and rehabilitative
- Must consider the anatomical structure, mechanism of injury, and purpose for which the tape is applied
Taping principles

- Suggested Purpose
- 1. Immobilization
- 2. Restriction or aid range of motion
- 3. Support of ligament / capsule
- 4. Support of muscle / tendon
- 5. Proprioceptive feedback
- 6. Sport specificity and function
- 7. Decrease swelling/edema
Types of Tape

- Non-elastic rigid (athletic tape)
- Non-elastic semi rigid (McConnell tape)
- Proprioceptive elastic (kinesiotape)
Suggested Theories: Non Elastic Rigid

Athletic Tape
- Immobilization
- Helpful to get athletes back on the field during a game
- Similar to ankle brace
- Protection
- Prevention
Suggested Theories: Non Elastic Semi Rigid

McConnell or Leukotape (also used with Mulligan Mobilization)

- Facilitation
- Inhibition
- Unloading
- Postural assist
- Joint approximation
Suggested Theories: proprioceptive elastic

Kinesiotape (also known as spider tape)

- Facilitation
- Inhibition
- Lymphatic drainage
- Unloading
- Decrease pain
Jury is out...

Taping has NOT

- been standardized to determine one type over another
- been proven to assist in any kind of joint approximation via MRI studies
- Been shown to affect muscle activation via EMG
- Demonstrated ability to alter position sense/proprioception
- been proven to prevent injuries in otherwise healthy athletes
Benefits of Taping

Improvements in functional scale scores

- Someeh et al, 2014
- Whittingham et al, 2004
- Bicici et al, 2012
- Miller et al, 2013
Benefits of Taping

Decreased subjective reports of pain
- Shaheen et al, 2014
- Warden et al, 2008
- Kaya et al, 2011
- Nambi et al, 2012
Benefits of Taping

May decrease risk of further injury

- Kaminski et al, 2013
- Janssen et al, 2014
- Dizon et al, 2010
Benefits of Taping

Psychological benefits to athletes

- Hunt et al, 2006
- Gear et al, 2011
- Moiler, 2006
Benefits of Taping

Decreases swelling

- Ristow et al, 2014
- Donec, 2014
Taping Examples
Taping Example: McConnell
What We Know About McConnell

- Introduced in Aust J Physiotherapy, 1986 as “long term solution for CMP”
- 1996 prospective randomized trial found no evidence to support it (Am J Sports Med 24(1):61-6)
- Again in 2005, no support was shown in a systematic review (J Athl Train;40(4):341-51)
- Shown to shift patella inferiorly (Phys Ther.2010;90(3):411-9)
Taping Example: Kinesiotape
What We Know About Kinesio-


While the application of Kinesio tapes may have some therapeutic benefits, the usage of these tapes does not promote strength gains in healthy adults.


Overall, Kinesio Taping was no better than sham taping/placebo and active comparison groups. In all comparisons where Kinesio Taping was better than an active or a sham control group, the effect sizes were small and probably not clinically significant or the trials were of low quality. Conclusion: This review provides the most updated evidence on the effectiveness of the Kinesio Taping for musculoskeletal conditions. The current evidence does not support the use of this intervention in these clinical populations.
More info of Kinesio-

- Kinesio taping in treatment and prevention of sports injuries: a meta-analysis of the evidence for its effectiveness.

In conclusion, there was little quality evidence to support the use of KT over other types of elastic taping in the management or prevention of sports injuries. KT may have a small beneficial role in improving strength, range of motion in certain injured cohorts and force sense error compared with other tapes, but further studies are needed to confirm these findings. The amount of case study and anecdotal support for KT warrants well designed experimental research, particularly pertaining to sporting injuries, so that practitioners can be confident that KT is beneficial for their athletes.
Summary

- Taping should be centered around anatomical structure and function.
- 3 primary types of type are used with varying levels of flexibility
- There are many benefits to taping in the training room including physical, psychological, and preventative.
- Research is extensive, but overall mediocre quality so interpret using best clinical judgment
- Benefit outweighs risk! There is no harm to applying tape vs the many possible gains
References


References