The posterior tibialis muscle/tendon serves as a dynamic stabilizer of the medial longitudinal arch of the foot. In many running athletes including soccer players, sprinters and long distance runners this dynamic stabilizer is exposed to excessive stress that causes posterior tibial tendon dysfunction (PTTD). Underlying this dysfunction can be excessive or early pronation during the gait or running cycle. There is evidence that suggest utilizing foot orthosis, high repetition strengthening and eccentric strengthening can improve this condition in athletes and the general population. Using video running analysis you can identify dysfunction in the knee and hip that can be contributing to excessive lower extremity internal rotation resulting in dynamic pes planus and placing increased load on the posterior tibial tendon. You can also identify cadence and stride length issues that are contributing to excessive loads on the posterior tibial tendon that can be corrected. Utilizing the best available evidence and video running analysis you can help improve performance and functional limitation in your running athletes.

Outline

1. Anatomy of Ankle
2. Predisposing factors for athletic stress on tibialis posterior
3. Manual Diagnosis of tibialis posterior tendonitis and differential diagnosis with other athletic injuries
4. Review of current research in refereed publications concerning effective treatment modalities for tibialis posterior tendonitis
5. Description of video analysis set up to exam foot, ankle, hip, knee and trunk of athlete
6. Description of measurements to take of foot, ankle, hip, knee and trunk with video analysis
7. Review the impact and contribution of measurements at foot, ankle, knee, hip and trunk on load and stress at tibialis posterior and foot mechanics
8. Interventions to employ to address results of video analysis
9. Discuss predisposing risk factors that can be identify with video analysis to prevent injury

Objectives

1. For participants to be able to differentially diagnosis tibialis posterior tendonitis and direct care appropriately
2. To have a complete understanding of what interventions and protocols are shown to be effective with the best available evidence
3. For participants to know how to set up markers for video gait and running analysis
4. To be able to recognize altered mechanics in hip, knee, ankle and foot that can contribute to stresses at tibialis posterior tendon and arch utilizing video analysis
5. To be able to name common risk factors to developing tibialis posterior pathology

Purpose
To take physical therapist and athletic trainers with novice, intermediate, and advanced knowledge in athletic foot ankle injuries a review of basic anatomy but increase knowledge base in assessment utilizing a specialized skill of video analysis. Also utilize current research to progress novice clinicians and trainers to intermediate familiarity, athletic trainers and therapists with intermediate knowledge to progress to advanced knowledge and to fill in gaps in knowledge of advanced clinicians and trainers.

Educational materials
1. Power point handouts emailed to participants
2. Video of gait analysis emailed to participants

Expected outcomes
For physical therapist and athletic trainers to more quickly recognize tibialis posterior tendonitis and to be able to utilize more effective treatment modalities to the athletes that they work with.
Abstract: ACL injury is one of the most common sports related injuries encountered in the United States today. By recognizing risk factors and implementing prevention strategies there is potential to prevent some of these injuries. Once injuries occur, proper diagnosis, treatment, and rehabilitation have been shown to return athletes to their pre-injury participation level.

Outline

I. ACL Prevention
   a. Epidemiology of ACL injury
   b. Anatomic risk factors
   c. Environmental risk factors
   d. Prevention programs

II. ACL treatment
   a. Diagnosis
   b. Nonsurgical management
   c. Surgical management

III. ACL rehabilitation
   a. Pre-surgical
   b. Post-surgical
   c. Return to play criteria
   d. Bracing

Objectives and purpose:

The objective/purpose of this presentation is to educate attendees regarding the most current concepts regarding the diagnosis, treatment, rehabilitation, and prevention of ACL injuries in an athletic setting.

Expected Outcomes

After completion of this presentation attendees will be more knowledgeable regarding the diagnosis, treatment, rehabilitation, and prevention of ACL injuries. They will be able to use this information to improve the quality of care they provide to the athletes they treat.

Education Materials

2. USA Lacrosse LaxPREP course [http://www.uslacrosse.org/safety](http://www.uslacrosse.org/safety)
Kash J Eagleton, DPT, SCS

Abstract:

This will be a presentation of clinical strengthening fundamentals to be used by health professionals in a rehab or conditioning setting. The presentation should be 50 min or less with Q and A. It was consist of an introduction and listing of credentials. It will list disclosures and objectives. We will then outline a review of strengthening patients to allow return to function after an injury or for overall conditioning purposes. Athletic Trainers and Physical Therapists are the intended audience in a lecture with power point AV presentation. We will discuss and review muscle cellular anatomy and structure including neural input. We will discuss how the body increases force production and some common mistakes we make in the clinic to address strengthening. Activation, inhibition, control, and hypertrophy will all be described and reviewed as they relate to clinical strengthening. We will present the order of activities to achieve strengthening in a clinical setting from activation to integration. We will review the types of muscle contraction and how to train them including eccentric, isometric, and concentric. The critical piece will be how to effectively strengthen an individual with discussions about increasing loads to maximal levels, lifting sub maximal loads quickly, and lifting sub maximal loads to fatigue to make meaningful force production changes. We want to discuss proper home exercise patterns and how to deal with pain during exercise. We will also touch on other physiological benefits of strengthening including tendon health, posture, and muscle fiber healing. We will allow time for Q and A. My contact information will be provided for future problems or questions. We will attempt to restore fundamental thought processes for clinicians as they try to strengthen their patients.

Purpose:

Educate the audience on basic fundamentals used in the health care setting with rehabilitation theories and function while return patients to activities of daily living or full participation in an athletic setting. The audience will leave with a basic understanding of strength and conditioning principals in regards to muscle contraction and how this understand will aid in the design and implementation of strengthening principals.

Objectives:

Review cellular anatomy of muscle
Determine if changes are neuromuscular improvements or muscle hypertrophy
Review types of contractions
Explain ways to improve strength
Improve HEP methods
Tendon/posture/circulation benefits

Expected Outcomes:

Attendees will be presented with significant information via lecture and Power Point AV material about the fundamentals of patient strengthening to be used in the clinic for rehab and/or conditioning. We will achieve all above mentioned objectives. All handouts will be given. Q and A will be completed. Contract information will be provided for future questions. The advancement of the current knowledge in the subject matter of the attendees is the primary goal and expected outcome.

Educational Materials:

Handouts will be given. These will be similar to the PP slides that will be shown during lecture. Individual notes can be taken here.

The lecture will be provided prior to the event to be distributed with all symposium handouts for all attendees with contact information for further clarification as needed. This may be paper and/or electronic.

Sources of information will be referenced in the lecture and handouts for cross referencing as needed.

The above material is provided in good faith as the best summary of the upcoming presentation to the best of my knowledge and ability. Please contact me for any necessary clarifications. Thank you.
Cryotherapy is a commonly accepted portion of the standard of care of acute injuries, and is one of the most widely used therapeutic modalities in athletic training. Despite its frequency, the physiological mechanisms underlying the use of cryotherapy are not well understood and are supported by literature that is inconsistent. Recent evidence has suggested that cryotherapy may not sufficiently reduce deep tissue temperature to reduce muscle blood flow. This data may call for a paradigm shift in the purposeful use of cryotherapy, with evidence supporting its beneficial effects on pain, function, and muscle inhibition.

Competency Gap:

Different modes of cryotherapy alter important clinical outcomes differently, but there are no definitive recommendations or gold standard parameters to rationalize choosing one mode of cryotherapy over another. Additionally, there have been few recommendations on the duration of treatment to achieve specific outcomes of decreased tissue temperature; the only studies currently available provide recommendations for the use of ice bags only. The focus of this presentation is to summarize the current state of evidence surrounding the clinical use of cryotherapy, to provide clinicians with the best available evidence for choosing treatment parameters in injured patients and athletes.

Outcomes

Upon completion of this presentation, participants will be able to:

- Discuss potentials reasons for inconsistencies in current evidence related to cryotherapy
- Explain the effects of cryotherapy on common physiological and clinical outcomes, including inflammation, blood flow, nerve conduction, pain, range of motion, and strength
- Describe the effects of cryotherapy on tissue temperature, and explain how adipose tissue alters recommendations for cooling protocols

Educational Materials to be offered:

- Presentation slides
- List of resources and references
This presentation is intended to provide physical therapists, physical therapy assistants, and athletic trainers with information about the Female Athlete Triad. It is important for rehab professionals to be familiar with signs and symptoms of the three components of the triad: disordered eating, menstrual dysfunction, and low bone mineral density. With the appropriate screening tools, clinicians can be trained to recognize symptoms, refer for further medical treatment, and assist with exercise modifications to restore energy balance and bone density.

Outline

A. Define Female Athlete Triad
   a. Define components
   b. Prevalence
   c. Susceptible populations
B. Screening tools for Rehab Professionals
   a. Menstrual Hx
      i. Review components of normal menstrual cycle
      ii. Define “abnormal”
      iii. Screening questions
   b. Eating Patterns
      i. Sufficient vs typical daily caloric intake
      ii. Definitions and prevalence of eating disorders
      iii. Eating disorder vs “disordered eating”
      iv. Why?
      v. Recognizable symptoms
      vi. Screening tools
   c. Exercise
      i. Sport specific
      ii. Quantity/ intensity/Why
      iii. Balance between exercise and caloric intake
C. Relationship of caloric intake, energy level, and menstrual cycle
D. Bone mineral density
   a. Define osteoporosis/ osteopenia
   b. Prevention vs treatment
   c. Restoration of bone density
   d. Vitamin D deficiency
      i. Symptoms
      ii. Effects on bone density
      iii. Dietary remediation
E. Conclusion
   a. Recognize
b. Refer (to include local resources)
c. Rectify

F. Questions

Objectives/ Expected Outcomes

1. Attendees will learn to recognize symptoms of all components of the Female Athlete Triad
2. Attendees will be equipped with screening tools to identify clients with disordered eating
3. Attendees will be able to adequately address Female Athlete Triad with patients within scope of practice
4. Attendees will receive resources for referrals for nutrition counseling and menstrual disorders

Educational Materials to be offered:

1. Presentation slides
2. Screening tools for disordered eating that can be used clinically
3. Female Athlete Triad “cheat sheet” of normal and abnormal values and guidelines for when to advise treatment
4. Referral list
Many therapies exist for the treatment of low-back pain including spinal manipulative therapy (SMT) and Lumbar stabilization exercises (LSE) which are extensively practiced therapeutic treatments.\(^4,5\) To be able to distinguish which patients would benefit the most from these interventions would help patients return to their desired activities faster. A use of clinical prediction rules is to identify patients who are most likely to respond positively to a particular treatment or treatments. Two of the most referenced clinical prediction rules for lumbar spine pathology examine criteria used to identify patients most likely to respond to that spinal manipulation therapy or stabilization exercises.\(^1-3,6\) The use of CPR’s is important because substantially different outcomes could be expected in a heterogeneous group of patients.\(^4,5\)

Low back pain is considered by many researchers and clinicians to be a heterogeneous condition\(^4,5\) and this is a possible reason why many interventions have only small effects.\(^4,5\) Spinal manipulative therapy (SMT) and or LSE is recommended in most international guidelines for the management of acute low back pain.\(^4,5\)

Competency Gap: Although spinal manual therapy and lumbar stabilization exercises are commonly used by health care professionals in the management of low back pain, there is question on what subgroup of patients that would have the greatest response to these treatments options. Recent research has investigated the reliability and validity of these CPR’s and there application in patient populations. The focus of this presentation is to educate health care professionals on the efficient application of CPR’s and the treatments associated with each.

Upon completion of this presentation, the participants will be able to:

a. Describe the methodology of developing a clinical prediction rule
b. Interpret findings of an evaluation based on clinical prediction rules to select patients that are most likely to benefit from spinal manual therapy techniques and/or lumbar stabilization exercises
c. Recognize variables in patients with lumbar pain that may indicate a positive outcome utilizing CPRs
d. Incorporate spinal manual therapy techniques into clinical practice
e. Incorporate lumbar stabilization exercises into clinical practice

Educational Materials to be offered:

1. Presentation slides
Ryan Miyamoto, MD

Hip Arthroscopy Update: What’s new in 2016?

Abstract: This lecture will discuss etiology, management, and rehabilitation of common nonarthritic hip pathology and the results of femoroacetabular impingement surgery (FAI).

Purpose: To educate the audience on surgical versus non-surgical methods of management and rehabilitation methods of common hip injuries

Injuries:

FEMOROACETABULAR IMPINGEMENT
- Anatomy + Exam
- Indications for Operative Repair
- Modern Repair Techniques/Biological Augmentation
- Labral Reconstruction
- Post Operative Recovery
- Outcomes

GREATER TROCHANTERIC PAIN SYNDROME
- Trochanteric Bursitis
- Abductor Dysfunction (tendonitis, tears)

COXA SULTANS
- Internal vs External: What’s the difference?
- How do we treat them?

SUBGLUTEAL SPACE SYNDROMES
- What are they?
- How do I treat them?

Objectives and Expected Outcomes:
- Educate attendees of general hip anatomy and biomechanics
- Educate attendees of surgical options for hip arthroscopy
- Educate attendees of non-surgical options for hip rehabilitation
- Educate attendees to treatment options for hip arthroscopy

At the conclusion of this course participants will be able to:
• Recognize relevant anatomy and exam findings of patients with common non-arthritic hip disorders
• Discuss treatment options (surgical and nonsurgical) for these pathologies and postoperative rehabilitation
• Discuss postoperative outcomes of FAI surgery
Objectives: 1. Gain a better understanding of dancing injuries including turf toe, os trigonum syndrome, FHL entrapment and ankle sprains. 2. Understanding how to get a dancer ready to go on pointe. 3. Injury prevention for all dancers

Title: Dance Injuries and Pointe Evaluation

Description: This lecture will focus on the common injuries seen in dancers and an in-depth look at pointe ballet. Injuries are seen in many types of dance however many of these could be prevented with the appropriate strength, training and flexibility. A critical time in a dancer's career is when they are staring to go on pointe. This is when many injuries occur if the dancer is not, not introduced into pointe correctly, or have poor technique.

Outline: Dance injuries: Ankle sprains, os trigonum injuries, turf toe, FHL entrapment. Pointe evaluation: strength, turn out, flexibility, age/maturity, three in office tests to assess the dancers ability to go on pointe, fit of the pointe shoe

knowledge: I danced for 14 years including acrobatics, jazz, tap, ballet, lyrical, pointe, and hip hop. I have witnessed and myself experienced multiple injuries, many of which could have been prevented with the appropriate training, stretching, and technique. Many physicians and physical therapist are not familiar with pointe or how to work on injury prevention with these young dancers which can affect them throughout their lives or suddenly end their dancing career.

Expected outcomes: My goal is for the audience to gain a better understanding of dancing injuries and pointe. I will focus on how to prevent these injuries, diagnosis and physical therapy modalities used to treat injury. I will also focus on how to get a patient ready to go on pointe and when she is physiologically ready to do so.

Educational materials: powerpoint slides and resources for further information
Taylor McKinney, DPT

Purpose: This lecture will update athletic trainers on current research regarding the risk factors for developing achilles tendinopathy as well as ways to help minimize occurrence. Evidence-based treatment guidelines, orthotics, and rehabilitation following surgical and nonsurgical treatment of complete ruptures will also be discussed. The overall objectives to achieve during this talk will be to improve understanding of risk identification, prevention, injury management, and rehab following traumatic rupture in athletes by athletic trainers and other sports medicine providers by reviewing current research from multiple disciplines responsible for diagnosis and management of achilles tendon injuries.

Expected Outcomes:

1. Conference attendees will demonstrate and understand risk factors for developing achilles tendinopathy.

2. Conference attendees will demonstrate and understand differential diagnosis for different subsets of achilles tendinopathy.

3. Conference attendees will demonstrate and understand conservative treatment techniques for all stages of achilles tendinopathy.


5. Conference attendees will demonstrate and understand orthotic prescription and other support devices.

6. Conference attendees will demonstrate and understand multidisciplinary approach to diagnosing and treating patients and getting athletes back to sport.

7. Conference attendees will gain understanding of how to safely progress back to return to sport after any degree of achilles injury including functional testing.

Educational materials: powerpoint slides and resources for further information.