

### **Learning Lab 1: Injury Care at Your Fingertips**

Come learn an old manual therapy technique that will change the way you practice. 'Need to get your athletes back faster from overuse or chronic conditions such as shin splints, patellofemoral syndrome or plantar fasciitis? 'Want to help athletes recover faster from acute ankle sprains? Then this lecture and lab are for you! Come with open minds and gentle hands to learn Myofascial Joint Mobilization (MFJM) from Gayle Olson and her colleagues.

After attending the lecture, attendees will be able to:

- 1) Explain the joint kinematics that keep joints on a balanced reciprocal tension and
- 2) State the variety of sensations one may feel as a release occurs.

After attending the lab, attendees will be able to:

- 1) Release at least the fibula, patella and talus effectively and
- 2) Have felt a release on themselves, so one will be better able to determine if he/she is being effective while treating an athlete.

### **Learning Lab 2: Addressing the Role of Regional Interdependence in the Assessment & Treatment of Cervico-thoracic Disorders**

The goal of this learning lab is to review a baseline assessment and treatment protocol for non-catastrophic cervical spine conditions, and examine the role that regional interdependence plays in the pathogenesis of neck disorders.

Participants will discuss how clues in an appropriate history may assist in obtaining a correct diagnosis, review and practice a basic assessment protocol that includes standard orthopedic and neurologic tests that have demonstrated the most consistent reliability in the literature, practice evaluating movement quality to assess for asymmetries and/or apparent weaknesses that may be contributing to any dysfunction, closely examine the role that regional interdependence plays in c-spine conditions; specifically, how problems in the thoracic spine and shoulder may disguise as a cervical diagnosis and examine several rehabilitative and mobility exercises to use with this patient population.

After attending the lecture, participants will be able to:

- 1) Appreciate the role that regional interdependence plays in the pathogenesis of cervico-thoracic disorders.
- 2) Identify methods of assessment and rehabilitation strategies that can assist the clinician in addressing these conditions.

After attending the lab, participants will have:

- 1) Identified methods of assessment that are reliable for evaluating cervico-thoracic disorders.
- 2) Been exposed to rehabilitation procedures that are helpful in treating cervico-thoracic problems.

### **Learning Lab 3: Lymphatic Facilitation for Upper Extremity Injuries**

Lymphatic facilitation (LF) is a unique, simple and efficient method of reducing the traumatic edema athletic trainers see everyday. It provides the “missing link” in standard care protocols by stimulating the body’s own edema removal system, the lymphatics. You will learn the basic anatomy and physiology of the lymphatic system, the basic LF strokes and the three step treatment protocol for removing edema anywhere in the upper body. Adding lymphatic facilitation to your current treatment protocols will improve your ability to reduce pain and swelling, improve pain free range of motion, and quickly return your athletes to full activity.

**IMPORTANT:** Attendees should wear something that allows skin to skin contact in the armpits, neck, and arm (i.e. women - a sports bra, or tank top and men a tank top or remove shirt).

After attending the lecture, participants will:

- 1) Explain the role of the lymphatic system in fluid return and the need to stimulate this system in order to properly address traumatic edema
- 2) Describe the unique characteristics of each vessel in the lymphatic network and how these characteristics contribute to edema uptake and lymph flow
- 3) Outline the key steps of a LF treatment for upper extremity edema

After attending the lab, participants will be able to:

- 1) Demonstrate the opening protocols and site specific LF techniques to effectively reduce traumatic edema associated with shoulder, elbow, wrist and hand edema.

### **Learning Lab 4: Examining the Throwing Shoulder Kinetic Chain**

More and more Certified Athletic Trainers are treating conditions that prevent the physically active patient/client from being as active as they desire. There is a need to learn evaluation methods identify kinetic chain dysfunction. The lecture portion of the course will introduce evaluation methods and describe the value of various tests. The laboratory portion of the course will provide hands on experience performing each test.

After attending the lecture and lab, participants will:

- 1) Be presented a series of tests to assist identifying present kinetic chain dysfunctions and/or potential causes for future dysfunction
- 2) Be described the reason for each test and the relationship of each test to other parts of the kinetic chain.

### **Learning Lab 5: The Key to Reimbursement – Correct Coding and Documentation**

Participants will learn the importance of detailed documentation of rehabilitation services and the correct coding for such services utilizing ICD-10, CPT and HCPCS codes. We will briefly discuss the importance of fee schedules and how they will guide you in your quest for revenue generation and reimbursement of services. The Learning Lab will provide a basic understanding of rehabilitation services and the differentiators in plan progression.

After attending the lecture, participants will:

- 1) Gain an understanding of the importance of thorough, well documented outpatient rehabilitation plan
- 2) Gain an understanding of the importance of thorough documentation in order to support correct coding

After attending the lab, participants will:

- 1) After viewing written evaluations of a patient, participant will be able to review rehabilitation plan and devise documentation and correct coding associated with that plan. Participants will be given a written evaluation of a patient, then in small groups participants will create a rehabilitation plan than properly document and code for the scenario.
- 2) After visual evaluations of a patient, participant will be able to review rehabilitation plan and devise documentation and correct coding associated with that plan. Participants will see a visual evaluation of a patient, then in small groups participants will create a rehabilitation plan than properly document and code for the scenario.

### **Learning Lab 6: Know Your Scopes**

This course will review the anatomy of the ear and important land marks for assessing the external and internal ear with emphasis on the tympanic membrane. Participants will evaluate for otitis media (swimmers ear), cauliflower ear, otitis media, perforations of the tympanic membrane and foreign bodies in the ear. Participants will learn advanced techniques for using digital otoscopic examination as well as reviewing the traditional use of the otoscope.

After attending the lecture, participants will:

- 1) learn advance techniques for the otoscope
- 2) be educated on new equipment
- 3) evaluate swimmer's ear (otitis eternal). otitis media, foreign bodies in the ear, and Tympanic Membrane Perforation

After attending the lab, participants will have been provided the opportunity to re-familiarize otoscopic examination techniques and observe advances in digital otoscopic imaging.

### **Learning Lab 7: Biomechanical Analysis of Walking Gait Patterns**

The purpose of this learning lab is to discuss clinical (strength, flexibility, and anatomical structure) and biomechanical factors related to musculoskeletal injury. Specifically, we will discuss hip and knee walking gait patterns related to injury and how these patterns can be altered through strengthening and stretching. The athletic trainer will be have hands-on experience with these measures as well as learn more about visual gait analysis to help improve and optimize their injury assessment technique.

After attending the lecture, participants will have:

- 1) Learned about the inter-relationship between clinical (strength and flexibility) and biomechanical factors
- 2) Learned how atypical gait patterns can be altered through appropriate therapeutic exercises

After attending the lab, participants will have:

- 1) Gained hands-on experience with specific manual muscle testing techniques and therapeutic exercises
- 2) Gained experience with visual gait analysis of the pelvis, hip, and knee joints while walking

### **Learning Lab 8: The Body-Swing Connection - A Simplified Four-Step Approach to Dealing with Golfers**

This learning lab will focus on a simplified four step approach for helping golfer achieve maximum potential in the game of golf, via the understanding of their physical make-up. The golf swing is inherently hindered or helped by the physical abilities of the golfer and as such needs to be a primary focal point for any golf development program. Utilizing proven techniques to evaluate and assess your golfing athlete will enable you to further develop their ability's on the golf course with respects to consistency, power and injury prevention.

After attending the lecture, participants will have:

- 1) Learned how to identify and overcome physical restrictions that are limiting your student's golf potential
- 2) Learned the most recent research and development in the field of golf swing analysis

After attending the lab, participants will have:

- 1) Learned proper administration of physical screening techniques for golfers
- 2) Understanding of how each physical screen correlates with related golf swing issues

### **Learning Lab 9: Preparing for Competition with Dynamic Stretching: Scientific-basis and Practical Application**

Evidence in the scientific literature suggests that static stretching prior to performance may decrease strength and power, therefore a warm-up that includes dynamic stretching is recommended. The lecture will compare and contrast dynamic, static and PNF stretching, and provide specific recommendations based on the literature. Benefits of dynamic stretching prior to performance will be presented and discussed. The laboratory will include a demonstration of dynamic stretching exercises for major muscle groups in both the lower and upper extremities. Those attending will be encouraged to participate by completing a dynamic stretching program guided by several laboratory instructors.

After attending the lecture, participants will:

- 1) Be able to define various types of stretching and understand appropriate application of each type
- 2) Have explored the scientific literature to determine the relative effectiveness of the various stretching techniques

After attending the lab, participants will be able to:

- 1) Develop the ability to analyze dynamic exercise to determine the muscles being stretched

- 2) Successfully complete a guided dynamic stretching warm-up for muscles of the upper and lower extremity.

### **Learning Lab 10: Thoracic Spine Asymmetries**

The importance of the thoracic spine is often overlooked when addressing the shoulder from both a rehabilitation and assessment perspective. In addition, how the thoracic spine affects the lower body is rarely taken into account. With the thoracic spine being a significant link between the upper and lower extremities, any asymmetry in this region has the potential to affect both segments. Scapular mechanics are very well understood in their relation to shoulder function, but the influence of the thoracic spine on the scapula is not so well understood- the same holds true for the thoracic spine's effect on squat mechanics. This learning lab will address: the function of the thoracic spine in relation to body mechanics, how to identify thoracic spine asymmetries, and cover techniques to correct these asymmetries.

After attending the lecture, participants will:

- 1) Appreciate and recognize the importance of the thoracic spine on upper and lower body mechanics
- 2) Identify thoracic spine asymmetries
- 3) Address thoracic spine asymmetries
- 4) Recognize varying techniques to assess thoracic spine movements
- 5) Understand multiple ways that thoracic spine mobility restrictions present themselves

After attending the lab, participants will:

- 1) Be able to apply drills and exercises to address thoracic spine mobility restrictions

### **Learning Lab 11: Clinical Evaluation of Static and Dynamic Malalignments - Techniques for Assessment and Intervention**

The interaction among faulty static alignment and dynamic movement patterns of the lower extremity are commonly thought to contribute to both acute and chronic injuries. This learning lab will present efficient techniques to assess and intervene on proposed contributors to lower extremity injuries. The lecture will be used to address static lower extremity alignment and its potential influence on dynamic motion and the overhead squat as a movement screen to assess for dynamic malalignments. During the lab, participants will be instructed on a comprehensive assessment of lower extremity static and dynamic alignment. Clinical techniques to address these findings will also be covered.

Participants will learn the interaction between static posture and dynamic motion, be provided a foundation for techniques that may be used in identifying static and dynamic malalignments, and be instructed on methods toward implementing effective intervention strategies.

After attending the lecture, participants will be able to:

- 1) Identify static and dynamic malalignments that may predispose athletes to injury
- 2) Understand the relationship between static alignment and dynamic motion

After attending the lab, participants will be able to:

- 1) Implement clinical techniques that may be used to assess for static and dynamic malalignments
- 2) Discuss intervention strategies to address static and dynamic malalignments

### **Learning Lab 12: Evaluation and Treatment Techniques for Athletes with Vestibular Pathology**

Dizziness and imbalance are common complaints following concussion. This learning lab will focus on the basic anatomy and physiology of the vestibular system and its impact on balance, vision, and readiness for return to play. Common subjective complaints, physical manifestations, and special tests for vestibular pathology will be discussed. During lab, these special tests will be reviewed, and participants will perform diagnosis-specific treatment techniques. The primary rehabilitation theories of adaptation, substitution, and habituation will be addressed.

After attending the lecture, participants will be able to:

- 1) Understand the basic anatomy and physiology of the vestibular system
- 2) Identify common subjective complaints / objective findings consistent with vestibular pathologies
- 3) Recognize the primary rehabilitation theories for treating vestibular pathologies
- 4) Be able to list the "red flags" that warrant referral to a physician

After attending the lab, participants will be able to:

- 1) Correctly perform an oculomotor examination
- 2) Correctly perform special tests for evaluating vestibular function
- 3) Select appropriate treatments with respect to the current evidence-based rehabilitation theories
- 4) Apply treatment techniques for canalithiasis, cupulolithiasis, and hypofunction

### **Learning Lab 13: Targeting the Hip: Strengthening the Hip for Patients with Patellofemoral Pain Syndrome (PFPS)**

Recent research has demonstrated that there is a direct link between lack of strength in the hip musculature and presence of PFPS. A review of clinical relevant research will explore this relationship. The goal of this learning lab is to introduce the advantage of a hip specific strengthening program, in addition to standard care, for patients with PFPS.

After attending the lecture, participants will be able to:

- 1) Execute techniques to evaluate hip weakness
- 2) Instruct specific exercises that target hip musculature for the treatment of PFPS
- 3) Administer an exercise protocol progression for PFPS patients
- 4) Be aware of proper exercise techniques and common substitution errors
- 5) Review hip evaluation for strength
- 6) Review literature that explains the link between hip strength and reduction of knee symptoms

After attending the lab, participants will be able to:

- 1) Demonstrate proficiency in evaluating hip strength
- 2) Be able to initiate a hip strengthening program and instruct specific hip exercises

**Learning Lab 14: Evidence-based Selection & Application of Sacroiliac Joint Special Tests**

The focus of this learning lab is to provide participants with a better understanding of the evidence available regarding the selection and application of sacroiliac joint special tests. The lecture portion of the learning lab will focus on the classification of sacroiliac joint dysfunctions and special test selection based on the most current available literature. The lab portion of the learning lab will focus on appropriate application of sacroiliac joint special tests that are supported by the literature.

After attending the lecture, participants will be able to:

- 1) Differentiate between SI and IS dysfunctions
- 2) Determine appropriateness of diagnostic procedures and special test based on the best available of the evidence
- 3) Apply and interpret special tests of the sacroiliac joint

After attending the lab, participants will be able to:

- 1) Appropriately apply special tests of the sacroiliac joint
- 2) Interpret special tests of the sacroiliac joint based on the best available of the evidence

**Learning Lab 15: Clinical Assessment of High Risk Movement Patterns for ACL and Other Knee Injury: The Landing Error Scoring System (LESS)**

Faulty movement patterns have been reported as risk factors of multiple lower extremity injuries, especially non-contact ACL injuries. It is important to be able to identify individuals displaying these faulty movement patterns in a clinical setting. The Landing Error Scoring System (LESS) is a valid and reliable clinical assessment tool developed to provide a standardized instrument for identifying potentially high risk movement patterns. The 1 hour lecture will be used to provide an overview of the LESS as well as present evidence to support the use of the LESS to identify faulty movement patterns which may predispose individuals to injury. The 1-hour lab time will be used to train individuals on how to administer the LESS and also develop reliable raters when scoring individuals on the LESS.

After attending the lab, participants will be able to:

- 1) Describe what are the primary movement patterns associated with increased risk for ACL and other knee injuries
- 2) Describe a systematic clinical assessment protocol to identify high risk movement patterns during a jump-landing task
- 3) Understand how to implement clinical assessment of high risk movement pattern into large scale screenings

After attending the lab, participants will be able to:

- 1) Demonstrate set up and clinical assessment procedures for administering the Landing Error Scoring System (LESS)

- 2) Develop and train raters to be reliable when scoring the LESS

### **Learning Lab 16: Functional Performance Testing: A Patient-Oriented Approach**

The ultimate goal of most rehabilitation programs is that of returning the injured athlete/patient to the highest functional level in the most efficient manner. Functional performance testing (FPT) can assist the clinician in making return to play decisions. These tests are designed to simulate, in a controlled manner, the stresses produced and imposed during athletic participation and in many activities of daily living. The purpose of this workshop is to share functional performance tests that have been proven to be valid and reliable and how the clinician can incorporate these tests into clinical practice.

After attending the lecture, participants will be able to:

- 1) Provide the necessary relevance and background for FPT
- 2) Provide an overview of the relevant FPT's with the necessary physiological and biomechanical concepts

After attending the lab, participants will be able to:

- 1) Provide an opportunity for the LL registrants to participate in 6 different workshop stations each involving different FPT's
- 2) Provide a casual/informal environment for the exchange of ideas among certified athletic trainers with regard to FPT

### **Learning Lab 17: Pilates, Swiss Ball and Creative Core Rehabilitation**

Understanding the key components of the Pilates Method and core rehabilitation, we will teach new techniques involving a synergistic approach to rehab to provide an endless possibility of new exercises. This will be accomplished by going over the history of the Pilates Method, core rehabilitation, swiss ball exercises, activities and basic synergistic approaches to rehabilitation in order to facilitate and demonstrate how pilates, core rehabilitation, and exercise balls use can work to help increase the Athletic Trainers ability to create new exercises and modifications.

After attending the lecture, participants will be able to:

- 1) Identify key components of pilates
- 2) Understand the importance of using core rehabilitation in every rehabilitation program
- 3) Identify the structures used and enhanced during core rehabilitation

After attending the lab, participants will be able to:

- 1) Perform and teach the basic principles of pilates
- 2) Perform adapted movements from pilates & core rehabilitation exercises on the swiss ball
- 3) Create new exercise programs with the new tools learned in this Learning Lab
- 4) Utilize a fresh outlook on core rehabilitation, given the new concepts, modifications and simple, yet inexpensive, tools used in this Learning Lab

### **Learning Lab 18: Complementary & Alternative Medicine in Practice - Using Therapeutic Yoga in a Holistic Evaluative Model**

Using therapeutic yoga within a Holistic Evaluative Paradigm can be very helpful in assessment and management of the individual. This systems approach therapeutic management model is also useful for injury prevention via shifting from a pathology based to a holistically-based model. This evidence-based method is ideally suited to evaluate and assess the athlete in order to optimize patient outcomes, maximize performance, and create integrative rehabilitation programs.

After attending the lecture, participants will:

- 1) Understand how yoga is used therapeutically for evaluative and diagnostic benefit
- 2) Evaluate existing yoga programs for content and validity

After attending the lab, participants will be able to:

- 1) Develop a new yoga skill set to use the evaluative paradigm
- 2) Be able to use specific yoga postures and breath techniques to evaluate, assess and design integrative rehabilitation programs for the individual

### **Learning Lab 19: Lower Extremity Joint Mobilizations**

This learning lab will focus on teaching athletic trainers to incorporate joint mobilization and traction techniques into an athlete's daily rehabilitation protocol. The principles, indications, and contraindications for these techniques will be discussed. The lower extremity manual mobilization and traction techniques, performed by a rehabilitation specialist, and self-mobilization techniques, performed by the patient, will be demonstrated by the instructor, and then practiced by the audience. The learning lab content will be beneficial for ATs who have a beginning to intermediate knowledge of these techniques, and those ATs who may not use this type of manual therapy often in the athletic training room.

After attending the lecture, participants will:

- 1) Recognize the indications and contraindications of the techniques
- 2) Identify how the convex-concave principle is utilized at each joint in order to apply the mobilizations properly

After attending the lab, participants will be able to:

- 1) Apply Grades I-IV joint mobilizations appropriately to various joints of the lower extremity
- 2) Apply Grades I-III traction techniques to the lower extremity

### **Learning Lab 20: Emergency Management Techniques for the Spine-Injured Athlete**

The Chair and Co-Chair of the NATA's Inter-Association Task Force for the Appropriate Management of the Spine-Injured Athlete will present a hands-on learning opportunity with the experts. Participants will have an opportunity to become proficient with the equipment and practice the techniques for safe equipment removal and immobilization. In addition, new evidence-based research, the NATA Position statement, radiologic imaging, advanced airway

procedures, and new patient transfer techniques will all be emphasized. This learning lab is for the most experienced athletic trainers and the least experienced athletic trainers alike.

After attending the lecture, participants will:

- 1) Understand the history of developing protocols for suspected spine management from the athletic field to emergency receiving facility
- 2) Understand the alternative methods for achieving an airway with equipment in place when a spine injury is suspected

After attending the lab, participants will:

- 1) Be practiced in removal of the football facemask using multiple tools to cut the loopstraps
- 2) Be practiced in removal of the football facemask using quick release loopstrap connectors