

USA Soccer Cup Sports Medicine Course Lecture Learning Objectives

Common Biomechanical Abnormalities in LE Overuse Injuries

- Describe 3 muscle groups and their role in biomechanical muscle imbalance with LE overuse injuries.
- Demonstrate common assessment methods for these muscle groups.
- Discuss common exercises for correction.
- Understand the team approach with physical therapists in treating the athlete.
- Know how to write an appropriate physical therapy prescription.

Hands Biomechanical Muscle Imbalances Lower Extremity Overuse Injuries

- Demonstrate common assessment methods for these muscle groups.
- Recognize possible muscle imbalances on exam.
- Demonstrate and teach common exercises that can be prescribed by the family physician for correcting common muscle imbalances.

Foot and Ankle Injuries Didactic Lecture

- Identify key anatomical structures of the foot and ankle often injured in athletes.
- List common mechanisms of foot and ankle injuries.
- Apply the Ottawa Ankle Rules as a tool to triage ankle injuries that require imaging.
- Define cavus vs. planus foot structure and pronation vs. supination foot biomechanics.
- Articulate the role of hyperpronation in foot injuries.
- Recall guidelines for return to play following foot and ankle injuries.

Hands-on Foot and Ankle

- Review examination materials prior to the course session.
- Demonstrate palpation landmarks of important surface anatomy of the foot and ankle as defined by the skills checklist sheet.
- Demonstrate and interpret common foot and ankle exam maneuvers listed on the exam checklist.

Neck Injuries

- Demonstrate on-field examination for suspected neck injuries.
- Apply evidence-based rules, including Canadian C-spine rules.
- List differential diagnoses of sports-related neck injuries.
- Compare and contrast different imaging options.
- Recall return-to-play criteria.

Heat Illness

- Discuss the pathophysiology of exertional heat stroke.
- Recognize conditions where activity should be modified due to excessive risk of heat illness.
- Discuss the clinical presentation of exertional heat stroke.
- Summarize the field management of athletes with heat illness.

Soft Tissue Injuries

- Define tendinopathy.
- Summarize the normal course of injury and healing of soft tissues.
- Differentiate the changes in abnormal healing that can result in tendinopathy.
- Describe the principles used in rehab to stimulate healing of tendinopathy.
- Recommend some basic rehab exercises for various common injury patterns.

Knee Injuries Didactics

- Develop an age-related differential diagnosis of common knee injuries in sport.
- Name evidence-based treatment for common sports knee injuries.
- Appreciate a process for sideline and training room evaluation of knee injuries.
- Indicate where radiographs are recommended with knee injuries.

Hands-on Knee Exam

- Demonstrate palpation landmarks of important surface anatomy of the knee as defined by the skills checklist sheet.
- Demonstrate and interpret common exam maneuvers of the knee by the skills checklist sheet.
- Understand the general sensitivity and specificity of meniscal testing maneuvers in the knee.

Hand Injuries Didactics

- Recognize “problem” fractures of the fingers.
- Describe appropriate non-operative management of simple hand and finger fractures and dislocations.
- Describe indications for treating finger and hand injuries non-operatively and when to refer patients with these injuries for surgical repair.

Hands-on Wrist and Hand Injuries

- Palpate important surface landmarks of the hand and wrist.
- Perform and interpret examination of tendon function of the DIP, PIP, and MCP.
- Perform and interpret special tests of the hand and wrist.

The Pediatric Athlete

- List common injuries in pediatrics sports medicine.
- Interpret guidelines for management of common injuries.
- Discuss apophyseal and osteochondral injuries.
- Summarize considerations for the development of pediatric athletes.
- Identify contextual factors that may contribute to injuries in youth sports.

X-ray Review, Common Adolescent Fractures

- Cite unique features of pediatric bony anatomy.
- Identify common adolescent fractures.
- Apply the Salter-Harris classification of fractures in a patient case.
- List appropriate treatments for adolescent fractures.

Shoulder Injury Didactics

- Develop an age-related differential diagnosis of common shoulder injuries in sport.
- Name evidence-based treatment for common sports-related shoulder injuries.
- Indicate where radiographs are recommended with shoulder injuries.
- Review return to play criteria for common shoulder injuries in athletes.

Hands-on Shoulder Exam

- Review shoulder examination materials prior to the course session.
- Demonstrate palpation landmarks of important surface anatomy of the shoulder as defined by the skills checklist sheet.
- Demonstrate common exam maneuvers of the shoulder as listed the skills checklist sheet.
- Interpret differential diagnosis for limitations in active and passive range of motion.
- Interpret the positive findings in relation to diagnosis for specific shoulder maneuvers.

Low Back Pain in Adolescents

- List the principles of the back examination in adolescents.
- State a differential diagnosis for LBP in adolescents.
- Summarize diagnosis and management strategies for spondylolysis, spondylolisthesis, and hyperlordotic mechanical LBP.
- Recall diagnosis and management strategies for adolescent lumbar disc herniation.
- Appreciate the similarity of apophyseal ring fracture to disc herniation and the use of CT scanning in diagnosis.
- Articulate basic management procedures for adolescent idiopathic scoliosis.

Concussion Didactic Lecture

- Identify the signs and symptoms of concussion.
- Identify worrisome signs and symptoms that could suggest additional intracranial pathology and emergent evaluation.
- Evaluate patients for return to play.
- Describe effects of heading the ball and its relationship to concussion.
- Describe a step-wise return to play for patients with concussion.

Hands on Concussion Exam

- Develop and administer a domain based sideline evaluation for concussion.
- Administer a SCAT-3 examination.
- Administer a neurologic examination for trauma-related intracranial processes other than concussion.

Sports Dermatology

- List common sports dermatologic problems, including both mechanical and infectious conditions.
- Recall treatment and prophylaxis guidelines and resources for both the MSHSL and NCAA.
- Appreciate how the timing and implementation of treatment may affect participation in athletes, particularly wrestlers.

Backboarding

- Demonstrate a cervical spine examination.
- Demonstrate modified jaw-thrust airway opening for suspected unconscious spinal injury patient.
- Demonstrate in-line head and spinal stabilization.
- Recognize contraindications for in-line stabilization.
- Demonstrate how to size and apply a cervical collar.
- Recall the critical criteria for long spine board application.

Ultrasound Didactics

- Appreciate the emerging role of musculoskeletal ultrasound in the diagnosis and management of musculoskeletal injuries.
- List the advantages and disadvantages of MSK US as an imaging modality.
- Appreciate basic knobology.
- Identify useful procedures that can be enhanced by using MSK US.
- Define anisotropy and how it can affect US images as an artifact.
- Summarize factors affecting the application of MSK US for imaging in the office setting.

Hands-on Musculoskeletal Ultrasound

- Practice US probe grip, cord management, and scanning.
- Apply US probe via common convention (R side of screen cephalad in long axis. R side of screen indicates R side of patient).
- Identify common anatomic structures including muscle, tendon, bone, nerve, and vessels.

Casting and Splinting

- Select appropriate material for various common splinting applications.
- List techniques for various splinting materials.

Hands-on Casting and Splinting

- Apply splint to upper or lower extremity
- Demonstrate position of function for each finished splint.

Crutch Fitting

- Adjust crutches for a patient with limited weight bearing.
- Instruct in proper use of crutches.

Dislocations

- Name a 5-step approach to the evaluation and management of sideline dislocations.
- Identify situations where medical emergencies or urgencies can exist due to dislocation.
- Identify common dislocations of the shoulder, patella, and fingers.
- Identify a method to practice for reduction of each of these structures.

ATC Lecture

- Described the role and scope of care of a certified athletic trainer.
- Appreciate how ATC and physicians work together in the care of athletes.
- Know how to write a return to play letter to an ATC.
- Know where to find MSHSL resources.