MUSCULOSKELETAL AND SPORTS MEDICINE

OBJECTIVES

Patient Care

Residents are expected to:

- Perform a history and physical on the youth/adult who presents with a sports or activity related injury
- Recognize how changes in training schedule/equipment/environment can lead to increased risk of injury
- Develop a differential diagnosis for common problems including pain in the wrists, elbows, shoulders, hips, knees, ankle, foot, and spine based on the results of the history and physical
- Evaluate and manage patients with common musculoskeletal problems in an outpatient clinic

Medical Knowledge

Residents are expected to:

- Recognize and develop a treatment plan for the following sports-specific injuries:
  - Swimmers: shoulder injuries, shoulder multidirectional instability, mid back pain
  - Golf: golfer’s elbow, wrist injuries, low back pain
  - Tennis: tennis elbow, shoulder pain, lower extremity sprains and strains
  - Gymnasts: pars defects and spinal hyperextension injuries
  - Runners: overuse injuries including shin splints, stress fractures, tendonitis
  - Football: stingers, cervical spine injuries including transient quadraplegia, how to manage concussions and return to play guidelines, knee injuries, turf toe
  - Basketball: common knee, ankle, hand injuries
  - Baseball: medial collateral ligament sprains of the elbow, rotator cuff injuries, labral injuries
- Learn about injuries common in the geriatric athlete
- Manage knee OA in the active older adult
- Recognize the signs and symptoms of steroid use in athletes
- Learn indications for and appropriate radiographic investigations of musculoskeletal injuries
• Review imaging findings of common diagnoses including, arthritis, fractures, stress fractures, spondylolysis, spondylolisthesis, rotator cuff tear, labral tear, ACL tears, meniscus injuries, osteochondral defects
• Learn common injection techniques
• Learn injury specific precautions/restrictions
• Learn the appropriate go/no-go return to play criteria of players within a given sport
• Learn the acute care of injuries that may occur during competition and how to deal with those injuries on the athletic field
• Recognize those injuries for which a minor delay in treatment would not be deleterious to the athlete
• Demonstrate knowledge of sports equipment, particularly protective devices intended to allow the athlete to continue competition
• Recognize symptoms of concussion in athletes, treatment, and return to play guidelines
• Understand the psychological manifestations of athletic injuries
• Understand the female athlete triad
• Understand physical therapy modalities used in musculoskeletal medicine
• Describe the pertinent clinical anatomy of the shoulder, elbow, wrist, knee, hip ankle and foot
• Describe the anatomy and biomechanics of the shoulder
• Understand the mechanics of the throwing motion
• Understand the relationship between shoulder instability and impingement and rotator cuff tears
• Describe the pathophysiology and treatment of stress fracture and compartment syndrome
• Describe common surgical approaches to hip arthroplasty and the post operative precautions
• Describe post hip arthroplasty nerve injuries
• Describe common sequelae of a fall on an outstretched hand
• Review the pathophysiology and treatment of common overuse injuries including: medial and lateral epicondylitis, achilles tendonitis, iliotibial band syndrome, carpal tunnel syndrome, dequervains tenosynovitis, plantar fascitis, and shoulder impingement
• Describe the function of an impairment rating
• Review the Dictionary of Occupational Titles descriptions for work duties (heavy, medium, light, etc.)
• Learn the pathophysiology of hand and finger deformities in rheumatoid arthritis
• Learn what types of exercises, orthotics, and precautions are appropriate for the patient with the acutely inflamed joint vs. mild synovitis
• Develop a treatment plan for a patient with fibromyalgia
• Understand the presentation and treatment of environmental injuries to athletes including hypothermia, frost bite, heat cramps and exhaustion, and heat stroke
• Understand causation and apportionment in the workers’ compensation system

Practice Based Learning and Improvement:

Residents are expected to:
• Assimilate evidence from scientific studies related to patient health issues in the sports medicine field
• Develop skills to apply knowledge of study designs and statistical methods to appraisal of clinical studies
• Utilize the library and Internet to perform literature searches upon which to base their treatment of patients

Interpersonal and Communication Skills:

Residents are expected to:
• Work collaboratively and collegially with the other physicians and health care professionals involved in sports medicine (physical therapist, athletic trainers, coaches, nutritionists, nurse, and sports psychologist)
• Communicate effectively with athletes, coaches, parents, and other appropriate individuals regarding the diagnosis and management of injuries and the impact on sport activity
• Develop organized and succinct patient presentations to the supervising doctor
• Write complete therapy orders (diagnosis, treatment plan/duration and precautions)
• Discuss discharge from therapy once goals have been achieved
• Communicate return to work issues with the injured worker

Professionalism:

Residents are expected to:
• Arrive on time for clinics
• Maintain confidence in all interactions with patients, especially professional athletes with some measure of celebrity. Refrain from discussion of the athlete with friends, family, and colleagues.
• Complete medical record duties in accordance with clinic guidelines
• Demonstrate sensitivity to culture, age, gender, and disabilities

**Systems-Based Practice:**

Residents are expected to:

• Educate Orthopedic and Family Practice physicians on the role of the Physical Medicine Specialist
• Understand how physician decisions impact cost effectiveness and efficiency of patient care
• Develop the concept of how a well run outpatient practice clinic should function
• Understand the role of athletic trainers and physical therapists in caring for sports injuries
• Obtain experience in the organizational and operational requirements associated with providing for the medical and health needs for professional, collegiate, and youth athletic teams in season and off-season
• Recognize drug formulary and treatment limitations imposed by some health insurance plans
• Become aware of public and private support organizations for persons with musculoskeletal disorders