

Surgery and Rehabilitation of the Hand

with Focus on Weekday and Weekend Warriors

CONCURRENT SESSION #1-10 | SATURDAY MARCH 2, 2019 | 3:30-5:30 PM

1. Orthosis Fabrication: Fracture Bracing and Orthotic Intervention for Athletes

Moderator: *Lauren O'Donnell, OTR/L, CHT*

Workshop Assistants: *Alison Furman, OTD, OTR/L, CHT; Haley Hanlin, OTR/L; Jacqui Long, OTR/L, CHT; Caitlin McCormick, MS, OTR/L*

Have you ever treated a lacrosse, football or ice hockey player who wants to return to the field or ice after a metacarpal fracture? This workshop will introduce participants to a metacarpal fracture brace using viscoelastic, shear thickening polymer, Coban, and soft cast. Following an instructor demonstration, participants will have the opportunity to fabricate this fracture brace. The participants will need to bring an athletic glove to the workshop.

2. Surgical Procedures and Post-Operative Protocols: PIP Joint Protocols

Leonid I. Katolik, MD & Marie Sayers, OTR/L, CHT; Mark Rekant, MD; Christopher Saporito, OTR/L, CHT

The PIP joint poses rehabilitation challenges to hand therapists. This panel of surgeon and therapist teams will present indications, surgical procedures and post-operative management for PIP joint procedures including volar plate reconstruction, central slip repair, swan neck reconstruction and PIP arthroplasty. Healing timetables, precautions, orthotic intervention and clinical reasoning for the progression of therapeutic exercise will be addressed.

3. Conservative Management of Thumb CMC Osteoarthritis

Jeanine Beasley, EdD, OTR/L, CHT; Joy MacDermid, BScPT, PhD; Jason Suda, MS, OTR/L, CHT

This panel session will provide a comprehensive review of the anatomy, kinesiology, assessment and rehabilitation techniques for thumb CMC osteoarthritis. Evidence will be presented regarding best practices for conservative treatment including joint protection training, home exercise programs, and orthosis fabrication options.

4. Joint Stiffness: Pathophysiology and Clinical Management

Gary Solomon MBA, MS, OTR/L, CHT; Lauren DeTullio, MS, OTR/L, CHT; Jenifer Haines, MS, OTR/L, CHT

Joint stiffness is commonly treated by hand therapists. This session will explore the pathophysiology of joint pain and stiffness and will cover various conditions and factors that result in joint stiffness. Clinical examples for the conservative treatment of joint stiffness including modalities, manual techniques, therapeutic exercise and orthosis fabrication will be discussed.

5. Hand Therapy Certification and the CHT Examination

J. Martin Walsh, OTR/L, CHT

This session will cover the history of hand therapy certification, scope of practice and practice analysis. The certification test blueprint and item writing process will be reviewed as well as eligibility requirements. Test preparation strategies, study groups and resources will also be covered.

6. Ergonomic Trends and Interventions in the Workplace

Sue A. Emerson, OTR, CHT, CEES; Michael Gerg OTR, CHT, CEES

This session will provide an overview of ergonomic trends in the workplace such as sit-stand stations and the emerging evidence for their proper use and set up; as well as the current perspectives regarding carpal tunnel syndrome and computer keyboard use.

7. Clinical Reasoning in Flexor and Extensor Tendon Rehabilitation

Roslyn B. Evans, OTR/L, CHT; Karen M. Pettengill, OTR/L, CHT

Following a review of flexor and extensor tendon anatomy, biomechanics, and healing timetables for various surgical techniques, the session will focus on combining evidence with clinical judgement and skills to provide effective tendon rehabilitation.

8. Understanding Diagnostic Testing: Imaging and Electrophysiological Evaluation

David Hutchinson, PT, DSc, MS, ECS; Adam B. Strohl, MD

Comprehensive therapy treatment planning requires the ability to understand and incorporate the results of ancillary evaluation modalities such as x-ray, MRI and EMG. This session will provide an overview of diagnostic imaging and electrophysiological testing and how to interpret findings to allow appropriate goal setting and treatment planning.

9. Joint Mobilization: Elbow, Wrist, and Hand

Jane M. Fedorczyk, PT, PhD, CHT

Workshop Assistants:

Emily Altman, PT, DPT, CHT, OCS, CLT; Christopher Keating, PT, DPT, OCS, FAAOMPT; Teri Speakman, OTR/L, CHT

This session will offer an evidence-informed overview of joint-based manual therapy principles to be used to manage pain and/or recovery of range of motion. Participants will practice mobilization techniques for the elbow, wrist and hand. Recommendations for clinical application will be provided. Lab attire is recommended.

10. Graded Motor Imagery

Moderator: *Susan W. Stralka, PT, DPT, MS, ACHE*

This session will describe the uses of Graded Motor Imagery for the rehabilitation of patients with complex pain conditions including CRPS and phantom limb pain. The developmental approach of laterality training, mental imagery and mirror therapy will be described. Participants will gain knowledge in the theory behind GMI as well as learn practical skills for clinical application of techniques.

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CONCURRENT SESSION #11-20 | SUNDAY, MARCH 3, 2019
1:00-3:00PM AND 3:30-5:30PM

11. Orthosis Fabrication: PIP Joint Contracture Correction Orthoses

Moderator: *Dave Wolfe, OTR/L, CHT*

Workshop Assistants: *Ariana Belles, OTR/L, CHT; Katie Burkhart, OTR/L, CHT; Samantha Kampmeier, MS, OTR/L; Ellen Wilson, MS, OTR/L, CHT*

Following a review of conditions causing PIP joint contracture and differential diagnosis of active lag vs. joint contracture, orthosis options to overcome PIP joint stiffness will be discussed. Evidence for static, static progressive and dynamic orthoses will be explored. Participants will fabricate an orthosis to overcome PIP joint contracture.

12. Clinical Examination of the Shoulder

Martin J. Kelley, PT, DPT, OCS;
Brian G. Leggin, PT, DPT, OCS;
Frank Fedorczyk PT, DPT

This hands-on workshop will review surface anatomy, clinical evaluation of and special tests for the shoulder complex. Common shoulder pathology will be discussed in relation to physical findings. The role of the cervical spine in the production of shoulder pain will also be addressed. Lab attire is recommended.

13. Joint Play in Motion

Karen S. Schultz, MS, OTR, FAOTA, CHT
Workshop Assistants: *Lois A. Bencardino, OTR/L; Laura Fisher, PT, CHT*

This hands-on workshop will review traditional joint mobilization techniques for the elbow, forearm, wrist and hand as well as introduce new techniques to combine accessory motions with physiologic movement to reduce joint pain and/or improve range of motion. Lab attire is recommended.

14. Orthosis Fabrication with Plaster of Paris – Not Just for Casting but Splinting on a Budget

Bobbie Morris, OTR/L, CHT; Teri Speakman, OTR/L, CHT; Marianne Dunphy OTR/L, CHT

It has been a privilege to have access to thermoplastic materials in our clinics. Let's look back and remember the materials that the pioneers of hand therapy used to treat their patients. This course will spend a short time looking back at the history of plaster and its successes in the clinic. We will then spend time filling your tool box with tips on

how to use plaster for that tricky PIP joint contracture, for edema management, for the underinsured patient who needs a splint that is not covered, or to meet therapeutic goals for increasing motion and function in your patient's hand or arm. We will have fun discovering uses for plaster that will have everyone reaching to the back of the shelf to pull their plaster out.

15. Orthopedic Assessment of the Nervous System

Moderator:

Mark T. Walsh, PT, DPT, MS, CHT, ATC
Workshop Assistants: *Lauren M. DeTullio, MS, OTR/L, CHT; Ann Lucado PT, DPT, CHT; Deborah K. Reich, PT, DPT, CHT*

This hands-on session will provide the rationale, indications, treatment guidelines, precautions and contraindications for nerve mobilization. The process of neurodynamic testing of the upper extremity will be demonstrated and practiced. Lab attire is recommended.

16. Elite Performers: Managing Expectations and Safe Return to Performance and Competition

Aviva L. Wolff, EdD, OT, CHT

Therapists and trainers are often consulted for guidance and directions for clearance for athletes for return to competition. Clearance is a collaborative process between the physician, athletic trainer, and therapist. This session will present a continuum of care model that incorporates all aspects of care, and allows for customization, and progression. The model is comprised of a combination of quantitative testing and quality of movement assessment (QMA) to assess risk factors associated with movement biomechanics. The testing, analysis and recommendations are all done by athletic trainers and therapists. This model is used primarily for lower extremity injuries but has been adapted for the upper extremity.

17. Hand Assessment: Where is the Evidence?

Elaine E. Fess, OTR, OTD, FAOTA, CHT;
Laura Walsh, OTR/L, OTD, CHT

This session will cover the use of standardized upper extremity assessments including tests of sensibility, dexterity, strength and hand function.

Recent research regarding the correlation between handedness and grip strength will be discussed. Standardization, validity, and reliability of procedures and tests will be covered as well as the connection between clinical reasoning, treatment planning and evidence informed practice.

18. Clinical Examination of the Elbow

Moderator: *Jane Fedorczyk, PT, PhD, CHT*
Workshop Assistants: *Emily Altman, PT, DPT, CHT, OCS, CLT; Meredith Bradley, MS, OTR/L, CHT; Gary Solomon MBA, MS, OTR/L, CHT*

This session will cover clinical assessment of the elbow including tests for stability, mobility, strength and special tests for the elbow and interpretation of findings. Clinical reasoning in the development of a treatment plan based on findings will be illustrated. Reliability and validity of the techniques will be emphasized.

19. Clinical Examination of the Wrist

Moderator: *Terri M. Skirven, OTR/L, CHT*
Workshop Assistants: *Christine Estelle, OTR/L, CHT; Gayle Severance, MS, OTR/L, CHT; Jason Suda, MS, OTR/L, CHT; Teresa M. Zapotochny, PT, CHT; Veronica Penney, OTR/L, CHT*

This hands-on workshop will guide the participants through a systematic clinical examination of the wrist. A review of the anatomy and biomechanics will precede the lab. The provocative tests for wrist instability patterns will be demonstrated and practiced. Emphasis will be placed on the recognition of the signs and symptoms of a variety of common wrist conditions.

20. Taping Techniques for the Upper Extremity

Moderator: *Mary F. Loughlin, OTR/L, CHT;*
Matt Conoscenti, DPT, OCS, COMT, CEEAA
Workshop Assistants: *Mary Dougherty, OTR/L, CHT; Jane Moore, OTR/L, CHT*
Annalisa Synnestevedt, OTD, CHT; Janice L. Trope, OTR/L, CHT

The use of kinesiology taping for a variety of upper extremity injuries and conditions will be demonstrated and practiced in this hands-on session. Instruction on the fundamentals of kinesiology taping will be given. Taping for facilitation, inhibition, protection, scar management and edema management will be addressed. Lab attire is recommended.

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CONCURRENT SESSION#21-30 | MONDAY, MARCH 4, 2019 | 3:30-5:30 PM

21. Edema Management

Moderator: Sheri B. Feldscher, OTR/L, CHT; Norah Malkinski, OTR/L, CHT, CLT

This session will provide an overview of post-traumatic and post-surgical edema management for the upper extremity. The pathophysiology of edema including basic anatomy and physiology of the lymphatic and venous systems will be covered as a foundation for understanding management techniques. Examination and interventions such as compression bandages and manual edema mobilization will be demonstrated and practiced.

22. Surgical Procedures and Post-Operative Rehabilitation: Terrible Triad and Elbow Contracture Release

Kenneth A. Kearns, MD;
Nancy M. Cannon, OTR/L, CHT;
Jason A. Suda, MS, OTR/L, CHT

A collaborative approach between the surgeon and therapist is essential in the treatment of individuals who have sustained a terrible triad injury. This panel session will present anatomical considerations, surgical techniques, rehabilitation strategies and potential complications in the care of elbow dislocation with associated radial head and coronoid fractures.

23. Throwing Injuries of the Overhead Athlete: Focus on Baseball and Tennis

Brian G. Leggin, PT, DPT, OCS

The overhead throwing motion places extraordinary range of motion and force demands on the shoulder complex. This session will focus on assessment and rehabilitation approaches to facilitate a balance between mobilization and functional stability for overhead athletes. Clinical examples will spotlight rehabilitation of baseball and tennis players.

24. Research/Case Reports/Outcome Tools

Joy Mac Dermid, BSc, PT, PhD

This session will cover a practical approach to incorporating research tools and methods in the clinic. Patient reported outcomes and their relevance to the clinical reasoning process will be presented along with guidelines for case reports.

25. Can Cervical Dystonia Lead to Upper Extremity Dysfunction: Diagnosis and Treatment.

Nancy N. Byl, PT, PhD, MPH, FAPTA

Therapists may be challenged when working with individuals with hand and arm dystonia, a disorder of motor control in which involuntary movements and abnormal postures interfere with upper extremity function. This session will explore the principles of neural plasticity and the origin of repetitive strain injuries and focal hand dystonia as well as the effectiveness of conservative sensorimotor strategies for rehabilitating patients with focal hand dystonia.

26. Wrist Biomechanics: Dynamic Stability and Function

Aviva L. Wolff, EdD, OT, CHT; Christos Karagiannopoulos, PT, PhD ATC, CHT

This session will present an overview of wrist biomechanics, proprioception and the concept of dynamic stability of the wrist. Assessment of function, kinematics and patient expectations and satisfaction in self-identified activities for a range of wrist pathologies will be discussed.

27. How to Make the Functional Capacity Evaluation a Part of the Return to Work Process

Sue A. Emerson, OTR, CHT, CEES; Michael Gerg, OTR, CHT, CEES

How can therapists identify work demands, assess functional capacities and develop and modify treatment plans to facilitate patients' safe return to work? Essential components of functional capacity evaluation will be explored as well as therapeutic techniques to gain a thorough understanding of patients' capacities and priorities for rehabilitation.

28. Evaluation and Management of Scapular Dysfunction

Philip J. McClure, PT, PhD

This session will provide an overview of anatomy and biomechanics of the scapula followed by current concepts in the examination and management of individuals with scapular dysfunction. The consequences of scapula muscle dysfunction on upper extremity function and intervention strategies will be discussed. Lab attire is recommended.

29. The Kinetic Chain Assessment for Shoulder and Elbow Pain in Athletes

Angela Tate, PT, PhD; Brian J. Eckenrode, PT, DPT, MS, OCS

Overuse injuries can frequently affect the overhead athlete. Understanding the biomechanical demands of the shoulder and elbow in conjunction with the kinetic chain is paramount to management of these injuries. This session will present the current best practice treatment of upper extremity overuse injuries in the athlete while focusing on the assessment, management and return to sport guidelines. Participants will have the opportunity to practice kinetic chain evaluation techniques and are invited to wear lab attire if desired.

30. Joint Mobilization: Shoulder

Moderator: Frank Fedorczyk, PT, DPT
Workshop Assistants:

Christopher Keating, PT, DPT, OCS, FAAOMPT;
Deborah K. Reich, PT, CHT;
Bryan Spinelli, PT, PhD

This session will offer an evidence-informed overview of joint based manual therapy principles to be used to manage pain and/or recovery of range of motion. Participants will practice mobilization techniques for the shoulder complex including the scapula. Recommendations for clinical application will be provided. Lab attire is recommended.