

Tips and Tricks For Elbow Rehabilitation

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Disclosure: DO NOT have a financial relationship with any commercial interest.

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Objectives

Upon thoughtful review of the lecture contents participants will be able to:

- Include three new treatment techniques or philosophies to the management of their next elbow patient
- Explain to a co-worker the function of the lymphatic system
- Incorporate two new strategies into their splint fabrication methodology
- Add two new techniques to their edema management practices
- Look at their role differently

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Overheard in the Clinic

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Evidence Based Practice



Evidence Based Practice

Practice Based Evidence

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In General....

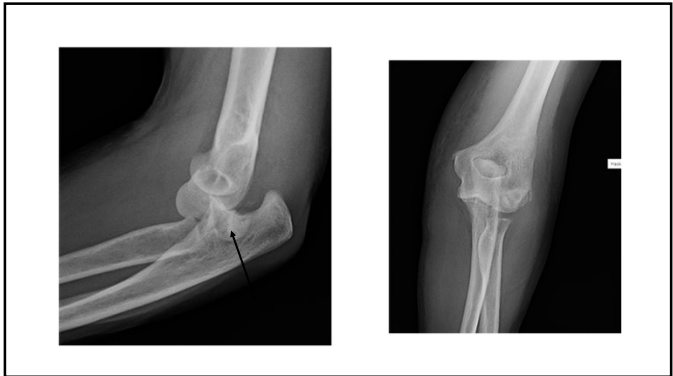
- Many cases are straight forward
- We all search for strategies and philosophies for the challenging cases
- Every technique is not for every elbow patient
- Clinical reasoning is key

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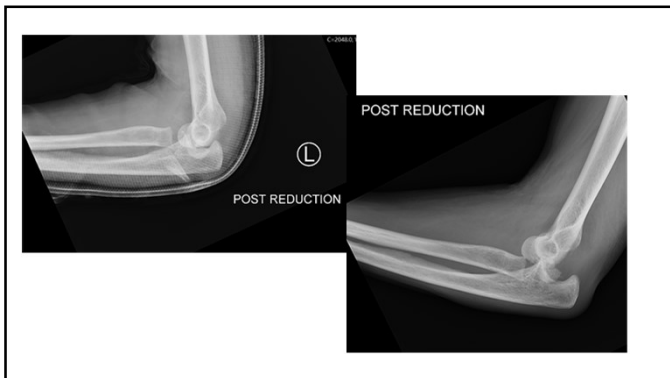
Two Cases, Same Diagnosis, Very Different

- Labels: Fracture Dislocation, Terrible Triad
- Women in their 70s
- One Operative, One Nonoperative

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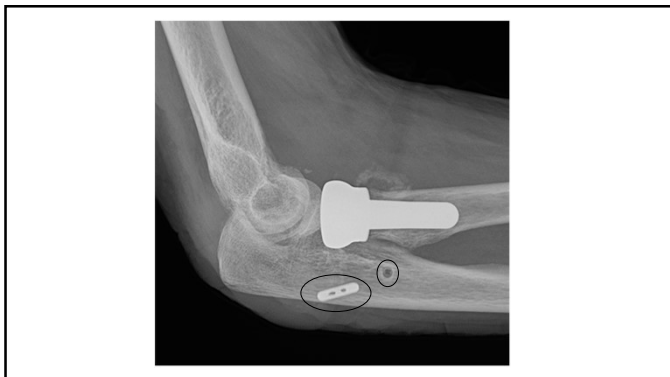
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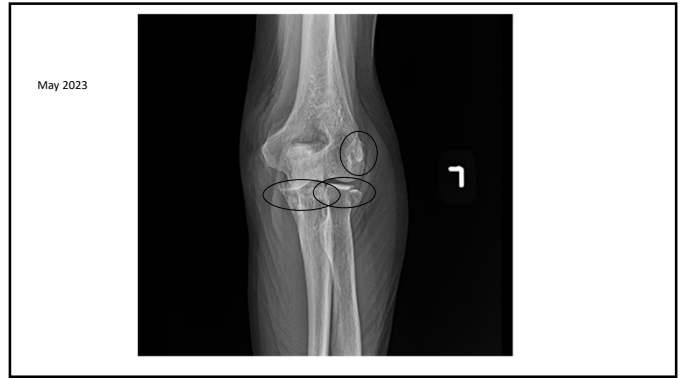
Post Op

- Overhead protocol
- Splint 90/neutral
- Noteworthy loss of extension and supination
- Overhead discontinued at 2 weeks
- Splint discontinued at 3 weeks (except for travel)
- Quick transition to straight forward orthopedics

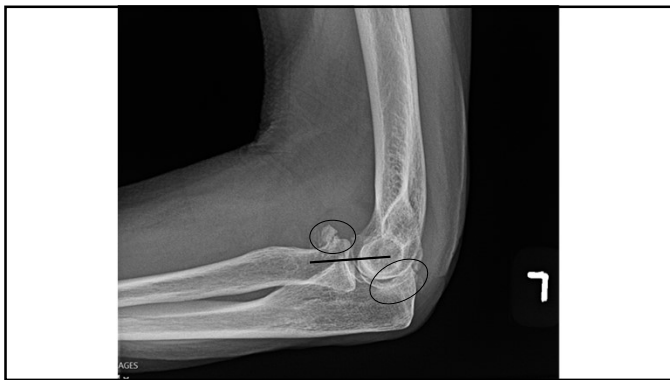
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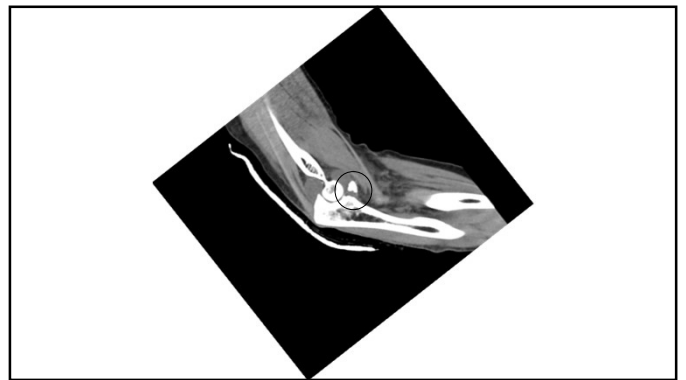
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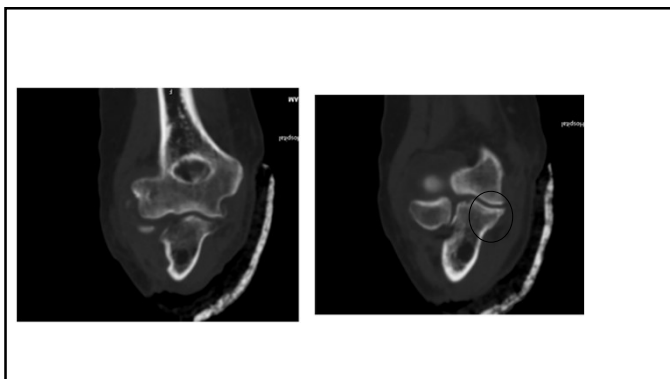
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Management

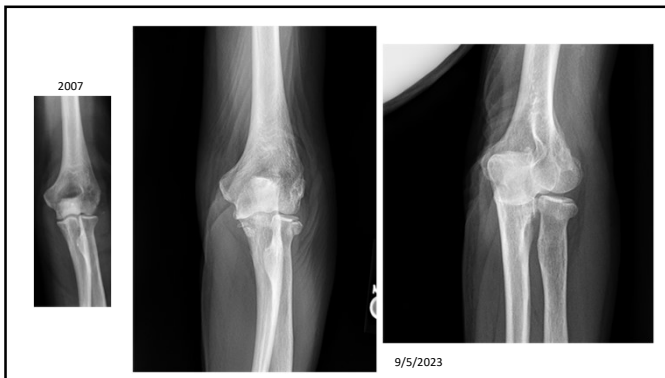
- Non op
- Splint 90/neutral
- Overhead protocol for extended period
- Persistent pain
- Almost instantaneous recovery of motion in all planes

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Management

- Chronic instability
- Acute on chronic, in a sense
- Midrange strengthening
- Proprioception training
- Pt education
- ADL strategies

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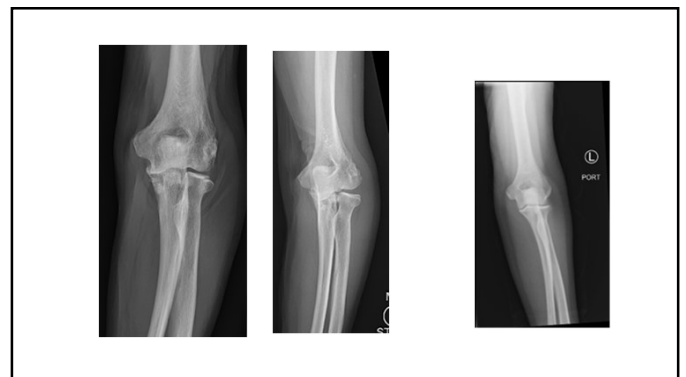


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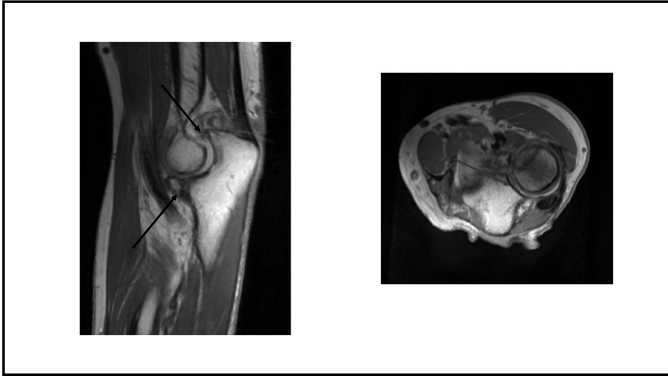
REFERRAL TO A HAND SURGEON

NEW IMAGING

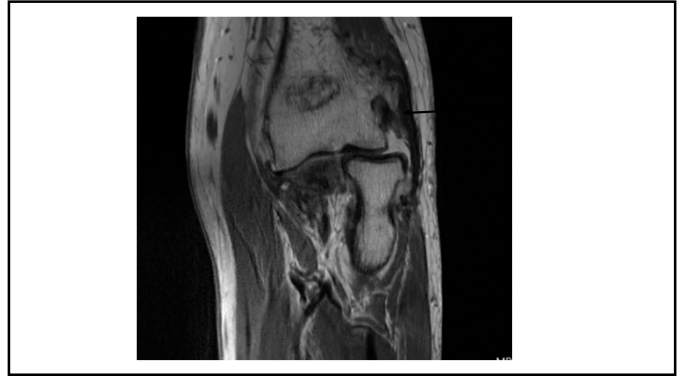
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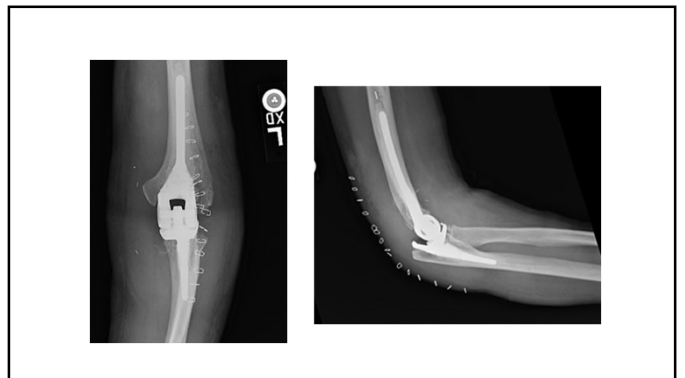
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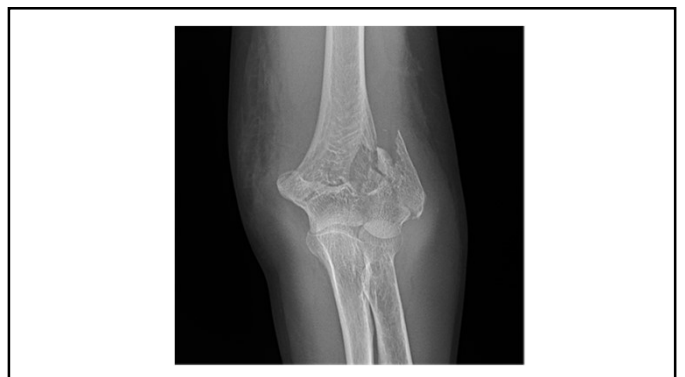
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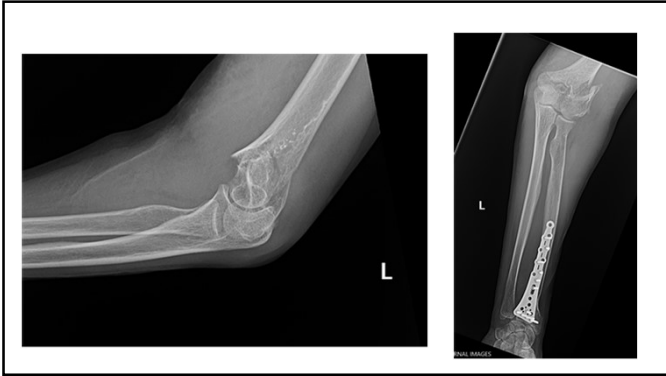
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Distal Humerus Flaw

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Postoperatively

- Sling immobilization
- Slightly delayed referral to therapy
- Hand pain, ulnar distribution
 - Stiff, painful ring, small fingers
- ROM progressed with unexpected ease
- Ulnar nerve
 - Navigation unclear

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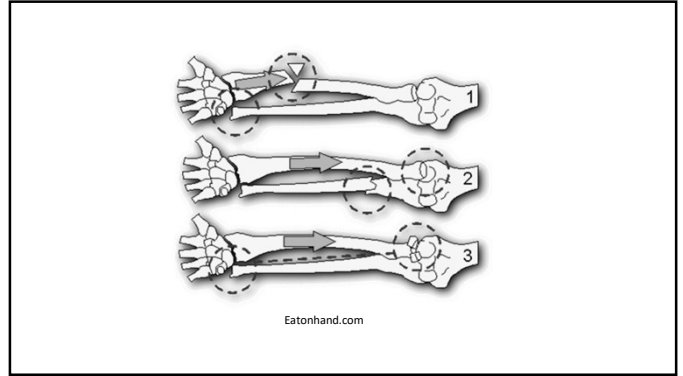
High Energy Series

- Galeazzi Fracture
 - Radial shaft—diaphyseal bone
- Monteggia Fracture
 - Proximal Ulna fracture
 - Stiffness
- Essex Lopresti Lesion
 - Complete longitudinal dissociation of the forearm
 - Stiffness, loss of rotation

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Long Haul Unstable Flavor

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Chronic Unstable Elbow



- Muscle strength/recruitment
- Proprioception
 - Isometrics
 - Theraband
 - Soft Weights
 - Occlude vision
 - Goal Posts
 - Avoid provocative positions (usually extension + supination)
- Shoulder range of motion: especially external rotation
- Effective splint mechanics

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Theraband

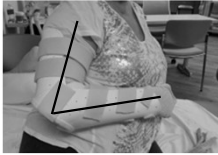




- Pt holds elbow in various positions, therapist changes direction and tension of pull. Grasp of theraband strip stabilizes elbow!
 - Occlude vision to make more challenging
- Can also do (gently) resisted elbow flex/ext

Goal Posts

- Set motion end points and have patient move between them
 - With or without Soft Grip weight

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Stiff Elbow—Key Points

- **Joint Based Manual Therapy Techniques**
 - Distraction & distraction with motion (Mulligan)
 - Lateral Glides
 - Radial head glides for rotation deficits
 - Know your joint geometry for effective force application
- **Soft Tissue Manual Therapy Techniques**
 - Contract/relax
 - ART
 - Skin techniques
 - IASTM (Graston, Hawkgrrips...)
 - Coax do not coerce
- **Psychology**
 - Attention
 - Time
 - Encouragement
- **Splints**
 - Make your splints well
 - BSN Delta Soft extension splint
 - Design based on accurate physics
- **The early game**
 - Edema!

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Joint Mobilizations

- Ulnohumeral Distraction
- Ulnohumeral Distraction with motion
- Lateral Glides



Photographs are property of IAOM-US
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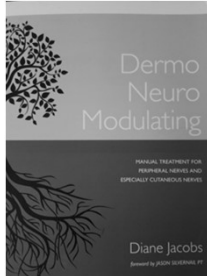
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Soft Tissue Considerations

- Become an end feel detective
- Biceps is your primary adversary
 - Contract relax techniques
 - Sustained pressure to tendon/musculotendinous junction
 - Biceps muscle belly bending (S's and C's)
 - ART technique for the biceps
 - IASTM techniques for fascia: Hawkgrrips, Graston....
- Triceps are generally weak
 - End range isometrics in extension
 - Mid range isometrics throughout available range
- AROM drills that require quick transitions between flexion and extension

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Importance of Skin

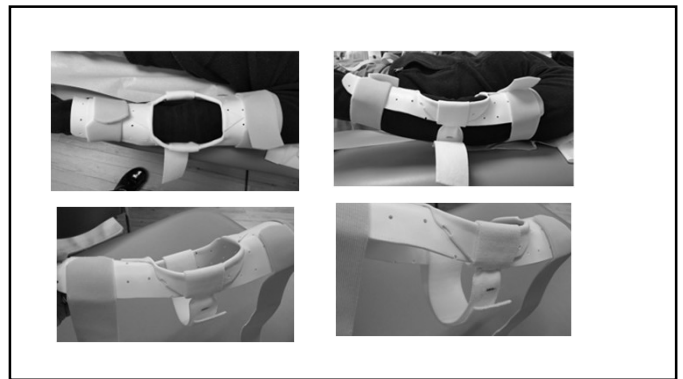


- Introduced to this book by Alison Taylor, OTR/L, CHT, CKTI
- Access the system through the skin
- Less is more. Slow & careful
- Skin stretch
- Importance of skin (vs bones/muscles)
- Pain
- S-shaped stretches in the area of the arm and forearm

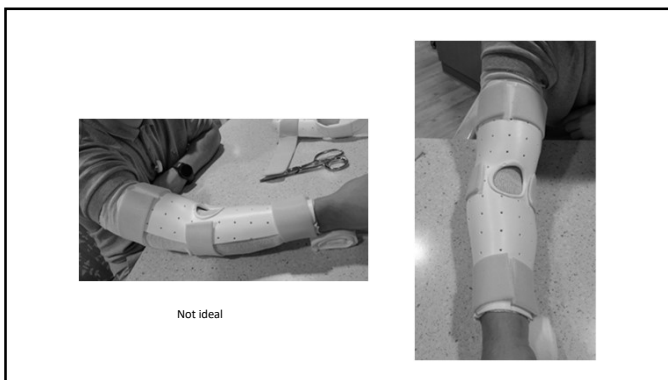
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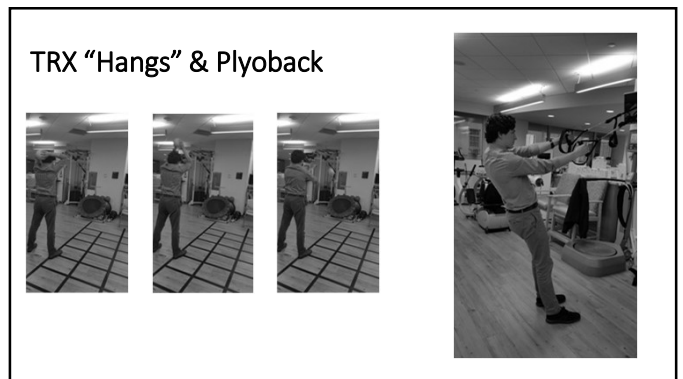
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Lymphedema Training



- 135 hour Certification in Complete Decongestive Therapy
- Advanced Training at Foeldi Clinic in Germany
- Orthopedic Swelling Solutions

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Edema

- Say “no” to retrograde massage
- Say “yes” to manual lymph drainage
- Apply lymphedema techniques to postoperative edema

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Problems

- Retrograde massage is too local
- Deep tissue and retrograde manual techniques
 - Lymph vessels collapse or spasm with external pressures exceeding 70 mmHg
 - Pushing the last car in a traffic jam. Must clear the accident first (proximal vessels)
- Lymph mobility is greatest with temperature ranges of 74-106°F. Mobility decreases with cooler temperatures
- Exercise increases filtration in a system that is already overloaded
- Compression pumps are typically too strong

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Manual Lymph Drainage

- **Begin proximally**
 - Shoulder rolls
 - Abdomen: diaphragmatic breathing
 - Axillary nodes
 - Medial upper arm
 - Lateral upper arm
 - Elbow/cubital fossa/lat&med epicondyle
 - Forearm
 - Wrist
 - Hand
 - Digits
- **Strokes**
 - Stationary Circles
 - Pumps
 - Scoops
 - Rotaries

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Follow with Compression

- Bandages
 - Short Stretch vs Long Stretch Bandages
- Foam
- Compression sleeves
- Compression gloves
- Finger wraps

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MLD Treatment-Warm Up



Photos with permission from
 Klose Training
 Lymphedema Certification
 Orthopedic Swelling Solutions Class



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MLD-Axillary Region



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MLD Medial Arm, Cubital Fossa



Slow circular movements
Stretching skin
Stretch-Relaxation phases of the stroke
Not sliding
Large hand contact

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MLD-Medial Epicondyle



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MLD-Forearm



Relaxed hands!

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MLD-Wrist/Hand



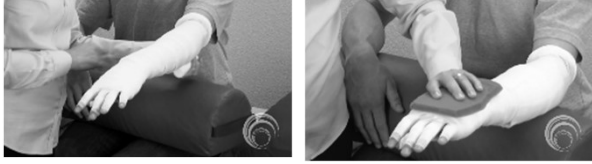
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Bandaging-Finger Wrapping



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Bandaging-Artiflex or Cellona or Fleece Strips



Dorsal gray foam piece

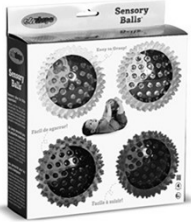
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Bandaging-Short Stretch Bandage

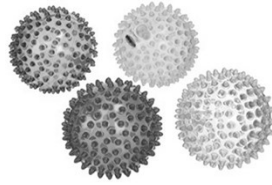


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Stuff I've Found



Fibrotic, indurated areas
Nubby, not too pointy
Not too inflated



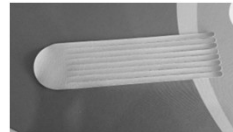
EduShape Sensory Balls
amazon.com

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Kinesiotape

PerformTex Fluid Flow Strips



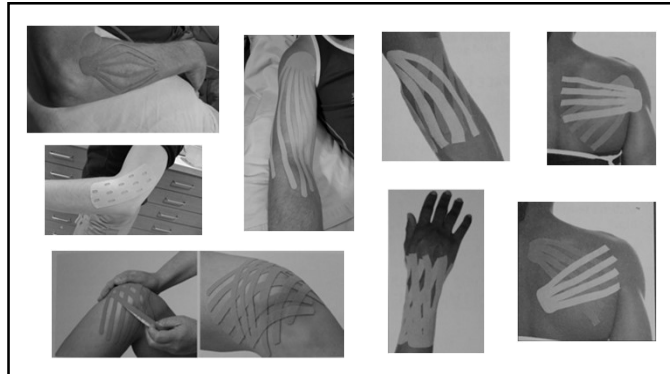
Place "anchor" where you want swelling to go.
Tails draw the fluid toward the anchor.
Available at www.bandagesplus.com



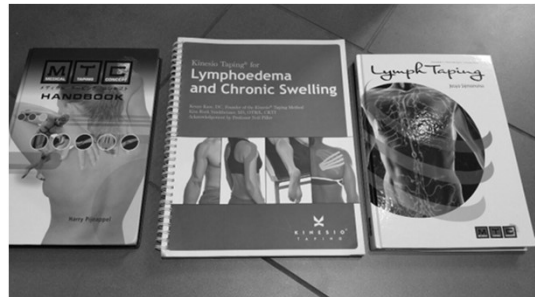
Curette Punch
Available at
www.bandagesplus.com

Available through WWW.KMSLLC.COM

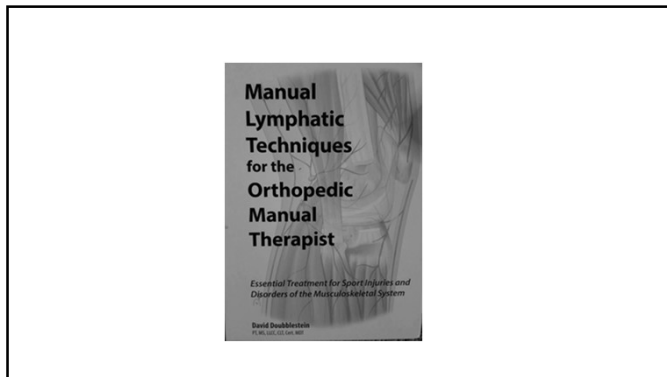
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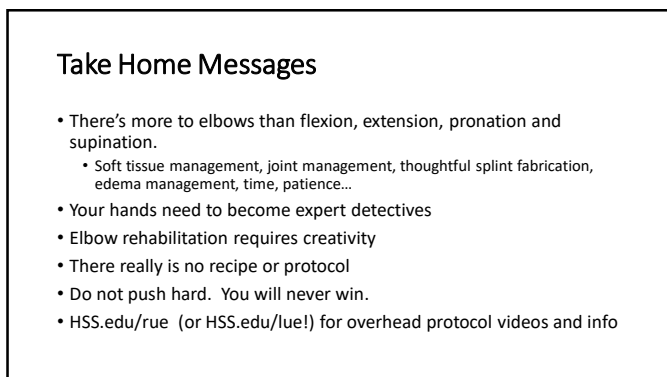
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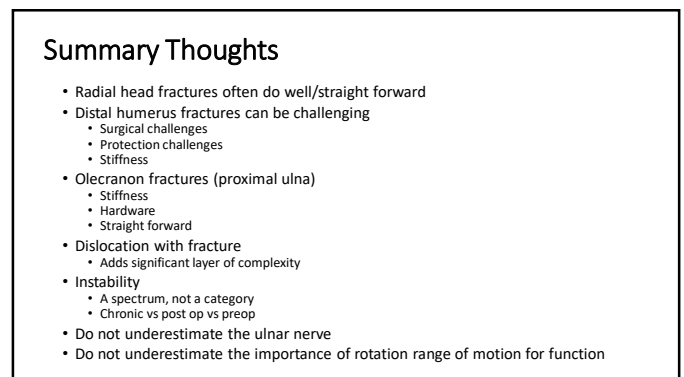
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Thank You!

Slides are posted on handtherapyhub.com on Monday

altmane@hss.edu