



# HEALTHY HANDS AND WRISTS IN STRING PLAYERS

DR. KATHERINE JETTER

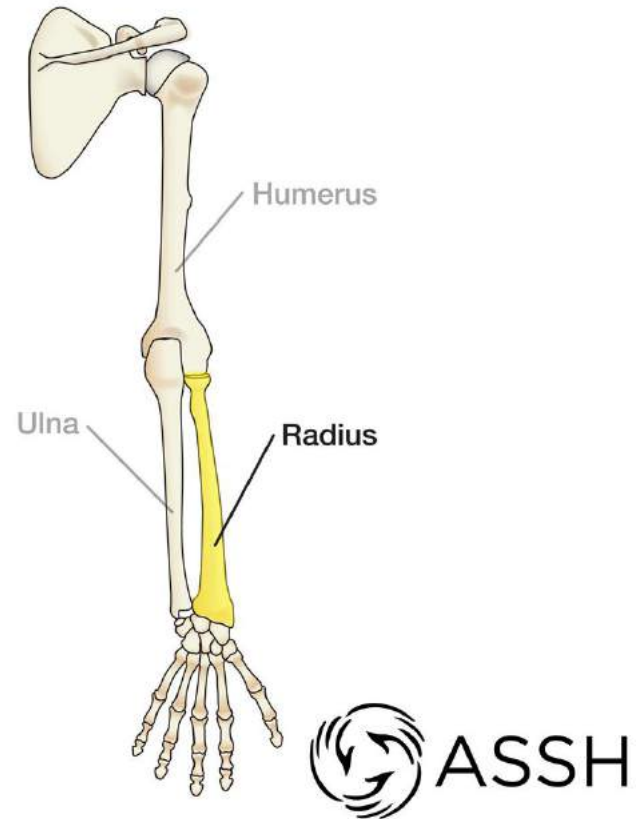
CMEA CONFERENCE 2019



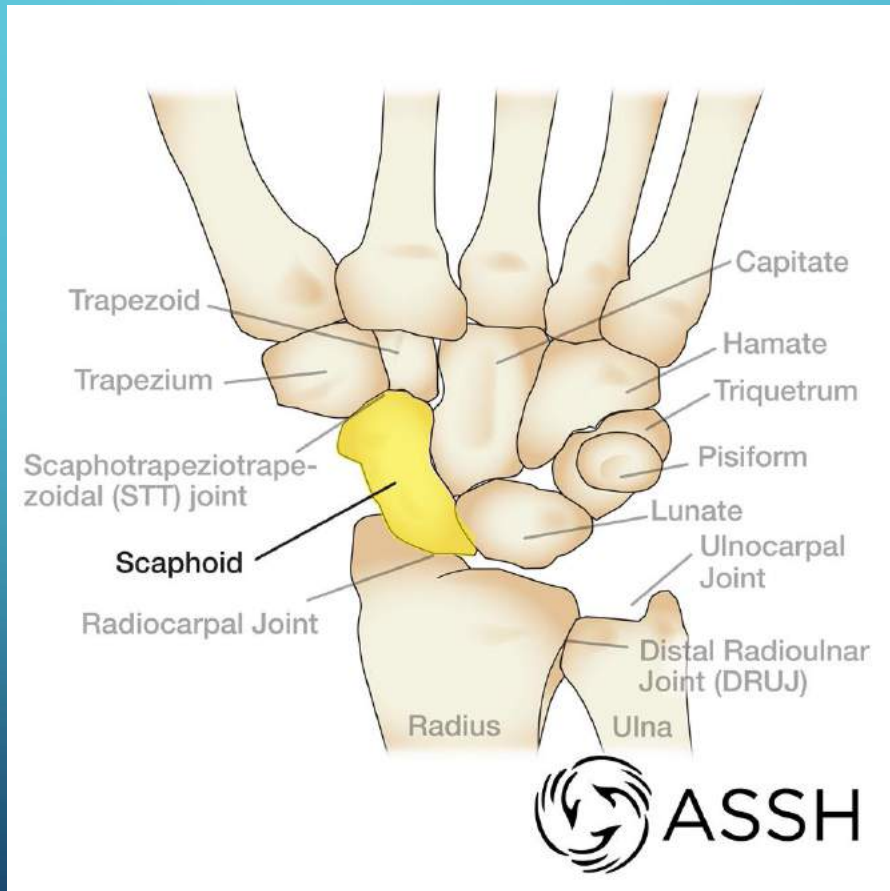
# INTRODUCTION:

- My story
  - Simple Exercises and Stretches to Keep Hands and Arms Healthy or for Recovery from Minor Injuries
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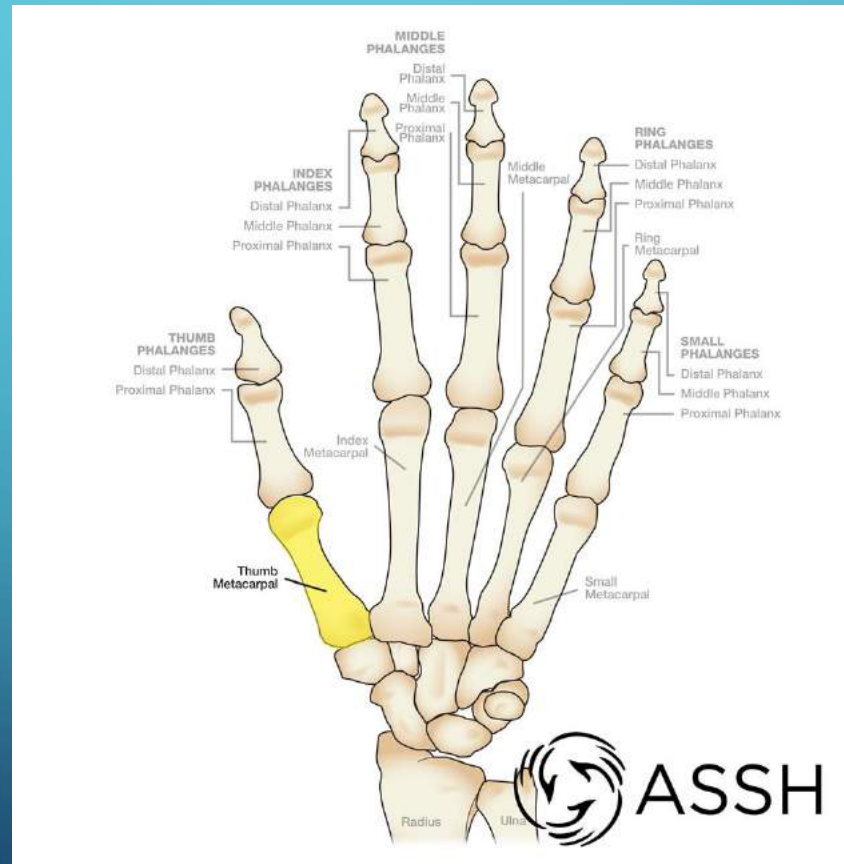
# BONES OF THE ARM



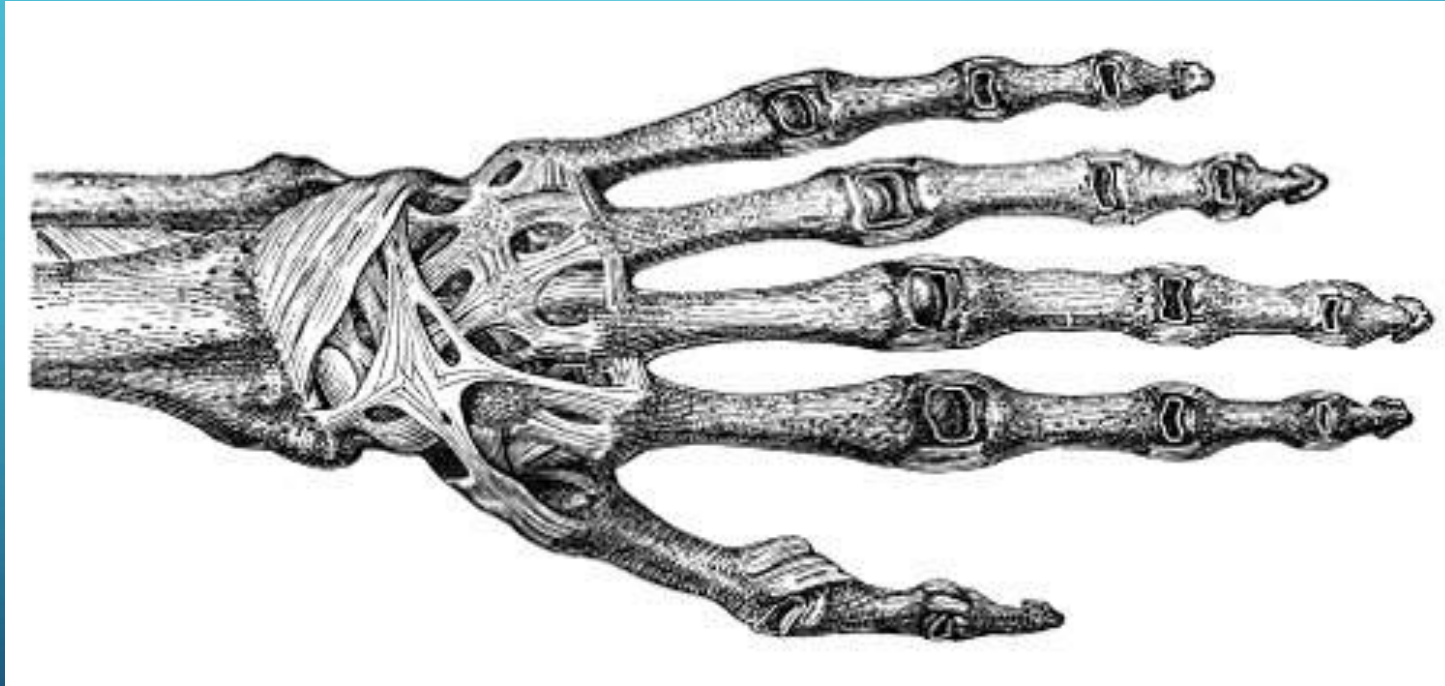
# BONES OF THE WRIST



# BONES OF THE HAND

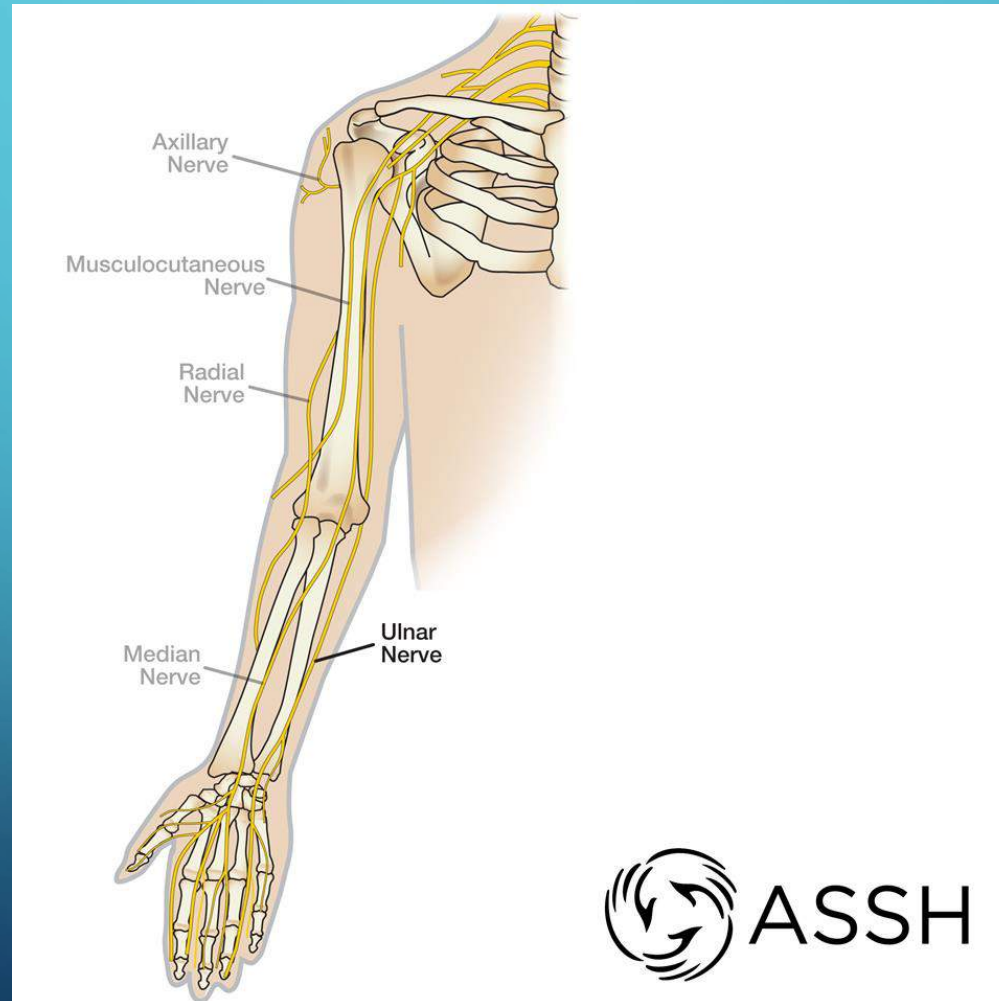


# LIGAMENTS IN WRIST





# NERVES IN THE ARM



# PUTTY EXERCISES:



## Putty exercises

Created by Kate Small, MS, OTR, CHT Feb 27th, 2018

View at "www.my-exercise-code.com" using code: 6METFY8

Total 5



### PUTTY GRIP

Place putty in your hand and squeeze it firmly and slowly. Reshape it and repeat.

Repeat	1 Time
Hold	0 Seconds
Complete	1 Set
Perform	1 Time(s) a Day



### PUTTY PINCH

Roll up some putty to create a small tubular section. Next, pinch the putty and repeat down the section.

Repeat	1 Time
Hold	0 Seconds
Complete	1 Set
Perform	1 Time(s) a Day



### PUTTY LUMBRICALS

Hold the putty with all fingers straight as shown, then squeeze. Keep your fingers straight the entire time.

Repeat	1 Time
Hold	0 Seconds
Complete	1 Set
Perform	1 Time(s) a Day



# PUTTY EXERCISES (CONTINUED)



## PUTTY KEY GRIP

Hold the putty at the top of your hand. Squeeze the putty between your thumb and the side of your 2nd finger as shown.

Repeat	1 Time
Hold	0 Seconds
Complete	1 Set
Perform	1 Time(s) a Day



## PUTTY EXTENSION LOOP

Create a small tubular section of putty. Form a loop around your fingers and then pull it apart as shown.

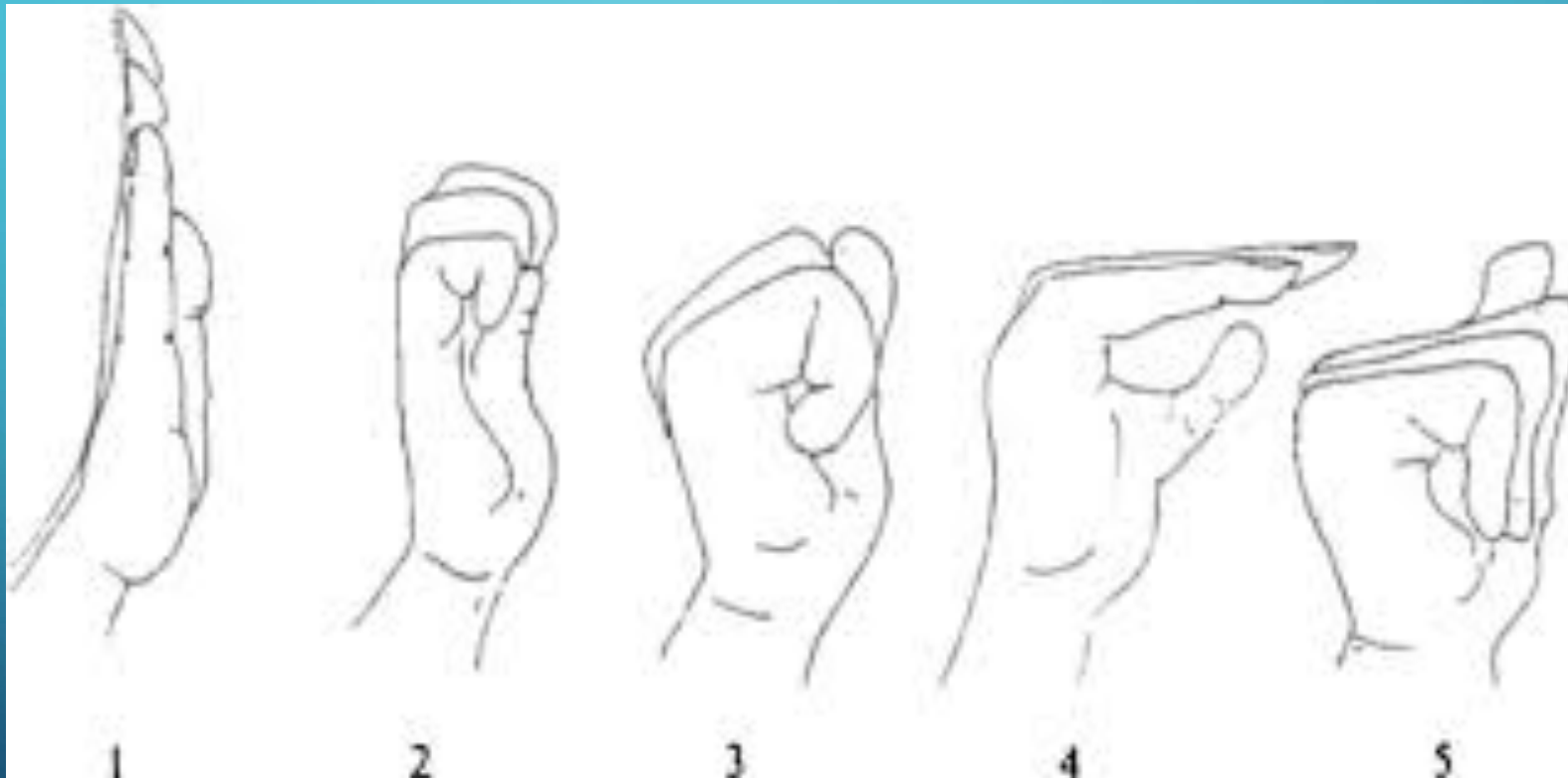
Repeat	1 Time
Hold	0 Seconds
Complete	1 Set
Perform	1 Time(s) a Day

# THUMB MOBILITY

- Touching thumb to tip of each finger and then to each joint down to base joint

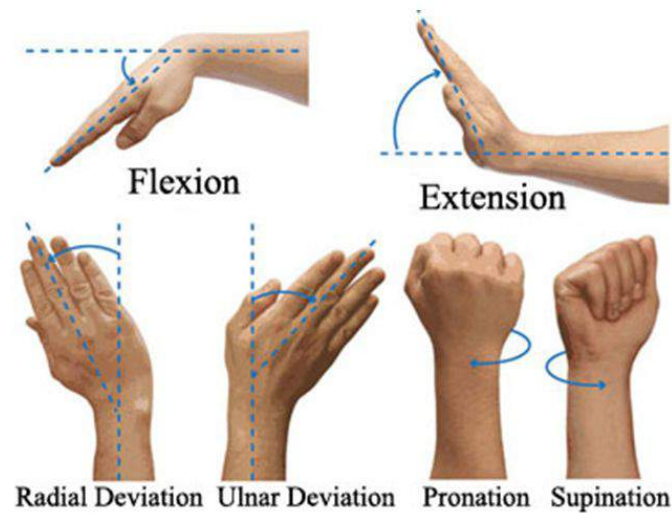
# HAND “SMEAR” – TENDON GLIDING EXERCISES

CHANGE ORDER TO 1, 4, 5, 3, 2



# PLANES OF MOTION OF MOVEMENT AT WRIST

## Motions of the Wrist



Flexion: 80-90 degrees  
Extension: 75-85 degrees  
Radial deviation: 20 degrees  
Ulnar deviation: 35 degrees  
Supination: 90 degrees  
Pronation: 90 degrees

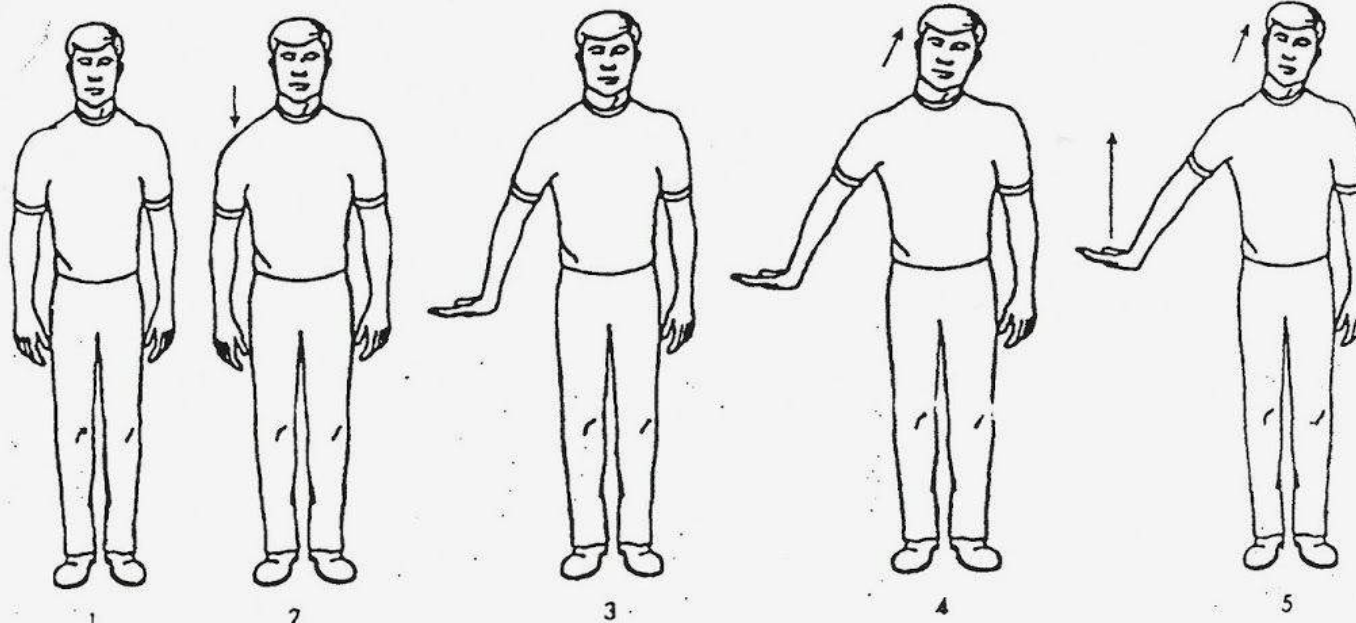
# WRIST MOBILITY AND STRENGTH EXERCISES

- Flexbar exercises
- Weighted dowel
- Hand Weight or Medicine Ball

# NERVE RELEASE EXERCISES: RADIAL NERVE GLIDE

## RADIAL NERVE GLIDES

Perform **10** repetitions of the following exercises, **3** times a day





# NERVE RELEASE EXERCISES

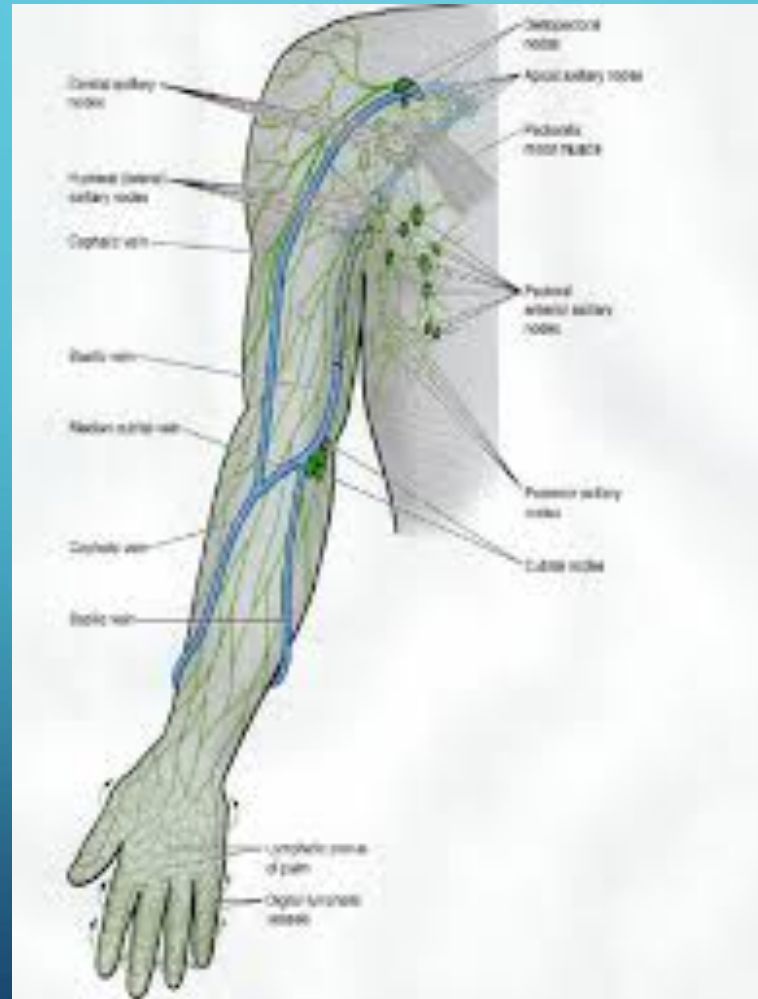
## ULNAR NERVE GLIDE



# HAND AND PALM OPENING

- Thumb stretch
- Ball: Passing Hand to Hand, Palming, Bouncing on Floor or Wall and Catching
- Mini Push-ups
- Fine motor rotations of wrist while supinated or pronated

# LYMPHATIC DRAINAGE TO RELIEVE SWELLING



# SELF-MOBILIZATION

- Massage by hand
- Palm/Carpal Opening
- Self Massage with lacrosse, tennis or small balls
- Decompression of the wrist

# REFERENCE MATERIALS

- Kate Smail, Certified Hand Therapist, Mercy Integrated Physical Therapy provided and taught me most of these exercises during the previous 6 months.
- *American Society of Hand Therapists.* <https://www.asht.org>
- Calais –Germain. *Anatomy of Movement.* Revised Ed. Seattle: Eastland Press, 2014.
- Conable, Barbara. *What Every Musician Needs to Know About the Body: the Practical Application of Body Mapping to Making Music.* Portland: Andover Press, 2000.
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