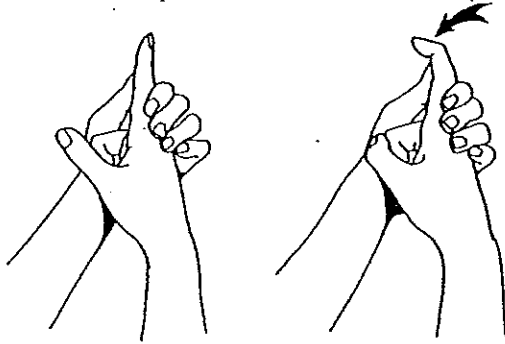


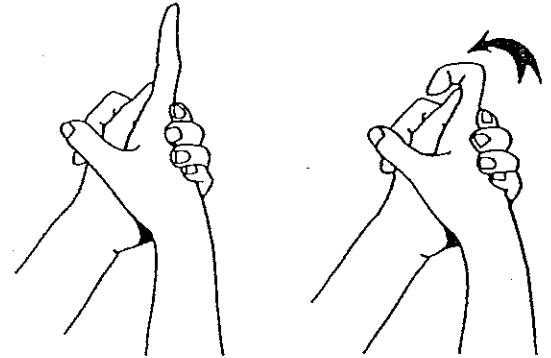
## Digits Active and Resistive ROM Exercises

**HAND - 6 Active Range of Motion**  
Active DIP Flexion/Extension



Using fingers of opposite hand, pinch middle knuckle to prevent bending. Bend the end knuckle as far as you can. Hold \_\_\_\_\_ seconds. Relax. Repeat \_\_\_\_\_ times.

**HAND - 7 Active Range of Motion**  
Active PIP Flexion/Extension

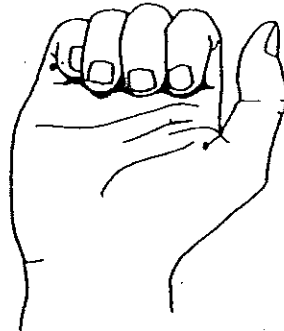


Using fingers of opposite hand, pinch bottom knuckle to prevent bending. Bend the middle knuckle as far as you can. Hold \_\_\_\_\_ seconds. Relax. Repeat \_\_\_\_\_ times.

**HAND - 8**  
Active Range of Motion  
Finger Flexion/Extension

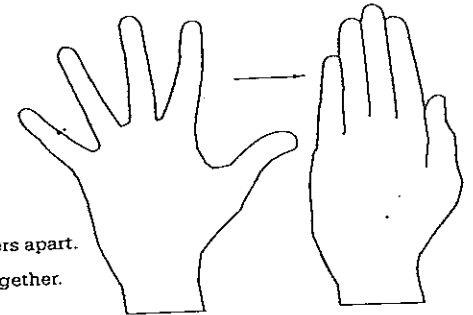
Actively bend fingers of involved hand. Start with knuckles furthest from hand and slowly make a fist.

Hold \_\_\_\_\_ seconds. Relax. Then straighten fingers out again as far as you can. Repeat \_\_\_\_\_ times.

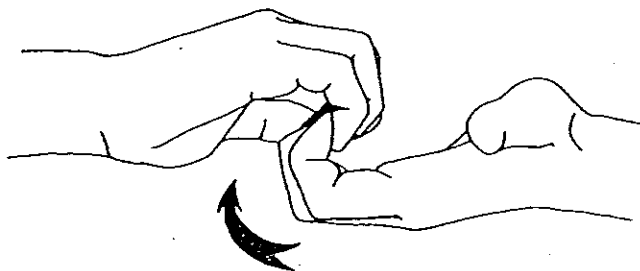


**Active**  
**Abduction/Adduction**

- Spread fingers apart.
- Then pull together.

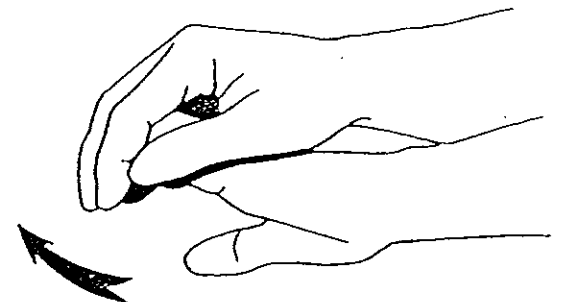


**HAND - 27 Active Resistive Finger Flexion**



Apply light moderate maximal resistance with opposite hand as you curl fingers of involved hand. Repeat \_\_\_\_\_ times. Do \_\_\_\_\_ sessions per day.

**HAND - 28 Active Resistive Finger Extension**



Apply light moderate maximal resistance as you extend fingers from middle knuckles. Repeat \_\_\_\_\_ times. Do \_\_\_\_\_ sessions per day.

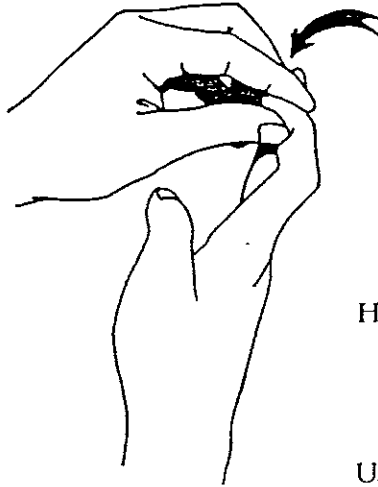
## Digits Passive ROM Exercises

### HAND - 1

Passive Range of Motion  
Finger DIP Joints

Using other hand, passively bend fingers at third row of knuckles until a stretch is felt. Hold \_\_\_\_ seconds. Relax. Straighten fingers out as far as you can.

Repeat \_\_\_\_ times.  
Do \_\_\_\_ sessions per day.

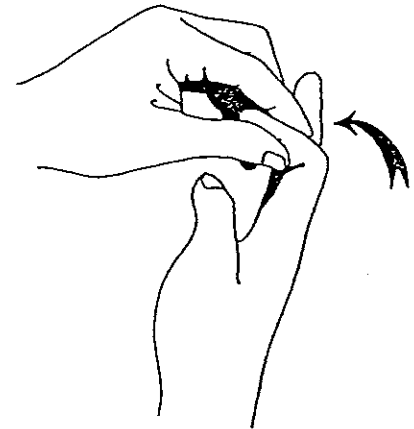


### HAND - 2

Passive Range of Motion  
Finger PIP Joints

Using other hand, passively bend fingers at middle row of knuckles until a stretch is felt. Hold \_\_\_\_ seconds. Relax. Straighten fingers out as far as you can.

Repeat \_\_\_\_ times.  
Do \_\_\_\_ sessions per day.

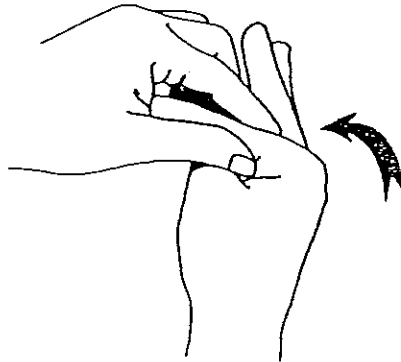


### HAND - 3

Passive Range of Motion  
Finger MP Joints

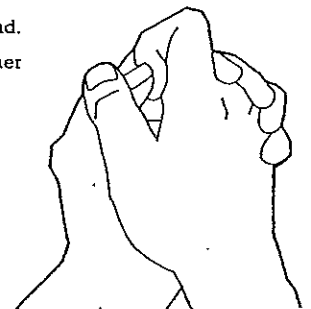
Using other hand, passively bend fingers at first row of knuckles until a stretch is felt. Hold \_\_\_\_ seconds. Relax. Straighten fingers out as far as you can.

Repeat \_\_\_\_ times.  
Do \_\_\_\_ sessions per day.

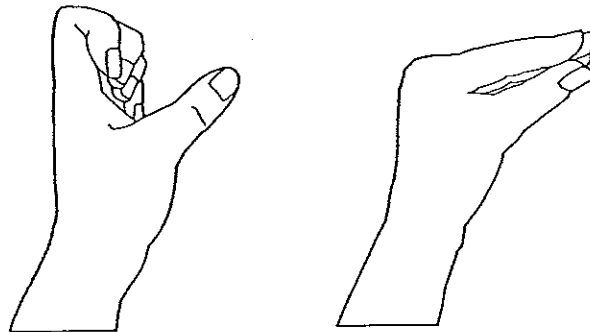


## Intrinsic Stretch

- Straighten MPs, curl PIPs and DIPs into the "hook" position.
- Gently stretch with other hand.
- Hold position and remove other hand.

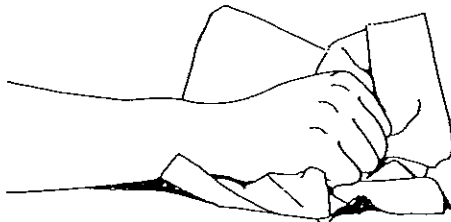


*Intrinsic Minus/Plus Positions*



- Straighten MPs and curl both PIPs and DIPs.
- Then bend MPs and straighten PIPs and DIPs.

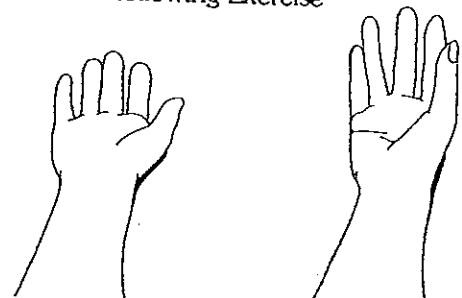
Paper Crumpling Exercise



Begin with palm down on a piece of paper. Maintaining contact to surface with heel of hand, crumple paper into a ball.

Repeat \_\_\_\_ Repetitions/set. Do \_\_\_\_ Sets/session.  
Do \_\_\_\_ Sessions/day.

Palm Hollowing Exercise

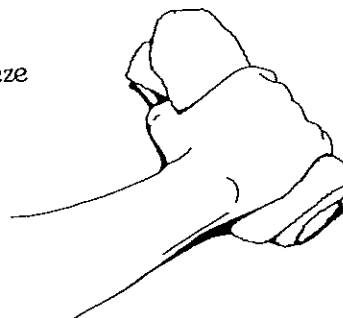


With hand flat, gently extend fingers and thumb upward to create a hollowing of the palm.

Repeat \_\_\_\_ Repetitions/set. Do \_\_\_\_ Sets/session.  
Do \_\_\_\_ Sessions/day.

Towel Roll Squeeze

With forearm resting on surface, gently squeeze towel.



Repeat \_\_\_\_ Repetitions/set.  
Do \_\_\_\_ Sets/session.

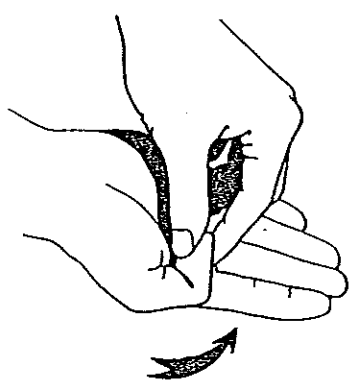
# THUMB EXERCISES

## Passive Range of Motion Thumb DIP Joint

Using other hand, passively bend thumb at knuckle as shown until a stretch is felt. Hold \_\_\_\_\_ seconds. Relax. Then straighten thumb out as far as you can.

Repeat \_\_\_\_\_ times.

Do \_\_\_\_\_ sessions per day.

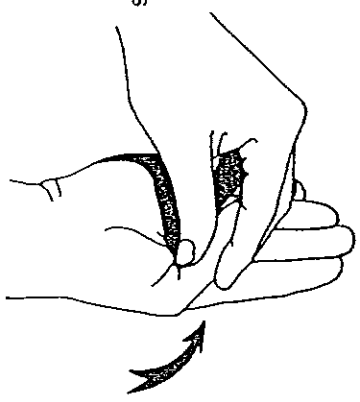


## Passive Range of Motion Thumb PIP Joint

Using other hand, passively bend thumb at knuckle as shown until a stretch is felt. Hold \_\_\_\_\_ seconds. Relax. Then straighten thumb out as far as you can.

Repeat \_\_\_\_\_ times.

Do \_\_\_\_\_ sessions per day.

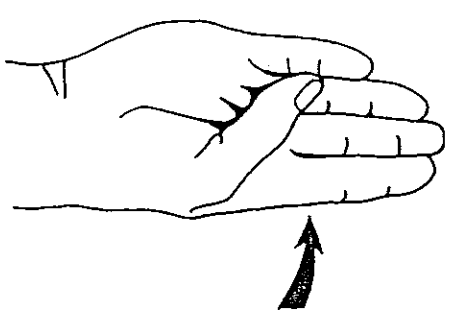


## Active Range of Motion Thumb Flexion/Extension

Actively bend thumb across palm as far as you can. Hold \_\_\_\_\_ seconds. Relax. Then pull thumb back into "hitch hiking" position.

Repeat \_\_\_\_\_ times per session.

Do \_\_\_\_\_ sessions per day.



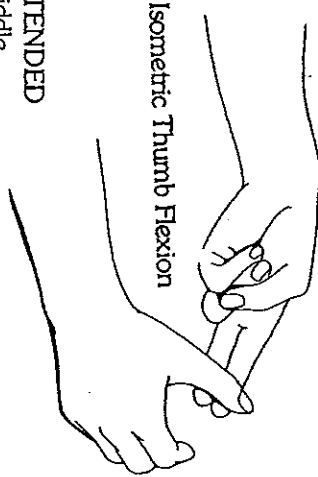
## Isometric Thumb Extension



Hand closed with thumb at : **REST MID EXTENDED** position apply gentle resistance with index and middle fingers. Do not allow thumb to move.

Repeat \_\_\_\_\_ Repetitions/set Do \_\_\_\_\_ Sets/session.  
 Do \_\_\_\_\_ Sessions/day.

## Isometric Thumb Flexion

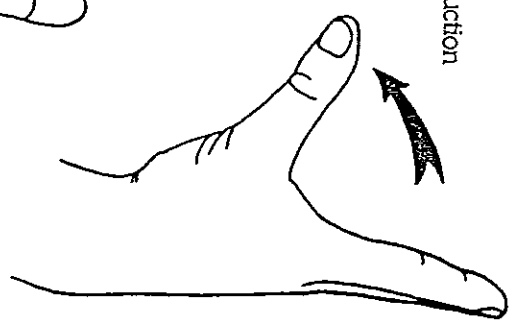


## Active Range of Motion Thumb Abduction/Adduction

Actively bend thumb out away from palm as far as you can. Hold \_\_\_\_\_ seconds. Then pull thumb back to touch fingers. Try not to bend fingers toward thumb.

Repeat \_\_\_\_\_ times.

Do \_\_\_\_\_ sessions per day.

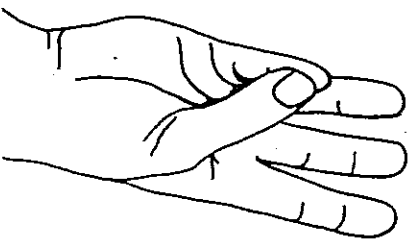


## Finger Opposition

Actively touch thumb to finger tip. Starting with index finger and proceed toward little finger. Move slowly at first, then begin to move rapidly as your motion and coordination improve. Be sure to touch each finger tip.

Repeat \_\_\_\_\_ times.

Do \_\_\_\_\_ sessions per day.



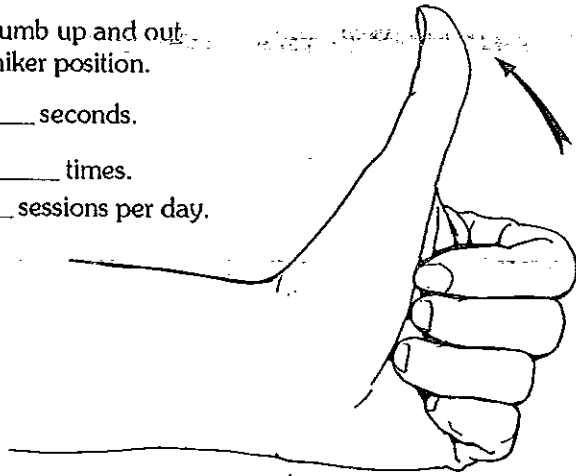
**THUMB - 24**  
Composite Extension (Active)

Bring thumb up and out  
in hitchhiker position.

Hold \_\_\_\_ seconds.

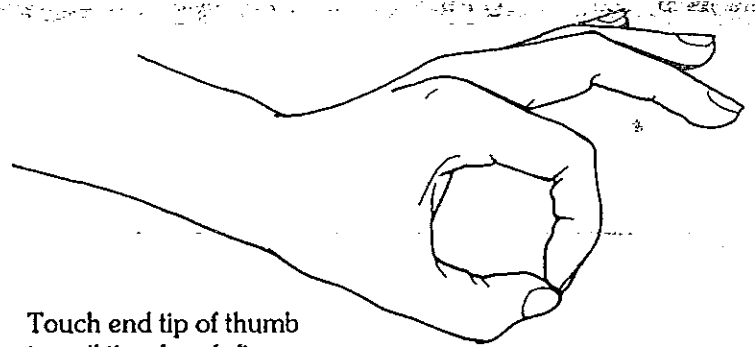
Repeat \_\_\_\_ times.

Do \_\_\_\_ sessions per day.



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**THUMB - 29**  
Opposition (Active)

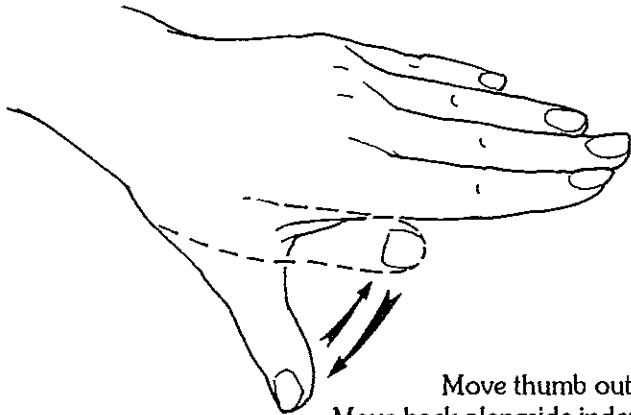


Touch end tip of thumb  
to nail tip of each finger  
in turn, making an "O" shape.

Repeat \_\_\_\_ times. Do \_\_\_\_ sessions per day.

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**THUMB - 26**  
Radial Adduction / Abduction (Active)

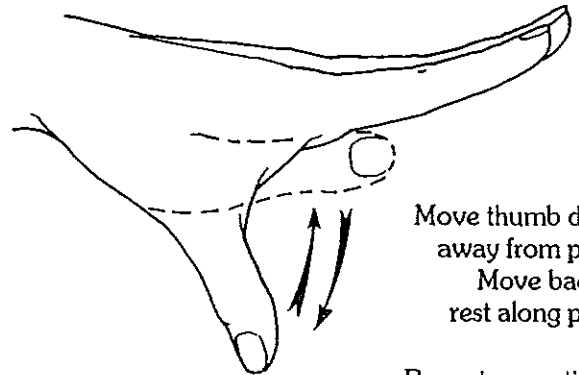


Move thumb out to side.  
Move back alongside index finger.

Repeat \_\_\_\_ times. Do \_\_\_\_ sessions per day.

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**THUMB - 27**  
Palmar Adduction / Abduction (Active)

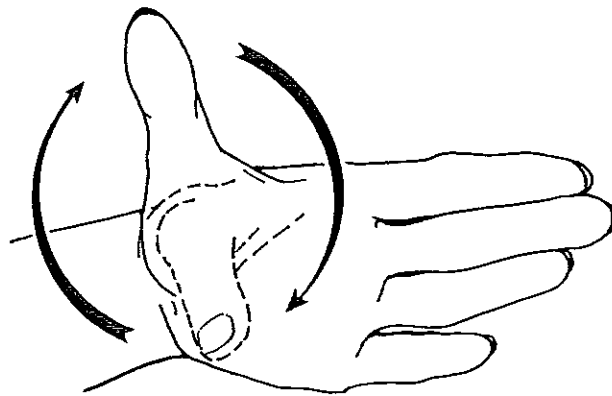


Move thumb down  
away from palm.  
Move back to  
rest along palm.

Repeat \_\_\_\_ times.  
Do \_\_\_\_ sessions per day.

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**THUMB - 30**  
Composite Movement Circumduction (Active)



Make circles with thumb.

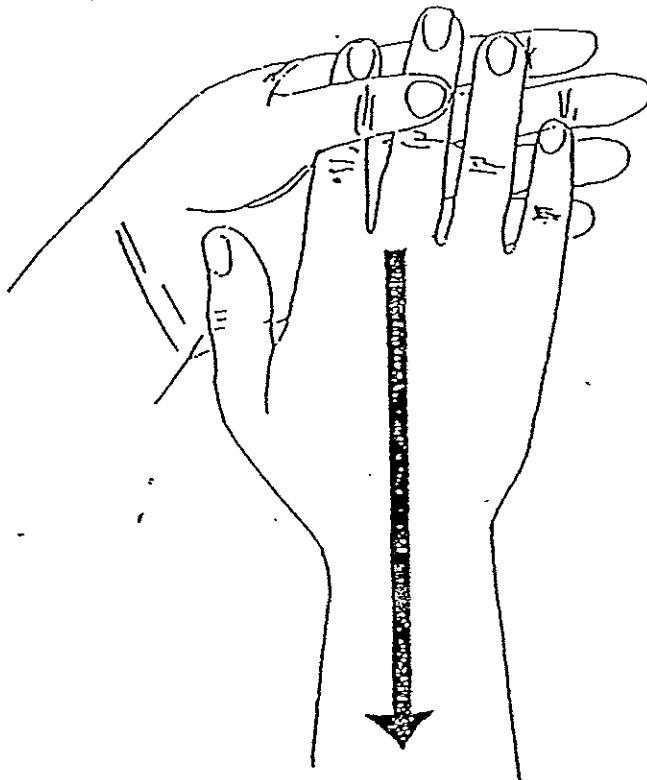
Repeat \_\_\_\_ times. Do \_\_\_\_ sessions per day.

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## E D E M A M A S S A G E

Edema is another word for swelling. The purpose of the edema massage is to decrease swelling by helping in the circulation of blood and lymphatic fluids.

1. Use a hand lotion as a lubricant. Any brand will do.
2. Hold your swollen hand up, in an elevated position.
3. Start at your fingertips and rub the lotion down your hand to your forearm.
4. Use firm, even pressure during the massage.
5. DO NOT rub from the forearm up to the hand. This only encourages fluids to pool in the hand.
6. DO NOT massage over open wounds.
7. Edema massages should be performed for ten minutes, three times a day.

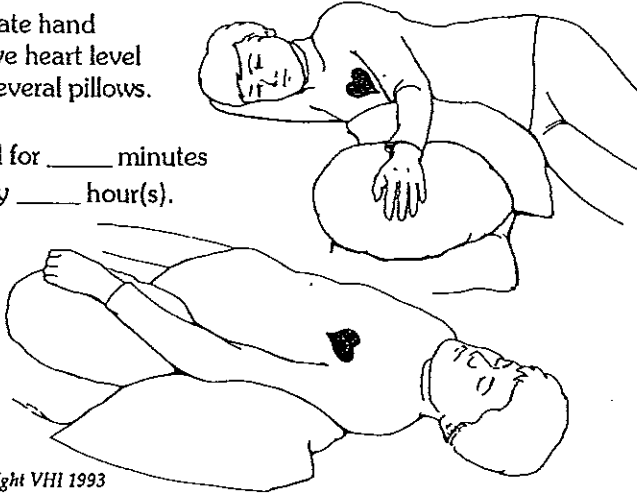


## HAND CARE - 2

Edema Reduction (Elevation - Prone)

Elevate hand above heart level on several pillows.

Hold for \_\_\_\_ minutes every \_\_\_\_ hour(s).



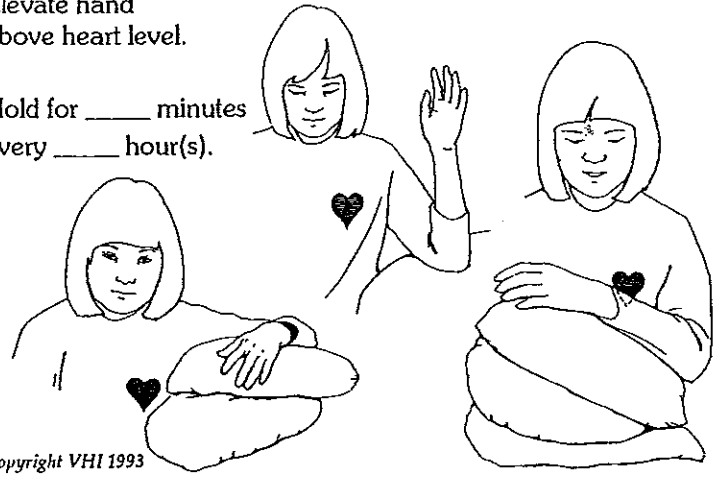
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## HAND CARE - 1

Edema Reduction (Elevation - Sitting)

Elevate hand above heart level.

Hold for \_\_\_\_ minutes every \_\_\_\_ hour(s).



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## HAND CARE - 4

Edema Reduction (Contrast Baths)

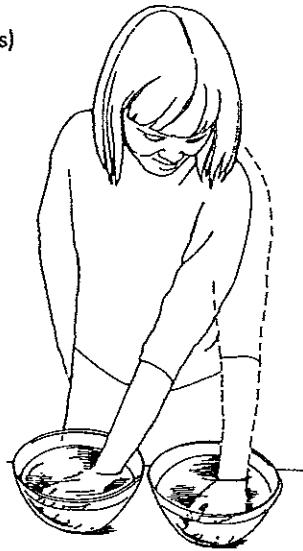
Have 2 containers deep enough for body part to be immersed.

Fill one with warm water and the other with slightly chilled water.

Soak in warm for 1 to 2 minutes, cold for ½ to 1 minute.

Alternate and continue for 10 minutes. End in warm water.

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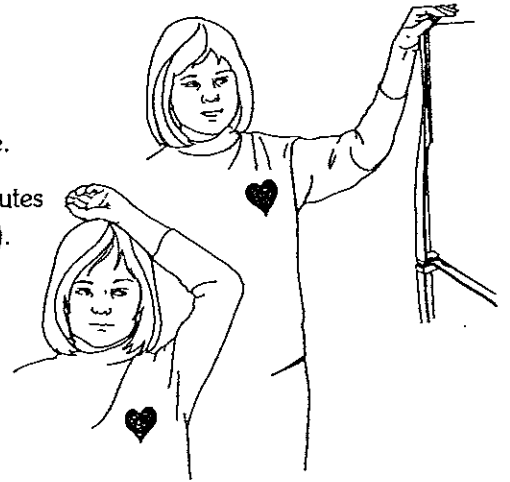


## HAND CARE - 3

Edema Reduction (Elevation - Standing)

Elevate hand above heart level by placing on top of head or furniture.

Hold for \_\_\_\_ minutes every \_\_\_\_ hour(s).



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## HAND CARE - 7

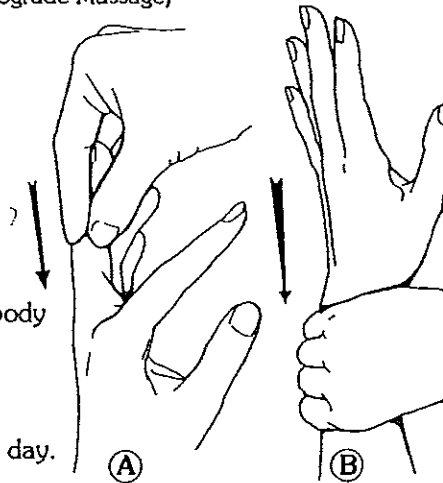
Edema Reduction (Retrograde Massage)

**A.** Enclose tip of finger with other hand and slide toward wrist.

**B.** For larger areas, massage toward the body in one direction only.

Repeat \_\_\_\_ times.

Do \_\_\_\_ sessions per day.



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## HAND CARE - 6

Edema Reduction (Pumping Exercises)

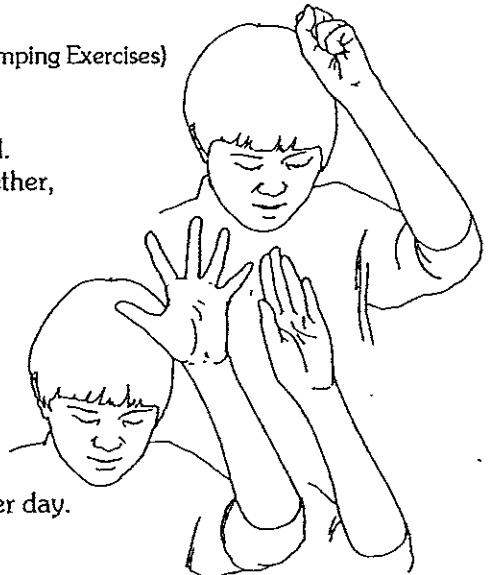
Hold hand overhead. Squeeze fingers together, making a fist.

Repeat \_\_\_\_ times.

Spread fingers apart then press together.

Repeat \_\_\_\_ times.

Do \_\_\_\_ sessions per day.



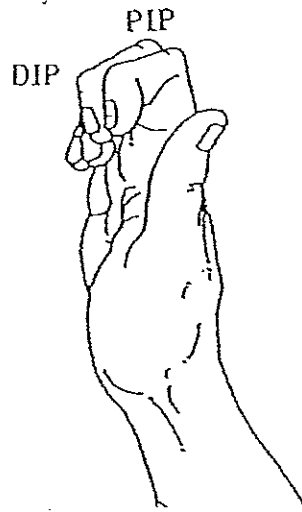
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## Tendon Gliding Exercises For Carpal Tunnel Syndrome

Repeat each exercise 10 times, 3 times per day



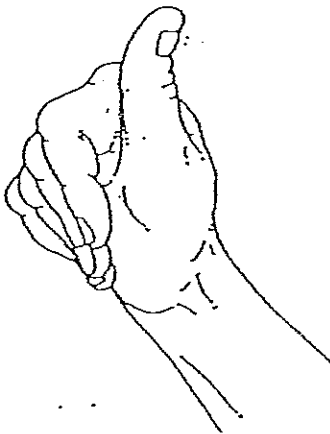
Starting position



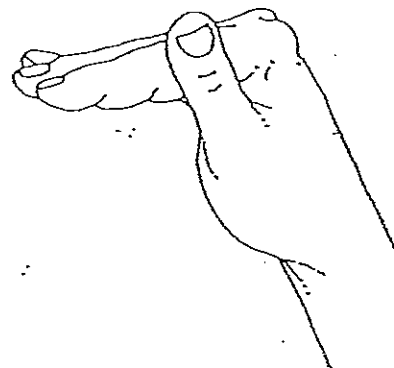
Hook fist



Full fist



Straight finger fist



Intrinsic plus position



## Fine Motor Coordination Activities

The following are suggestions for activities to perform at home to increase coordination:

1. Pick up small buttons or coins from a table.
2. Stack coins, dice, or cubes.
3. String beads.
4. Tie 12-inch lengths of string with as many knots as possible. Then untie.
5. Pick up pencil and roll it between fingers and thumb.
6. Turn pages of a book or magazine.
7. Peel potatoes or carrots with a peeler.
8. Cut food with a knife.
9. Dial the telephone.
10. Open and close a lock with a key.
11. Use scissors to cut out pictures from magazines.
12. Typing.
13. Play piano.
14. Screw and unscrew nuts and bolts.
15. Do your own buttoning and shoe tying.
16. Resume or begin hobbies such as knitting, crocheting, sewing, needle point, latch hook, weaving, mosaics, etc.
17. Play games such as checkers, chess, cards, and board games.
18. Play video games.
19. Do jigsaw puzzles.
20. Paint by numbers, doodle art, and trace designs.
21. Hook paper clips together.
22. Fasten safety pins to a towel or washcloth; then remove.
23. Attach Bobbie pins to a note card.
24. Flick small balls of paper or beads.
25. Write letters or make lists.
26. Squeeze/wring out washcloths.
27. Use tweezers to pick up rice.
28. Pick up popcorn kernels; use a tweezers also.

## DESENSITIZATION

Nerves traumatized by injury, amputation, and painful scar formation experience varying degrees of hyperesthesia (hypersensitivity) during recovery and reinnervation.

A light touch of the involved area may range from being mildly irritating to extremely painful.

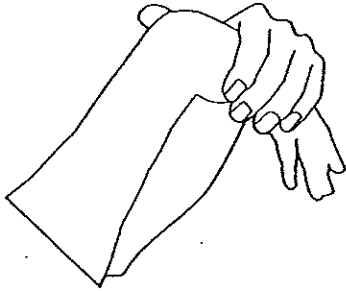
Treatment begins with exposure to a stimulus that is slightly irritating but tolerable. As tolerance increases, more noxious stimuli is introduced.

- 1) Modalities such as Fluidotherapy, contrast baths, heat
- 2) Light stroking, massage, tapping – progress in intensity as tolerated
- 3) Vibration
- 4) Textures: Brushing affected area in one direction beginning with tolerable material such as a cotton ball or facial tissue, progressing to rougher textures such as corduroy, burlap, velcro, sandpaper, etc.
- 5) Contact particles – moving hand through cotton, dry rice, popcorn kernels, macaroni, pebbles, plastic squares, metal washers, nuts & bolts
- 6) Functional activities – manipulating objects of various sizes, shapes, weights, and textures.

Dowel textures	Contact particles	Vibration
1. Moleskin	1. Cotton	1. Battery/no contact
2. Felt	2. Terry cloth pieces	2. Battery/near contact
3. Quickstick	3. Dry rice	3. Low cycle/near contact
4. Velvet	4. Unpopped popcorn	4. Low cycle/intermittent contact
5. Semirough cloth	5. Pinto beans	5. Low cycle contact
6. Velcro loops*	6. Macaroni	6. Low cycle continuous
7. Hard T-foam	7. Plastic wire insulation pieces	7. High cycle/intermittent
8. Burlap	8. Small pebbles	8. High cycle/intermittent
9. Rug back	9. Larger pebbles	9. High cycle/continuous
10. Velcro hook	10. Plastic squares	10. Vibration, not irritating

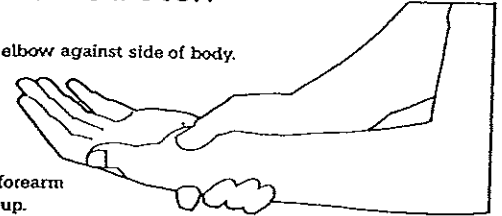
Treatment is \_\_\_\_\_ X's per day for \_\_\_\_\_ minute segments.

### Wrist Flexion Passive Stretch



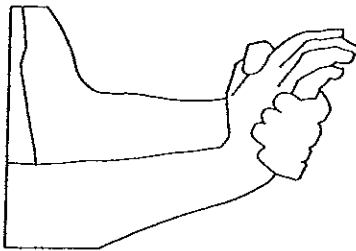
- Bend wrist forward.
- Stretch with other hand.
- Hold position and remove other hand.

### Forearm Supination/Pronation Passive Stretch

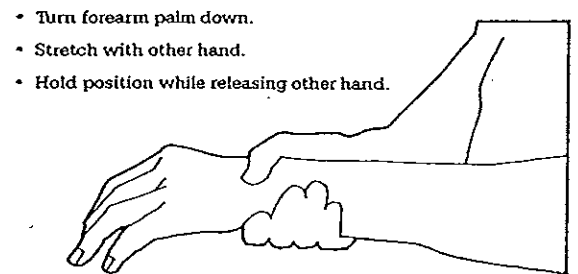


- Tuck elbow against side of body.
- Turn forearm palm up.
- Stretch with other hand. • Hold while releasing other hand.

### Wrist Extension Passive Stretch

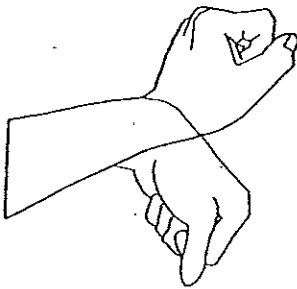


- Bend wrist back.
- Stretch with other hand.
- Hold position and remove other hand.



- Turn forearm palm down.
- Stretch with other hand.
- Hold position while releasing other hand.

### Active Wrist Flexion/ Extension



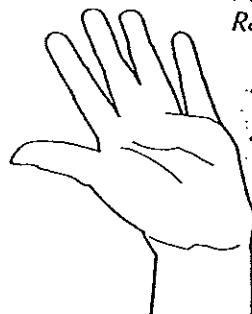
- With a loosely closed fist, bend wrist forward and backward.



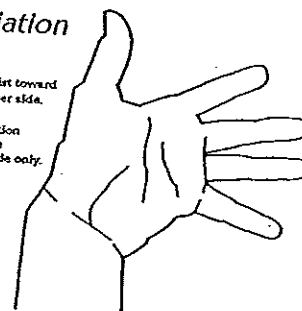
### Active Forearm Supination/ Pronation

- Tuck elbow against side of body.
- Turn forearm palm up.
- Turn forearm palm down.

### Active Wrist Radial and Ulnar Deviation



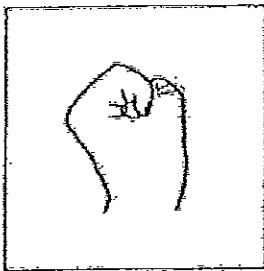
- Bend wrist toward thumb side.
- Wrist motion should be side to side only.



- Bend wrist toward little finger side.
- Wrist motion should be side to side only.

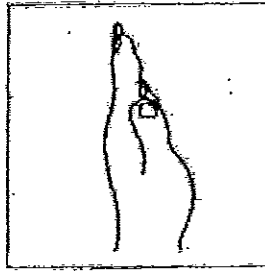
## Median Nerve Gliding Exercises For Carpal Tunnel Syndrome

Starting Position 1



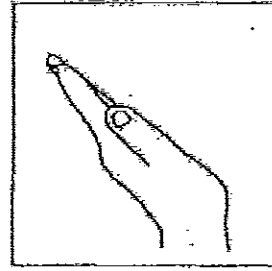
Wrist in neutral, fingers and thumb in flexion

Position 2



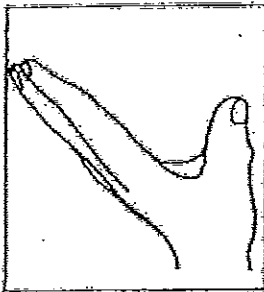
Wrist in neutral, fingers and thumb extended

Position 3



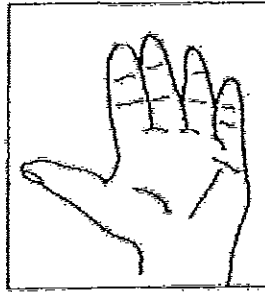
Thumb in neutral, wrist and fingers extended

Position 4



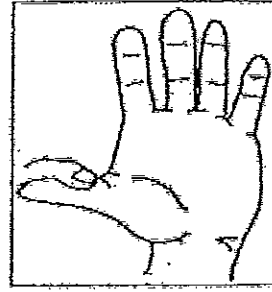
Wrist, fingers and thumb extended

Position 5



Same as in position 4, with forearm in supination (palm up)

Position 6



Same as position 5, other hand gently stretching thumb

Repeat the sequence of exercises 10 times, 3 times per day