

Hand Exercises for Scleroderma

These exercises are to help:

- Maintain function and Range of Motion (ROM)
- Prevent or slow down development of deformities and contractures (permanent tightening of the muscles, tendons, skin, and nearby tissues that causes the joints to shorten and become very stiff)

Helpful hints

- Prior to doing the exercises, use warm moist heat for 15–20 minutes to relax tight tissues (paraffin wax baths, microwaveable hot packs). You may also want to do some of the exercises during a warm shower or bath.
- AVOID heat that is too hot, as there is a risk of burning the skin
- If you cannot use warm water, try wearing warm mittens or gloves for 15 minutes prior to doing the exercises
- Massage (using lotion to soften skin) can also be done before exercises to warm up tissues

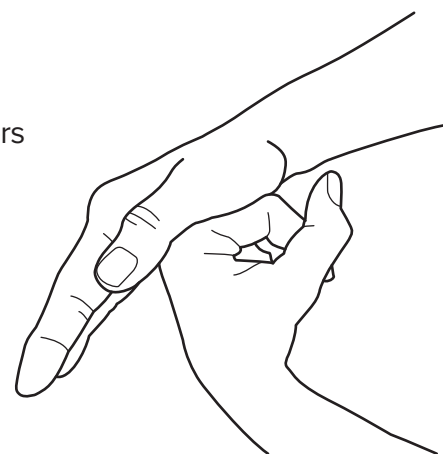
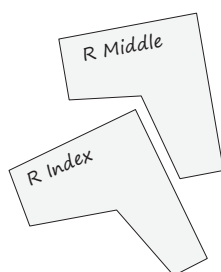
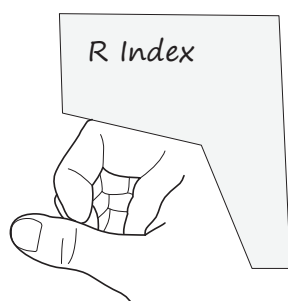
Instructions

- **Do each exercise 2-3 times per day**
- Stretch beyond the point where you feel some tightness/resistance and until you feel your muscle stretching
- **Once you feel your muscle relax, hold the stretch for 5–10 seconds (longer for larger joints) even if skin blanches or turns white**
- Breathe during each stretch
- **Repeat each stretch 5-10 times for a “set”**
- Alternate fingers/hands to allow blood to flow back into the finger between stretches
- If you have hand ulcers, there may be more pain while doing the exercises. You may have to reduce the number of repetitions. Stretching helps your finger joints stay mobile while your ulcer heals, so do not wait until the ulcer heals to start exercising.

Flexion (bending) of the knuckle (MCP)

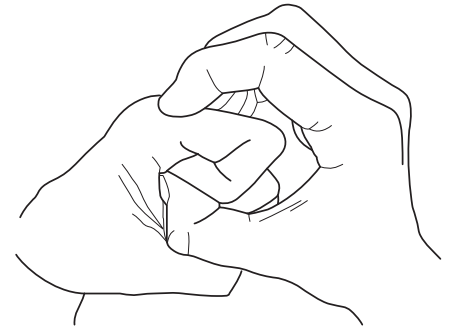
- Make a fist
- With the heel of the other hand, press down on the back of the fingers

Tip: Use index cards to measure and monitor ROM in MCP joints



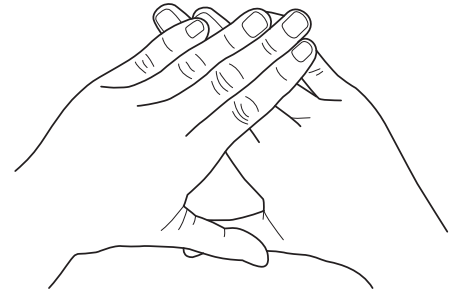
Flexion (bending) of the smaller finger joints

- Bend all the joints in one finger to touch the tip to the palm
- Gently push with the other hand to stretch
- Repeat with each finger



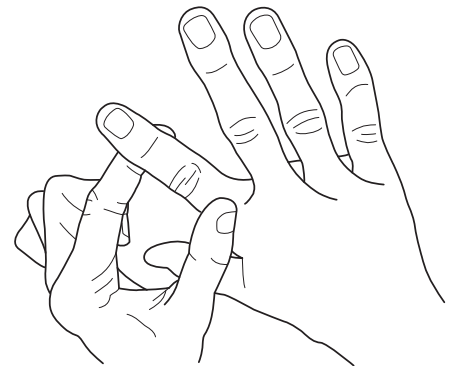
Extension (straightening) of the middle finger joints (PIPs)

- Place your hand flat on a hard surface like a table or on your own thigh
- Try to get the entire surface of all fingers and the palm to touch the table
- You can use the other hand to push down on the back of the fingers



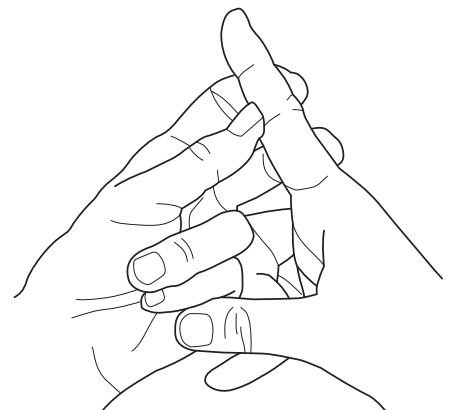
OR

- Place your hand on a table
- Use your thumb to press down on the back of the finger just past the knuckle
- Use one finger to lift up underneath, as shown in the picture.
- Try to straighten the middle joint
- The finger you are stretching may turn white
- Repeat the stretch with another finger, and keep repeating the stretches until you have stretched all fingers



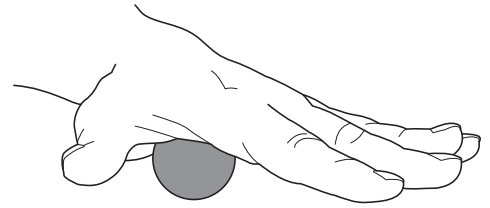
OR

- Another way to straighten your PIP joints
- Use three points of pressure (see picture)
- The first point of pressure is the pad of the index finger on the back of the finger just above the PIP joint
- The second point of pressure is the pad of the middle finger on the back of the finger below the PIP joint
- The third point of pressure is the thumb against the PIP joint
- Your thumb pushes against the joint, while your index and middle fingers apply counter-pressure to attempt to straighten the PIP joint
- Repeat the stretch for each finger



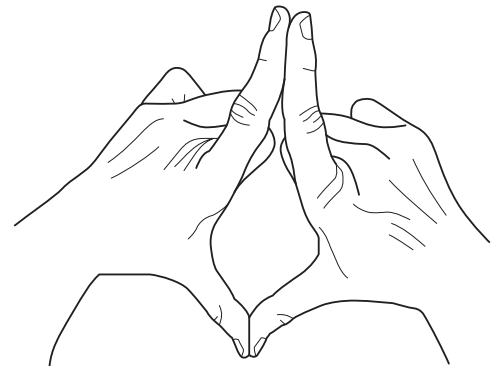
Stretching web space

- Use a small ball between your hand and a table to massage the muscle in the web space between the thumb and index finger
- Hold the pressure on areas that feel tight until the muscle releases (45–60 seconds)



Thumb extension

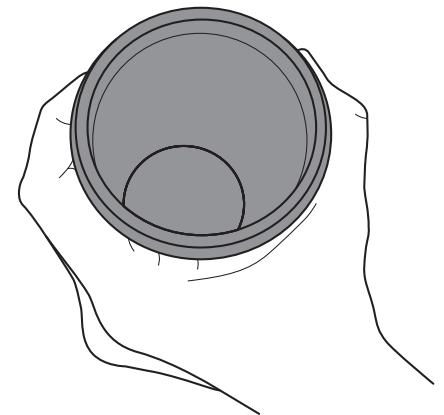
- Place the pads of your thumbs and index fingers of both hands together and push the thumbs away from the index fingers (this will also open the web space)



Thumb abduction (opening web space)

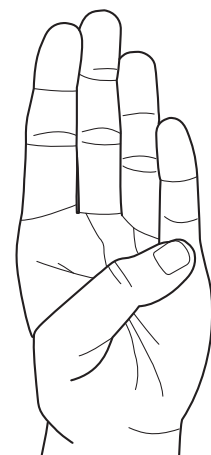
- Stretch the web space: Find a large, round object like a water bottle, tumbler, or soda can.
- Fit it snugly in the web space of your hand.
- If there is a gap, the object is too big. Try a smaller object.
- If you keep up these stretches, your webspace may become flexible enough to switch to a larger cup or bottle

Tip: Use a round tool to measure & monitor ROM



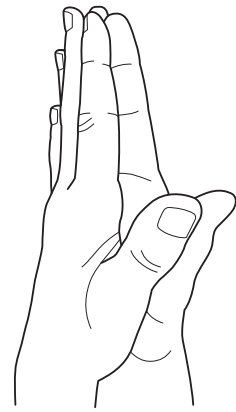
Thumb flexion (bending)

- Try to bend your thumb so the tip touches the bottom of your little finger
- If the tip of your thumb cannot reach that far, keeping up with this stretch may help you reach that goal in time

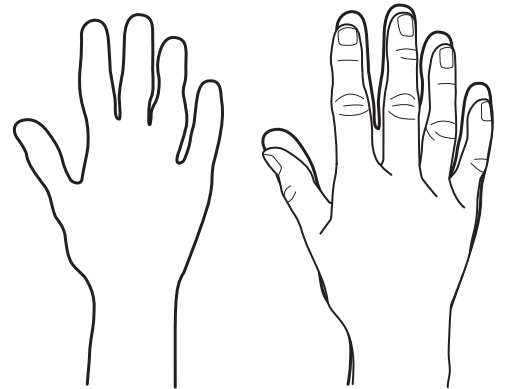


Hand extension (straightening)

- Place both hands and fingers flat against each other in a “prayer” position
- Try to place the insides (palm sides) of all fingers together, until they touch along the length of each finger
- If your fingers cannot straighten, or you do not feel a good stretch, try the other exercises where you stretch just one finger at a time.

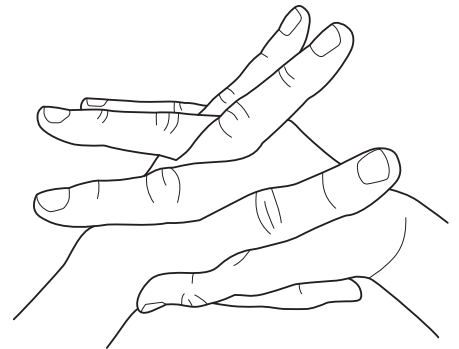


Tip: Trace your hand on a paper template to monitor and maintain your hand extension, abduction, flexion, etc.



The space between your fingers

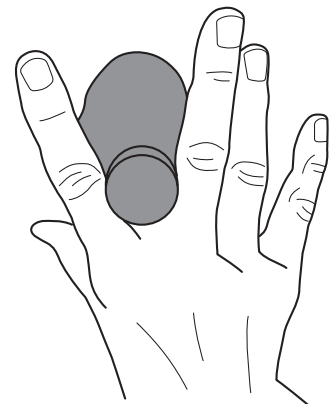
- Interlace your fingers
- Try to slide the fingers all the way down so that the web spaces are touching, like in the picture



OR

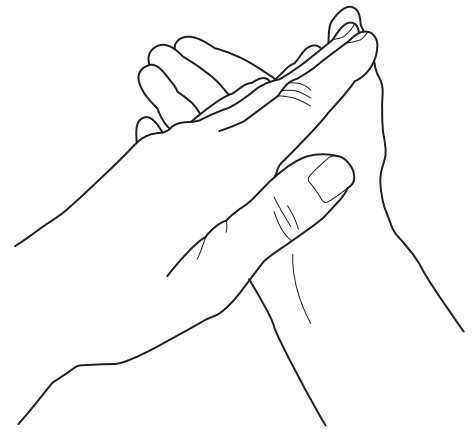
- Place the top of a water bottle or other object that will fit between your fingers
- Slide it down as far as the bottle will go
- Then, slide the bottle in between the next two fingers and repeat

Tip: If your fingers are very tender try using a softer object such as a foam spacer.



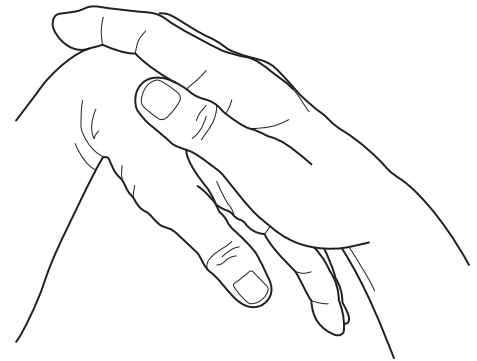
Wrist extension

- Turn one hand so your palm is facing up
- Then, extend your wrist so the fingers point down to the floor
- Take your other hand and try to push on the palm to get the wrist to extend more
- Then stretch your other wrist
- Repeat



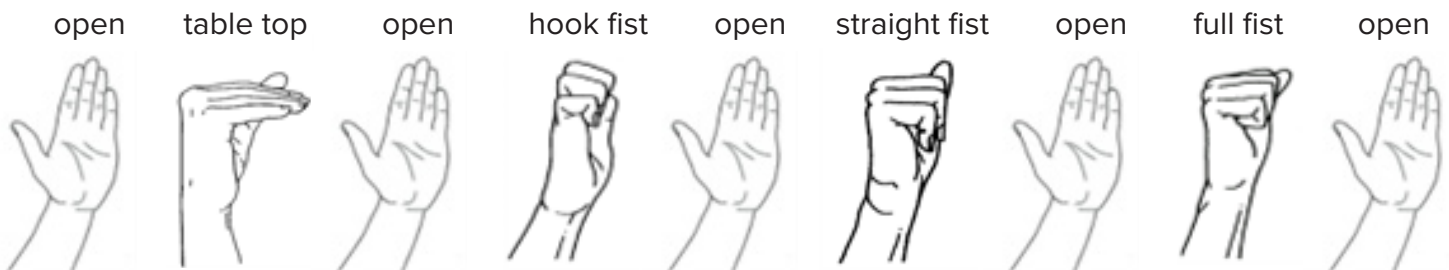
Wrist flexion

- Turn one hand so your palm is facing down
- Bend your wrist so your fingers point down to the floor
- Use the other hand to push, very gently, on the back of the hand.
- Then stretch your other wrist
- Repeat



Tendon glides

- Start with straight or open hand, then follow the sequence as shown below



Additional resources

- Exercise Handout - scleroderma.org/resources-center (PDF Stretching exercises for the hand and face)
- The SPIN-HAND Toolkit for Hand Function - tools.spinsclero.com
- Paraffin Wax Baths - vch.eduhealth.ca/en/permalink/phem4781



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