

Medical Report



National
Scleroderma
Foundation

Stretching Exercises for the Hand and Face - by Janet Poole, Ph.D., OTR./L

What are the benefits of stretching for people living with scleroderma?

- In scleroderma, your body's collagen, part of the connective tissue of your skin and tendons, builds up. This causes your skin to tighten. Skin can't stretch easily over joints, so it's difficult to move them.
- Over time, your joints may stiffen up. Your skin feels tight. You may not be able to form a fist, straighten your fingers, bend your knees and elbows, or open your mouth wide enough to floss or brush your teeth. When you go to the dentist, it's hard for your hygienist to clean your teeth or examine your gums.
- You may have worse stiffness in certain joints in your arms and hands, leading to joint contracture, or loss of motion.
- Your large knuckles (metacarpophalangeal phalangeal or MCP joints) can be hard to bend or flex. (See Figure 1.)
- Smaller joints, like the proximal interphalangeal or PIP joints in Figure 1, can be hard to fully straighten.
- If you try to wrap your hand around a cup or glass, you may find it hard to bend your thumb or flex your thumb away from your hand.

Stretching Can Help: Daily range-of-motion stretches can prevent or slow down the loss of motion in your joints. You can do these exercises on your own at home or work to keep your joints from getting stiffer.

First, talk with your doctor. They can refer you to an occupational therapist (OT) or

physical therapist (PT) who will show you how to properly do each stretch, give you a plan, monitor your progress, and answer any questions you have.

HELPFUL HINTS: STRETCHING/JOINT RANGE OF MOTION EXERCISES

- Get in the habit of doing stretching or range-of-motion exercises as early as possible, even before you notice reduced flexibility in your fingers.
- Warmth can relax tight tissues: paraffin wax baths for hands or feet (instructions at bottom of page), electric moist heating pad, microwaveable hot packs, warm showers or baths.
- Make sure you apply warm, moist heat for 15-20 minutes, but not hot! You could burn your skin.
- Do your range-of-motion exercises about two to three times each day.
- Stretch beyond the point where you feel some tightness and until you feel your muscle stretching.
- Once you feel your muscle relax, hold the stretch for about 5-10 seconds. You may feel

NAMES OF THE JOINTS IN THE FINGERS

Metacarpophalangeal joint (MCP)
Proximal interphalangeal joint (PIP)
Distal interphalangeal



Figure 1

your skin and muscle stretching. Hold it even if your skin turns white.

- Remember to breathe during each stretch!
- Repeat each stretch 5 to 10 times for a “set.”

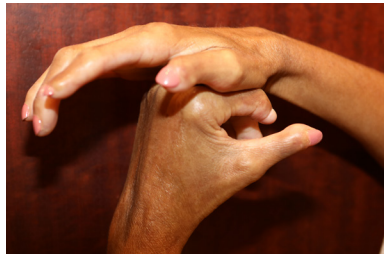
Stretching is helpful even if you have finger ulcers. Ulcers are very painful, so you may not be able to do as many repetitions. Stretching helps finger joints stay mobile while your ulcer heals.

Specific hand stretches:

Do each exercise 5 to 10 times, and hold to a count of 3 to 5 seconds.

EXERCISES FOR LARGE JOINTS ON YOUR FINGERS (MCP)

Exercise 1 helps you bend large knuckle joints farther. Make a fist emphasizing flexion (bending) of the MCP joints. Use the palm of the other



Exercise 1

hand to press down on the back of the fingers close to the joint, as shown in the picture.

EXERCISES FOR BENDING ALL FINGER JOINTS

Exercise 2 helps you bend and flex your middle and upper finger joints. Make a fist and try to touch the tips of all fingers to the palm of the hand.



Exercise 2

Use your other hand to push and try to bend the finger joints (see picture above).

EXERCISES TO STRAIGHTEN MIDDLE (PIP) FINGER JOINTS

If you can almost straighten the middle joints of your fingers, Exercises 3 and 4 are good choices for you.

Exercise 3. Push your hand flat on a hard surface, like a table. Try to place the entire surface of



Exercise 3

your fingers and palm on the table. Use one palm to push down on the backs of your fingers.

Exercise 4. 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 at the length of each finger.



Exercise 4

If your fingers cannot straighten, or if the middle joint of one finger is bent more than the others, try Exercises 5 and 6 instead to stretch just one finger at a time.

Exercise 5. Place your hand flat on the table. Use one thumb to press down on the back of the middle joint of one finger. Use your index finger to lift up underneath



Exercise 5

the tip of the finger, as shown in the picture, to try to straighten the middle joint. The finger you're stretching may turn white. If this happens, repeat the stretch with another finger, and keep repeating the stretches until you have stretched all fingers. Then, start again with the first finger and keep repeating until you have done about 3 to 5 stretches with each finger.

Exercise 6. Here's another way to stretch your PIP joints. Use three points of pressure (see picture). The first point of pressure is the pad (inside or palm side) of the index finger just above



Exercise 6

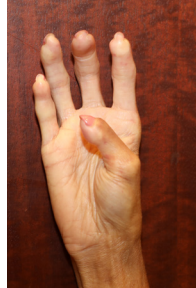
the joint. The second point of pressure is the pad of the third finger, on the palm side of the contracted finger below the PIP joint. The third point of pressure is the thumb against the back of the contracted PIP joint. Your thumb pushes against the joint, while your index and middle fingers apply counter-pressure to attempt to

straighten your joint. Repeat until you have done 3 to 5 stretches per finger.

THUMB EXERCISES

In some people, the space between the thumb and index finger, or webspace, becomes tight. This makes it hard to grasp a glass or other large objects. Try Exercises 7 and 8 to stretch your webspace and make it more flexible. Do each exercise 5 to 10 times.

Exercise 7. Try to bend your thumb so the tip touches the bottom of your little finger. Hold for 3 to 5 seconds. If the tip of your thumb cannot reach that far, keeping up with this stretch may help you reach that goal in time.



Exercise 7

Exercise 8. Place the pads of the thumb and index fingers of both hands together and push the thumbs away from your index fingers. Hold for 3 to 5 seconds.



Exercise 8

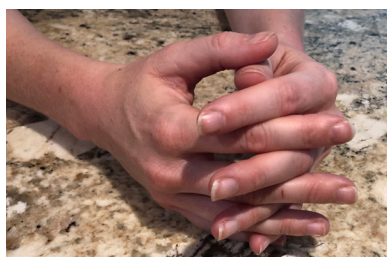
Exercise 9. Here's another way to stretch the webspace: Find a large, round object like a water bottle, tumbler, or soda can. Fit it snugly in the webspace of your hand. If there is a gap, the object is too big. Try a smaller object. Hold for 3 to 5 seconds, and do each stretch 5 to 10 times. If you keep up these stretches, your webspace may become flexible enough to switch to a larger cup or bottle.



Exercise 9

EXERCISES TO STRETCH THE SPACE BETWEEN YOUR FINGERS

You also have webspaces between your fingers, and these can tighten in people living with scleroderma. Exercises 10 and 11 can stretch these



Exercise 10

spaces to make it easier to use a computer keyboard, play the piano, or put on gloves.

Exercise 10. Interlace your fingers. Try to slide the fingers all the way down so that the webspaces are touching, like in the picture. Hold for 3 to 5 seconds.

Exercise 11. Place the top of a water bottle between two of your fingers. Slide it down as far as the bottle will go. Hold for 5 to 10 seconds. Then, slide the bottle in between the next two fingers and repeat.



Exercise 11

WRIST EXERCISES

Exercise 12 can help you straighten your wrist. Turn one hand so your palm is facing up. Then, straighten 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 straighten more. Hold for 3 to 5 seconds. Repeat. Then stretch your other wrist.



Exercise 12

Exercise 13 increases the motion to bend your wrist. Turn one hand so the 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 for 3 to 5 seconds. Don't force it, or push hard or for very long. Repeat with the other wrist.



Exercise 13

FACE & MOUTH EXERCISES

Scleroderma's skin tightening can decrease your ability to open your mouth. Stretching can help you improve flexibility for facial expressions and oral care.

Exercises 14-17 stretch the skin on your face. They look like exaggerated facial movements. Do these exercises in the shower, so warm water relaxes your skin. Hold each stretch for 3 to 5 seconds, and do each one 5 to 10 times.

Exercise 14. Pucker up your lips like you're kissing or blowing out a candle. Hold the pucker. Count to 5, then relax and repeat.

Exercise 15. Puff out your cheeks with air and hold. Count to 5, relax and repeat.

Exercise 16. Smile! Give yourself a cheesy smile in the mirror. Show off all your teeth. Hold and count to 5, relax and repeat.

Exercise 17. Open your mouth as wide as you can and hold. Count to 5, relax and repeat.

Exercise 18. You can also use your fingers to manually stretch your mouth. Place your right thumb in the corner of the left side of your mouth, and your left thumb in the other corner of your mouth. Stretch your mouth with your the thumbs. Hold for 5 seconds, relax and repeat.

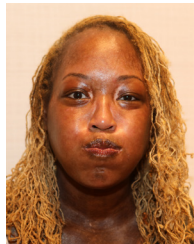
Exercise 19. Oral augmentation exercises use tongue depressors. Insert the depressors between the teeth from the left premolar area to the right molar region. Hold for several seconds. You can add more tongue depressors as your range of motion increases.

INSTRUCTIONS FOR PARAFFIN WAX

Paraffin wax baths provide warm, moist, soothing heat to stiff joints. Paraffin units can be purchased from pharmacies, discount stores, beauty supply stores, or online retailers.



Exercise 14



Exercise 15



Exercise 16



Exercise 17



Exercise 18



Exercise 19

What you'll need:

- Paraffin wax unit
- Plastic wrap or bags
- Soft, terrycloth towels

Preparation:

- After you have followed the manufacturer's instructions to melt the paraffin, insert the thermometer; the temperature should read 125/126 degrees F.
- If it is too hot, turn temperature down to LOW and test again with thermometer.
- When temperature is 125-126 degree F, you're ready.

Treatment:

- Roll up shirt sleeves, remove all jewelry, wash & dry hands.
- Spread your fingers apart, and slowly put your hands in the wax.
- DO NOT TOUCH THE SIDES OR BOTTOM OF THE PARAFFIN UNIT.
- Gently remove your hand.
- Count to 5, and then dip hand back in the wax. Repeat 5 times.
- After you remove your hands, cover them with plastic bags, then wrap in a towel.
- Wait 20 minutes.
- Remove towels.
- Remove plastic bags and toss them out.
- Peel the paraffin wax from your hands. You can return used paraffin to the unit so it melts for future uses.
- TURN OFF UNIT.
- Do hand exercises while your hands are still warm.

NOTE: DO NOT use paraffin if you have open wounds or cuts on your hands. If you forget, call your health professional. Change the wax in the unit when it starts to look dirty or no longer white. Dump old wax, clean the unit, and put in new wax.

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