Physiotherapy and Scleroderma

Physiotherapy is a healthcare profession concerned with human function and movement, and maximising potential. Your physiotherapist should be able to advise you on a home exercise programme to keep you as active and mobile as possible; they will also discuss what kind of exercise could suit you best and will give you tips on how best to deal with the problems you may encounter from your scleroderma.

Why Exercise?
Exercise has many beneficial effects and these apply as much to you as to someone without scleroderma. Some of the benefits are that it:

- Increases muscle strength and general fitness
- Increases or maintains flexibility and balance
- Increases sense of general well being
- Protects thinning of the bones
- Aids digestion and sleep
- Helps control weight and overcome fatigue
- Gives a sense of personal control

In other words, exercise makes you feel fitter, healthier and can lift your mood. It can increase your independence and improve your social life. It can also help to improve function and your ability to cope with everyday tasks and situations.

What Types of Exercise Should I Do?
Everyone should have a fitness programme that includes at least flexibility, strength and general conditioning or aerobic components. These exercises could well include things you do at home such as stair climbing, walking, cooking and other household jobs. If you are in any doubt how much exercise is appropriate for you, it is important to check with your doctor.
Flexibility/Stretches

One of the characteristic features of scleroderma is skin tightening and consequent decreased movement or stiffness at joints. With this skin tightening there is also some tightening of underlying muscles. Stretches will not prevent skin tightening, but they will loosen off any tightened tissues under the skin. Getting into a routine of daily stretches will allow you to minimise the effects of the scleroderma on your movements. Many patients also say that they find their stretches aid in pain relief. These exercises are provided as a guide only. Always seek medical advice before commencing an exercise programme. For more specific exercises designed towards your personal goals please ask your doctor or nurse specialist to refer you to a physiotherapist.

Stretches should be held for at least ten seconds and performed three times daily to show benefit – following physiotherapy assessment you will be advised which of the following exercises are most important for you.

Hips, Knees and Ankles

**Inner thigh stretch**
Stand with your legs apart, feet facing forwards. Lean across to one side by bending that knee – keep the other knee straight – until you feel a firm but comfortable stretch in your inner thigh/groin.

**Standing hamstring stretch**
Stand with one leg in front of you. Keep this leg straight. Bend the back knee and place you hands above the straight knee for support. Keep your back straight and bend forwards at the hip until a firm but comfortable stretch is felt at the back of thigh and knee.

**Calf stretch**
Stand facing a wall; put one leg out behind you, keeping your knee straight and heel flat on the floor. Lean forwards until you can feel a firm but comfortable stretch in your calf.

**Quadriceps stretch**
In standing, bend your knee behind you. If you can, grasp your ankle with your hand and pull your foot towards your bottom until you can feel a firm but comfortable stretch at the front of your thigh. If you cannot grasp your ankle, or you feel unsteady on your feet then put a chair behind you, put the leg on the chair with the knee bent as far as possible and then lean back onto the chair to feel the stretch.

Shoulders, Elbows and Wrists

**Elbow stretches**
Bend and straighten your elbows; to get an extra stretch, use your other hand to push further to the extreme of the stretch.

**Shoulder abduction stretch**
Standing up, hold a stick (e.g. rolling pin, walking stick, golf club, umbrella) in both hands with the palms facing upwards. Push one arm up to your side until you feel the stretch. Repeat for the other side. If it’s easier, this stretch can be performed while sitting.

**Wrist extension stretch**
Place palms together and then lower them down the chest, keeping the base of the palms as close together as possible until you feel a firm but comfortable stretch at the inside of the wrists.

**Wrist flexion stretch**
Place backs of hands together and then lower them down the chest, keeping the base of the backs of the hands as close together as possible until you feel a firm but comfortable stretch at the outside of the wrists.
Neck and Back

Mid-back twists
Whilst sitting on a chair, twist to one side to feel a stretch in the mid-back.

Hand behind back stretch
Place your hands behind you, holding onto a stick, pull the stick up with the upper hand to bring the lower arm up into its stretch. Your palm should be facing outwards. Repeat for the other side. If it is easier this stretch can be performed in sitting and a towel could be used instead of the stick.

Neck extension
Whilst sitting, gently stretch your neck by looking upwards (if you get any dizziness then cease this exercise immediately). You should feel a firm but comfortable stretch at the front of the neck, particularly if you have tight skin in this area.

Neck side flexions
Tilt the head so that the ear gets nearer to shoulder, and be sure not to be looking backwards for this stretch. You should feel a firm but comfortable stretch at the opposite side of the neck, running down towards the shoulder.

Low back rolling
Whilst lying on your back on the bed with your knees bent up, gently roll your knees from side to side.

Neck rotation
Whilst sitting, look over the shoulder, turning the head to the side without looking up or down. You should feel a firm but comfortable stretch on the opposite side of the neck to which you are looking.

Neck retractions
Whilst looking straight ahead, pull the head backwards feeling a firm but comfortable stretch at the base of the neck.

Face
Most people find these exercises easier to do when facing a mirror. You’ll stretch more effectively if you perform these with the skin warmed up, for instance after a hot shower or bath. Or you could massage the face with a warm flannel prior to stretching. Again stretches should be held for at least ten seconds and performed three times daily to show benefit.

- Lift the eyebrows and then lower them;
- Squeeze your eyes closed tightly. Wink tightly with either eye;
- Frown your forehead to wrinkle the bridge of your nose, raise your upper lip to increase the stretch;
- Flare your nostrils. Close your lips hard;
- Cover your teeth with your lips, and then open your mouth as wide as you can;
- Bare your teeth and open the mouth as far as you can. Push the jaw forward to produce an under-bite;
- Grin as widely as you can, without showing the teeth.

Finger Exercises
Please refer to our leaflet The Fingers in Systemic Sclerosis for examples of useful finger exercises.
MUSCLE STRENGTHENING
The effects of scleroderma may affect your posture and range of movement; both of these problems will have a knock-on effect on your muscle strength. You may have problems with your diet, and so not be getting enough nutrition to keep your muscles strong. Or you may well be less active than previously.

You can maintain your muscle strength by keeping as active as possible, within the limitations of your scleroderma. You may need to perform some specific exercises to keep specific muscles strong or to re-strengthen muscles that have become weak. Your physiotherapist will be able to assess you and decide if any of your muscles need these specific treatments. Generally these muscle strengthening exercises can be performed at home with little or no equipment. If you are a gym member then your instructor may well also be able to provide appropriate muscle strengthening exercises for you to perform at your gym.

GENERAL CONDITIONING / AEROBIC EXERCISE
It is important to try and do some gentle cardiovascular or aerobic exercise regularly. Well recognised advice states that you should aim to do 20-30 minutes, 4-5 times a week. How much you can manage and what is an appropriate exercise may vary depending on the activity of your scleroderma. Examples of cardiovascular exercise include: dog walking, swimming, aqua aerobics, going up and down stairs, gardening, cycling, aerobics classes and keep-fit classes. For a list of local community led exercise options please ask your health care professional or see the Change4Life website.