

## General Principles of Stretching

To be effective, stretching must be done **slowly, gently and frequently**.

**Slowly** means that while the exercise is being done the muscle being stretched must be moved slowly so that you can easily be aware of the tension in the muscle even when it is quite light.

**Gently** means that, when stretching, the tension in the muscle is mild enough that if the position is held for 20 – 30 seconds the tightness should disappear. If it hasn't, then the amount of tension is too much so you need to relax the muscle then repeat the exercise using less tension.

**Frequently** means that to be effective the stretching should be done several times per day. When you are trying to improve flexibility in a muscle you should do the exercise in sets of 10 and do at least four sets in the course of the day. It is more effective to do these exercises several times per day rather than doing all four sets at once. Once you have achieved the flexibility you require, doing the exercises once or twice per day will be sufficient to maintain the flexibility.



## Lumbar Paravertebrals



1. Lie on your back with your knees bent.
2. Raise your right leg and hold it with your right hand below the knee then repeat with the left leg holding with the left hand.
3. Clasp your hands together around the knees and, by pulling with your hands, gently bring your knees closer to your chest.
4. When you feel light tension in the muscles in your back hold the position for about 20 seconds.

If you have difficulty doing this exercise using both legs together it may be done with the legs individually but make sure the leg is kept over your abdomen during the stretch and not allowed to go to the side.

## Quadratus Lumborum

Two methods of stretching this muscle will be described. In both instances the description will be for the right quadratus lumborum muscle.



### Method 1

1. Lie on your back with knees bent.
2. Cross your right leg over your left so that the outside of your right ankle rests along the outside of your left thigh.
3. Place your left hand on your right knee.
4. Keeping your shoulder blades on the floor use your left hand to move your tight knee to the left. This will cause your lower back to twist but still keep your upper back and shoulder blades on the floor.

## Quadratus Lumborum Method 2



1. Sit on a chair with your right ankle resting on your left thigh. Place your right hand lightly on your right knee.
2. Maintaining the light pressure on your knee lean your upper body to the left.
3. Holding the above position, slowly twist your upper body to the right as though you were trying to look behind your right shoulder.
4. When you feel the tension, hold the position for 20 seconds.

## Gluteal Muscles

This method can be used to stretch most of the muscles in the gluteal area including tensor fascia lata, piriformis and the smaller lateral rotators. The technique will be described for stretching of the right gluteal area.



1. Sit upright on a chair
2. Place your right ankle on your left thigh. Place your right hand lightly on your right knee. This pressure should be light, you are not trying to push the knee down but just to stop it rising during the rest of the exercise.
3. Keeping your back slightly arched so that your movement comes from the hip and not from the back, lean gently forward and to the left side.
4. When you feel light tension in the desired area hold the position until the tension has left.

With the above exercise the degree of leaning forward and to the side will vary depending on which muscle is affected. To find the correct position you may have to experiment a little with these movement components.

## Iliotibial band



1. Sit upright on a chair.
2. Cross your legs so that your right knee is resting over the left.
3. Place your right hand gently on your right knee.
4. Keeping the right knee where it is, use your left hand to raise your right foot to the point, if possible, where your right lower leg is parallel to the floor.
5. Making sure to keep your back slightly arched, gently lean forward by bending at the hip. Stop when you feel slight pressure along the outer thigh.

## Hip flexors



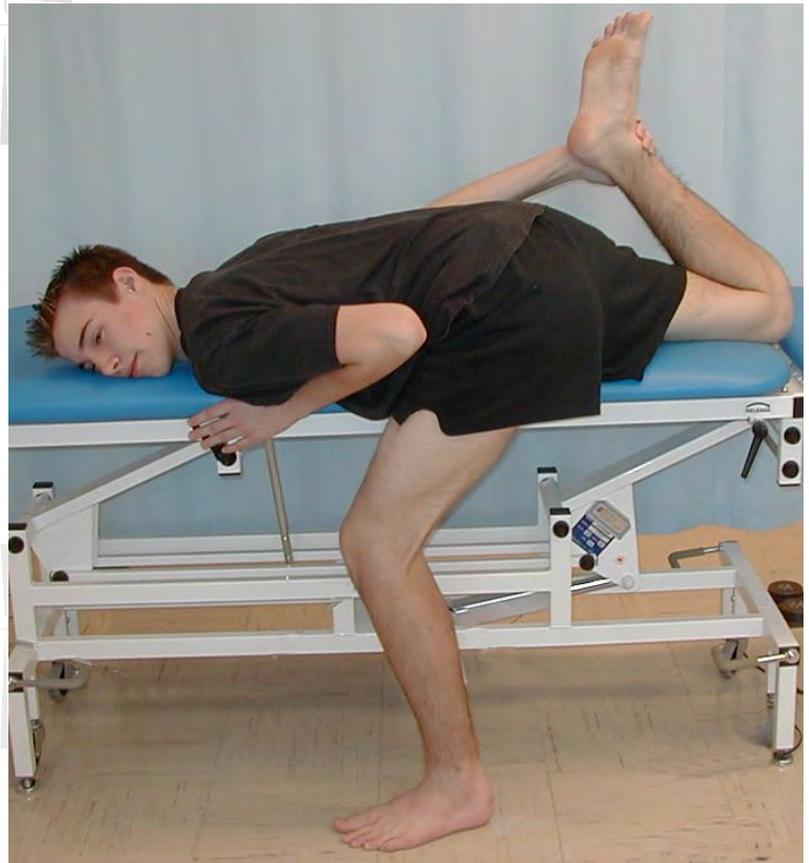
1. Go down on one knee with the right knee on the floor. The left foot is placed flat on the floor so that the left knee is at a right angle.
2. Flatten your low back by gently contracting your lower abdominal muscles. This flattening of the low back must be maintained throughout the stretch.
3. Keeping your body erect and your right knee in place, move forward so that your weight is shifted over your left foot. You may find that you need to place your left foot farther forward especially as your flexibility improves

## Quadriceps.

Two methods will be described for stretching the quadriceps. The first method has the advantage of being more efficient but the disadvantage of having to have the right support which means that it is not easily performed anywhere and at any time. The second method can be efficient but it requires proper concentration to ensure that no cheating movements are employed. It has the advantage of being easily performed at any time of day in any situation.

### Method 1

1. Lie face down on the edge of your bed with the left foot on the floor and the right thigh and leg flat on the bed.
2. Flatten your low back by gently tightening your abdominal muscles. It is important to maintain this flattening throughout the stretch.
3. Bend your right knee so that you can grasp your right foot or ankle behind you with your right hand.
4. Relax your leg but maintain the flattening of your back and use your right hand to bring your foot slowly towards your right buttock. Stop and hold when you feel a light stretch at the front of your thigh.



If you are unable to bend your knee enough so that you can reach your foot comfortably you may tie a belt around your right ankle and pull on the other end of it by reaching over your shoulder.

## Quadriceps

### Method 2



1. Stand with your right knee bent so that your right heel rests against your right buttock.
2. Flatten your low back by gently tightening your lower abdominal muscles. This flattening must be maintained throughout the stretch.
3. Keeping yourself erect pull your right foot backwards so that your right thigh moves back until you feel the pulling on the front of your right thigh. It is important to keep both thighs touching, avoiding the tendency to let the right thigh move to the right.

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## Adductors



1. Stand with feet slightly more than shoulder width apart and toes pointing forwards.
2. Flatten your low back by gently tightening your lower abdominal muscles. This flattening must be maintained throughout the stretch.
3. Shift your body weight to the left allowing your left knee to bend. Stop when you feel light tension on your inner thigh.

## Hamstrings



There are many different ways of stretching hamstring muscles most of which are quite effective. The following method is described because of its ease of use in any circumstances.

1. Stand with a chair directly in front of you.
2. Place your right heel on the chair with the toes pointing towards the ceiling.
3. Keeping your back slightly arched and your right knee straight, slowly lean forwards until you feel light tension at the back of your thigh.
4. Once the tension has relaxed repeat the stretch with the right knee slightly bent. This time you will feel the tension higher up in the thigh.
5. Repeat steps 3 and 4 ten times.



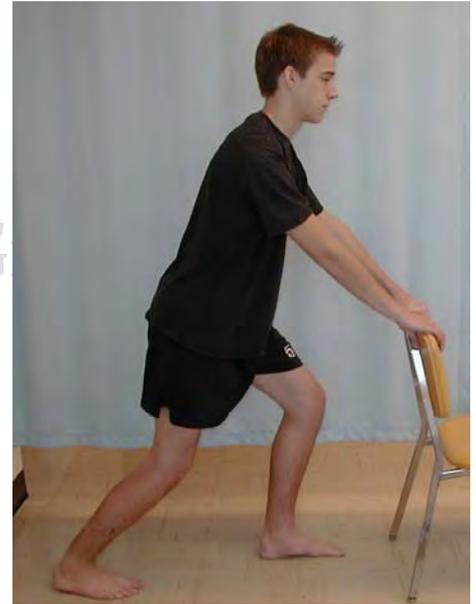
## Calf Muscles



To improve the effectiveness of this exercise it is best to have the body weight supported by the arms by leaning on a countertop, desk or a wall.

1. Allow the left knee to bend and move the right foot backwards. Place the right foot flat on the floor with the toes pointing straight forward.
2. Keep your body erect and your right heel and foot on the floor, and

allow the left knee to bend more so that more of your weight is on the left rather than the right side. Stop when you feel a gentle tightness in the right calf.



3. When the tension has eased repeat step 2 but with the right knee being allowed to bend a little. This time you will feel the tension lower down in the muscle.
4. Repeat steps 2 and 3 ten times.

## Neck extensors



1. Sit in an upright posture on a chair.
2. Tuck your chin in slightly by elongating your neck.
3. Slowly bring your chin towards the upper part of your chest until you feel the tightness beginning in the muscles at the back of your neck. As you are bringing your chin towards your chest you may find it easier to guide the movement by using light pressure with your hand on top of your head. Remember not to push hard.

### Lateral neck muscles



1. Sit in an upright posture on a chair.
2. Tuck your chin in slightly by elongating your neck.
3. Place your left hand on your right shoulder, keep looking straight ahead and slowly move your left ear towards your left shoulder until you feel tension on the right side of your neck. The placement of your left hand on your shoulder is to ensure that your shoulder does not rise while you are doing the exercise.

## Neck rotation



1. Sit in an upright posture on a chair
2. Tuck your chin in slightly by elongating your neck.
3. Slowly turn your head so that you are looking over your right shoulder. Stop when you feel the tightness beginning. Repeat the exercise to the left side.

### Trapezius and supraspinatus



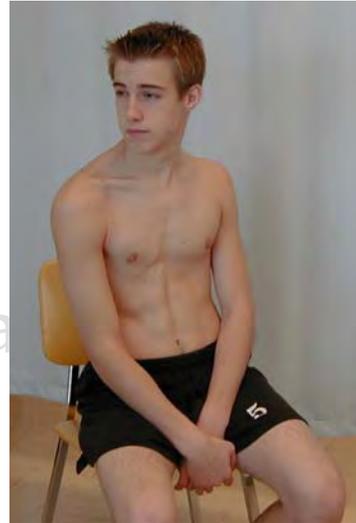
1. Sit in an upright posture on a chair.
2. Tuck your chin in slightly by elongating your neck.
3. Bring your right arm behind your back so that your forearm is resting in the small of your back.
4. Keep looking straight ahead and slowly move your left ear towards your left shoulder until you feel slight tension on the right side of your neck and shoulder.

## Rhomboids



1. Sit in an upright posture on a chair.
2. Tuck your chin in slightly by elongating your neck.
3. Bring your right arm across so that the elbow is in front of your sternum (breast bone) and your forearm is pointing straight up. Support your elbow with your left hand.
4. Keep your elbow where it is and allow your forearm to rotate outwards so that your right hand is in front of your right shoulder.
5. Use your left hand to move your elbow slowly towards the left until you feel the tightness beginning between your shoulder blades. Remember to keep your forearm rotated outwards while you are performing the movement.

### Mobility and stretching in the Upper thoracic area



1. Sit in an upright posture on a chair.
2. Tuck your chin in slightly by elongating your neck.
3. Slowly turn your head to the right as far as you can comfortably. Once you have done this focus on a point in the room and keep looking at it. This is to make sure that during the next phase of the exercise your head will not move.
4. Keeping your head in the above position now slowly twist your body so that your shoulders rotate to the left until you begin to feel some pulling along your spine.
5. Repeat the exercise, this time rotating your head to the left and your shoulders to the right.

## Pectoral Muscles

Two methods will be described for stretching these muscles. The first method is very easy and efficient but it requires that you are somewhere where you can lie down to do it. The second method can be done anywhere and at any time during the day.



### Method 1

1. Lie on the floor with your knees bent and your head supported on a small pillow.
2. Before lying down take a small towel folded several times lengthwise, when you lie down the towel will be placed along your spine.
3. You may notice at first that your shoulders are not resting flat on the floor. As you relax some of the tightness in the muscles will release and the shoulders will move closer to the ground. This exercise requires no further effort than just lying in this position for about ten minutes.

### Method 2

1. Stand in a doorway so that the front of your right shoulder is placed against the doorjamb. Your right arm should be hanging by your side.
2. Move forward until you begin to feel the tightness begin in the muscles on the right side of your chest.



## Triceps



1. Sit in an upright posture on a chair.
2. Tuck your chin in slightly by elongating your neck.
3. Place the palm of your right hand on your right shoulder so that your upper arm is pointing straight ahead.
4. Slide your hand down towards your right shoulder blade so that the elbow moves upwards. You may want to guide this movement by using your left hand to help the elbow move. Stop when you begin to feel the tightness on the back of your arm or shoulder.