

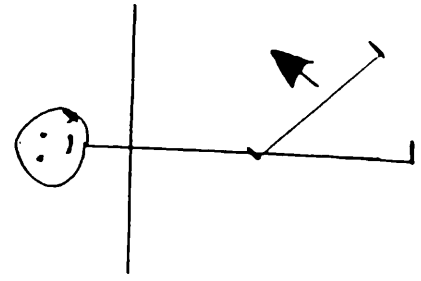
## **PLEASE NOTE**

The content of this exercise booklet is provided for information purposes only and is not meant to replace a physiotherapy or medical consultation.

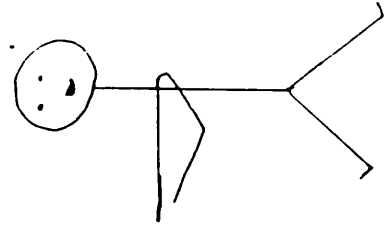
These physiotherapy exercises are intended to be used under professional supervision only and are undertaken entirely at your own risk.

✓ MAT EXERCISES

1. Lying flat on your back, and keeping your shoulders touching the floor, take your right leg across to touch your left hand. Keep your leg straight.  
This exercise encourages rotation at the lumbar and thoracic spine.  
Repeat with left leg.

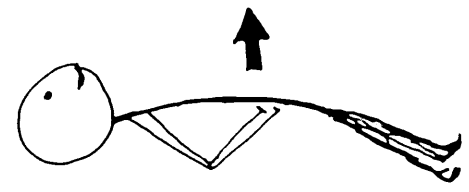


✓ 2. With legs apart and straight, reach across with the left hand to touch the elbow or wrist of the right arm. Stretch as much as possible, making sure that your hips stay in contact with the floor. This exercise encourages rotation mainly at the upper thoracic spine.  
Repeat with right hand.

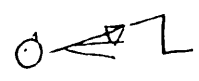


✓ EXTENSION EXERCISES

3. Dig heels and shoulders into the floor and lift your hips and back up.



Bridging



\*

Hug alternate knees to chest.



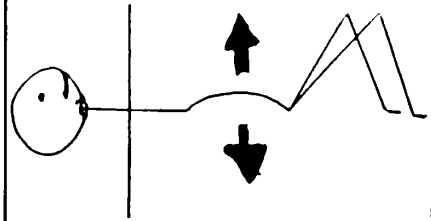
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1 supine side flexion reaching to knee

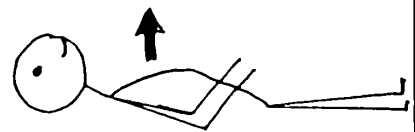


EXTENSION EXERCISES (CONTINUED)

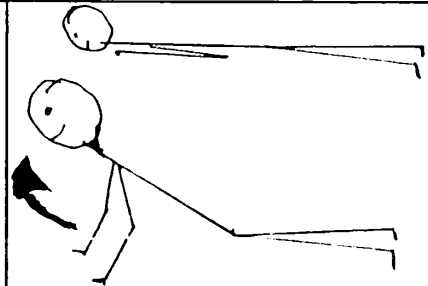
4. Flatten the small of your back, then arch away. Keep knees bent.



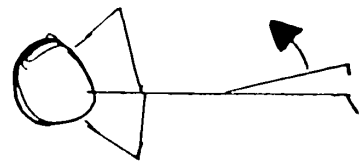
5. Push hips, elbows and head into the floor to raise your shoulder blades off.



6. Lying on your front, push up with your arms, making sure that hips always stay in contact with the floor.



7. Still lying on your front, lift alternate legs up as high as you can. Keep legs straight and hips on floor.



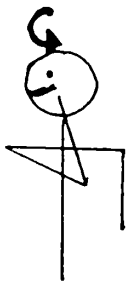
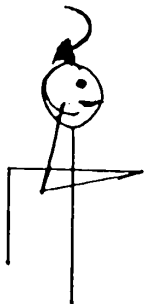
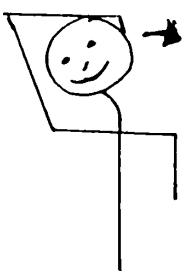
8. Still lying on your front, now lift one arm off the floor, again as high as possible. Make sure you keep sight of your hand - this increases extension at the neck. Repeat with other arm.



✓ The next set of exercises all use the hold/relax technique of increasing range of movement - as demonstrated during the A.S. classes:-

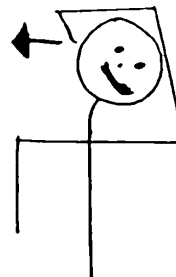
- A) Move into position until the stretch is just beginning.
- B) Hold that position and contract the muscle group to be stretched, hard and statically. (Hold 2, 3, 4 and 5).
- C) Relax that muscle group.
- D) Move further into the stretch.

(Repeat B - D twice more).

<p><b>CHAIR EXERCISES</b></p> <p>1. Cervical Rotation (Right):</p> <p>Look over right shoulder. Go as far as possible. Place right hand on left cheek and contract muscles to bring head back to centre. Right hand prevents movement (static contraction).</p>	
<p>2. As Rotation to Right, but this time to left.</p>	
<p>3. Side Flexion to Right:</p> <p>Tip head over to right. Ensure that <u>no</u> rotation occurs. Put right arm over head and right hand on left side of head. Contract muscle to bring head back to centre. Again a static contraction.</p>	

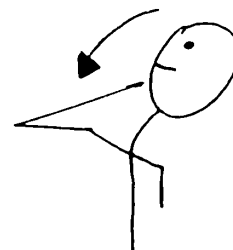
**CHAIR EXERCISES**

4. As Side Flexion to Right, but this time to left.



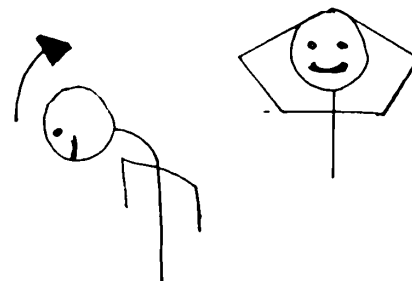
5. Cervical Extension:

Look up at the ceiling. Put one hand beneath your chin. Contract muscles to bring head down and back to centre (static contractions).



6. Cervical Flexion:

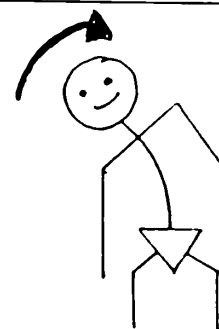
Look down as much as possible. Put two hands on the back of your head, and contract muscles to move head up (static contractions).



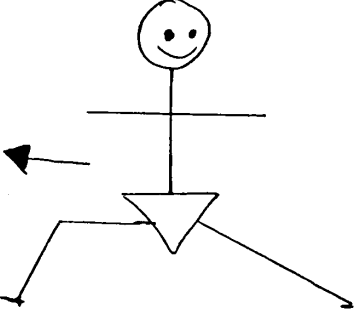
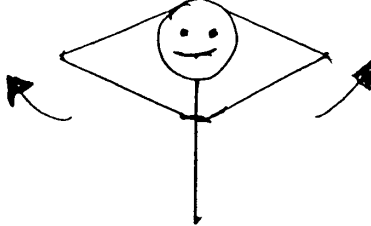
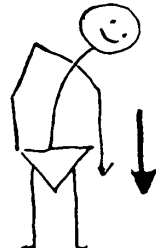
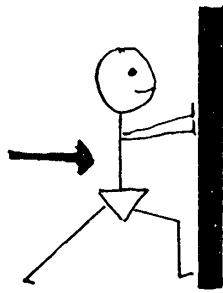
7. Thoracic Side Flexion:

Hold on to chair with right hand. Then side flex to right as much as possible. Contract trunk muscles on the left to bring you back to centre - right hand stops the movement (static contractions).

Repeat with side flexion to left.

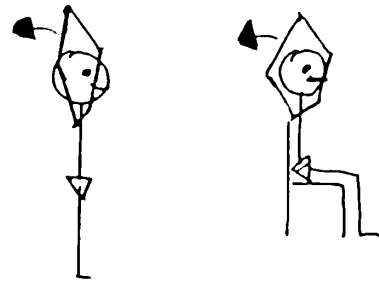


The next set of exercises are general stretching exercise. They should be done slowly, to a point where you feel the muscles stretching. DO NOT bounce (you are more likely to pull a muscle)!

STRETCHING EXERCISES	
<p>1. Adductors</p> <p>Stand feet wide apart, with feet pointing forwards, keep left leg straight and feet flat on the floor, lunge sideways bending right knee, keeping your shoulders upright, until a stretch is felt in the inside of the left thigh. Repeat 3 times to each side.</p>	 A stick figure is shown in a lunge position. The left leg is straight and pointing forward. The right leg is bent at the knee and pointing to the right. The figure's torso is upright. Two arrows point outwards from the feet, indicating they should be pointing forward.
<p>2. Pectorals</p> <p>Clasp hands behind head with elbows out to the sides, push elbows backwards until a stretch is felt across the front of the chest. Repeat 3 times.</p>	 A stick figure is shown with its hands clasped behind its head. The elbows are extended outwards to the sides. Two curved arrows point backwards from the elbows, indicating the direction of the stretch.
<p>3. Trunk side flexors</p> <p>Stand feet apart, slide left hand down side of left leg and take right arm above head and towards left side until you feel a stretch down your right side. Do not lean forwards. Repeat 3 times.</p>	 A stick figure is shown standing with feet apart. The left hand is placed on the side of the left leg. The right arm is raised above the head and bent towards the left side. A downward arrow is shown next to the right arm, indicating the direction of the stretch.
<p>4. Calves</p> <p>Stand facing a wall with hands supported flat on the wall, and one foot in front of the other, toes pointed forward. Lunge forward onto your front leg, keeping your back leg straight and heel on the floor until a stretch is felt in the calf muscle. Repeat 3 times each leg.</p>	 A stick figure is shown in a lunge position against a vertical wall. The figure's hands are flat against the wall. The front leg is bent, and the back leg is straight with the heel on the floor. An arrow points forward from the front leg, indicating the direction of the lunge.

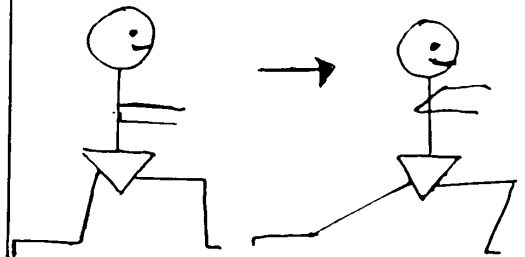
### 5. Shoulders

Stand or sit with your arms stretched above your head, elbows slightly bent and hands clasped. Take arms back behind head until a stretch is felt at your armpits. Repeat 3 times.



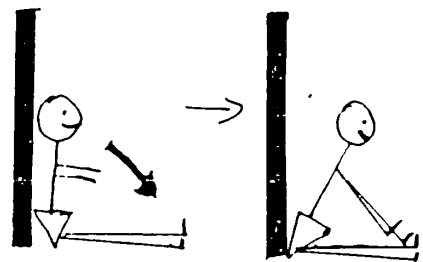
### 6. Hip flexors and quads

Kneel on left knee and lunge forward onto right foot until you feel a stretch on the front of your left thigh and hip. Repeat 3 times each side.



### 7. Hamstrings

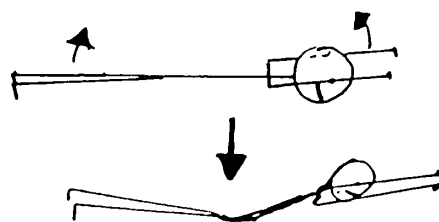
Sit with your legs outstretched and behind your back against a wall or door. Lean forward until you feel a stretch behind your knees. Repeat 3 times.



The next set of exercises are to keep your muscles as strong as possible in order to protect and support your joints, and maintain a good posture.

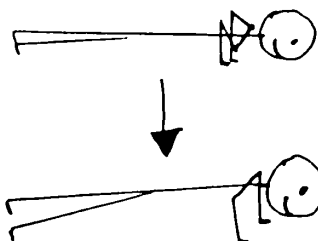
1. Back and hip extensors

Lie face down with feet together and arms stretched above head. Raise both legs and arms as high as you can off the floor. Repeat 5 times.



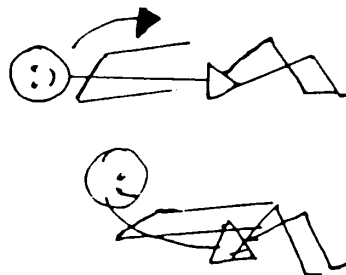
2. Press-ups

Assume press-up position (hands under shoulders) press-up with arms keeping your body straight, not letting your bottom sag. Repeat 10 times.



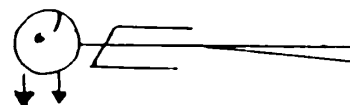
3. Abdominals

Lie on your back with your knees bent and shoulder-width apart. Place your hands on your thighs, and your chin on your chest, curl up sliding your hands to the tops of your knees. Repeat 10 times.



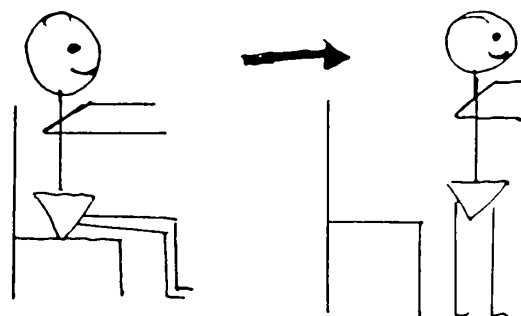
4. Neck Retractions

Lie on your back with a pillow under your head. Keep your head in neutral (in line with your body). Press your head straight back into the pillow, do not tip your head forwards or backwards. Repeat 10 times.



5. Quads (thigh muscles)

Sit on chair, feet shoulder-width apart, and arms out forwards and back straight, then repeatedly sit and stand without actually sitting on the chair. Repeat 10 times. This exercise can be made harder by holding an object in your hands.

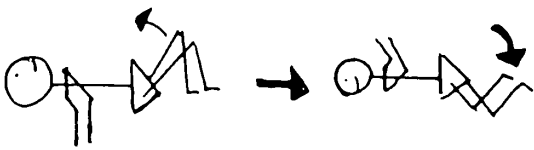
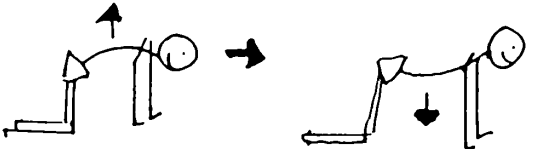
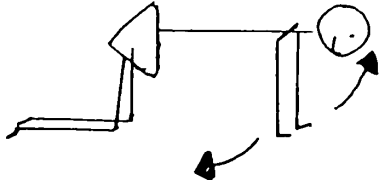
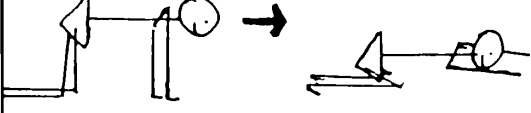


## SUPPLEMENTARY EXERCISES

These exercises can be added to your main programme if you have time, or if you find you need to target a particular joint.

### MOBILITY EXERCISES 1 - 4

### STRENGTHENING EXERCISES A - K

<p>✓ 1. Knee rolls</p> <p>Lie on your back with your knees bent and feet flat on the floor, keeping your feet and knees together, roll your knees to one side as far as you can, whilst taking your arms to the opposite side.</p>	 A stick figure is shown lying on its back. In the first position, its knees are bent and together, and its arms are extended to the right. An arrow points to the second position where the knees have rolled to the left and the arms are extended to the right. A second arrow points to the third position where the knees have rolled back to the right and the arms are extended to the left.
<p>✓ 2. Back flexion and extension</p> <p>Kneel on all fours, round your back up as much as you can, then hollow your back down as much as you can.</p>	 A stick figure is shown on all fours. In the first position, its back is rounded upwards, with an arrow pointing up from the head. An arrow points to the second position where the back is hollowed downwards, with an arrow pointing down from the head.
<p>✓ 3. Side flexion</p> <p>Kneel on all fours as above, walk your hands round to your right as far as you can, then round to the left as far as you can keeping your hips still.</p>	 A stick figure is shown on all fours. In the first position, its hands are on the floor. An arrow points to the second position where the hands have moved to the right side of the body. A second arrow points to the third position where the hands have moved to the left side of the body.
<p>✓ 4. Back extension</p> <p>Kneel on all fours, as above. Lean back onto your heels and leaving your hands flat on the floor until you feel a stretch.</p>	 A stick figure is shown on all fours. In the first position, it is upright. An arrow points to the second position where the figure has leaned back onto its heels, with its hands flat on the floor.

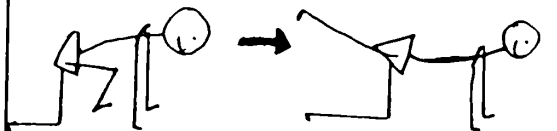
A. Back extension

Kneel on all fours, your hands directly under your shoulders, and knees directly under your hips, straighten your left leg behind you, as high as you can, whilst raising your right arm up in front and lifting your head as high as you can. Repeat to the other side.



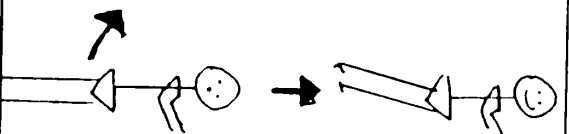
B. Back flexion extension

Kneel on all fours as previous exercise, bend your right knee towards your left arm. Then straighten it out behind you, lifting it as high as you can. Repeat with left leg.



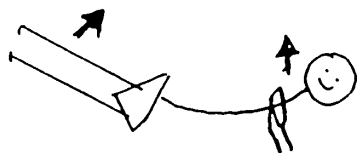
C. Trunk side flexion

Lie on your side. Keep feet together and legs straight, lift both legs up as high as you can. Don't let your hip fall backwards. Repeat to other side.



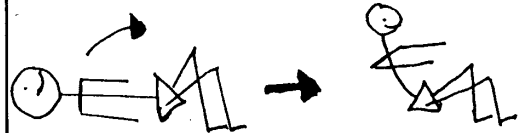
D. Trunk side flexion

As above, but lifting your head and shoulders off the floor as much as you can.



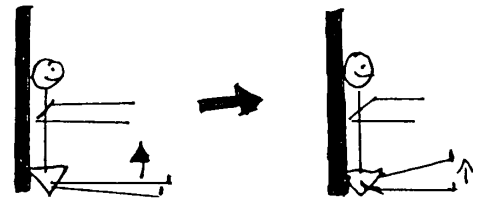
### E. Abdominals

Lie on your back, with knees bent and feet shoulder-width apart, and chin on chest, curl up, sliding right arm up left leg. Repeat to other side.



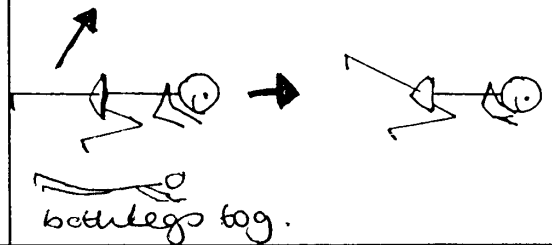
### F. Straight leg raising

Sit with your back against the wall. Pull your foot towards you, brace your knee down, and lift your leg straight up in the air 6 inches. Hold for a count of 5 and lower slowly. 10 times. Repeat with other leg.



### G. Hip abductors

Lie on your side with your bottom leg bent and the top leg straight. Lift your leg 6 inches off the ground keeping it straight and hips facing forwards and your foot parallel to the floor. Hold for a count of 5 and lower slowly. 10 times. Turn onto other side. Repeat with other leg.



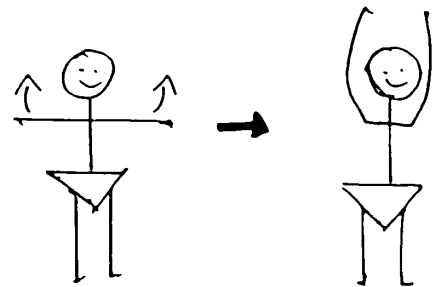
### H. Hip adductors

Lie on your left side, leaning on your left elbow, with your right leg bent up behind and left leg straight. Pull your left foot up towards you, straighten the knee and lift the left leg up off the floor, keeping your foot parallel with the floor. Hold for a count of 5, lower slowly 10 times. Turn over and repeat with other leg.



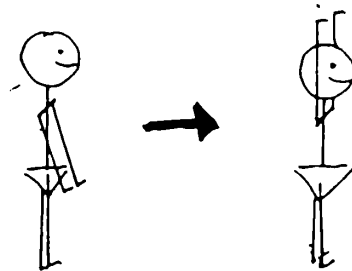
### I. Shoulder Abduction

Sitting or standing, take both arms out to each side and up above head in one movement. Make harder by holding a weight in each hand if necessary.



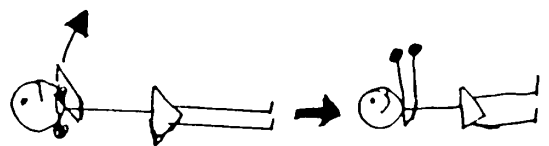
### J. Shoulder flexion

Positioned as above, take both arms forwards up and above head in one movement. Make harder by holding a weight in each hand.



### K. Pectorals

Lying on your back, with a weight in each hand. Start with hands resting on shoulders, push weights upwards until elbows are straight.



## Deep Breathing Exercise

Remember that it is important to mobilise the joints of the rib cage which can also be affected in A.S.

1. Sitting in an upright position, take a deep breath in through your nose. Hold for a count of 3 and then slowly exhale through your mouth.

DO NOT repeat this exercise more than 3 times in succession otherwise you may become dizzy.

2. Repeat as above but place your hands on either side of your chest wall and as you breathe in try to push your hands apart. This will help to strengthen the muscles in your chest wall.

## Posture

In addition to daily exercise it is important that you try and keep good postural alignment. Here are a few guidelines:

1. Do not adopt a stooped posture for any length of time.
2. If you have to bend forward always stand up and arch backwards immediately afterwards.
3. Do not do repetitive lifting work, if you have to lift always bend your knees and keep your back straight.
4. Try and lie on your stomach for 20 minutes a day as this will help to stretch important muscle groups.

N.B. If you require more detailed advice on posture and lifting, please consult your physiotherapist.