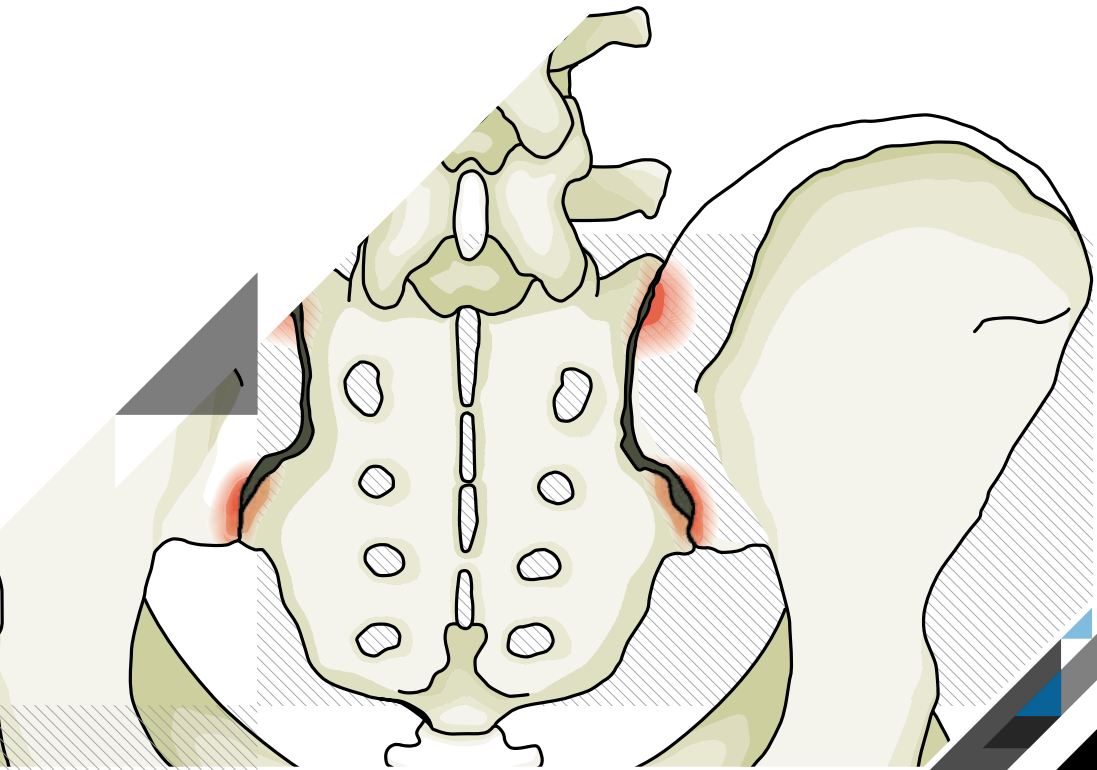


Patient information

# Exercises for axial spondyloarthritis (axial SpA)



Department of Rheumatology  
Whipps Cross University Hospital



# Introduction

Performing low-impact exercises regularly can help you maintain flexibility and reduce the pain and stiffness of axial spondyloarthritis. Try to incorporate the following stretching and strengthening exercises into your daily routine. Different levels of difficulty are given for some of the exercises; when you can do one level easily progress to the next.

You should also have an assessment from a physiotherapist who will be able to help you perform the exercises correctly, tell you which ones to concentrate on, and let you know any other exercises which might be good for you.

You may experience some mild aches, pains and feelings of stiffness when you are stretching. This is normal and they should ease off after the exercise session. However, make sure when exercising that you do not push through pain. It is good to feel a stretch during an exercise but not a significant increase in pain, especially if the pain lasts after the exercise has been completed. If your pain continues, please stop the exercise and seek medical advice.

The exercise repetition figures shown below each exercise are only a guide. If you are starting a new exercise do not overdo it as your body needs to adjust to the new movements and positions. You should exercise within your own limits.

If you are pregnant, or have had any of these symptoms while exercising before, please see your doctor before starting an exercise programme.

- ⊙ Unexplained breathlessness
- ⊙ Chest pain
- ⊙ Palpitations
- ⊙ Dizziness
- ⊙ Fainting

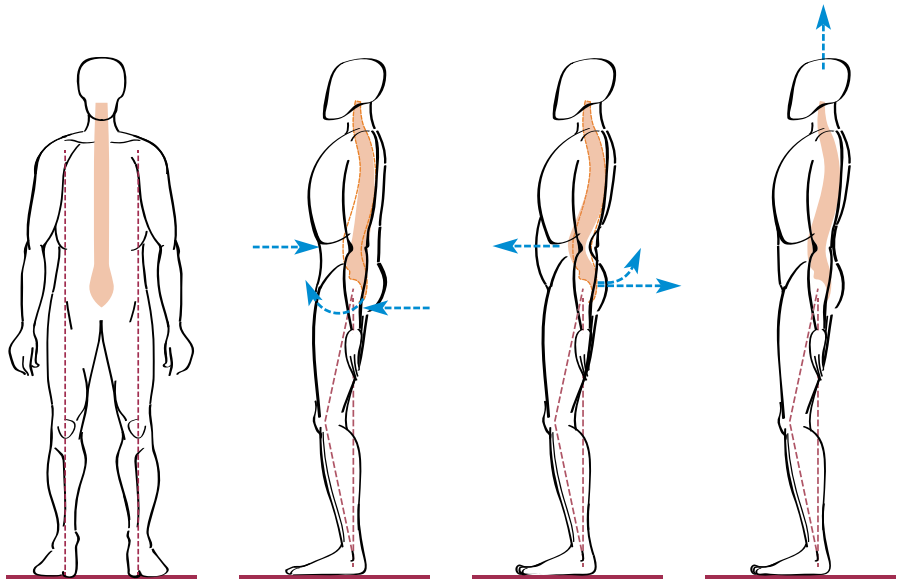
The exercises have been divided into the categories shown below. Click on each section to see the exercises for that part of the spine.



## Finding good posture

**Standing**

**Sitting**



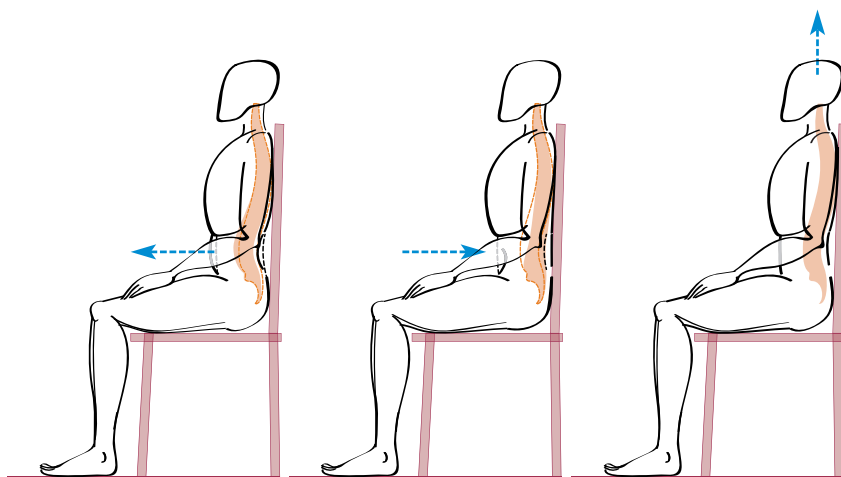
## Standing

Stand with your feet a shoulder width apart and your weight evenly distributed. Keep your knees soft, not locked straight.

Tilt your pelvis forwards and backwards to get the neutral midway point and stay there.

Look straight ahead and keep your shoulders back.

Imagine a piece of string is attached to your head pulling your spine straight.



## Sitting

Sit with your legs uncrossed, your feet flat on the floor and your bottom touching the chair back.

Tilt your pelvis forwards and backwards to find the neutral midway point and stay there.

Look straight ahead and keep your shoulders back.

Imagine a piece of string is attached to your head pulling your spine straight.

## Cervical (neck) exercises

**Cervical rotation**

**Side bending**

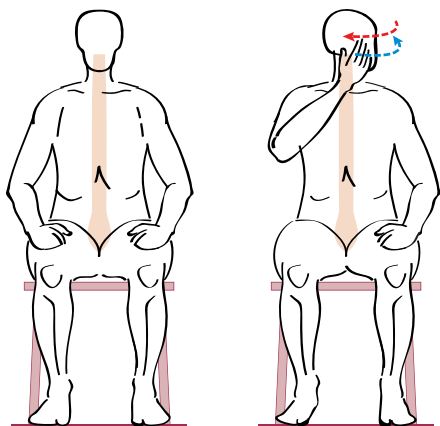
**Swan dive**

**Superman**

Level 1

Level 2

Level 3



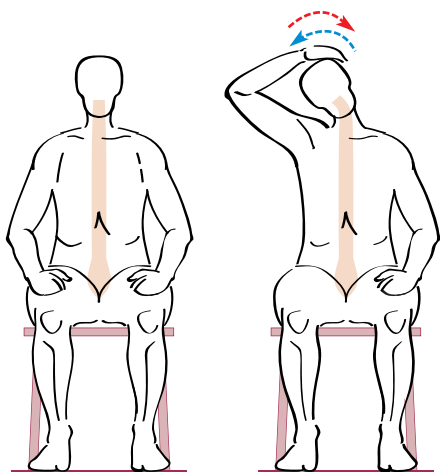
## Cervical rotation

In the sitting position, turn your head to the left. Place your right hand on your right cheek.

Using only moderate effort, turn your head to the right resisting the turn with your hand.

Hold 7 seconds and relax. Now try again turning your head a little further to the left.

Repeat 3 times in total. 3 repeats with head turned to the right.



## Side bending

In the sitting position, tilt your head to the right. Place your right hand on the side of your head.

Using only moderate effort, tilt your head to the left resisting the tilt with your hand.

Hold 7 seconds and relax. Now try again tilting your head a little further to the right.

Repeat 3 times in total. 3 repeats with head tilted to the left.

# Swan dive

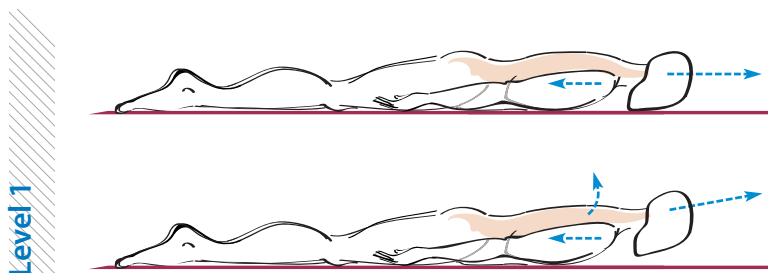
## Level 1

Lie on your front.

Keep your arms by your side, palms up, and look down.

Pull your shoulders back and raise your head still looking down.

Hold 3–5 seconds and return to start position; 10 repeats.



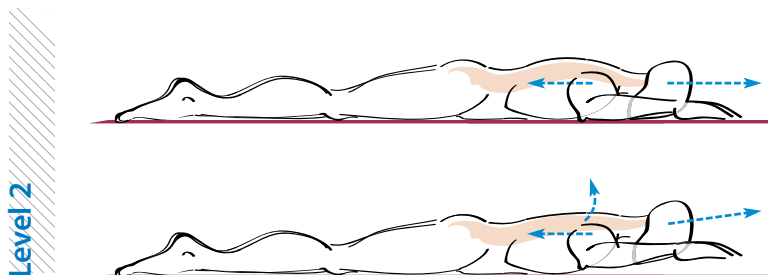
## Level 2

Lie on your front.

Place your hands beside your head as shown and look down.

Pull your shoulders back, float your arms and raise your head still looking down.

Hold 3–5 seconds and return to start position; 10 repeats.



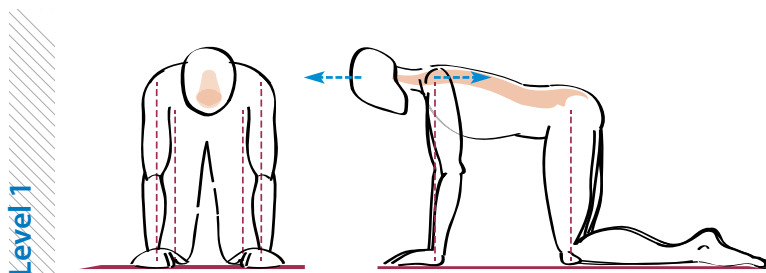
# Superman

## Level 1

Rest on your hands and knees keeping your hands under your shoulders and your knees under your hips.

Pull your shoulders back and lengthen your neck keeping it in line with your spine.

Hold 3–5 seconds and relax; 10 repeats.

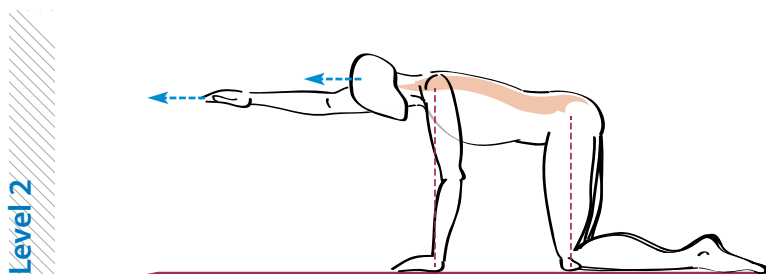


## Level 2

As level 1 but raise one arm straight in front of you while you lengthen your neck.

Hold 3–5 seconds and relax. 10 repeats.

10 repeats with your other arm.



# Superman

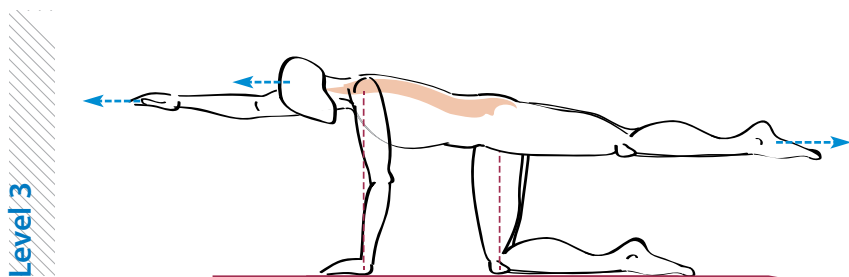
## Level 3

As level 2 but raise the opposite leg at the same time as your arm while you lengthen your neck.

Make sure you keep your spine straight and your hips level.

Hold 3–5 seconds and relax; 10 repeats.

10 repeats with your other arm and leg.



## Thoracic (trunk) exercises

Thoracic rotation

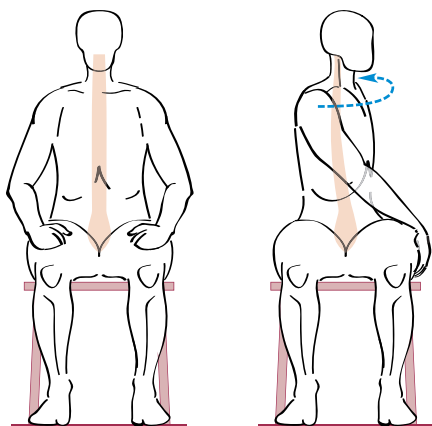
Upper back/chest stretch

Chest stretch

Cat stretch

Upper back rotation stretch

Arm opening



## Thoracic rotation

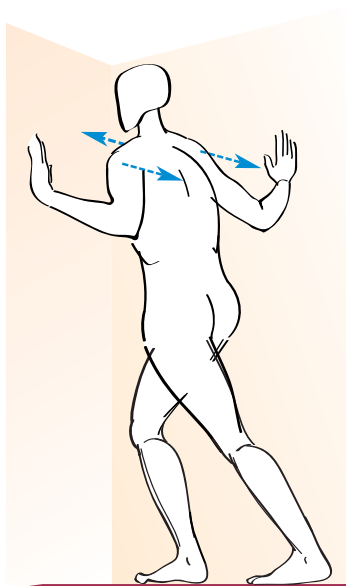
Sit on a chair with your legs uncrossed, back straight and looking ahead.

Place both hands on one side of the chair or your thigh.

Turn your body to the same side as your hands keeping your head in line with your shoulders.

Hold 3–5 seconds and return to start position; 10 repeats.

10 repeats on your other side.



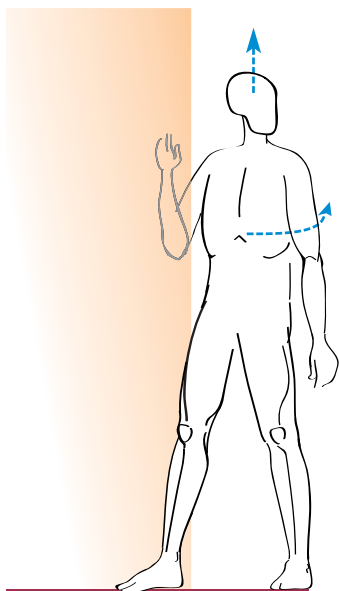
## Upper back/ chest stretch

Stand facing a corner with one leg in front of the other.

Place your hands on either side of the corner.

Keeping your feet still, gently lean into the corner and feel the stretch across your chest.

Hold 15–20 seconds and return to your start position; 2–3 repeats.



## Chest stretch

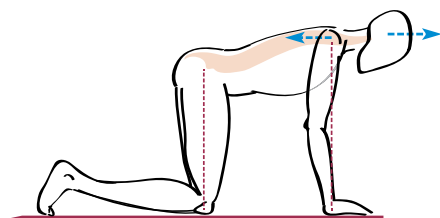
Stand in a walking position with your right leg in front of your left.

Bend your right elbow and support your forearm against a doorframe.

Turn your upper body away from your arm until you can feel your chest muscles stretching.

Hold 20 seconds and relax;  
2–3 repeats.

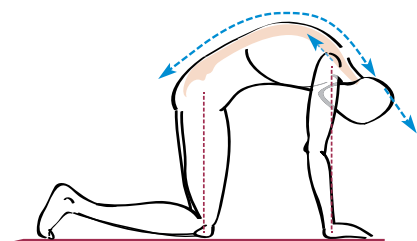
2–3 repeats on your other side.



## Cat stretch

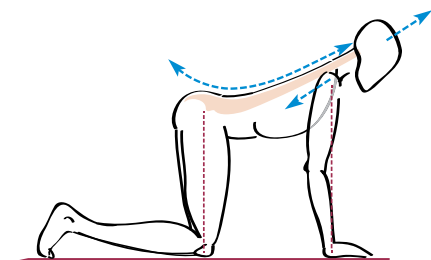
Rest on your hands and knees keeping your hands under your shoulders and your knees under your hips.

Arch your spine upwards while letting your head relax between your arms.

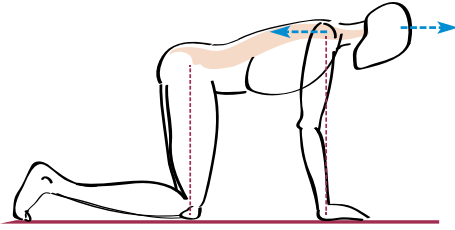


Hollow your spine downwards and raise your head in line with your spine.

10 repeats.



## Upper back rotation stretch



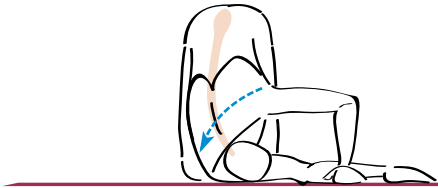
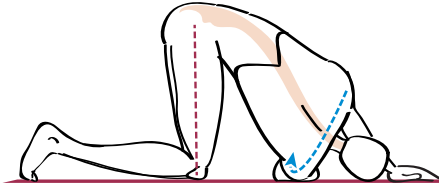
Rest on your hands and knees keeping your hands under your shoulders and your knees under your hips.

Stretch your right arm underneath your chest across the floor.

Rotate your spine so you can reach as far as you can to the left.

Hold 3 seconds and return to start position; 10 repeats.

10 repeats on your other side.



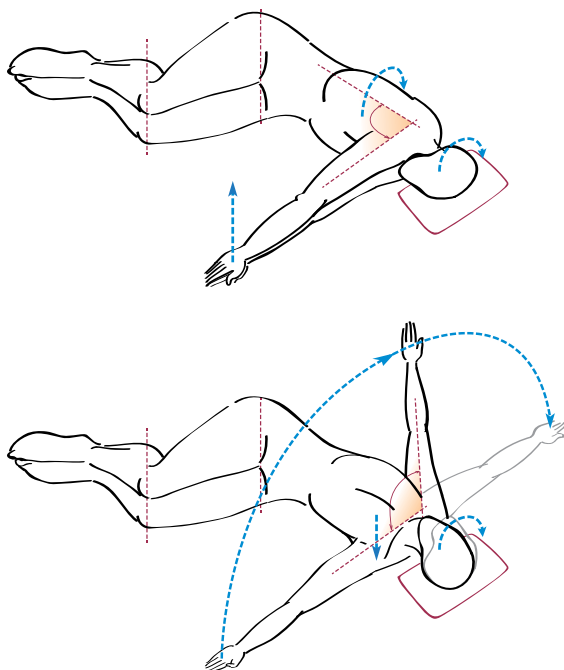
## Arm opening

Lie on your side with a pillow under your head, your knees bent and your arms stretched in front of you.

Keeping your hips still, rotate your spine and move your top arm slowly to the other side of your body. Follow the movement of your arm with your head and encourage your shoulder blades to get as close to the floor as possible.

Return slowly to your starting position by moving your arm back to your other arm.

10 repeats. 10 repeats on your other side.



## Lumbar/pelvic (lower back) exercises

Knee rolls

Scissors

Knees-chest

Bridge

Hamstring stretch

Clam

Gluteal stretch

Hip abduction

Piriformis stretch

Piriformis stretch (seated option)

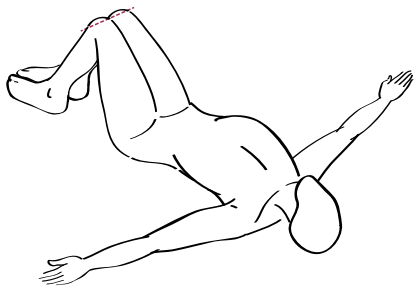
Quadruped

Extension

Hip flexor stretch

Pelvic rock

Setting your centre

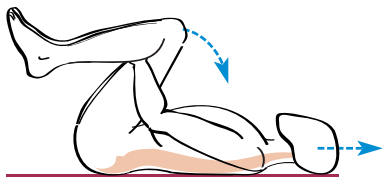
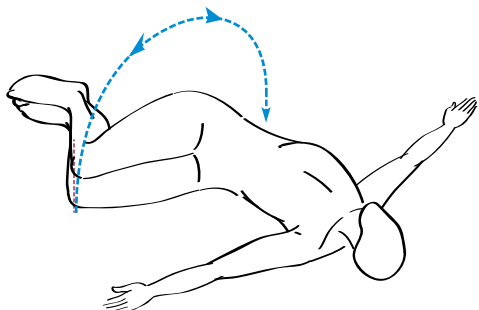


## Knee rolls

Lie on your back with your feet on the floor, legs bent with knees together and your arms out wide.

Keeping your shoulder blades flat on the floor, slowly roll your bent legs to lie on the floor on one side, and then move them across to the other side.

10 repeats.



## Knees-chest

Lie on your back with your feet on the floor and your legs bent with your knees together. Lift your knees towards your chest.

Draw your knees to your chest by using your hands behind your knees.

Hold 15–20 seconds and relax; 2–3 repeats.

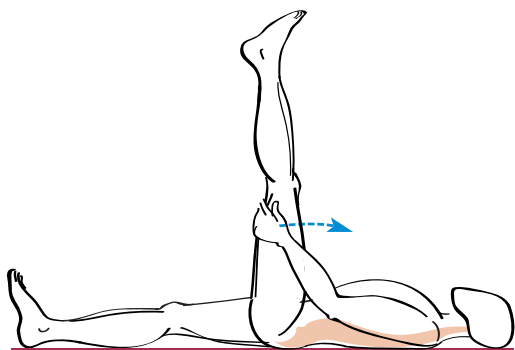


## Hamstring stretch

Lie on your back with your legs straight.  
Lift one leg straight in the air.

Place your hands around the back of your thigh, or use a towel, to gently pull your leg towards your chest. Feel the stretch behind your thigh.

Hold 15–20 seconds and relax; 2–3 repeats.  
2–3 repeats with your other leg.

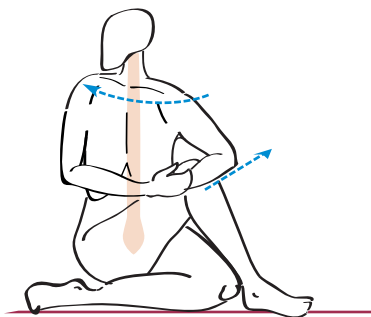


## Gluteal stretch

Sit on the floor cross-legged with your back straight. Cross your right leg over your left leg as shown. Put your hands on your right knee and draw it towards your left shoulder.

At the same time rotate your upper body, keeping your head in line, towards the right. Feel the stretch in your right buttock.

Hold 15–20 seconds and relax; 2–3 repeats.  
2–3 repeats on your other side.



## Piriformis stretch

### Level 1

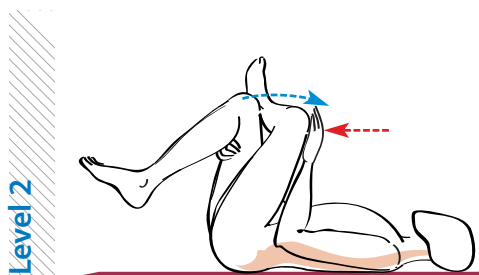
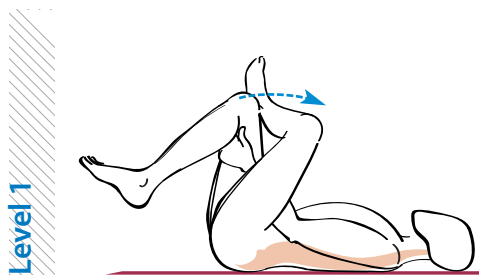
Lie on your back with your feet on the floor and your legs bent.

Cross your left ankle over your right knee and place your hands around your right thigh as shown.

Gently pull your right thigh towards your stomach. You should feel the stretch in your left buttock.

Hold 15–20 seconds and relax; 2–3 repeats.

2–3 repeat with your other thigh.



### Level 2

As level 1 but push your knee away with your hand as shown to stretch further.

## Piriformis stretch

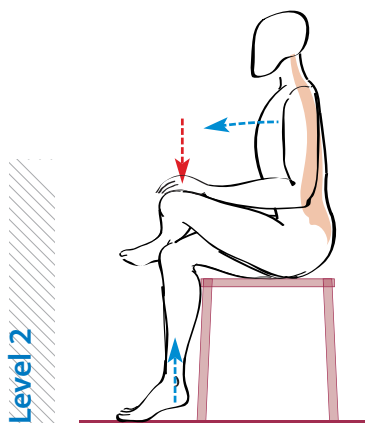
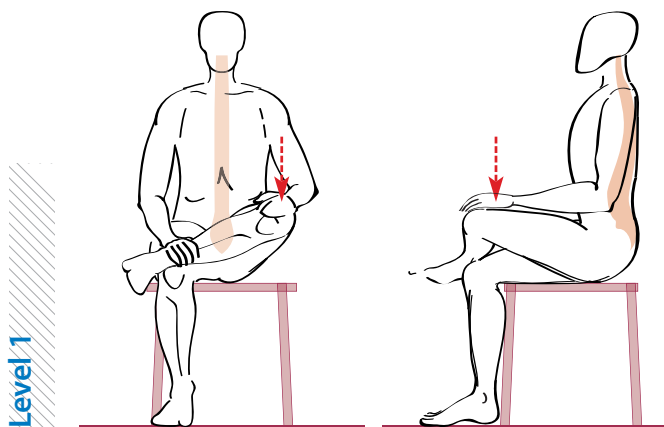
### Seated option level 1

Sit on a chair with your legs uncrossed, back straight and looking ahead. Place your right ankle on your left knee.

Put your right hand on your knee and push your knee towards the floor.

Hold 15–20 seconds and relax; 2–3 repeats.

2–3 repeats with your other leg.



### Level 2

As level 1 but tilt your upper body forwards, keeping your back straight, and lift your heel off the floor to stretch further.

## Quadruped

On your hands and knees, press your bottom on to your feet and stretch your arms out in front of you.

Keep your forehead as close to the floor as possible.

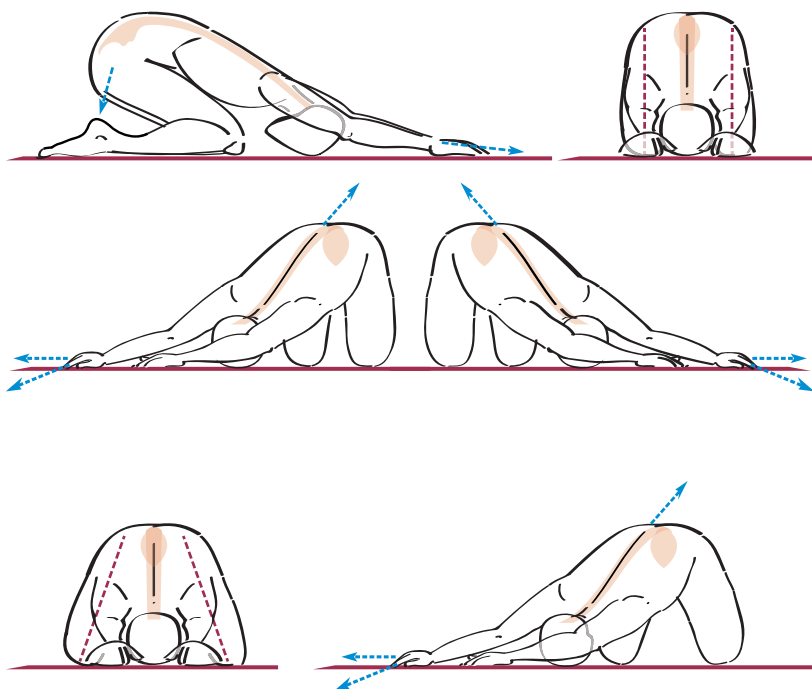
To stretch your left lower back, move your arms right to the 2 o'clock position.

Hold 15-20 seconds and return to the start position. 2-3 repeats.

To stretch your right lower back, move your arms left to the 10 o'clock position.

Hold 15-20 seconds and return to the start position. 2-3 repeats.

Try an alternative start position with your knees further apart (option 2) for a further stretch.



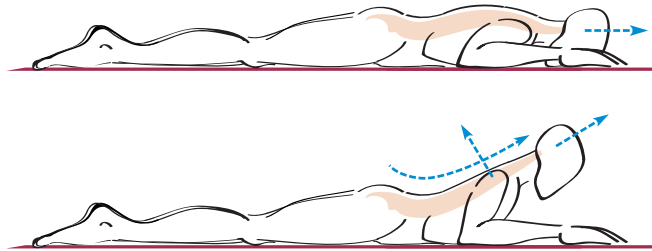
Option 2

## Extension

Lie on your front keeping your elbows close to your body. Keeping your forearms and your hips on the floor, arch the small of your back and raise your upper back.

Keep your head in line with your spine.

Hold 3 seconds and return to start position; 10 repeats.



## Hip flexor stretch

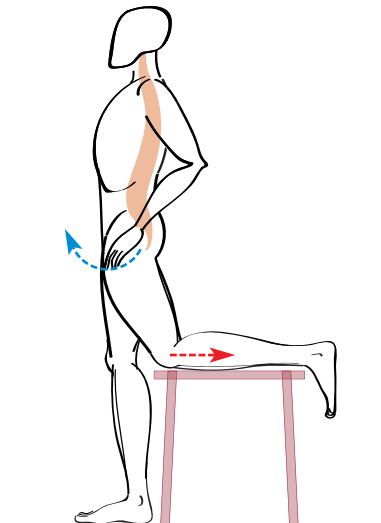
Stand with one knee bent on a chair.

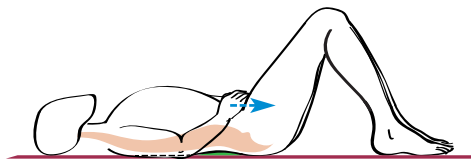
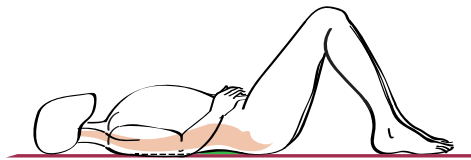
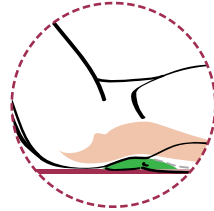
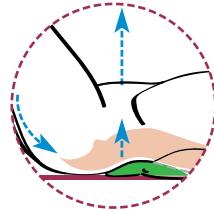
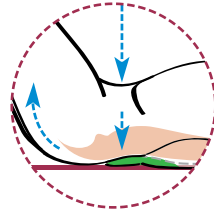
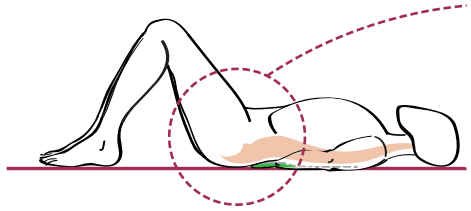
Keeping your knee still, gently push your pelvis forwards tucking your bottom underneath you.

You should feel a stretch in your groin.

Hold 15–20 seconds and relax; 2–3 repeats.

2–3 repeats with your other knee on the chair.





## Pelvic rock

Lie on your back with your feet flat on the floor, your legs bent and your arms by your side.

Keep your knees in line with your hips so they do not touch.

Place your left hand under the small of your back and your right hand on the front bony point of your pelvis.

Move your pelvis backwards so you feel your lower back pressing on your hand and then arch your lower back so your back lifts off your hand.

Rock between these two positions.

10 repeats.

Still lying in the same position proceed to setting your centre.

## Setting your centre

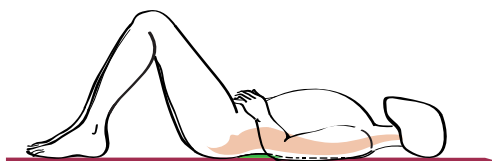
Find the neutral position which is halfway between arching and flattening your lower back.

Move the fingers of your right hand down 4cm from the front bony point of your pelvis.

Gently pull in the muscles under your hand as if you were tightening a belt. It might help to let out a breath at this point.

You should feel tension under your fingertips; this is called setting your centre.

Hold this position for 10 seconds breathing normally, and relax; 10 repeats.

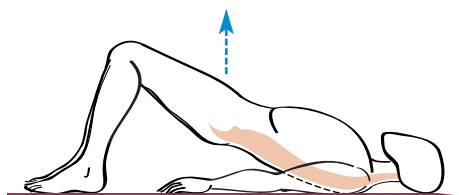
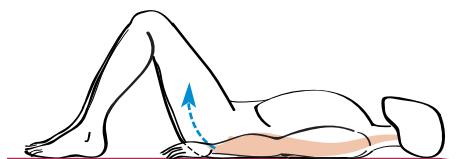


## Scissors

Start on your back, feet flat on the floor and knees bent but not touching. Set your centre. Put both your hands on the front bony points of your pelvis.

Bending at the hip, slowly raise one leg with your knee bent. Lower your leg to the starting position. Maintain the neutral position of your spine throughout avoiding arching or flattening your back.

Repeat alternate legs 10 times.



## Bridge

Start on your back, feet flat on the floor and knees bent but not touching. Set your centre and put your arms by your side.

Tilt your pelvis thus pushing the bottom of your back into the floor. Squeeze your bottom muscles and lift your bottom up gradually.

Roll your back up bone by bone until you are resting on your shoulder blades. Gently roll down bone by bone starting from the top of your spine.

10 repeats.

## Clam

For this exercise you need a pillow.

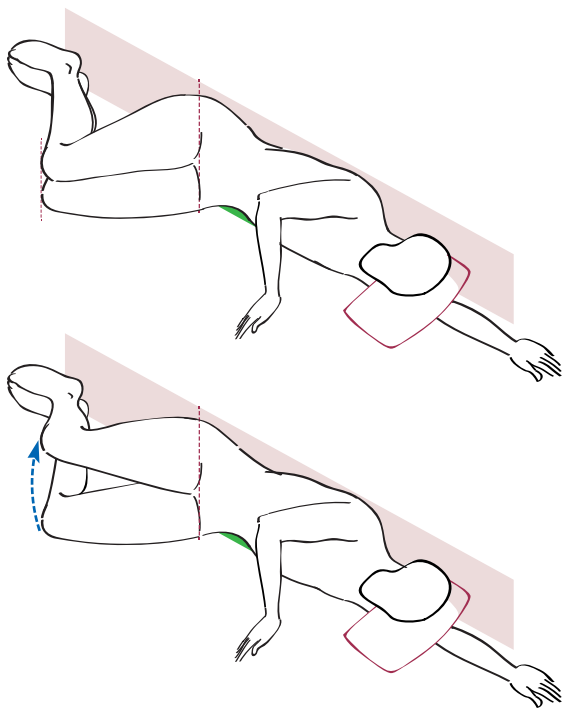
Lie on your side with your bent knees together. Place the pillow between your head and your out-stretched arm as shown.

Set your centre, finding the neutral position, by tightening your lower tummy muscles.

Keeping your heels together and your pelvis still, raise your top knee in the air and slowly lower it.

You can check your pelvis remains still by keeping a paper cup or book in place on the top of your hip.

10 repeats. 10 repeats on your other side.



## Hip abduction

For this exercise you need a pillow.

Lie on your side with your bent knees together. Place the pillow between your head and your out-stretched arm as shown.

Tighten your lower tummy muscles to set your centre and create a small gap between your waist and the floor.

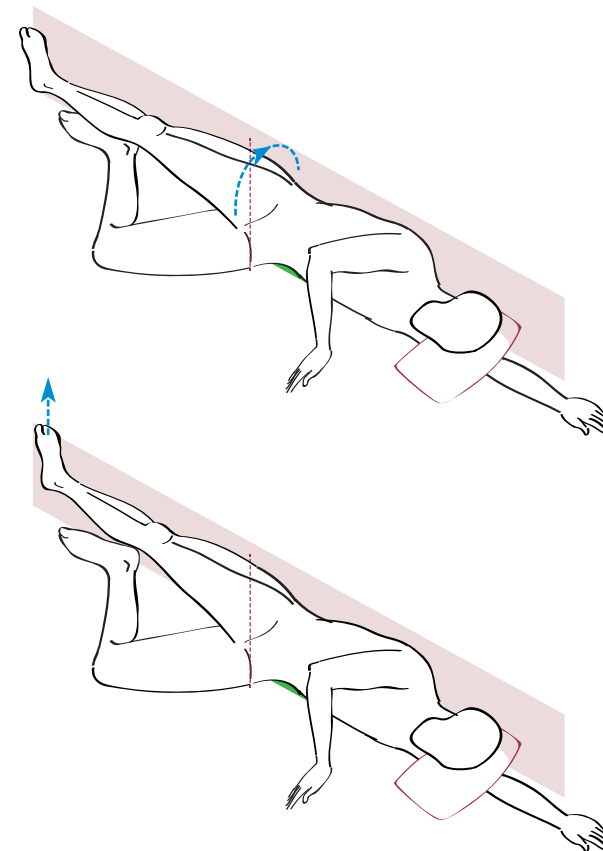
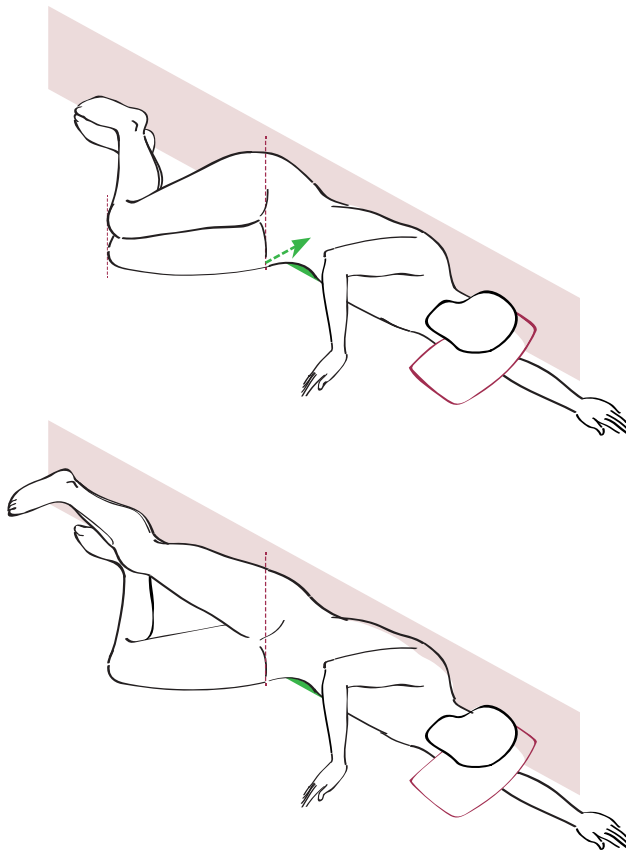
Keeping your lower leg bent, straighten your top leg so your body is in a straight line as shown.

Gently rotate your hip outwards so you are pointing your foot towards the ceiling.

Keeping your foot-up, raise your leg a few inches and lower.

10 repeats.

10 repeats on your other side.



## Summary

Ideally these exercises should be done once a day. If you do not have time to do all of them, choose some exercises from each section so you are stretching and strengthening your whole spine.

People with axial SpA must pay special attention to posture and avoid stooping or slouching when standing or sitting.

You may also find you are stiffer if you stay in one position for too long. Change position frequently. Ideally you should move every 20 minutes even if it is just a stretch while you are sitting in front of a computer, or get up and walk around for a few minutes.

### **This booklet was written by:**

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This booklet is a general guide to exercises for axial spondyloarthritis. It should not be used as a substitute for individual care and advice you may be receiving from your physiotherapist and doctor.