

Spinal Rehabilitation Programme

Information for patients

This leaflet can be made available in other formats including large print, CD and Braille and in languages other than English, upon request.

Contents	Page No
How can the Spinal Rehabilitation Programme help me?	1
How long does the programme last and where are the sessions held?	2
Starting your exercises	2
Correct breathing	2
What is the pelvic floor muscle?	3
Pelvic floor exercises	3
What is neutral spine?	4
Transversus Abdominus (Trans Abs)	4
Putting it all together to start stabilising your spine and pelvis	5
Spinal stabilisation exercises	6
Exercise A	6
Exercise B	7
Exercise C	9
Exercise D	10
Exercise E	11
What happens when I finish the programme?	12
Contact numbers	13
Further information is available from	13

Spinal Rehabilitation Programme

How can the Spinal Rehabilitation Programme help me?

At the moment you may find almost everything you do hurts your back. To help speed up your recovery you need to learn how to begin stabilising your core muscles (deep abdominal (tummy)) and back muscles.

To do this you need to understand how your core muscles work (body awareness), and to do certain exercises to strengthen these muscles. Once you have learned how to use these muscles many of your daily activities will become easier and you will have less discomfort.

As part of the Spinal Rehabilitation Programme your physiotherapist or health and fitness advisor will show you how to do 5 groups of exercises, which are explained in this leaflet.

The programme consists of advice, education, relaxation and exercises to help you understand your back pain and how to control your symptoms.

How long does the programme last and where are the sessions held?

The Spinal Rehabilitation Programme lasts for 7 weeks. You will be invited to attend a programme.

These programmes are designed to meet your needs. This will be discussed and agreed with you and will be either:

- 2 sessions each week in the daytime, each lasting 1 - 1½ hours, at a fitness centre in the community
- or
- 1 session each week in the evening, lasting 1 - 1½ hours, at the University Hospital of North Tees or the University Hospital of Hartlepool

An individual session with your physiotherapist or health and fitness advisor will be arranged after your Spinal Rehabilitation Programme is finished.

Starting your exercises

You should:

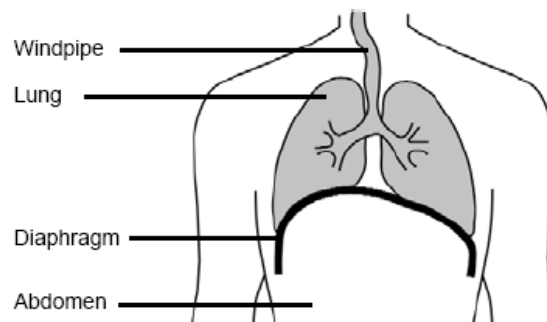
- only do the exercises advised by your physiotherapist or health and fitness advisor
- not exercise after a large meal; wait for 2 - 3 hours
- wear flat, well-fitting shoes
- wear comfortable clothes.

Spinal Rehabilitation Programme

Your physiotherapist or health and fitness advisor will explain the exercises to you and help you to do them correctly.

Correct breathing

It is important you use the correct muscles when breathing. The diaphragm is the large muscle under your ribs, which makes your lungs go down and out so air is drawn into the base of your lungs.



To do this:

- place your hands lightly on your lower ribs
- breathe in and feel your hands being moved away, this is called a "wide breath"
- breathe out and relax.

Pelvic floor muscle

What is the pelvic floor muscle?

The pelvic floor muscle stretches like a sling from your pubic bone to the bottom of your spine (see diagram right). This muscle helps to hold your bladder and bowel in place.

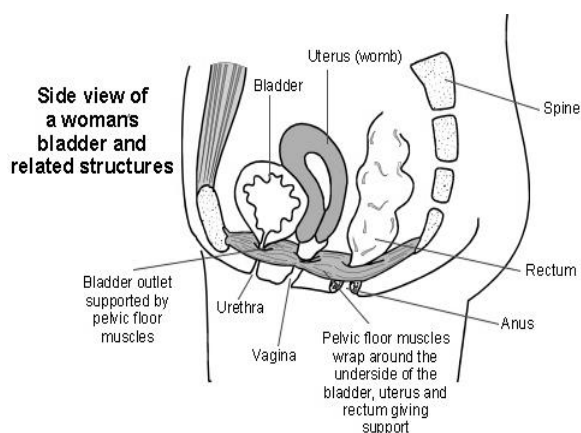


Diagram to show the pelvic floor muscle in women

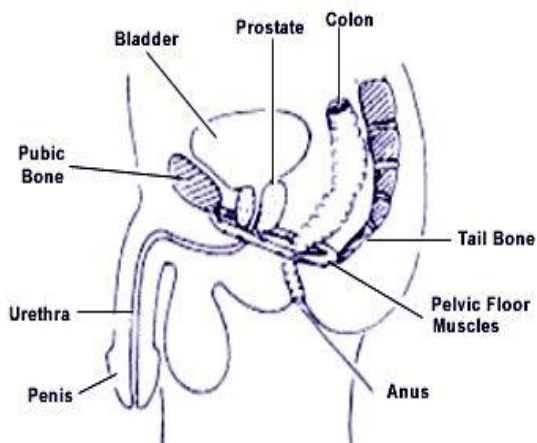


Diagram to show the pelvic floor muscle in men

Spinal Rehabilitation Programme

Pelvic floor exercises

To do your pelvic floor exercises:

Imagine you are trying to stop passing urine, so it feels as if you are 'zipping up' inside (zip). If you feel the muscles in your bottom tightening then you are trying too hard.

What is neutral spine?

Neutral spine is the natural position of your spine. This is the position your spine must be in before you start your exercises.

It is the natural or ideal position of your spine and can be found when standing, sitting, lying on your front, back or side and also when kneeling on all fours.



Picture to show neutral spine position

To find your neutral spine:

- lie on your back with your knees bent, feet flat on the floor at hip distance apart
- rest your head on a small pillow or folded up towel
- tilt your pelvis up towards your umbilicus (navel or tummy button) until you feel your spine flattens to the floor and the tailbone tips up
- now tilt your pelvis down towards your pubic bone, you will feel your spine arch up and your tailbone push into the floor.

These are the extreme (full) movements of your spine and pelvis.

Repeat these movements 4 - 5 times and then relax when your spine is neither flattened down nor arched up - **this is your neutral spine.**

If your pelvis is twisted sideways, repeat this action to the left and right and rest when you feel 'in the middle' - **this is your neutral spine.**

Your physiotherapist or health and fitness advisor will tell you when you have found your neutral spine.

Always start your exercises in this neutral position.

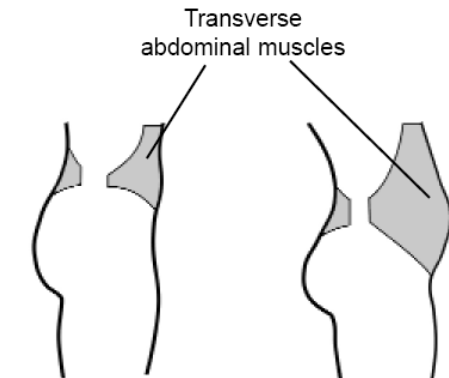
Spinal Rehabilitation Programme

Transversus Abdominus (Trans Abs)

This is the deepest of your abdominal muscles and, as it is your transverse only abdominal muscle attached (joined) to your spine, it is the most important in controlling the stability of your spine and pelvis. The muscle fibres run around your abdomen, like a belt. When working they tighten like a corset to help stabilise your spine.

To exercise these muscles:

- lie on your back with your knees bent and your feet flat on the floor
- gently pull your navel inwards, towards your spine
- feel your lower abdomen 'hollow' to feel if it is working, (place your fingertips just on the inside of hipbones)
- you should feel the muscle flatten. If it bulges you are using the wrong muscles.



Good posture
Good trans abs
Good neutral spine

Poor posture
Poor trans abs
Poor neutral spine

Diagram to show you Transversus Abdominus muscles (Trans Abs)

Putting it all together to start stabilising your spine and pelvis

You should:

- lie on your back; find your neutral spine position
- take a 'wide breath' in (see page 3)
- breathe out, 'zip and hollow', (pull up your pelvic floor and pull your navel back to your spine)
- not allow your spine to move
- breathe and relax.

As your body awareness improves and you become more practised you will be able to keep your neutral spine, 'zip and hollow', while you breathe in and out at the same time. This takes practice!

Before you do any exercises **you must:**

- find your neutral spine
- take a 'wide breath' in
- breathe out while you, 'zip and hollow'
- breathe in as you relax.

When you have learned these 5 groups of exercises and can find your neutral spine your physiotherapist or health and fitness advisor will teach you how to do spinal stabilisation exercises.

Spinal Rehabilitation Programme

Spinal Stabilisation Exercises

Exercise A

Lie on your back, with both of your knees bent and keep your feet flat on the floor. Find your neutral spine, 'zip and hollow', and then:



Level 1

- slowly move your left knee out to the side
- do not allow your spine or pelvis to move
- return to your starting position and repeat using your right knee
- repeat up to 10 times each side.



Level 2

- lie on your side with your knees bent
- place your feet in line with your buttocks and shoulder
- keep your neutral spine
- keeping your feet together slowly lift your top knee
- do not allow your hip or pelvis to roll back
- move your top knee back to the starting position
- repeat up to 10 times
- repeat lying on your other side.



Level 3

- lie on your back with your knees bent and your feet flat on the floor
- squeeze your buttocks together and slowly lift your pelvis and hips off the floor
- do not lose your neutral spine position
- hold, for up to 10 seconds
- slowly lower back on to the floor
- repeat up to 10 times.



Spinal Rehabilitation Programme

Level 4

- lie on your back with your knees bent and your feet flat on the floor
- squeeze your buttocks together and slowly lift your pelvis and hips off the floor
- do not lose your neutral spine position
- keeping your hips up straighten your left knee (see picture)
- bend your left knee in again and place your foot back on the floor
- lower your hips back down to the floor
- repeat the exercise using your right leg
- repeat up to 10 times each side.



Exercise B

Lie on your back, with both of your knees bent and keep your feet flat on the floor. Find your neutral spine, 'zip and hollow', and then:



Level 1

- maintain your neutral spine
- slowly slide alternate legs out straight and then bend back in, keeping your heels on the floor
- repeat up to 10 times each leg.



Level 2

- maintain your neutral spine
- raise one heel off the floor slowly, raise your knee towards your hip and then slowly place your foot back on to the floor
- repeat using your other leg
- repeat up to 10 times each leg.



Spinal Rehabilitation Programme

Level 3

- maintain your neutral spine
- slowly raise your left knee towards your hip
- take your right hand to your left knee and gently push the two together
- do not allow your pelvis to move
- hold for up to 10 seconds
- slowly lower your leg and arm
- repeat the exercise using your right knee and left hand
- repeat up to 10 times each leg.



Level 4

- maintain your neutral spine
- raise one heel off the floor slowly, then raise one of your knees towards your hip
- raise your other knee as well, to hip height
- lower one leg and then the other
- repeat 10 times.



Level 5

- maintain your neutral spine
- raise one heel off the floor slowly and raise your knee towards your hip
- raise your other heel off the floor slowly and raise that knee as well, to hip height
- straighten one leg out keeping your foot 5cm (2 inches) off the floor
- bend your knee back
- repeat using your other leg
- lower one foot to the floor with your knee still bent, then the other
- repeat up to 10 times.



Spinal Rehabilitation Programme

Exercise C

Lie on your back with both of your knees bent, keeping your feet flat on the floor. (Keep looking up towards the ceiling to avoid straining your neck.) Find your neutral spine, 'zip and hollow', and then:

Level 1

- place your hands on your thighs
- curl up by lifting your shoulders off the floor and sliding your hands up towards your knees
- slowly lower
- repeat up to 10 times.



Level 2

- place your arms across your chest
- slowly curl up by lifting your shoulders off the floor then slowly lower
- repeat up to 10 times.



Level 3

- place your finger tips behind your ears
- slowly curl up by lifting your shoulders off the floor and then lower
- repeat up to 10 times.



Level 4

- place your finger tips behind your ears
- slowly curl up by lifting your shoulders off the floor
- rotate (turn) to the right (elbow towards your knee)
- rotate back to the middle and then lower
- repeat up to 10 times.
- repeat the exercise but rotate to your left side and then lower.



Spinal Rehabilitation Programme

Exercise D

Lie on your front with your feet hip width apart and your arms straight above your head. Place your forehead on a folded up towel. Find your neutral spine position and then:

Level 1

- 'zip and hollow'. You should feel your lower abdomen lift away from the floor while maintaining your neutral spine position
- hold for up to 10 seconds
- repeat up to 10 times.



Level 2

- 'zip and hollow'. You should feel your lower abdomen lift away from the floor maintaining your neutral spine position
- do not allow your pelvis or spine to move
- raise your right arm off the floor
- hold for up to 10 seconds and lower
- do not allow pelvis or spine to move
- repeat the exercise using your left arm
- repeat up to 10 times each side.



Level 3

- 'zip and hollow'. You should feel your lower abdomen lift away from the floor whilst maintaining your neutral spine position
- do not allow your pelvis or spine to move
- keeping your legs straight, raise one leg off the floor slightly
- do not allow your pelvis or spine to move
- hold for up to 10 seconds and lower
- repeat the exercise using your other leg
- repeat up to 10 times each side.



Spinal Rehabilitation Programme

Level 4

- 'zip and hollow'. You should feel your lower abdomen lift away from the floor whilst maintaining your neutral spine position
- do not allow your pelvis or spine to move
- raise your right arm and left leg off the floor slightly
- do not allow your pelvis or spine to move
- hold for up to 10 seconds and lower
- repeat using your left arm and right leg
- repeat up to 10 times.



Exercise E

Kneel on all fours, with your hands directly under your shoulders and your knees underneath your hips. Keep your head in line with your shoulders. Find your neutral spine and then:

Level 1

- 'zip and hollow'
- do not allow your back to sag
- hold for up to 10 seconds and slowly release
- do not allow your back to sag
- repeat up to 10 times.



Level 2

- 'zip and hollow'
- keep your neutral spine position
- slowly raise one arm out in front
- keep looking at the floor at all times
- hold for up to 10 seconds and lower
- repeat using your other arm
- repeat up to 10 times each side.



Spinal Rehabilitation Programme

Level 3

- 'zip and hollow'
- keep your neutral spine position
- slide one leg behind you and then slowly raise it up to hip height
- keep your neutral spine position
- hold for up to 10 seconds and then lower
- repeat the exercise using your other leg
- repeat up to 10 times each side.



Level 4

- 'zip and hollow'
- keep your neutral spine position
- now raise your right arm and left leg together
- keep your neutral spine position
- hold for up to 10 seconds and lower
- repeat raising your left arm and right leg together
- repeat up to 10 times each side.



What will happen when I finish the programme?

After completing the 7 week Spinal Rehabilitation Programme you will be invited to attend a 10 - 12 week course of exercise sessions available at a number of local leisure or community centres. There will be a small charge.

You should continue to exercise regularly and do your spinal stabilisation exercises daily.

You will be offered:

- an Active Health course (run by Stockton Borough Council's Sports Development Department), an Exercise For Life course (run by Hartlepool Borough Council's Sports Development Department) or a Get Active course (run by County Durham Sports Development) referral. These courses run for 12 weeks in local leisure centres. There will be a small charge for this course.
- a leisure saver card to enable you to take part in leisure activities in the local leisure centres at a reduced rate.

Spinal Rehabilitation Programme

Contact numbers

If you need further advice or have any problems, please contact:

University Hospital of North Tees

Physiotherapy Outpatient Department

telephone: 01642 624869

Monday – Friday, 8.00am – 4.30pm

Please ask for the Physiotherapist or Health and Fitness Advisor who treated you during your spinal rehabilitation programme.

Further information is available from:

NHS Choices

telephone: 111 (when it is less urgent than 999)

Calls to this number are free from landlines and mobile phones
or via the website at www.nhs.uk

Spinal Rehabilitation Programme

This leaflet has been produced in partnership with patients and carers. All patient leaflets are regularly reviewed, and any suggestions you have as to how it may be improved are extremely valuable. Please write to the Quality Assurance Team, University Hospital of North Tees or email: patientinformation@nth.nhs.uk.

Comments, Concerns, Compliments or Complaints

We are continually trying to improve the services we provide.

We want to know what we're doing well or if there's anything which we can improve, that's why the Patient Experience Team is here to help.

Our Patient Experience Team is here to try to resolve your concerns as quickly as possible. If you would like to contact or request a copy of our PET leaflet, please contact:

telephone: 01642 624719

Monday – Friday, 9.00 am – 4.00 pm

Messages can be left on the answering machine and will be picked up throughout the day.

freephone: 0800 092 0084

Mobile: (can use text): 0779 561 883

Email: patientexperience@nth.nhs.uk

Out of hours if you wish to speak to a senior member of Trust staff, please contact the hospital switchboard who will bleep the appropriate person.

telephone: 01642 617617

24 hours a day, 7 days a week

The Patient Experience Team is available to discuss your concerns in person Monday – Friday, 1.30 pm – 4.30 pm.

Data Protection and use of patient information

The Trust has developed a Data Protection Policy in accordance with the Data Protection Act 1988 and the Freedom of Information Act 2000. All of our staff respect this policy and confidentiality is adhered to at all times. If you require further information please contact the Head of Communications.

telephone: 01642 624339 or www.dataprotection.gov.uk

University Hospital of North Tees, Hardwick, Stockton-on-Tees. TS19 8PE
University Hospital of Hartlepool, Holdforth Road, Hartlepool. TS24 9AH

Telephone: 01642 617617

Fax: 01642 624089