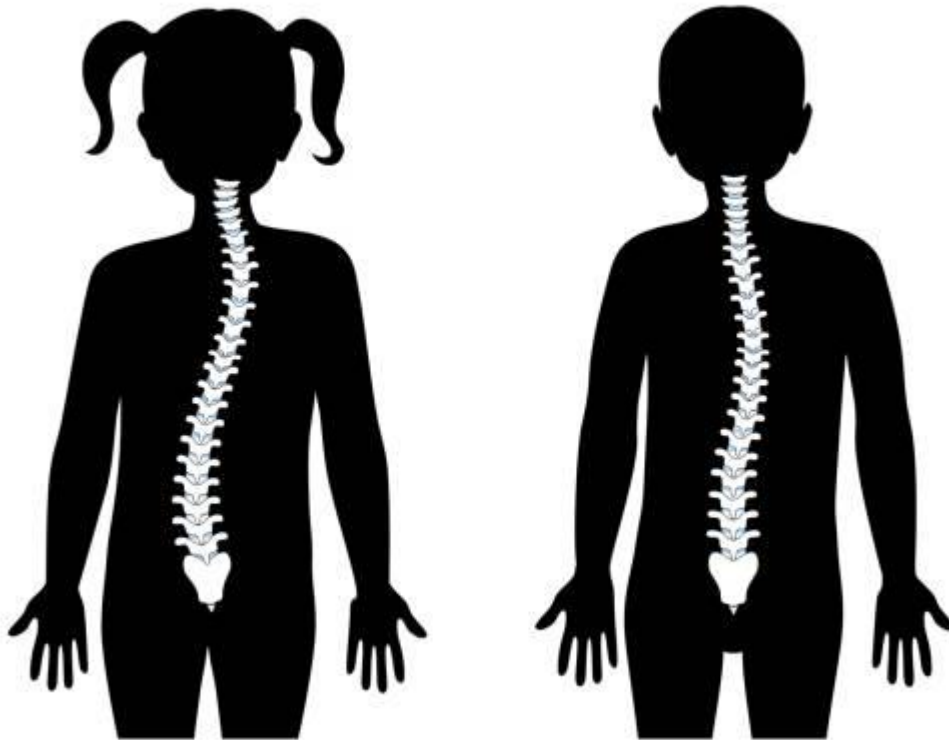


# Therapy Support following Paediatric Spinal Fusion Surgery



**This leaflet explains Adolescent Idiopathic Scoliosis and provides some information regarding physiotherapy intervention following anterior and posterior spinal fusion surgeries. Each treatment provided is given on an individual basis so your experience may differ slightly from the information given.**

**If you have any further questions, please speak to a doctor or nurse caring for you.**

## What is Scoliosis?

Your spine is made up of 33 bones which sit on top of each other spanning from your skull to your pelvis. Muscles, tendons and ligaments surround these bones supporting them in their natural curves.

Scoliosis is where for some reason a sideways curve develops in the spine.

Most commonly the cause for the curvature is unknown and this is called 'Idiopathic' scoliosis. This is progressive, meaning the amount of curvature will increase over time as you grow (NICE, 2022).

## Scoliosis Treatment

There is no known way to prevent scoliosis from occurring, so the main aim of treatment is to limit the progression of curvature. The spinal team will support you along the journey and there are a few options that they can consider supporting with treatment including:

1. Observation – monitoring of the progression of curvature with regular x-rays.
2. Spinal Bracing – wearing a supportive custom spinal brace to try to prevent curvature progression.
3. Surgery – for those who have more severe curvature or there is a fast progression of curvature.

Physiotherapy is not used routinely prior to surgery to support with management of scoliosis progression unless there is pain or a limitation to function (Romano et al. 2012). However, the physiotherapy team plays an important role following surgery, helping to get you back on your feet and moving again.

## Spinal Surgery

There are two main surgical approaches used in scoliosis surgery:

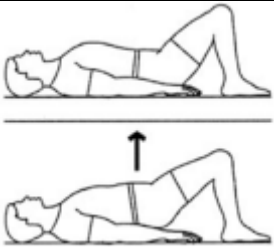
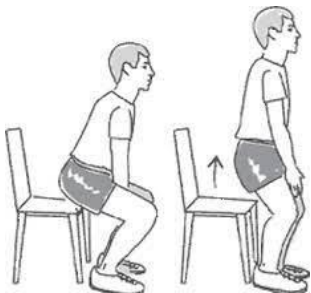
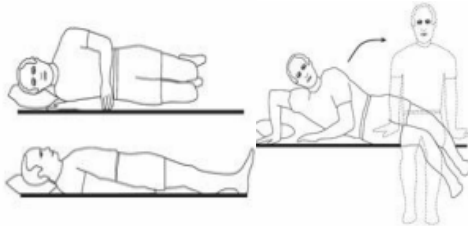
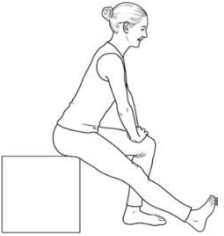
1. Anterior Spinal Fusion – the surgical cut is made on the side of your chest.
2. Posterior Spinal Fusion – the surgical cut is made on your back.

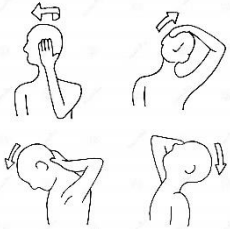
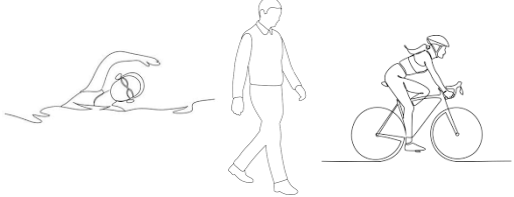
The surgical team will decide based on your curvature as to which approach is more suitable for you.

Surgery will involve inserting metal screws into some bones in your spine and then placing a metal rod through these to decrease the curvature. The bones continue to fuse into their new, more aligned position.

## How can I prepare for my surgery?

Prior to your surgery, there are no specific restrictions in what you can do, however there are a few specific things that you can do to maximise your outcomes following the surgery.

<p>Glute Bridge</p>		<p>Lying on your back with your feet together and knees bent.</p> <p>Push your feet into the floor and lift your hips in line with your knees.</p>
<p>Sit to Stand</p>		<p>Sitting in a chair, stand up without using your hands.</p> <p>Sit back down in the chair without using your hands.</p> <p>Take your time, aim to take five seconds to stand up and five seconds to sit down.</p>
<p>Log Roll</p>		<p>This is how you will be getting out of bed following surgery to protect your spine.</p> <p>Bend the knee opposite to the side you are rolling. Reach over to roll onto your side. Bring your legs forward off the edge of the bed. Push yourself up into sitting.</p>
<p>Hamstring Stretch</p>		<p>Sitting on the edge of your bed or chair, place one leg out straight in front of you.</p> <p>Rest your hands on your bent leg and then bend forwards and reach towards your toes.</p> <p>You should feel a stretch along the back of your leg.</p>

Neck Stretches		<p>Practise stretching your neck in different directions.</p> <p>a. Bring your ear to the same shoulder.</p> <p>b. Turn to look over your shoulder.</p> <p>c. Shrug your shoulders up and down.</p>
Gentle Exercise		<p>Any other activity you can manage will help build up your strength to make your muscles stronger and improve your recovery.</p>

- Keep active, building your strength prior to surgery will help with your movement following surgery.
- Stretch lots! Especially stretching your back, thigh and shoulder muscles.
- Practise movements we will use following your operation, like the log roll depicted below (The Scoliosis Handbook, 2019)

Depending on your current symptoms it is important to think about how you manage now with your day-to-day tasks and how this may differ following your surgery. If you have any specific concerns, please contact the spinal team to discuss them.

## What happens once I am in hospital?

Once you have had your surgery, you will be reviewed by the physiotherapy team the following day. Here is a guide of what to expect:

### Day 1:

Assessment of strength and sensation  
 Sit on the edge of the bed and / or standing  
 Provide with neck stretches  
 Assessment of breathing

### Days 2-3:

Standing  
 Progress to sitting in a chair  
 Walking as able

### Days 3-5:

Walking independently 100m around the ward  
 Sitting in a chair for 60 minutes  
 Managing the stairs independently

Whilst you are on the wards the physiotherapy team will try to review you twice a day. In between these sessions it is important to carry on with your exercises and movement, as you will need to be able to move around on your own or with help from your family at home.

### **Will I feel any pain?**

During your admission you will be seen by the pain team which works closely with the therapists to make sure your pain is under control. Movement is also a key factor to support with pain management by limiting the risk of muscles getting stiff and sore. Following spinal surgery, we do expect a certain level of pain as your bones and muscles adjust to their new positioning but we will work closely as a team to make sure you are comfortable.

### **Will I have to wear a brace?**

Following some surgeries, doctors may request you wear a spinal brace (TLSO brace) to support with your healing. This will be fitted by your physiotherapist during your admission and you will be able to practise putting it on and off.

The doctors will talk to you in more detail following the surgery as needed, about how long you will need to wear this and for how many hours in the day. Usually, they recommend wearing the brace for as long as is tolerated, for six weeks post-surgery.






### **What happens following discharge?**

There is no need routinely for a referral to physiotherapy services, as patients often make vast improvements on their own.

You will be provided with a leaflet by your physiotherapist with some continuing exercises and management strategies to support your return to home. Should you have any continuing issues with your mobility please contact your GP who will be able to refer you to your local physiotherapy services.

### **What exercises can I continue with following surgery?**

Please see below some generic timelines of when you can return to exercise, if you have any specific questions please discuss with your spinal team before completing.

Activity	6 to 12 weeks	3 to 6 months	6 to 12 months	1 year
 <p><b>Walking</b></p>	Aim for 3km a day on a flat surface.	Gradually increase the distances and start walking up hills.	As normal.	As normal.
 <p><b>Jogging</b></p>	None	Build up the distance over the next few months of a flat surface.	Practise changing direction and / or speed with gentle inclines and uneven ground.	As comfortable with no restrictions.
 <p><b>Cycling</b></p>	At six weeks, use a static bike with no resistance.	Start outdoor cycling ~4km on flat surfaces.	Build up distances and speed, can cycle up and down hills, but not mountain biking.	Mountain biking and BMX cycling allowed.
 <p><b>Gym</b></p>	Exercises prescribed by physiotherapist only.	Start on cross trainer or exercise bike with low resistance.	Start on treadmill, rowing machine or cross trainer with slow speed. Gently increase speed and resistance.	Re-start with weight machines.
 <p><b>Swimming</b></p>	None	Build up slowly with breaststroke or front crawl. No jumping or diving into the pool.	Jumping into the pool from the side is allowed.	Diving from higher height is allowed and butterfly stroke.

## What about going back to school?

After surgery you will still be in some pain and may take some time to recover. Prior to coming in for surgery you should talk to school about how schooling can be supported whilst you recover at home.

Patients usually return to school four to six weeks following surgery. There are some other things you can discuss with your school which can support a smooth return:

1. A graded return can be helpful to reintroduce you to the school day. This can involve going in for a few hours at first to get used to things and then building up to a full day.
2. A buddy system to support with carrying your heavy school bags; you should not carry more than 2kg for six months in a backpack following surgery.
3. Ask for some extra time to support you moving between classes to avoid the rush.
4. It may be difficult to sit in your chair for the whole lesson initially, so talk with your teacher about opportunities to stand up, stretch and use a pillow as needed.
5. Discuss with school about PE. You will not be able to do any PE or contact sports for at least three months so this might be a nice time to practise your other exercises

## Onward advice from the spinal service.

After your surgery you will be unable to get on an aeroplane or fly for six weeks.

All metal work used (the material could be any of these: Titanium alloy, Cobalt rods and carbon fibre screws) for your surgery is compatible with MRI scans and all other scans. There are no concerns with airport scanners. Please talk to your doctor regarding further information and advice as needed.

## Useful sources of information

The Scoliosis Association offers support and advice to anyone affected by scoliosis. Visit their website at [www.sauk.org.uk](http://www.sauk.org.uk) or call their helpline on 020 8964 1166.

## Contact us

If you have any questions or concerns about therapy support following scoliosis surgery, please contact the physiotherapy team at St George's Hospital on 020 8725 189 (Monday to Friday, 8:30am to 4:30pm).

**For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit [www.stgeorges.nhs.uk](http://www.stgeorges.nhs.uk)**

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## Additional services

### Patient Advice and Liaison Service (PALS)

PALS can offer you advice and information when you have comments or concerns about our services or care. You can contact the PALS team on the advisory telephone line Monday, Tuesday, Thursday and Friday from 2pm to 5pm.

A Walk-in service is available:

Monday, Tuesday and Thursday between 10am and 4pm  
Friday between 10am and 2pm.

Please contact PALS in advance to check if there are any changes to opening times.

The Walk-in and Advisory telephone services are closed on Wednesdays.

PALS is based within the hospital in the ground floor main corridor between Grosvenor and Lanesborough Wing.

**Tel:** 020 8725 2453 **Email:** [pals@stgeorges.nhs.uk](mailto:pals@stgeorges.nhs.uk)

### NHS UK

The NHS provides online information and guidance on all aspects of health and healthcare, to help you make decisions about your health. **Web:** [www.nhs.uk](http://www.nhs.uk)

### NHS 111

You can call 111 when you need medical help fast but it's not a 999 emergency. NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones. **Tel:** 111

### AccessAble

You can download accessibility guides for all our services by searching 'St George's Hospital' on the AccessAble website ([www.accessable.co.uk](http://www.accessable.co.uk)). The guides are designed to ensure everyone – including those with accessibility needs – can access our hospital and community sites with confidence.



<b>Reference:</b> PAE_PSF_01 <b>Published:</b> August 2024 <b>Review date:</b> August 2026
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