Spinal Deformity Service

Information about surgery for scoliosis

The information sheet has been prepared to help you understand as fully as possible about the operation for scoliosis. Please read this information carefully and if there are any further questions do not hesitate to ask.

Scoliosis is an abnormality of the spine which is quite common, affecting about 1 in 250 children. It usually occurs in girls, but can occur in boys as well and can occur at any time from birth until the end of growth. The most common type develops in teenage years and may cause a visible deformity of the back. It often becomes worse during teenage years, but at the end of growth this deterioration largely stops. Sometimes this deformity is very unsightly and sometimes it is barely noticeable. Surgery is considered in cases where there is risk of the curve progressing or has progressed beyond 40 degrees. Approximately 1 in 4 patients with scoliosis will require surgery.

Occasionally deformities become so severe that they do cause serious problems such as interference with the lungs and movement of the spine. In this case surgery is used to correct and to stabilise the spine and prevent further deterioration.

The surgery which is required to correct a deformity of the spine is very major. It is important to be aware of the risks involved and that although the end result should be an improved appearance, the spine will still be far from normal and there may be further problems in the future.

The operation normally involves attaching the curved part of the spine to one or two metal rods and joining (fusing) the vertebrae in that part of the spine so that they eventually join together. The operation may be done on the back of the spine through an incision down the middle of the back. The operation itself normally takes four to five hours. The patient may however be in the operating theatre for the greater part of the day which includes the time it takes to set the patient up for surgery.
Risks of surgery and blood transfusion

Blood loss is normal during surgery and a proportion of patients may require a blood transfusion either during surgery or shortly afterwards.

The main risk, of which you should be aware, is the possibility of damage to the spinal cord. If this happens it can result in paralysis of the legs and loss of control of the bowels and bladder. Fortunately this complication is rare. Worldwide it occurs in about 0.5 per cent of cases. Special precautions are taken to protect the spinal cord. In particular spinal cord monitoring is used so that if anything damages the spinal cord during the operation it can be detected immediately and hopefully the situation remedied.

The other risks are those which exist with any large operation. These include damage to the important blood vessels. Damage to one of the main blood vessels near the spine could result in life-threatening bleeding, although this is exceedingly rare.

Wound infections can occur and these sometimes do not become apparent until several months or even years later. If this occurs then it may be necessary to remove the metalwork from the spine.

There will always be a large scar on the back which may be unsightly, although it fades over the six months following surgery. Sometimes the skin around the scar can feel numb or tender.

Treatment after the operation

After the operation, most patients will be looked after on the Intensive Care Unit or High Dependency Unit for 24 hours, although occasionally it may necessary to remain there longer. There will also be a variety of wound drainage tubes and a tube in the bladder. The patient will usually be transferred back to the normal ward the following day and the various tubes will be removed over the course of the next few days.

It should be possible for the patient to get out of bed after one or two days and then gradually become more mobile on the ward. Patients are normally ready to leave hospital five to seven days after their surgery.

After discharge from hospital the patient should be able to do all activities at home and should be able to return to college or work in four to eight weeks although this can take longer. It takes several months for the bone fusion to happen and the spine has to be considered somewhat weaker than normal until it has fused.

It is most important that you fully understand the nature of the operation which you are about to have. If you have any further questions after reading this leaflet the team will be only too happy to discuss them with you.
Spinal deformity service team
- Consultant Orthopaedic Spinal Surgeons: Mr J Crawford and Mr D Hay
- Specialist Registrar
- Consultant Anaesthetist
- Superintendent Physiotherapist
- Scoliosis Coordinator – 01223 216854

Relatives can also stay on site at: Pemberton House (Tel. 01223 868300)

Decision making process
- Counselling about scoliosis surgery
- MRI
- Lung function testing
- Medical risk assessment

Following these assessments and counselling session the patient will have an appointment with the consultant, if the decision is made to proceed with surgery at this point, the case will be put forward for discussion at a multi disciplinary meeting. If the team are agreed that no further investigations are necessary prior to surgery the patients name will be placed on the waiting list for surgery.

Before the operation
When we have a potential date for your surgery you will be asked to attend the outpatient clinic for a few hours for a ‘pre-operative assessment’. During this visit the following tests are likely to be done to help plan the operation and make sure that you are fit for surgery:

<table>
<thead>
<tr>
<th>Test</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-rays</td>
<td>of your spine to help plan the operation</td>
</tr>
<tr>
<td>ECG (electrocardiograph)</td>
<td>to assess your heart</td>
</tr>
<tr>
<td>Blood tests</td>
<td>also form part of the assessment of fitness for surgery. Blood will be crossmatched in case you should need a blood transfusion during surgery</td>
</tr>
<tr>
<td>Spinal Cord monitoring</td>
<td>which will be used during surgery</td>
</tr>
</tbody>
</table>

Prior to your admission you are welcome to visit the ward to familiarise yourself with the set up.
Admission
You will be admitted to the ward the day before your operation.

Unfortunately if there are unforeseen emergencies, there is a chance that your operation may be cancelled or postponed if no appropriate bed for your post-operative care is available.

Day of the operation
You will be in the operating theatre most of the day, and then transferred to the ward.

After the operation

<table>
<thead>
<tr>
<th>Drips and drains</th>
<th>You will be attached to drips and drains including a catheter. These will gradually be removed as you recover.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Pain control</th>
<th>You will be attached to a special pain controlling system called PCAS (Patient controlled analgesia system) which allows you to control the amount of pain-killer that you receive.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Physiotherapy</th>
<th>Breathing exercises</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- foot and ankle exercises</td>
</tr>
<tr>
<td></td>
<td>- static muscle exercises.</td>
</tr>
<tr>
<td></td>
<td>- leg and trunk control exercises.</td>
</tr>
</tbody>
</table>

You will be assisted to roll in bed until you can turn yourself comfortably.

Once trunk control has been achieved you will be helped out of bed to stand. Patients often feel a little unsteady at first and so this may not be achieved at the first attempt.

You will be able to start sitting for short periods for functional activities such as toileting and eating.

Once you are able to stand for short periods, an x-ray of the spine will be performed to assess the position and for comparison with subsequent x-ray.

The physiotherapist will assist and monitor you as you mobilise (walk) around the ward. You will then be able to walk little and often and gradually increase time sitting.

Once safety and comfort allow, you will be discharged home between five to seven days after your operation.
First six weeks
Gradually increase the frequency and length of time spent sitting, standing and walking. Decrease the amount of time spent lying and resting.
If your back becomes more uncomfortable then you are probably doing too much. You will probably benefit from lying down for a rest in the early afternoon.

After six weeks
- Review appointment in clinic
- Return to college or work part time, for example half days or every other day
- Attend outpatient physiotherapy and hydrotherapy

After three months:
- Return to college or work full time
- Can go swimming and cycling

Six months
- Review in clinic
- Increase time and distance walking, increase pace as able
- Aim to increase fitness.
- Non-competitive swimming, for example lengths of a pool
- Cycling/riding/jogging increasing to running
- Acceleration/deceleration and turning
- No contact sport

12 months
- Competitive contact sport

Useful organisations
Scoliosis Association UK (SAUK) – leaflet from clinic 6 or www.sauk.org.uk
Scoliosis Research Society – www.srs.org click on patient/public information

If you would like to be put in touch with a patient who has had scoliosis surgery, please contact the Scoliosis Coordinator (TEL: 01223 216854)
We are now a smoke-free site: smoking will not be allowed anywhere on the hospital site. For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

**Other formats:**

If you would like this information in another language, large print or audio, please ask the department where you are being treated, to contact the patient information team: patient.information@addenbrookes.nhs.uk.

Please note: We do not currently hold many leaflets in other languages; written translation requests are funded and agreed by the department who has authored the leaflet.

**Document history**

Authors: Sarah Charlton

Department: Cambridge University Hospitals NHS Foundation Trust, Hills Road, Cambridge, CB2 0QQ [www.cuh.org.uk](http://www.cuh.org.uk)

Contact number: 01223 245151

Publish/Review date: April 2016/April 2019

File name: PIN2317_information_surgery_scoliosis_v4.doc

Version number/Ref: 4/PIN2317