Spinal deformity service

Neuromuscular scoliosis – information about surgery

This 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 you have any further questions do not hesitate to ask.

The surgery which is required to correct a scoliosis deformity of the spine is a major procedure. It is important to be aware of the risks involved and that although the end result should be a stable spine, the spine will still not be entirely normal and there may be further problems in the future.

The operation normally involves attaching the curved part of the spine to two metal rods and fusing the vertebrae in that part of the spine so that they eventually join together. The operation will be done on the back of the spine through an incision down the middle of the back. The anaesthetic and surgical procedure normally takes the best part of a day.

Risks of surgery

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 (1 in 200) of cases. Special precautions are taken to protect the spinal cord. In particular spinal cord monitoring is used so that any problems can be detected as early as possible to minimise the risk of paralysis.

In the event that the spinal cord monitoring signals become a cause for concern during the procedure, it may be necessary to remove the implants to minimise the risk of paralysis with a view to returning to theatre a week or two later to complete the procedure.

The other risks are those which exist with any big operation. These include a very low risk of damage to the important blood vessels. Damage to one of the main blood vessels near the spine could result in life-threatening bleeding.
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, though it fades with time. Often the skin around the scar can feel numb or tender.

**Treatment after the operation**

After the operation, patients will be looked after on the intensive care unit or the high dependency unit for a day or two and may be kept anaesthetised and on a ventilator. There will also be a variety of wires for monitoring purposes and a tube in the bladder called a catheter. The patient will usually be transferred back to the normal ward the following day. The various tubes and wires will be removed over the course of the next few days.

There are no restrictions with mobilising following the operation and patients will be regularly repositioned. It should be possible for the patient to get out of bed after one to two days. Occasionally it may be necessary for a spinal brace to be worn for a few weeks. Patients are normally ready to leave hospital about five to seven days after their surgery.

After discharge from hospital the patient should be able to do normal activities at home and should be able to return to school after four to eight weeks. It takes a few months for the spinal fusion to take place and the spine has to be considered somewhat weaker than normal until it is fused. The patient should be able to finally resume all everyday activities at about six months and sport after a year.

It is most important that you fully understand the nature of the operation. If you have any further questions after reading this leaflet the team will be only too happy to discuss them with you.

**The team**

Consultant orthopaedic spinal surgeons – Mr Crawford and Mr Hay
Specialist spinal deformity physiotherapists
Paediatric scoliosis/ neurosurgery clinical nurse specialist (01223 256658)
Scoliosis co-ordinator (01223 216854)

**Assessment and decision making process**

- Counselling about scoliosis surgery with physiotherapist
- MRI (magnetic resonance imaging)
- Lung function testing
- Medical risk assessment
Multi-disciplinary meeting

The case will be put forward for discussion at a multidisciplinary meeting to be discussed with both consultant surgeons, paediatric respiratory consultant, anaesthetist, specialist physiotherapist and specialist nurse. Following this discussion, and if no further investigations are needed the patient will have an appointment with the consultant. If the decision is made to proceed with surgery at this point then the patient will be added to the waiting list.

Before the operation

Prior to the date of your surgery you will be asked to attend the 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:

- X-rays of the spine to help plan the operation
- ECG (electrocardiograph) to assess the heart
- Blood tests also form part of the assessment of fitness for surgery. Blood will be cross matched in case you should need a blood transfusion after surgery
- Spinal cord monitoring which will be used during surgery
- Consent forms discuss and sign with consultant

Prior to admission you are welcome to visit the ward to familiarise yourself with the set up.

Admission

You will stay on the hospital site, either on the ward or in accommodation on the hospital grounds, called Elsworth House, the night before your operation or you may be admitted on the morning of surgery.

Children under the age of 16 will be looked after on ward D2 (telephone 01223 217549). Each patient’s bed has a ‘pull out’ bed beside it that a parent or friend/ carer can stay on.

Relatives can also stay on site at:
- Pemberton House (telephone 01223 868300)
- Acorn House (telephone 01223 586806) [www.sickchildrenstrust.org](http://www.sickchildrenstrust.org)
Surgery will only proceed on the morning of surgery if there is an appropriate post operative care bed available. Unfortunately if there are unforeseen emergencies, there is a chance that your operation may be cancelled.

**Day of the operation**

Pre operative checks are carried out and you will be taken to the operating theatre and anaesthetised.

You will be in theatre most of the day, and then transferred to the intensive care unit in the evening where you will be nursed on a one to one basis. Observations will be done hourly and pain relief will be monitored.

**After the operation**

**Day one**

Drips and wires

Patients are attached to drips, wires and a catheter.

These will gradually be removed as you recover.

Pain control

Will be administered as appropriate.

Physiotherapy

Breathing exercises — huffing and coughing

Circulation — foot and ankle exercises

— static muscle exercises

You will be assisted to roll in bed for the first 24 hours.

**Day two onwards**

Once you are comfortable being moved around the bed, you will be helped out of bed to sit and then stand, or transferred using a hoist out into a wheelchair, depending on your normal level of mobility. You may 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.

**A check x-ray of the spine will be performed.**

**Day two to four**

Gradually increase the frequency and length of time spent sitting and mobilising if appropriate.

**Once safety and comfort allow, you will be discharged home.**
Two to six weeks
Gradually increase the frequency and length of time spent sitting, standing and walking. Decrease the amount of time spent lying and resting. You will probably benefit from lying down for a rest in the early afternoon.

Six weeks
- Return to school part time (such as half days or every other day)
- Outpatient clinic appointment and check x-ray

Two to three months
- Return to school full time.

4 – 12 months
- Aim to increase fitness.
- At four months: Start leisurely swimming/ hydrotherapy

12 – 15 months
- Cycling, riding (if appropriate)

Patients are reviewed in the clinic with x-rays for 1-2 years.

Useful organisations
Scoliosis Association UK (SAUK) – leaflet from clinic 6 or www.sauk.org.uk

The British Scoliosis Society – www.britscoliosissoc.org.uk

Scoliosis Research Society – www.srs.org

If you would like to be put in touch with a patient who has had scoliosis surgery, please contact the scoliosis co-ordinator on 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.

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