



ROYAL CHILDREN'S HOSPITAL
ORTHOPAEDIC UNIT

SPINAL SURGERY

PRIOR TO HOSPITALISATION:

- It is best that your child is as fit and healthy as possible before surgery. A well balanced diet and plenty of exercise prior to surgery will help recovery. Iron and Multivitamin supplements may also be considered.
- Please visit your child's school prior to admission to arrange schoolwork for your child while they are not able to attend school. Your child will be off school for about six weeks and starting back with half days initially. Check with your surgeon before returning to school.
- Children commonly have constipation following this kind of surgery. If your child has pre-existing constipation, it is recommended that your child uses their bowels the day prior to surgery. Your local pharmacist will be able to assist you with medication if required.
- A Pre Assessment Clinic is arranged prior to surgery.
- Your child may require some of the following tests:
 - X-ray – may include a stretching and bending xrays,
 - Blood test – to assess your child's overall health,
 - Clinical Photographs – in their underwear for their hospital file,
 - ECG – stickers are placed on the child's chest to look at their heart function,
 - Lung Function Test – this test involves blowing into a special mouth piece to assess lung function.
- You will also sit down with a nurse to discuss the hospital stay, medications, and care of your child at home. Please bring any questions you have to this appointment.

WHAT TO EXPECT DURING YOUR HOSPITAL STAY

What to bring:

- You will need to bring along your child's pyjamas; boxer shorts, cotton singlets, silky pj's or anything that will stretch a little is usually best.
- Dressing gown and slippers for when they get out of bed.
- For girls hair ties without metal on them; for long hair it is best to braid/plat hair to prevent it from knotting.
- If you wish you can bring a pillow and rug from home but not essential.
- Bring own toothbrush and toothpaste, all other toiletries provided including hairdryer.
- You may like to bring your own dvd/videos/ipod/laptop (dvd player & vcr available on ward), ensure they are labelled appropriately. Any equipment that needs to be plugged into wall MUST be checked by our engineering department prior to use, let your nurse know if you have something that needs checking. Families are responsible for any valuables brought onto ward.
- You may bring your mobile phone; however it MUST not be turned on in patient's rooms. You can use mobile phones near lifts outside ward. Phone charges should be checked by engineering first.

- If a parent is staying overnight it is recommended you bring your own pillow, all other linen is provided.

On Admission:

- Your child comes in for admission the day of or the day before surgery, you will be advised as to which is most appropriate.
- On arrival to the ward your child will require a blood test to determine their blood type, in case they require a transfusion post surgery.
- Your child will be seen by the physiotherapist and taught breathing exercises for after surgery.
- Your child will be seen by the Anaesthetist and Orthopaedic Consultant.
- Your child will be taught how to use 'Patient Controlled Analgesia' (P.C.A.). A computer-controlled pump that delivers medicine through your child's IV. When your child starts to feel pain, he/she can push a button and receive a small of medicine (usually Morphine). Children as young as five years of age can use this method of pain relief.
- You will be informed fasting times. (What time to stop eating and drinking)

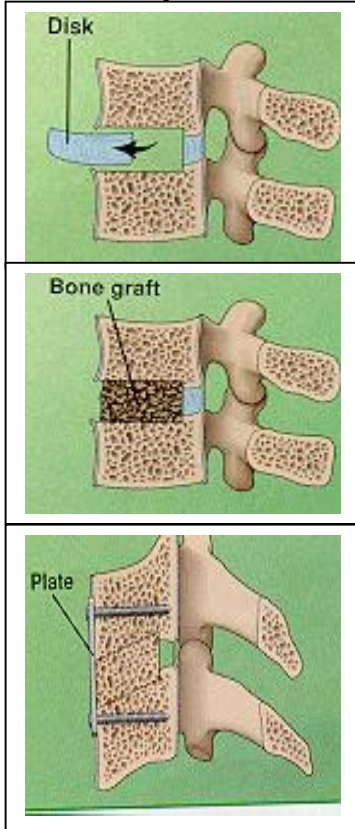
Prior to Theatre:

- Your child will be given a white gown to put on prior to theatre and two name bands.
- Your child will have some white cream applied to the back of his/her hand, this will numb the skin, so that the needle in the operating theatre does not hurt.
- Your child may require an antiseptic wash to the area where the operation will be performed.
- Sometimes the time of your child's operation changes due to unexpected circumstances. You are able to check with the nursing staff if there is a delay.

What does the operation involve?

Spinal fusions involve the use of a bone graft, metal rods and screws. Usually the bone graft is taken from a rib your child's hip. The metal work is generally not removed and stays permanently attached to the spinal cord. Spinal fusions may be anterior (front) spinal fusions or posterior (back) spinal fusions. The rods have different names, examples are, Luque, CD and Moss-Miami. The following pictures are a guide only.

Anterior Spinal Fusion:

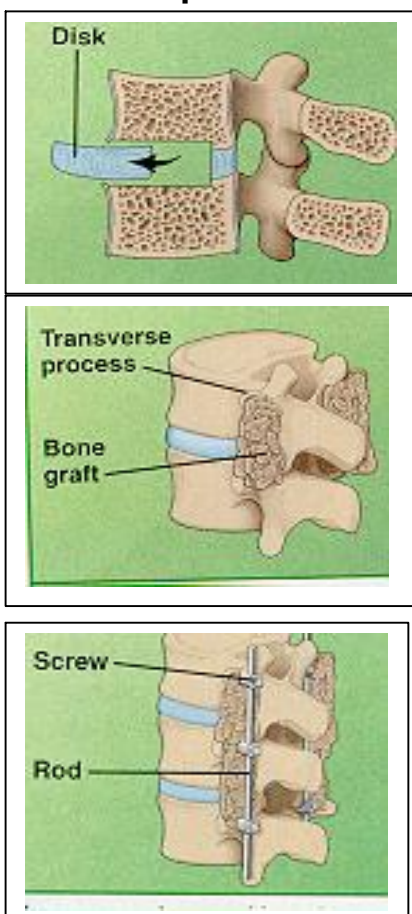


1. The disc between the vertebrae may be removed

2. The bone graft is then packed into the now empty space between the vertebrae.

3. A metal support, rod and screws are inserted. Over several months the bone graft and vertebrae fuse into a solid unit.

Posterior Spinal Fusion:



1. The disc between the vertebrae may be removed

2. The bone graft is placed between the “wings” of bone on the sides of the vertebrae

3. Metal rods and screws are attached to the bony part of the spine (Spinous Process)

4. Over several months, the bone graft and vertebrae fuse into one solid unit

During The Operation:

- When it is time for your child's operation, you will all be taken to a room near the operating suite called, 'Pre Op Hold'. You are welcome to stay with your child in this area.
- A parent or adult closest to your child is able to come into the room where your child will go to 'sleep'.
- When your child is asleep you will be asked to wait in the waiting room, which is located just outside the operating theatres. You will have time to go for a walk or visit the cafeteria while waiting.
- Your Orthopaedic doctor will speak to you after the operation either in the recovery room or on the ward.
- A nurse from the recovery room will call you when your child wakes up from the anaesthetic. You will be able to sit with your child until he/she is taken back to the ward, this usually takes about half an hour or so.

Post -op Care on the Ward:

- On the ward nursing staff will closely monitor your child; take frequent blood pressures, pulse and temperature.
- Frequent observations of his/her feet to check circulation, movement and sensation.
- Your child may feel sick and possibly vomit following this operation; medication will be given for this.
- Your child will not be able to drink or eat for a few days after the operation. Once the doctor has given permission to start drinking, your child will start with small sips gradually increasing amounts of fluids as tolerated. The day following this, your child may begin eating a light diet if he/she is tolerating the sips of water and not vomiting.
- Your child will have an intravenous drip (IV) to give pain relief and fluids, until he/she can drink enough fluids.
- Your child may require some oxygen for a few days, through a mask or a small tube in the nose.
- Your child will have a large dressing over the wound. It is not unusual for the wound to bleed a small amount, and nursing staff will check the dressing frequently.
- Your child may have a drain tube; this tube will come from under the dressing to a bottle attached to the side of the bed.
- Your child will be encouraged to do breathing exercises 2 to 3 times a day.
- Your child may have a catheter inserted into the bladder, to drain urine. A bed pan will be used for bowel motions.
- Bed rest is usually required for three to five days prior to standing and walking. Your child will need to turn every few hours as not to get any pressure marks on his/her skin.
- Your child may require a brace before he/she is allowed to get out of bed. This brace will be made in the hospital by the Orthotics department.
- Your child will have washes in bed for the first 4 - 5 days, then can have a shower on a special shower bed, at this stage the dressings will be removed.
- Your child will require a post-op X-ray.
- A physiotherapist will teach you and your child the correct way to get in and out of bed.

- After an Anterior Release your child will be allowed to sit up, mobilise and go home after 6 – 7 days.

Pain Relief:

- We aim to keep your child as comfortable as possible. Your child will have one of 2 types of pain relief:
 1. “PCA” - Patient Controlled Analgesia. This is a Morphine pump. Your child has a button which can be pushed to deliver a dose of Morphine for pain or before turning and moving. This is a safe means of pain relief controlled by your child. Only your child may press the PCA button, nurses and parents are not to press the button.
 2. Morphine Infusion - the nursing staff controls this infusion. The amount of Morphine given can be increased or decreased as required.
- The anaesthetist will decide which method of pain control will be best for your child.
- The Pain Service will visit your child twice a day and are on call 24 hours a day to assist with you child’s pain management.
- Your child will also be given paracetamol and other medications to help maintain comfort.
- After approximately 4-5 days your child will be given oral analgesia instead of intravenous medication. This is then what they will be discharged home on.

Discharge:

- Discharge occurs when your child's pain is manageable with oral analgesia, is tolerating adequate diet and fluids and is able to mobilise short distances.
- If your child requires a brace, it needs to fit correctly. The Orthotics department may adjust the brace where required.
- The surgeon will review your child prior to discharge.
- Hospital stay will vary, depending on your child’s recovery. The average length of stay is approximately 7 days.
- Follow up arrangements to see the doctor will be discussed before you leave the hospital, but usually it is 6 weeks post surgery.

Home Care

Pain:

It is important to continue to give your child analgesia regularly for the first week at home to control the pain and not wait for the pain to become severe. Paracetamol and a long acting morphine will probably be required. You will be given a prescription and thorough education from the nursing staff before you are discharged. The Pain Service will contact you at home to help with the weaning of medications.

Bowel Care: Codeine and Oxycodiene can cause constipation with prolonged use. Ensuring your child drinks plenty of water and eats adequate amounts of fresh fruit and vegetables will decrease the risk of constipation. It will also ensure your child does not lose too much weight. Also ensuring your child is walking regularly will help with their digestion. However if your child does suffer from constipation at home your local chemist will be able to recommend the appropriate laxatives for your child.

Hygiene:

Your child will need assistance in the shower for the first couple of weeks at home. It is recommended that your child sit on a chair in the shower rather than stand (plastic garden chair is suitable). The wound may be left uncovered or dressed. It is important to keep it clean and dry between showers. The nurse will instruct you how to care for the wound and the dressing before you leave the hospital.

Back Care and Activity:

While in hospital, and after discharge, you will need to move safely to protect your back while it is healing. The below pictures show you how to move safely, it may be useful to try this at home before you are admitted. If you need to bend for any reason, use your legs not your back. Your child will need to take it very slowly to begin with, for example; small gentle walks gradually increasing as tolerated. The brace should be worn as instructed.

Children with a Disability:

Your child will need a hoist for transfers post operatively. The sling we recommend is the LIKO hard back sling. These can be loaned through the Equipment Distribution Centre at the hospital. Your child is also eligible for support postoperatively from Post Acute Care (PAC). Services they provide include respite, assistance with hygiene and home help.

Complications:

Wound infection may occur but is uncommon. If you notice any redness, swelling or the wound feels hot to touch or has an offensive smell, contact your local doctor or visit the hospital Emergency Department. Constipation can also have an effect on your child's recovery time, so ensuring your child has regular bowel actions is very important (See: "Bowel Care" for further instructions).



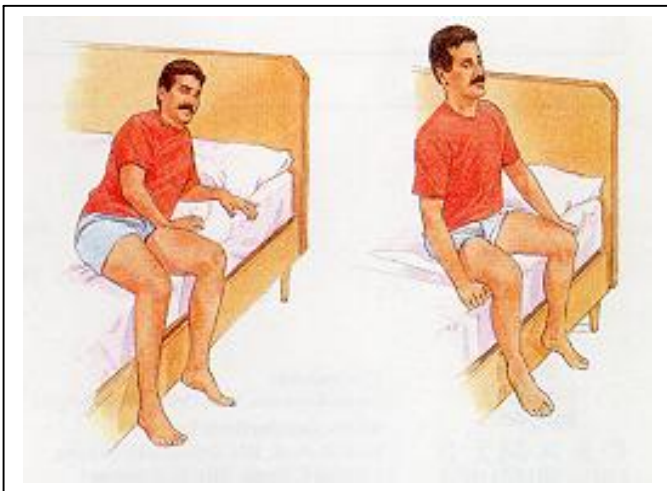
Lying in bed:

- Lie on your back with a pillow under your knees
- When rolling, keep your ears, shoulders and hips in a straight line.



Do not twist or bend at the waist. Keep your knees bent and together.

- Lie on your side with your knees bent and a pillow between your knees (you may also want one for behind your back)



Getting out of bed:

- Lie on your side near the edge of the bed.
- Push your body up with one elbow and the other hand.
- At the same time direct your feet towards the floor.
- Keep your body in a straight line, do not twist or bend.



Standing up:

- Move to the edge of the bed or chair.
- Lean forward from the hips. Do not bend from the waist.
- Use the armrests or side of chair for support.
- Use your leg muscles to push your body up to standing.

Sitting down:

- Basically the opposite to standing up.
- Back up to the chair or bed.
- Lean forward from the hips.
- Use your leg muscles to lower yourself to the edge of the chair, then once seated move back into the chair.



Turning:

- Stand with your feet shoulder width apart.
- When you turn move your feet, don't twist your body.

Contact Numbers:

4 North: (03) 9345 5303

Orthopaedic Outpatients: (03) 9345 5310

Royal Children's Hospital: (03) 9345 5522

Joanne Noonan – Scoliosis Coordinator: (03) 9345 5794

E-mail: jo.noonan@rch.org.au

Useful Web sites –

Four very helpful Web sites giving general information about scoliosis:

www.spinecarefoundation.org

www.consultingorthopedists.com

www.srs.org

www.scoliosis.org.au

Written by past patients of their experience during and after hospitalisation:

home.iprimus.com.au/sffrost

http://homepage.mac.com/woods_surgical

www.emelinasscoliosis.com