Patient Information Booklet

GROWING RODS SPINAL SURGERY

Queensland Government

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Briz Brain & Spine

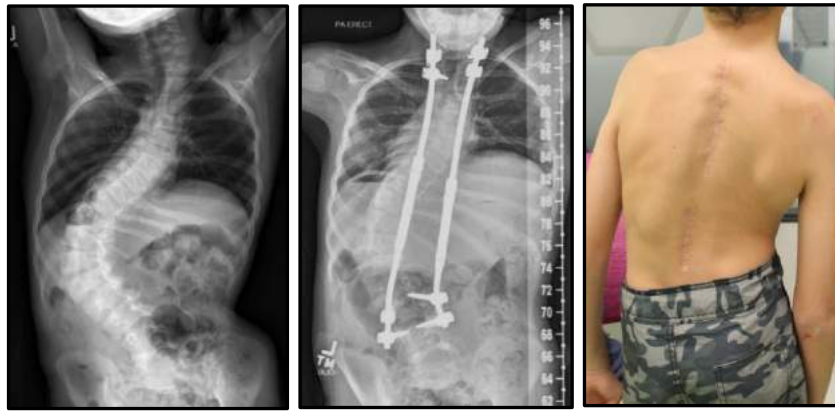
All information contained in this booklet has been supplied by qualified professionals as a guideline for care only. Seek advice from your specialist for specific concerns regarding your child's health or surgery.

GROWING RODS SPINAL SURGERY

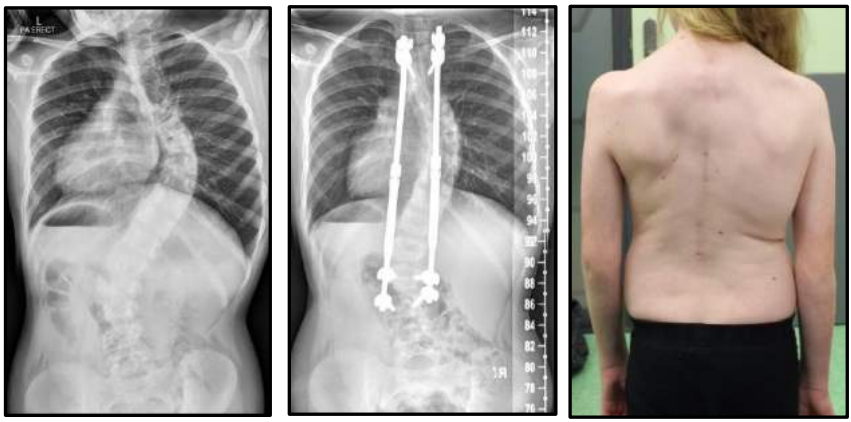
This booklet aims to provide you and your family with some general information about your child's stay at the Mater Hospital, expectations when they are discharged, and to help answer any questions you may have.

What is Growing Rods spinal surgery?

This surgery is required for younger patients who have a moderately severe scoliosis or complex spinal deformity which continues to worsen and is not treatable by bracing. It usually involves both the thoracic and lumbar spine. While asleep facedown, two short incisions are made at either end of where the growing rods are to be placed. Usually two custom made titanium rods with special screws and hooks are attached carefully to the spine at each end. The aim is for your child's spine to continue to grow while the rods are in place. Spinal cord monitoring is used to keep a check on the impulses from the brain to the limbs to ensure the spinal cord is functioning normally during surgery. The surgery is a 'minimally invasive' procedure and as such any blood loss is expected to be minimal and the time in theatre under anaesthetic is approximately 3 - 4 hours.



Example 1. Thoracolumbar Scoliosis X-Ray, Dual Growing Rods T2-L4 & scar after surgery



Example 2.

Thoracic & Lumbar scoliosis, Dual Growing Rods T3–L3 & scar postop

The goal of this surgery is to prevent the scoliosis or kyphosis from continuing to get worse while the spine is allowed to grow, and to gain some correction as best is possible. The titanium rods have the special ability of being able to be lengthened regularly (approximately every six months), as your child grows. These lengthening procedures are performed mostly as a day procedure and very occasionally may require an overnight stay. It is expected that the lengthening procedures should not disrupt your child to any great extent. There is usually no need for a brace to be worn while you child has growing rods. Your surgeon will advise when it is time for a permanent surgical solution, once your child has grown sufficiently. At this time the growing rods will be removed and a final correction with different rods and fusion will be performed.

Preop appointment with your doctor:

- The doctor will give you detailed information about the surgical plan and you will sign consent forms

- You may ask any questions or raise concerns you have regarding the surgery or hospital stay

- We will discuss the guidelines for your child's return to normal activities after the surgery (see Table page 12). These are general guidelines only of when you may return to these activities – please discuss any specific activities with your doctor. Please note: Parental supervision is required at all times.

- Your child will require the following tests that will be arranged during this visit:
  - ✓ blood tests
  - ✓ ECG
  - ✓ spine X-Rays or EOS imaging (if required)
- Further investigations may be required after your child's surgery

- It is very important to advise the doctor if your child is taking any medication which may thin the blood as this can result in bleeding during surgery (eg; Aspirin, Nurofen, fish oil, krill oil or herbal extracts)

Before admission to hospital

If your child has any of the following symptoms, please notify the doctor's office ASAP prior to admission.

Symptoms including:

- general 'unwell' feeling
- ear infection
- cough or cold
- vomiting or diarrhoea
- fever
- contact with any infectious illnesses (e.g. chicken pox, measles)
- any scratches or broken skin (including acne).

Before surgery: have you discussed the following with doctor?

- your plans for staying with your child while they are in hospital
- your child's medical condition/s and any previous operations they have had
- the expected recovery outcomes (discharge criteria) for spinal surgery
- your child's regular medicines, including herbal or homeopathic tonics
- any allergies or reactions to medicines, iodine, soap, tapes or foods
- fasting instructions before the operation
- how your child communicates pain
- does your child have a bowel routine

What to bring to hospital

- pyjamas and/or clothes that are front opening for easier dressing
- toiletries, including toothbrush, toothpaste, hairbrush
- comforters (e.g. blankets, teddy bears, pillow)
- your child's regular medications, including herbal or homeopathic tonics
- relevant medical information
- nappies or continence aids as required by your child
- special dietary requirements
- your child's formula and any special bottles, teats, cups or spoons that your child uses
- electrolyte drinks (eg. Gatorade)
- Mobile phone, iPad, favourite DVD's (Free Wi-Fi available)

The Day of Surgery

You will be admitted to the Mater Hospital (Level 5 Welcome Lounge) the morning of the surgery in most cases. The morning of surgery, just before you leave home, your child will need to have a shower or bath and wash themselves with antibacterial wash. If your child is allergic to iodine or soap, please discuss other options at your preadmission visit.

Your child will be fasting as per the preop fasting instructions provided. This means that they cannot have anything to **drink or eat** (including water, chewing gum and/or lollies) before the surgery.

On the day of surgery, you and your child will be seen by the anaesthetist and the doctor prior to the surgery. It is important to tell the doctor, anaesthetist or admitting nurse if your child is taking any medicines, including herbal or homeopathic tonics. Some children with certain medical conditions will require a night in the Paediatric Intensive Care Unit (PICU) following their surgery.

The admitting nurse will apply an identification band to your child's wrist or ankle, which stays on for the duration of admission for identification and safety reasons. If the identification band falls off or is pulled off, please notify nursing staff as a new one will need to be applied. The admitting nurse will ask about your child's medical/surgical history and any particular needs your child may have while in hospital so that they can properly plan to meet your child's needs.

Your child will be weighed and vital signs (temperature, pulse, respiratory rate, blood pressure) will be recorded. Please discuss with the admitting nurse how your child communicates pain. This will help staff recognise and manage post-operative pain, to keep your child as comfortable as possible. Your child's usual bowel medicines and routine should also be discussed to avoid any problems after surgery.

Your child will be asked to wear a hospital gown. Long hair should be plaited (no metal hair bands please). The anaesthetist may request medicine be given to your child before the operation, which can cause drowsiness. It would be advisable to take your child to the toilet before any pre-medication that may be arranged. If you child has had a pre-medication given, your child should remain on their bed and supervised at all times.

Your child will walk into the Operating Theatre lobby area accompanied by a parent and a nurse. In the Operating Suite Reception area, the nurse will check that your child's identification band is correct and ask you questions relating to the planned surgery. While your child is having their surgery, you may wait in the designated parents' lounge. If you wish to leave this area, please inform the receptionist of your contact number.

Post- operative phase

After surgery, your child will return to the Orthopaedic Ward. A nurse will call you when it is possible for you to see your child. It can be distressing to see your child after the operation—they may be sleeping, crying or be quietly awake. Your presence when your child 'wakes up' is important, as they will need to see a familiar, caring face. Often children will begin to cry when they see a familiar face/parent.

Your child can expect to have the following:

- monitoring equipment
- intravenous (IV) therapy—(a 'drip') containing pain relieving medicine
- epidural line for pain relief
- urinary catheter
- large dressing covering their wound.

The nurse will be monitoring your child regularly. This includes checking temperature, pulse, breathing rate, blood pressure, circulation, intravenous therapy, wound dressing and their level of comfort. When your child is fully awake after the surgery, they will be able to have clear drinks, such as Gastrolyte, cordial, soup and juice. Electrolyte drinks are recommended.

It is not uncommon for your child to feel sick after an anaesthetic and in the first few days following the operation. If this becomes a persistent problem, medicines may need to be given or altered.

It is important your child's pain is controlled and they are comfortable. In the first few days after surgery, your child will have strong pain medicine either through an intravenous (IV) line or an epidural. The nurses will monitor your child's progress every day while strong pain medicine is required. Other pain relieving medicines may also be given by mouth. The nurse will assess your child's level of comfort using a pain assessment scale. You will be actively involved in helping the nurses understand and monitor your child's level of comfort.

Your child will have IV therapy for two to three days following surgery until they are able to tolerate a normal diet and fluids. Please ask the nurse before giving your child anything to drink or eat. The nurse will be recording the amounts that your child is drinking and eating.

Epidural infusions for pain relief may continue for two to three days before removal by nursing staff. A urinary catheter (when in place) will be taken out by nursing staff after removal of the epidural. The dressing on your child's back will be changed about this time, usually on the third day following surgery. A waterproof dressing will be applied to allow for showering or bathing. Prior to this, your child will have a daily sponge in bed.

The nurse will be recording the amount of urine that your child is passing. The nurse will also record when your child has a bowel motion. After the operation, your child may not have a bowel motion for a few days. This may be because your child is not having their normal diet and/or the pain medicines may cause constipation.

Your child can sit up or stand as soon as they are able to do so. The physiotherapist will assist with this as well as with breathing and circulation exercises.

Each day your child is in hospital, they will be visited by their team of doctors to make sure they are recovering well. Blood tests and chest X-Rays may be done in the post-operative period. If your child has been referred to a Paediatrician, this team may also see your child. If you have any concerns with your child, please speak with the nurse or the doctors caring for your child.

Physiotherapy during your stay

A physio will visit your child in hospital and each day to assist with:

- deep breathing exercises and activities, coughing techniques
- moving about in bed while taking care of the spine
- getting in and out of bed correctly with assistance as required
- wheelchair modifications (if required)
- walking and stair climbing (if able)
- providing a home program tailored to suit your child's individual needs.

Independent patients undergoing growing rod surgery

The physiotherapist will assist your child to get out of bed correctly on the first day after surgery using a log rolling technique. Your child may sit on the edge of the bed for a short time. From the next day onwards your child will sit out of bed at least twice a day and gradually increase the distance walked and their independence. Breathing exercises are important and your child will be encouraged to do these regularly. Before your child goes home, they should be able to:

- independently get in and out of bed and on/off chairs
- independently use the bathroom and toilet
- walk up and down stairs
- complete the six minute walk test (as able)
- be familiar with the Return to Activity guidelines.

Wheelchair bound patients undergoing growing rod surgery

Whilst in hospital, your child will be assisted in/out bed by two staff members. Rarely, a brace may be required after surgery. If a brace is ordered, it should be worn whenever your child is sitting up or being moved about.

Wheelchair patients who were independent with transfers before surgery may take weeks to regain their previous level of independence, as they recover. Your physiotherapist will work with you/your family and your community carers to provide strategies to meet any temporary limitations. Your child will be sat up on day one following surgery and will be normally out of bed in their wheelchair on day two for increasing time periods. Your child may have an increased need to have rests throughout the day for the first week or two after surgery. Your child will be reviewed by the physiotherapist prior to discharge from hospital and you will be advised what activities and if any community physiotherapy may be appropriate.

Discharge phase

Your child will have X-rays or EOS imaging before leaving hospital. Your child will be ready to go home when the doctor considers them ready for discharge, and when they:

- are walking independently or mobilising as per preadmission
- are tolerating a well-balanced diet
- are tolerating normal daily activities
- have effective control of pain with oral analgesia (tablets/medicine)
- the wound is healing well
- your child will be seen in the Spine Outpatients Clinic approximately 8 weeks after surgery

At all times please seek medical advice if:

- your child has a fever, chills, redness, warmth or foul smelling drainage at the wound site
- your child's pain increases/worsens
- you have any questions or concerns.

Scoliosis Comic Book

http://www.medikidz.com/Redirection/Scoliosisau/English/index.html
or
Download the App – Search 'Medikidz explain Scoliosis'

Scoliosis information websites

www.niams.nih.gov/health_info/scoliosis
www.srs.org/patients-and-families
www.iscoliosis.com
www.spineuniverse.com/conditions/scoliosis
www.scoliosis-australia.org

Return to activity guidelines	1 -2 weeks	8 weeks	3 months	6 months
Shower	Yes			
Walking	Yes			
Passenger in car	Yes			
Sit in swim pool (no stroking)	2 weeks			
School – start with shorter days	No	3-4 weeks		
Lifting/carrying up to 7kg	No	Yes		
Pilates session	No	Yes		
Stationary exercise bike	No	Yes		
Swimming in pool - NO diving	No	Yes		
Drive prolonged period e.g. ≥ 2 hours	No	Yes		
Carry heavy school bag (approx. 10kg)	No	No	Yes	
Bicycling	No	No	Yes	
Light jogging	No	No	Yes	
10-pin bowling	No	No	Yes	
Non-contact sports	No	No	Yes	
Tennis or Golf	No	No	Yes	
Horse-riding but NO jumps	No	No	Yes	
Routine PE exercise class	No	No	No	Yes
Swimming in shallow surf	No	No	No	Yes
Skiing	No	No	No	Yes
Diving into pool	No	No	No	Yes
Bowling (Cricket)	No	No	No	Yes
Horse-riding with jumps	No	No	No	Yes
Lifting ≥ 20kg	No	No	No	Yes
Gymnastics	No	No	No	Yes
Playground Equipment	No	No	No	Yes
Amusement park rides	No	No	No	Yes
Contact sports	No	No	No	Yes
Basketball	No	No	No	Yes
Rowing machine	No	No	No	Yes
Rollerblading or skating	No	No	No	Yes
Special Instructions				

Contact us

For emergency medical treatment, call the Queensland Ambulance Service on 000.

For prompt general advice about your child's condition or general health, call 13 HEALTH (13 43 25 84)

For medical review of your child, please present at QCH Emergency, your local GP, or your local hospital.

Queensland Children's Hospital, call 07 3068 1111

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Still have questions?

Write down any questions here to discuss at your next appointment.