

Limb reconstruction

Family information



Orthopaedics

Limb reconstruction

- Is a surgical process used to correct deformity or alter limb length.
- Its primary aim is to improve function, relieve pain and minimise joint problems.
- It uses a series of metal rings and pins, or a metal bar and pins to hold bone and/or joint in a new position (external fixation). This external fixation can be adjusted slowly to guide bone/joint into a new position (distracting frame), or it can hold bone/joint in the new position obtained in theatre (holding frame).

What is involved

Before we undertake a reconstructive program you will be given an appointment to attend for an assessment. All investigations are completed and ample time is provided to discuss the intricacies of the treatment program with you, your child and other members of the service.

One of the most important parts of a successful treatment is thorough preparation.

We aim to make this as easy as possible by providing an accurate operation date, a clear outline of the surgery and an overview of the rehabilitation program.

The process for limb reconstruction and lengthening does take a long time. It has 5 discernible stages. These include:

The preparation stage

This includes your initial consultation with the surgeon, when the surgical option of a frame is discussed. After this, you will have the opportunity to meet with the limb reconstruction nurse, who will provide you with written and visual information on the frames, and the physiotherapist, who will assess your child's muscle function and prescribe some exercises for your child to do to prepare for the surgery.

The surgery or operation

It is usual to be admitted to the hospital on the day of surgery. During this time the anaesthetic doctors will visit you and discuss going to theatre and post-operative pain relief. The time your child is in theatre is very stressful so it is wise to have family or friends around, leave the admission area for a while and distract yourself as best as possible.

After surgery you will be invited to the recovery room to see your child. A member of the surgical team will let you know how the operation went and the post-operative plan. There are facilities on the orthopaedic ward for one parent to remain overnight with their child. The hospital stay is usually 3-5 days.

The correction stage

For those children that need gradual correction of a bony or joint deformity, this is the time when we adjust the frame. Distraction is usually done at a rate of 1mm per day, divided into 4 'turns'. The surgeon or limb reconstruction nurse will teach you how to perform this, and you will do this at home.

The consolidation stage

The lengthening/correction has stopped and the bone or joint now needs to strengthen and heal.

The rehabilitation stage

The fixation device has been removed and your life is getting back to normal. This time will require lots of physiotherapy and exercises to strengthen the muscles and bones and get your child walking normally again. Sometimes we use orthotics to assist in maintaining the corrected position.

The people you will meet

There is a team of health care professionals who are dedicated to making your hospital stay as comfortable as possible. They are:

The orthopaedic doctors

A team of orthopaedic doctors will visit every morning to check on the progress and recovery of your child.

The nurses

The orthopaedic nurses are nurses specialised in looking after children with bone and joint problems. If you have any questions about your treatment, they are the people to ask.

The anaesthetic doctor

This doctor will assess your child on the day of surgery and discuss the anaesthetic with you. The anaesthetist works closely with the 'pain team' to ensure that your child is comfortable after the operation.

The 'pain team'

As the name suggests, the pain team deals with children's pain. A team of anaesthetists and nurses will assess your child every morning, and prescribe medication to alleviate any discomfort your child is feeling.

The physiotherapist

The physio (and the exercises they prescribe) is an integral part of successful limb reconstruction and lengthening. The physio will assist with mobilisation on the ward, and you will also see the physio for out patient appointments.

The occupational therapist

The 'OT' can assist in the hire of specific equipment needed to make your life easier at home.

The orthotist

Sometimes, specific splints are required to support toes, feet or fingers. The orthotist will make these splints to suit your child.

The education advisor

The RCH Education Institute liaises with schools and families, and can assist in helping get your child back to school.

The educational play therapist

Provides children with developmentally appropriate play experiences, offers diversion during medical treatment and preparation for admission and medical procedures.

The clown doctors

Once a week, the wards are visited by some very different doctors — the clown doctors. This is a group of actors whose aim is to make our patients, families (and staff) feel happy and have a laugh. Hopefully you will meet them during your child's hospital stay.

After the operation

The first few days after the operation are a time of both relief and anxiety for parents and discomfort for some children. Physiotherapy is often started early in order to minimise post-operative problems and maximise speed of recovery.

The next stage of recovery is really a time of getting used to things, particularly if a fixator or a plaster cast has been applied.

Your child's emotions will often run high and you may become overwhelmed by the whole situation — please remember you are not alone and to talk to us if things are getting difficult.

Going home

The decision for discharge is usually made once the rehabilitation program is going smoothly. We need to be sure that you will cope at home and that all appropriate arrangements have been made for home, school, physiotherapy and transport.

Coping strategies

Limb reconstructive surgery places significant stresses on families.

Children and parents may have difficulties with increased dependence, discomfort from the rehabilitation program, and interruption to sleep. Boredom, frustration and a sense of isolation sometimes develop.

It seems that families cope better when they have a realistic picture of what the treatment involves and its actual impact on the family life. Giving this some thought prior to the surgery often helps prevent problems developing. It is better to take things one at a time rather than building up hopes that progress will be quick, smooth and trouble free.

Try to keep up as normal a life as possible during treatment and share your worries with us at an early stage rather than waiting for problems to build up. We may be able to put you in contact with other families who have been through, or are going through Limb reconstruction.

Follow up appointments

After your surgery, you will need to come back to see the surgeon, the limb reconstruction nurse and the physiotherapist. You may also need to have an Xray. This appointment should be made before you are discharged from hospital. Subsequent follow up after this will either be weekly, fortnightly or monthly.

Pin sites

These are the insertion points of the pins from the frame through the skin, muscle and bone. These sites will be cleaned daily for the first three days after surgery, and then at least weekly after this. A detailed brochure on how to clean and care for the pin sites will be provided when you are in hospital. All children are referred to RCH@Home for a 4 week period of pinsite care.

Why do plans change?

A common cause of family concern is changes to the surgical procedure of the post-operative plan. This occurs for a number of reasons but primarily due to subtle changes in your child's condition due to growth, difficulties in rehabilitation or the development of a complication.

Research

The service is very active in both basic and clinical research and from time to time we may ask patients to participate in our activities.

You can be assured that any research undertaken has full ethics committee approval and is aimed directly at ultimately improving patient care.

Contacts

Limb Reconstruction Service	Monday to Thursday on 9345 7027 or via switchboard on 9345 5522 (Note if there is no answer, please refer to the ward or leave a message)
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Platypus Ward	9345 5432
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Physiotherapist	9345 9300 or via switchboard on 9345 5522
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Occupational Therapist	9345 9300
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Education Advisor	9345 9700
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Specialist Clinic Appointments	9345 6180
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Web	www.rch.org.au/limbrecon/
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