

Physiotherapy Practitioners:

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Alder Hey Children's
NHS Foundation Trust

Orthopaedic Department

Hip Reconstruction Surgery

This leaflet only gives general information. You must always discuss the individual treatment of your child with the appropriate member of staff. Do not rely on this leaflet alone for information about your child's treatment.

This information can be made available in other languages and formats if requested

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Information for parents and carers

Why do Hip Reconstruction surgery?

Hip disease in children with spasticity can cause the ball of the hip joint (femoral head) to drift out (sublux or dislocate) from the hip socket (acetabulum).

Hip reconstruction surgery is performed to correct the dislocated hips, and improve the functional problems resulting from the dislocation:

- ✓ The operation will correct the “wind-swept” posture of the hips and allow better seating. Legs can also be spread further apart for toileting etc.
- ✓ Hip pain is less common in hip joints that are correctly located.
- ✓ While the hips are dislocated, the femoral head becomes more and more mis-shapen. It may not be possible to correct the hip dislocation as your child gets older.
- ✓ Balancing the hip joints by hip reconstruction can prevent or reduce long term complications such as scoliosis (curved spine).
- ✓ Hip reconstruction surgery has become the “standard of care” because it is most successful in preventing future dislocation.
- ✓ Tendon releases can help in the early stages, but is not enough for hips which have been dislocated for some time.
- ✓ Parent / carer satisfaction rates following hip reconstruction surgery are high (85%).



What does Hip Reconstruction surgery involve?

During surgery, the ball of the hip joint is moved back into the hip socket to correct the dislocation. If both hips are dislocated, then both hips will be operated on during the same operation. The exact combination of procedures will depend on your child’s needs and your consultant will discuss this with you.

The procedures involved include removal of a small section from the thigh bone (femur) and rotation of the top section of the bone into the right position to fit back in the hip socket. A 2-3cm wedge of bone is removed, and the bones fixed back together in the new position with a metal plate.

The leg muscles attached to the hip joint (hamstrings in particular) can cause pressure on the joint. This pressure is also reduced by the shortening of the thigh bone.

Surgery to the hip socket can also be required to prevent the femoral head from drifting out of the socket again. The hip socket is made deeper, so that the joint stays in place better.

The combination of surgery is performed during the same operation to correct all of the problems at the same time. Your child will usually need to have another operation at a later date to remove the metalwork.

Medical terms

The surgery to put the ball of the hip joint back into the socket is called “Varus Derotational Femoral Osteotomy”.

Surgery to the hip socket is called “Acetabuloplasty”

You don’t need to remember these names, but it might help you to know what the doctors are talking about.



Possible risks

Hip reconstruction is a big operation, and there are risks as well as benefits. Your doctor will talk to you about these risks, and give you some idea about the chance of them happening:

- Anaesthetic complications (very rare)
- Need for blood transfusion
- Wound infection
- Bone healing delay (or not at all)
- Fractures of the thigh bone around the knee
- Metal plates & screws can break or pull out of the bone
- Re-dislocation of hips
- Injury to nerves and blood vessels
- Need for further surgery (removal of metal plates & screws)
- Long term hip pain
- Surgery may not achieve all the expected improvements (functional goals)
- Pain once the hip is back in joint



Will I need specialist equipment to care for my child?

You will be asked a few questions about what equipment and support you have in your home to help you manage your child. Some additional equipment (wheelchair, hoist etc) may be necessary when your child is recovering from surgery.

Who will arrange things?

If it is likely that you will need additional equipment or support, we will contact your Occupational Therapist and / or Social Worker and ask them to carry out a proper assessment of your needs. It can take several months to get equipment organised, so we will contact all professionals as soon as you are given a provisional date for surgery.

Organising equipment / support

Your Occupational Therapist and Social Worker will be asked to contact Alder Hey to inform us of progress towards organising equipment or support. If we do not hear anything, we will contact them to check how things are coming along.

If essential equipment cannot be organised in time for your child's planned hip reconstruction, it may be necessary to delay the surgery, until you have what you will need to manage your child at home after the operation.

We will also contact your wheelchair supplier and let them know when you are booked for surgery. Your child's regular wheelchair may need to be modified following surgery as the shape of the hips will have changed and the thighs will be slightly shorter. Unfortunately, the wheelchair cannot be modified until your child has recovered from the operation.

What you need to do before your admission:

By 2 months before your planned operation date, if you have not heard anything about the specialist equipment you have been told you will need, please contact your consultant's secretary. They will ask one of our physiotherapy practitioners to chase this with your local primary care trust / social services etc.

Contact numbers (office hours):

Mr Bass & Mr Wright & Mr Widnall's secretary: 0151 252 5385

Mr Walton's secretary: 0151 252 5779

Physiotherapy Practitioners: 0151 252 5949

Once you have your date for surgery, you will be given an appointment date for a pre-operative assessment. This will normally be 6 weeks before your operation date.



Pre-operative Assessment

This pre-operative assessment is an opportunity to discuss the operation with your consultant, and you will be asked to sign a consent form for the surgery. The consent process will involve discussion of the risks of surgery, as well as the possible benefits, and we feel this is best done in clinic, rather than leaving it until your child is about to go to theatre.

Your child will also need some blood tests to check if they need Iron supplements or Vitamin D supplements. The Iron helps build up their haemoglobin level prior to surgery and this can reduce the need for blood transfusion after surgery. Vitamin D helps with bone healing.

Your consultant may also prescribe medication to help with muscle spasms following surgery. It is sometimes appropriate to start this medication (usually baclofen) before surgery.

What you need to do on the day of admission

Your child will be usually be admitted on the day of surgery. When you arrive at Alder Hey you will be asked to report to the Surgical Admissions Lounge (SAL). You will not usually be allocated a bed on a ward straight away, but it is important that you arrive on time for surgery.

An anaesthetist will see you on the morning of your child's operation to discuss the anaesthetic and planned pain management.

If you have been told which ward your child will be going to, you may be able to use the parents room on the ward until your child's bed is available. The ward can also order a meal for your child, if needed.



The operation day

The operation will be done under general anaesthesia. This means your child will be put to sleep. The surgery can last anywhere from 3 to 6 hours. This depends on the procedures needed to correct the position of the thigh bones and re-shape each hip socket. Your surgeon will have discussed these details with you and given an estimate of how long your child's operation will be.

Pain relief following surgery

To help your child feel comfortable after the operation, the nerves to the thighs and hips may be blocked temporarily through an epidural catheter. This is a tiny plastic tube used to inject anaesthetic directly onto the nerve roots, near to the spinal cord. This blocks the pain signals and makes them numb, just like the epidurals used for women in childbirth. The epidural catheter will be inserted in theatre while your child is asleep.

An epidural may not be appropriate for all children, or may not block all the pain. Your child will also be given strong painkillers straight into their bloodstream. This will be through a cannula, which is a small plastic tube inserted into a vein, usually in the back of your child's hand. The anaesthetist will discuss any issues about pain relief with you. Oral (by mouth) painkillers will also be used continually throughout your child's admission.

After surgery

Most children will have an epidural in place for pain relief. This may remain in place for up to 5 days. Your child may also have a urinary catheter inserted in theatre. This can remain in place for a few days following surgery. It can help, particularly if your child has an epidural, as the numbness means they cannot feel the urge to pass urine.

Blood loss following surgery

All patients lose blood after major hip surgery, which is why we often advise iron supplements to increase the haemoglobin in the blood. The more haemoglobin in the blood, the easier the body can make up for blood loss after surgery.

Blood transfusion may be necessary during or immediately after surgery, however this is rare, as steps are taken to recycle your child's own blood, wherever possible.

The plaster cast

Your child will usually be in a special plaster cast called a hip spica following surgery. This goes from the waist to above the knees, with a space to allow toileting. It will be removed after 3 weeks, unless advised otherwise by your consultant. The hip spica is not used to hold the hip reconstruction in place, as the plates and screws do that. It just helps your child to feel more comfortable after surgery. Some children do not require a cast and may just be managed with a wedge to hold the hips in a good position.

Going home

Patients can usually be discharged 7-10 days after surgery, although this will depend on how your child feels.

Caring for your child at home in a hip spica

While your child is at home in the plaster cast, arrangements will be made for a District Nurse, or the Orthopaedic Nurse specialist to contact you. The nurse will ask you about your child's skin and the plaster cast, as well as checking how you are managing at home.



The nurse will give you a contact number to ring if you need assistance or advice.

The most important things to remember when caring for your child in a hip spica are:

1. Keep the skin dry at all times

Remember to clean and dry the skin carefully at every pad change. If you use wipes to clean the area, remember to dry the skin with a towel. Don't forget to dry the waterproof covering on the edge of the plaster.

2. Change your child's position

To prevent pressure ulcers forming, change your child's position regularly as shown to you by the ward staff. The first sign of a pressure problem will be redness of the skin.

3. Check your child's skin

Look for signs of redness. Contact your nurse if you notice any redness of the skin, and they will advise you about what to do, or make a visit, if necessary.

If you have any problems at the weekend, please contact the ward.



Hip spica removal

Your child will have a brief hospital admission for removal of the plaster cast and hydrotherapy. Once the spica is removed, you should contact your child's regular wheelchair supplier and arrange for their chair to be modified. They should already be aware of the date of your child's surgery and be expecting to hear from you. Ward staff can help you to arrange this.

Wound healing

Wounds from the surgery should have healed inside the spica, therefore showering or bathing is usually allowed as soon as the hip spica is removed.

If you find any problems with wound healing, please contact the ward or your Consultant's secretary. Minor wound infections can happen, but they usually settle with a course of antibiotics.

Starting movement

Full movement of the hips and knees can be started safely as soon as the spica is removed. But, realistically, this is not achieved during the first 4-6 weeks because of discomfort. Use of a standing frame can be re-introduced between 6-12 weeks after surgery, depending on pain, tolerance and their hip x-ray.

Children particularly benefit from hydrotherapy in the first 3-6 weeks following spica removal. Ideally this should be delivered daily.

Children who are not in a hip spica may be able to begin standing and use of the standing frame much sooner, at 2-3 weeks post-op. This will be discussed with the Consultant.

Transferring out of chair to bed etc usually requires a hoist for the first few weeks. If your child is usually able to stand, weight bearing transfers should be started as soon as the immediate post-operative discomfort settles. This may be as early as 6 weeks post-operatively, although some pain on transferring during the initial period will be expected.



Ongoing medication

Pain and muscle spasms are common after any surgery in children with spasticity. This procedure is no different. It is important to take painkillers and anti-spasticity medication (usually baclofen) regularly for the first 2 weeks after surgery. Regular painkillers may be necessary for the first few months.

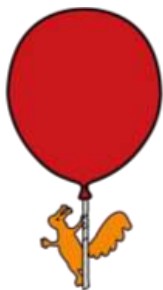
Measuring the success of hip reconstruction

To give you some idea of what to expect, these are the sort of recovery timescales we would predict:

- ✓ Weight-bearing transfers by 3 months (if your child is normally able to do this)
- ✓ Pain free by 12 months
- ✓ Functional goals of surgery achieved by 12 months

Some early improvements following hip reconstruction may not last. We cannot fully judge success until 2 years after surgery.





Pre-admission Checklist & Contacts

PRE-ADMISSION INFORMATION

Please list the professionals currently involved:

School:

School Physiotherapist:

Contact details:

Wheelchair supplier:

Contact details:

Occupational Therapist:

Contact details:

Social worker:

Contact details:

GP:

Contact details:

Other:

Contact details:

Checklist of equipment / support requirements identified:

1.

2.

3.

4.

