

Common Types of Hip Osteotomy Surgery in Children

Fact Sheet

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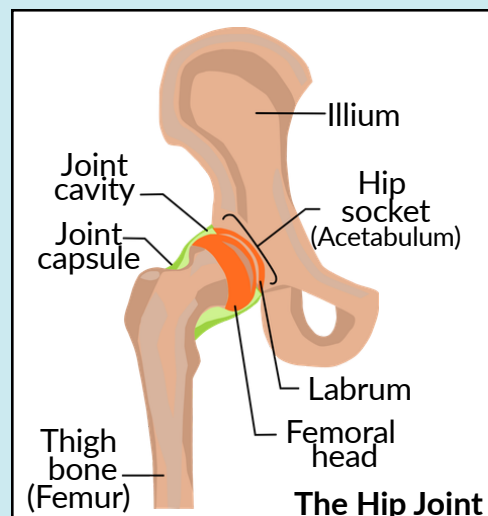
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Steps is the leading charity working for all those whose lives are affected by childhood lower limb conditions

What is an osteotomy?

An osteotomy is an operation where the surgeon will carefully divide a bone. It is performed to improve the shape and position the bone. This factsheet explains the different types of osteotomy surgery used to treat hip problems in children and young people.

The type of surgery recommended will depend on your child's individual condition. Your surgeon will discuss with you which surgery is most suitable and what to expect before surgery.



Femoral osteotomy

A femoral osteotomy is sometimes called a rotation osteotomy or a derotation osteotomy. The type of surgery depends on the structure of the hip joint and the age of the child. During the femoral osteotomy, the top end of the thigh bone (femur) is repositioned to give better stability to the hip. The femur is carefully divided surgically just below the femoral neck and rotated to the best position. Some shortening of the femur is possible too when changing the orientation of the bone.

The femoral osteotomy is then secured in the correct position, often with a metal plate and screws but this can also be wires. After surgery, the child is usually put in a hip spica cast for six to twelve weeks. If metal plates are used, they are usually left in place for at least a year, at which point the child will have a more minor operation to remove them. Some surgeons prefer not to remove the plates routinely, unless any further surgery is required.

Salter osteotomy

In a Salter osteotomy, a cut is made through the pelvis above the socket (acetabulum) where the femoral head sits. The surgeon tilts the acetabulum to correct its angle and inserts a graft of bone (taken from another part of the pelvis through the same incision). One or more pins are inserted through all the pieces of the bone to hold them while they all join together over a few weeks.

Chiari osteotomy

This surgery makes the hip socket deeper and the surgeon slides bone outward to effectively widen the shelf of bone above the femoral head. Steel pins are often used. After the surgery, it is common to have limited mobility for a long time, typically this can mean that only partial weight can be put on the leg for three months. If that is the case, you'll be shown how to use a mobility aid (like crutches) to get around.

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Pelvic osteotomy

A pelvic osteotomy is a general term for surgery to reconstruct the bone that includes the 'socket' of the hip joint by changing its angle (reorientation) or its volume. The surgeon cuts the bone in the pelvis and can then reposition it to improve the orientation of the hip socket and to improve support for the femoral head. There are many different types of pelvic osteotomy and your surgeon will advise which is the best for your child.

All involve improvement of the position and orientation of the socket and may involve insertion of metal pins and bone grafting from the pelvis. After surgery, most younger children are placed in a hip spica or brace, meaning they are unable to move their legs freely, but older children and teens may be allowed to move around on crutches.



Pemberton osteotomy

This surgery involves cutting the hip bone and tilting the roof of the socket (acetabulum) to correct its angle, filling the gap with a wedge of bone. It is often undertaken to treat acetabular dysplasia.



More information

Steps has produced the resource 'Hip Surgery and Spica Cast Care, a Parent's Guide', which offers more information on what to expect if your child is undergoing hip surgery. We have also created the guide 'Preparing for your Child's Surgery', which gives you information about how to prepare and what happens during and after the hospital visit.



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Facebook Group: A closed group where you can talk about your worries, share helpful tips, and find emotional support.

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