

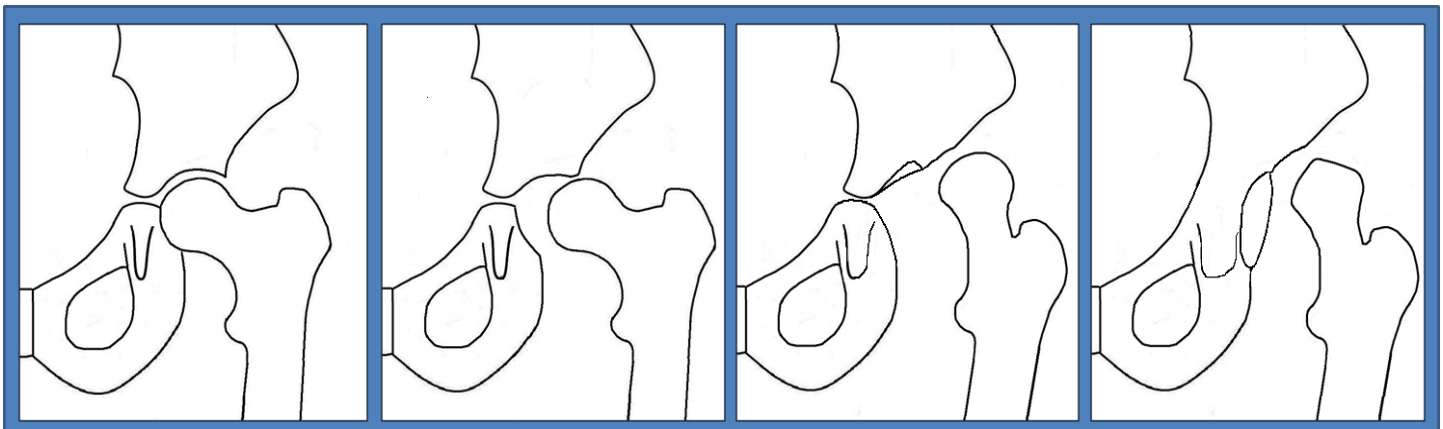
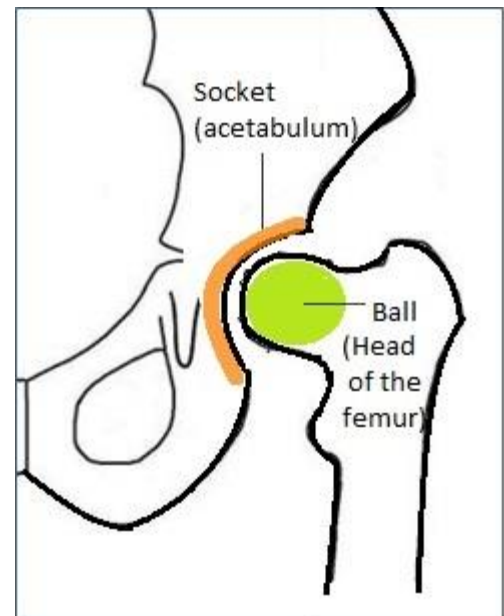
Hip Displacement for Children with Cerebral Palsy

Your Child's Hip Joint:

A hip is a ball and socket joint.
The top of the thigh bone (head of the femur) is the ball
Part of the pelvis (acetabulum) is the socket.
In a healthy hip the ball rests inside the socket

What is Hip displacement?

Hip displacement (sometimes called subluxation) occurs when the ball gradually slides out of the socket. Without treatment a displaced hip may become dislocated (the ball will slide all the way out of the socket). Hip displacement is very common in children with cerebral palsy.



Healthy Hip

Displaced Hip

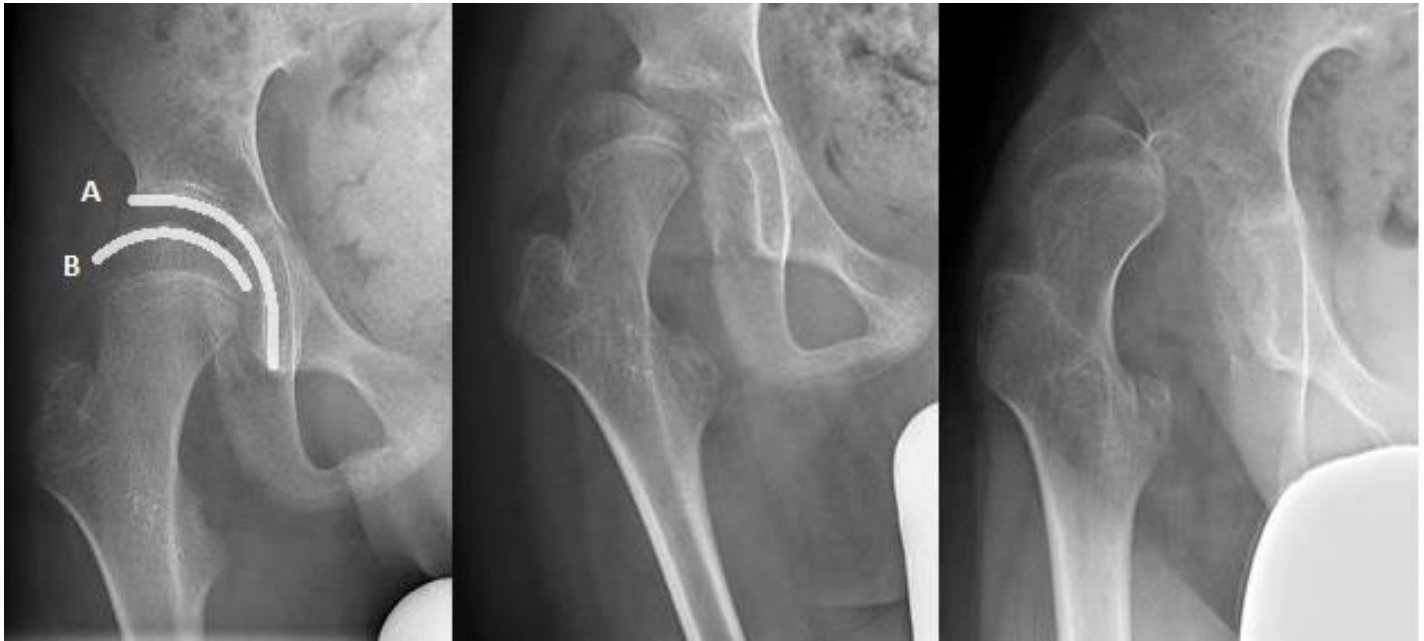
Dislocated Hip

Dislocated hip with
bony changes to the ball

An x-ray is required to see hip displacement. Children with hip displacement may not have any symptoms. However, as the ball continues to slide out there can be pain, loss of movement, and a change in sitting tolerance. If your child has cerebral palsy regular hip x-rays are important. Hip x-rays allow your doctor to measure the amount of hip displacement and measure the change over time. The frequency of hip x-rays will depend on your child's functional level.



Hip Displacement for Children with Cerebral Palsy



Healthy Hip (A: socket/acetabulum
B: ball/ head of the femur)

Displaced Hip

Dislocated Hip

What causes hip displacement?

The exact cause of hip displacement is unknown. It is believed that abnormal muscle pull, delayed standing and walking, and changes in the shape of children's thigh (femur) bone have an influence.

What is the treatment for hip displacement?

A displaced hip can only be repaired with orthopaedic surgery. The type and timing of surgery depends on many factors including (but not limited to) your child's age, functional level, and severity of the displacement. Other techniques such as positioning and Botox® may be an option to slow the speed of the ball sliding out of the socket but they will not prevent a hip from becoming displaced or fix a hip that is already out. If surgery is required, your surgeon will talk with you about when this should happen.

Hip Displacement for Children with Cerebral Palsy

Hip reconstruction surgery

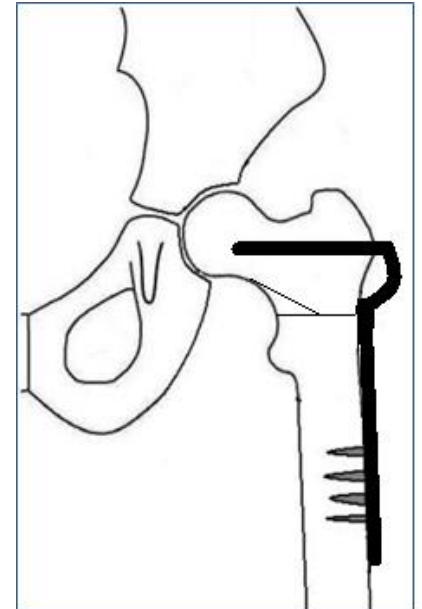
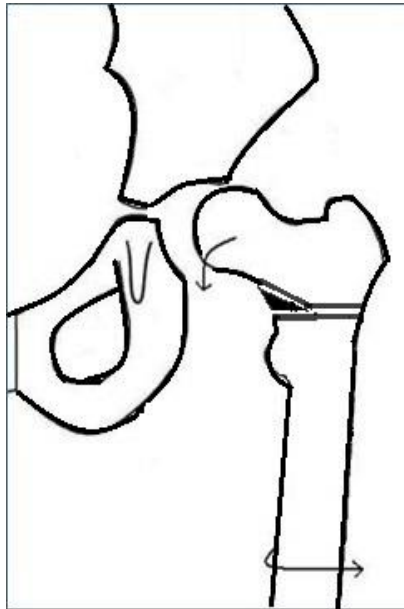
If your family and medical team decide that an operation is required to place the ball of the hip back in the socket, then your child will undergo a *Femoral Varus Derotation Osteotomy (VDRO)* and possibly a *Pelvic Osteotomy*.

What is a Femoral Varus Derotation Osteotomy (VDRO):

When a hip is displaced, a VDRO is done to tilt the ball (head of the thigh bone) back into the socket (acetabulum)

Your child's surgeon will make a cut on the outside of your child's hip.

A small piece of bone will then be cut out of the thigh bone (femur). This will allow the ball (head of the femur) to be tilted so that it rests inside of the socket (acetabulum). A metal plate with screws is used to hold the bone in this new position.



As part of this surgery, most children need to have the muscles around the hip lengthened. These may include some or all of the following: the psoas (front of the hip), hip adductors (inside of the groin), and hamstrings (back of the thigh). This is necessary to gain the range of motion that is needed to put the hip back into joint.



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What is a pelvic osteotomy?

A pelvic osteotomy is done to correct a hip socket (acetabulum) that is too shallow or misshapen (also known as dysplastic).

Your child's surgeon will make a cut on the outside of the hip.

A piece of bone is wedged into the top of the socket. This makes the size of the socket larger so that it covers the ball on the top of the thigh (head of the femur) better.

This surgery is often done in combination with a Femoral Varus Derotation Osteotomy.

