

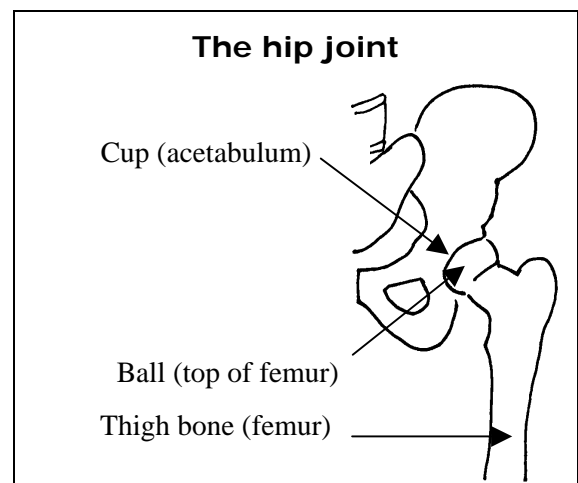
Developmental dysplasia of the hip

What is development dysplasia of the hip?

Developmental dysplasia of the hip, or DDH, is an abnormal hip joint.

The ball at the top of the thigh bone (femur) and/or the cup-shaped hip socket (acetabulum) are not in the normal position.

The structures which normally hold these parts together may also be loose and stretched. This makes the hip unstable.



We know that some hips with DDH are more unstable than others:

- In some newborn babies, the ball of the femur fits loosely in the hip socket. It can partially move out of the socket (sublux).
- In a few babies, the ball of the femur is completely out of the socket (dislocated).

Developmental dysplasia:

- Is not always found at birth. In some children, the hip becomes unstable later on.
- Can occur in one or both hips.
- May be inherited. It occurs more often when another family member has had the condition.

What causes DDH?

There are several factors that can contribute to DDH. For example:

- When women give birth, their bodies make hormones to help relax the pelvis. These hormones may also soften and stretch the baby's ligaments.
- During pregnancy the baby's position in the uterus, such as the breech position, can put pressure on the hip socket.
- A child's muscles may be tight or "spastic". Tight muscles can pull on the head of the thighbone, which can pull it out of the hip socket. This is very common in children with cerebral palsy or spina bifida.

DDH is not caused by anything the mother did during pregnancy.

How is DDH diagnosed?

A doctor or midwife examines every newborn baby for these signs of DDH:

- one leg appears shorter than the other
- one hip has less movement or flexibility than the other
- the skin creases of the thigh and buttocks are not even on both sides

To check the stability of the baby's hip, the doctor or midwife gently tries to move the ball of the femur out of the socket and back into place. If there are signs of DDH, an ultrasound scan can confirm the diagnosis.

The hip will be checked again as the child grows, because some children develop DDH later on. This is usually done at check-ups with the doctor.

After 5 months of age, an x-ray is helpful to diagnosis DDH.

It is important to begin treating DDH as soon as possible so the hip can grow.

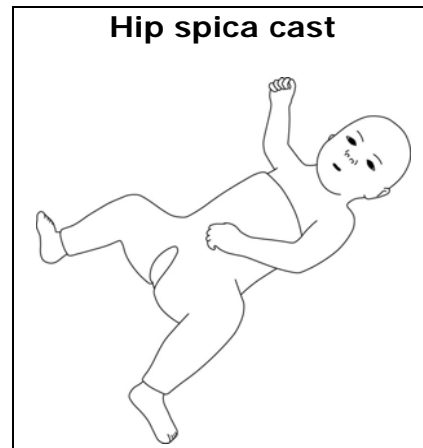
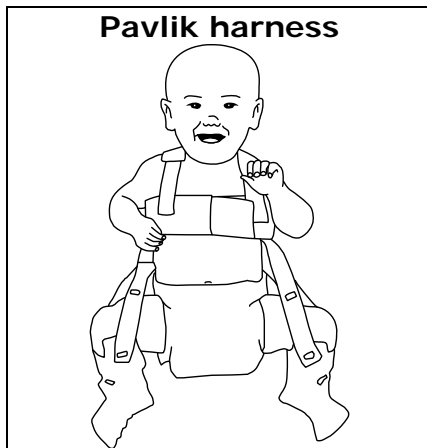
How is DDH treated?

If you or your baby's caregivers notice signs of DDH, your baby's doctor should make a referral to a pediatric orthopedic surgeon right away. The surgeon will check your child and arrange for tests to help make the diagnosis. The surgeon will discuss your child's condition and the treatment plan.

The goal of treatment is to put the ball of the femur back into the hip socket and keep it there until the structures surrounding the hip (muscles, ligaments and tendons) become strong enough to hold the joint together. This gives the hip a better chance of growing and developing normally.

Treatment: From birth to 6 months (also depends on the size of the child)

Treatment at this age usually consists of bracing. At McMaster Children's Hospital we use cloth splints such as the Pavlik Harness. Most babies can be treated in a harness. A few babies may require a hip spica cast.



For 6 to 12 weeks or longer, the baby usually wears his or her treatment equipment all day and night. After this time, a splint may be used during naps and at night to guide the development of the hip as the baby sleeps. During treatment there are many appointments to examine the baby and make sure that the equipment fits and is being used properly.

Some babies may require further treatment, such as traction and surgery.

Treatment: Age 6 months to 1 year

When DDH is found in an older infant, the treatment is different. The hip must be put back into place. Depending on the child's situation, this may require surgery. After surgery, the child will be put in a hip spica cast. The cast holds the hip and leg in place to promote healing. The surgeon will decide how long the child needs to wear the cast.

Treatment: Over 1 year of age

When DDH is found in children over 1 year of age, surgery is almost always needed to correct the muscles, tendons and/or bones. After surgery, a hip spica cast is used to hold the hip and leg in place to promote healing. The surgeon will decide how long the child needs to wear the cast.

What are the outcomes of treatment?

The earlier DDH is found and treated, the better the outcome for the child. If the treatment does not work as expected, the child may need more than one type of treatment and may need multiple surgeries.

Each child's situation is unique. Talk with your child's orthopedic surgeon about your child's condition, treatment, expected outcomes and possible risks.

How can I help my child during treatment?

- Become involved in your child's treatment. Your child's health care team will teach you how to care for your child to help in his or her recovery.
- If you have questions or concerns, talk with your child's caregivers.
- Follow directions regarding casts, braces and harnesses carefully. Remove them only as directed by the doctor.
- Try to treat your child as normally as possible. Encourage your child to resume his or her usual activities as soon as the doctor recommends.
- Make sure your child has follow-up visits with the doctor. The doctor will check for any signs that the hip is becoming unstable again.

Adapted from "Congenital Dislocation of the Hip" © 1992. The Hospital for Sick Children.
With permission from Dr. Cole, Head of the Division of Orthopedics.