
Developmental dysplasia of the hip (DDH)

Summary

- Developmental dysplasia of the hip, or DDH, means that the hip joint of a newborn baby is dislocated or prone to dislocation.
 - DDH affects one in every 600 girls, and one in every 3,000 boys.
 - Treatment includes special harnesses, or operations and casts, depending on the age of the child at diagnosis.
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Developmental dysplasia of the hip (DDH), previously referred to as congenital dislocation of the hip (CDH), means that the hip joint of a newborn baby is dislocated or prone to dislocation. Around 95 per cent of babies born with DDH can be successfully treated.

Approximately one in every 600 girls is affected, compared to just one in 3,000 boys. The left hip is affected three times more often than the right hip. Dislocation of both hips is not uncommon. DDH is also more common in babies born with particular disorders, including cerebral palsy and spina bifida. There is a family history of DDH in one third of cases.

Structure of the hip joint

The hip is a ball and socket joint. The femur (thigh bone) ends with a rounded projection, or ball, which fits into the hollowed out socket (acetabulum) of the pelvic girdle. The ball is anchored firmly into the socket with tough connective tissue called ligaments.

In a baby with DDH, the socket is abnormally shallow, which prevents a stable fit. Slack ligaments may also allow the femur to slip out of joint.

Symptoms of DDH

The signs and symptoms include:

- reduced joint mobility
- a low clunking sound can be heard when the leg is gently rotated, which is the sound of the femur engaging the socket
- the stretch of skin between the anus and the genitals (perineum) is unusually wide.

For unilateral (one-sided) dislocation, symptoms include:

- The skin creases of the buttocks don't match.
- One knee joint looks higher than the other.

Causes of DDH

There are many causes of DDH, both genetic and environmental, including:

- **family history** – around one third of babies with DDH have a blood relative who also had the condition
 - **congenital disorders** – DDH is more common in babies with disorders such as cerebral palsy and spina bifida
 - **breech delivery** – being born feet first can put considerable stress on the baby's hip joints
 - **multiple babies** – crowding inside the womb may dislocate the hip
 - **first-time mother** – the inexperienced uterus and vagina may cause a difficult or prolonged delivery
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Routine checks for DDH

Babies are routinely checked at birth to make sure their hip joints are properly positioned. The baby is laid on its back, and the doctor rotates each leg at the hip to ensure full joint mobility. A dislocated hip doesn't have a full range of movement and tends to make a clicking or clunking sound as the ball of the femur moves in and out of the socket.

An ultrasound is usually performed to confirm the diagnosis and help determine the extent of the dislocation. X rays, CT scans and magnetic resonance imaging (MRI) scans may also be used.

Treatment for newborns

A baby born with a dislocated hip can be successfully treated with a Pavlik harness. This device holds the joint in place while the baby's skeleton grows and matures. Subsequent x-rays will track the hip joint's progress. The Pavlik harness is effective in over 85 per cent of cases. Most babies will require the harness for between six and 12 weeks, and do not appear to be distressed by its use.

Safe wrapping of baby

In some babies, the ligaments around the hip joint are loose, which in most circumstances, corrects during the first few months of life. Research has shown that tight wrapping with the legs held straight can lead to hip dysplasia and dislocation.

When wrapping your baby, always remember to leave enough room in the wrap for the legs to move freely. Your baby's legs should be able to bend at the hips with their knees apart.

Older babies with DDH

If a baby is diagnosed with a dislocated hip when they are six months old or more, then an anaesthetic will be required before the hip is manipulated into its proper position. An operation may also be needed. A hip cast applied after surgery helps to keep the hip joint in place, and subsequent x-rays will track the hip joint's progress.

Later diagnosis of DDH

Sometimes, a child isn't diagnosed with DDH until they are two or three years of age. Symptoms may include a distinct waddling gait, one hip lower than the other, a limp, and walking on tiptoe. Complications of untreated DDH in an older child may include stability problems with the knee joints and injury to nerves supplying the femur (the thigh bone – between the hip and the knee).

Long-term outlook after DDH

Most babies born with successfully treated DDH don't have any hip problems in later life. However, some may develop arthritis in the affected joint in their later years.

Where to get help

- Your doctor
- Paediatrician
- Maternal and child health nurse

Things to remember

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