The Robert Jones and Agnes Hunt
Orthopaedic Hospital
NHS Foundation Trust

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Date of publication: November 2023
Date of review: November 2025
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Information for patients

Inpatient Treatment Developmental Dysplasia of the Hip (DDH)

Alice Ward

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What is developmental dysplasia of the hip?

Developmental Dysplasia of the hip (DDH) was formerly referred to as congenital dislocation of the hip (CDH). Now that the condition is better understood, the former name is preferred.

The hip is a 'ball and socket' joint. The top of the thighbone (femur) is shaped like a ball and fits into a matching cup (acetabulum) in the pelvis. In a hip which is unstable, the head of the femur can be moved partially or fully out of its socket. DDH covers a spectrum of hip instability requiring a range of treatment according to how badly unstable the hip is. In a few babies the 'head' lies completely out of the socket: a dislocated hip.

For some children, although the hip is not dislocated, the socket does not grow properly and is too shallow allowing the 'head' to move with growth from the position it should occupy.

DDH occurs in approximately 6 out of 1000 babies and is not a dangerous condition. It is painless and does not stop a child from kicking their legs or walking.

What treatments are available?

Closed reduction

This procedure is carried out under a general anaesthetic, with an injection of dye into the hip joint cavity. The dye outlines the soft tissue structures within the hip allowing a good understanding of the causes of the dislocation and informing the surgeon regarding further treatment.

If a satisfactory position can be achieved this will be held in a hip spica (plaster cast from chest to toes). The plaster is retained for a total of 16 weeks, usually with a change of plaster at eight weeks also done under a general anaesthetic. Following this your child will be readmitted for application of a splint, which will need to be in place for a period of a further four months depending on x-ray findings.

Notes:

Further information and useful telephone numbers:

Alice Ward 01691 404444, or childrens outpatients department on 01691 404510

'STEPS' is a national charity to support families with children that have abnormalities of the lower limbs. They can be contacted on 01925 750271 or www.stepsworldwide.org

Following the initial reduction your child will be discharged from hospital after approximately 2-3 days once we are sure that the plaster fits correctly and is not causing any problems. Your child should not be in any discomfort and simple pain control such as Paracetamol syrup is usually all that is required. The consultant may request that a MRI scan is carried out after approximately 48hrs; this is a special type of scan, which will confirm the position of the hip. Prior to discharge, you will be taught correct handling and positioning of your child in plaster. The plaster places the legs apart in a 'frog' shape and most children are able to fit in their normal pushchairs.

If a closed reduction could not be achieved, then an operation will be arranged for a later date and you will be allowed home with your child later that day, providing they have made a full recovery from the anaesthetic.

Open Reduction

This is an operation where the hip is surgically opened and returned to its correct position. A plaster spica is applied as above to maintain the hip in the correct position. The difference being the straighter position of the legs and that they must not be nursed upright. This remains in place for a total of 12 weeks.

Following surgery your child is likely to be in hospital for about 3-4 days. A scan is usually required to confirm position of the hip and you will be allowed home when your child is fit and well and you are able to care for their needs in plaster.

After the 12 week period your child will be readmited for removal of the plaster and physiotherapy to re-mobilise the hip. This may take 1-2 weeks depending upon the stiffness of the hips and knees, comfort of your child and their previous level of mobility.

Please note: Occasionally it is possible to reduce the hip with an operation through the groin (medial surgical approach) and then the plasters and aftercare will be the same as that following a closed reduction.

Open Reduction and Salter's Osteotomy

This operation is performed on children over 18 months old. The hip joint is opened surgically, returned to its correct position and the 'socket' is repositioned to give the 'ball' more coverage.

Following this surgery your child will be nursed in a straight plaster spica for six weeks, with a hospital stay as described above.

After six weeks your child will be readmitted for removal of plaster and a period of physiotherapy lasting about two weeks until mobile again.

Femoral Osteotomy/Shortening

This is an operation where the femur (thigh bone) is realigned to provide a better position of the hip joint, and is combined with other surgical procedures mentioned above. Following this surgery your child will be nursed in a plaster spica for six weeks.

Initially your child will remain in hospital for approximately five days until fit and well and you are able to care for their needs in the spica. Six weeks later your child will be readmitted for removal of plaster and a period of physiotherapy. This usually takes about two weeks.

Both these operations will be done under a general anaesthetic and an epidural or caudal injection may be required. See paediatric pain relief leaflet for further information.

Aftercare

Whenever children have been treated for DDH it is very important that they are followed up periodically as an outpatient to ensure that the hip continues to grow satisfactory.

Please ask for a leaflet on 'Care of Your Hip Spica' if you have not already been provided with one.

What are the possible risks and complications?

- There may be an adverse response to a general anaesthetic or drugs used.
- If there is a surgical scar then unfortunately this will grow with the child.
- Rarely the hip may displace in the plaster cast resulting in the need for further treatment.
- Alterations of the blood supply may cause under or over growth of the hip and leg length. The socket may remain shallow and not support body weight effectively by adult life. Longterm growth of the ball and socket will be monitored and such problems can be addressed later if necessary.
- There is a small risk of damage to the nerves and/or blood vessels.

Is there any alternative treatment?

Treatment is not obligatory but may well be more complex if left until a later date. If left untreated a limp is likely to be apparent with one leg shorter than the other. There would also be a high risk of early arthritis and back pain. Please be aware that the information within this leaflet is meant for general guidance only and that each case is treated as an individual so variations may occur.

You are encouraged to discuss any concerns with the medical staff prior to commencement of treatment. Please follow any additional information given to you by the healthcare team.