

Further information and advice can be obtained from:

NHS 111
NHS Choices online

☎ 111
www.nhs.uk

MTW NHS Trust is committed to making its patient information accessible in a range of languages and formats. If you need this leaflet in another language or format please ask one of your clinical care team or the Patient Advice and Liaison Service (PALS). We will do our best to arrange this.

Maidstone and Tunbridge Wells NHS Trust welcomes all forms of feedback from our service users. If the standard of service you have received from the Trust does not meet your expectations, we want to hear from you. Please speak with the ward manager or the nurse in charge in the first instance, or you can contact the **Patient Advice and Liaison Service (PALS)** on:

Telephone: ☎ 01622 224960 or ☎ 01892 632953

Email: mtw-tr.palsoffice@nhs.net

or visit their office at either Maidstone or Tunbridge Wells Hospital between 9.00am and 5.00pm, Monday to Friday.

You can be confident that your care will not be affected by highlighting any areas of concern or making a complaint. The Trust will retain a record of your contact, which is held separately to any medical records. If you are acting on behalf of a patient, we may need to obtain the patient's consent in order to protect patient confidentiality. More information on PALS or making a complaint can be found on the Trust's website: www.mtw.nhs.uk or pick up a leaflet from main reception.

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Developmental Dysplasia and Dislocation (DDH)

Information for patients and carers



Riverbank Unit: Maidstone Hospital

☎ 01622 220241/ 220242

Open Monday – Friday, 7.30am – 6.00pm

Woodlands Ambulatory Unit: Tunbridge Wells Hospital

☎ 01892 638032/ 633346

Open 7 days a week, 7.00am - midnight

Hedgehog Ward, Inpatient Ward: Tunbridge Wells Hospital

☎ 01892 633525

Open 7 days a week, 24 hours a day

This leaflet has been produced to give you information about your child's developmental dislocation of the hip (DDH); however, it is not a complete guide so if you have any questions or you require further explanation please do not hesitate to ask a member of staff.

Developmental dislocation of the hip (DDH)

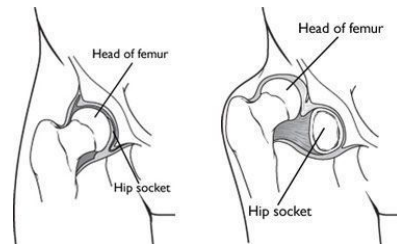
DDH is the commonest condition affecting a baby's hip joint, but it is still quite rare. It affects around one to two out of a thousand babies. There is a national program to detect the problem at an early age (NIPE) but there are some differences between parts of the country
If not treated, DDH can lead to pain, limping, unequal leg length and osteoarthritis by early adulthood.

Treatment of DDH

It is easier and safer the earlier treatment is started. For this reason, babies are examined following birth and often at subsequent check-ups. Also, hip ultrasound examination is often used, especially in at-risk groups. Despite these methods, some children are not diagnosed early.

The cause of DDH is not clear but the ball at the top of the thighbone (**femoral head**) may not be stable in the socket (**acetabulum**). The socket may also be shallow, and the ligaments of the hip joint may be loose and stretched. The degree of instability or looseness varies.

This painless condition ranges from **dysplasia**, where the socket is shallow but the hip is loosely in the socket, to **dislocation**, where the hip is not in the socket at all. In some children the ball part of the hip may gradually come out of the



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Please use this space to write any note or questions you may have.

Leg length inequality

- This usually only occurs with open reduction and often improves but a slight leg length difference can remain but rarely needs treatment.

Osteoarthritis

- There is an increased risk of developing osteoarthritis earlier than would be expected especially where the final shape of the acetabulum is not entirely normal; this is more likely following surgical treatment than treatment with a Pavlik Harness.

Further surgery

- Your child will be followed up regularly to make sure that the hip is developing as it should. On occasion however, further intervention may be necessary. This may be scans or further surgery which can be relatively minor but sometimes more extensive. Your doctor will be available to explain this should the need arise

Useful links and telephone numbers:

Website: www.stepsworldwide.org

Pavlik Harness: https://www.stepsworldwide.org/wp-content/uploads/2020/02/Pavlik-Booklet-2021-FINAL_July-2021.pdf

Hip Spica: https://www.stepsworldwide.org/wp-content/uploads/2020/02/Hip-Surgery-and-Spica-Cast-Care-FINAL2_July-2021.pdf

Email enquiries: mtw-tr.paedhub-ortho@nhs.net

Pavlik Harness advice number: 07523 932103

Paediatric Orthopaedic Pain Nurse Specialist: 07894 327226
(please note these are not on-call emergency numbers and there may be a delay in reply if urgent please go to the Emergency department)

socket as the child grows, whilst in others it may already be completely dislocated at birth. DDH has a familial tendency and is much more common in girls. It is also more frequent in breech babies and is occasionally associated with other abnormalities such as foot deformities.

In general, the treatment of DDH consists of placing the femoral head in the acetabulum and keeping it there. This should enable the hip to develop more normally as the child grows, and the younger the treatment is started, generally the outcome is better. The method of treatment depends upon the child's age.

0 - 6 months:

A dysplastic or dislocated hip during this period is usually treatable. It is treated with a soft, simple positioning device (Pavlik Harness) to keep the femoral head in its socket. This may help tighten ligaments and stimulate normal development of the acetabulum. The harness is usually worn for a minimum of three months. You can obtain more information on the Pavlik harness through our Pavlik Harness leaflet and from <https://www.steps-charity.org.uk/introduction-pavlik-harnesses/>. When the hip is dislocated, the harness may help relocate it although this is not always successful and a different method of treatment may need to be adopted.

6 months - 2 years:

Manipulation of the hip under anaesthesia (**closed reduction**) is the major method of treatment. This involves the baby having a general anaesthetic and the hip being repositioned in the socket. At the time of the procedure, dye is injected into the hip joint to allow the surgeon to see the socket more clearly on X-rays. A small operation (**adductor tenotomy**) is often required to cut tight muscles in the groin which may make the hip unstable or increase the pressure on the femoral head. The muscles then heal themselves. At the end of the procedure, a plaster hip spica will be applied to hold the hip in the socket. The child will usually have a CT or MRI scan the next day to confirm the hips are well positioned.

The hip spica will be on for 3 – 5 months and will need to be changed at 6-8-week intervals. Information on hip spica's can be found on <https://www.steps-charity.org.uk/hipsurgeryandspicacastcare/>

Unfortunately, closed reduction is not always possible. In these cases, an **open reduction** (see below) will probably be required. If the child is under a year old, then it is best to wait until they are a year old before doing an open reduction. In some cases, after closed reduction, the hip joint may occasionally come out again (**re-dislocate**) during treatment and this may require a repeat procedure or an open reduction.

After 2 years:

Deformities may have become severe, making major open surgical intervention necessary to reposition the hip. This involves placing the femoral head in the acetabulum directly by the hip by opening the hip joint (**open reduction**). As part of this process it is often necessary to carry out an osteotomy (cutting of a bone), usually of the thigh bone (**femoral osteotomy**) or the bone around the socket (**pelvic osteotomy**). Older children are more likely to need this type of additional procedure. At the end of the procedure the child is placed in a hip spica.

Long term follow-up:

If the child is treated with a Pavlik Harness, then the child is followed up until they are walking well and radiographs (X-Ray images) are satisfactory. Children treated by closed or open reduction are followed up until they have stopped growing. If dysplasia is treated successfully – and the earlier the better - children end up with normal hip joint function, have no further problems and go on to lead active lives. However sometimes the acetabulum or the femoral head do not develop as hoped and further surgery may become necessary.

Complications of Treatment

Failure of reduction

- With any of the closed methods of treatment, it may not be possible to reduce the dislocated hip.
- In the younger child, where a Pavlik harness is being used this usually means that a closed reduction under anesthesia will be required. If a closed reduction is unsuccessful then open reduction is required. This is usually delayed until the child is 15-18 months old as they are then bigger and stronger and the procedure is safer.

Re-dislocation

- With any method, re-dislocation can occur. In these circumstances it may be possible to try again using the same treatment method or it may be necessary to use a different method.

Avascular necrosis

- The treatment of this DDH can result in damage to the blood supply of the femoral head. Unfortunately, all the possible causes of this are not known. Whilst precautions are taken against this (e.g. avoidance of extreme positioning, adductor tenotomy), sometimes it still occurs. Usually this is only slight and leads to few long-term consequences but rarely can it result in significant damage and growth disturbance to the hip that might require further treatment.

Skin irritation

- This may occur with any of the various positioning methods.

Delay in walking

- This may occur if the child is in the spica but children soon catch up.
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