Paediatric Orthopaedics

Developmental dysplasia of the hip (DDH) & management with a Pavlik harness

What is DDH?
DDH is a condition where there are varying degrees of instability of the hips. This is usually present from birth (congenital) but can also develop during infancy or childhood. It consists of two components:

- The depth of the socket (acetabulum)
- The position of the ball part of the thigh bone (femoral head) within the socket.

What causes DDH?
DDH can be a result of many different factors: family history; low levels of amniotic fluid during pregnancy; the position of the baby in the womb and at birth (for example breech); maternal hormones causing lax ligaments around the time of birth; first born; the presence of other orthopaedic problems (for example foot deformity).

How will I know if my baby has DDH?
When your baby is born, the doctor and midwife will routinely check your baby’s hips and if they feel any instability or any clicking, will refer your baby to have a hip ultrasound to check their position. If there is a family history of hip problems, or if the baby has any other orthopaedic problems, such as foot deformity, then your baby will be referred for a routine hip ultrasound scan.

What happens if my baby is diagnosed with DDH?
You will receive a referral to our consultant paediatric orthopaedic surgeon who will assess your baby’s hips and review the ultrasound scan. If it is felt that the hips are unstable and need to be treated, it is likely that the consultant will discuss using a Pavlik harness with you. This will help the baby’s hips to develop in the most normal way.
**What is a Pavlik harness?**
A Pavlik harness is a soft fabric harness which is put on initially under the baby’s vest, next to the skin. It has a chest strap, two shoulder straps and four leg straps which attach to little ‘booties’.

![Pavlik harness image](image)

Courtesy of STEPS charity

**How does the Pavlik harness work?**
The goal of the harness is to keep the ball of the hip joint pointed towards the socket while the baby moves his or her legs. The baby will be encouraged to rest into a position where the hips are bent (flexed) up to 90 per cent and relaxed out to the side (abduction).

**Will I have to care for my baby in a different way?**
When the harness is first put on, the length of the straps will only be altered by a member of the orthopaedic team. Parents are allowed to loosen the chest strap for feeding. Loose clothing needs to be worn around the harness and we suggest you hold your baby with their affected leg away from your body to prevent the legs from coming together. Initially removing the harness (for example for bathing) is not advised, especially if the hip is unstable.

**How long will my baby have to wear the harness?**
This will depend on the severity of your baby’s hip condition. As a general rule it is likely they will have to wear the harness full time for four to eight weeks. You will then be able to remove the harness for bathing and so forth. Most children will be treated with a harness for about two to four months.

**How will I know if the harness is working?**
You will have regular appointments with the consultant and the team where the harness will be checked to ensure that it is fitting correctly and is still providing the right amount of correction. The regularity of these appointments will again be dependent on the severity of the dysplasia. Initially it is likely that you will have weekly or fortnightly appointments with the team including regular hip ultrasounds so that we can check how the hips are developing.
What happens if the hips do not correct with the harness?
The consultant will discuss your baby’s progress at each appointment; if s/he feels that the hips are not developing in the normal way even with the Pavlik harness, s/he will discuss the future treatment options. Each baby is different.

It is important to contact the hospital if:
- the baby’s feet are constantly slipping out of the booties
- you feel the baby has grown and the harness is too tight
- the baby has persistent red marks around the shoulders or chest strap

Useful contact numbers:
The consultant surgeon’s secretary: Tel: 01223 216101 (or ext 2101)
The physiotherapists via email: add-tr.paedorthophysio@nhs.net

Please note this is a generic mailbox for all paediatric orthopaedic physiotherapists and will be accessed once a day

National Support Group:
STEPS - The National Association for Children with Lower Limb Abnormalities
Lymm Court, 11 Eagle Brow, Lymm, Cheshire, WA13 0LP;
Website: www.steps-charity.org.uk

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