

# Developmental Dysplasia of the Hip - Pavlik Harness Treatment

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## Information for patients from the Paediatric Orthopaedic Service

### What does Developmental Dysplasia of the Hip (DDH) mean?

- Developmental** - This indicates that the condition occurs whilst the baby is developing.  
**Dysplasia** - This indicates that the joint is immature or has not developed fully.  
**Hip** - A ball (femoral head) and socket (acetabulum) joint at the top of the leg.

The condition can be mild, moderate or severe. Some hips are simply immature (the socket is usually shallow), others are unstable (the hip can slip out of joint easily), other hips may be fully dislocated (out of joint).

The condition is not painful in children but can lead to deformity, limp and pain in later life, if not treated.

### How common is DDH?

Two babies in every 1000 live births will have DDH and it is seven times more common in girls. First-born children are also more at risk.

There is also evidence that it is more common if there is a family history of DDH, if the baby has been squashed inside the womb (oligohydramnios) or if the baby was breech (feet first or bottom first).

### What is the treatment for DDH?

The treatment of DDH aims to put the ball in the socket (reduction) and keep it in place while the hip develops. This can be done in many ways and is dependent upon the age at presentation, severity of the DDH and the judgement of the clinician for each individual child.

The treatment outlined below are only average guides, ages may vary dependent upon the growth of your child. Your child may need more or less treatment than average. In general terms, the younger the child is at the time of diagnosis, the less invasive the treatment and the better the outcome.



## Treatment of DDH

### Pavlik Harness

This fabric harness called a “Pavlik Harness” keeps your baby’s legs in a “frog” position. Their hips and knees are bent up to 90 degrees or more and their legs are kept apart as pictured below.



This is a natural position and encourages the normal development of your baby’s hips.

Your baby will need to wear the harness 24 hours a day. You may also need to attend clinic on a weekly basis to allow the harness size and fit to be checked.

Your baby will have repeat scans in the harness to check the progress of your baby’s hips. Once your baby’s hips have been shown to be developing sufficiently, the Pavlik Harness will be removed. In most cases this takes between six to eight weeks.

If progress is satisfactory, your baby will be followed with a clinical check and another scan at six months old. This is followed by an x-ray at one year old and then yearly until the hips are equally mature.

90% of hips will be treated successfully with the harness alone; however there will still be some babies who may require further intervention.

### Caring for your baby in a Pavlik Harness

A member of the Paediatric Orthopaedic Team will fit your baby’s Pavlik Harness. You will not need to make any adjustments or need to remove the harness at any time.

#### Clothing

- Do not use clothing with a waist such as trousers, skirts or tights. The waist will tighten the harness preventing your baby from moving freely and may cause your baby’s hips harm.
- The best style of clothing is dresses for the girls and long baggy baby grows for the boys. You will not need socks or tights as the harness has booties attached that keep their feet warm.
- Items such as vests are best replaced with long sleeved or short sleeved t-shirts. However when the vest is cut along the outside seams this widens the vest and does not restrict the harness.

#### Nappy changing

- You will need to make sure that the nappy is underneath the harness and **not** over the top of the straps. Not only does this minimise soiling of the harness but will prevent over-tightening of the harness straps, which can be harmful to your baby’s hips.
- You will need to lift your baby’s bottom by placing one hand under their bottom rather than lifting them using their legs. This again protects your baby’s hips. It is often helpful to put the clean nappy under the dirty nappy you are about to remove to protect the harness from “accidents”.
- To clean the area use a wet wipe or water making sure to thoroughly dry the area afterwards to prevent soreness. You can really open up the creases to allow you to clean and dry the creases properly. This will not disturb your baby’s hip position.

- Do not use talc or cream as this can become caught in the hip creases and cause soreness and irritation.

### Washing

- You will not be able to bath your baby only “top and tail”.
- Ensure your baby is completely clean and dry in their hip creases and behind their knees as dampness can cause sores and urine can cause urine burns.
- Try to dab them dry rather than rubbing as their skin can become sensitive.

### Positioning

- You should continue to lay them on their backs, as this is a good position for their hips.
- You can also sit them across your leg or place them in a baby reclining seat. Sometimes a folded towel is required under their bottoms in the reclining seats as they can be quite deep.
- Do not place them on their sides or on their stomachs as this can put their hips at risk.
- For feeding you can either hold them against you, chest to chest, or you can lay them on a pillow on their back. Any position you find most comfortable is fine as long as their legs remain in the “frog” position.
- Baby papooses are great for carrying as they keep your baby’s hips in a good position. They can also find this method of carrying soothing.

### Buggies and car seats

- Your buggy and car seat will need to have low sides to allow your baby enough room to move whilst in the Pavlik Harness. If the seat you already have is deep you can lift your baby’s bottom up higher within the seat using blankets or cushions and lengthening the straps.
- You may need extension straps for your seat. If this is the case please contact the manufacturer for further details.

### General concerns

- Your baby may be a little fractious in the first 24 to 48 hours. This is not due to pain or discomfort, but due to the restrictive nature of the harness. Most parents report that their baby settles once they learn they can still kick their legs out sideways rather than downwards.
- If you are concerned that your baby is in discomfort check that the harness is not rubbing around the neck area or that they have nappy rash in their hip crease. These are the most common causes of discomfort. Rubbing is uncommon but can be helped by wrapping a soft cloth around the straps. One parent found that breast pads were soft and absorbent.
- Occasionally parents have reported that their babies are more prone to colic in the harness as they are unable to move sufficiently. Talk to your health visitor regarding massage techniques and other methods to relieve colic.
- Health visitors need to know the weight of the harness to accurately calculate your baby’s weight – they weigh 125 grams.
- Keeping the harness clean – Do not worry, no harness remains perfectly clean. If any accidents occur, you can wipe the harness with a damp cloth. Some parents cover the straps with a cloth or cotton wool before changing nappies or when feeding. If the harness gets very dirty we can change it but we risk losing the good position of the hip so naturally would prefer to leave them on if at all possible.

If you remain concerned please contact a member of the Paediatric Orthopaedic Team.

## **Useful contacts**

Physiotherapists - Jenny Seggie/Suzanne Gray

Telephone: 01233 616618

Email: [jenny.seggie@nhs.net](mailto:jenny.seggie@nhs.net) or [suzanne.gray2@nhs.net](mailto:suzanne.gray2@nhs.net)

Sonographer – Pauline Bacon

Telephone: 01227 766877 extension 73086

Email: [Pauline.bacon@ekht.nhs.uk](mailto:Pauline.bacon@ekht.nhs.uk)

## **Maisy's story – as told by her mother**

The first we heard of hip dysplasia was when our daughter, Maisy, was examined by the paediatrician the day we were discharged from hospital. We were simply told that there was something wrong with her hips and that she would most likely need treatment. The staff at the hospital gave us an information sheet that included a picture of the Pavlik Harness and we were given an appointment in Canterbury for a fortnight later.

Looking at the picture of the harness on the sheet we hoped for the next two weeks that Maisy's was a mild case that would not need treatment. It looked restrictive, uncomfortable and, to be honest, a bit stupid. Nevertheless we turned up for the appointment with a dress in our changing bag just in case she would leave wearing one.

To our dismay, the scan showed that Maisy did indeed need treatment – her right hip socket was very immature and the left worse still. We were both distressed as we watched the harness being fitted. I felt like my baby was being taken away – I couldn't hold her against me the same way to feed her and cuddling her was difficult. Instantly everything seemed to become more difficult – it felt so unfair. After two weeks of having Maisy we had been doing really well, coping with everything being new parents involved and now it was as if someone had gone "Right you two, you are doing far too well, lets make everything harder!".

Pauline and Jenny were very supportive, even giving us a number to contact them at anytime. Armed with this, we went home and got on with it. However, the first night was awful and Maisy howled for most of the evening. We came very close to ripping the harness off her and I was in floods of tears. The next day however, we realised that Maisy had been coming down with a cold and must have had a really sore throat – perhaps the crying had not been caused by the harness after all?

The first week was quite tricky - getting used to doing everything differently. I found breast feeding positions especially difficult at first as I couldn't find a way for Maisy to feed with her head in line with her spine. She seemed to get a stiff neck and this would make her cross and keep coming off the nipple. I persevered and we managed to adapt over time, Maisy became less annoyed and I continued to breast feed her successfully.

Another problem was cleanliness. Maisy had only had one bath since she was born and now she could only have strip washes. This was fine except, as the weeks went by, her harness picked up more and more dirt especially around the neck where milk or sick ran down the crease. By week three she actually smelt really bad there and her neck was constantly damp. Also, the creases at the top of her legs became really sore at one point and I felt awful that I'd missed cleaning that area properly and let it get so bad.

The harness definitely affected Maisy's mood over the six weeks. She was more cranky and would whinge and squirm more frequently. However, the weekly appointments in Canterbury were really helpful and reassuring as we could discuss these problems and Pauline and Jenny helped us work out solutions. To help the smelly neck, Jenny gave us some gauze to wrap around the shoulder straps and we could swap tips with other parents such as using cotton buds to clean the creases and scrubbing the harness straps with a toothbrush.

In the end, the six weeks passed quite quickly and it was all worth it as Maisy's hips are now normal. Really we now feel lucky that she is healthy in every other way and the harness was a short ordeal that has hopefully prevented more invasive treatment in the future. Furthermore, while we initially felt robbed of some aspects of Maisy we now appreciate the small things even more. Seeing her kicking her little legs, kissing her toes and watching her enjoying a bath is something we will never take for granted.

**This leaflet has been produced with and for patients**