



steps

We don't take walking for granted

Caring for a child in a Pavlik harness



The Parents' Guide



Testimonial

“Lyla started gymnastics aged 3. She took part in her first club competition aged 5, winning a bronze medal for the vault and another for the overall competition. Lyla spent 13 weeks in a pavlik harness with more scans and x-rays than I can count and it has never held her back. Lyla recently started cheerleading and was selected to represent her school in athletics, activities I could have never imagined her doing”

Emma Malkin
(Mum to Lyla, successfully treated with a Pavlik harness)





Introduction

It is a common reaction of most parents who discover their child has a hip condition to feel confused, worried or upset.

These are perfectly natural feelings and you should not feel guilty or try to hide your emotions. Your feelings matter.

Support when you need it

Often being able to contact someone who knows what you are going through can be the biggest help when facing an uncertain situation. Our Family Contact Service can put you in touch with others who have shared a similar experience and can offer advice, support and practical tips. Please contact our Helpline for details.

Our online discussion forum is another fantastic resource for helpful tips and practical advice written by parents who are coping with a child with DDH. You can also share your problems and solutions to everyday challenges. Register FREE on our website or contact us for more information.

Remember, the STEPS Helpline team are here to offer information and support in total confidence and answer any questions or concerns you may have. This will help you to ask informed questions at hospital appointments or may help to reassure you along the way.

No matter how big or small your concern, please telephone our Helpline on **01925 750271** or email info@steps-charity.org.uk for support and advice in total confidence.

The final outcome from DDH will depend on the severity of your child's condition and their response to treatment. However, many children are treated successfully and go on to lead a healthy active life with no long term problems.

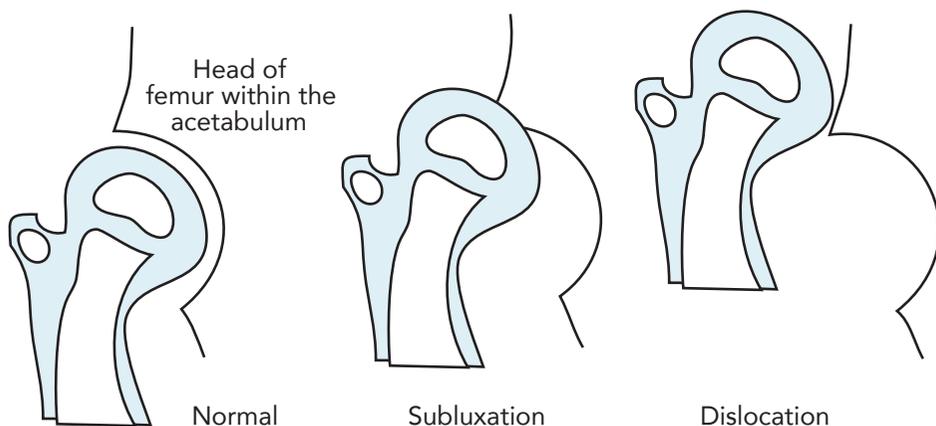
Understanding childhood Dysplasia of the Hip (DDH)

What is Developmental dysplasia of the hip (DDH)?

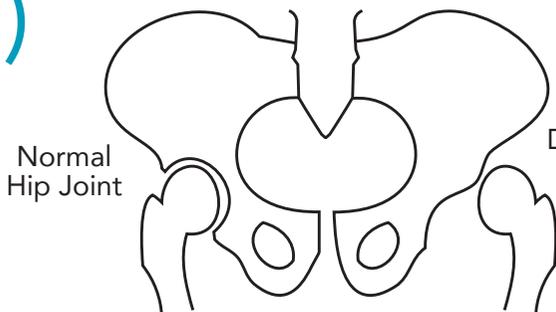
The hip is a 'ball and socket' joint. In a normal hip, the top of the thighbone (femur) is a smooth round ball shape which fits into a smooth cup-like socket on the pelvis (acetabulum). The head of the femur and the acetabulum are in close contact, a little bit like an egg in an egg cup.

When DDH occurs, there is an abnormality either in the shape of

the head of the femur, the shape of the acetabulum or the supporting structures around them. As a result the acetabulum and the femur are not in close contact. In the mildest form of hip dysplasia, known as subluxation, there is some contact between them. In the more severe forms, the femoral head or ball may be displaced completely out of the socket and be dislocated.



d Developmental (DH)



Normal Hip Joint

Dislocated Hip Joint



What is the significance of hip angles?

The following information is taken from The International Hip Dysplasia Institute www.hipdysplasia.org:

“An ultrasound study in young infants is performed when hip dysplasia is suspected. This is necessary to make the diagnosis or to be sure the hip is normal.

There are angles that are measured during the examination. This should be gentle and performed when your baby is relaxed. The one that is used the most to help guide treatment is the alpha angle. This angle is considered normal if it is more than 60 degrees. Mild dysplasia is present when the alpha angle is between 43-60 degrees. Dysplasia is severe when the alpha angle is less than 43 degrees.

During the ultrasound examination, the hip is also examined for stability in the same manner as the Barlow test.

The ultrasound is used to see if the hip is unstable as well as relying on the feel of a doctor.

Many babies have slightly loose hips so this can be very difficult to interpret. The images can generally show how far out of the socket the hip will move.

Of course, this depends on how hard the examiner pushes.

In general more than 50% of the ball should remain in the socket. When the number is less than 45% then there is instability. The instability is much more common in newborn infants and the ligaments get tighter with age. Some instability in a six-week old infant is not very uncommon.

Sometimes this is treated and sometimes it is observed with a repeated ultrasound study at age three months. Other imaging methods that may be used for babies or children are x-rays and arthrograms.”

Why does it happen?

When DDH occurs, it is important to understand that a child's hips developed this way on their own. DDH cannot be prevented and it isn't anyone's fault. Even though as parents you may be distressed at discovering your baby has a hip condition, he/she will not be in pain.

Many babies are born with unstable hips that stabilize soon after birth. With DDH, the problem persists but can be treated successfully with early detection.

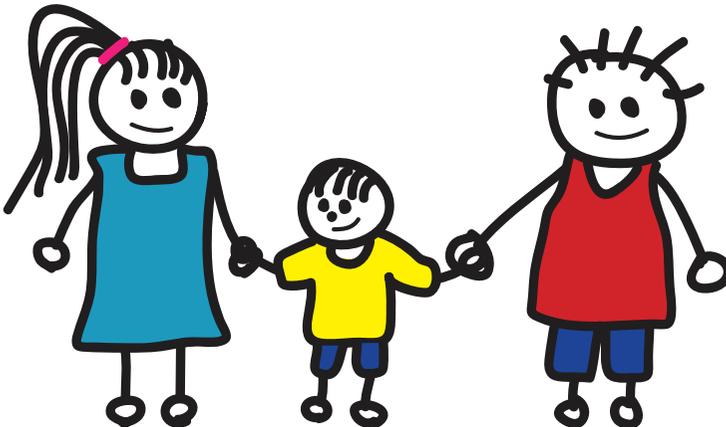
About 1 or 2 babies in every 1,000 born will have a hip that is not stable at birth. This can be due to various risk factors such as:

- A family history of hip problems
- Breech position in the last three months of pregnancy
- Breech delivery
- Girls are affected more often than boys, particularly the first born.

Is treatment necessary?

If your baby is born with DDH, treatment is best started as early as possible. From birth up to 6 months, babies with DDH are usually fitted with a special harness, the most common type being the Pavlik harness. The baby may need to wear the harness for several weeks or

months and in most cases this will correct the condition. Some babies do not respond to early treatment or some children are not detected until they are older. These cases may be more difficult to treat and surgery may be necessary.



Pavlik Harness Explained



What is a Pavlik harness?

A Pavlik harness is a lightweight 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 may be attached to little 'booties'.

Is a Pavlik harness suitable for all babies?

It is typically used to treat babies with hip dysplasia from birth to 6 months of age.

How does the Pavlik harness work?

The 4 leg straps are fastened to allow some movement in the legs and to direct them into a position where the hips will be able to develop into a more normal position. It is important

to understand the proper use and fit of a Pavlik harness. A harness that is too tight can do more damage to a baby's hips, and a harness that is too loose will not hold the hips properly.

How long will my baby have to wear the Pavlik harness?

The answer to this question depends on the severity of your baby's hip condition and can change over time as your baby's hips improve. As a general rule, it will be worn for 6 to

12 weeks or it could be as long as 6 months. In some cases the consultant may decide to remove the harness sooner if it is not achieving the desired outcome.

Can the harness be removed during this time?

Your baby will need to wear the harness for 24 hours a day throughout this time. You may be able to remove the harness for bathing for a short period of time,

no more than 10 to 15 minutes. Your consultant will inform you whether you can do this. Spongebath your baby if you are not allowed to remove the harness.

Will my child need any special equipment?

- You will not need any special equipment whilst your child is wearing the harness
- Your child will be able to fit into a

- normal car seat and pushchair
- Your child will need to wear larger loose fitting clothing for comfort

Is there equipment that I should avoid using?

- Baby door bouncers
- Baby walkers
- Baby slings/carriers
- Swaddling your baby



How will I know if the Pavlik harness is working?

You will have regular appointments with your consultant or a member of the specialist 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 vary and again depend on the severity of your baby's hip condition. Ultrasounds and x-rays are also used to see how your

baby's hips are developing.

Between appointments DO contact your hospital if:

- Your baby's feet are constantly slipping out of the booties
- The harness is too loose or too tight
- If your baby has pressure sores or persistent red marks around the shoulders or chest strap

What happens if the hips do not correct with the Pavlik harness?

Your consultant will discuss your baby's progress at each appointment. If the hips are not developing in the normal way or remain dislocated despite wearing the Pavlik harness, the harness will be discontinued. Continuing to use the harness when the hip remains dislocated is very

harmful to the hip. Your consultant will discuss future treatment options with you if appropriate, at this point.

If further treatment is required, please contact our Helpline [01925 750271](tel:01925750271) or email info@steps-charity.org.uk for help and advice about the next stage.

What happens when treatment is successful and the harness is removed?

Your baby may be uncomfortable for a short time and sleeping patterns may be disrupted as they adjust to life without the harness. It is also normal for your baby to hold the frog-leg position for a couple of

days. You can handle your baby as you would normally during this time. Normal activities can be resumed but avoid using doorway bouncers and baby walkers. Swimming is great exercise for your baby at this stage.

Care for a baby in a Pavlik harness

The first week is often the hardest and it is common for your baby to be unsettled as he/she adjusts to the Pavlik harness. Hang in there, your baby needs this treatment and babies are resilient and can adapt. You will also quickly work out a new routine which will get better with practice. Here are some suggestions to ease the adjustment period:



Keeping clean and skin care



Your baby cannot have a bath whilst wearing the Pavlik harness so you will need to give your baby a sponge wash; particular attention needs to be paid to the neck, shoulders, groin and behind the knees as these can become sore.

Do not be tempted to use cream or talc under the harness as these can clog and cause skin problems. Check for any red areas and if you are worried and you feel concerned the skin is getting worse please seek medical advice immediately.

Nappy changes

For a baby wearing a harness, many parents find disposable nappies easier to manage than cloth. When you change the nappy, lift the baby up under the thighs and try to support the bottom rather than just pulling up on the legs. Don't forget, the nappy always needs to go under

the harness but please take extra care not to dislodge the straps. If the harness webbing gets soiled you can sponge with a mild detergent or scrub with an old toothbrush. However, staining is probably going to be inevitable.

Clothing

Loose fitting clothing, usually the next size up, can be worn over the Pavlik harness.

Toddler size socks usually fit over the harness 'booties'. However, some babies can get minor skin irritation from the harness straps. A vest can

be used under the harness or safely secure some soft padding around the shoulder straps to stop the problem. Do not put tight trousers or tights on your baby, as this pulls the legs together, which will make the harness less effective.

Breastfeeding

If you are breastfeeding you can continue to do so successfully while your baby wears the Pavlik harness. You could try curling up next to your baby, underarm feeding or a 'v' shaped pillow to support the baby in the normal position. It can seem difficult at first finding the

right position but eventually you will find a way which suits you both. Feeding may just take a little longer than usual and it is also a good idea to wind your baby more frequently. For further breastfeeding advice and support, please contact your local GP, health visitor or midwife.

Sleeping

Sleeping on the back is always encouraged for the hips. It can take a week or even longer for some babies to adjust to sleeping in a Pavlik harness. To keep your baby warm at night, you can use the baby sleeping bags in a larger size which fits comfortably over the Pavlik Harness. If your child is inconsolable, maybe the problem is not the harness. Check the same things you would otherwise look for in an unsettled baby: teething, temperature, etc. Do not lie your baby on his/her side as

it is not good for your baby's hips at this stage. It is also not advised to lay your baby face down. Sleeping on the back is always encouraged for the hips.

Loose-fitting clothes should be worn over a harness or splint unless the specialist advises differently. Although babies may like the sensation of being wrapped up tightly or swaddled, this unfortunately is bad for your baby's hips and should be avoided.



Play time & tummy time

Regular play time is encouraged. Older infants sometimes learn to crawl while wearing the Pavlik harness. This is not harmful. Floor activities, sitting activities and high chair are all encouraged with the harness.

For playing, lay your baby on his/her

tummy, back or in a sitting position. As with sleeping, do not lie your baby on their side as it is not good for your baby's hips at this stage.

You can do tummy time with some support under the torso so the hips can stay in the spread position of the harness.

Out and about

Most parents find their babies fit into their usual car seat and pushchair without any problems. Try to avoid long journeys because a car seat usually holds your baby's thighs close together and limits the effectiveness of the harness. If your car seat feels too tight on your baby's legs, then consider purchasing a wider car seat to allow his/her legs to spread apart.





A success story



Following his birth in March 2009 Ronan's hips were checked by the Midwife as part of the routine hospital discharge procedure. She felt unhappy about his hips however and asked the Paediatrician for his opinion - he described the hips as 'clicky' and although this didn't necessarily indicate a problem said

that his hips would be checked again in 6 – 8 weeks. Not entirely happy with this, the Midwife asked for a second opinion from a more senior Paediatrician. He described a 'clunk' when the hips were examined and said that the hips could be dislocated during examination and would therefore require treatment.

Ronan had an ultrasound scan at 1 week old and went into a Pavlik Harness the following week. I was distraught at seeing my tiny baby in the harness and it took us all a little while to get used to it. Ronan had to wear the harness 24 hours a day. At one of our follow up checks we were told that there was a possibility of the harness coming off when he was 8 weeks old. I was so excited about this but massively disappointed when we were then told he had to continue wearing it for a further 6 weeks. I really wish that they'd not said anything about it coming off sooner as I don't think the doctors realised just how much we pinned our hopes on that throw-away comment.

Looking back I am hugely thankful for the Midwife at the hospital, but for her diligence, Ronan's hip problem may have gone undetected at that stage. A lot of people told me that it was great that it had been picked up and that he was being treated so early. With hindsight I can see that they were right but at the time I just wanted to shout at people that there was nothing great about the fact that my newborn needed to be in a harness. After the harness was finally removed Ronan went back for check-ups every 6 months until finally at 2 years old he was signed off completely with healthy hips.

Ronan's sister Ruth was born in January 2012 and although she was given the all clear on her hips at her

newborn check she was referred for a scan because of her family history.

The Health Visitor had said that she had felt a 'click'. We were therefore anxious to be seen sooner rather than later and booked a private appointment for Ruth to be seen by a Consultant at 2 weeks old. He said that she had an 'immature' hip that may resolve without intervention but asked us to return for a further scan when she was 6 weeks old. This second scan showed no improvement in the hip however and she went into a Pavlik Harness when she was 7 weeks old and was in the harness for a total of 9 weeks, 24 hours a day. Interestingly her harness was much less bulky than Ronan's (2009) and the fabric-covered metal buckles had been replaced with plastic and Velcro and it even had little built in socks! Once she came out of the harness Ruth had 3-6 month follow up appointments and at 18 months old is now running around happily and was signed off with healthy hips at her last review!

I won't lie, I shed many tears and we did take a while to adjust to the harness but I now have 2 happy and healthy children running around and no one would ever suspect that they'd had a problem.

Sarah McConnell
(mum to Ronan and Ruth)

We don't take walking for granted...



Babies & Children



Anyone



Families

Where can I find out more information about DDH?

You should contact your medical practitioner for information relating directly to your child or for more general information contact STEPS.

www.steps-charity.org.uk

Helpline: 01925 750271 Email: info@steps-charity.org.uk

 STEPS Charity Worldwide  @STEPS_Charity



BMA Patient Information Awards
Commended in the 2011 BMA Patient Information Awards
Reviewed and republished January 2015

Acknowledgements:

STEPS wishes to thank:

Julia Judd, Advanced Nurse Practitioner, Children's Orthopaedics,
Southampton University Hospital

Deborah Jackson, Clinical Specialist Physiotherapist,
Great Ormond Street Hospital for Children

Rose Davies, Specialist Orthopaedic Nurse,
Alder Hey Children's Hospital

Susan Saville, Specialist Paediatric Physiotherapist,
Alder Hey Children's Hospital

and all the families who provided feedback and photos
for the production of this Pavlik harness booklet.

Special thanks to Pannone, Part of Slater & Gordon



Sponsored by Pannone, Part of Slater & Gordon