

# Patient information

## Perthes

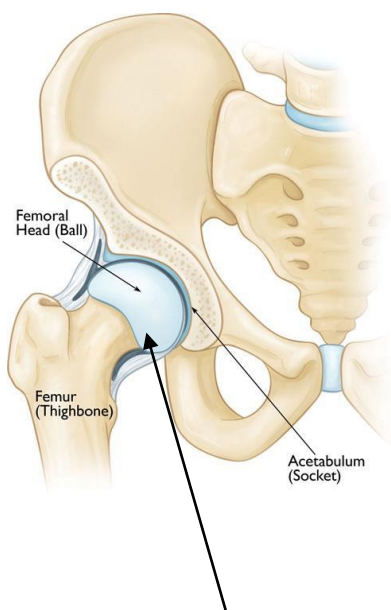
### What is Perthes?

Perthes is a rare childhood condition involving the hip which affects approximately 1 in 9,000 children. Perthes typically occurs in children who are between 4 to 10 years old and is five times more common in boys than girls.

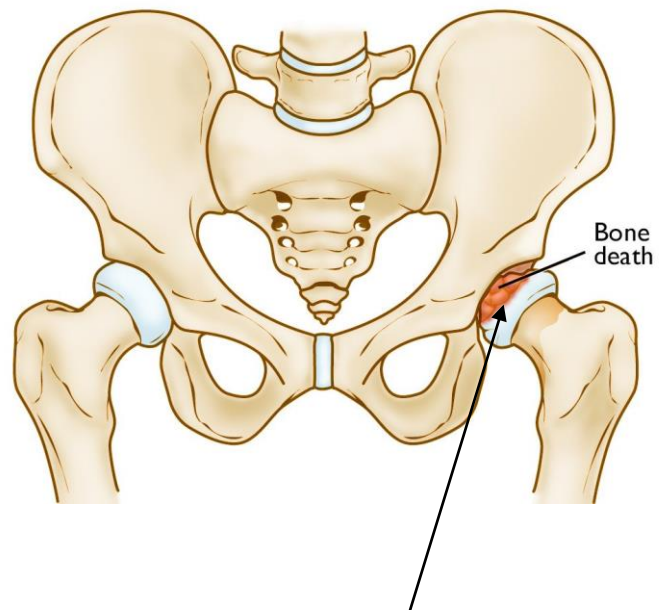
### The long-term prognosis for children who have had Perthes is good

Perthes occurs when the blood supply to the rounded head of the femur (thighbone) is temporarily disrupted. Without an adequate blood supply, the bone cells die in a process called avascular necrosis. The reason for the blood supply disruption is still not fully understood however over time (approximately 18 to 24 months) the blood supply to the head of the femur returns and the bone re grows. Most children return to daily activities without any major limitations.

### Anatomy of the Hip



Healthy hip joint



Perthes hip joint

### What are the symptoms of Perthes?

Often one of the earliest signs of Perthes is a change in the way your child walks and runs. This can be most apparent during sports activities. Your child may limp, have restricted hip movement, or develop a peculiar running style, all due to irritability within the hip joint.

Other common symptoms include:

- Pain in the hip or groin or in other parts of the leg, such as the thigh or knee (called "referred pain.").
- Pain that worsens with activity and is relieved with rest.
- Painful muscle spasms that may be caused by irritation around the hip.

## **What is the management for Perthes?**

The goals of treatment are to relieve painful symptoms, protect the shape of the femoral head, and restore normal hip movement.

There are many treatment options for Perthes and your doctor or consultant will consider several factors when developing a treatment plan for your child, including:

- Your child's age. Younger children (age 6 and below) have a greater potential for developing new, healthy bone.
- The degree of damage to the femoral head. If more than 50% of the femoral head has been affected by necrosis, the potential for regrowth without deformity is lower.
- The stage of Perthes at the time your child is diagnosed as this will determine which treatment option your doctor will recommend.

Additional management such as limiting or adapting sports/games to avoid high-impact activities such as running and jumping will help relieve pain and protect the femoral head. On occasions your doctor or consultant may also recommend crutches or a walker to prevent your child from putting too much weight on the joint.

## **How can physiotherapy help alongside activities at home?**

Hip stiffness and muscle weakness is common in children with Perthes. Physiotherapists can help monitor hip range of movement and muscle strength to help address this.

If pain and restriction is limiting your child's activity then physiotherapists can look to develop and teach an exercise programme that parents can complete with their children at home or in a swimming pool.

See below some exercises to trial at home.

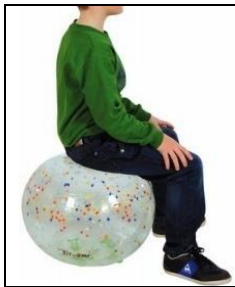
## **Home exercises to trial**

These exercises can help to reduce muscle weakness and joint stiffness around your child's tummy and hips. Please ensure that your child has parental supervision for their safety when completing these exercises.

None of the below exercise should be forced to recreate pain. Your child might report some aching around the areas whilst completing the exercises or afterwards which is normal.

Encouraging these exercises regularly are also a good way to highlight any new restrictions or changes with your child's hip enabling further advice to be sought as required.

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**Sitting**- sitting on a gym ball or chair. Encourage an upright sitting posture with hips and knees bent at a 90 degrees angle.

Aim to encourage this activity daily with school work/meal times.



**Trunk movements** - whilst sitting on a gym ball (or floor) encourage your child to pass a ball rotating to the left and right to achieve trunk rotation. Aim to complete 30 seconds to 1 minute at a time.

Now practice sitting back to back and passing the ball over head to encourage trunk flexion and extension. Aim to complete 30 seconds- 1minute.



**Hip movements** - lying on their back (to make the exercise easier use a wall to support their legs). See if they can hold a ball up in the air and then tap the ball with their feet ( feet can be together or individually).

Aim to encourage 10 toe taps.



Alternatively they could see if they could pass the ball from their feet to their partner's feet without dropping it.






**Hip movements** - sitting with knees bent in an open frogs leg position encourage rolling the ball forwards and backward with a partner.

You can then repeat this exercise with a straight leg to help increase the flexibility of their hamstrings.



To increase the stretches encourage your child to lean forwards to reach and push the ball.

Aim to complete 30 seconds to 1 minute.

	<p><b>Hip movements and strengthening</b> - lying on their tummy holding a ball in front encourage them to lift and hold legs and arms off the floor (like superman!)</p> <p>See if they can hold this position for 5seconds and repeating as able.</p>
	<p><b>Hip movements and strengthening</b> - lying on their back, encourage them to place their feet on the ball and lift their hips up whilst maintaining their balance.</p> <p>Repeat 5 times.</p>
	<p><b>Tummy and hip strengthening</b> - Encourage your child to get into a plank position with their feet resting on the ball. This will challenge their balance and tummy strength.</p> <p>See how long they can hold this position. To make it harder see if they can walk forwards and backwards a few steps with their hands.</p>

## Sources of information

- <https://orthoinfo.aaos.org/en/diseases--conditions/perthes-disease#:~:text=Perthes%20disease%20is%20a%20rare,a%20process%20called%20avascular%20necrosis.>
- <https://patient.info/doctor/perthes-disease-pro>
- [www.evidence.nhs.uk/search?q=perthes+disease](http://www.evidence.nhs.uk/search?q=perthes+disease)
- [www.nhs.uk/conditions/limp-in-children/](http://www.nhs.uk/conditions/limp-in-children/)

## Important information

The information in this leaflet is for guidance purposes only and is not provided to replace professional clinical advice from a qualified practitioner.

## Disclaimer

Please note this is a generic ESHT information sheet. If you have specific questions about how this relates to your child, please ask your doctor. Please note this information may not necessarily reflect treatment at other hospitals.

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## Your comments

We are always interested to hear your views about our leaflets. If you have any comments, please contact the Patient Experience Team – Tel: 0300 131 4731 or by email at: [esh-tr.patientexperience@nhs.net](mailto:esh-tr.patientexperience@nhs.net)

## Hand hygiene

The Trust is committed to maintaining a clean, safe environment. Hand hygiene is very important in controlling infection. Alcohol gel is widely available at the patient bedside for staff use and at the entrance of each clinical area for visitors to clean their hands before and after entering.

## Other formats

**If you require any of the Trust leaflets in alternative formats, such as large print or alternative languages, please contact the Equality and Human Rights Department.**

**Tel: 0300 131 4500 Email: [esh-tr.AccessibleInformation@nhs.net](mailto:esh-tr.AccessibleInformation@nhs.net)**

After reading this information are there any questions you would like to ask? Please list below and ask your nurse or doctor.

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## Reference

Written by Jessica Pitman, Paediatric MSK Physiotherapist

The following clinicians have been consulted and agreed this patient information: MSK Physiotherapy Paediatric special interest group Miss J Dartnell, Consultant Paediatric Orthopaedic Surgeon

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