Royal Cornwall Hospitals
NHS Trust

# Legg-Calve-Perthes disease

Information for patients and carers

One + all | we care

## What is Perthes?

- It is a rare childhood condition involving the hip, which affects around 1 in 9,000 children.
- Typically occurs in children who are between 4 to 10 years old.
- Five times more common in boys than girls.
- Occurs when the blood supply to the rounded head of the femur (thighbone) is temporarily disrupted.

The reason for the blood supply disruption is still not fully understood. Over time (around 18 to 24 months) the blood supply to the head of the femur returns and the bone regrows.

## What are the symptoms of Perthes?

- **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.
- **Limb shortening** may occur in the affected side compared to the unaffected side.
- **Limping** is often developed and can gradually become worse over a few weeks. Your child may develop a peculiar running style.
- **Stiffness and reduced range of movement** occurs in the affected hip.
- **Muscle wasting** occurs as the affected leg can't be used normally and the muscle becomes weaker. You may notice that the affected leg appears thinner than the unaffected leg.

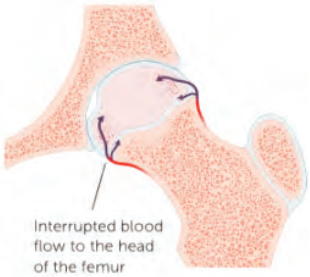
## How is it diagnosed?

If your child has suspected Perthes, your GP or healthcare professional will refer them to your local Paediatric Orthopaedic Consultant, who will carry out X-rays and further tests. If Perthes is confirmed they will discuss a treatment plan for your child and refer them to the Paediatric Orthopaedic Physiotherapy Service.

## Stages of Perthes

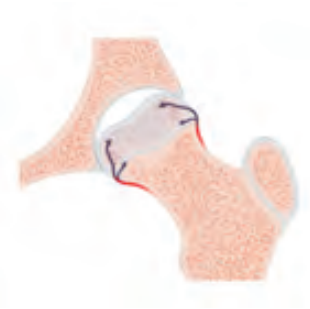
### 1. Necrosis

- Blood supply to the femoral head is disrupted.
- This phase can last for several months or up to a year.



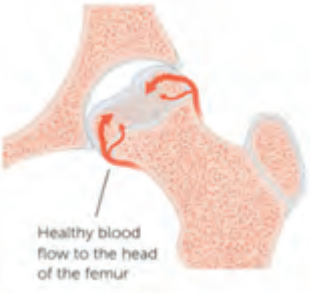

### 2. Fragmentation

- This is when the body 'cleans up' the bone cells that have died away and replaces them with new healthy bone cells.
- The femoral head begins to remodel, but the joint remains inflamed and painful.
- This phase can last up to 2 years.



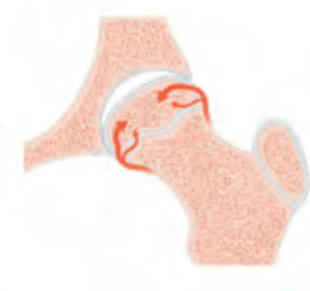
### 3. Reossification

- The femoral head continues to remodel itself into a round shape with the new bone once blood flow is restored.
- This phase can last from 1 to 3 years.




### 4. Remodelling

- Normal bone cells replace the new bone cells.
- The femoral head remodels to more of a mushroom shape appearance.



## What can help?

- Swimming and cycling are recommended as this keeps the joint mobile without putting pressure through the joint.
- Pain relief medication may reduce pain, but you need to discuss options with a pharmacist or GP.
- Avoid activities that lead to direct impact through the joint, such as running or trampolines. You may need to take no weight through that leg and to use crutches. Younger children may need a wheelchair outdoors.

## Exercises

Exercise is recommended to promote joint mobility and maintain strength. A physiotherapist can guide you through the correct exercises to complete. Please see some below to start with. Start with 3 repetitions of each and gradually increase by 1 or 2 each day up to 10. Try to exercise at least 2 times a day.

Stop these exercises if you feel they are making symptoms worse or bring on new pain. Please contact the Physiotherapy department for more advice on the number at the end of this leaflet.

## Inner range quads

1. Sit your legs out in front of you. This can be done with your back against a wall.
2. Position a large firm rolled up towel under one knee.
3. Keeping the back of the knee on the towel roll raise only your foot off the floor until it is level with your knee
4. Hold 5 seconds, relax and repeat.

## Bridge

1. Lie on your back with your knees bent and your feet and knees a little apart.
2. Squeeze your bottom muscles
3. Lift up your bottom.
4. Hold 5 seconds, relax and repeat.

## Frog Legs

1. Lie on your back.
2. Bend your knees up and place your feet together.
3. Let your knees fall outward as far as you can. Gentle pressure on the knees can help you to stretch as far as possible.

## Sharks

1. Lie on your side, knees bent.
2. Keeping your heels together lift the uppermost knee like the jaws of a shark – opening as wide as possible.
3. Hold for 5 seconds, relax and repeat.

## Star Fish

1. Lie on your back.
2. Bring your legs out like a star fish and then back to the middle.
3. Your physio will show you ways to slide your legs easily.

## Prone knee bend

1. Lie on your tummy and reach for your heel, bringing it up towards your bottom.
2. A gentle stretch should be felt in the front of your thigh. Do not use any force.
3. Use gentle overpressure only. If you have difficulty doing this yourself ask someone to help you.

## Contact us

If you have any questions or need further information, please contact:

Paediatric Orthopaedic Physiotherapy Team

Tel: 01736 758846

## Further information

Further information and support is available from the following website:

www.stepsworldwide.org

If you would like this leaflet in large print, braille, audio version or in another language, please contact the General Office on 01872 252690

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