

Perthes – general information

This leaflet provides useful information for parents and carers on Perthes disease, and how your child may be affected and the condition managed.

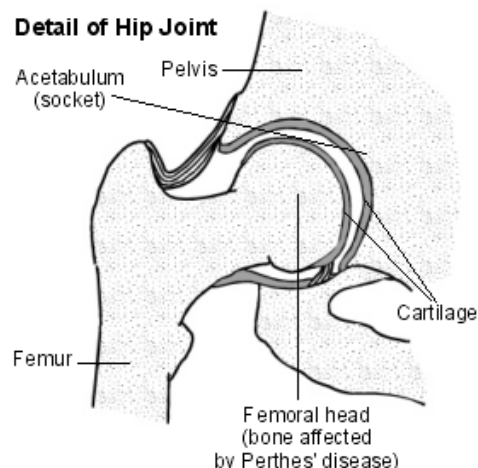
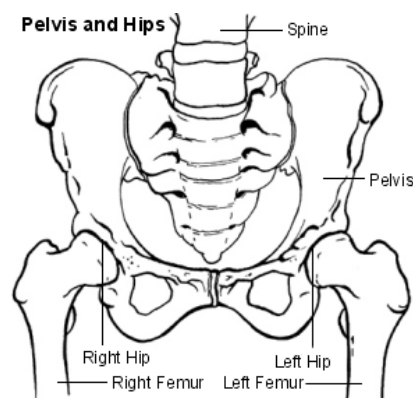
What is Perthes?

Perthes disease (also called Legg-Calvé-Perthes disease, Calvé Perthes disease, or avascular necrosis) is a disorder of the hip joint found only in children. It is not really a disease but this is the name it was given when it was first discovered.

The hip joint is a ball and socket joint. Perthes has many phases: initially, there is a temporary loss of bloody supply to the ball-shaped end of the thighbone (called the femoral head). As a result the bone softens and breaks down (a process called necrosis). This causes the normally round femoral head to become flattened or changed shape; this can be made worse by high impact activities. It then cannot fit perfectly into its socket, which means it cannot move as well.

It is not known why this can happen; it is not due to injury or a general blood vessel problem, but is thought to maybe occur when the child's circulation is changing to an adult formation. The blood supply will return to the femoral head over time and the bone will begin to remodel or reshape. It can take 2-3 years for the damaged bone to repair.

Perthes normally affects children between the ages of 4-10 years, and is more common in boys. In over three-quarters of children, only one hip is affected.



Symptoms: Children will often have a limp that comes and goes. They may complain of hip or groin pain, although often knee pain is the first symptom. The pain will persist and they may have wasting of the muscles around their hip and leg, and stiffness. Over time, they may have shortening of the affected leg.

Diagnosis: The diagnosis of Perthes disease is generally made through x-rays. However in the early stages, evidence of Perthes disease cannot always be seen on x-ray; therefore an MRI scan may be done as well. The stage and extent of the disease process will be assessed.

Treatment: Treatment aims to reduce hip pain and stiffness, and prevent deformity of the femoral head. During the early stages minimising high impact activities such as running and jumping, will prevent further flattening of the femoral head. Physiotherapy or hydrotherapy may be used to maintain the movement of the hip.

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During times of increased pain, we may recommend use of crutches, but not routinely. Regular visits at outpatient clinics will be needed for hip examination and x-rays to monitor changes to the femoral head.

The aim of treatment is to keep the femoral head as round as possible, and keep it contained within the socket. It may be necessary to do a special x-ray called an arthrogram, to get a better image of the shape of the femoral head. For this, your child will go to theatre and have an anaesthetic so that a special dye can be injected into the hip joint. This will show the joint structure and the coverage of the femoral head clearly.

Sometimes, there is a need for surgical treatment. If surgery is recommended full explanation will be given to you by your doctor. The aim of surgery is to keep the soft head well-protected in the hip socket; this may involve re-aligning the joint or enlarging the socket to provide better coverage for the femoral head.

What care is needed at home?

You will be referred to a physiotherapist, who will advise you on an exercise plan for your child. It is important to keep them mobile and active. Cycling and swimming under supervision are good forms of exercise that can be enjoyed, unless otherwise advised by their doctor.

It can be very difficult preventing a child from running around. Try to encourage your child to engage in activities such as playing board games, doing puzzles or watching films.

It is important that your child's school is aware of their condition and that they understand the problems of mobility and participation in sports/PE. This should be discussed with their teachers so that they are aware of their limitations and needs when at school.

Useful link: <https://www.stepsworldwide.org/conditions/perthes/>

References:

1. Physio tools (2003), version 3.066, 12th November silver level
2. J. Adams, D. Hamblen (1995) Outline of orthopaedics, 12th ed. Singapore, 312-316 Longman Singapore Publishers Ltd.
3. www.patient.co.uk/health/Perthes'-Disease.htm
4. Brech G, Guarnieiro G (2006) Evaluation of Physiotherapy in the treatment of Legg-Calvé-Perthes Disease Clinical science 61 (6)521-8

Contacting us

Physiotherapy Department
Dingley Child Development Centre
Erleigh House, University of Reading Campus, Reading RG6 6BZ
Tel: 0118 322 5248

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