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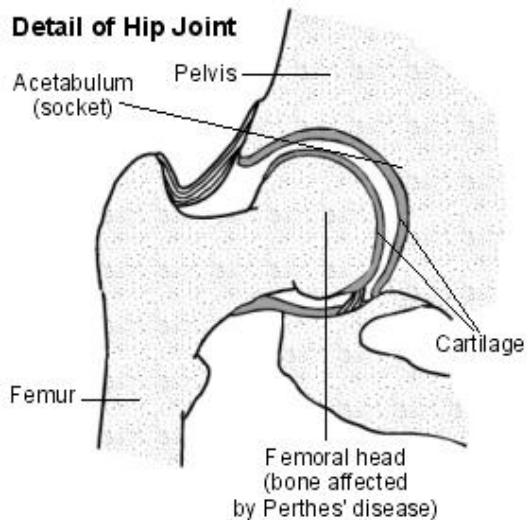


Perthes Disease

Information for Families & Carers

What is Perthes Disease?

Perthes Disease is a disorder of the hip in young children, usually between the ages of 4 and 10. The blood supply to the femoral head (the "ball" that is the upper part of the femur that inserts into the socket of the hip) is interrupted. The femoral head then "necroses" (i.e. loses blood supply) which weakens the bone.



Over several months the blood vessels re-grow, and the blood supply returns to the 'dead' bone tissue. New bone tissue is then laid down and the femoral head re-grows and remodels over several years. This is similar to how bone reforms and remodels after any 'normal' fracture or break to a bone, but takes longer.

better. Alternatively the surgeon could use another piece of bone from the pelvis as a 'shelf' to make the hip socket deeper.

Activity

In general it is important to **keep the hip moving** as much as is tolerated. This is because the cartilage in the hip joint relies on the fluid in the joint for its nutrition.

A good activity for children with Perthes disease is swimming. This allows full range of movement in the hip joint without the pressure of gravity and often allows fun activity even when other activities cause pain.

Activities to be avoided are those which cause a heavy impact on the hip joint such as running, jumping (including on trampolines) and contact sports.

Your consultant or physiotherapist can offer more specific advice about appropriate activities.

Treatment

The aim of treatment is to promote the healing process and to ensure that the femoral head remains well located within the hip socket.

Treatment will be directed by the consultant according to the severity of the condition and the age of the child.

Until recently most children were treated with plaster casts and possibly surgery. However, it is now known that at least half of children diagnosed with Perthes will heal without medical or surgical treatment. These are usually those under 5 years.

Treatment options are likely to be;

Physiotherapy and home exercise programmes to keep the hip joint mobile and in a good position and may include hydrotherapy (exercises in a warm pool). This will be accompanied by regular observation by the consultant.

Crutches or activity limitation may be needed for a short time if symptoms are particularly bad.

Plaster casts may be considered to keep the femoral head deep in the hip socket in order to promote bone healing in a good rounded shape.

Surgery may be necessary in severe cases. The aim of this would be to alter the angle of either the femoral head or the hip socket so that the joint fits together

Why does it happen?

It is not clear why this problem with the femoral head occurs. It is not due to an injury or a general problem with blood vessels.

Studies have however shown that between 2% and 10% of children with Perthes disease have at least one family member who has been affected by the disease.

Children with Perthes Disease are otherwise usually well.

What are the symptoms?

- Knee pain (may be the only symptom initially)
- Persistent thigh or groin pain
- Difficulty with walking or running shown as a limp due to pain or sometimes developing legs of unequal length
- Muscle wastage in the upper thigh
- Muscle spasms
- Hip stiffness restricting its movement

What tests are done?

GPs who suspect a child has Perthes will refer the child to a specialist. Tests to investigate whether the child has Perthes might include:

Xrays are taken of the hip when the child is lying flat and with the legs in a frog-legged position. The Xray can be normal in the early stages of the disease and is therefore likely to be repeated in a few months if the symptoms persist and are typical of Perthes. Once the signs of the disease are more apparent, the femoral head (ball of the hip joint) starts to look flattened rather than rounded. Xrays will be used to follow the progress of the breakdown of the soft bone and then healing as new bone is made and gradually remodelled.

A Bone scan may be carried out to confirm Perthes Disease when the Xrays are still normal in the early stages of the disease but the symptoms are persistent and typical of Perthes.

MRI scan (Magnetic Resonance Imaging) is sometimes used to assess the damage to the hip joint.

What is the prognosis?

This varies but in most children pain eases during the teenage years.

There are some signs that affect prognosis. Usually children diagnosed at 6 years or younger have the best outcome.

Signs of a poorer outcome may include;

- children who develop Perthes when they are 8 years or older
- development of a poor range of movement in the hip
- presence of a non-round femoral head even after treatment

It is estimated that approximately 50% of patients who develop Perthes disease as a child will need hip replacement by later adulthood (50 – 60 years of age).