

Perthes' disease

Perthes' disease is a disease of the hip joint that tends to affect children between the ages of three and 11 years. The top end of the thigh bone (femur) is shaped like a ball so that it can fit snugly into the hip socket. In Perthes' disease, this ball (femoral head) is softened and eventually damaged due to an inadequate blood supply to the bone cells. Around one in every 4,750 children is affected, with boys four times more likely to develop the disease than girls. In most cases (87 per cent), only one hip joint is affected. Most children with Perthes' disease eventually recover, but it can take anywhere from two to five years for the femoral head to regenerate. The cause is unknown and there is no cure. Treatments are available to encourage the femoral head to grow into a functional shape. Perthes' disease is also known as Legg-Calve-Perthes disease or coxa plana.

Symptoms

The symptoms of Perthes' disease include:

- An occasional limp in the earlier stages
- Knee pain
- Worsening pain and limping as time goes by
- Pain in the knee, thigh or groin when putting weight on the affected leg or moving the hip joint
- Constant thigh pain
- Reduced joint motion
- Joint stiffness
- Withered thigh muscles (atrophy)
- Eventually, the affected leg becomes shorter than the unaffected leg.

The cause is unknown

The blood supply to the hip joint is decreased or interrupted, for reasons unknown. Without sufficient oxygen and nutrients, the bone cells of the femoral head die. Typically, the femoral head takes on a flattened rather than rounded shape, and eventually fails to fit properly inside the hip socket. The femoral head can take between two and five years to re-grow. Sometimes, it grows in a deformed manner, such as extending beyond the confines of the hip socket. Perthes' disease tends to run in families, which suggests a genetic susceptibility. Current theory proposes that the genetic susceptibility can't trigger the onset of disease by itself, but the exact triggers are unknown. There is no cure.

Diagnosis methods

Diagnosing Perthes' disease involves a number of tests including:

- Physical examination
- X-rays
- Bone scan
- Ultrasound scan.

Treatment options

In most cases, the blood supply to the hip joint returns and the femoral head regenerates by itself. This can take anywhere between two and five years. During this critical period, the bone is soft and vulnerable to deformities. The aims of treatment include making sure the femoral head grows into a functional shape, and reducing joint pain and stiffness. Treatment depends on the age of the child and the severity of the condition, but may include:

- Bed rest.
- Pain-killing medication.
- Avoidance of high impact activities such as running.
- A brace, splint or plaster worn for between one and two years to encourage the femoral head to sit inside the hip socket as it re-grows.
- Surgery to treat the deformed femoral head and fit it snugly within the hip socket.

Long term outlook

In most cases, children recover from Perthes' disease. Generally speaking, the younger the age of onset, the better the odds of full recovery, with almost all children under five years recovering without any complications. The degree of damage to the femoral head also determines the long term outlook. The more bone cells destroyed by Perthes' disease, the greater the chance of deformities during re-growth. Some children may develop osteoarthritis in the affected joint later in life.

Where to get help

- Your doctor
- Orthopaedic surgeon
- Bone Growth Foundation

Things to remember

- Perthes' disease is a disease of the hip joint that tends to affect children between the ages of three and 11 years.
- The femoral head deteriorates because of insufficient blood supply to the joint.
- Most children recover from Perthes' disease, but it takes between two and five years for the femoral head to re-grow.

This page has been produced in consultation with, and approved by:

Australian Rheumatology Association (Vic Branch)

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