



Perthes' disease

- Perthes' disease is an uncommon condition that affects children between the ages of 3 and 11 years
- Blood supply to the head of the thigh bone is disrupted which causes the bone to deteriorate
- This can cause pain, limping and limited movement of the hip joint
- Most children recover from Perthes' disease, but it can take two or more years for the bone to regrow and return to normal

Perthes' disease is a condition of the hip joint that tends to affect children between the ages of 3 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.

Boys are more likely to develop Perthes' disease than girls. In most cases 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 regrow and return to normal, or close to normal.

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
- stiffness and reduced range of movement in the hip joint
- pain in the knee, thigh or groin when putting weight on the affected leg or moving the hip joint
- the affected leg may become shorter leading to uneven leg length
- thinner thigh muscles on the affected leg
- worsening pain and limping as time goes by.

Cause

Our bones need a regular supply of blood to stay healthy. Blood provides our bones with oxygen and other nutrients.

In children with Perthes' disease blood supply to the femoral head is disrupted. We don't know what causes this to occur. Without enough oxygen and nutrients, the bone cells of the femoral head die.

Diagnosis

Your doctor will do a number of examinations and tests to work out what's causing your child's symptoms.

These will include:

- medical history – to get a better understanding of the situation your doctor will ask you when you first noticed the symptoms, what makes the symptoms worse, what makes them better, if there are any other health issues
- your doctor will also conduct a physical exam, which will involve moving your child's legs through their range of movement. This will help identify any positions that cause pain or stiffness.

Other tests may also be required and include:

- x-rays
- magnetic resonance imaging (MRI)
- bone scan
- ultrasound
- blood tests (to rule out infection).

These will give your doctor a picture of what's happening inside your child's joints.

Treatment

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 damage.

Treatment of Perthes' disease aims to make sure the femoral head remains as round as possible, and to reduce joint pain and stiffness.

Treatment depends on your child's age and the severity of their condition, but may include:

- regular monitoring by your doctor, including physical examinations and x-rays
- pain medication
- physiotherapy to help keep the hip joint moving and to help maintain muscle strength
- swimming and exercising in water
- avoiding high impact activities such as running and jumping
- a brace, splint or plaster may be used if your child's range of movement in the hip is affected, or if x-rays show that the femoral head is losing its rounded shape
- short term bed rest may be required when the pain is especially bad
- your doctor may advise rest using crutches, a walker, or a wheelchair for a period of time
- some children require surgery to treat the deformed femoral head so that it fits snugly within the hip socket.

Long term outlook

In most children, 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 time provide understanding and support to help your child find other activities they can enjoy that don't require weight bearing on the affected leg.

Generally speaking, the younger the child is when they develop Perthes' disease, the better the outcome. The degree of damage to the femoral head also determines the long term outlook.

Some children may develop osteoarthritis in the affected joint later in life, and in rare cases, hip replacement surgery may be required.

However most children respond well to treatment and are able to get back to their usual activities.

Where to get help

- Your doctor
- Physiotherapist
- Orthopaedic surgeon
- Musculoskeletal Australia
www.msk.org.au
MSK Help Line: 1800 263 265

How we can help

Call our MSK Help Line and speak to our nurses. Phone 1800 263 265 or email helpline@msk.org.au.

We can help you find out more about:

- Perthes' disease and musculoskeletal conditions
- ways to live well with these conditions
- managing your pain
- upcoming webinars, seminars and other events.

More to explore

- Better Health Channel
www.betterhealth.vic.gov.au
- OrthoInfo – American Academy of Orthopaedic Surgeons
<https://orthoinfo.aaos.org/en/diseases--conditions/perthes-disease>

The whole or part of this material is copyright to the State of Victoria and the Better Health Channel. Reproduced with permission of the Victorian Minister for Health. Users are permitted to print copies for research, study or educational purposes.

This information has been produced in consultation with and approved by: Musculoskeletal Australia.

May 2019