

Patient Education



ARNOLD PALMER HOSPITAL
For Children
Supported by Arnold Palmer Medical Center Foundation

Orthopedic Center
at Arnold Palmer Hospital
83 W. Columbia St. Orlando, FL 32806
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Legg – Perthes

What is Legg-Perthes?

Legg-Perthes is an abnormal hip joint which changes over one or two years. The hip is a ball (head of femur) and socket (acetabulum) joint. In Legg-Perthes, the blood supply to the ball is stopped, the bone slowly dies and is slowly replaced.



Stages of Legg-Perthes

Stage 1 is the avascular phase. This is when the blood supply to the bone stops. Patients are rarely seen this early and x-rays may be normal.

Stage 2 is the revascular phase. This is when the blood supply to the bone is restored.

Patients are most often seen during this phase. There are noticeable changes in the x-ray.

Stage 3 is the collapse phase. Dead bone is reabsorbed and the ball collapses.

Stage 4 is the healing phase. The flattened top of the ball is replaced with new bone.

The goal of treatment is to keep the soft ball in the socket until new bone forms.

Stage 5 is the healed phase. There is no further formation of bone in the ball but the shape may continue to round until the end of growth at skeletal maturity.

Why did my child get Legg-Perthes?

Your child did not develop Legg-Perthes as the result of a specific fall, jump or injury. In fact, the cause of Legg-Perthes is unknown. Doctors have studied the following as possible causes:

- genetics
- environment
- trauma
- hematologic (blood) abnormalities
- synovitis (inflammation of the joint space)

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What are the treatments of Legg-Perthes?

Goals of treatment:

- Maintain motion of hip
- To have a pain free hip
- Decrease development of degenerative arthritis in the hip
- Decrease potential for a leg length inequality

Your child's doctor will look at your child's symptoms, age and the amount of involvement of the ball. Your child may have one or more of the following treatments.

- Pain control: nonsteroidal anti-inflammatory medicine
- Activity restrictions: decrease activity, no jumping or sports activities
- Leg exercises: designed to keep the hip(s) moving
- Crutches: to protect and rest the hip while your child is walking
- Cast: to keep the ball in the correct position
- Traction: to relieve pain and allow the hip to regain motion

- Surgery: to place the ball into the socket to allow the bone to heal round and smooth and to improve circulation

(1) *Adductor tendon release* is a surgical release of the groin tendon(s). A cast will be put on both legs. A removable bar between the legs is used to spread the legs wide open which places the ball into the socket. This cast is called a Petrie Cast.

(2) *Osteotomy* is a surgical procedure to cut the bone(s) of the hip and/or thigh to position the ball into the socket. Sometimes a cast is used that covers the legs up to the chest. This type of cast is called a Hip Spica.

What are long term effects of Legg-Perthes?

- Most children have occasional periods of increased pain and stiffness for six months to two years.
- Most children have a normal childhood and adolescence with a return to all activities.
- Some children may be at risk of developing early arthritis between the ages of 30 to 50.

The younger your child is at diagnosis the better the long term outcome. Younger children have a shorter duration of the phases that cause symptoms.

- Children less than 6 years of age usually do well.
- Children 6 to 9 years of age have a variable course.
- Children older than 9 years of age may have difficulty into early adolescence.

Children with more roughness of the ball will have longer periods of symptoms and a greater risk of problems later in life.