Hip Dysplasia in Adolescents and Adults

Boston Children's Hospital
Child and Young Adult
Hip Preservation Program

bostonchildrens.org/hip | 617-355-6021

What is hip dysplasia?

For adolescents and young adults, hip dysplasia is a result of one or more areas of the hip joint not developing properly. It occurs when the ball at the top of the thigh bone (femur) that fits into the hip socket (acetabulum) is loose within the socket, so that the socket's coverage of the ball (femoral head) is reduced.

What is it caused by?

Hip dysplasia is a developmental problem that can occur before or after birth. Adolescents and adults with hip dysplasia may have previously had developmental hip dysplasia, which may or may not have been diagnosed and treated during their infancy or toddler years. Children who are not diagnosed with hip dysplasia in infancy may not have symptoms until adolescence or later.

Although the condition can be related to breech birth and a family history of dysplasia, the actual cause of hip dysplasia is still unknown.

Signs and symptoms

- Deep pain in the front of the groin, back or side of hip joint
- Clicking or popping of the hip
- Standing/walking leads to fatigue or pain in the hip

How is it diagnosed?

A diagnosis of hip dysplasia should be confirmed by an orthopedic hip specialist. This diagnosis is determined from a physical examination that assesses how well your hip moves as well as your level of discomfort in the hip joint.

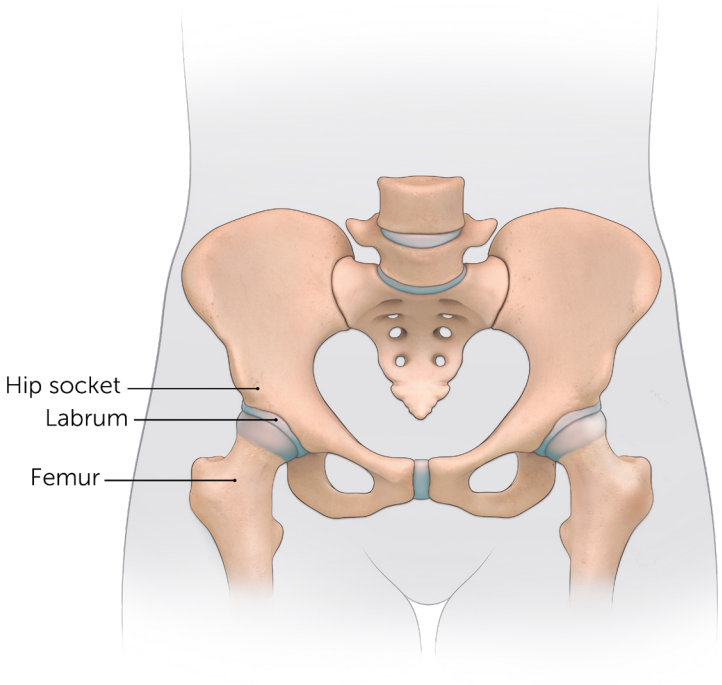
In order to evaluate the structure of the hip joint, imaging diagnostic tests will be performed. This involves x-rays and often a CT scan and MRI as well. A CT scan creates a compiled image of many small x-rays that are taken at different angles in order to give a cross-sectional view of the hip.

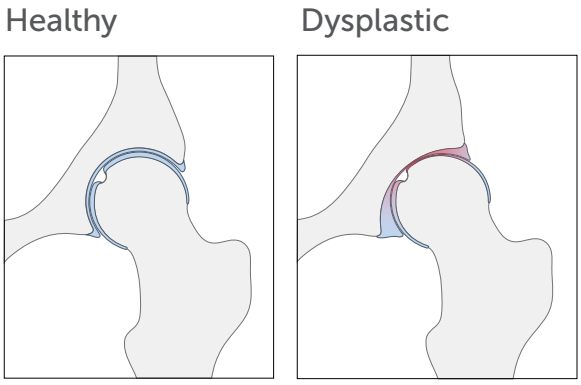
The MRI allows the physician to assess the cartilage lining the hip joint — known as the labrum — along with the other soft tissue structures of the hip and pelvis. Boston Children's hip preservation team has developed an advanced MRI technique that can detect any early arthritis caused by hip dysplasia and other hip conditions. This technique — known as delayed gadolinium-enhanced MRI of cartilage (dGEMRIC) — is often recommended for patients with hip dysplasia and assesses the health of the cartilage in the hip.

How is it treated?

The course of treatment is determined by the severity of your hip dysplasia. More subtle cases of hip dysplasia are often treated with physical therapy and nonsteroidal anti-inflammatory drugs. But if this does not decrease your pain, surgical intervention is also an option.

Adolescent Hip Anatomy





Physical therapy alone does not correct hip dysplasia, but it can decrease symptoms of hip pain that are secondary to hip dysplasia. Hip injections — a combination of anesthetic and a corticoid steroid — can also help reduce pain and inflammation in the hip joint, but will not correct hip dysplasia.

Hip arthroscopy can be performed to repair the damaged labrum, but the underlying cause of that damage is hip dysplasia, which needs to be corrected to prevent further damage to the labrum.

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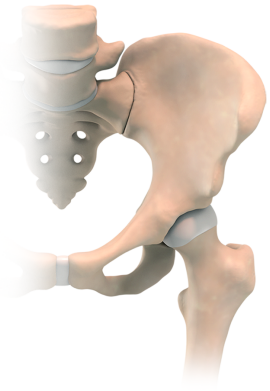
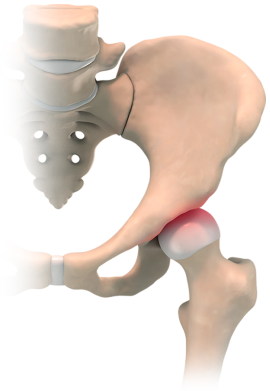
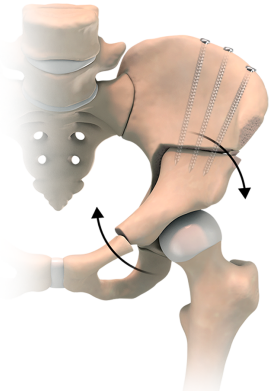
PAO Procedure



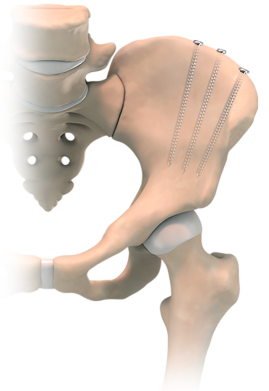
Healthy
The femoral head is properly covered by the hip socket.



Dysplastic
The femoral head isn't properly covered by the hip socket, resulting in pain and inflammation.



PAO
Hipbone is rotated for better coverage of the femoral head.



Healed bone
The rotated hip socket heals in place, properly covering the femoral head.

For minor to severe cases of hip dysplasia, a surgical procedure called periacetabular osteotomy (PAO) may be recommended. The surgery involves making a series of cuts to rotate the hip socket into proper position, and holding it in place with screws. The goal of the surgery is to allow the hip socket to provide better coverage of the femoral head and reduce the stress on the rim of the hip socket that damages the labrum. The long-term goal of this procedure is to preserve the hip joint and decrease your risk of developing arthritis.

Why choose Boston Children's Hospital?

The Child and Young Adult Hip Preservation Program at Boston Children's Hospital is at the forefront of research and innovation, which means our care providers offer the most advanced treatments available, personalized for you and your hip. We combine the best surgical treatment and specialized expertise with structured physical therapy in order to get you back to the activities you love.

Boston Children's hip specialists perform more PAOs than any other hospital in the country, and have pioneered minimally invasive procedures as well as open surgical techniques to help treat patients of all ages. No matter how minor or severe your hip dysplasia may be, we have the experience and approach to best treat your condition.

Our expansive team of orthopedic hip specialists provide world-class care throughout each patient's journey, collaborating over both common and complex hip disorders to provide you with comprehensive care. Our goal is the same as yours: to help you get better so you can return to being healthy and pain-free.

Notes

Produced by the Child and Young Adult Hip Preservation Program in the Orthopedic Center at Boston Children's Hospital.

For more information or to request an appointment visit **bostonchildrens.org/hip**.

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Boston Children's Hospital
Until every child is well™

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