

Slipped Capital Femoral Epiphysis (SCFE)



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

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What is SCFE?

Slipped capital femoral epiphysis (SCFE) is a disorder of the hip joint that occurs when the ball-shaped head at the end of the thigh bone (femur) slips off the neck of the femur at the growth plate, where the bone is weaker.

What is it caused by?

SCFE is the most common hip disorder in adolescent children, typically occurring in children ages 10–16. It usually develops after periods of rapid growth following the beginning of puberty.

Males are at a higher risk for SCFE than females, as are children who are overweight, have hormonal abnormalities and take hormone medication. While it is not fully understood why this condition occurs, it is believed that one cause is weakness in the growth plate.

Adolescent growth spurts can lead to a slip, as some children's growth plates weaken as they are growing and expanding. The growth plate is not as strong as the bone, so the broadening of the growth plate and the shape of the hip can result in SCFE.

Signs and symptoms

- Pain around hip and in the groin or thigh that may come and go
- Knee pain that may occur before or without any hip pain
- Child holds affected leg turned outwards
- Intermittent limp
- Decreased range of motion in the thigh or knee

How is SCFE diagnosed?

A SCFE diagnosis should be confirmed by a pediatric orthopedic specialist. A confirmed diagnosis is based on patient history, a physical exam, and imaging (x-rays or MRI).

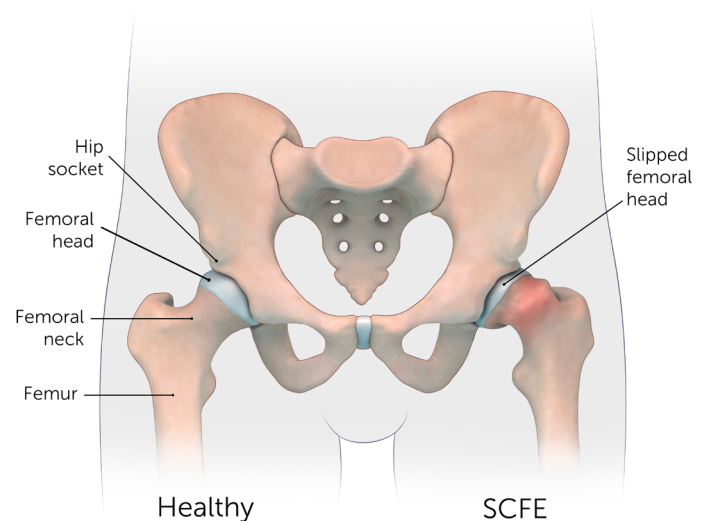
A physical exam for a patient with SCFE will allow your specialist to determine their limited range of motion and possible pain associated with their hip and leg. Following the physical exam, an x-ray is used to provide an in-depth look at the structure of the hip. If a slip is difficult to determine through x-ray, the physician may order an MRI for further evaluation. Severe cases may also require a CT scan (or CAT scan) to better evaluate the bone deformity.

Early diagnosis of SCFE is important, as it provides the best chance to prevent further slipping of the femur, which could damage the blood supply of the femoral head and cause deformity.

How is it treated?

Once a child is diagnosed with SCFE, they will be prevented from bearing any weight on the affected leg. A confirmed diagnosis requires surgical intervention in order to prevent any further damage to the hip.

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Surgical treatment involves pinning the head of the femur to its established location on the femur bone — a process called in-situ pinning — or through an open surgery where the ball (femoral head) is reduced back to the correct position on the thigh bone and pinned in place. Based on the severity of the slip, a specialist will determine which surgical option is the best fit.

Due to high risk of a slip occurring on the other hip, preventative pinning of the opposite hip may be recommended depending on the patient's age.

Further down the road, surgical intervention may be necessary if there is femoroacetabular impingement (FAI) as a result of a change in the shape of the ball and hip socket, which causes the ball and socket to rub against each other during movement. Ultimately, this can cause pain and damage to the joint, and may require further treatment.

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 child. In fact, specialists at Boston Children's published one of the first papers on contemporary open surgical technique in the treatment of SCFE.

Our expansive team of pediatric 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.

The majority of children treated for SCFE at Boston Children's Hospital are able to walk, play, and grow alongside their peers. Our goal is the same as yours: to help your child get better so they can return to being healthy and pain-free.

Notes

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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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