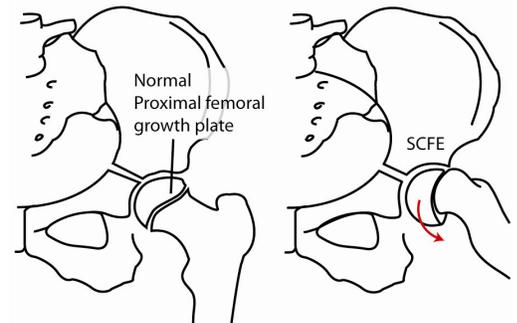


Slipped Capital Femoral Epiphysis (SCFE)

Slipped capital femoral epiphysis (SCFE), a relatively common disorder in childhood, occurs most commonly between age 8-14 years. SCFE is more common in overweight children, and the incidence appears to be increasing as American children eat more and exercise less.

SCFE occurs when the proximal femoral growth plate (growth center), which is within the hip joint, takes too much stress and the ball (femoral head) begins to **slip** away from its normal position. Both excessive body weight and increased physical activity can worsen this movement.

The movement is usually slow, and most patients have what is called a chronic or “stable” slip. The onset of hip pain is gradual and sometimes the child has only knee pain (referred pain). In rare cases, a child will have an acute SCFE (like a broken bone) that has a sudden severe and painful onset (unstable slip).

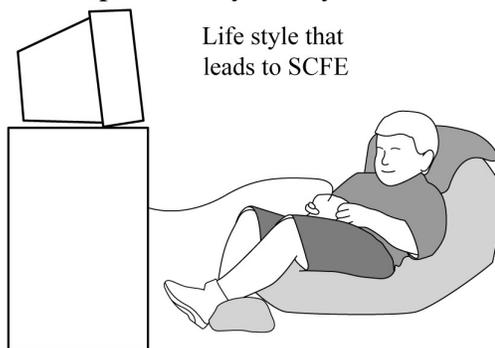


Making the Diagnosis

Children with a SCFE should have early diagnosis and urgent surgical stabilization (pinning). The worse the slip becomes before it is treated, the greater the risk for early arthritis of the hip. Occasionally children have SCFE in both hips (bilateral). The much less common unstable SCFE, which is similar to a fracture, is an orthopedic emergency with a very high risk for permanent damage to the hip joint.

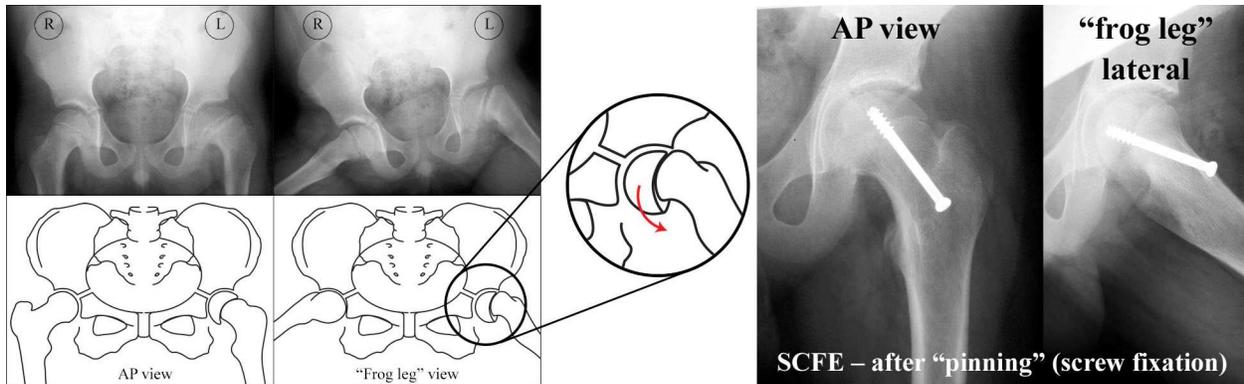
Prevention of SCFE

Teenagers who are overweight with a high body mass index (BMI), have a greater chance of getting SCFE. Parents should be aware that their child needs a balance that includes adequate exercise and the right amount of food. Occasionally children with a normal body build will develop SCFE, particularly if they are involved in competitive athletics.



X-ray Findings in SCFE

These x-rays and drawings show a left hip SCFE. The so-called “frog leg” view shows the slip best.



Surgical Treatment

Stable Slip. Surgical treatment for a stable SCFE requires urgent stabilization using a specially designed screw for fixation. This is described as pinning a slip “in situ” (in its current position). Surgery is performed in a controlled manner in the operating room, often requiring only a very small incision. This figure demonstrates a slip that has been pinned, as noted on both the AP and frog leg lateral views of the left hip.

After surgery the hip is protected for 3-6 weeks by placing the patient on crutches.

Unstable Slip. This condition is less common but requires emergent hospitalization and often an open surgical reduction of the hip (a bigger operation). Often two screws are required to stabilize the slip and the patient is kept in a wheelchair or crutches for many weeks. There is a high risk for loss of blood supply to the femoral head (avascular necrosis – AVN), which can lead to premature arthritis.

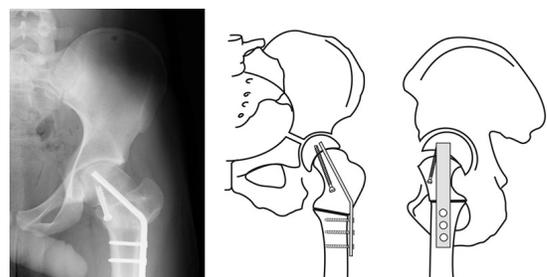
Late Reconstructive Operations

Even in more severe slips, initial treatment is usually “in situ” pinning – the ball is not repositioned but instead fixed in its current position, (because of the risk for loss of blood supply).

If the ball (femoral head) is already in a significantly abnormal position, there is a risk for early arthritis. Accordingly, late reconstructive procedures have been developed to correct the hip deformity.

Corrective Osteotomy

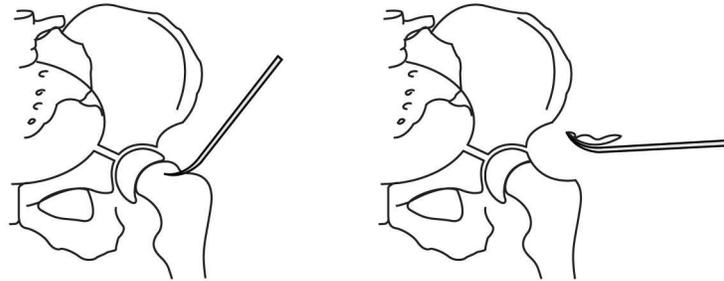
A child is considered for a corrective osteotomy 6-12 months after the original pinning. This involves cutting the femoral bone and repositioning the femoral head in a position on top of the femoral neck (See figure).



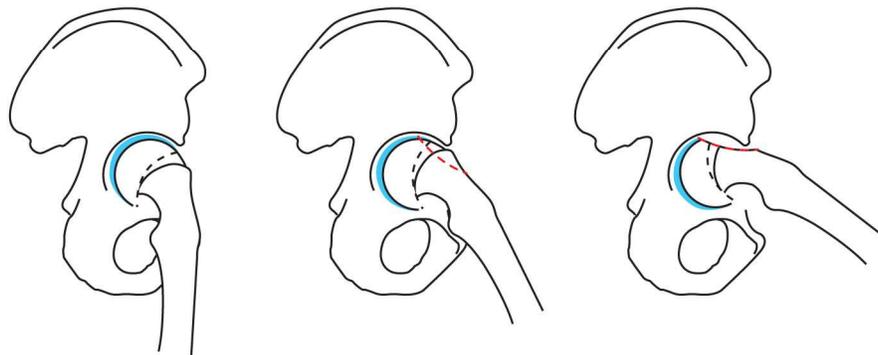
Corrective osteotomy for SCFE

Femoral Head - Neck Recontouring

Another approach to decrease the chance for early arthritis in severe SCFE is to “recontour” the femoral head and neck. In most cases, the femoral head has been stabilized by a screw to prevent further slipping. Then at a later date an operation is performed to remove the bump on the antero-lateral surface of the femoral head, to make the femoral head more round again, allowing it to better fit in the hip socket. In some cases this can be done via hip arthroscopy.



Femoral head-neck recontouring



Hip impingement

Limits hip motion

After re-contouring –
better hip motion

Summary

SCFE, a common orthopedic condition requires early diagnosis and treatment. Prompt orthopedic care can decrease the chance for early hip arthritis.