Slipped Capital Femoral Epiphysis

DESCRIPTION
You child has been diagnosed with a slipped capital femoral epiphysis. This is often referred to by the initials SCFE, which is pronounced “Sciff-ie”. SCFE is an uncommon hip disorder, in which the femoral head slips backwards on the femur through the upper growth plate.

This slipping can happen slowly or rapidly, with mild or severe symptoms. Pain occurs in the groin, medial thigh, or knee. Signs include gait changes and decreased rotation of the hip. This condition is generally found in adolescents, but can be found in younger children who have renal or other metabolic abnormalities. About 25% patients will have both hips involved. If only one hip is involved initially, it is very important to be watchful for later involvement of the second hip.

CAUSES
The causes for a SCFE are not known, but there seems to be a mild weakness to upper growth plate of the femur, combined with higher than normal stresses. Most kids are above average in size and many participate in sports with impact loading of the hips. The growth plate naturally becomes somewhat weaker as the adolescent matures and the growth plate closes and changes from cartilage to bone. Some times the growth plate can also be weaker due to endocrine or metabolic abnormalities. Higher than normal stresses may be generated by obesity, decreased femoral anteversion, sport activities with impact loading, or trauma such as a motor vehicle accident or fall.

In about 25% of patients, both hips will be affected at the time of diagnosis. In another 25% the second hip will be affected over the next 1-2 years. Your physician may recommend treatment of both hips to protect the other hip and treat the involved hip. If the other hip is not protected,

Another big concern is that as the hip slips, it stretches the blood vessels which run along the neck and supply the femoral head. If these vessels get stretched too far or damaged in an attempt to correct the slippage, then the bone in the femoral head can lose its blood supply. It then becomes soft and flattens - developing very bad premature arthritis, which is very difficult to treat. Protecting the blood supply and preventing progression of the slip are the main goals of treatment.
DIAGNOSIS
The diagnosis is made based on complaints of current or recent pain or limping and x-rays of the hip that show the femoral head has slipped backwards relative to the neck and shaft of the femur. Pain related to a SCFE may be in the thigh or knee and can sometimes misdirect initial evaluations. It is all not uncommon for initial x-rays to be normal. Repeat x-rays taken when the pain continues or worsens, often show the slippage and clarify the diagnosis.

TREATMENT
Once the diagnosis is made, treatment is surgery to stabilize the slipped femoral head with a bone screw. It may seem logical that the femoral head should be repositioned and put back into normal position. Unfortunately, this is not advisable as it increases the risk of damage to the blood vessels and the risk for avascular necrosis of the hip. A screw should prevent further slippage. The screw is typically put in through a very small incision. After surgery, crutches are used for 6 weeks, followed by 6 months of limited activity (no running and jumping) to decrease stresses on the hip during healing. Most patients do well following their surgery and require no additional treatment.

It is very important, if only one hip was involved initially, to be watchful for involvement of the second hip, which occurs in 25% percent of patients. It is very important to tell the doctor if soreness or a limp develops on the other side.

COMPLICATIONS
Potential problems include growth plate closure, a loss of blood supply to the head, chondrolysis, arthritis, and involvement of the other hip. The worse complication is the loss of blood supply to the femoral head, which is called avascular necrosis. This results in terrible irreversible collapse of the femoral head. This risk for avascular necrosis is up to 50% in hips presenting with unstable slips. Treatment options are limited and include pain management, activity modification, fusion of the hip, or hip replacement. Gait changes are also common. This is because the slippage of the hip is not corrected (due to the associated risk to the blood vessels) and this changes the alignment of the hip joint. Usually, the gait changes are mild and mostly cosmetic with mild out-toeing while walking. This alignment does change the stresses on the hip and can increase the potential for arthritis later in life. Some hips heal with significant rotation which leads to gait changes which some patients find unacceptable. Once the hip has healed and growth has completed, it is possible to realign the hip with a second bigger surgery. This should not be done until the slip has healed and the growth plates are closed.
PROGNOSIS
Prognosis is very good for hips that heal without avascular necrosis or significant deformity. Most patients return to their usual activities including sports after 6 months of healing.

MORE INFORMATION
Further information can be obtained on the internet. Your local public library can help you explore these sources if you are interested. Two good sites for expert and peer reviewed information are the American Academy of Orthopedic Surgeons at www.aaos.org and www.emedicine.com.

FEEDBACK
If you have questions or comments, please contact the office or submit them to the web site at www.pedortho.com.