**Hip Injuries in Soccer**

The hip plays an important role in stabilizing the entire lower leg especially during running, kicking and moving laterally. The hip joint also provides motion in all planes making it extremely important during sport specific activities. Due to its wide range of motion it is also very prone to injury during activities such as soccer. Common injuries of the hip include hip flexor strains, hip pointers, stress fractures, snapping hip syndrome and labral tears.

**Anatomy**

The hip is a ball and socket joint allowing for greater mobility. The top of the thigh bone (femur) is in the shape of a ball that rotates within a cup-shaped portion of the pelvis (acetabulum). Strong ligaments secure the femoral head (ball) into the cup.

Several muscles attach the thigh bone to the hip and give the hip its range of motion. These include muscles that extend the hip (hamstrings and gluteal muscles), hip flexors (iliopsoas and quadriceps muscles), and those that bring the leg toward (adductors) and away from the body (abductors).

**Hip Flexor Strains**

A hip flexor strain causes pain and tenderness in the hip and thigh. The hip flexors are located in the front upper thigh. The hip flexors (the psoas major, psoas minor, iliacus, iliopsoas and sartorial) move your hips forward as you run. Sometimes mistaken for a groin or quadriceps injury, hip flexor strains often occur when the muscles overstretch or tear during a powerful sprint or kick.

Athletes will have pain that worsens with resisted hip flexion. There may be some swelling and occasionally bruising with severe strains. The area will usually be tender to touch.

The initial treatment should include rest from painful motions, ice and compression to keep swelling down. Gentle range of motion exercises are begun once they are tolerated with minimal pain. Once full motion has been achieved, strengthening is begun. Athletes may return to sports when they are pain free and their range of motion and strength has returned to normal.

Ways to prevent muscle strains include a proper warm up prior to sports participation, stretching, and strengthening exercises.

**Hip Pointer**

A hip pointer is a bruise to the iliac crest of the pelvis. The iliac crest is the superior border of the hip bone. Hip pointers occur from a direct blow to the iliac crest. Because of the superficial location of the iliac crest, it is very susceptible to impact injuries.

Athletes with a hip pointer complain of pain and can develop swelling and significant bruising at the site of injury. Initial treatment should focus on minimizing swelling and bleeding. This is done with ice and compression. Because hip pointers can be very painful, athletes occasionally require crutches during the first few days after the injury to assist with ambulation. Stretching and strengthening of adjacent muscles are added once pain has resolved. Athletes may return to sports once they have regained full strength and range of motion.

Use of appropriate padding over the iliac crest can help reduce the risk sustaining a hip pointer.

**Stress Fractures/Fracutres**

An apophysis is a prominence of a bone. These prominences serve as attachment sites for tendons. In the pelvis there are several of these, and one of the more common ones is the anterior superior iliac spine (the prominence felt at the front of both sides of the pelvis.

Repetitive pulling of the tendons at their attachment in the front of the hip without adequate rest between activities can lead to inflammation and pain (apophysitis). Because of its strong attachment, the tendon can actually pull a small piece of bone (the apophysis) off the pelvis with a forceful contracture (apophyseal avulsion). Radiographs will reveal whether the apophysis was avulsed or just irritated. If a fragment of bone is pulled from the pelvis, it usually has not moved far from its original site and seldom requires surgical fixation.

Stress fractures of the proximal femur are more commonly seen in female athletes, but do occur in males. They are more common in sports that involve jumping and landing on hard surfaces. Athletes with stress fractures complain of hip pain that worsens with impact activities (running, jumping/landing). Because some stress fractures are not visible on regular radiographs, a special type of radiograph called a bone scan or an MRI can be used to detect stress fractures.

Treatment includes ice, rest, and protected weight bearing. Compression shorts can help pain and control swelling. Weight-bearing and range of motion exercises are begun once pain is controlled. A return to sports is allowed once full range of motion and strength have been restored. Ways to prevent stress fractures include maintaining a well-balanced diet, avoiding sudden increases in activity, and strengthening core musculature. Certain stress fractures of the femoral neck may require surgery.

**Snapping Hip Syndrome**

Athletes with snapping hip syndrome complain of a snapping sensation in the groin or at the side of the hip with hip motion. The snapping or popping is occasionally audible and associated with pain. Two varieties of snapping hip syndrome occur; the more common type is called external snapping hip syndrome. It is caused by the iliotibial band (a wide band of tissue that extends from the buttock down the side of the hip to just below the knee) catching on a bony prominence on the side of hip (the greater trochanter) as the hip is flexed and extended. It frequently occurs in athletes, such as dancers, runners and soccer players, who are involved in repetitive, physically demanding motions,.

Internal snapping hip occurs when the tendon of the iliopsoas muscle (hip flexor) slides over the lesser trochanter (a bony prominence on the inner upper leg) or the pelvic rim (anterior inferior iliac spine).

Snapping hip syndrome is often caused by tight muscles and can be treated with rest from aggravating activities, appropriate stretching exercises, and occasionally anti-inflammatory medications. Surgery may be indicated on rare occasions.

**Acetabular Labral Tears**

Labral tears have become an increasingly prevalent injury among soccer players. Labral tears occur when the labrum, a small ligamentous ring which helps to stabilize the leg in the hip joint, becomes pinched and eventually torn. This causes instability in the hip joint which results in pain, especially with lateral activity, and decreased range of motion at the hip joint.

The acetabular labrum is a small band of tissue located along the rim of the cup of the hip joint (acetabulum). The labrum looks and feels like a rubber band. It acts as a cushion as the ball of the hip (femoral head) comes into contact with the cup in extremes of motion.

The labrum can be torn by a twisting or slipping injury, or over time by repetitively compressing the labrum between the femoral head and cup. An athlete with a labral tear will usually complain of pain to the anterior groin. The pain is often worsened with certain motions, especially hip flexion. Sometimes a quick sharp pain or catching sensation can be felt with certain motions. As the condition worsens, pain can be felt with walking and sitting for long periods of time.

Labral injuries are becoming more common due to increased sport participation at younger ages as well as improper mechanics with sport specific activity. These injuries vary in size and severity and can require surgery to repair.

Labral tears are difficult to diagnose and need to be properly diagnosed by a sports medicine physician. If a labral tear is suspected, physicians will usually order a special type of an MRI of the hip, called an MR arthrogram. Small labral tears can be treated with physical therapy, but larger tears usually require surgical treatment.

**Summation**

Hip injuries can be very debilitating and a delay in diagnosis can make continued participation in sports frustrating, painful, and possibly cause more damage. Don't guess the cause of your upper thigh or hip pain. The sooner you see a sports medicine physician to diagnose the cause, the sooner you will recover.

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