

# Athletes Who Push Beyond Their Anatomic Limits

Hip and/or groin pain in a young athlete is often a signal that something's not quite right. And one of the most common causes of hip pain in this group is a condition known as femoroacetabular impingement or FAI. Early detection is the key to preventing serious hip problems later in life.

You might think that young athletes don't have to worry about things like osteoarthritis. They are active and rarely overweight. They excel beyond anything the rest of us would ever dream of accomplishing. But if they push themselves beyond what their own bodies can handle, even they can break down.

Femoroacetabular impingement occurs when abnormal hip anatomy is aggravated by repetitive movements of the hip. There could be a slightly off center placement of the hip in the socket or a femoral head that isn't perfectly round that is contributing to the problem.

Or the hip socket may be too deep for the size of the femoral head or the rim of the hip socket is too prominent. Sometimes the angle of the femoral neck is bent or twisted just a tad from normal. There could be a separate piece of bone called the os acetabulum along the front rim of the hip socket. Any of these morphologic changes can lead to impingement.

How can too much physical activity at a young age be the problem here? With impingement, the soft tissues around the joint get caught between the femur and the hip socket. There are several different types of impingement. They differ slightly depending on what gets pinched and where the impingement occurs.

The labrum, a fibrous rim of cartilage around the hip socket is the most likely area to get pinched. Add repetitive motion and you get repetitive pinching or compression until the labrum starts to fray and tear.

How can this problem be treated? That's a good question and along with that question is this one: does it need to be treated at all? The reason that second question even comes up is because some high level athletes with abnormal hip joints never develop problems. Who does develop femoroacetabular impingement and how to predict if/when it should be treated are areas where further study is needed.

In the meantime, arthroscopic surgery may be the most effective way to handle the problem. When pain interferes with participation in sports, athletes are eager to find ways to get back in the game. Conservative (nonoperative) care may be tried first. But if that fails to yield the desired results (elimination of pain and restoration of motion and function), then it may be time to take a look inside the joint and see what can be done.

With an arthroscope, the surgeon can enter the joint without making a large incision. A tiny TV camera on the end of the instrument projects a picture on a screen for the surgeon to see. Any areas of damage to the labrum can be smoothed down and repaired. The rim of the acetabulum and even the head of the femur can be reshaped if necessary. Reshaping the area where the femoral head and neck meet takes quite a bit more skill but may be helpful, too.

In a recent study of 200 athletes who had arthroscopic surgery for femoroacetabular impingement, 92 per cent were able to return to full participation in the sport of their choice. Whenever possible, the surgeon repaired the labrum instead of removing or shaving it off. This approach may account for the good results.

Runners, football players, soccer players, and basketball players made up the bulk of the patients. But there were also wrestlers, ice hockey players, weight lifters, swimmers, dancers, golfers, and even two bull riders

in the group who had this arthroscopic treatment of femoroacetabular impingement.

The results weren't perfect as there were some complications (e.g., temporary nerve damage, bone formation within the hip capsule). One athlete ended up getting a total hip replacement and four others had to have a second surgery because of continued problems with hip pain.

The surgeon who conducted the study commented that by the time the athlete comes in for surgery, there is often some damage to the joint that simply can't be reversed. He advocates for earlier diagnosis in order to help prevent some of the unavoidable consequences of this problem in active, young athletes.

Reference: J. W. Thomas Byrd, MD, and Kay S. Jones, MSN, RN. Arthroscopic Management of Femoroacetabular Impingement in Athletes. In *The American Journal of Sports Medicine*. July 2011. Vol. 39. Supplement 1. Pp. 7S-13S.