

# Sports medicine, orthopaedic surgery and the athlete: When does my injury need surgery?

Sports medicine is a discipline of medicine that was classically based on the care of the elite athlete. Its roots developed from the need for organized care of Olympic athletes back in the 1960's and 70's. Rapid recovery and return to sport was its main focus. In its current state, the application of sports medicine care has broadened. The athlete is no longer just the world class athlete. The athlete is anyone who engages in an active lifestyle and who is at risk for acute or chronic injuries. The practice of sports medicine is not limited to a single specialty entity. It engages the care of surgeons, physicians, physical therapists, trainers, coaches, nutritionists and "alternative" therapists.

Surgery has a definitive role in the care of the athlete. Over the last few decades, the indications for surgery have increased as our understanding of injuries improved and our technology has allowed us the tools to treat the athlete. Arthroscopic surgery is a major advancement of sports medicine. Instead of traditional open surgery with large incisions, multiple small incisions are used to visualize and work through these soft tissue sparing, minimally invasive portals. A small camera and specialized instruments are the workhorses of arthroscopic surgery. Many common sports medicine procedures can be performed arthroscopically and have shown equal if not better results than that of open surgery.

## Philosophy and principles of sports medicine and arthroscopy:

### *Non-surgical versus Surgical treatment*

Surgery is a major undertaking that has risks and potential complications. The rehabilitation process can be extensive requiring time away from school, work and family. It can also require a team of providers to guide you carefully through this critical post-operative healing phase. There is always a risk to benefit ratio to consider and there are many injuries that require surgery to return you to your athletic lifestyle.

Non-surgical treatment or non-invasive treatment should always be considered first. You cannot reverse surgery. Most athletic strains, sprains and pains can and should be treated with non-surgical treatment if indicated. Supervised physical therapy, medications, supplements, bracing, taping, activity modification and "alternative" philosophies should be explored. Injection therapy can be a useful adjunct to non-surgical treatment. Most orthopaedic surgeons can offer therapeutic injections into many joints, bursal spaces and painful tendon insertions.

## Surgery

Depending on the injury, failure of non-surgical measures and exhausting these measures is a common indication for choosing surgical treatment.

### *Arthroscopic versus open surgery*

Once the decision for surgery has been made, a dialogue with your surgeon should be thorough and candid. Can this surgery be done arthroscopically? How successful is it as compared to open

surgical treatment? How extensive is the rehabilitation protocol? When can I return to my active lifestyle?

## Common injuries that respond well to arthroscopic surgery

### *Shoulder*

**Instability** is a sense of looseness in the shoulder. One may experience a feeling of popping out of joint. This may occur after an acute traumatic dislocation. Arthroscopic shoulder stabilization can prevent recurrent instability and pain.

**Rotator cuff tears** may be experienced by pain and weakness in the shoulder. Night time pain is a frequent complaint. It may occur traumatically and in association with older age. Athletes over 40, and wheelchair athletes have a predilection to rotator cuff tears. These tears tend to not heal and can lead to progressive degeneration, shoulder dysfunction and rotator cuff deficient arthritis. Early repair for full thickness tears can prevent the natural history of a cuff tear. Partial thickness tears respond well to non-surgical measures but if you have persistent symptoms of pain and weakness, arthroscopic treatment may be of value.

**Classic external impingement** occurs with an abnormal acromion morphology or bone spurs that dig into your rotator cuff and cause pain. It may be experienced as pain with overhead motion and night pain.

**Internal impingement** is classically seen in throwing athletes and occurs within the glenohumeral joint. Sometimes accompanied with an internal rotation deficit, arthroscopic surgery with various releases and repairs can be helpful.

**Labral tears** are experienced as a deep pain and can be associated with instability. They usually result from trauma or dislocations but can also be age related and degenerative. Arthroscopic debridement can provide symptom relief.

### *Elbow*

**Loose bodies** are experienced as pain and loss of motion of the elbow. It may occur in association with trauma or arthritis. Pieces of bone and cartilage may get loose and cause a mechanical block to the motion of your elbow. Arthroscopy with and without open techniques can remove these painful entities.

**Impingement** is experienced as localized pain with activity. Classically, it is seen in throwing athletes. Excessive overload of the ulna on the humerus in the throwing motion can cause cartilage wear and bone spur formation. This painful articulation can be treated arthroscopically.

### *Hip*

**Impingement** of the hip is experienced as pain with flexion and internal rotation. It occurs when the femoral head contacts the acetabular labrum and creates a painful conflict.

Genetics have been implicated as a cause for “abnormal” femoral head shape or acetabulum. Traditionally, open techniques have up to 80% success. Recently, arthroscopic treatment has shown equally good results.

**Snapping hip** occurs in two ways, internal and external. Internal snapping hip is a painful condition where the psoas snaps over the hip joint. External snapping hip occurs when the iliotibial band at the hip snaps over the greater trochanter. External snapping can also be associated with greater trochanteric bursitis and injuries to the abductor insertion. Recent advances in hip arthroscopy have allowed us to treat these successfully.

**Labral tears** are experienced as pain associated with mechanical symptoms of locking or catching. It can occur traumatically or with age. Arthroscopic treatment can be successful 75% of the time but tends to deteriorate if cartilage damage is co-existent with the tear.

**Loose bodies** are experienced as mechanical symptoms and pain. It can occur with trauma, age or an entity called synovial chondromatosis. This disease is a result of cartilage being formed in the wrong place. Arthroscopic treatment can be successful with or without open techniques.

### **Knee**

**Cruciate ligament tears** are experienced as instability or looseness of the knee. It can occur to the posterior cruciate ligament or more commonly the anterior cruciate ligament. Young active athletes engaged in knee-at-risk sports (i.e. skiing, soccer, basketball) should have reconstructions.

**Posterior cruciate ligament injuries** in isolation usually do well with non-operative treatment but if symptomatic and combined with associated injury, arthroscopic reconstruction is beneficial.

**Meniscal tears** are the most common injuries treated with knee arthroscopy. Typically, mechanical locking or catching associated with joint line pain makes for successful arthroscopic treatment. Sometimes, repairs of the meniscus are successful depending on tear shape, size and location.

**Contained chondral injuries** are experienced as pain and possibly mechanical symptoms. They usually occur after trauma but can also occur in the teenage years as a disease called osteochondritis dissecans. Arthroscopic microfracture, debridement or cartilage replacement have shown good results.

**Patella dislocation** occurs when the patella dislodges to the outside of your knee. It usually occurs with trauma. The knee cap slides laterally and sometimes bone or cartilage loose bodies shear off in the joint. In addition, the rate of recurrence after first time dislocators can be up to 40-50% leading some surgeons to repair the restraints preventing re-dislocation.

**Loose bodies** can occur after trauma or in association with knee arthritis. When mechanical symptoms occur, arthroscopic removal is successful.

## **The Process and Mapleton Hill Orthopaedics**

Mapleton Hill Orthopaedics is a diverse group covering all aspects of orthopaedic care for Boulder county patients. Our staff includes five physicians, four board certified orthopaedic surgeons, a board certified physical medicine specialist and a certified physician assistant. We strive to bring together a well-trained, experienced, and compassionate group of Medical and Orthopaedic professionals to provide the highest quality orthopaedic care in a personalized and efficient treatment environment. Our philosophy includes believing that with patience and education, all patients can understand their problem and become an active participant in their medical care decision-making process.



**Dr. Seng graduated from medical training at the University of Colorado School of Medicine. After completing his residency at Harvard Medical School, his general surgery internship training**

**was at Brigham and Women’s Hospital and orthopaedic surgical training at the Massachusetts General Hospital, Children’s Hospital and Veteran’s Administration Hospital of Boston, MA. During his training, Dr. Seng has had extensive and comprehensive experience in hip, knee and shoulder reconstruction, sports medicine, arthroscopy of the shoulder, elbow, wrist, hip, knee and ankle. After residency, he completed a sports medicine fellowship in Taos, New Mexico at the Taos Orthopaedic Institute with a focus on sports medicine, arthroscopy and trauma. Dr. Seng is published in sports medicine, adult reconstruction, hand and trauma literature.**

Initial office consultation includes a thorough history and physical examination. If warranted, special imaging studies may be ordered. Diagnosis and implementation of treatment can occur within 2 weeks of the initial office visit.

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[www.mapletonhill.com](http://www.mapletonhill.com)

