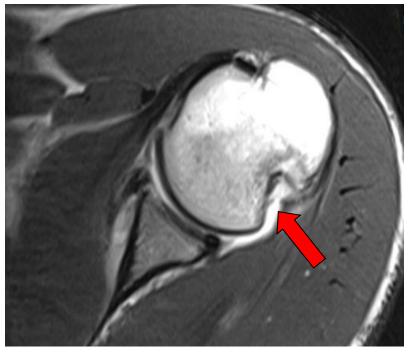
SHOULDER, KNEE & SPORTS MEDICINE

Hill-Sachs Lesions and Shoulder Instability/Dislocations

The shoulder is the most mobile and the most commonly dislocated large joint in the body. Dislocation means that the joint is moved out of position such that the joint surfaces at the ends of the bones are no longer in contact. In the shoulder, most dislocations are anterior (moving forward from the body); however, they can occur in other directions. When a dislocation occurs, the soft tissues that stabilize the shoulder can be torn.



Hill-Sachs lesion on the posterior (back) side of a humeral head (ball) of the left shoulder as seen on MRI.

Traumatic dislocations of the shoulder can result in a Hill-Sachs lesion, often in addition to other soft-tissue injuries. The head of the humerus (ball of upper arm bone) is stabilized against the glenoid (socket of the shoulder joint) using a combination of muscles, labrum, and ligaments. When a dislocation occurs, the head of the humerus is forced out of its normal position and can result in forceful contact between the bones of the humerus and the edge of the glenoid. If the dislocation is anterior (forward), the contact occurs between the posterior (back) side of the humeral head and the anterior (front) rim of the glenoid. In posterior







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(backward) dislocations, the contact is between the anterior (front) portion of the humeral head and the posterior (back) rim of the glenoid. These points of contact damage the humeral head, leaving a "dent" in its normally rounded surface that is known as a Hill-Sachs (or reverse Hill-Sachs) lesion. The presence of a Hill-Sachs lesion lets the physician know that the patient has suffered at least one shoulder dislocation, even if other injuries are not as easily detected.

Frequent Signs and Symptoms

- Severe pain in the shoulder at the time of dislocation
- Loss of function and pain with shoulder motion
- Feeling like the shoulder is going to "pop out"
- Occasional aching when not using the arm
- Tenderness and swelling
- Occasional loss of strength or difficulty raising the arm
- Occasional numbness and tingling in the arm after injury

Etiology (Causes)

- Direct blow to the shoulder or backward force on extended arm or elbow
- Powerful or violent muscle contraction
- Repetitive throwing or swimming motion

Risk Factors

- Participation in contact sports (football, wrestling, basketball, etc.)
- · Activities with forceful lifting, hitting, or twisting
- Previous shoulder dislocations or injuries
- Poor physical conditioning (strength and flexibility)

Prevention

- Appropriately warm up and stretch before activity
- Allow time for adequate rest and recovery between bouts of exercise
- Proper preseason conditioning that is task-specific (overhead throwing or hitting, etc.)
- Maintain appropriate conditioning:
 - Cardiovascular fitness
 - Shoulder flexibility







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- Muscle strength and endurance, particularly of the rotator cuff and scapular muscles
- Use proper technique
- If participating in contact sports, wear properly fitted protective equipment

Outcomes

Younger patients with shoulder dislocations have a high incidence of a repeat injury. It is possible to use conservative measures to let the shoulder recover and increase muscular stability through exercises; however, it is likely that the shoulder will remain unstable without surgical repair. Dr. Chudik may recommend an arthroscopic procedure to address any injuries that may have occurred with the dislocation. Post-operatively, the patient will be immobilized in a sling for 6 weeks to allow healing of the repaired tissue. Most patients experience full recovery and return to activities within 4-6 months after surgery

Potential Complications

- Re-injury and repeated dislocations, particularly if not repaired
- Injury to nerves and blood vessels can occur with dislocation
- Bone fracture or cartilage injury with dislocation or reduction process
- Unstable or arthritic shoulder following repeated injury
- Uncommon Surgical risks/complications:
 - Infection (Rare)
 - Continued pain or re-injury
 - Stiffness/loss of motion
 - Arthritis (Post-traumatic)
 - Inability to return to previous level of competition or activity

Treatment Considerations

After the joint is reduced (put back into place) by trained medical personnel, treatment consists of ice, medications, and early mobilization. Whether or not the patient has surgery, physical therapy exercises will be necessary to restore motion and function to the recovering shoulder. Hill Sachs lesions rarely require treatment unless they are large and engage (get stuck on the glenoid) within the normal ranges of shoulder motion. Engaging Hill Sachs lesions may require repair with bone grafting or attaching the rotator cuff into the defect to prevent engagement of the Hill Sachs lesion with the glenoid rim.



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Possible Medications

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (DO NOT take
 within seven days before surgery), or other minor pain relievers, such as acetaminophen,
 are infrequently recommended. Take these as directed by your physician. Contact your
 physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur
- Pain relievers are usually not prescribed for this condition
- Steroid injections reduce inflammation can be helpful in certain cases but should be used with proper discretion

Modalities

Cold is used to relieve pain and reduce inflammation. Cold should be applied for 15 to 20 minutes every two to three hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage with a cloth between the ice and your skin to prevent burning /freezing your skin.

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