

Shoulder Instability (Dislocation) and Labral Tears

Jeff Horinek, MD

Symptoms

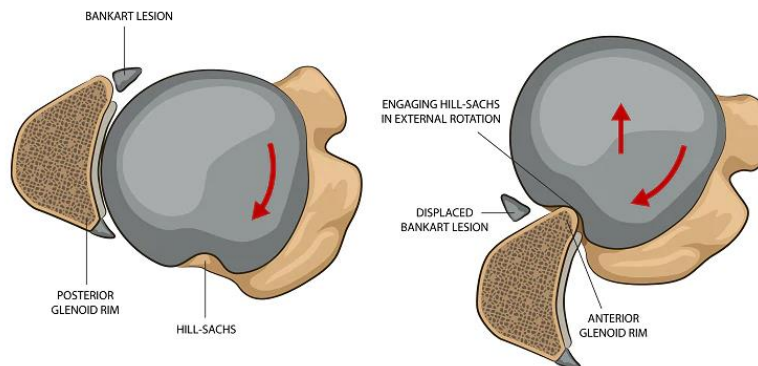
Shoulder instability is generally obvious and occurs after a traumatic event and will require reduction of the ball back into the socket by athletic trainers or medical personnel. Labral tears can be more subtle and symptoms include pain with end points of motion, popping or grinding sounds, and a sense of instability. Visible deformity and loss of function of the shoulder occurs after dislocation or subluxation sensation changes such as numbness or even partial paralysis can occur below the dislocation as a result of pressure on nerves and blood vessels.

Anatomy

Stability to the shoulder is provided by the labrum, ligaments, and overlying rotator cuff. The labrum is a cartilage ring that deepens the socket of the shoulder. Ligaments extend from the labrum to the ball side of the shoulder. These two structures provide static stability to the shoulder at the end-points of range of motion. The rotator cuff also provides stability through motion at the mid-points of motion. The shoulder is the most mobile joint in the body, thus making it prone to instability. If the labrum or glenohumeral ligaments are torn, instability can occur.

Causes

The labrum or capsule can be injured with repetitive use or from a dislocation. A dislocation occurs when the end of the humerus (the ball portion) partially or completely dislocates from the glenoid (the socket portion) of the shoulder. A partial dislocation is referred to as a subluxation whereas a complete separation is referred to as a dislocation. The classic tear in a shoulder dislocation is an anterior labral tear referred to as a “Bankart” tear. In addition, the humeral head can impact the socket or glenoid resulting in what is called a “Hill-Sachs” lesion (images below)



Common mechanisms of injury include:

- Falling on an outstretched hand
- Repetitive overhead sports such as baseball, swimming, volleyball, or weightlifting

Risk factors for recurrent instability include younger age, males, generalized laxity, and high demand sporting demand activities. In the case of anterior shoulder instability, the risk of recurrent instability, for instance, is about 75% under the age of 20, 50% under the age of 30, and drops to 5-10% after the age of 40.

With dislocations each injury also damages the bone. This damage can be progressive, with each dislocation increasing the risk of recurrent instability and long-term arthritis. Thus, it is important to prevent recurrent instability especially for young patients.

Treatment

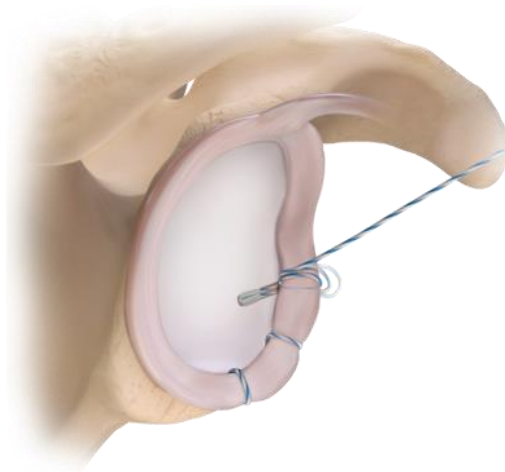
Conservative treatment is the most common approach for labral tears without dislocation (those from repetitive use) or for dislocations in people over the age of 35. Most dislocations under the age of 30 to 35 require surgical treatment because the risk of recurrence is so high and further damage occurs with each dislocation.

The goal of conservative treatment for shoulder instability is to restore stability, strength, and full range of motion. Conservative treatment measures focus on initial rest and ice, followed by physical therapy to strengthen the surrounding muscles.

When the conservative treatment options fail to relieve shoulder instability, or for most patients with a shoulder dislocation under the age of 30, a surgical stabilization is recommended. While published outcomes are variable, our patients can lower the risk of recurrent dislocation down to 5 to 10%. Most of the procedures are performed arthroscopically. Arthroscopy is a surgical procedure in which an arthroscope, a small flexible tube with a light and video camera at the end, is inserted into a joint to evaluate and treat the condition. The benefits of arthroscopy compared to the alternative, open shoulder surgery are smaller incisions, minimal soft tissue trauma, less pain leading to faster recovery.

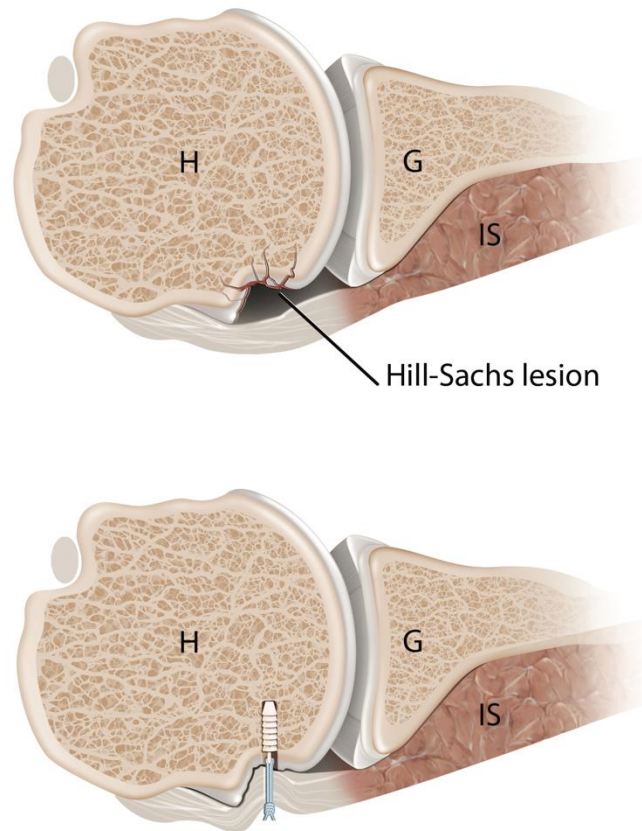
Labral Repair:

With a labral repair, the labrum and ligaments are repaired back to the socket with several small anchors. Each anchor is about 2-3 mm in size. The anchor goes into the bone and sutures are used to tighten the labrum and capsule back to the socket. This procedure takes about 60 minutes to perform and afterwards people are in a sling for 4 to 6 weeks.



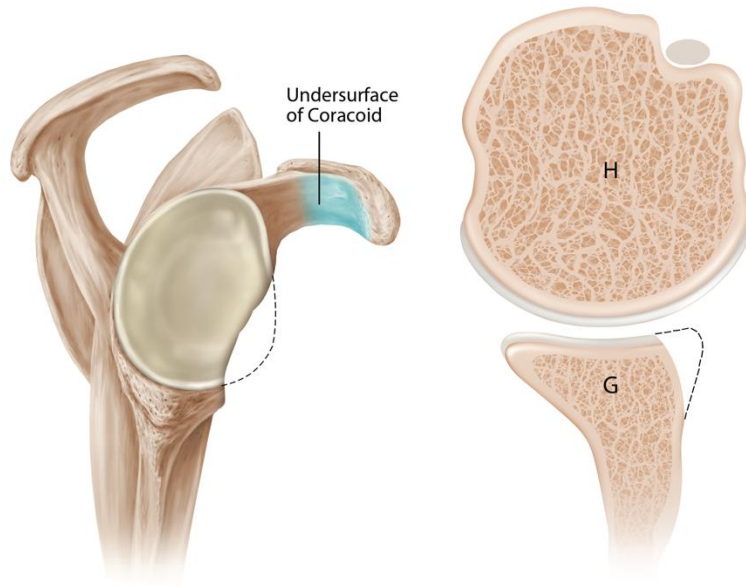
Remplissage:

Remplissage can be added to a labral repair for anterior shoulder dislocation. Remplissage is a procedure in which the structures in the back of the shoulder are fixed into the Hill-Sachs defect. We have done several studies on this procedure and found that this procedure increases biomechanical strength and lowers the risk of dislocation. In one study we did the risk of recurrent instability after this procedure was only 2%!

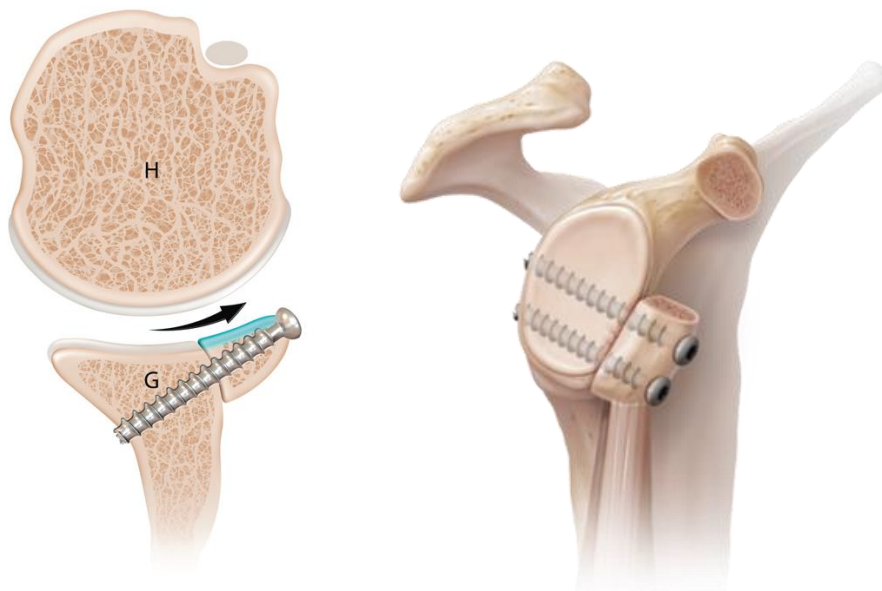


Latarjet

When multiple dislocations occur, bone on the front of the socket is “knocked” off. When bone loss is substantial (more than 20-25% of the glenoid), a bone restoring procedure must be performed to maintain stability.



With Latarjet bone graft is taken from the coracoid bone and placed against the socket to restore the bone loss. This is often done with screws, although techniques continue to evolve. In some cases, the bone graft can be taken from other sources as well.



More Information:

<https://orthoinfo.aaos.org/en/diseases--conditions/shoulder-joint-tear-glenoid-labrum-tear/>

<https://orthoinfo.aaos.org/en/diseases--conditions/dislocated-shoulder/>

