

Shoulder Dislocation/Instability

Shoulder dislocations are relatively frequent in athletes and most commonly result in the humeral head translating anteriorly and out of the glenoid socket. It usually occurs with the arm abducted and externally rotated (such as tackling) and requires a reduction either on the field or in the emergency department.

In young patients, a dislocation almost always results in an anterior-inferior labral and capsular injury (called a Bankart lesion), while in older patients it commonly results in a rotator cuff tear (see rotator cuff handout). The normal shoulder joint is similar to a golf ball on a golf tee (see below¹⁷), and a dislocation disrupts this relationship.

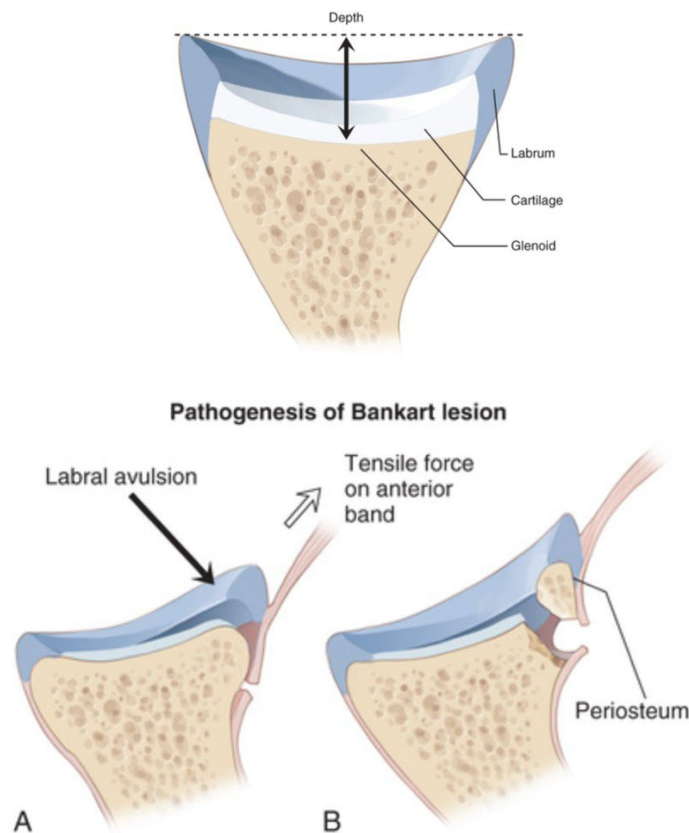


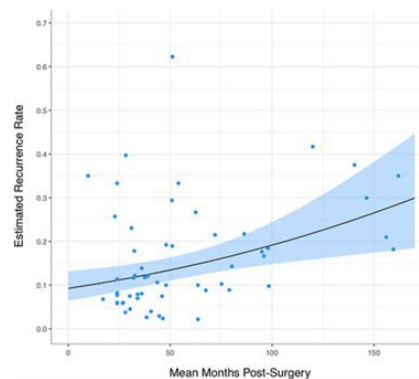
FIG. 40.4 (A) A Bankart lesion, which is defined as avulsion of the anterior-inferior capsulolabral complex with extension into the scapular periosteum and rupture of the periosteal tissue. (B) A bony Bankart lesion occurs when the capsulolabral complex is avulsed along with a variably sized fragment of bone.

WHEN DO YOU NEED SURGERY?

The decision for surgery after a shoulder dislocation is made on a case-by-case basis and individualized to each patient. After a dislocation, we will get an X-Ray in clinic to ensure the shoulder is in the appropriate position and make sure no fractures are present. We will then get an MRI to evaluate the labrum and rotator cuff.

There are numerous studies looking at the rate of recurrent dislocations for anterior shoulder instability, and these report that young male patients may have an 86-92% risk of recurrent dislocation if not treated with surgery.¹³⁻¹⁴ Males and females over 30 years old have been reported to have much lower levels (40% for males, 15% for females).¹³⁻¹⁴

Studies have additionally shown that patients that are treated with arthroscopic stabilization after the first dislocation have significantly less risk of failure after surgery (3%) versus those with a second dislocation (24%) or more than 3 dislocations (34%).^{1,8} Overall, failure of arthroscopic treatment for anterior shoulder has been reported to be approximately 17%.⁸⁻⁹

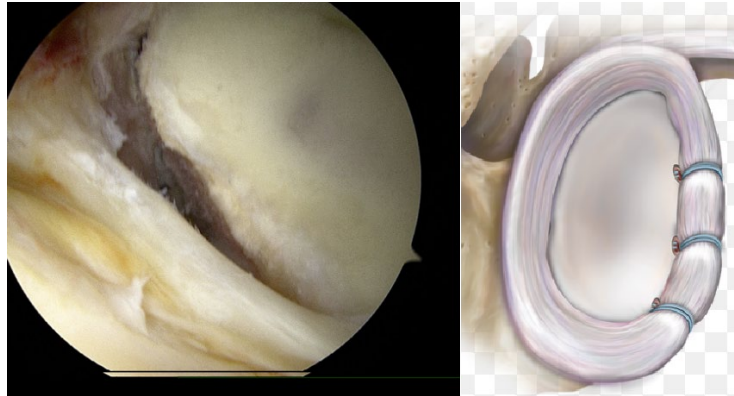


Therefore, in general, Dr. LaPrade recommends surgical stabilization after a first-time shoulder dislocation to maximize the chance for success and decrease the need for larger more invasive procedures. At the same time, Dr. LaPrade does understand that every patient requires an individualized treatment plan and will discuss the risks and benefits of either approach. Some patients do choose to wear a brace and finish the season.

WHAT IS ARTHROSCOPIC STABILIZATION?

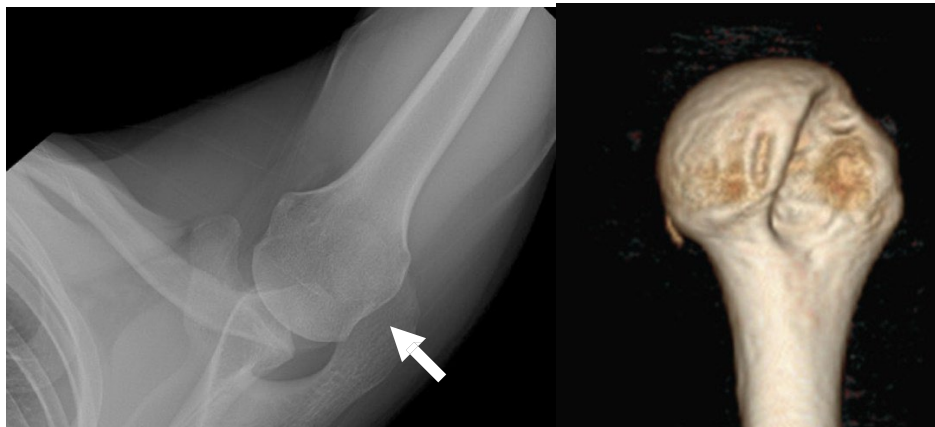
Arthroscopic stabilization, or a capsulolabral repair, is the gold standard treatment for a shoulder dislocation. It involves using small portal arthroscopic incisions to repair the torn labrum and capsule (Bankart tear), which can sometimes involve a small piece of bone (bony

Bankart). Anchors are placed into the glenoid with sutures passed around the labrum to restore the normal labrum and capsule as a restraint/bumper against dislocation in your shoulder.



WHAT IS A HILL-SACHS LESION?

A Hill-Sachs lesion can occur with the initial injury or more commonly after repeated shoulder dislocations. It is a bony lesion (“dent”) on the posterior and superior humerus thought to be a result of the humerus hitting against the glenoid during a dislocation. Larger lesions can be engaging and contribute to continued instability.⁵



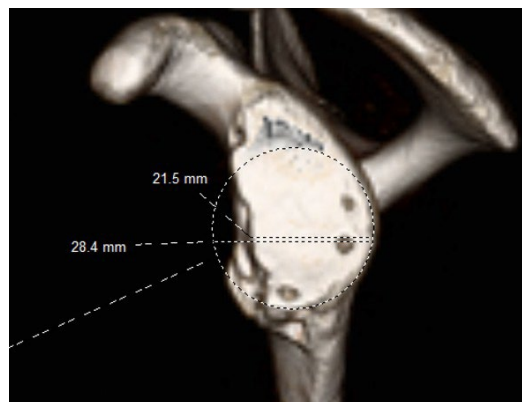
WHAT IS A REMPLISSAGE?

A remplissage means “to fill” in French and is a surgical technique to help fill the Hill-Sachs lesion with part of the rotator cuff tendon and posterior capsule.¹⁷ A remplissage is an addition to the arthroscopic stabilization and is done at the same procedure.

The remplissage technique has been recently extensively studied and shows a significant decrease in dislocation rate versus isolated arthroscopic repair in patients with a Hill-Sachs lesion but without significant glenoid bone loss.^{2,19} There is a concern for a slight decrease in external rotation after a remplissage procedure, so this procedure is typically avoided for a throwing athlete on their throwing arm.² Dr. LaPrade will consider adding a remplissage in a contact athlete or a patient with a medium to large Hill-Sachs lesion.

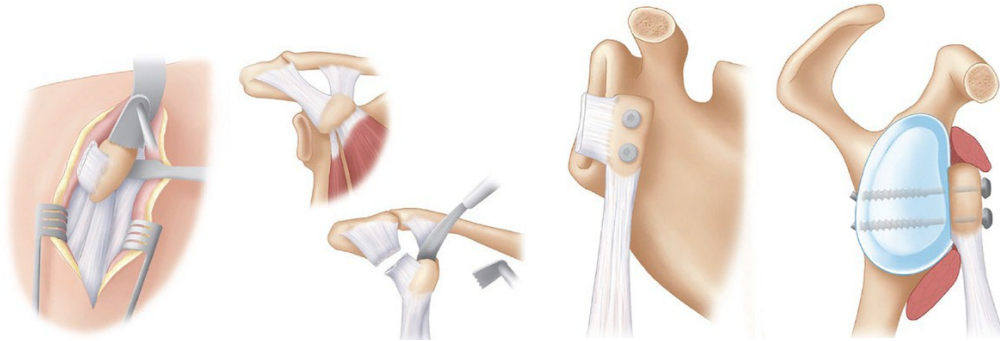
WHAT IS GLENOID BONE LOSS?

Glenoid bone loss can result after repeated dislocations in which the glenoid is injured and/or worn away due to the repeated dislocations. This is best assessed on a 3D CT scan (see below). Glenoid bone loss has been shown to be very important risk factor for failure of an arthroscopic stabilization, with recent studies saying that loss of any more than 13.5% of the glenoid is a risk factor for failure after isolated arthroscopic stabilization.¹⁵



WHAT IS A LATARJET PROCEDURE?

The Latarjet procedure is an open coracoid transfer for treatment of anterior shoulder instability, named after Dr. Latarjet who was one of the first to describe the procedure.¹⁰ The Latarjet procedure is particularly effective for those with glenoid bone loss. The Latarjet is described to have a “triple blocking effect” to dislocation with the (1) the transferred coracoid bone where there was previous glenoid bone loss, (2) the sling effect of the conjoint tendon, and (3) the coracoacromial ligament that is repaired at the end of the case.^{10,21}



WHEN IS A LATARJET PROCEDURE RECOMMENDED?

Doing a revision, or “redo,” arthroscopic stabilization procedure has very poor results in the literature. In a military population without glenoid bone loss, rates of recurrent instability have been reported to be 44% after a second procedure.¹⁶ Adding a remplissage to the anterior stabilization still results in high levels of failure in other studies (34-36%),^{11,22} especially in contact athletes or those with greater than 10% glenoid bone loss.²²

In terms of recurrent instability, the Latarjet procedure has been reported to have the lowest rate of recurrent instability (4%).²³ The complication rate for this procedure is relatively high (16%) and can include recurrent dislocations or nerve injuries,³ with one study reporting that 21% of patients will have a temporary nerve deficit.⁴ Permanent nerve damage is much lower, but still 2-5%, which is not insignificant.²⁰ If a Latarjet is done after a prior surgery for anterior shoulder instability, this complication rate is higher, including the rate of instability (12% for revision, 3% for primary).⁶

In Dr. LaPrade’s practice, a Latarjet procedure is recommended if greater than 13.5% glenoid bone loss or potentially after a previous failed arthroscopic procedure, especially in a contact athlete. Because of the fact there is typically more pain, with it being an open procedure, and a relatively high complication profile, it generally is not recommended for a routine first-time dislocation.

WHAT IS A DISTAL TIBIAL ALLOGRAFT OR FREE BONE GRAFT?

Distal tibial allografts are being studied more in the literature and do show promising results. At this time, Dr. LaPrade primarily recommends these for a failed Latarjet procedure. Studies have shown no difference in clinical outcomes or dislocation rate in free bone graft versus a Latarjet procedure,¹² but the free bone graft, especially allograft, is quite expensive, and the distal tibial allograft has been reported to have a very high rate of at least some of the graft resorbing with time (73%).¹⁸

WHAT ABOUT THE POSTERIOR LABRUM?

While posterior dislocations are quite low, posterior labral tears are fairly common, with reports that 47% of labral repairs involve the posterior labrum, with the highest rate in athletes.⁷ It is classically seen in weightlifters or football offensive lineman and oftentimes presents more as pain than instability. Typically, if the main symptom is pain without instability, we recommend physical therapy first because many patients will improve without surgical intervention. If there is a posterior labral tear in the setting of an anterior labral tear, which has been reported to be present in 30%,⁷ Dr. LaPrade will repair the posterior labrum in addition to the anterior labrum.



HOW LONG OF A RECOVERY IS AN ARTHROSCOPIC STABILIZATION OR LATARJET?

Both procedures require an extended period of recovery in order for the labrum and capsule to heal in an arthroscopic procedure or the coracoid bone graft in the Latarjet procedure. The first 3 months are focused on range of motion and light band work. If things are on schedule, around 4.5 months patient can begin progressing strengthening exercises with a full return to contact sports being around 6 months. A similar timeline is expected for a Latarjet procedure. Please see Dr. LaPrade's website for PT protocols: <https://tcomn.com/physicians/christopher-laprade/>.

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