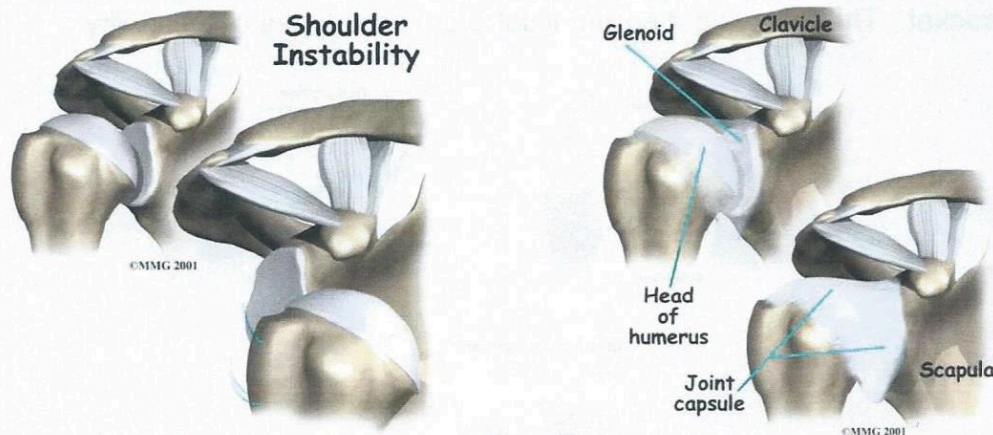


Your diagnosis is **shoulder instability**.



The shoulder

The primary function of the shoulder is to position the hand in space. Accordingly, the shoulder is a joint built for mobility. The socket (glenoid) on which the ball (humeral head) rotates is extremely flat. Stability is provided by soft tissues, which surround the joint. These include:

- *Glenoid Labrum*- fibrocartilage structure that surrounds the socket, making the socket deeper and increasing the overall area of the glenoid
- *Glenohumeral Ligaments*- thick bands of tissue that help the humeral head remain stable and centered on the glenoid throughout various ranges of motion
- *Rotator Cuff Muscles*- act as dynamic stabilizers, meaning that by contracting these muscles they move the humeral head (ball) down into the glenoid (socket) during shoulder motion

What is shoulder instability?

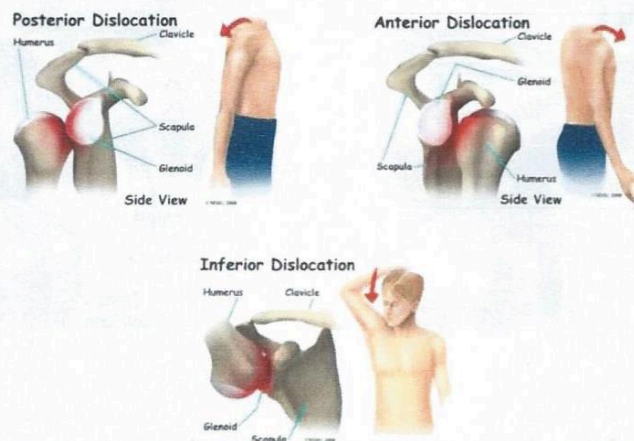
Occasionally during work, sport, or other activities, the arm is placed in a position where the stabilizers of the shoulder can be overloaded. This can occur with a fall on the outstretched hand or with traction injuries where the arm is pulled away from the shoulder. *These types of injuries can tear the supporting tissues off the glenoid and leave the shoulder in an unstable condition.* If the forces are great enough, the ball will dislocate out of the socket.

The shoulder can also be injured though repetitive use.

- Athletes including baseball players, volleyball players, swimmers and gymnasts often have symptoms of a loose shoulder secondary to overuse.

- When the arm is brought through repetitive ranges of motion, the rotator cuff muscles act as dynamic stabilizers. If the muscles become overloaded and weak, they lose their protective function and stretching of the capsule and glenohumeral ligaments occurs.
- The instability that results can lead to additional injuries to the rotator cuff tendons and labral tissues.

Shoulder instability is defined by the direction the humeral head moves out of the glenoid socket. The following diagram illustrates three types of instability:



What are the symptoms of shoulder instability?

The *most common complaint is pain with activity*. Pain is present when you move your shoulder in various positions. Also, symptoms of:

- Looseness, slipping, grinding, clicking, or popping often occurs. These symptoms usually relate to the ball (humeral head) moving excessively.

If an unstable shoulder dislocates, symptoms that may occur could be:

- Pain in the shoulder and upper arm that hurts more when you move.
- Deformation of the shoulder- a bump in either the front or back of your shoulder, depending on how the bone has been dislocated.

Is instability permanent?

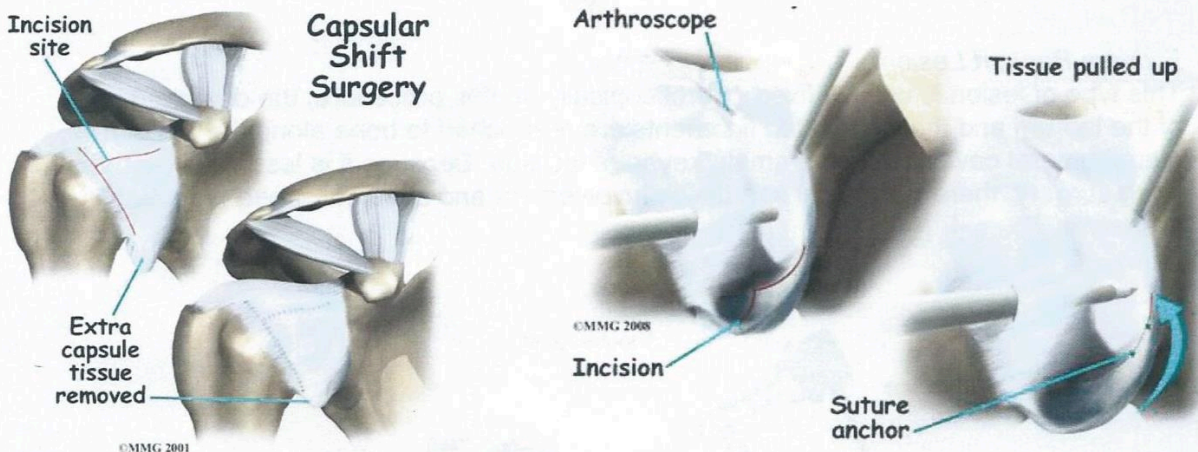
Traumatic shoulder dislocations can recur in approximately 80% of patients if the initial dislocation occurs at age 20 years or younger. The recurrence rate goes down to 20% if the initial dislocation is at 40 years of age or older. Disability is increased if the dominant hand is involved, and if the patient is highly active with recreational activities, sports, or overhead work. In severe cases of dislocated shoulder, the tissue and nerves around the shoulder joint are damaged. Chronic instability and weakness can occur in a person who has repeated dislocations.

Types of Instability

- Traumatic: a sudden injury causes the shoulder to dislocate and may lead to multiple dislocations over time.
- Atraumatic or Multi-Directional Instability (MDI): general laxity (looseness) in the joint that eventually results in the shoulder becoming unstable in multiple directions. This can be treated conservatively with a physical therapy program to work on muscular rehabilitation or operative treatment.

Operative Treatment for MDI: Anterior Capsular Shift

The most commonly performed surgical procedure for tightening the capsule is the anterior capsular shift. This can be used for patients with a large amount of anterior instability but is particularly useful for patients with MDI. This is an arthroscopic procedure. Arthroscopy is a minimally invasive surgical procedure in which an arthroscope (camera) is inserted into the joint through a small incision. In this procedure, the “slack” in the shoulder capsule that surrounds the shoulder joint is reduced by making a “T-shaped” cut through the capsule, overlapping the tissue, and then stitching the overlapped capsular tissue together.

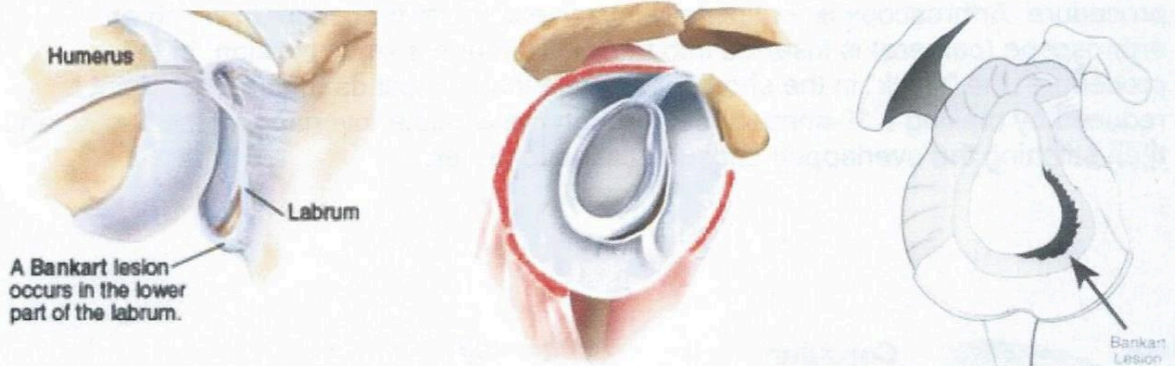


Injuries that may be caused by shoulder instability

- *Bankart Lesion*
- *Hill Sachs Lesion*
- *SLAP Lesion*

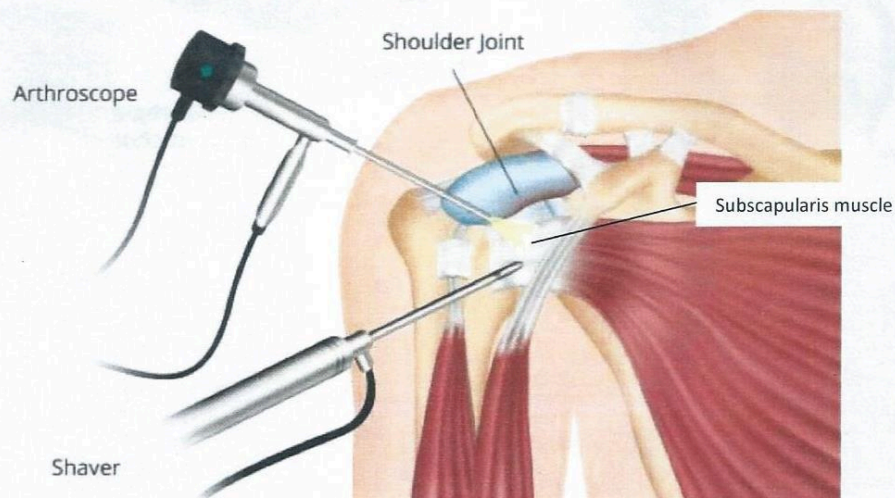
Bankart Lesion

Shoulder instability resulting from trauma usually involves a Bankart lesion. This means that there is detachment of the anterior (front) part of the labrum from the rim of the glenoid cavity.



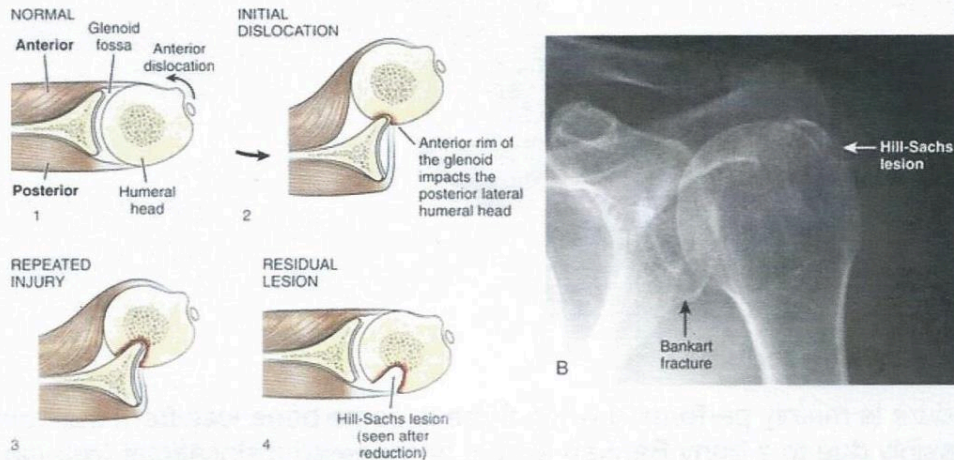
Fixing a Bankart Lesion:

This type of lesion is usually fixed arthroscopically. In this procedure, the detached part of the labrum and the associated ligaments are reattached to bone along the rim of the glenohumeral cavity through a small "keyhole" incision. Because it is less invasive than open surgery, there is minimal soft-tissue involvement and shoulder range of motion is preserved.



Hill Sachs Lesion

This lesion is a compression fracture (bony defect) of the humeral head that is typically associated with anterior shoulder instability. These are typically painful at the time of dislocation, and may promote future dislocation/subluxation due to the lever like effect of the defect during external rotation. Glenoid bone loss is common in Hill Sachs lesions in patients with recurrent anterior shoulder instability.



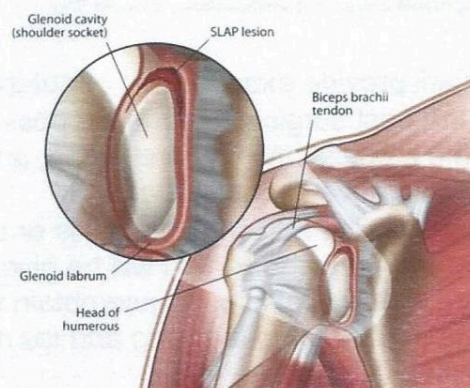
Fixing a Hill Sachs Lesion:

The bony defect itself does not require treatment, but the associated instability and often other injuries (possibly to the labrum) often do require surgical repair. Repair of the labrum is done arthroscopically, as described for the Bankart lesion.

SLAP Lesion (Superior Labrum Anterior Posterior)

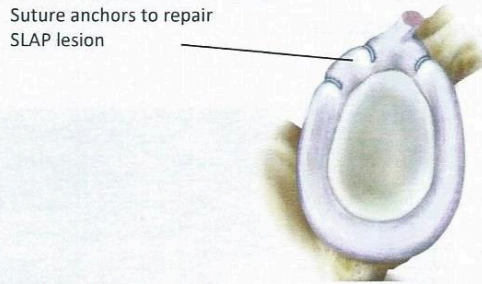
A SLAP tear occurs when the labrum detaches from its usual location along the top of the shoulder cavity. This detachment is associated with clicking sounds, locking of the shoulder, and/or feeling that the shoulder is “not right.” It is rarely associated with frank shoulder instability.

SLAP LESION



Fixing a SLAP lesion:

SLAP lesions are usually repaired arthroscopically by reattaching the labrum to the glenoid using a biodegradable tac or suture anchor.



Latarjet-Bristow Procedures

This procedure is mainly performed when there is some bone loss from the front of the glenoid possibly due to a bony Bankart lesion, or repeated dislocations wearing away the front of the glenoid.

The procedure involves transfer of the coracoid with its attached muscles to the deficient area of the front of the glenoid. This replaces the missing bone and the transferred muscle acts as an additional muscular strut preventing further dislocations.



Before

- When date

Latarjet/Bristow Procedure
(Coracoid Transfer to anteroinferior Glenoid Rim)

Surgery

the surgical is determined,

- the surgery scheduler will provide exact details about these requirements.
- We want you to have the best surgical experience possible so knowing about your medical history, the medications you are taking, and previous surgeries helps us plan your pre-operative needs.

Surgical Clearance

A complete physical by a primary care doctor is necessary in order to be cleared for surgery. The doctor will take your medical history and order various tests, such as blood tests, urinalysis, a chest X-ray and an electrocardiogram (EKG or ECG). The physical is usually done within 8 to 14 days before surgery in order to address any medical clearance concerns and be the most accurate assessment of your current state of health. The surgery scheduler will give you details as to when the pre-operative physical should be completed. Some patients may require additional clearance from cardiology or hematology.

Medications

There are medications that we may need you to stop taking before your surgery. Medications like nonsteroidal anti-inflammatories (NSAIDS, like Ibuprofen and Alieve) and blood thinners can lead to problems during and after surgery. By informing us of the medications you are taking we can do our best to prevent any problems.

Potential Problems Related to Infection

It is important that you don't have any underlying issues that might place you at an increased risk for an infection. Dental procedures can be a source of bacteria entering the bloodstream and causing an infection. Managing these problems before surgery, rather than after, decreases the risk infection in the new total shoulder.

In addition, if you develop any kind of infection prior to surgery, such as a cold or the flu, notify your surgeon immediately.

Pre-Surgical Planning

You should be in the best possible health before your surgery. If you are overweight, your doctor may suggest that you lose weight. If you smoke, it is very important that you stop prior to your surgery because smoking can change blood flow patterns and delay healing and recovery.

Because your arm will be in a sling for the first six to eight weeks following surgery, you should place everything in your house that you use on a regular basis at elbow level. This way you will not have to raise your arm. We encourage you to have a family member or friend with you when returning home for the first 24 hours. In addition, make sure that you have someone to drive you home from the hospital and to your first follow-up visit, which will be one week after surgery. You will not be able to drive for six to eight weeks while you are recovering.

It is not necessary to bring your actual medications as the hospital will provide you with your medications; however *do bring a list of your medications and their dosages because this is important for the hospital staff to know.*

Please take a shower or bath and wash your body thoroughly preferably the morning of surgery. **Do not eat or drink anything after midnight the night before your surgery.**

The Surgery & Hospital/Surgery Center Information

After you arrive at the hospital/surgery center, you will meet a pre-operative nurse who will review your medical history and start an I.V. in the opposite arm. You will meet the anesthesiologist and he or she will discuss the options for your anesthesia with you. You may get a nerve block for the surgery, known as an interscalene brachial plexus block. The anesthesiologist will discuss this in detail with you before the surgery.

- An *interscalene brachial plexus block* delivers numbing medication to the nerves in the shoulder and arm. The nerve block is temporary, lasting up to several hours. Following the operation, the medication wears off and the sense of feeling returns. It is essential you begin to take pain medication **before** the nerve block has worn off in order to have a comfortable transition.

You will also be getting a general anesthetic (meaning you will be fully asleep). The anesthesiologist will also discuss this with you.

Surgery:

The circulating surgical nurse will transport you to the surgical suite, where heart and blood pressure monitors will be placed on you prior the administration of the general anesthetic. Once the monitors are in place, the anesthetic will be administered.

Surgery is either done open (a larger incision over the front of your shoulder) or arthroscopically (multiple small incisions around the shoulder through which we pass various instruments. This depends on exactly what type of instability repair procedure will be done. Surgery will take approximately 1-3 hours.

After the incisions are closed you will be moved to the recovery room where you will be carefully monitored. As the anesthesia wears off you will slowly regain consciousness. A nurse will be with you, and may encourage you to cough or breathe deeply to help clear your lungs. Your arm will be in a sling or brace, and it may be wrapped in an ice pack or pad that circulates cold water to help control pain and swelling. You will also be given pain medication. You will remain in the post-operative unit for approximately 1-2 hours after surgery before being discharged home.

Post-operative:

After the operation the shoulder and arm may feel numb. This should last for about 6-48 hours. After this the shoulder may be sore and you should take your pain medications as directed. Another side effect of the anesthesia is that you

may not be able to move the fingers or hand on the operated arm while the block is still in effect.

After surgery, you may feel some pain that will be managed with medication to make you feel as comfortable and should be used as needed. To avoid lung congestion after surgery, you should breathe deeply and cough frequently to clear your lungs.

Pain management:

The use of the ice machine and cooling pad can help you manage your pain, and decrease the swelling as well as the need for pain medication. We recommend using the ice or cooling pad consistently the first few days after the surgery, then intermittently for comfort.

Caring for your incision:

The incision site will be covered with a waterproof dressing so you can shower without having to cover the area. Leave this dressing in place. You will have stitches running along your wound on the front of your shoulder. These will be removed one week after your surgery, at your first follow-up appointment.

Physical Therapy:

Before leaving the hospital/surgery center, a nurse or physical therapist will be teaching you and your family/friends how to do “Passive range of motion” (PROM) exercises. You will be doing these stretching exercises with someone for the first three to four weeks after your surgery.

At Home After Surgery:

Call BoulderCentre for Orthopedics immediately if your incision swells, drains, becomes red or painful, or if you develop a temperature over 102 degrees Fahrenheit.

Your arm will still be in a sling after you leave the hospital/surgery center and it is recommended that you wear it when you are in public or moving around/active and when sleeping. (Refer to the instructions at the end of this education packet for details regarding how to put the sling on.) If you are reading, watching television or working at a desk, you may loosen or remove it. You may use your arm to perform normal daily activities, such as eating, writing or shaving as long as your elbow is kept at your side, but you may not lift any items or reach out suddenly until you are instructed that it is OK to do so.

You may experience swelling and bruising of the hand and arm or you might get a small to large “lump” on the inside of your arm. This is a normal result of having your arm in a sling, and the fluid moving down the arm and into the hand. There is no treatment for this but bending and straightening your elbow frequently and making a fist to help keep your circulation flowing will help

minimize this. Having someone help place your arm in an elevated position can also help decrease the swelling.

You can experience some difficulty sleeping for a while. Most people sleep in a recliner chair or propped up on a few pillows or foam rubber wedge. You will not do any damage if you sleep on your back or even on your side, but most people find this uncomfortable shortly after surgery. This should slowly resolve.

Continue using ice or the cooling pad for pain management. (Refer to the instructions at the end of this document regarding how to use the cooling pad.) You will continue to work on PROM at home with a family or friend for 3-4 weeks.

Medications:

Unless you have an allergy or other contraindications, you are instructed to take one full strength (325mg) aspirin once a day for 21 days for prevention of blood clots. **You should not use other NSAIDs for 4 weeks after surgery.**

Unless otherwise directed, you can return to using your previous medications and supplements when you return home. We suggest that you make an appointment with your primary care provider after surgery for evaluation and treatment of other medical problems, especially if you are placed on an anticoagulant (Coumadin) following surgery.

You will be given a prescription for pain medication when you are discharged from the hospital/surgery center. Continue to use the pain medications according to the instructions are provided. Your narcotic pain medications will not be refilled on weekends, please make arrangements prior to weekends should you need refills. Narcotic pain medications cannot be filled over the phone or called into a pharmacy by law. You must obtain a written prescription from our office or request to have one mailed to your house. If you were already seeing a pain management physician prior, please follow up with that provider for continued treatment.

Physical Therapy:

Over the six weeks after your surgery you need to protect the shoulder so that the muscles can heal. Continue the passive range of motion (PROM) exercises the physical therapist taught you in the hospital for 3-4 weeks after surgery. Your therapy will slowly advance to "Active assisted"(AAROM) at 3-4 weeks post op and then at 6-8 weeks post op you will start "Active range of motion" (AROM) exercises. (See physical therapy protocol hand out.) You will be given a prescription for physical therapy when you are seen in the clinic 5-7 days after you are released from the hospital. We suggest that if you do not already have a therapist, to find one close to your house. They will be following the protocols prescribed post operatively.