

Anterior Shoulder Stabilization: The Latarjet

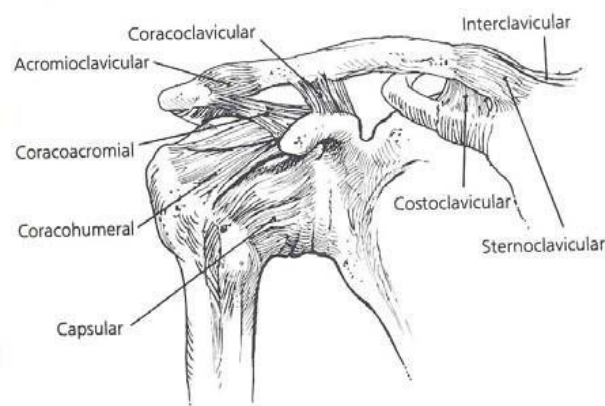
The shoulder joint is a ball and socket joint that connects the bone of the upper arm (humerus) with the shoulder blade (scapula). The shallow socket in the scapula is the glenoid cavity. The capsule is a broad ligament that surrounds and stabilizes the joint. The glenoid labrum is a rim of cartilage attached to the glenoid rim. If the arm is pulled out of its socket, the capsule and labrum tear, usually from the rim of the glenoid cavity. A dislocation occurs when the humerus comes completely out of the socket and stays out. A subluxation occurs when the humerus comes partly out of the socket and then slips back in.

When the capsule tears from the glenoid rim, the shoulder can become unstable and dislocate or subluxate repeatedly. The most common direction for the humeral head to dislocate is toward the front of the body (anteriorly); this typically occurs if the arm goes too far behind the body when the arm is in an overhead position (such as when throwing a ball). The humeral head can also dislocate toward the back of the body (posteriorly) when force is directed toward the back of the shoulder; this can occur when falling forward on an outstretched arm, seizures, electrical shocks or blocking with the arm straight ahead in football. It is possible for the shoulder to be unstable in more than one direction, which is more common in loose-jointed (double-jointed) individuals.

To help confirm the diagnosis of instability several different tests are helpful and may be employed:

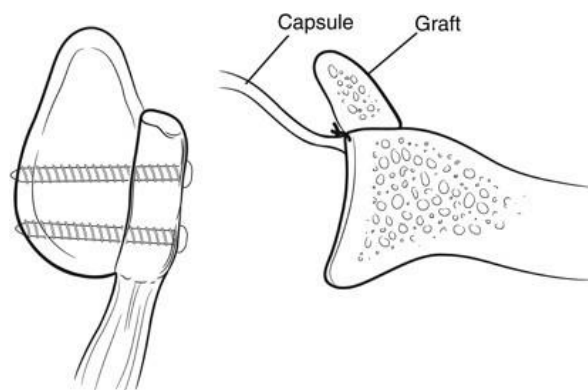
- Magnetic resonance imaging (MRI) or computed tomography (CT)
- MRI or CT scan with dye is injected into the shoulder joint (arthro MRI or arthro CT)
- Examination under anesthesia followed by arthroscopy

Some patients who dislocate their shoulder do well after the injury and do not have recurrent instability. They tend to be older in age and not active in sports. Young people, especially athletes, are prone to have recurrent dislocations and subluxations and usually need surgery to correct the shoulder problem.



Often, anterior shoulder dislocations can be fixed using arthroscopic, or minimally invasive, surgery to fix the ligaments around the shoulder. However, when the socket (glenoid) is missing a significant amount of bone - over 20% - a minimally invasive surgery is often not successful at maintaining the shoulder in its socket and a reconstruction using your own bone gives the best results. The two most common sites of bone are from your coracoid bone (a knuckle of bone near your shoulder) or your iliac crest (hip bone). Depending on the nature of your injury, Dr. O'Donnell will discuss which of these options is more desirable.

In the Latarjet procedure, an incision is made over the front part of your shoulder and the coracoid bone is exposed. About 2cm of the bone is cut and moved to the front part of the shoulder in order to make a new shoulder socket. The picture below depicts how this is done.



The risks of the surgery include but are not limited to:

- Infection
- Nerve injury
- Failure of the repair/recurrent instability
- Non union of the bone graft, with subsequent resorption
- Stiffness in the shoulder
- Pain, postoperative and/or persistent
- Arthritis
- Blood clots

Postop Instructions

You will wake up in the operating room with a sling and pillow in place and ice on your shoulder. You will then be brought to the recovery room for a few hours while the effects of anesthesia run their course. You will be discharged from the recovery room after a few hours and will need someone to drive you home.

If you had a nerve block placed you will likely have numbness and pain relief for 6 or more hours afterwards. It will be important to begin taking pain medicine prior to this wearing off, as it is always important to “stay ahead of the pain.” You will be prescribed oxycodone or a similar medication to help with your pain control for the first several days.

Activities & advice for in the hospital and while at home

1. Please call with any concerns: 617-726-6648
2. Apply ice to the shoulder as it will be quite helpful. After two days, you can change the dressing to a smaller one to allow the cold to better get to the shoulder. Be sure to leave the little pieces of tape (steri-strips) in place.
3. Remove the sling on the first day after surgery. Move your elbow, wrist, hand and fingers several times a day. Begin the pendulum exercises several times a day. Put the sling back on when you're done with these exercises. It is likely the sling will be used for 4-6 weeks.
4. If you had a purely arthroscopic procedure, it is okay to shower and get the wound wet after two days, but do not soak the wound as you would in a bath tub or hot tub. If you had an open procedure it will be necessary to keep the wound(s) dry for two weeks.
5. It is important to look out for signs of infection following surgery. These can include: fever (temperature > 101.50, chills, nausea, vomiting, diarrhea, redness around your incision, or yellow or green drainage from your incision. Should any of these be present please contact Dr. O'Donnell's office immediately.
6. To wash under your operated arm bend over at the waist and let the arm passively swing away from the body. It is safe to wash under the arm in this position.
7. DO NOT lift the arm or move the arm at your shoulder using your muscles. This could damage the repair.
8. After shoulder surgery there is a variable amount of pain and swelling. This will dissipate after several days. Continue to take the pain medicine you were prescribed as needed. Remember it is called pain control, not pain elimination.
9. You will have an office visit with Dr. O'Donnell scheduled approximately 10-14 days after your surgery.

Phase I: Immediate postop phase (first 5-7 days after surgery, prior to starting PT)

Goals:

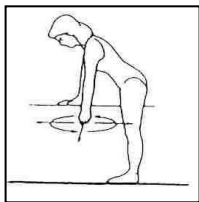
1. Protect the bone graft and allow time for union (usually 6-8 weeks)
2. Ensure wound healing
3. Diminish pain and inflammation
4. Prevent stiffness and regain motion

Activities:

1. Sling: Use your sling all of the time except for when doing therapy. Remove the sling 4 or 5 times a day to do pendulum exercises. You will need to sleep with your sling and pillow in place. It is often more comfortable to sleep in a recliner or on several pillows.
2. Use of the affected arm: You may use your hand on the affected arm in front of your body but DO NOT raise your arm or elbow away from your body. It is all right for you to flex your arm at the elbow. Continue to move your elbow wrist and hand to help circulation and motion. Also:
 - a. No lifting of objects
 - b. No excessive shoulder extension
 - c. No excessive stretching of sudden movements
 - d. No supporting of body weight by hands
3. Continue to ice on a regular basis. At least 20 minutes at a time, 4-5 times per day.
4. Physical therapy will have either been scheduled or will begin immediately after your first post-op appointment.

Exercises:

Program: 7 days per week, 4-5 times per day		
Pendulum exercises	1-2 sets	20-30 reps
Supine external rotation	1-2 sets	10-15 reps
Supine passive arm elevation	1-2 sets	5-10 reps
Scapular retraction	1-2 sets	5-10 reps
Shoulder shrug	1-2 sets	10-15 reps



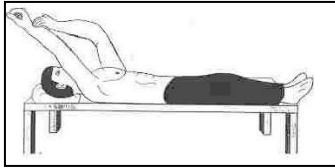
Pendulum exercise

Remove your sling, bend over at the waist and let the arm hang down. Using your body to initiate movement, swing the arm gently forward and backward and in a circular motion.



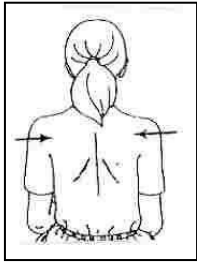
Supine external rotation

Lie on your back. Keep the elbow of the operated arm against your side with the elbow bent 90 degrees. Using a cane or a long stick in the opposite hand, push against the hand of the operated arm so that the operated arm rotates outward. Hold for 10 seconds, relax and repeat. The amount of allowed external rotation will be specified after surgery.



Supine passive forward elevation

Lie on your back. Hold the affected arm at the elbow with the opposite hand. Assisting with the opposite arm, lift the operated arm upward, as if the bring the arm overhead. Slowly lower the arm back to the bed.



Shoulder blade pinches

While standing, pinch shoulder blades backward and together.

Phase II: Intermediate postop phase (5---7 days post surgery – 2 weeks)

At this point you should begin your formal physical therapy, the instructions that follow are to aid your therapist in maximizing the results of your surgery while still protecting the repair.

Your therapist will instruct you on how to perform the exercises below and give you a home exercise program. It is important that you stay within the limits demonstrated and that you perform your exercises daily. You should strive to do your home exercise program at least 3-4 times per day, every day. The success of your repair depends on your rehab.

PT should not hurt. Do not force painful motions.

Goals:

1. Protect the surgical repair
2. Ensure wound healing
3. Prevent shoulder stiffness
4. Control pain and swelling

Activities:

1. Sling: Use your sling most of the time for the first 4 weeks. Dr. O'Donnell will give you additional instructions on the use of the sling at your post-operative office visit. Remove the sling 4 or 5 times a day to do pendulum exercises. You will need to sleep in your sling for the first 4 weeks.
2. Use of the operated arm: You may use your hand on the operated arm in front of your body but DO NOT raise your arm overhead. Avoid extending the arm behind you and avoid putting your arm in a position as if your hands were behind your head. It is all right for you to flex your arm at the elbow but do not lift any objects in excess of 2 pounds or engage in activities that involve forceful use of the forearm such as using a screwdriver. Use of a computer or writing is all right as long as it is not painful.
3. Showering: You may shower or bath and wash the incision area. To wash under the operated arm, bend over at the waist and let the arm passively come away from the body. It is safe to wash under the arm in this position. This is the same position as the pendulum exercise.
4. Continue to ice on a regular basis
5. You will have your first follow-up appointment with Dr. O'Donnell at 2 weeks after surgery.

Exercises (focus on stretching and passive motion):

- Supine external rotation (limit to 0 degrees ER)
- Supine forward arm elevation
- Ball squeeze exercise (squeeze rubber ball in your hands for 5-7 seconds)
- Scapular retraction

Phase III: Initiate motion phase (weeks 2 to 5)

Goals:

1. Protect the surgical repair
2. Ensure wound healing
3. Prevent shoulder stiffness

Activities:

1. Continue to use your sling. At home, you may remove it whenever you wish if you are careful and keep the shoulder safe. Put the sling on when you are outside or in a crowd. Keep the sling on when sleeping at night for the first three or four weeks.
2. Use of the operated arm: You may use your hand on the operated arm as long as you **do not** rotate the arm externally or away from your body. You should bend your arm at the elbow and use your fingers and hand, such as to reach up and touch your face. Keep your elbow in front of you.
3. Bathing and showering: You may shower or bath and wash the incision area. To wash under the operated arm, bend over at the waist and let the arm passively swing away from the body. It is safe to wash under the arm in this position. This is the same position as the pendulum exercise. **Do not** submerge the incisions under water.
4. Continue to ice on a regular basis.
5. Once you are no longer taking pain medication and are able to safely use your arms in front of you it is safe to drive.
6. You will have a follow-up appointment with Dr. O'Donnell 6 weeks after your surgery.

Exercises:

Stretching/PROM:

- Pendulum exercises
- Supine external rotation (limit to 30 degrees)
- Supine passive arm elevation
- Behind the back internal rotation (start at 3 weeks postop)

Isometrics:

- Internal and external rotation at neutral
- Prone row
- Prone extension (do not extend past hip)
- Sidelying external rotation
- Rhythmic stabilization and proprioceptive exercises with therapist

Phase IV: active motion phase (5-8 weeks after surgery)

Goals:

1. Protect the surgical repair
2. Regain full range of motion
3. Begin strengthening exercises

Activities

1. The sling is no longer necessary.
2. You may now use your arm. Avoid having the arm forcefully pulled behind you.
3. Continue to avoid heavy weight lifting or manual labor. Follow any further instructions given to you by your doctor.
4. Do not lift objects overhead with the weight of the object going behind the head. In other words, keep objects in front of you where you can see them.
5. Continue to ice on a regular basis
6. You will have a follow-up appointment with Dr. O' 6 weeks after your surgery.

Exercises:

Stretching/AROM:

- Pendulum exercises
- Supine ER (limit to 45 degrees)
- Standing ER (limit to 45 degrees)
- Supine passive arm elevation
- Seated-standing forward arm elevation
- Behind the back IR

Strengthening/Theraband:

- External rotation
- Internal rotation
- Prone row
- Prone horizontal abduction "T's"
- Prone extension
- Standing scaption
- Side-lying ER
- Rhythmic stabilization and proprioception exercises with therapist.

Phase V: strengthening phase (8-12 weeks after surgery)

Goals:

1. Protect the shoulder repair
2. Regain full range of motion
3. Continue gentle strengthening

Activities:

1. You may now use your arm in a more normal fashion. You may move the arm into all positions including external rotation and behind the back if it is comfortable. Avoid having the arm forcefully pulled behind you. Continue to avoid heavy weight lifting or manual labor. Follow any further instructions given to you by your doctor.
2. Do not lift heavy weights overhead with the weight going behind the head. In other words, keep the weights in front of you where you can see them.

Exercises:

Stretching/PROM:

- Pendulums
- Standing ER / door / wall slide stretch
- Hands behind the head stretch (starting at 9 weeks)
- Behind the back IR
- Supine cross body stretch
- Sidelying IR

Strengthening/Theraband:

- External rotation
- Internal rotation
- Standing forward punch
- Shoulder shrug
- Dynamic hug
- Wall "W's"
- Seated row

Strengthening/Dynamic:

- Sidelying ER
- Prone horizontal abduction "T's"
- Prone scaptation "Y's"
- Prone row
- Prone extension
- Standing scaptation "full can" exercises
- Rhythmic stabilization and proprioception exercises with therapist

Phase VI: Advanced strengthening phase (12 weeks and beyond)

Goals:

1. Protect the ligament repair
2. Regain full range of motion
3. Continue strengthening
4. Gradual return to full activity

Activities:

1. Use the arm for normal daily activities. There is no restriction on your range of motion unless exceptions are outlined in your discussions with your doctor.
2. Weight training can gradually resume with caution being paid to exercises such as bench press, incline press, dips, pull-downs behind the neck or other exercises where the hands are repeatedly placed behind you.
3. If you are returning to contact sports, you should wait until six months after surgery.

Exercises:

Stretching/PROM:

- Continue phase V exercises
- External rotation at 90 degrees abduction stretch

Strengthening/Theraband:

- Continue phase V exercises
- External rotation at 90°
- Internal rotation at 90°
- Standing "T"s
- Diagonal up
- Diagonal down

Strengthening/Dynamic:

- Continue phase V exercises
- Prone ER at 90 degrees abduction "U"s"
- Biceps curls
- Resisted forearm supination/pronation
- Resisted wrist flexion/extension
- PNF manual resistance with therapist
- Push up progression

Future Progression

You may begin plyometric program with clearance from your therapist

May begin weight training but the following weight training exercises should be avoided after Bankart repair for shoulder instability and superior labrum repairs:

1. Pull downs behind-the-neck (wide-grip)
2. Behind-the-neck shoulder press
3. Wide-grip bench press
4. Standing lateral deltoid raises
5. Triceps press overhead

If your goal is returning to high-level weight training or weight lifting, it will take 3 to 6 months of cautious, gradual progression to return to top form. In general, avoid increasing the amount of weight lifted by more than 10-15% (at a time) of your present working weight every 10-14 days.

Remember: Weight training is beneficial to improve muscular strength and protect the joints from injury. If done improperly by using too much weight and/or improper technique, weight training can cause serious injury.

At the 16 week mark, it is okay to start an interval return to sport program for swimming, tennis, golf or throwing.