

Explanation of Procedure and/or Diagnosis

Anatomy

The shoulder is a ball and socket joint and is the most mobile joint of the body. Its plays a major role in positioning your arm and hand in space. Because of its great mobility, it is inherently at risk for instability.

The socket of the shoulder (the glenoid) is part of the shoulder blade or scapula. The ball is part of the arm bone or humerus. The socket is rather shallow which allows for the wide range of motion that the shoulder requires. Around the socket is a soft tissue called the labrum (Latin for lip). Think of this rim of tissue as an O-ring that lines the edge of the bony socket. It is attached to the shoulder capsule. One of its main jobs is to help keep the ball centered in the socket during shoulder motion. When the shoulder dislocates, it is usually this labrum or rim of tissue which tears from socket. Shoulder instability occurs when the ball, or humerus head, is forced out of the shoulder socket (glenoid).

This can happen during a sudden injury. Once a shoulder has dislocated, further dislocations may occur over time. When the shoulder is in this loosened state and multiple dislocations occur, it is referred to as chronic shoulder instability.

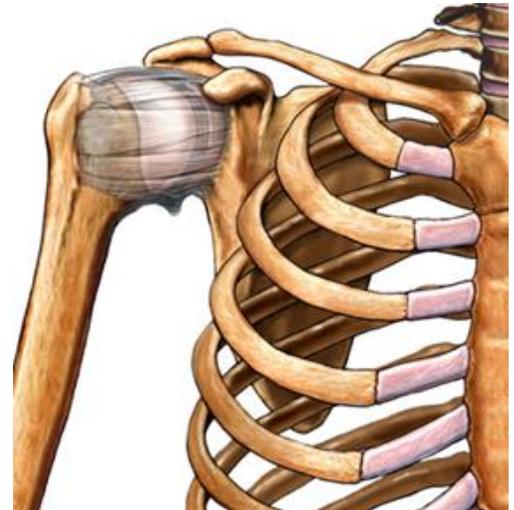
Typically, this results in damage and stretching of the ligaments and labrum of the shoulder. In some cases, though, this results in damage to the bony socket which is a more severe form of shoulder instability. When the bony socket is damaged, instability can be much more profound.

The socket is often compared to a golf tee and the ball to a golf ball. If a certain amount of the "tee" is damaged, it can no longer hold the "ball". This is when a bony procedure to fix the "tee" may be necessary.

Symptoms

Common symptoms of shoulder instability include:

- Pain caused by shoulder injury
- Repeated shoulder dislocations
- Repeated instances of the shoulder giving out
- A persistent sensation of the shoulder feeling loose, slipping in and out of the joint, or just "hanging there"



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Physical Examination and Patient History

Imaging Tests:

It is often important to obtain imaging tests to help confirm the exact diagnosis and identify any other problems. X-rays are usually obtained to assess position of the shoulder joint and reveal bony injuries.

Frequently, if there is bony damage on x-ray, you may need a CT scan to assess the degree in better detail, which may have important implications to the ultimate management of the instability.

MRI studies are often necessary in patients with shoulder instability. These images can demonstrate the soft tissue structures (labrum, ligaments, tendons and muscles) which cannot be seen on X-ray.

Treatment

Shoulder instability is often initially treated with nonsurgical options such as bracing, physical therapy and rest. If these options do not relieve the pain and instability, surgery may be indicated.

Non-surgical Treatment

It is always reasonable to consider non-operative treatments first. A treatment plan to relieve your symptoms will be developed. It often takes several weeks or months of nonsurgical treatment before you can tell how well it is working.

Non-surgical treatment typically includes:

- Activity modification. Making some changes in your lifestyle and avoiding activities that aggravate your symptoms.
- Anti-inflammatory medication. Medicines like aspirin and ibuprofen reduce pain and swelling.
- Physical therapy. Strengthening shoulder muscles and working on shoulder control through a specific shoulder program can increase stability. Your therapist will design a home exercise program for your shoulder.

In many patients, nonsurgical treatment is very successful. This depends on a variety of factors including your age, your desired activity level, the specific sport you hope to return to, and the degree of tissue damage in your shoulder. Return to normal activities may take several months but the goal is to not only prevent dislocation but to restore your sense of full confidence in the shoulder. If this does not happen with conservative measures, surgical treatment may be considered.

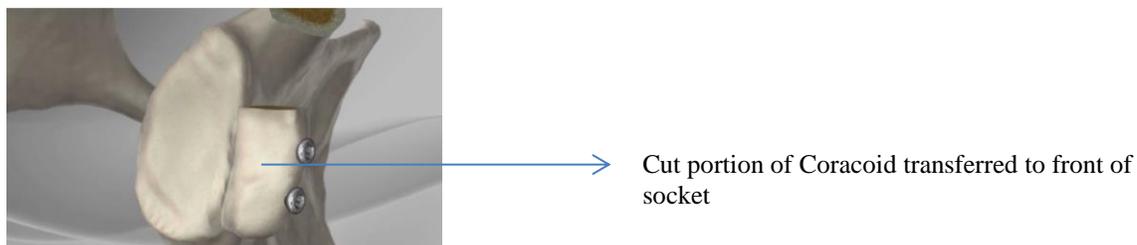
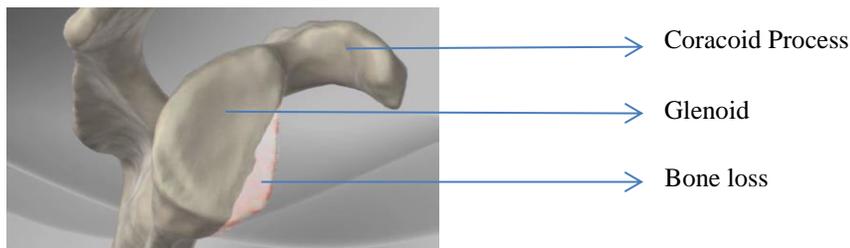
Surgical Treatment

Surgery is often necessary to repair torn or stretched ligaments so that they are better able to hold the shoulder joint in place, especially when nonsurgical treatments have not been entirely successful. Although nonsurgical treatment is always the initial consideration, there are certain degrees of damage and certain patient factors in which surgical treatment may be the preferred initial choice. The more extensive the damage to the ligaments and, particularly, the bony structures, the greater the likelihood that surgery may be necessary.

- Arthroscopy. Soft tissues in the shoulder can be repaired using a small camera and instruments through small incisions. This is a same-day or outpatient procedure and is used typically if the damage is limited to soft tissue structures. Arthroscopy is minimally invasive surgery and typically involves repairing the labrum to the glenoid with sutures.

- Open or 'traditional' Surgery. Some patients may need an open surgical procedure. This involves making a larger incision over the shoulder and performing the repair under direct visualization. Usually when this technique is used, it is because the arthroscopic methods for that particular issue are not appropriate and is often the preferred option if there is severe bone damage.

Latarjet Procedure. This surgery is performed when the bone on the socket needs to be repaired with additional bone and this is obtained from a small bone protruding off the front of the shoulder blade called the coracoid process. Because of the "transplant" of the bone, this is generally done as a traditional open surgery rather than arthroscopic. An incision about 4-6 inches long is made on the front of your shoulder. The bone from the coracoid is "harvested" and then the socket is identified and prepared. The rest of the joint and soft tissues are inspected for damage and treated if necessary. The bone graft is then screwed into place on the socket and soft tissues are then repaired. Your incision will be closed with sutures or staples. The area is then covered with a sterile dressing. Your operative shoulder will be placed in a sling after surgery.



Illustrations provided courtesy of Arthrex, Inc.

Preparing for Surgery

If the surgery involves your dominant arm, it may present several challenges for you. Following shoulder surgery your arm will be in a sling. Performing activities of daily living with your non-dominant hand requires some adjustments and patience. Strange as it seems, bathroom hygiene is quite difficult with your non-dominant hand and should be practiced. It will be several weeks before you will be able to use your dominant hand normally.

Women have several additional considerations. Most women will want to use a front-closing bra for several weeks after surgery since their operative arm will be in a sling. Additionally, women may want to have a close shave of the axilla (arm pit) as it will be difficult to do this for several weeks after surgery.

Before having shoulder surgery, you should make sure your doctor is aware of:

- All medical conditions, including any not previously disclosed
- All allergies
- Any medications that you are taking
- Any bleeding problems
- Pregnancy status

In addition, your doctor will ask you not to eat or drink anything after midnight the night before surgery.

Unless directed otherwise you should refrain from taking any medications the day of surgery. You should not take Aspirin or anti-inflammatory medicines (i.e. Advil, Motrin, Ibuprofen, Aleve) for 10 days before your surgery as they inhibit platelet function (blood clotting).

You must arrange for someone to pick you up after surgery and stay with you for the first 24 hours after your procedure. It is important to plan ahead in this regard. We will do our best to make your return home after surgery as easy as possible.

What to Expect at Surgery

On the Day of Surgery

- Wear clothing roomy enough to accommodate the bulky bandage and sling that will be wrapped around your shoulder after surgery
- Remove all jewelry
- Go to the bathroom just before surgery

Generally, the procedure takes between 1 and 2 hours, depending on you and your individual shoulder condition.

Care After Surgery

After your procedure, you will go to the post anesthesia care unit (PACU). You will remain there until the effects of your anesthetic have begun to wear off and until you can eat, drink and urinate without difficulty.

Specially-trained nurses work in the PACU and will monitor your progress and give you verbal and written discharge instructions. Your surgeon or anesthesiologist will discharge you from the PACU to home or your hospital room. However, you will not be able to drive home after surgery and should have someone stay with you overnight.

What is the Recovery in the Immediate Postoperative Period?

Ice is applied immediately after surgery and thereafter intermittently for 20-30 minutes at a time over the first seven days. This reduces swelling and relieves pain. The incision takes several days to heal, sometimes up to two weeks. The shoulder dressing is usually kept on for 48 hours.

Medications

Take as prescribed. Narcotic pain medications such as Norco (hydrocodone) or oxycodone are used for severe pain. They can be taken up to every four hours as necessary. Most patients only require these medications for the first week. Once pain is better controlled, you may simply take Tylenol (acetaminophen) every four to six hours, not to exceed 3000 mg in one day. Take these medications with food. If you have any problems taking the medications, please stop them immediately and notify the clinic.

Wound Care

Please remove the surgical dressing on the second day after surgery. You may see staples, skin sutures or steri-strips used to close the incision. Keep these sutures and incisions clean and dry.

Possible Complications/Risks

The risk of complications after shoulder reconstruction is low. However, as with any invasive procedure there is some risk that the following conditions may arise:

- Bleeding
- Infection. Common signs of infection include increasing pain after surgery, increased redness around the incision, swelling, and drainage.
- Complications from anesthesia, including death
- Permanent or temporary nerve or blood vessel injury
- Failure of fixation
- Need for further surgery
- Damage to other tissues or fracture
- Loss of limb or function
- Recurrent instability is possible though uncommon
- Post traumatic arthritis

Be sure to watch for signs and symptoms of possible infection after surgery, which includes:

- Redness
- Increased swelling
- Warmth
- Wound drainage
- Fever greater than 101 degrees

If you notice any of these signs and symptoms please notify your surgeon.

Follow-Up

Your initial follow up visit will be one to two weeks after surgery. These visits will be arranged for you.

Questions

The CORE Institute is dedicated to your outcome. If any questions or concerns arise, please call The CORE Institute at 1.866.974.2673.