

Patient Guide to Shoulder Instability

Johns Hopkins Division of Shoulder Surgery

What is the shoulder joint?

The shoulder is ball and socket type of joint that permits a wide range of movement. Its bony structures includes the upper arm bone (the humerus) and the shallow cavity (the glenoid) of the shoulder blade. The ball of the humerus (humeral head) is meant to stay close to the socket, like a ball bearing in a holder.

The humeral head is held into the socket by the lining of the joint (the capsule), thickenings of the capsule called ligaments, and a cartilage rim (the labrum). [Figure 1]

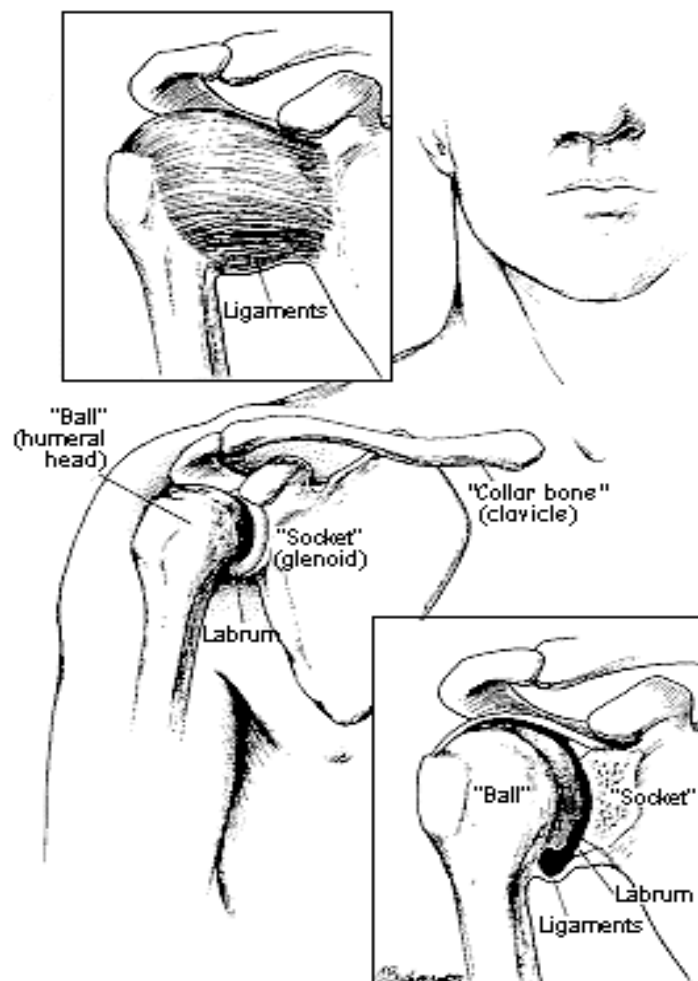
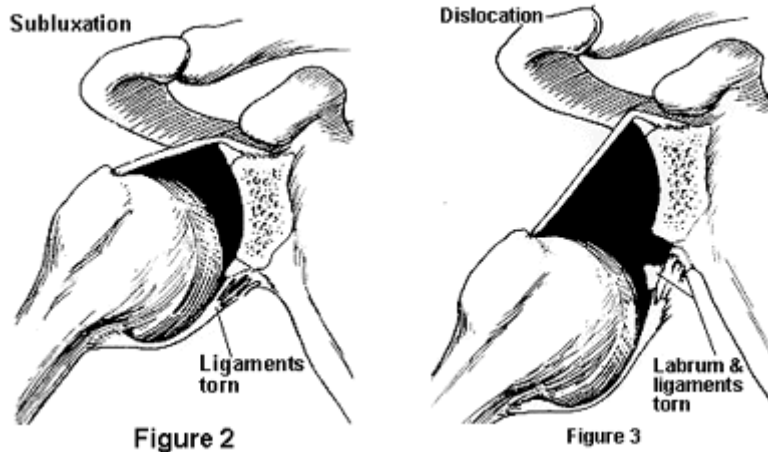


Figure 1

What is shoulder instability?

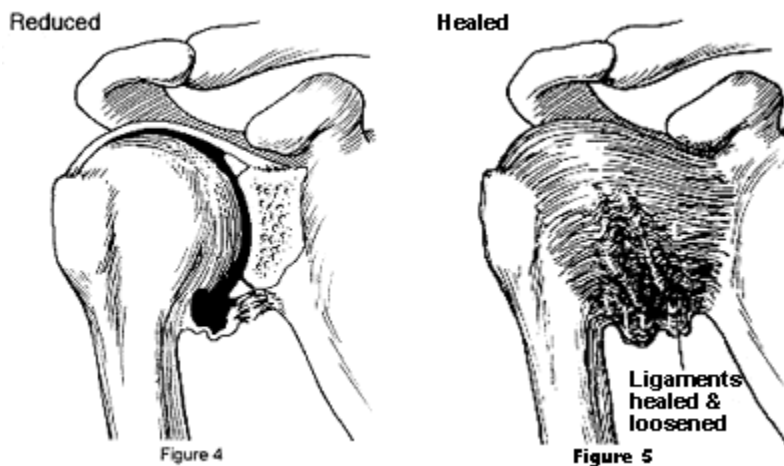
While the shoulder has great range of motion, it can lose its stability and the humeral head can sometimes move out of the socket of the joint.

The humeral head (ball) can move either partially (sublux) [Figure 2] or completely (dislocate) [Figure 3] out of the socket.



What causes shoulder instability?

With significant trauma to a previously normal joint, the humeral head can be forcefully subluxed or dislocated. The capsule, ligaments, or labrum can be stretched, torn, or detached from the bone. When the humeral head is back in place (reduced) [Figure 4] these structures can heal in a loose or stretched position which may increase the risk of future episodes of subluxation or dislocation. [Figure 5] With each additional episode, further tissue damage can occur increasing the tendency towards future instability.



Alternatively, some people are born with somewhat loose shoulder ligaments (they have a loose or spacious capsule). Instability can occur without any trauma or following relatively minor injury.

What are the symptoms of instability?

People with instability of the shoulder joint can sometimes feel the ball of the shoulder come out of its socket or "give way". This is commonly associated with pain. Often, the episodes of "giving way" occur with specific activities or positions of the arm, such as with throwing a ball or reaching behind the body.

How is shoulder instability diagnosed?

A complete history and physical examination should be done by a physician. The examination includes palpation to check for points of tenderness as well as a determination of range of motion and strength. The degree of shoulder looseness or laxity of the shoulder joint can also be assessed by specific tests during the examination. X-rays are usually done to obtain information about the possible causes of the instability and to rule out other causes of shoulder pain, such as a fracture.

Additional tests such as a magnetic resonance imaging scan (MRI) or a dye test (arthrogram) with or without a CT (computed tomography) scan are occasionally done to further evaluate the bones and tissues of the shoulder joint. However, these scans are not required in all patients with instability.

How is shoulder instability treated?

After a shoulder has dislocated or subluxed it is important to rest it and avoid aggravating activities for a couple of days. If the pain is significant, such as following a traumatic dislocation, a sling is used. Once the pain and swelling have subsided, range of motion exercises are started. Strengthening exercises are begun as motion improves. Typically, the exercise program is done in conjunction with a trained physical therapist.

Applying cold packs or ice bags to the shoulder before and after exercise can help reduce the pain and swelling. NSAIDS (nonsteroidal anti-inflammatory drugs), which include aspirin, ibuprofen (Motrin, Advil, Nuprin, etc), or ibuprofen-like drugs (such as Alleve) can be used to reduce pain and swelling. You should check with your physician because a number of different kinds of drugs are available. They may have side effects and if you have questions you should consult your physician.

The goal of therapy is to restore shoulder motion and increase the strength of the muscles around shoulder. Strong muscles, especially those of the rotator cuff, are required to protect and prevent the shoulder from re-dislocating or subluxing. Once full function of the shoulder has returned, the patient can gradually return to activities.

When would I need an operation?

Despite a course of physical therapy in which full shoulder motion and strength are restored, the shoulder may still be loose or unstable. Treatment options then consist of 1) activity modification and 2) surgery. Activity modification is primarily an option for patients who experience instability only with certain activities such as playing basketball or overhead racquet sports. In these patients, avoidance of the activity can completely eliminate their episodes of subluxation or dislocation.

Surgical treatment is considered in patients not willing to give up the activities or sports which provoke their episodes, and in patients in whom instability occurs during routine daily activities (dressing, sleeping, etc) or work.

The surgery includes examination of the shoulder under anaesthesia to fully assess the extent and direction of the instability while the muscles surrounding the shoulder are completely relaxed. An arthroscope is frequently used to inspect the the inside of the shoulder joint in order to evaluate the joint and its cartilage. The arthroscope allows direct assessment of the condition of the labrum and rotator cuff tendons. In a limited number of select patients in whom the degree of looseness or laxity is relatively mild, it may be possible to stabilize the shoulder by arthroscopic techniques.

To correct severe instability, open surgery is often necessary. An incision is made over the shoulder and the muscles are moved to gain access to the joint capsule, ligaments and labrum. [Figure 6]

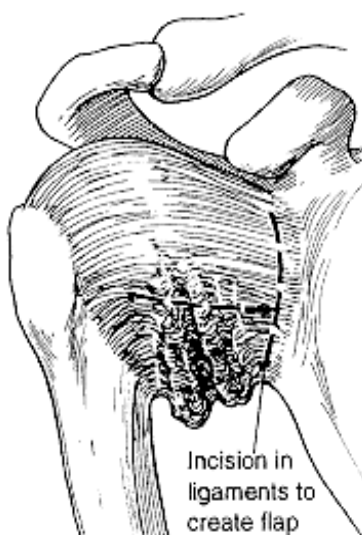


Figure 6

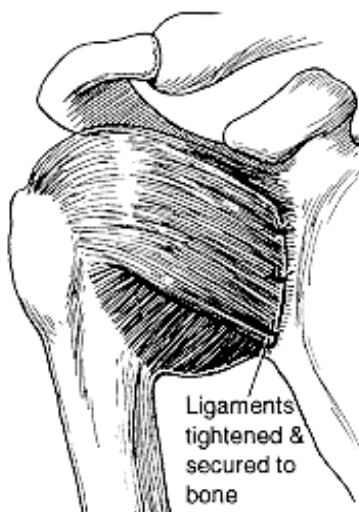


Figure 7

identified at surgery. [Figure 7]

The repair can be tightened done with simple sutures or with sutures attached to metal, secured to plastic, or absorbable tacks or anchors. These anchors are inserted into the bone and hold the sutures that are used to reattach or tighten the ligaments. These anchors stay in the bone permanently.

How long does rehabilitation after an operation take?

The course of recovery following surgery depends somewhat upon the type of procedure the surgeon performs. Usually, range of motion of the hand, wrist and elbow are begun the day after surgery. Most patients can write and use the arm to eat within three to seven days after surgery. A supervised physical therapy program is initiated one to four weeks after the operation. Full range of motion usually returns after six to eight weeks. Strength usually returns in three months. Driving sometimes take several weeks. Return to work or sporting activities depends on the specific nature and demands of that activity, but can take up to one year or more for heavy laborers or high level athletes. With surgery, the chance of recurrence of the instability is low (3 to 5%) and most patients can return to their previous activities.