

SHOULDER DISLOCATION OR SUBLUXATION

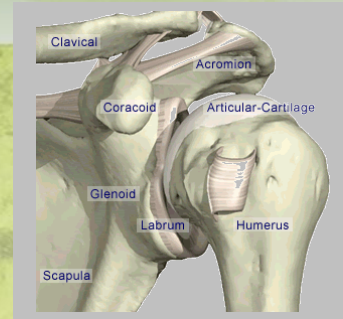
What is dislocation or subluxation of the shoulder?

The shoulder joint is the most mobile joint in the body. This looseness is also its weakness as it is the most often dislocated/subluxed joint in the body.

The head of the humerus (upper arm bone) sits in the glenoid fossa (shallow cup), an extension of the scapula, or shoulder blade. Because the glenoid fossa is so shallow, other structures within and surrounding the shoulder joint are needed to maintain its stability. Within the joint, the labrum (a fibrous ring of cartilage) extends from the glenoid fossa and provides a deeper cup for the humeral head. The capsule and ligament that surrounds the joint also helps maintain stability. The rotator cuff muscles and the tendons that surround the shoulder also provide a significant amount of stability for the shoulder.

Dislocations/subluxations of the shoulder occur when the head of the humerus is forcibly removed from its socket in the glenoid fossa. Subluxations occur when the head only partially comes out then pops back. Ninety eight percent of shoulder dislocations are anterior or forward dislocations, meaning that the humeral head has been moved to a position in front of the joint. Posterior dislocations are those in which the humeral head has moved backward toward the shoulder blade.

Dislocations in younger people tend to arise from trauma and are often associated with sports or falls. Subluxations can result from the same trauma and also occur with much less force in joints that are very loose either naturally or through injury. Older patients with stiffer joints usually require some force to dislocate.



Shoulder Dislocation



Simon Burley is a shoulder physiotherapist with 20 years experience with a subspeciality in shoulder treatment. He is also the physio for the sunshine coast shoulder clinic with the coasts leading shoulder surgeon and medical specialists.

Anterior dislocations/subluxations often occur when the shoulder is in a vulnerable position up and out to the side. This scenario can occur with throwing a ball or hitting a volleyball. Anterior dislocations or subluxations also occur during falls on an outstretched hand. An anterior dislocation involves external rotation of the shoulder; that is, the shoulder rotates away from the body.

Posterior dislocations are rare and are often associated with specific injuries like lightning strikes, electric shocks and seizure. On occasion, this type of dislocation can occur with minimal injury in the elderly with worn out support structures, and often the diagnosis is missed.

What are the signs and symptoms?

While still “out” dislocations are painful and the patient will often refuse to move the arm in any direction. The muscles that surround the shoulder joint tend to go into spasm, making any movements very painful. Usually the arm is held slightly away from the body, and the patient tries to relieve the pain by supporting the weight of the injured arm. Often, the shoulder appears squared off since the humeral head has been moved out its normal place. Sometimes, it may be seen as a bulge in front of the shoulder.

With subluxation there can be sudden pain and loss of strength that then eases and there can be a feeling of “dead arm” or the arm feeling numb and weak.

Dislocation symptoms are markedly relieved once the shoulder is put back in either by an experienced person at the time the injury happens (paramedic, physio, and doctor) or later at the emergency department often with the assistance of medication.

How is it diagnosed?

With dislocations the diagnosis has been made by the time they attend the physiotherapist. Plain X-rays usually have been taken to confirm the initial diagnosis of shoulder dislocation and/or to make certain there are no broken bones associated with the dislocation.

With subluxations the diagnosis is made by evaluating the history of the injury and symptoms and then a series of tests which can indicate instability and/or injury to the cartilage labrum of the shoulder. Xrays are taken to evaluate any bone injury if it's a repeated problem. MRI scan can evaluate the tissues (including the labrum) fully.

What are potential complications?

Shoulder dislocations may be complicated by fractures of the bones that make up the shoulder joint. Up to 25% of patients will have an associated fracture. Not included in these numbers are the Hill-Sachs deformity that may occur in up to 75% of anterior shoulder dislocations.

Complications of shoulder dislocation can also include brachial artery, brachial plexus or axillary nerve damage so the physio will check for signs of these.

Axillary nerve injury is the most common of the three. The first sign of injury is numbness in a small patch distribution on the outside of the upper arm. This nerve often recovers spontaneously in a few weeks but can be long term. It's important to recognise as it causes weakness of the deltoid muscle that helps move the shoulder.

Rotator cuff injuries are commonly seen in older patients who dislocate their shoulder. The diagnosis may be difficult to make initially and often is made in follow-up visits then confirmed with an MRI or ultrasound scan.

What is the appropriate followup and rehabilitation?

Significant damage occurs to the joint when the shoulder is dislocated even if there isn't a significant fracture. The labrum (called a bankart lesion) and joint capsule have to tear, and there may be associated injuries to the rotator cuff. These are the structures that provide stability to the shoulder joint and since they are injured, the shoulder is at risk to dislocate again.

Follow-up with an experienced shoulder physiotherapist, or an orthopaedic surgeon if there is significant bony or labral injury known or suspected, is advised after a shoulder dislocation.

Some patients may be an immediate candidate for surgery to prevent future dislocations/ subluxations and some for a trial of physio rehabilitation. The decision depends upon the extent of damage to the joint and the type of activity that the patient engages in. Severe displaced fractures often need surgery and lengthy immobilisation.

Or a young rugby footballer who has badly damaged the labrum is likely to re dislocate (58% chance) and surgery may be the best option.

An older patient who has also torn the labrum but has lesser demands on the shoulder may be suitable for rehabilitation without surgery.

The decision as to wearing a sling and when to begin range-of-motion exercises of the shoulder is, therefore, individualized for each patient. Dislocations with significant bone fracture or severe instability or other associated injury require orthopaedic specialist care and instruction. For others, the younger patient may be kept immobilized for three weeks (research suggests no difference between 3 and 6 weeks). Repeated dislocations may be placed in a regular sling for a shorter time just for comfort as the damage is done. In the elderly, the sling time frame may be only a week because of the risk of developing severe stiffness.

For a first time shoulder dislocation it was thought immobilizing in external or outward rotation might be beneficial but this has been later disproved. Further research needs to be done here.

Shoulders that sublux usually don't require a sling.

Physiotherapy is an important component to optimal recovery with and without surgery. Physio includes guidance when and how to restore range of motion to the shoulder, exercises to strengthen the rotator cuff muscles that stabilise the shoulder, the scapula support muscles, general shoulder strength, shoulder coordination/ proprioception exercises, and how to avoid future dislocation/subluxation.

Total recovery from a shoulder dislocation/subluxation usually takes 12-16 weeks and up to 6 months if surgery to re-attach the labrum and/or repair the ligaments and capsule is required.

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