



# **MULTIDIRECTIONAL SHOULDER INSTABILITY**

## **DESCRIPTION**

Injury to the shoulder joint so that the upper arm (humerus) is displaced from its normal position in the center of the socket (glenoid) and the joint surfaces no longer touch each other. With this type of instability, the humerus may go in front of (anterior), below (inferior) and/or behind (posterior) the glenoid. Because the shoulder has more motion than any other large joint in the body, it is the most commonly dislocated large joint. The shoulder is like a golf ball on a golf tee. A few of the many factors that provide shoulder stability include the cartilage rim (labrum) that helps provide depth to the socket, the capsule with thickenings which are the ligaments of the shoulder, and the muscles of the rotator cuff which surround the shoulder. To dislocate the shoulder, the rotator cuff muscles as well as the capsule and ligaments need to be stretched, and often the labrum is pulled off the glenoid. Subluxation of this joint is also common in sports and is where the ball of the humerus does not stay centered in the socket with shoulder motion and feels like it wants to slip out of place. Subluxation of the shoulder causes overuse of the rotator cuff muscles trying to keep the humeral head in the socket causing rotator cuff symptoms. Further, with fatigue of the rotator cuff muscles, as the deltoid muscle contracts, this may push the humeral head up to the roof of the shoulder, pinching the subacromial bursa and supraspinatus tendon (part of the rotator cuff). This type of instability tends to occur in loose jointed (“double jointed”) people.

## **FREQUENT SIGNS AND SYMPTOMS**

- Severe pain in the shoulder at the time of injury though many people do not have an injury, and may not have pain that is severe.
- Pain when using the arm overhead or carrying heavy objects with the arm at the side
- Loss of shoulder function and pain when attempting to move the shoulder
- Tends to affect both shoulders
- Feeling like your shoulder wants to slip out of place
- Tenderness, deformity (fullness in the armpit and prominent roof of the shoulder or fullness in the back of the shoulder), and occasionally swelling
- Pain moving the shoulder, esp. reaching overhead, heavy lifting, pain that awakens at night, loss of strength
- Numbness or paralysis in the upper arm and deltoid muscle from pinching, stretching or pressure on the blood vessels or nerves
- Crepitation (“crackling”) feeling and sound when the injured area is touched or with shoulder motion

## **CAUSES**

- Direct blow to the shoulder or backward force on an extended or outstretched arm or arm overhead
- Usually microtraumatic or atraumatic onset.
- Repetitive throwing motion or swimming
- Congenital (born with) abnormality, such as a shallow or malformed joint surface or ligament disorder
- Powerful muscle twisting or violent muscle contraction.
- Some people can willfully produce a recurrent dislocation

## **RISKS INCREASES WITH**

- Loose joints
- Contact sports (football, wrestling and basketball)
- Sports that involve repetitive overhead activity such as baseball, volleyball, swimming
- Sports that require forceful lifting, hitting or twisting
- Congenital abnormality, such as a shallow or malformed joint surface or ligament disorder



## **EXPECTED OUTCOME**

With appropriate reduction (repositioning of the joint) and immobilization for 3 - 6 weeks, healing of ligaments can be expected in 6 weeks. Repeated shoulder dislocations and subluxations are common. If customary treatment does not prevent a recurrence, then athletic activities should be modified until surgery can be performed to cure the problem. For those without injury causing the symptoms, rehabilitation has a high likelihood of success.

## **POSSIBLE COMPLICATIONS**

- Damage to nearby nerves or major blood vessels causing temporary or permanent weakness, paralysis, numbness, coldness, and paleness
- Fracture or joint cartilage injury due to the dislocation or reduction of the dislocation.
- Prolonged healing or recurrent dislocation if activity if activity is resumed too soon
- Rotator cuff tear
- Repeated shoulder dislocations, particularly if the previous dislocation is not healed completely or appropriately rehabilitated. Most recurrent dislocations are caused by repeated injury, though with increasing number of dislocations, less force is necessary to cause a dislocation.
- Unstable or arthritic shoulder following repeated injury, or if there is associated fracture.

## **GENERAL TREATMENT CONSIDERATIONS**

After reduction (repositioning of the bones of the joint) treatment consists of ice and medications to relieve pain. Reduction usually can be performed without surgery, though surgery is rarely necessary to restore the joint to its normal position, as well as to repair ligaments. Often patients will be able to reduce the shoulder themselves. Immobilization by sling or immobilizer for 3-8 weeks is usually recommended to protect the joint while the ligaments heal. After immobilization, stretching and strengthening of the stiff, injured and weakened joint and surrounding muscles (due to the immobilization and the injury is necessary. This may be done with or without the assistance of a physical therapist or athletic trainer. Surgery is uncommonly recommended after the first dislocation to tighten the shoulder ligaments and repair the labrum. Surgery is usually reserved for those who have recurrent dislocations despite appropriate rehabilitation. This can be done arthroscopically or through a standard incision.

## **MEDICATION**

- General anesthesia or muscle relaxants may be used to help make the joint repositioning possible
- Non-steroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take if surgery planned within 7 days), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician - contact them immediately if any bleeding, stomach upset or allergic reaction.
- Strong pain relievers may be prescribed as necessary. Use only as directed and only as much as you need.

## **NOTIFY OUR OFFICE IF:**

- Pain, tenderness or swelling worsens despite treatment
- You experience pain, numbness, or coldness in the arm
- Blue, gray or dusky color appears in the fingernails
- New, unexplained symptoms develop. Drugs used in treatment may produce side effects.