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Information leaflet: Frozen shoulder

What is it?

Frozen shoulder is a condition in which movements at the shoulder are lost causing it to 'freeze up'. It is associated with significant pain and in some cases it can totally prevent all shoulder movement.

Is it called by any other name?

Adhesive capsulitis

What is its cause?

The exact cause is not known. The shoulder joint is a ball and socket joint. The round end of your upper arm bone (humerus) fits into the shallow socket (glenoid) on your shoulder blade (scapula) much like a golf ball rests on a tee. A tough but thin smooth elastic tissue (capsule) surrounds the joint like a bag. In a frozen shoulder the capsule becomes inflamed and eventually contracts and becomes thick. The inflammation and capsule contracture causes pain and loss of movement.

Frozen shoulder is associated with diabetes, high cholesterol, heart disease, epilepsy, hypothyroidism and Dupuytren's disease in the hand. The condition is more severe in diabetics. It can rarely occur after an injury to the shoulder. It usually occurs in patients between the ages of 40 and 60. It is more common in women. The other shoulder can get affected in 20% of patients.

What are the symptoms and how is it diagnosed?

In the initial stages the main complaint is of severe pain usually worse at night. Patients will notice gradual limitation of shoulder movement (stiffness). Simple activities like combing hair or reaching for your back pocket will become difficult. This is the first stage of the disease (the freezing phase) and can last from 2-9 months. The next stage (the frozen phase) may last from 4-12 months. Over this period pain may gradually improve but a significant amount of movement will be lost. In the final stage (the thawing phase) patients will experience a gradual restoration of movement over 12- 36 months.

Diagnosis is mainly by physical assessment. Loss of movements both with and without assistance, with global shoulder tightness and pain, suggest a diagnosis of frozen shoulder.

Will further tests or investigations be needed?

An x-ray of the shoulder is usually recommended to rule out any other cause of loss of movement. Sometimes a MR scan may be advised so as to exclude some other pathology.

What is the treatment?

1. Initial conservative management consists of painkillers, anti-inflammatory medication and physiotherapy. It is aimed at easing the pain and regaining a further range of motion.
2. A steroid injection in the shoulder (glenohumeral joint) may relieve symptoms. The injection very occasionally causes some thinning or colour change of the skin at the site. Improvement is variable and can be temporary.
3. Hydrodistension is a type of treatment where the joint is distended by injecting saline water with a steroid injection.
4. Manipulation of the shoulder is the traditional way of treating such procedures. It is a blind procedure during which the adhesions and scar tissue are broken down by forcibly moving the shoulder around while the patient is under an anaesthetic.
5. Arthroscopic (keyhole) surgery is a relatively small operation during which the tight and contracted shoulder capsule is released. About 2-3 small incisions of 5mm each are needed. A telescope is passed into the shoulder through one of these incisions and a special radio-frequency probe is passed through the other incisions. The probe is used to release the capsule. The results of this procedure are encouraging and it is becoming a more popular treatment. It has the advantage of being able to identify other pathologies and avoids the complications of manipulation under anaesthetic.

What happens if it is not treated?

It is likely that with time, pain will significantly resolve and though full range of motion may not be achieved, a functional range of motion may be regained. The symptoms may resolve to such an extent that the patient may be able cope with the residual lack of movement. It is difficult to say when this will occur as the natural history of the condition is unpredictable and definitive improvement may not happen for 2-3 years.

What is the success of surgical treatment?

Both manipulation of the shoulder under anaesthesia and Arthroscopic surgery (capsular release) have a generally successful outcome. However diabetics usually have a more severe disease and the results in this group of patients are relatively less successful.

What are the complications of surgical treatment?

1. Fracture of the upper arm (humerus) can occur after manipulation of the shoulder.
2. Infection of the wound is possible and can usually be successfully treated with antibiotics.
3. Damage to the nerve or blood vessels is possible but very rare.
4. The operation may fail to improve your symptoms.
5. Any surgical intervention has the risk of developing complications that are unpredicted. These complications may have the potential to leave the patient worse than before surgery.

Is there anything I can do to improve the outcome?

Keep the wounds dry and clean until they have healed.

It is important to remember that the operation was carried out to increase movement. After the operation you will be given a sling for comfort. It is important to discard this sling as soon as possible and practice the prescribed exercises regularly both during the physiotherapy sessions and at home. It will help to keep the pain levels down with analgesics so as to keep your shoulder moving.

I would advice against wearing rings on the operated side for 4-6 weeks after surgery.

When can I do various activities?

Return to work depends on many factors including the nature of the job and hand dominance. Generally you will be able to return to a desk job within 2-3 weeks of the operation and perform reasonable tasks with the limb by that time. Manual work should be avoided for 4-5 weeks.

Driving should be possible within 7-10 days of the operation. Before driving do check that you can manage all controls and start with short journeys.