



Shoulder Separation and Clavicle Fractures

Overview

These injuries are most common in active individuals who fall during athletic activity. What both injuries have in common is that they will usually heal without surgery and will not result in loss of strength or function. In addition, they will leave a prominent bump on the top of the shoulder. Surgery is rarely required for a shoulder separation, but can sometimes be necessary after a clavicle fracture.

Anatomy of the Injury

A shoulder separation occurs when a fall causes tearing of the ligaments that normally hold the clavicle in its normal position. It is technically known as an acromioclavicular separation. Depending on the severity of the fall, the clavicle can be shifted very slightly upwards or very obviously upwards. (In actuality, it is not the clavicle that moves upward, but rather the arm that sags downward after the injury).

A clavicle fracture occurs when the force from a fall is transferred more to the bone than to the ligaments. The clavicle is a long and thin bone, and it bears the brunt of many falls onto the outstretched hand. It can break anywhere along its length, but most commonly it is fractured right in the middle.

Non-Surgical Treatment

The vast majority of shoulder separations are treated without surgery with a short period of rest followed by progressive full return to pre-injury activity. Though severe pain subsides quickly, the full length of recovery is usually between 3-6 months. Even after full recovery, the bump on the top of the shoulder will still be visible, and direct pressure to the bump can cause mild discomfort.

For clavicle fractures, sling immobilization is usually required for a period of time. Often after the severe pain subsides, patients will still feel the fracture moving until adequate healing occurs to make the broken bone ends "sticky" again. Like shoulder separations, patients may return to full activity as they can tolerate. Full recovery is also on average between 3 and 6 months, but can take longer for some patients.

Surgical Treatment

For very rare cases of shoulder separation, surgery may be required. The purpose of surgery is to bring the end of the clavicle closer to its attachment point. This can be done through different means including use of a screw and/or a graft to tie the clavicle back down. Even in the best of circumstances, patients are usually left with a slightly more prominent clavicle than their normal side. It should be emphasized that the goal of surgery is *not* to restore a cosmetically appealing appearance to the shoulder but rather to restore more normal function to it. In fact, the incision required for surgery can be as unappealing to some patients as the original deformity itself.

With regard to clavicle fractures, for some patients surgery may be the better option. It has the advantage of restoring the proper length of the clavicle and allowing much earlier return to function in very active individuals. Your surgeon will help you decide whether this is the best option for you. Surgical fixation of the clavicle can be achieved by two general techniques. One technique involves passing a rigid rod through the center of this hollow bone. The other technique



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involves using a plate and screws to reconnect the broken fragments. Each is equally effective in stabilizing the fracture and the type of fixation is determined on an individual basis.

The risks of surgery for both shoulder separation and clavicle fractures involve potential damage to the blood vessels and the lung that lie very close to the structures being repaired. With regard to shoulder separation surgery, it is possible that the end of the clavicle will migrate upward again should healing be inadequate. With regard to clavicle fractures, it is possible that the bone will not heal and may require further surgery to allow this.

Post-Surgical Rehabilitation

In general, the soft-tissue healing required after repair of shoulder separations will require a longer period of time than the bony healing of clavicle fractures. Therefore, rehab after shoulder separation surgery must be gentler and slow than after clavicle fracture fixation. This means that shoulder separation patients will not be able to safely use the operated arm for strenuous activity for potentially 6 months after surgery. In contrast, after clavicle fixation, the bone will normally be sufficiently healed by 2-3 months to allow for most activities. As with all shoulder rehab, regaining full painless range of motion is a must in order to achieve normal function.