CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION

# Proximal Humerus Fracture

X-ray showing a fracture at the top of the upper arm bone, just below the shoulder joint.

Kieran Hirpara 4.0

## What you're feeling

You will likely feel pain in your upper arm and shoulder area. This pain often comes from a break in the bone near the shoulder joint. If your fracture is linked to weak bones, known as osteoporosis, the pain may be part of a larger pattern of fragility injuries. Nondisplaced fractures, where the bone pieces stay in place, are common in this group. Even when the bone does not shift, these breaks can still cause significant disability and lower your overall sense of health.

The pain tends to worsen with movement. You may find it difficult to lift your arm or reach overhead. Simple daily tasks become challenging. You might struggle to tuck in your shirt or reach behind your back to fasten a bra. Lifting objects, even light ones, can trigger sharp discomfort. Because the shoulder is unstable, any effort to use the arm can aggravate the injury.

Resting the arm usually helps reduce the pain. However, you may still experience flare-ups at night. Many patients report that sleeping on the affected side is painful or impossible. Waking up with a stiff or aching shoulder is common. Your surgeon will guide you on how to position yourself for comfort while protecting the healing bone.

If you are under 65, your surgeon may discuss whether surgery offers clear benefits over non-surgical care. For many adults in this age group, the evidence does not show a strong advantage for operation. Most one-part fractures heal well without surgery. Older adults also frequently receive nonoperative treatment. Regardless of your age, the goal is to manage your pain and protect the bone while it heals. Complications can occur at different stages, so your team will monitor you closely. You are not alone in this process; your care team is there to support your recovery and help you regain function safely.

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## What's actually happening

Your shoulder is a ball-and-socket joint where the upper arm bone meets your shoulder blade. The top of your arm bone has two small bumps called tuberosities. These bumps act like anchor points for the rotator cuff tendons. These tendons are strong ropes of fibers that lift and rotate your arm. When you fracture the top of your arm bone, these anchor points can shift out of place.

If the tuberosities move downward, the tendons lose their proper tension. This pulls the joint mechanics out of alignment. Even a small shift of 15 degrees can change how the joint moves and bears weight. This misalignment causes pain and limits your movement. It also makes it harder for the joint to heal in the correct position.

The joint capsule is the sleeve around the shoulder. It holds the joint together and produces fluid to keep things slippery. After a fracture, this capsule can become stiff or scarred. This stiffness, along with any damage to the tendons, reduces your strength and range of motion. Your surgeon needs to restore the anatomy so these tissues can work together again.

For many people, especially older adults, the bone fragments are too broken to fix with plates and screws. In these cases, your surgeon may recommend a joint replacement. This procedure replaces the damaged ball with a metal and plastic implant. This option is often chosen when getting your arm moving again is the top priority. It provides stable support and allows you to regain function even if the original bone structure is severely compromised.

## What we can do about it

Most one-part fractures heal well without surgery. In fact, nonsurgical management is the standard for the vast majority of cases. Your surgeon will likely recommend a period of immobilization to let the bone knit. You can expect short and long periods of rest to yield similar results, regardless of the fracture pattern. This approach is especially common for older adults and children, whose bones have tremendous potential for remodeling.

During this time, physiotherapy plays a key role. Your therapist will guide you through gentle movements to restore range of motion. The goal is to prevent stiffness while protecting the healing bone. For displaced two-part fractures in patients aged 60 or older, studies show no significant difference in outcomes at two years between surgery and non-operative treatment. Therefore, your surgeon may advise you to give conservative care a fair chance before considering more invasive options.

Pain management is essential for your comfort. Your surgeon may prescribe pain medication or anti-inflammatories to control swelling and discomfort. While the evidence highlights the success of non-operative care, it does not detail specific injection protocols like cortisone or PRP for this fracture type. Instead, focus on adhering to your immobilization schedule and attending physiotherapy sessions. Consistent effort during these early weeks sets the foundation for your recovery.

Surgery is considered only when conservative care reaches its limit or when the fracture pattern is complex. This typically involves more severe breaks, such as three- or four-part fractures in older patients, where the

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bone fragments are significantly displaced. In these cases, your surgeon might recommend a procedure to stabilize the bone, such as using a nail and plate system or, in some instances, a reverse total shoulder replacement. These options aim to restore function and provide long-term durability when the bone cannot heal properly on its own. The decision depends on your age, the specific fracture pattern, and your overall health.

## What to expect

Your outlook depends largely on your age and how many bone fragments are involved. Most one-part fractures heal well without surgery. For older adults, nonoperative treatment often leads to good functional results. However, if you are over sixty, your surgeon may recommend surgery for complex three- or four-part fractures. In these cases, a new nail and plate system or a reverse shoulder replacement can provide better long-term function than leaving the fracture alone.

Recovery is a gradual process. For nonoperative cases, short and long periods of immobilization yield similar results. You do not need to worry about the exact length of rest changing your final outcome. If you have surgery, the timing of the operation beyond five days does not impact your final results. This gives your care team flexibility to plan safely. Most patients with complex fractures treated with surgery achieve good long-term outcomes, even though complication rates are high.

Be aware that your risk of serious health events is higher after this injury. The risk of death within one year is 9.8%. This risk continues to increase to 28.2% at five years. This elevated mortality risk exists regardless of other health factors. It is important to stay active and follow your surgeon's advice to maintain your overall health during recovery.

If you undergo a reverse shoulder replacement, your function may improve significantly compared to nonoperative treatment. However, some patients notice a decrease in functionality and quality of life over time. This change occurs after the two-year mark but is generally not considered clinically relevant. Most pediatric patients recover fully with few complications. For adults under sixty-five, surgery does not always offer a clear benefit over nonoperative management. Your surgeon will weigh these factors to choose the path that best supports your daily life.

## When to see someone

See your GP if pain does not improve with rest. Ask for a specialist review if you feel weakness or instability in your shoulder. Contact your surgeon if your arm locks or gives way. Seek care if symptoms interfere with your sleep or work. Sudden worsening of pain requires immediate attention. Most one-part fractures heal well without surgery. However, complications can occur at any stage. Mortality risk is high for fragility fractures in older adults. One-year mortality is 9.8%. Five-year mortality rises to 28.2%. Nonunion risk is higher than once thought. Do not ignore persistent symptoms. Early evaluation helps your surgeon choose the right path.

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