CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION

Scaphoid Fracture

X-ray showing a fracture of the scaphoid bone in the wrist.

Kieran Hirpara 4.0

What you're feeling

You may feel pain and tenderness in the base of your thumb, just below the wrist. This area is known as the anatomical snuffbox. The pain often starts after a fall onto an outstretched hand. You might notice swelling or bruising around the wrist. Simple activities can become difficult. Reaching behind your back to fasten a bra may hurt. Tucking in a shirt or turning a doorknob can trigger sharp discomfort. Lifting objects, even light ones, may feel unstable or painful.

The pain often worsens with movement. Using your thumb and wrist together puts stress on the injured bone. You might find it hard to grip things firmly. This can make holding a coffee cup or a phone challenging. Resting your hand usually helps reduce the ache. However, the pain may flare up later in the day after you have been active. Some patients report that the discomfort is noticeable at night, especially if you sleep on that side. Waking up with a stiff or aching wrist is common.

It is important to know that standard X-rays do not always show the fracture clearly. In fact, true fractures are identified in only about 40% of patients based on initial X-rays and clinical exams alone. This means your symptoms might feel severe even if the first scan looks normal. If your surgeon suspects a fracture but the X-ray is unclear, they may order an MRI. This scan can find hidden injuries that X-rays miss. Early diagnosis helps prevent complications.

If the bone does not heal properly, it can lead to a nonunion. This happens when the bone fails to knit back together. Nonunion rates remain high for scaphoid fractures. In some cases, delayed or nonunion occurs in over 6% of patients, even with proper initial treatment. Most of these patients will need surgery to fix the bone. Early internal fixation is increasingly favored to lower this risk. Your surgeon will discuss the best path for you based on the specific details of your injury.

What's actually happening

Your scaphoid is a small, walnut-shaped bone in your wrist. It acts like a critical bridge between your forearm and hand bones. This bone has a tricky blood supply, meaning it does not always get enough fuel to heal on its

CQ HAND + UPPER LIMB
Dr Kieran Hirpara — Specialist Orthopaedic Surgeon
Suite 2, Level 1, Mater Private Hospital Rockhampton, 31 Ward Street, The Range, QLD 4700
Phone 07 4863 6556 · office@cqupperlimb.com.au · cqupperlimb.com.au

own. When you break it, that healing process can stall. This is called a nonunion. Even with modern diagnosis and surgery, nonunion rates remain high.

If the bone does not knit back together, the normal movement of your wrist changes. The bones in your wrist are supposed to move in a coordinated dance. A broken scaphoid disrupts this rhythm. It partially uncouples the upper and lower rows of wrist bones. This leads to abnormal motion and wear on the joint surfaces. Over time, this wear-and-tear can cause arthritis. You may feel pain and stiffness as the joint surfaces rub against each other without their usual smooth protection.

Your surgeon can help restore this balance. For some breaks, a simple screw holds the pieces together while they heal. For more complex cases, your surgeon may use a bone graft. This involves taking a small piece of healthy bone to fill gaps and encourage growth. In some situations, your surgeon might also adjust the shape of your forearm bone. This shifts the weight away from the damaged scaphoid. These steps aim to restore normal wrist motion and grip strength.

The goal is to stop the abnormal wear before it causes lasting damage. If treated early, even displaced fractures can heal well. If the bone does unite, you will likely have a good outcome, regardless of minor shape changes. The focus is on giving you a pain-free, functional wrist that can handle daily tasks without the grinding or instability caused by a broken bridge.

What we can do about it

Your care begins with careful monitoring and rest. Because standard X-rays and two clinical exams only identify a true fracture in about 40% of patients, your surgeon may use early MRI to get a clear answer. This scan accurately finds hidden injuries and helps rule out fractures when initial results are unclear. While you wait for a diagnosis or during conservative treatment, you should avoid activities that strain your wrist. Physiotherapy aims to restore your range of motion and strength once the bone has healed. For many patients, especially those with nondisplaced fractures, nonoperative treatment is effective. Union rates for these cases approach or even exceed those of surgery. You can expect to wear a cast or splint for a period determined by your surgeon. There is no single best protocol for how long to immobilize your wrist after any procedure, so your team will guide you based on your healing progress.

Pain management is a key part of your recovery. Your surgeon may recommend over-the-counter pain relievers to keep you comfortable. However, you must be cautious with nonsteroidal anti-inflammatory drugs (NSAIDs). If you take these medications within the first month of your injury, you face an increased risk that the bone will fail to heal (nonunion). This failure may lead to more complex salvage procedures later. For most acute fractures, we do not use cortisone, hyaluronic acid, or PRP injections as standard care. Instead, we focus on protecting the bone while it repairs itself. If you have a nonunion that is nondisplaced and nonangulated, minimally invasive bone grafting and compression screw fixation may be considered. This approach is safe and effective for stabilizing the bone without major surgery.

Surgery is typically reserved for displaced fractures or cases where conservative care has failed. If your fracture is displaced, operative intervention is recommended to align the bone correctly. For recent nonunions that did not heal with initial treatment, your surgeon might perform a distal scaphoid resection or use double

antirotation screw fixation with arthroscopy. These procedures aim to stabilize the bone and promote healing. While early internal fixation is increasingly favored for some acute fractures, it is not always necessary for nondisplaced injuries. In fact, there is no true long-term benefit to surgery compared to nonoperative treatment for acute nondisplaced or minimally displaced fractures. Your surgeon will help you choose a path based on your individual values and risk tolerance. Remember, nonunion rates remain high even with improved techniques, so close follow-up is essential regardless of the treatment chosen.

What to expect

Most scaphoid fractures heal well, especially in children. For adults, the outlook depends on how quickly you get treated and whether the bone pieces have shifted. If the fracture is not displaced or only slightly displaced, your surgeon may recommend a cast or surgery. Both approaches lead to similar long-term function. However, surgery helps you return to work about 7 weeks faster than casting alone.

If the bone fails to heal, this is called nonunion. This happens in more than 10% of cases after surgery for closed fractures. It is also more common if you present for care more than 21 days after the injury. Delayed treatment increases the risk of casting failure. Nonunion can lead to progressive wear-and-tear arthritis in the wrist. While this sounds serious, many patients still report good wrist motion and strength years later, even if the bone shape is slightly altered.

Your surgeon will monitor your healing closely. If you have a nonunion, further surgery may be needed. These repeat procedures are less successful than the first attempt. In some cases where arthritis has developed, removing part of the scaphoid bone can relieve pain. About 94% of patients remain satisfied with this procedure, and it stops the wrist from collapsing further.

Overall, virtually all scaphoid fractures that successfully unite lead to a good outcome. The key is ensuring the bone heals. Early diagnosis is critical because standard X-rays often miss these injuries. If you are in a group at higher risk for delayed healing, such as those with certain mental health conditions or from deprived communities, extra attention to your follow-up is important. With proper care, you can expect to regain normal hand function and strength over the coming months.

When to see someone

See your GP if you have persistent pain, weakness, or instability in your wrist. Symptoms that interfere with sleep or work need attention. Ask for a specialist review if your wrist locks or gives way. Sudden worsening of pain is also a warning sign. Be aware that delayed presentation 21 days or more after injury predicts a greater risk of casting failure. Misdiagnosed fractures can lead to significant complications. Early diagnosis helps avoid these issues. If initial X-rays are unclear, early MRI can accurately identify injuries. Do not ignore symptoms, as untreated fractures may not heal properly.

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