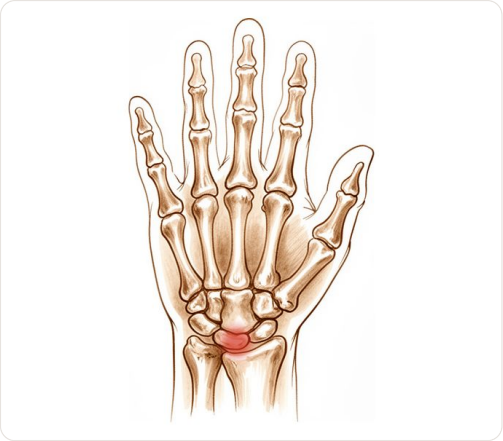
CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION — IN DEPTH

Kienböck's Disease



Advanced Kienböck's disease (Stage IIIB): the lunate bone in the centre of the wrist has lost its blood supply and collapsed, distorting the surrounding wrist mechanics.

What you're feeling

You may notice swelling on the back of your wrist. This is a common part of the condition. The pain usually sits in the centre of your wrist. It often feels deeper than surface discomfort. You might feel stiffness when you first wake up in the morning. This stiffness can make simple movements feel tight and resistant.

Daily tasks become harder as the condition progresses. You may find it difficult to push up from a chair. Opening jars or turning doorknobs can cause sharp twinges. Lifting objects, even light ones like a kettle, may trigger pain. The discomfort often worsens after you have been using your hand for a while. Resting your wrist on a table might bring some relief. However, the pain can also flare up at night, disturbing your sleep.

The way you feel depends on the stage of the disease. In the early stages, symptoms might be mild and intermittent. You might only notice them during heavy activity. As the condition advances, the pain becomes more constant. The bones in your wrist may begin to collapse. This structural change leads to increased stiffness and reduced grip strength. You may feel a grinding sensation when you move your wrist.

It is important to understand that symptoms vary between individuals. Some people experience significant pain with minimal swelling. Others may have visible swelling but less pain. Your surgeon will look at your specific symptoms and imaging to determine the best path forward. We do not rely on symptoms alone to guide treatment. We consider the overall health of your wrist bones and joints.

If you are a teenager or young adult, your symptoms might develop differently. Younger patients often respond well to non-surgical treatments. These can help manage pain and preserve function. For older patients, non-operative care is also often the first step. We consider these options before discussing any surgical intervention. The goal is to relieve your pain and help you return to your daily activities safely.

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What's actually happening

Your wrist contains a small, cube-shaped bone called the lunate. It sits in the centre of your hand and acts like a shock absorber between your forearm and your fingers. For this bone to stay healthy, it needs a steady supply of blood. However, the movements of your wrist can actually reduce blood flow to this area. When circulation drops, the bone tissue begins to weaken.

This lack of blood can lead to tiny fractures or fragmentation within the lunate. These breaks do not always line up with how much your wrist has collapsed. Sometimes the bone breaks apart early in the disease process, even before significant structural changes are visible. As the bone weakens further, it may lose its shape and height. This is known as carpal collapse. The bone essentially flattens under the pressure of daily use.

When the lunate collapses, it disrupts the smooth mechanics of your wrist joint. The bones no longer glide past each other correctly. This causes pain, stiffness, and a feeling of instability. The surrounding joints also take on extra stress, which can lead to further wear and tear over time. Understanding this process helps explain why treatments focus on either restoring blood flow in younger patients or stabilising the joint structure in advanced cases.

What we can do about it

Dr Kieran Hirpara, an upper-limb surgeon at Mater Private Hospital Rockhampton, starts with the least invasive options that suit your condition. We begin by managing symptoms through self-care and therapy. You may be advised to change activities to avoid painful movements. Physiotherapy helps maintain wrist motion and strengthen surrounding muscles. For children, adolescents, and older adults, these non-surgical steps are often effective. Good outcomes are common in younger patients whose bones are still growing. We typically give this approach a fair trial before considering surgery.

Medical management focuses on reducing pain and inflammation. Your surgeon may recommend pain medication or anti-inflammatories to help you stay active. Injections can also provide relief. Cortisone injections reduce swelling and pain, though the effect is temporary. Hyaluronic acid injections aim to lubricate the joint, offering comfort for a limited period. Platelet-rich plasma (PRP) injections use your own blood components to support healing. These treatments do not reverse the underlying bone changes but can improve your daily comfort while you recover or wait for further decisions.

Surgery is considered when conservative care has not given enough improvement or if the disease is advanced. In early stages, we may use procedures like core decompression to relieve pressure or radial osteotomies to realign the wrist bones. Radial shortening osteotomy provides decade-long improvement in 75% of patients. For advanced Kienböck's disease, where the lunate has collapsed or wear-and-tear arthritis has developed, we discuss salvage options. These include a proximal row carpectomy, which removes damaged bones to preserve motion, and a wrist fusion, which joins bones to eliminate pain. Scaphocapitate arthrodesis is another option for salvaging the wrist in advanced cases. Vascularised bone grafting may be used to restore blood supply to the lunate. The choice depends on your specific stage and goals.

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Patients are generally referred to our clinic by their GP; if a physiotherapist has suggested you see us, you will still need a referral from your GP in order to be eligible for the Medicare rebate. A clinic assessment, including history, examination, and imaging such as CT or MRI, establishes the diagnosis. We then work with you to decide on the best path forward.

What to expect

Your wrist's outlook depends largely on how far the condition has progressed. In early stages, your surgeon may recommend non-surgical options like activity changes or splinting. These approaches often provide good outcomes for children, adolescents, and older patients. You can expect reasonable long-term function if you undergo procedures like radial shortening osteotomy. This involves adjusting the radius bone to relieve pressure on the lunate.

If the disease is more advanced, with significant collapse of the lunate bone or wear-and-tear arthritis in the wrist, your treatment path changes. You may be offered joint-levelling procedures or bone grafting to preserve function. For these cases, radiographic progression over a year or more tends to be slight on average, regardless of the specific treatment chosen. However, approximately one in eight patients who have radial shortening osteotomy will eventually need salvage surgery.

Salvage options are considered when the lunate has collapsed substantially or arthritis is widespread. These include proximal row carpectomy and wrist fusion. Scaphocapitate arthrodesis is also an option. While scaphocapitate arthrodesis can alleviate pain and preserve grip strength in the long term for collapsed disease, it may yield discouraging functional outcomes in the medium term for advanced stages. Other salvage options, such as tendon ball arthroplasty, can result in long-term satisfactory clinical outcomes despite widespread changes in the wrist bones and joints.

There is no single treatment proven to be superior to all others. Some patients respond well to nonoperative care, while others benefit from surgical intervention. Your surgeon will discuss which path aligns with your specific stage of disease and lifestyle needs. The goal is to manage pain and maintain as much function as possible, recognising that outcomes vary from person to person.

When to see someone

See your GP if you have persistent wrist pain that does not improve with rest. Kienböck's disease is a progressive condition affecting the wrist bones. You may notice swelling on the back of your hand. Ask for a specialist review if you experience weakness or instability. Locking or giving way of the wrist are also warning signs. Symptoms that interfere with sleep or work need attention. Sudden worsening of pain should be checked promptly. Early assessment helps your surgeon understand the stage of your condition. This allows for better planning of your treatment. Do not wait for symptoms to resolve on their own.

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In more depth

This section goes further than you need for your own treatment decisions. Kienböck's disease is worth the extra reading because of an uncomfortable finding that runs through its literature: the operations performed for it improve symptoms without clearly changing what the disease does to the bone.

SURGERY RELIEVES PAIN; IT HAS NOT BEEN SHOWN TO ALTER THE DISEASE

The most direct comparison available followed patients long-term after radial osteotomy against those treated non-operatively. Radial osteotomy was **not superior** to non-operative treatment in terms of disease progression by Lichtman stage — but it did produce better outcomes for **pain** and **range of wrist motion** [1].

Read that as two separate claims, because it is. The operation helps how the wrist feels and moves. It has not been demonstrated to stop the lunate collapsing. A later long-term comparison of non-operative treatment against vascularised bone grafting reached a similarly measured conclusion [2].

This is the single most useful thing to understand before consenting to surgery here. If an operation is offered as a way to *save the lunate*, that framing is ahead of the evidence. If it is offered as a way to reduce pain and preserve motion in a wrist that hurts now, that is supported.

WHY THE RADIOGRAPHS AND THE SYMPTOMS DRIFT APART

Kienböck's is defined radiologically — the Lichtman stages describe sclerosis, then collapse, then carpal disintegration — and it is natural to assume the pictures track the pain. They frequently do not. Wrists progress radiologically while feeling better, and wrists hurt persistently at early stages.

That mismatch is why "the X-ray looks worse" is not by itself a reason to operate, and why serial imaging is a poor way to decide. The decision belongs to symptoms and function.

THE OPERATIONS ARE NUMEROUS, WHICH IS ITSELF INFORMATIVE

Radial shortening, capitate shortening, vascularised bone grafting, core decompression, partial fusions, proximal row carpectomy — the number of described procedures is large. A systematic review of capitate shortening osteotomy is among the more recent additions [3].

In surgery, a long list of competing operations for one condition is usually a sign that none of them is decisively better. That is the honest reading here, and it explains why two reasonable surgeons may propose different procedures for the same wrist without either being wrong.

The unifying logic behind most of them is mechanical: reduce the load passing through the lunate, either by shortening the radius so the ulna carries more, or by shortening the capitate so less force is transmitted down onto the lunate. They are attempts to unload a bone whose blood supply is failing, not attempts to restore that blood supply — with the partial exception of vascularised grafting, which tries to do both.

WHAT THIS MEANS FOR YOU

Three practical consequences. Watchful waiting is a legitimate option rather than a failure to act, particularly if pain is tolerable. The purpose of any operation should be stated in terms of symptoms, not stage. And because

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no procedure has separated itself from the others, being told why *this* operation suits *your* wrist – your ulnar variance, your stage, your demands – matters more here than in most of hand surgery.

REFERENCES

1. Shin YH, Kim JK, Han M, Lee TK, Yoon JO. Comparison of long-term outcomes of radial osteotomy and nonoperative treatment for Kienböck disease: a systematic review. J Bone Joint Surg Am. 2018;100(14):1231-40.
2. Park JY, Kim JK, Shin YH. Comparison of long-term outcomes between nonoperative treatment and vascularized bone graft for Kienböck disease. Clin Orthop Surg. 2023;15(4):643.
3. Simske N, Pourghaed M, Johnson C, Clark DM. Capitate shortening osteotomy for Kienböck's disease: a systematic review. Hand (N Y). 2026.

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