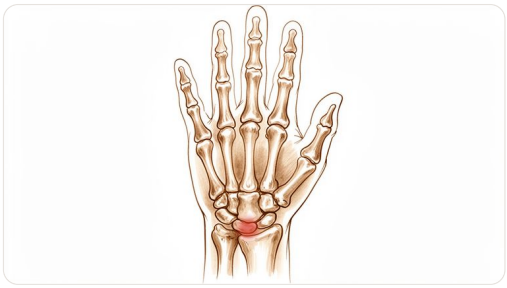
CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION

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.

Kieran Hirpara 4.0

What you're feeling

Kienböck disease is a condition affecting the small bones in your wrist. It is not very common. The problem usually gets worse over time if left untreated. You may notice swelling or stiffness in your wrist. The pain often starts slowly and builds up.

You might feel tenderness when you press on the top of your wrist. This is where the lunate bone sits. The pain can make simple tasks difficult. You may struggle to push yourself up from a chair. Lifting objects can become painful and weak. Even turning a doorknob or opening a jar might hurt.

Your wrist may feel stiff in the morning. This stiffness often eases as you move around during the day. However, pain can return after you have been using your hands for a while. Activities that put weight on your wrist, like doing push-ups or carrying groceries, can trigger flare-ups. You might also notice that your grip strength is weaker than before.

In some cases, the pain can be sharp or dull. It may radiate up your forearm. Nighttime pain is possible, especially if you sleep on that side. This can disrupt your rest and leave you feeling tired. You might find it hard to reach behind your back to fasten a bra or tuck in a shirt. These movements stretch the wrist and can aggravate the inflamed bone.

The severity of your symptoms depends on how the bones are shaped in your wrist. This shape affects how much pressure is placed on the lunate. The cause of the disease is likely due to several factors working together. It is not always clear why one person develops it and another does not.

If you ignore the symptoms, the condition can progress to more advanced stages. This can lead to changes in the shape of your wrist bones. Your surgeon will look at X-rays to see how much the bones have shifted. However, standard X-rays do not always show the full picture of bone collapse. This is why your surgeon may order more detailed scans to get a clear view of what is happening inside your wrist.

What's actually happening

Kienböck's disease is a condition where the blood supply to a small bone in your wrist, called the lunate, is reduced or lost. Without enough blood, this bone begins to weaken and can eventually collapse. Think of the

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lunate as a central shock absorber in your wrist. When it loses its structural integrity, it can no longer cushion the impact between your forearm bones and the rest of your hand.

This collapse changes how your wrist moves. Normally, the bones in your wrist slide and roll smoothly against each other. When the lunate is damaged, this motion becomes irregular. The bones may shift out of their normal alignment, a problem known as rotational malalignment. This misalignment puts extra stress on other parts of the wrist joint, particularly where the radius bone meets the scaphoid bone. Over time, this uneven wear can lead to arthritis in those specific areas.

Your surgeon looks at these changes to decide the best path forward. In younger patients, the goal is often to save the bone. Procedures like radial osteotomies, where the forearm bone is adjusted, can improve outcomes and radiographic findings in teenagers. For others, capitate shortening or vascularized bone grafting may be recommended to restore balance and blood flow. These treatments aim to keep your wrist moving as naturally as possible.

In more advanced cases where the bone has collapsed significantly, the focus shifts to stabilizing the joint. Surgeries like scaphocapitate arthrodesis, which fuses two bones together, can provide long-term relief from pain and improve grip strength. While these procedures limit some motion, they create a stable platform that allows you to use your hand effectively. Your surgeon will choose the option that best matches the stage of your disease and your personal needs.

What we can do about it

We start with non-surgical care to manage your symptoms and protect your wrist. This approach focuses on reducing stress on the bones in your hand. Your surgeon may recommend rest or specific activities to avoid. Physiotherapy helps maintain movement and strength in your wrist and hand. These methods aim to keep you comfortable while we monitor the condition.

Research shows that nonsurgical treatments can achieve good and excellent outcomes in younger patients whose bones are still growing. For many, this conservative path is sufficient to manage pain and function. However, Kienböck's disease is generally a progressive condition. This means it can worsen over time, potentially leading to advanced changes in the wrist joint if left unchecked. We watch for these signs closely during your regular check-ups.

If non-surgical measures do not provide enough relief, we discuss medical management options. Pain medication and anti-inflammatories help control discomfort and swelling. In some cases, we may consider injections to reduce inflammation directly in the joint. These treatments offer temporary relief and help you stay active. They do not reverse the underlying bone changes but can improve your daily quality of life while we decide on the next steps.

Surgery is considered when conservative care reaches its limit or if the disease progresses despite treatment. The goal of surgery is to unload the affected bone, restore blood flow, or stabilize the joint. Options include procedures to change the shape of the radius bone, graft new bone with its own blood supply, or fuse specific bones together to relieve pain. The choice depends on the stage of your disease and your individual needs.

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For teenage patients, radial osteotomies (changing the shape of the forearm bone) are effective in improving both symptoms and X-ray findings. These procedures can provide decade-long improvement in 75% of patients. In advanced cases where the wrist has collapsed, fusion procedures like scaphocapitate arthrodesis offer significant pain relief and functional improvement. Your surgeon will explain which option fits your specific situation.

We also use imaging like X-rays and MRI to track changes. While plain X-rays can sometimes miss early signs of collapse, advanced imaging helps us see the true state of your lunate bone. This ensures we choose the right treatment at the right time. Whether you need simple rest or a surgical procedure, our aim is to preserve your wrist function and reduce pain.

What to expect

Kienböck's disease is a condition where the blood supply to a small wrist bone is reduced, causing it to weaken and collapse. This process is generally progressive, meaning it tends to worsen over time rather than settle on its own. Without treatment, the condition can advance to Stage IV changes, which involve significant wear-and-tear arthritis in the wrist joint. The exact path of the disease is not fully known, but it often leads to persistent pain and stiffness if left unmanaged.

With treatment, your outlook improves significantly. Many surgical options are designed to stop this progression and relieve pain. For example, radial shortening osteotomy—a procedure that adjusts the length of your forearm bone—provides decade-long improvement in 75% of patients with symptomatic disease. This treatment is particularly effective for long-lasting pain relief in patients with negative ulnar variance, a specific wrist bone alignment. Other procedures, such as scaphocapitate arthrodesis (joining two bones together) or proximal row carpectomy (removing a row of small wrist bones), offer durable, long-term benefits. These surgeries typically alleviate pain, preserve functional mobility, and maintain satisfactory grip strength for many years.

Even with treatment, the disease does not always progress rapidly. Radiographic progression of Kienböck disease over 1 year or more is slight on average, regardless of the treatment chosen. This means that while the underlying condition may persist, the visible changes on X-rays often stabilize. You can expect your surgeon to tailor the plan to your specific stage and symptoms. Whether you are a teenager or an adult, the goal is to manage pain and keep your wrist functional. While outcomes are generally positive, it is important to have realistic expectations. The disease is multifactorial, and individual results vary, but modern treatments offer reliable paths to pain relief and improved hand function.

When to see someone

Kienböck's disease is a rare condition affecting the wrist. It is generally considered a progressive issue that can lead to advanced joint changes. The exact path it takes is not fully known. You should see your GP if you have persistent pain that does not improve with rest. Ask for a specialist review if you notice weakness or instability in your wrist. Seek help if your hand locks or gives way. Contact your surgeon if symptoms interfere with your

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sleep or work. Sudden worsening of pain is also a reason to seek care. Early evaluation helps manage this complex condition effectively.

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