

Wrist Ligament Injuries



The scapholunate ligament holds the scaphoid and lunate bones together. When it tears, those two bones drift apart and the wrist starts to wear unevenly.

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What you're feeling

You may feel pain on the inner side of your wrist, near the pinky finger. This ulnar-sided pain is a common cause of upper-extremity disability. The discomfort often feels deep and complex, making it hard to pinpoint exactly what is wrong. You might notice that simple movements trigger sharp aches or a dull, persistent throb.

Daily tasks can become difficult or painful. Reaching behind your back to fasten a bra may strain the injured area. Tucking in a shirt or pushing yourself up from a chair can also aggravate the pain. If you have sustained a high-energy injury, you might experience several bone and ligament issues at once. These injuries represent a spectrum, ranging from acute trauma to chronic overuse syndromes, especially if you are an athlete.

Your symptoms may flare after activity or during the night. Waking up with pain can disrupt your sleep, particularly if you sleep on your side. On waking, your wrist may feel stiff or unstable. You might find it hard to grip objects or bear weight on your hand. This instability is often linked to injuries in the scapholunate or lunotriquetral ligaments, which hold your wrist bones together.

It is important to note that plain X-rays do not always show these soft tissue injuries clearly. You might have significant pain and instability even if your initial images look normal. Sometimes, anatomical variations on an X-ray can confuse the picture, leading to nonspecific pain. Do not assume that visible bone changes explain all your symptoms.

If your pain persists or limits your function, your surgeon may recommend further evaluation. Diagnostic wrist arthroscopy is often the gold standard for seeing these ligament injuries directly. This minimally invasive procedure allows your surgeon to visualize the damage and treat multiple causes of pain at the same time. Early diagnosis and appropriate treatment are key. They help prevent further deterioration of your wrist function and allow you to return to your normal activities more quickly.

What's actually happening

Your wrist is a complex cluster of eight small bones. These bones must slide and rotate together smoothly for you to grip, lift, or type. Ligaments act like strong ropes that hold these bones in their correct positions. When you injure these ligaments, the bones lose their stable relationship. This condition is known as carpal instability. It means your wrist can no longer maintain its normal shape under everyday loads.

The mechanics of your wrist are driven by the shape of the bone surfaces rather than just the ligaments. The back row of wrist bones stays mostly still, while the front row does most of the moving. When a ligament tears, this coordination breaks down. For example, a break in the scaphoid bone can uncouple these two rows. A fracture in the forearm bone can also interfere with this balance. This disruption limits how far you can move your wrist and weakens your hand muscles.

Without proper support, the bones may rub against each other incorrectly. This abnormal motion can lead to wear-and-tear arthritis over time. Your surgeon looks for these kinematic changes to understand the severity of the injury. In some cases, standard scans are not enough to see how the wrist moves dynamically. Advanced imaging may be used to map this motion if the diagnosis is unclear. The goal of treatment is to restore the natural alignment and stability of these bones. This helps preserve your range of motion and prevents early arthritis, allowing you to return to normal daily activities with less pain.

What we can do about it

For many wrist ligament injuries, you can start with self-management and guided physiotherapy. Your surgeon may recommend rest and gentle movement to protect the healing tissue. In acute cases, such as certain scaphoid fractures in children, nonoperative treatment often leads to a high rate of healing with few lasting symptoms. Physiotherapy aims to restore strength and flexibility without stressing the injured ligaments. You should give this approach enough time to work, as conservative management can sometimes fail in complex cases like palmar carpal subluxation. If your injury is diagnosed late, such as a trans-scaphoid perilunate dislocation, nonoperative care may still achieve an enduring functional result. However, if you are an adult with a distal radial fracture, operative treatment often yields better functional outcomes for 12 months compared to cast immobilization alone. Your surgeon will help you decide if this initial conservative path is right for your specific injury pattern.

Medical management focuses on controlling pain and reducing inflammation to help you function during recovery. Your surgeon may prescribe pain medication or anti-inflammatories to manage discomfort. While the evidence does not strongly support one specific treatment for all scapholunate ligament injuries, managing symptoms is a key part of your care plan. Note that radiofrequency energy for capsular shrinkage in the wrist is considered safe but ineffective, so it is not a recommended option. The goal of medication is to keep you comfortable while your body heals or while you undergo other treatments. If pain persists despite these measures, your surgeon will reassess whether your injury requires a more active intervention to prevent further deterioration of wrist function.

Surgery is considered when conservative care has reached its limit or when the injury structure requires mechanical stabilization. Your surgeon may recommend ligament repair or reconstruction to restore normal wrist motion and prevent long-term stiffness. For chronic scapholunate injuries, three-ligament tenodesis generally provides good short-term outcomes regarding function, satisfaction, and pain relief, although approximately 20% of operated wrists did not improve. In severe cases involving carpal collapse or arthritis, procedures like lunate-capitate arthrodesis or midcarpal arthrodesis may be necessary to alleviate pain and improve range of motion. These surgeries aim to stabilize the wrist bones and preserve as much movement as possible. Your surgeon will discuss the specific surgical option that best fits your anatomy and lifestyle needs.

What to expect

Your recovery depends heavily on how quickly you get care. Early diagnosis and the right treatment can help you return to your normal activities, including sports, much faster than if you wait. If treatment is delayed, your wrist may not regain its full strength or range of motion. In some cases, late surgery does not fix the underlying alignment issues, leaving you with a stiff wrist that feels limited for years.

If your injury is managed well, most people see good long-term function. Even if scans show changes in the joint structure, you may still feel and use your wrist effectively. For example, in procedures that fuse some wrist bones together, about 73% of patients show radiographic changes in the joint over time. Despite these visible changes on X-rays, functional results remain good for many people. You might find that your wrist feels stable and usable, even if it does not look perfect on imaging.

However, outcomes are not guaranteed. If the ligaments that hold your wrist bones together are not repaired or reconstructed properly, your wrist function can continue to worsen. In some chronic cases, up to 20% of patients do not see improvement in pain or function after surgery. You might experience ongoing instability or early wear-and-tear arthritis. Some procedures carry a risk of loosening or recurring instability, which can lead to further complications.

Without proper treatment, the injury often persists. You may notice that your wrist remains stiff, with only a few degrees of movement possible. In severe cases, you might return to work years later but still feel significant limitations in daily tasks. The goal of your surgeon is to restore stability and prevent further deterioration. By addressing the injury early and accurately, you give yourself the best chance for a functional, pain-free wrist in the long run.

When to see someone

Ask for a specialist review if you have persistent pain that does not improve with rest. Seek care if you feel weakness, instability, or if your wrist locks or gives way. See your GP if symptoms interfere with your sleep or work. Get help for any sudden worsening of pain. These signs may indicate a ligament injury. Early diagnosis allows for appropriate treatment. This helps prevent further deterioration of wrist function. Your surgeon can determine if you need imaging or arthroscopy to confirm the issue. Do not ignore ongoing discomfort. Proper care supports better long-term outcomes for your wrist.