



**QUESTION |** What are the most reliable clinical tests and what is the optimal conservative management for low-grade sprains? What is the optimal timing for surgery for scapholunate ligament dissociation?

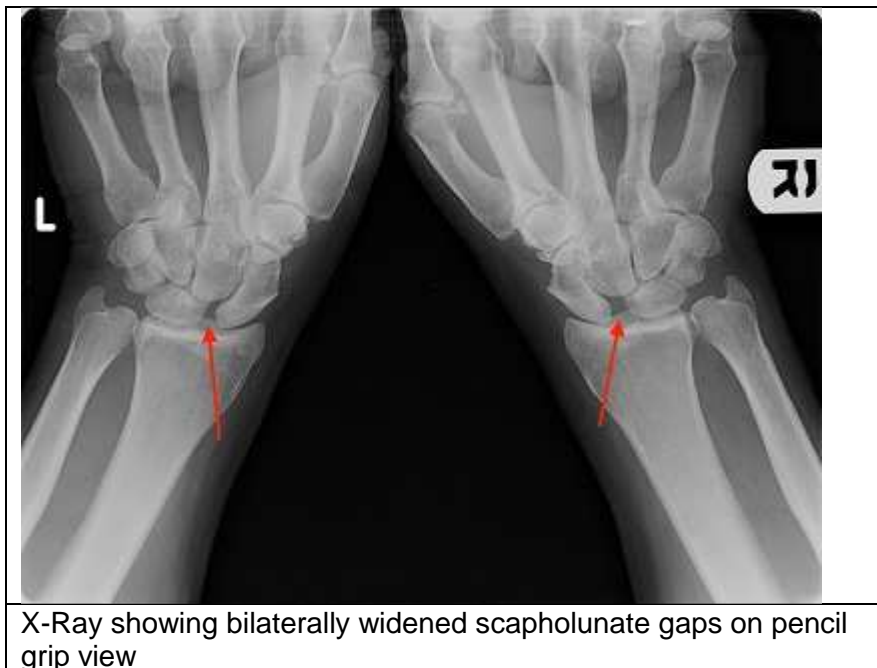
**ANSWER |** Scapholunate ligament injuries typically occur from a fall onto an outstretched hand, and can therefore occur in combination with other injuries that results from this mechanism, such as distal radius fractures, scaphoid fractures or perilunate dislocations. The diagnosis must be considered in anyone who has had a fall of this nature and has wrist pain, but is often missed. If there is pain in the central wrist area despite apparently normal imaging, then special attention must be made to this ligament. Other symptoms may include ongoing limited range of wrist motion or poor grip strength.

Point tenderness over the scapholunate ligament increases the suspicion of injury. The easiest way to palpate this is to feel for Lister's tubercle on the dorsum of the distal radius, then palpate about 1 cm distally. This test is not specific for this ligament as dorsal wrist capsulitis may also cause point tenderness.

I find a Watson's scaphoid shift test quite useful. With the patient's elbow supported on the table and the forearm held vertically, push the scaphoid tubercle dorsally from the volar aspect while moving the wrist from ulnar to radial deviation. A normal wrist's scaphoid tubercle should push volarwards smoothly as the wrist is radially deviated. A painful clunk or abnormal scaphoid movement may indicate a significant scapholunate ligament tear, enough to destabilise the link between the two bones. Normal motion, but a reproduction of the patient's pain during this manoeuvre may indicate a partial tear, but not enough to unlink the two bones. Always compare this to the patient's other normal wrist. Be aware that, like palpation, this is not a specific test for this condition.

If an injury to the scapholunate ligament is suspected, then x-rays should be organised. Plain wrist x-rays may show widening of the scapholunate gap on the PA view in comparison to the other wrist. Lateral views may show an increased scapholunate angle due to abnormal flexion of the scaphoid and extension of the lunate. Stress views may show widening of the scapholunate gap more than a static resting view; my preference for this is a pencil grip view rather than a clenched fist view, as it gives a symmetrical view of both wrists for comparison. Ultimately, an MRI scan will give a direct view of the ligament. There is no role for ultrasound in diagnosing this condition.

Low-grade sprains, or tears where the relative motion of the scaphoid and lunate (even under stress) are preserved, are treated symptomatically. Typically, this will involve oral analgesia, swelling control and a short-term wrist splint, followed by a motion and strengthening program. The exact timing of progression from one stage to another is determined by the patient's symptoms. If there is ongoing pain, then an injection of local anaesthetic and steroid may be helpful for symptom control.



High-grade or complete tears of the scapholunate ligament which cause scapholunate dissociation should ideally be treated surgically within a fortnight of the injury. This is when healing potential is highest, and the ligament may still be directly repairable. Once the ligament scars down in a retracted position or degenerates, then it is unrepairable, and surgery would consist of using a graft from elsewhere in the body to reconstruct a new scapholunate ligament. This procedure is more complicated than a direct repair, with a longer recovery time, higher complication rate and lesser final outcome.

After either a repair or reconstruction, the patient will need to be completely immobilised for about 6 to 8 weeks, before starting a range of motion program with a removable splint. It is generally about 6 months before the patient is allowed to return to full activities, but will continue to show improvement in the wrist function for about 12 months.

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