

Wrist Fracture Surgery: What You Need to Know

A wrist fracture occurs when one or more bones in the wrist break, often due to a fall, accident, or trauma. Two common types are **distal radius fractures** (a break near the end of the forearm bone) and **scaphoid fractures** (a break in one of the small carpal bones of the wrist). When these fractures are unstable, misaligned, or fail to heal with casting alone, surgery may be recommended to restore proper alignment and function. This procedure, called open reduction internal fixation (ORIF), uses hardware like plates, screws, or specialized compression screws to stabilize the bone. Below, we explain the surgery, recovery, potential complications, and expected outcomes to help you feel informed.

Description of the Surgery

Wrist fracture surgery varies depending on the type and location of the break. Here's how it's typically performed for distal radius and scaphoid fractures:

- **Distal Radius Fracture ORIF (Plate and Screw Construct):**

This surgery is used for fractures of the radius bone near the wrist. The surgeon makes an incision (usually 2-3 inches) along the forearm or wrist, depending on the fracture pattern. The broken bone fragments are realigned (reduced), and a metal plate is placed along the bone, secured with screws to hold it in place. The incision is closed with stitches and a splint is applied.



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- **Scaphoid Fracture ORIF (Headless Compression Screw Construct):**

This procedure targets fractures of the scaphoid, a small bone in the wrist near the thumb. The surgeon makes a smaller incision (about 1-2 inches or smaller) over the wrist or near the base of the thumb. The bone fragments are realigned, and a headless compression screw (a screw with no protruding head) is inserted through the bone to stabilize it. The screw compresses the fracture site to promote healing. In cases where the fracture is chronic and has not healed on its own (nonunion), bone graft from a nearby bone in the forearm (autogenic) or from processed cadaver bone (allogenic) may need to be inserted into the fracture site to promote healing. The incision is closed with stitches and a splint is applied.



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Both surgeries are usually performed under regional anesthesia (numbing the arm) or general anesthesia (putting you to sleep), depending on your case. They may take 1-2 hours and are typically outpatient procedures, meaning you can go home the same day.

What to Expect During Recovery

Recovery depends on the fracture type, the surgery performed, and your overall health. Here's a general guide:

- **Immediately After Surgery:**

Your wrist will be immobilized in a splint to protect the repair. Mild pain, swelling, or bruising is normal, manageable with prescribed pain medication or over-the-counter options like ibuprofen. Keep your arm elevated to reduce swelling. Work on finger motion exercises (from a full fist to complete extension) to avoid finger stiffness and swelling.

- **First 1-2 Weeks:**

You'll need to avoid using the wrist and keep the splint and dressing clean and dry. Stitches are typically removed within 10-14 days. Finger movement is encouraged to prevent stiffness, but the wrist remains immobilized.

- **Weeks 3-6:**

For distal radius fractures, the splint is removed and a removable brace is typically provided for comfort. For scaphoid some scaphoid fractures, a removable brace may be provided at this point, however for others (particularly nonunions) immobilization in a cast may last 6-12 weeks due to the bone's slower healing rate. Physical therapy often begins once the splint or cast is removed to restore strength and mobility.

- **Months 2-6:**

Gradual return to normal activities occurs as the bone heals and strength improves. Distal radius fracture patients may often resume full activities by 8 weeks, while some scaphoid fracture patients may take longer (3-6 months) due to the bone's slower healing rate.

- **Full Recovery:**

Complete healing can take 6-12 months, especially for scaphoid fractures. Most patients regain full function, though heavy lifting or sports may require extra time and clearance from your surgeon.

Follow your surgeon's instructions on immobilization, therapy, and activity restrictions for the best results.

Potential Complications

Wrist fracture surgery is generally safe, but risks exist, as with any procedure. These are uncommon and often treatable:

- **Infection:** Redness, swelling, or drainage at the incision site may indicate an infection, treatable with antibiotics.
- **Nerve or Blood Vessel Damage:** Rarely, nearby structures may be irritated or injured, causing numbness, tingling, or weakness, which may resolve over time.
- **Hardware Issues:** Plates or screws may cause irritation, and in rare cases, they may need to be removed after the bone has healed to avoid injury to tendons or other structures.
- **Nonunion or Delayed Healing:** The bone may not heal completely or on its expected timeline, especially with scaphoid fractures, potentially requiring additional treatment.
- **Stiffness or Arthritis:** Prolonged immobilization or joint involvement may lead to stiffness or future arthritis, typically manageable with therapy or other treatments.

Contact your doctor if you experience severe pain, fever, or signs of infection after surgery.

Expected Outcomes

Wrist fracture surgery has a high success rate when performed to stabilize the bone and prevent long-term issues. Here's what you can expect:

- **Pain Relief and Stability:** Surgery aligns the bone properly, reducing pain and preventing deformity, arthritis, or instability.
- **Restored Function:** Most patients regain good wrist motion and strength, allowing a return to daily activities, work, and hobbies.
- **Long-Term Results:** Over 85-90% of patients achieve successful healing with proper care. Scaphoid fractures may have a slightly higher risk of complications due to their location, but outcomes are still favorable with surgery.

Success depends on factors like the fracture's severity, your adherence to recovery guidelines, and any pre-existing conditions (e.g., osteoporosis).

Final Notes

Wrist fracture surgery is an effective way to repair a broken wrist and restore its function. If you have questions about your specific case or the procedure, don't hesitate to discuss them with your surgeon. We're here to support your recovery every step of the way!