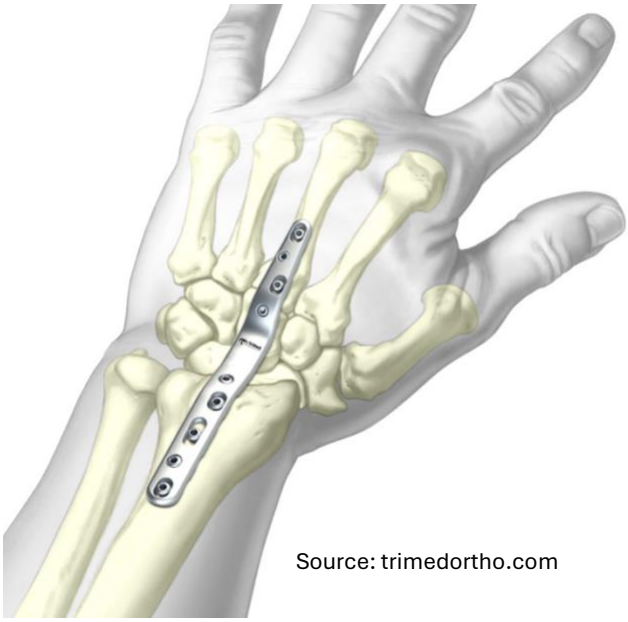
Wrist Arthritis Surgery: What You Need to Know

Wrist arthritis occurs when the cartilage in the wrist joint wears away, causing pain, stiffness, and swelling. This can result from aging, injury, or conditions like rheumatoid arthritis. When non-surgical treatments such as bracing, medications, or injections no longer provide relief, surgery may be recommended. The most common procedures for wrist arthritis are **total wrist fusion**, **proximal row carpectomy**, and **scaphoid excision with four-corner fusion**. Each option addresses the pain differently, depending on your condition and goals. Below, we explain the surgery, recovery, potential complications, and expected outcomes to help you feel prepared.

Description of the Surgery

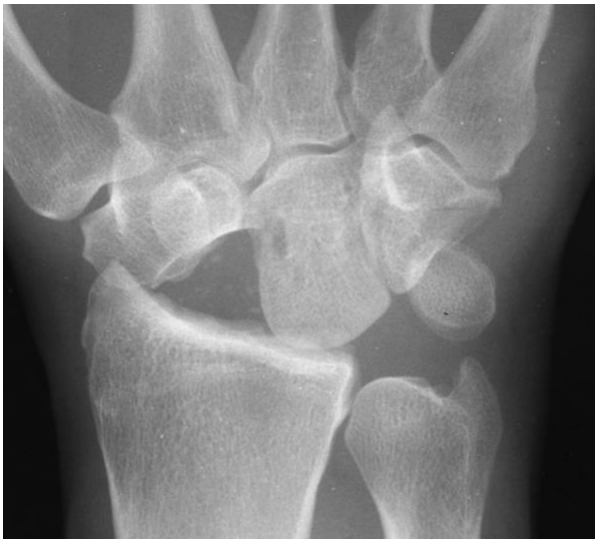
Wrist arthritis surgery varies based on the extent of damage and your need for motion or stability. Here's how the most common procedures are performed:

- **Total Wrist Fusion (Arthrodesis)**:
  This procedure permanently fuses the wrist bones to eliminate pain by stopping all motion. The surgeon makes an incision (2-4 inches) on the back of the wrist, removes the damaged cartilage, and aligns the radius (forearm bone) with the carpal bones. A metal plate and screws are used to hold the bones together until they fuse into one solid unit. The incision is closed, and a splint is applied. This is ideal for severe arthritis or heavy manual laborers.



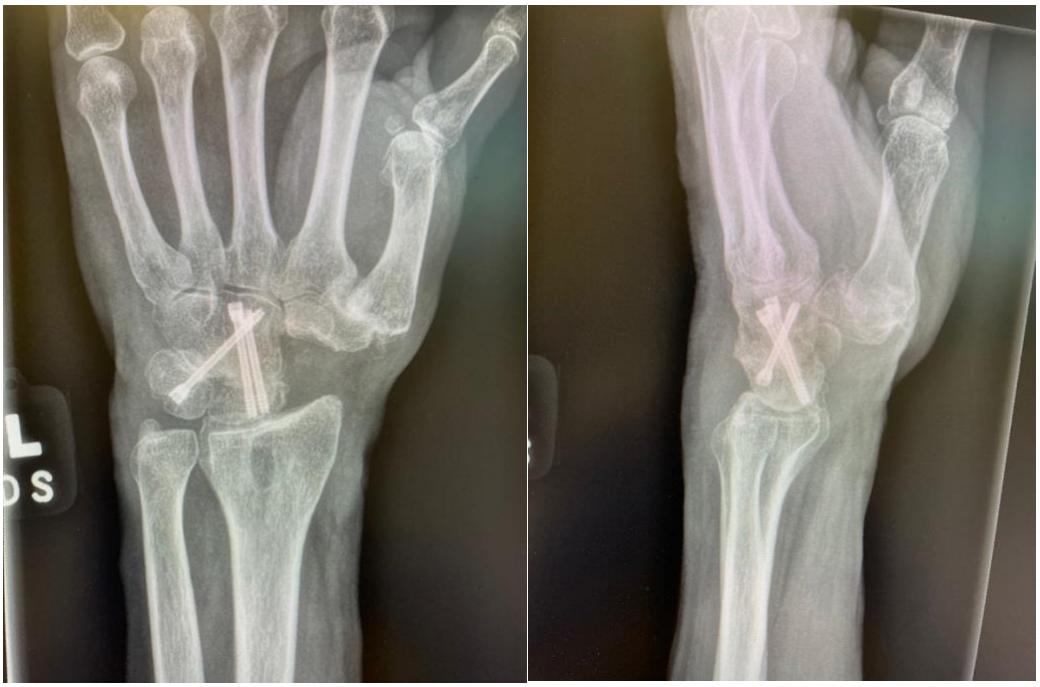
Source: trimedortho.com

- **Proximal Row Carpectomy (PRC)**:
  This surgery removes the proximal row of carpal bones (scaphoid, lunate, and triquetrum) to relieve pain while preserving some wrist motion. The surgeon makes an incision (2-3 inches) on the back of the wrist, removes the three arthritic bones, and allows the remaining bones to form a simpler joint with the radius. The incision is closed, and a splint is applied. This is often chosen for cases of arthritis where the entire joint is not affected.



Source: eatonhand.com

- **Scaphoid Excision with Four-Corner Fusion**:
  This limited fusion removes the scaphoid bone and fuses four remaining carpal bones (lunate, triquetrum, capitate, and hamate) to reduce pain while retaining partial motion. The surgeon makes an incision (2-3 inches) on the back of the wrist, excises the scaphoid, and uses headless screws, staples, or a plate to fuse the four bones. The incision is closed, and a splint is applied. This balances stability and flexibility for moderate to severe arthritis. This is often chosen for cases of arthritis where the entire joint is not affected.



These surgeries are typically performed under regional anesthesia (numbing the arm) with general anesthesia. They take 1-2 hours and are usually outpatient, meaning you go home after surgery.

What to Expect During Recovery

Recovery varies by procedure, with fusion requiring longer immobilization than PRC. Here's a general guide:

- **Immediately After Surgery**:
  Your wrist will be in a splint. Mild to moderate 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 prevent stiffness.

- **First 1-2 Weeks**:
  The splint stays in place, and stitches are typically removed within 10-14 days. You'll avoid using the wrist, though gentle finger movement may be encouraged to prevent stiffness.

- **Weeks 3-6**:

    - **Total Wrist Fusion**: A cast is applied and remains in place for 6-8 weeks until the bones begin to fuse. Light activities like writing or typing may resume with care after initial healing.

    - **Proximal Row Carpectomy**: A removable splint may replace the cast after 2-4 weeks, with therapy starting to restore motion. Light activities like writing or typing may resume with care after initial healing.
    - **Four-Corner Fusion**: The cast stays for 6-8 weeks, followed by gradual mobilization. Light activities like writing or typing may resume with care after initial healing.
- **Months 2-6**:
    - **Total Wrist Fusion**: Full fusion takes 3-6 months; strength improves, but motion is permanently lost in the wrist joint.
    - **PRC and Four-Corner Fusion**: Therapy helps regain motion (up to 50-60% of normal) and strength, with a return to most tasks by 3-6 months.
- **Full Recovery**:
  Complete healing takes 6-12 months. Fusion provides a stable but stiff wrist, while PRC and four-corner fusion offer partial motion.

Follow your surgeon's instructions on immobilization, therapy, and activity restrictions.

Potential Complications

These surgeries are generally safe, but risks exist. These are rare and often treatable:

- **Infection**: Redness, swelling, or drainage at the incision site may indicate an infection, treatable with antibiotics.
- **Nerve or Tendon Damage**: Rarely, nearby structures may be irritated or injured, causing numbness or weakness, which may resolve over time. Permanent injury is very rare.
- **Nonunion (Fusion)**: The bones may not fuse, requiring additional surgery (more common in smokers or complex cases).
- **Hardware Issues**: Plates or screws may cause irritation, occasionally needing removal after healing.
- **Persistent or Recurrent Pain or Stiffness**: Some discomfort or reduced motion may linger, often manageable with therapy. For some patients, arthritis may progress over time following PRC or four-corner fusion, at which point a total wrist fusion might be recommended.

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

Expected Outcomes

Wrist arthritis surgery effectively reduces pain, with outcomes depending on the procedure:

- **Pain Relief**: Most patients experience significant or complete pain reduction within weeks to months.
- **Functionality**:
    - **Total Wrist Fusion**: Eliminates motion but provides a strong, stable wrist for lifting or gripping. Ideal for heavy use or severe arthritis cases.

    - **Proximal Row Carpectomy**: Preserves more motion (50-60% of normal), allowing flexibility for daily tasks.
    - **Four-Corner Fusion**: Balances stability and motion (about 50% of normal), suitable for moderate activity levels.
- **Long-Term Results**: Approximately 70-90% of patients report satisfaction with pain relief and function. Fusion is permanent, while PRC and four-corner fusion may lead to arthritis in other areas over decades.

Success depends on the arthritis severity, your activity level, and adherence to recovery guidelines.

Final Notes

Wrist arthritis surgery can relieve pain and improve your quality of life. Discuss with your surgeon to determine the best option for you. We're here to support your recovery every step of the way!