John Dunn, MD

Double Board-Certified Hand, Wrist, and Nerve Surgeon

JohnDunnMD.com

DISTAL RADIUS FRACTURE

What is it?

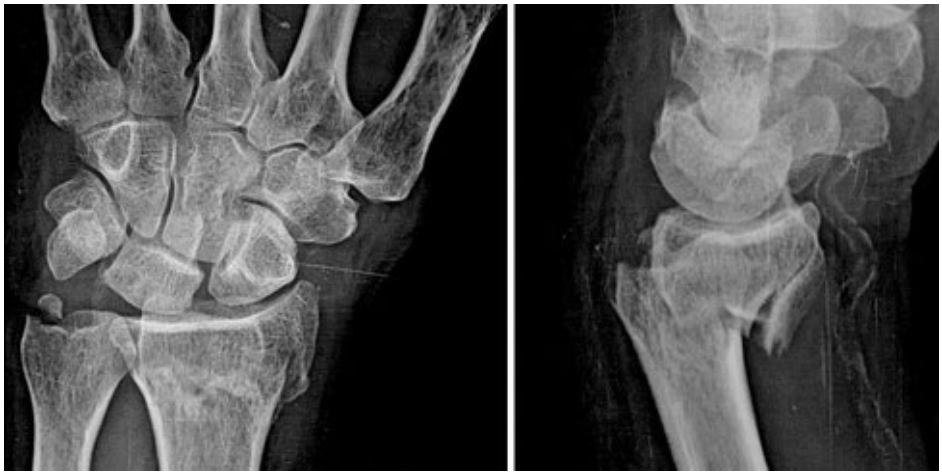
- Distal radius fractures occur where the forearm meets the hand and are the most common orthopaedic injury.

Who gets it?

- Distal radius fractures account for nearly 20% of all adult fractures.
    - Most often during a fall onto an outstretched wrist.
- They occur in younger men (high energy) and older women – who have weaker bone.
    - Older women with fragility fractures are encouraged to discuss their bone quality with a primary care doctor. These patients may be at risk for future fragility fractures.

What can you do about it?

- No MRI/CT is needed in most cases. X-Rays are required.
- Depending on the patient's age, bone quality, activity level, type of fracture, and preference for surgery, fractures may be treated with:
    - No reduction and splint only.
    - Reduction (surgeon straightens the bone by directly pulling in the office) with splint
        - Splint or cast usually stays on for 4-8 weeks.
    - Surgery with a palmar plate.
    - Surgery with a plate on the back (dorsal) part of the wrist.



Surgery:

- With a palmar plate:
    - The surgery involves a 8cm incision over the palmar side of the wrist.
    - A plate (about the side of your thumb) buttresses the fracture.
        - The plate is almost never removed.
- With a dorsal plate:
    - The surgery involves a 12cm incision over the back of the wrist.
    - The plate spans the wrist and holds the fracture in place.

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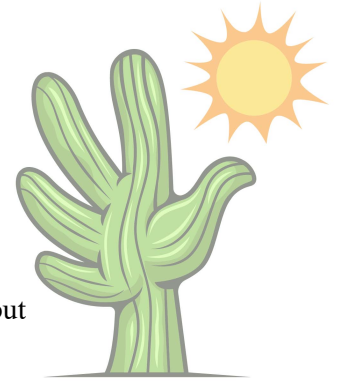

        - The plate is removed in 12 weeks.
    - Until the plate is removed, the patient can make a fist and rotate the wrist – but flexion and extension of the wrist is not possible.

Post-operative course:

- Pain pills may be needed for the first 5-7 days.
- Black nylon sutures are removed at the first post-operative visit in 2 weeks.
    - This suture is inert (does not react with your body) and is sturdy
    - The wrist is immobilized with a splint until sutures are removed.
- You can text, type, and do light duties with the hand before the sutures are removed while the dressing is in place (but no weight bearing)
- Therapy may be helpful (especially early on after surgery) – but is not required.
- The second post-operative visit is at 6 weeks after surgery.
- Palmar plate:
    - At the 2 week visit, if the bone was strong – you may be transitioned to a removable splint.
        - However, if the bone was weak, you may be put back into a cast for an additional 4 weeks.
- Dorsal plate:
    - At the 2 weeks visit, your splint will be removed and you will not be put back into another cast or splint. You may start moving your fingers and hand as tolerated.
    - At 12 weeks – your plate will be removed.

Outcomes

- Benefits of surgery:
    - Surgery preferentially benefits younger patients (less than 65 years old)
    - Skeletal stability.
    - Anatomic reduction.
    - Improved grip strength.
    - Early return to activity.
- Surgery generally benefits patients more early on. But at later time points the outcomes between surgery and closed treatment are more similar.
- Several scientific papers have demonstrated that *hand surgeons* (as opposed to *orthopaedic surgeons)* have superior outcomes when treating distal radius fractures. It is best that if you have a distal radius fracture, you are treated by a hand surgeon.

Complications

- Patients often to have discomfort, regardless of treatment, over the distal ulna (on the pinky finger side of the wrist) because these ligaments are often injured with the fracture.
- Complications with surgery:
    - Risk damage to neurovascular structures, infection, tendon injury (flexor and extensor), wound complications, and need for revision surgery, and arthritis.
- Complications without surgery:
    - Tendon injury, fracture healing in a poor position, finger stiffness from a splint, carpal tunnel syndrome, and arthritis.