

Distal Radius Fracture



The radius is the larger of the two bones of the forearm. The end toward the wrist is called the distal end. A fracture of the distal radius occurs when the area of the radius near the wrist breaks.

Cause

Distal radius fractures are very common. In fact, the radius is the most commonly broken bone in the arm. The break usually happens when a fall causes someone to land on their outstretched hands. It can also happen in a car accident, a bike accident, a skiing accident, and similar situations.

Sometimes, the other bone of the forearm (the ulna) is also broken. When this happens, it is called a distal ulna fracture.

Symptoms

A broken wrist usually causes immediate (acute) pain, tenderness, bruising, and swelling. Frequently, the wrist hangs in an odd or bent way (deformity).

Diagnosis

The doctor will take an X-ray of the wrist. This is important to understand the extent of the injury.

Risk Factors

Osteoporosis (decreased density of the bones) can make a relatively minor fall result in a broken wrist. Many distal radius fractures in people older than 60 years of age are caused by a fall from a standing position. A broken wrist can happen even in healthy bones, if the force of the trauma is severe enough. For example, a car accident or a fall off a bike may generate enough force to break a wrist.

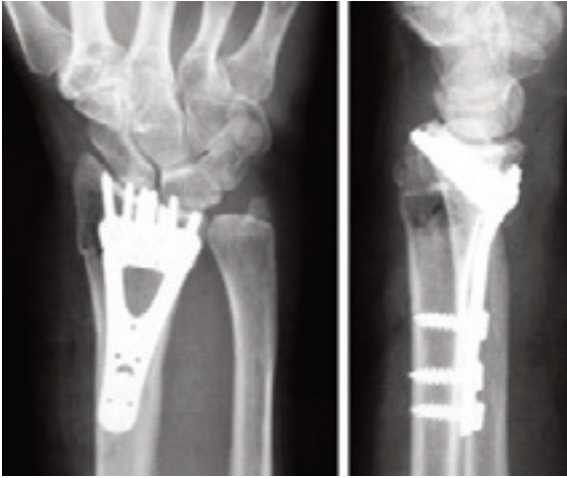
Good bone health remains an important prevention option. Wrist guards may help to prevent some fractures, but they will not prevent them all.

Nonsurgical Treatment

There are many treatment choices. The choice depends on many factors, such as the nature of the fracture, age, and activity level. The following is a general discussion of the possible options.

Casting: If the broken bone is in a good position, a cast may be applied until the bone heals.

If the position (alignment) of your bone is not good and likely to limit the future use of the arm, it may be necessary to correct the deformity. The bone may be re-aligned (reduced) to a correct position (this is called a closed reduction) and would not require surgery. Casting the arm would still take place.



Surgical Treatment

Sometimes, the position of the bone is so much out of place that it cannot be corrected or kept corrected in a cast. This has the potential of interfering with the future functioning of your arm. In this case, surgery may be required.

Depending on the fracture, there are a number of options for holding the bone in the correct position, including a cast, metal pins (usually stainless steel or titanium), a plate and screws, an external fixator (a device for which most of the hardware remains outside of the body), or any combination of these techniques.

After the bone is properly aligned, a splint or cast may be placed on your arm. The splint is usually used for the first two weeks. A custom removable splint is then typically used for another month after that to allow early range of motion exercises and physical therapy.

X-rays may be taken, depending on the nature of the fracture. These are used to verify reduction of the fracture, ensure maintenance of alignment and to follow healing.

After Surgery

What can I expect while my bone is healing?

The kinds of distal radius fractures are so varied and the treatment options are so broad that it is hard to generalize what to expect.

Most fractures hurt moderately for a few days to a couple of weeks. Many patients find that using ice, elevation (holding their arm up above their heart), and simple, non-prescription medications for pain relief are all that are needed.

Most casts are waterproof. However, if you have an initial splint or a cast that is not water-proof, or had surgery, you must keep it dry. If it does get wet, blow-drying on the coolest setting will help to keep it dry. Most surgical incisions must be kept clean and dry until the stitches or staples are removed.

What can I expect after my bone has healed?

Most patients do return to all their former activities. The nature of the injury, the kind of treatment received, and the body's response to the treatment all have an impact, so the answer is different for each individual.

Some generalizations can be made.

- Physical therapy is not usually needed for most fractures but is more likely if you had surgery
- Most patients will be able to resume light activities, such as swimming or exercising the lower body in the gym, within a month or two after the cast is taken off or after within a month or two after surgery.
- Most patients can resume vigorous physical activities, such as skiing or football, between three and six months after the injury.
- Almost all patients will have some stiffness in the wrist, which will generally lessen in the month or two after the cast is taken off or after surgery. Improvement will continue for at least two years.
- Recovery should be expected to take at least a year. Some residual stiffness or ache is to be expected for two years or possibly permanently, especially for high-energy injuries (such as motorcycle crashes, etc), in patients older than 50 years of age, or in patients who have some osteoarthritis. However, the stiffness is usually minor and may not affect the overall function of the arm.

Finally, osteoporosis is a factor in as many as 250,000 wrist fractures. It has been suggested that people who suffer a wrist fracture may need to be screened for osteoporosis, especially if they have other risk factors. Ask your doctor if you need to be screened or treated for osteoporosis. This will need to be managed by your primary physician.

Adapted from American Academy of Orthopaedic Surgeons. For more information, see orthoinfo.aaos.org

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