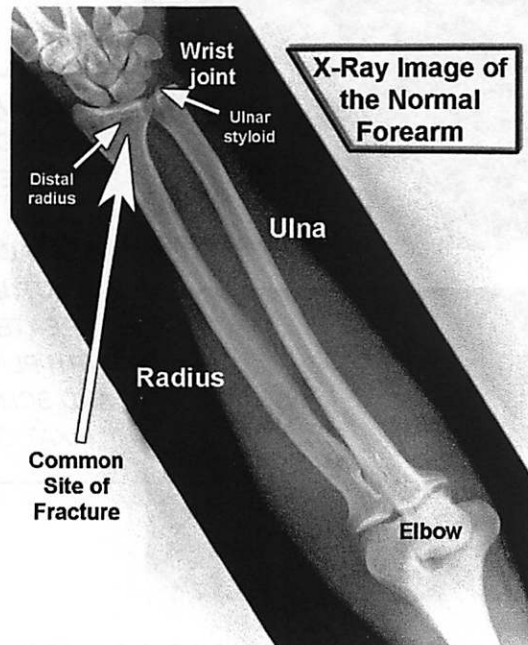


InfoSheet – Distal Radius Fractures

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WHAT IS A DISTAL RADIUS FRACTURE?



The *distal radius fracture* is the most common type of *wrist fracture*. The forearm contains two bones: the *radius* and the *ulna*. The distal end of the radius is the end that is closest to the wrist. Many distal radius fractures are accompanied by a small fracture at the distal end of the ulna, known as an *ulnar styloid process fracture*.

HOW IS A DISTAL RADIUS FRACTURE TREATED?

The goal of treatment is to hold the fracture in a satisfactory position until it is able to heal. Depending upon the characteristics of the fracture, surgical or non-surgical treatments may be chosen to achieve this goal.

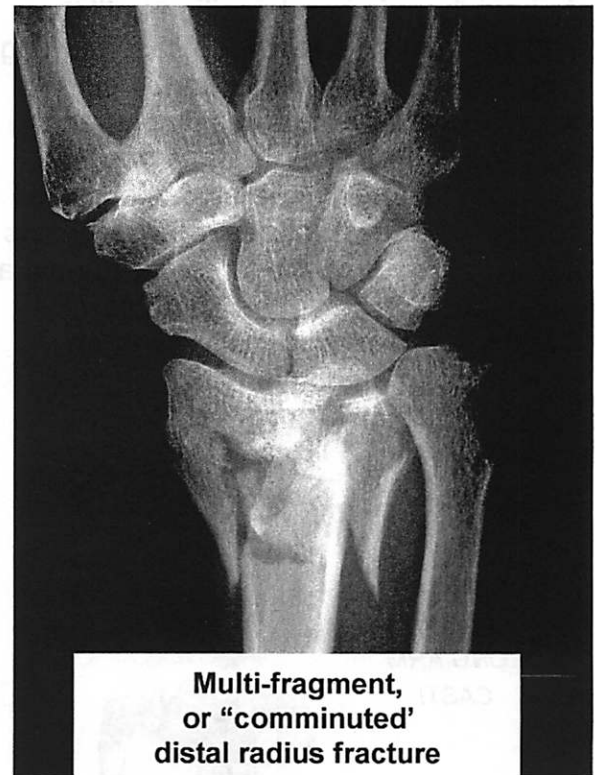
HOW LONG DO WRIST FRACTURES TAKE TO HEAL?

In adults of any age, wrist fractures take 6 to 8 weeks to heal enough so that

they do not need additional support. Good strength is achieved by 12 weeks, and full healing with remodeling of the underlying bone may take 6 to 12 months. Children heal faster, and may be solid enough to go without a cast or splint at 4 to 6 weeks.

WHAT DOES IT MEAN TO NEED A 'REDUCTION'?

If the position of a fracture is significantly out of place, the fracture will need to be put back into place, "reduced", or "set" to achieve a good result.



WHY DO SOME WRIST FRACTURES LOSE POSITION OR "SLIP"?

Even well-reduced fractures may not want to stay in position. Loss of the

position is known as having the fracture "slip". Several fracture and bone-quality characteristics can contribute to loss of reduction. Because of the tendency to "slip", we often follow patients with weekly x-rays for the first two to four weeks. That way, if the fracture does slip, it can be re-reduced, or operative treatment can be considered.

WHAT ARE SOME OF THE REASONS TO USE A CAST VERSUS AN OPERATION FOR A DISTAL RADIUS FRACTURE?

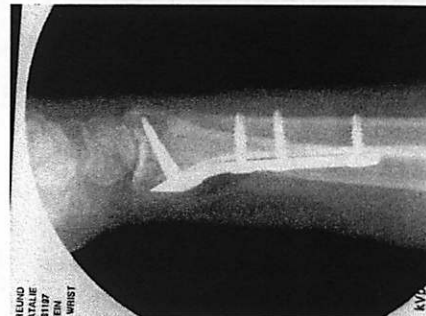
A cast is a traditional treatment that works very well for different types of wrist fractures. Casts are often used for *stable* or *nondisplaced* fractures in order to hold them in good position until the fracture heals. A *long-arm cast* (starting above the elbow) is chosen to help control unstable fractures by preventing rotation at the wrist. *Short-arm casts* (starting just below the elbow) are used for more stable fractures. *Plaster* casts are sometimes chosen in order to hold a specific correction of an unstable fracture. *Fiberglass* casts are often chosen for their convenience and for their light weight.

A WELL-DECORATED LONG ARM CAST!



Fractures that are significantly angulated, shortened, or displaced (especially if there are fragments within

the joint that are displaced) are more likely to need operative treatment.



PRE-OP AND POST-OP SIDE-VIEWS OF A DISPLACED FRACTURE TREATED WITH PLATE AND SCREW FIXATION

WHAT CAN BE DONE FOR A WRIST FRACTURE THAT HEALS IN AN UNSATISFACTORY POSITION?

Other than one that is truly *nondisplaced* (like a crack in a teacup), no wrist fracture ever heals in an exactly *anatomic* position. The less active people are, and the older they get, the greater their tolerance for non-anatomic healing. Additionally, over several months, most people accommodate to the new position of their wrist with no pain plus good return of function.

For wrist fractures that heal in an unsatisfactory position and cause pain, operative treatments can be done: When the radius shortens so that the ulna is relatively long, removing the end of the ulna or shortening the ulna will often both decrease pain as well as improve range of motion. For a fracture that heals in an angulated position, another alternative is to reposition the

end of the radius through a surgical correction known as a *radial osteotomy*.

The fact that these two surgical corrections are possible should give comfort to patients; even if they do not choose surgical treatment if it is suggested initially, a correction can be made down the road if they are dissatisfied with their healing.

WHAT ABOUT THE FRACTURE AT THE END OF THE ULNA?

Fractures at the tip of the ulna, known as *ulnar styloid fractures*, are very commonly associated with fractures of the distal radius. Most of them will heal with few symptoms even without any formal treatment. Many of them go on to heal with a fibrous union, and still do not cause problems. Usually, the only time that surgical treatment is necessary for an ulnar styloid fracture is when the ends of the radius and the ulna are significantly unstable even after the radius fracture is surgically repaired.

WHY DID I BREAK MY WRIST?

Like any other bone in the body, the end of the radius will break if sufficient force is directed towards it. In younger people, fractures of the wrist usually reflect a considerable amount of energy, such as a blow at high speed or from a fall from a height. As people get older, and their bones get weaker, a wrist fracture easily occurs following a simple fall from a standing position. Osteoporosis is a frequent contributor to fractures of the wrist, which is why they are known as a type of "fragility fractures".

IF I FALL AGAIN, AM I MORE LIKELY TO REFRACTURE MY WRIST?

The opposite is actually true. In almost all fractures of the body, when the fracture heals, there is more bone at the fracture site than there was previously, and it is less likely to break again. If it does break, it will usually break to one side of the old fracture and not in the same position.

WILL I NEED THERAPY TO GET BETTER?

Not everyone needs therapy following a wrist fracture. Those that do need therapy often are having difficulty getting back their range of motion and the function of their fingers and hand.

WHAT ARE SOME OF THE ASSOCIATED PROBLEMS THAT FOLLOW A WRIST FRACTURE?

Wrist fractures of all types are often associated with decreased motion or stiffness, even following healing. In some cases, there can be an injury to the median nerve, causing a *traumatic carpal tunnel syndrome*. Many of these will require an operative release of the carpal tunnel to get good results. A much more rare problem following a wrist fracture is *reflex sympathetic dystrophy (RSD)*, or "complex regional pain syndrome". This unusual condition causes severe pain, stiffness, and swelling out of proportion to physical examination. Treatment of RSD is often slow and requires considerable physical therapy and/or medication.

SHOULD I USE MY ARM WHILE IT IS IN THE CAST?

It is very important to use your hand and fingers even while you are wearing a cast. While *you should not lift*

anything heavier than a coffee cup or a telephone receiver, active use of the hand and fingers does prevent stiffness.

WHY SHOULD I KEEP MY HAND ELEVATED?

Injuries to the hand, with or without surgery, cause swelling. If you keep your hand higher than your heart, or at least higher than your elbow, you will help decrease the amount of swelling. Do this **for at least one week** after your injury or surgery. In general, a sling is not good for elevation, as most people tend to have their hand hanging around their belly. Ask us about some tricks to help keep the hand elevated while you sleep. Overall, it's important to keep the hand elevated during the day. Don't obsess over keeping your hand elevated at night – worry about getting enough sleep instead.

AM I NOW MORE LIKELY TO GET ARTHRITIS?

Unless the wrist fracture has cracks that travel into the joint itself, or unless the fracture heals in such a position to significantly change the alignment of the wrist, you are *not* likely to get arthritis in the wrist after healing of the fracture.

WHEN WILL MY FRACTURE STOP HURTING?

Most wrist fractures will hurt severely for the first one to three weeks. After that, the pain lessens until about one to three months, after which the pain is often at a low-level, often worse with activity or with changes in the weather, for one to two years.

WHY ARE MY FINGERS SO STIFF?

When a wrist is broken, the rest of the hand usually swells. Fluid in the soft tissues causes stiffness. Additionally, some people have arthritic joints in their

fingers, even if they have never had any pain or dysfunction. Anybody with arthritis in his or her fingers is far more likely to develop *permanent* stiffness. This is only one reason why we are so insistent that you work on the motion of your fingers when you have a wrist fracture.

WHAT CAN I EXPECT WHILE MY FRACTURE IS HEALING?

For the first one to two weeks, your wrist will be very painful, and you may even feel “like the bones are moving”. Your hand will likely become swollen, and it may become difficult to move your fingers. Elevation and working on finger and thumb motion is key for a good result. Expect your fingers to be cool, and even bluish in color, but they should always retain sensation, and not become “numb”. As time passes, the pain will go down. Once out of a cast or splint, you can work on more motion, and you will have different pains, both at rest and with activity. As you continue to heal, you will slowly get your strength back. You should postpone contact sports and impact activities until 4-6 months after the fracture. It may be a year or more before the swelling is down to a minimum, and the “ache” is gone. Even so, expect pain with weather changes for 1-3 years after the fracture. The wrist may always look a little bigger, and have less motion than the “normal” wrist.

