

△ GENERAL INFORMATION

Colles' fracture is a fracture of the wrist usually caused by a fall on the palm of an outstretched arm (Fig. 1). It is most common in persons older than 50 years of age.

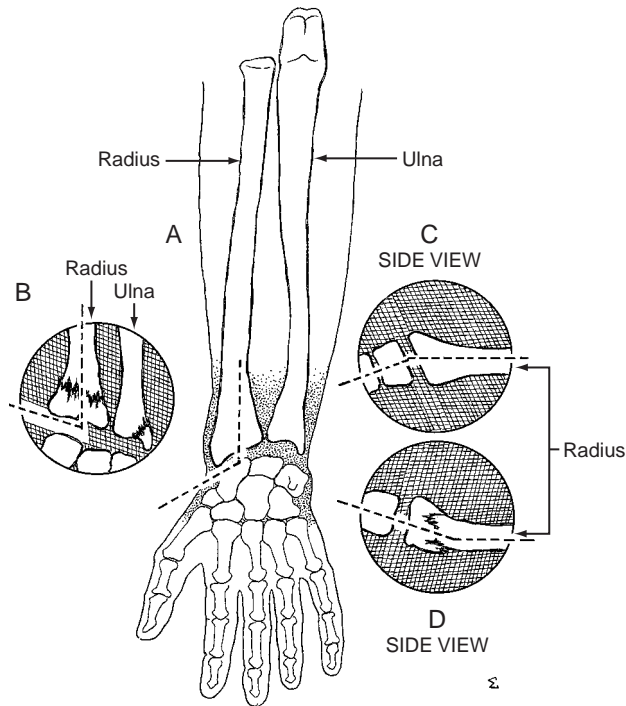


Figure 1. A, Normal relationship of the bones of the wrist, back to front view. Notice the radius is longer than the ulna. With a Colles' fracture, significant changes occur in the position of the radius. B, The radius is fractured and pushed back so that it now is shorter than the ulna, causing the wrist to angle more toward the thumb. C, Side-to-side view of a normal radius, showing the downward slant of the joint. D, Side-to-side view showing the radius fractured, pushed back, and the joint now having an upward slant.

COMMON SIGNS AND SYMPTOMS

The symptoms vary, depending on the extent of the fracture, how widely the fracture segments are separated, and the time since the injury.

With minimal injury, there is very little deformity, minimal tenderness over the fracture, and slight swelling over the point of fracture. With modest injury, the arm just above the wrist is bent upward (it looks like a fork facing down), there is acute tenderness over the fracture, and there is moderate swelling over this area. The hand cannot be turned palm up. With severe injury, all the above signs and symptoms are more marked. In addition, there may be symptoms caused by pressure on the nerve from swelling or from a fragment of bone.

DIAGNOSIS

- The diagnosis usually can be made by taking a detailed history of how the injury occurred and doing a thorough physical examination. The surest way to make the diagnosis is by taking appropriate x-rays of the wrist.

Note: Very infrequently, it is not a Colles' fracture that is producing the symptoms but a fracture of one of the small bones of the wrist. Such a fracture may need entirely different management. This is the reason that your x-rays will be looked at with great care to be certain that such a fracture is not missed.

- Symptoms of pressure on the nerve require prompt attention to remove this pressure to avoid possible permanent damage.

○ TREATMENT

The aim of treatment is to restore the function of the arm to as normal a condition as possible and with the least deformity. The treatment of Colles' fracture is heavily influenced by the age, sex, and occupation of the person; other associated injuries or diseases that may complicate matters; and, most important, how badly the bone is broken and how severely the wrist is deformed.

Minimal Deformity

For an older patient, a priority is to restore normal function as soon as possible.

- Often, there is no attempt to have a perfect alignment.
 - A simple splint is applied from the elbow to the crease in the palm.
 - After 3 to 4 weeks, the splint is removed and progressive motion is begun.
- For a younger patient, the priority is to prevent displacement. A forearm cast is applied from the crease in the palm to below or above the elbow.
- A repeat x-ray is taken 2 days later to be certain the bones have not changed their alignment.
 - The cast is removed in 6 weeks and graduated motion is started.

Marked Displacement

- In such cases, the displaced bones should be realigned and then firmly immobilized in that position until they heal.
- A repeat x-ray is taken in 2 days to be certain the bones have not changed their alignment.
- The cast is removed in 6 weeks and graduated motion is started.

After reviewing your case, the recommendation is that you have a resetting of the fractured bones to a more normal position.

PREMANIPULATION

- Except for older persons or those with associated injuries or illnesses, laboratory tests are not always necessary.

- Do not eat or drink anything for 8 hours before the procedure.
- You may be given medicine beforehand that will make you feel drowsy.

REDUCTION OF FRACTURE

An *open* operation is rarely necessary for a Colles' fracture. If you need an open operation, the entire procedure will be discussed with you before anything is planned or done.

- The anesthesia for a *closed* reduction of a Colles' fracture can be given in several ways, depending on the individual clinical and technical circumstances. *Local anesthesia:* A local anesthetic is injected into the fracture itself with a fine needle. *Regional block:* The nerves that supply sensation to the arm are temporarily anesthetized by injecting a local anesthesia around them. *General anesthesia:* You are completely asleep during reduction of the fracture. The choice of anesthetic will be discussed with you beforehand.
- The fractured bones will be realigned by pulling and bending the wrist and then applying a cast to hold them in this corrected position.
- The cast usually extends from the crease in the palm to below or above the elbow.
- The hand will purposely be angled away from the thumb and toward the palm. This is necessary to retain the proper position of the broken bones while they are healing.
- You will be taken to a recovery room and observed. When your blood pressure, pulse, and breathing are stable, you should be able to go home that same day with a responsible adult. On occasion, however, it may be necessary for you to stay in the hospital overnight.
- Arrangements will be made for your pain medicine, follow-up x-rays, and office visit.

⊕ HOME CARE

- You will be fitted with a sling that fits around your neck and under the cast to hold your arm more comfortably.

- For the first several days lie down as much as possible and keep the arm elevated on two or three pillows. This elevation will help keep down the swelling of the tissue, which now is inside the rigid cast.
- Move your fingers at every opportunity.
- Take medicine as prescribed for your pain.
- Eat as you wish.
- You may bathe or shower as you wish, but don't get the plaster cast wet. A small plastic trash bag fitted over the entire arm and sealed at the top with tape usually is satisfactory.
- During a follow-up visit, you will have x-rays to check the position of the bones. Following this, you may have your cast changed to one that goes to just below the elbow.
- Usually, the cast is removed in 6 weeks and a program of graduated exercises of the wrist begun.
- Satisfactory return of motion varies quite a bit, depending again on how severely the bones were broken, how far they were separated, and your age and general condition.
- As with any operation, complications are always possible. With this type of operation, they can include stiffness of the wrist joint, inability to turn the forearm freely, pressure on the nerve to part of the hand, and shoulder stiffness (especially if exercises are neglected). Infrequently, there is a severely disabling complication of marked pain, tenderness, and swelling of the hand, with severe stiffness of the fingers and shoulder.

Important: Notify the doctor *promptly* if you cannot move your fingers, if they become bluish, if you feel a pins-and-needles sensation in them, or if you feel increasing pain in the fracture under the cast. If you cannot reach the doctor, go to the local hospital emergency room promptly.

📞 CALL OUR OFFICE IF

- You have any questions.