



# Fractures of the Forearm Bones

The forearm is the area between the elbow and the wrist. It has two bones. The ulna bone starts at the point of the elbow and is well fixed as a hinge to the humerus (upper arm bone). The ulna bone can be felt beneath the skin as it extends all the way from the tip of the elbow down to the little finger side of the wrist. The radius bone spins around the ulna bone and can be felt at the wrist on the thumb side. It is called the radius because it spins around the ulna bone and allows a twisting motion of the wrist.

The most common mechanism of [fracture](#) of the forearm bones is a fall onto an outstretched hand, or a direct blow of a hard object against the forearm. After an injury, significant deformity of the forearm reveals that there is a fracture. Significant pain and swelling is usually present. Occasionally nerve and blood vessel injuries can result from such a fracture. Fractures of the radius bone at the wrist are very common, and will be discussed in a different section of this website. The remaining fractures of the forearm include fractures of the radial shaft, fractures of the shaft of both the radius and the ulna, and fractures of the ulna alone.

## Radial Shaft Fractures

Radial shaft fractures, without fracture of the ulna, are not very common. When this happens, sometimes the end of the ulna is dislocated at the level of the wrist. This deformity is known as a Galeazzi fracture. Isolated radial shaft fractures are usually treated with surgery if the broken bone ends are moved apart from each other. It is important to align the bones properly to preserve normal rotation of the wrist.

## Fractures of Both the Radius and Ulna Shaft

Fracture of both the radius and ulna shaft is another relatively common injury. Sometimes the fracture ends are not moved apart from each other and the bones may simply be straightened out. However, if the bone ends are moved apart from one another, usually surgical treatment is needed. Surgical treatment allows the surgeon to reposition the bone ends with respect to each other in proper length, alignment, and rotation.

The surgery on both bones fractures is most commonly done with a metal plate and screws. Usually each bone is repaired through a separate incision. Occasionally, intramedullary rods are inserted down the hollow space of the bones and this treatment is more common in children. Adults with both-bones fractures are usually treated with plates and screws.

The following links are resources for forearm bone fractures in children:

- [Elbow fracture in children](#)
- [Radius and ulna fractures in children](#)

Complications of both-bones fractures include decreased motion and delayed or failure to heal of the fracture itself. These complications are more common in fractures that involve the bone being shattered into many small fragments ("comminuted fracture"), and in people who smoke cigarettes. Wound infection is another risk of fracture surgery in the forearm, especially if the fracture was an open fracture. After fracture healing, sometimes the hardware is painful to the patient and they will request hardware removal.



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After fracture surgery on the forearm, most patients are treated in a cast to protect the bones while they are healing. Time to healing is eight to twelve weeks. Time to full activity including sports is 12 to 20 weeks. If a bone plate is removed after bony healing, the patient must once again avoid extreme stresses on the healed bone to prevent a refracture. After hardware removal, usually the bone is strong enough once again for full activity after four months.

## Isolated Fractures of the Ulna

As noted above, the ulna can be felt just below the skin all the way from the tip of the elbow up to the wrist. Therefore, the ulna is particularly vulnerable when it is placed up in front of an individual's face to protect the patient against a blow, or when the patient falls against the ground and strikes the ground first. A fracture of the middle of the ulna is called a "nightstick fracture." The mechanism of injury can be any direct blow to the mid shaft of the ulna, however. Often a fracture of the mid shaft of the ulna is not associated with an injury at the elbow or the wrist. It can be treated with a long arm cast, or with surgery. Plates and screws or intramedullary pins are both effective treatments.

A fracture of the ulna bone near the elbow joint is called a Monteggia fracture, named by an Italian doctor named Giovanni Monteggia in 1814. In this fracture, the end of the radius bone at the elbow is not broken, but rather it is pushed out of its joint. This fracture is thus both a fracture of the ulna and a dislocation of the elbow end of the radius. Proper treatment of this injury requires relocation of the end of the radius and this injury is treated almost always with surgery. The ulna is often plated into its exact proper position, and with this the radius almost always comes back into its proper location at the elbow.

The point of the elbow is called the [olecranon](#). A fracture of the olecranon usually results from a fall directly onto the elbow. It extends into the elbow joint and usually requires surgical treatment with pins, plates, or screws.