

# Volar Plating for Colles Fractures

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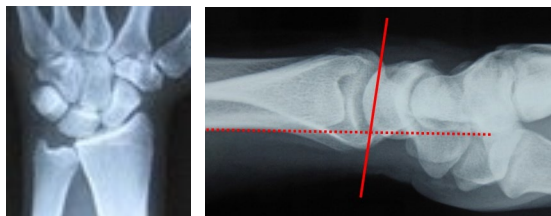
[www.myhand.com.au](http://www.myhand.com.au)

For the treatment of **Unstable , Unacceptably displaced Colles Fractures.**

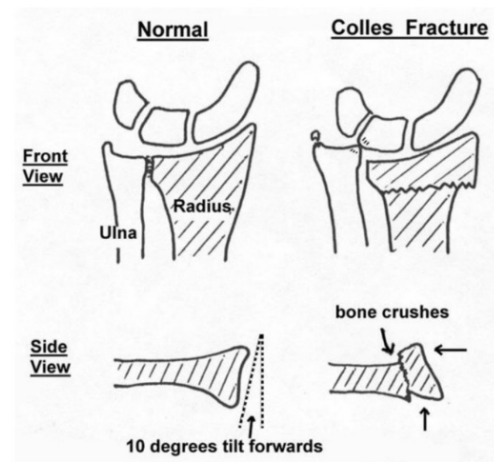
The determination of “Unstable” and “Unacceptable” may vary from individual to individual.

**Indices of Instability** include:

- Dorsal Comminution > 50%
- Dorsal tilt > 20\*
- Palmar metaphyseal comminution  
( crushing, bone in multiple fragments)
- Translation > 10mm in any plane
- Radial Shortening > 5mm
- Intra-articular depression ( step in joint surface)
- some Ulnar fractures
- ++ Osteoporosis

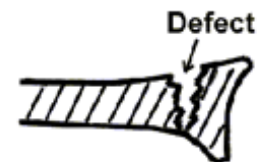


A step in the joint surface like this would rapidly result in arthritis in the wrist if left untreated.



At the time of fracture the bone crushes into itself. When the bone is pulled back (“Reduced”) into place there is often a large defect on the dorsal or back surface of the radius.

## Post Reduction

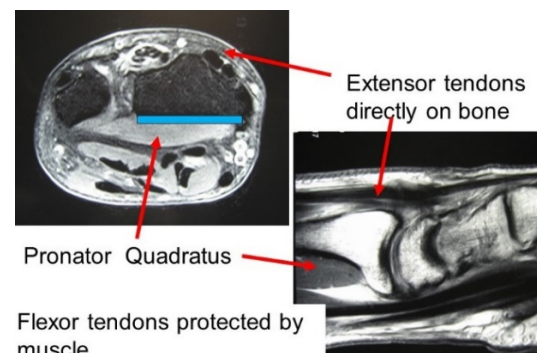


This is potentially an unstable configuration and the fracture can re-displace even in a cast.

If the fracture is deemed unstable then surgical stabilisation with a plate and screws is often recommended.

The diagnosis that a Colles fracture is **unstable** should be made from the **original Xray**

– Not after the fracture has re-displaced.



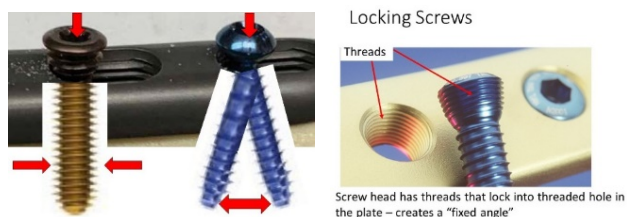
Flexor tendons protected by muscle

We aim to apply plates to the palmar or volar surface of the wrist because the tendons are protected from rubbing on the plate by the overlying muscle of pronator quadratus.

See diagram above. If the plates are applied to the dorsal surface of the wrist there is no protection between the plate and the extensor tendons and often the plate then needs to be removed. Plates on the volar surface of the wrist can often remain in place for the rest of your life. One has to balance the risks of removing the plate ( albeit small) versus the benefits.

### Locking screws & plates

The advent of locking screws has been revolutionary in the treatment of Colles fractures. The plates have threads in the screw holes and the head of the screws has a corresponding thread so that when the screw is inserted it locks and becomes a fixed angle.



### Surgical Procedure

Surgery is often performed under an axillary block and/or a general anaesthetic.

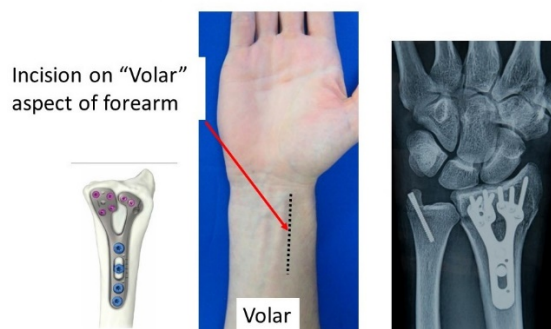
The Axillary block provides excellent post-operative pain relief. Blocks can last for 12 to 24 hours.

During this time you will not have control of the arm. It is important to prevent the plaster hitting you in the face after the surgery because of this lack of control.

The arm will be elevated in an overhead sling.

A 5 to 6 cm incision is made only volar aspect of the forearm.

### “Volar Plate”



Multiple xrays are taking during the procedure using an image intensifier ( Low dose radiation) to ensure satisfactory realignment of the fracture and correct placement of the plate on the bone.

The wound is closed with a **buried suture**.

It is important to keep the **wound dry for 10 days**.

Steri-Strips are applied to the wound at the time of surgery and should be left on until they fall off.

There are **NO** sutures to be removed – they will dissolve.



Steristrips

3 weeks

6 months

The Scar often looks great at 10 days. It then turns purple at 3 weeks. This is normal wound healing.

The scar then will fade over a period of 6 to 12 months.

Rarely keloid scars can form in patients predisposed to this condition.

## Post Op management

Often there will be an Axillary Block to provide post operative pain relief.

<https://www.myhand.com.au/my-operation/anaesthetics/axillary-blocks>

The problem is when the axillary block wears off. It is important to stay ahead of the pain.

You will be prescribed painkillers to take **even though you are not in pain** so that you have adequate pain relief when the block does wear off.

A plaster slab is applied at the end of the operation. If the **plaster slab feels too tight , it is too tight.**

Let the nursing staff know if you are concerned.

The can usually be converted to a **Grenace brace** by the

hand therapist a day or two after the surgery.

It is often more comfortable if the aluminium strip on the dorsal surface of the splint is removed.



The splint can come on off to allow a gentle active exercise program.

An exercise program can usually be commenced within

a day or two after the surgery depending on fracture stability.

If there is gross osteoporosis and the fixation is tenuous

then the wrist may be immobilised in a splint for a further

few weeks. The aim is to start mobilising the wrist

as soon as pain permits.



Your first post-operative visit the wound is checked.

The Steri-Strips remain on and Coban bandage was applied. This can be removed for showering but does help with this controlling swelling and so should be left on for a few days.

Don't peel the Steristrips off. Let them wash fall off.

The wound can be improved if micropore tape or Silicone sheet is applied to the scar for six weeks following the surgery.

You will get a better scar if you keep the wound out of the sun.

The Normal review after surgery is at:

- 9 – 10 days, - 6 weeks and - 4 ½ months.

X-rays may be performed and assessment range of movement & grip strength is noted.

The X-rays are performed in a critical way to assess wrist alignment and plate position.

<https://www.myhand.com.au/health-professionals/radiographers/colles>

