

Total Wrist Replacement

Which conditions is it for?

- When some joints in a wrist is still in good condition
- But others are worn out (bone on bone)
 - Due to previous united fracture
 - Or longstanding ligamentous injuries
- The useful joints can be maintained and worn joints eliminated

One example is a four-corner fusion

- In this surgery the worn and or broken scaphoid bone is removed
- and the remaining bones are fused to facilitate a stable wrist
- Bone graft is often needed from the iliac crest (hip)

What else can be done for an arthritic wrist?

- Avoid activities that flares up pain in the wrist.
- Wear a wrist splint.
- Consider taking an anti inflammatory and panadol.
- A steroid injection into the can give temporary relief

When is surgery needed?

- When non operative treatment is unsuccessful and
- Symptoms in the hand:
 - stop you from doing the ‘things that you have to do’ such as getting dressed, making a meal, driving a car, or getting a good night’s sleep
 - and/or the ‘things that you love to do’ in life such as fishing, riding a bicycle, or holding a book to read.

- If you would prefer a definitive cure for the problem.

How does surgery work?

- This kind of surgery is usually done under general anaesthetic
- Because it is painful after surgery and significant swelling can occur (that may need urgent treatment), it is advisable to stay in hospital overnight
- Antibiotics is usually administered at the time of surgery, but does not have to be continued after.

What do we do in surgery?

- An incision is made on the back of the wrist
- The worn out bones are removed
- And the remaining cartilage between the other bones are removed
- The defect is filled with bone that is harvested from the pelvis
- And the bones are fixed with a plate or screws

After the Surgery

In Hospital

- A large bandage and splint is applied to the hand.
- It is important that the hand remains elevated 'higher than your heart' to help limit swelling
- Do not hesitate to ask for pain killers. It is much better to 'stay on top of pain', than 'to catch' up when it is severe.
- If the bandage feels too tight, do not hesitate to ask for it to be removed.

At Home

- Continue to elevate your arm until swelling in your fingers subside.
- Move your fingers (making a full fist and straightening your fingers out fully about 10-20 times a day).
- Keep the wound dry covered and clean.
- Remove the bulky bandage 2 days after surgery, but keep the splint on.
- Blood thinning medication (if you are on any) can be started 2 days after surgery

- An appointment usually arranged with a hand therapist at about 1-2 weeks after surgery.

The recovery

- The wound usually heals over 1-2 weeks and any sutures are then removed
- Self care (washing, dressing, eating) with the operated hand – usually around 5 days (with a splint on)
- Driving: when you are able to control a steering wheel with your operated hand and you are not taking strong pain relief anymore (usually 4-6 weeks)
- Most moderate activities (equivalent to lifting a pot of the stove or pouring a full kettle) can usually be achieved by 4-6 weeks,
- The bone in the wrist usually take about 8-12 weeks to knit.
- Heavy manual activities should be avoided for 3-6 months
- A maximal recovery can take 6-12 months.

What can go wrong?

- Infection occurs rarely (1% of the time). It is rarely severe.
- There may be ongoing pain from scarring other worn out joints in the area, that were not obviously a problem at the time of doing the surgery.
- Very rarely severe swelling can occur that threatens the blood supply or nerves in the hand. This can necessitate urgent surgery to release the pressure.
- Occasionally the bones do not fuse and further surgery may be needed.
- Very rarely (around one in a thousand) a severe pain reaction, (CRPS) can develop, which can be disabling for years.
- Rarely, the fusion can be unsuccessful and a total wrist arthro desis may be needed.
- A anaesthetic can have complications, such as nausea, heart and lung problems. Please discuss it with your anaesthetist before the operation.

What can you expect the final outcome to be?

- Usually around 50% of wrist movement is maintained
- Strength in the hand is usually around 80 % of normal.
- Most patients experience a satisfactory outcome for many years (studied to about 20 years)