

WRIST ARTHRITIS

Arthritis between the wrist bones is quite common. It can occur either as part of a general tendency to osteoarthritis or following a previous injury to bones or ligaments. The normal smooth surface of the joints has been lost in places causing bare bones to rub together as the wrist is moved. This causes pain, weakness and stiffness. The methods for relieving discomfort in an arthritic joint include (i) activity modification, (ii) pain-killers, (iii) splints and (iv) surgery

There are a number of operations available for treating wrist arthritis. The choice of procedure is complex. It depends mainly on which joints are affected. It also is influenced by your job demands and preferences. Some people need power, some movement, some the quickest recovery and others want the most reliable operation. Not all the methods mentioned below are necessarily applicable to your situation. Whatever is done, the wrist will never be as good as before becoming arthritic.

Denervation This small operation involves cutting the nerve branches that supply the wrist joint but not the skin. It often improves pain but it does not slow the progress of the arthritis. A useful aphorism to illustrate its effect is "Denervation causes 70% reduction in pain in 70% of patients and lasts 7 years.

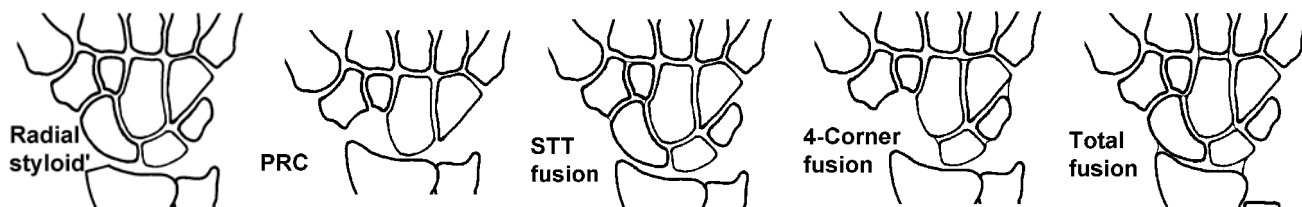
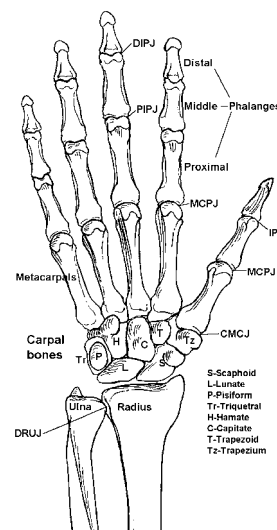
Radial styloidectomy Removal of a small area of the radius. Suited to localised arthritis.

Proximal row carpectomy (PRC) Removal of the first three carpal bones and the creation of a "new" joint between the capitate and radius. Suited to relatively localised arthritis.

Limited fusion Some bones are fused together preventing movement only at the affected joints. Suited to localised arthritis. Requires bone graft to be taken from the hip to allow the bones to heal together.

Total fusion All movement at the wrist is prevented by fusing multiple joints. This is suitable when many of the wrist joint surfaces are arthritic or when other methods have failed to control pain. Requires bone graft.

All involve a cut on the back of the wrist. Fusion is achieved by the surgeon removing all of the surfaces of the joints to be fused with a burr or saw. A cut is then made over the hip-bone and bone-graft is removed. The bone graft is packed into the joints to encourage the bone surfaces to join together. The bones are then held in place by wires (limited fusion) or a plate (total fusion).



Operation	Bone Graft	Fixation	Recovery (min)	Movement (best)	Power (best)
Proximal row carpectomy	No	No	12wk	55%	70%
Limited fusion	Yes	Wires (external)	16wk	50%	80%
Total fusion	Yes	Plate (internal)	16wk	None	75%

Denervation and styloidectomy are small operations with minimal rehabilitation demands that are quick to recover from. These are, however, often only temporary measures that are merely intended to delay the need for the more extensive operations

Carpectomy and fusions are more extensive procedures that take a long time to get over. Overall patient satisfaction rates are "Good"=75%, "Fair"=10%, "Poor"=15%. In general, patients are most satisfied with a total fusion in the long run, despite the loss of movement. PRC and limited fusions can wear out in time and may need to be converted to a total fusion.

After **carpectomy and fusions**, the wrist will be protected in a splint for 6 weeks. After this, you will usually be allowed to begin light use but the splint will be needed for protection at night and during heavy use until at least 9 weeks for PRC and at least 12 weeks for fusions. Fusions will need to be protected until the X-Rays show that the bones are joining together (uniting). Until then, unprotected heavy use will ruin the surgery. You may need to be very patient. **Complications** are common after these operations including finger stiffness (6%), superficial infection (5%), deep infection (0.5%), nerve damage (4%), nerve compression (10%). The fusion operations can fail to join (non-union) (10%) and need a further bone-graft. The plates can cause problems and need later removal (20%).