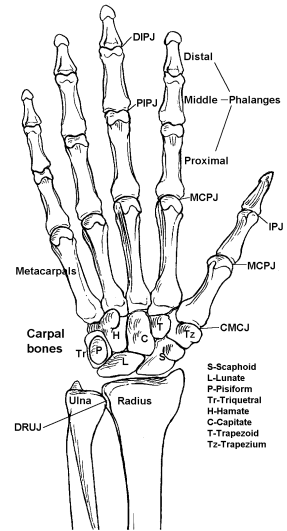


WRIST ARTHRITIS

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. Broadly speaking, pain from a joint can be relieved by (i) cutting its nerve supply (denervation), (ii) removal of bone(s) to prevent the affected surfaces rubbing together (resection arthroplasty) or (iii) preventing movement at the affected joint by fusing the bones together (arthrodesis).

The choice of procedure is complex and depends mainly on which joints are affected. It 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 and some can be combined.

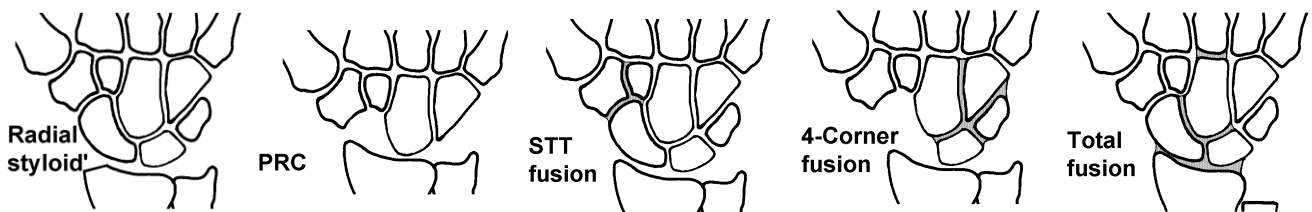
Denervation This involves cutting the nerve branches that supply the wrist joint but not the skin. It often improves pain but it does not slow the progress of the arthritis. A useful aphorism to illustrate its effect is that it causes “70% reduction in pain in 70% of patients and lasts 7 years.

Resection Radial styloidectomy is an example where a small area of the radius is removed where it is rubbing against the scaphoid bone.

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 Two or more bones are fused together preventing movement only at the affected joint(s). Fusion is achieved by the surgeon removing all of the surfaces of the joints and then holding the bones in position by wires or screws. Bone graft is often used to encourage the bone surfaces to join together. Suited to localised arthritis.

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 and a plate.



Operation	Bone Graft	Fixation	Recovery (min)	Movement (best)
Denervation and resection	No	No	2-6wk	Unchanged
Proximal row carpectomy	No	No	12wk	55%
Limited fusion	Yes	Wires/screws/plate	12wk	50%
Total fusion	Yes	Plate	12wk	None

Denervation, joint resection/styloidectomy are small operations with minimal rehabilitation demands that are quick to recover from. The complications are usually minor but the effect of surgery is often only temporary being 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%. PRC and limited fusions can wear out in time and may need to be converted to a total fusion but they are useful in preserving some movement. In general, patients are most satisfied with a total fusion in the long run, despite the loss of movement.

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 wires and plates can cause problems and need later removal (20%).

Carpectomy and fusions require the wrist to 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 in planning a return to normal activities and work.