

# OSTEOARTHRITIS - HAND & WRIST

Decision making

Joint	Outcomes	Decisions
DIPJ PIPJ MCPJ TMCJ PTq STT RCJ DRUJ	Predictable      Unpredictable	Simple      Difficult

**DIPJ & thumb IPJ**

Arthrodesis  
Arthroplasty

**PIPJ**

**Arthrodesis**  
Predictable  
Definitive  
No contraindications  
Stiff

**Arthroplasty**  
Unpredictable  
Limited life  
Contra-indications (Bone stock, stability)  
Mobile (but not very)

**MCPJ**

Arthroplasty  
Arthrodesis

**TMCJ**

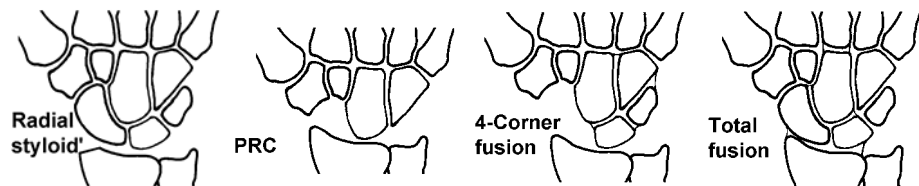
Trapeziectomy  
Arthrodesis  
Trapeziectomy & LRTI  
Trapeziectomy & implant  
Soft tissue stabilisation

**STT**

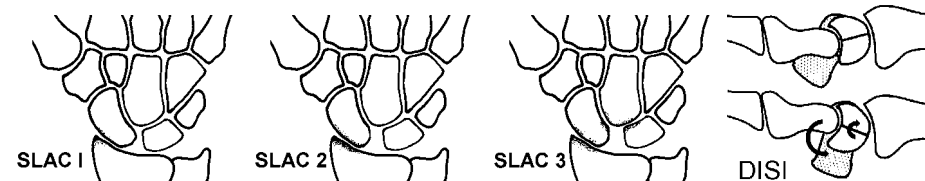
Arthrodesis  
Resection

**Wrist**

Debridement (arthroscopic or open)  
Denervation  
Radial styloidectomy  
Proximal row carpectomy  
Four cornered arthrodesis  
Other limited fusion  
Total fusion



- I Radial styloid degeneration only
  - II Scaphoid fossa involvement
  - III Capito-lunate joint involvement
- (Krakauer et al. JHS 1994, 19A, 751)



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Denervation	Nerves divided/Variant	Minimal	Limited	Modified	Full
	Posterior interosseous nerve	✓	✓	✓	✓
	Anterior interosseous nerve		✓	✓	✓
	Deep branches radial nerve			✓	✓
	Deep branches dorsal ulnar			✓	✓
	Deep branches palmar median branch				✓
	Recurrent intermetacarpal branches				✓
	Incisions	1	1	1	6

777 *Denervation causes a 70% reduction in pain in 70% of patients and lasts 7 years (John Stanley)*

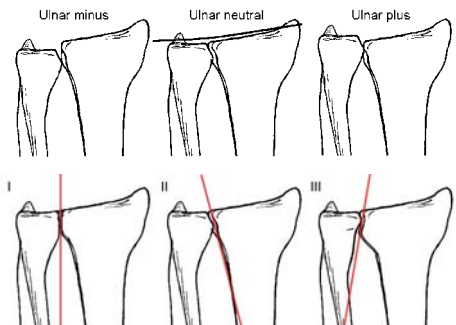
Styloidectomy  
 Suitable for SNAC and SLAC-I  
 Avoid over-resection to prevent instability  
 5-7mm

Motion preserving	PRC		4-CF	
	62%	Flexion/extension*	58%	*Of contralateral hand
	51%	Deviation*	70%	
	71%	Grip strength*	79%	
	SLAC 1-2		SLAC 1-3	
	Easier			
	No wires			
	No non-union			

**P-Tq** Pisiformectomy

**DRUJ**  
 Distal resection (Darrach)  
 Hemiresection  
 Arthrodesis (Sauve Kapandji)  
 Osteotomy  
 Arthroplasty

Analysis  
 Joints affected  
 Variance  
 DRUJ format  
 Stability  
 Power



Darrach  
 Over-used  
 Over-resection is main error

**Indications**

Elderly & osteoporotic  
 Low power  
 Post-Colle's  
 Rheumatoid

**Contra-indications**

Hypermobility  
 Heavy duty work.  
 Unstable DRUJ  
 Carpal translocation (RA)

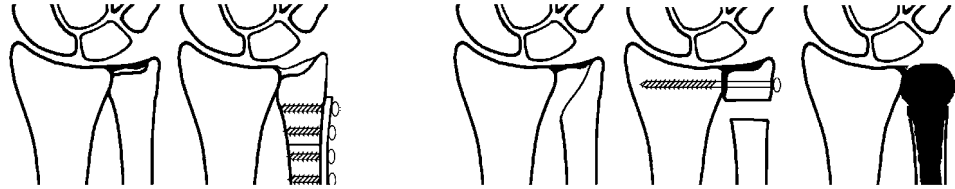
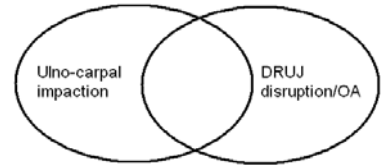
Instability of ulnar stump  
 Impingement of ulnar stump  
 Carpal translocation  
 Extensor tendon rupture

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Alternatives

Wafer and shortening osteotomy indicated for ulno-carpal abutment only if the DRUJ is satisfactory.

Other techniques indicated if DRUJ is disrupted or arthritic but all also can offer solution for abutment

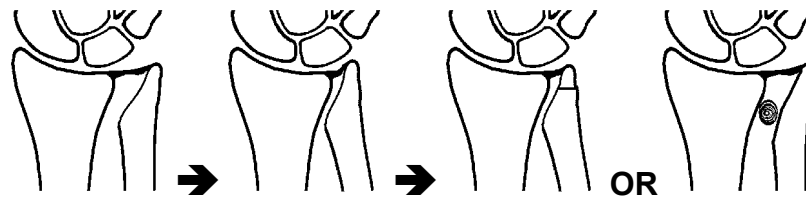


Osteotomy

Abutment syndrome,  
OA in type-I DRUJ  
Radial malunion  
TFCC tears  
DRUJ instability

Hemiresection

Hemiresection interposition technique "HIT" (Bowers 1985)  
Matched ulnar resection (Watson 1986)



Sauve Kapandji

Shares problems of Darrach

Ulnar arthroplasty

Indications unclear  
Salvage procedure

Choice

Considerable variation in opinion and practice. No controlled trials

**Opinion 1:** If there is no instability (TFCC competent) and the cartilage is at the level of the ulnar head there are only two classic options (i) hemiresection & interposition arthroplasty (Bower's procedure) or (ii) Sauvé-Kapandji. The first option has the advantage of not increasing instability, but the disadvantage of poor long-term results owing to degeneration of the tendon ball interposed. The SK creates instability at the level of the ulnar stump, which becomes symptomatic in about 10% of the patients (MGE)

**Opinion 2:** SK works well for me if meticulous at post op care and rehab had good results. Never seen good results with Bowers etc. Replacement has not been a great procedure in my hands. Does need good soft tissues to create stability. Only really used it for end stage disasters referred in after multiple surgery (PS)

**Opinion 3:** Young & early; hemi resection. Late; replace (but this is very rare). Late with post trauma step; smooth joint. I would never do a Sauve-Kapandji. (JD)