

HAND SURGERY- GUIDELINES for POST-OP TREATMENT and REFERRAL to HAND THERAPY

Please use the specific hand therapy referral form. Always give at least one telephone number for the patient so that there is no delay in contacting patient.

For all post-op patients we will aim to see them within 4 days of surgery, unless otherwise stated.

EXTENSOR TENDON REPAIRS

On referral please state zone of injury and which tendon was repaired
i.e. EDC, EI, EDM, EPL, EPB, ECRL, ECRB, ECU

Mallet (Zone I-II)

Splint: DIPJ in full extension, PIPJ free (encourage flexion/extension at PIPJ)

If tendon only: 0-8 weeks continuous splint use
 Refer to hand therapy if stiffness after 8 weeks

If crush fracture 0-6 weeks continuous splint use
 6-8 weeks splint at night and for heavy functional activities only

Central Slip & Lateral Bands (Zone III) – Surgical Repair

Refer immediately following surgery

Central Slip repair only: PIPJ splinted at 0° for 6 weeks (single oblique k-wire)
 Encourage DIPJ/ MCPJ flexion/extension

Lateral bands & central slip repair: PIPJ & DIPJ splinted at 0° for 2 weeks
 Start MCPJ exercises
 At 2 weeks splint reduced so that PIPJ only immobilised at 0°
 Start active DIPJ exercises
 At 4 weeks Start gentle active PIPJ flexion/extension, removing splint for exercises only
 At 6 weeks If extensor lag – use a dynamic Capener splint
 At 8 weeks Continue with static splint at night
 Start passive flexion, if required.
 Discard splint
 Start driving & moderate functional use of hand
 At 10-12 weeks Return to sports/ manual work

Boutonniere Deformity – Conservative Treatment

Immobilise PIPJ only at 0°.

Refer to hand therapy immediately for cylindrical splint to keep PIPJ immobilised for 6 weeks.

Encourage MCPJ & DIPJ flexion/extension

Extensor Tendon Repair (Zone V-VIII)

EDC, EI, EDM

Refer immediately for splint (wrist 25° extension, all MCPJ 40-50° flexion, all IPJs 0°)

0-3 weeks	Splint worn continuously. EAM exercise within limits of splint.
3-5 weeks	Splint worn continuously, removing for active exercises only
5-7 weeks	Discard splint in day Begin light activities
7 weeks	Discard splint at night Return to full function

EPL, EPB, APL

Immobilise in POP splint for 3 weeks (wrist 25° extension, CMCJ full extension, MCPJ full extension, IPJ extended (EPL), IPJ free (EPB/APL), fingers free)

Refer to hand therapy immediately so that we can arrange to see the patient at 3 weeks and replace the POP with a thermoplastic dorsal splint which will maintain the thumb in extension, but allow active flexion exercises to begin within the limits of the splint.

At 5 weeks	Discard splint during day and begin light function
At 7 weeks	Discard splint at night Begin moderate function
At 9 weeks	Return to full function

ECU, ECR

Immobilise in POP (wrist 25° extension, fingers free) for 4 weeks.

At 4 weeks	Refer to hand therapy for graded exercises
At 8 weeks	Return to full function

FLEXOR TENDON REPAIRS

Fingers (FDS, FDP)

On referral please state zone of injury, % division, quality of repair and which tendon was repaired

Refer immediately following surgery

The therapist will replace the post-op POP back slab with a dorsal splint (wrist 20-30° flexion, MCPJs 60-70° flexion, IPJs 0° with fingers free to start EAM exercises

0-3 weeks	Splint worn continuously
3-6 weeks	Splint removed for exercises only
At 6 weeks	Discard splint in day Begin light activities
At 8 weeks	Discard splint at night
At 10 weeks	Return to driving and moderate activity
At 12 weeks	Return to full function

N.b.

- Partial divisions that have been repaired are treated as full repairs
- Partial divisions 0-50% trimmed or left, are not treated
- Muscle injuries – splint removed at 4 weeks and graded exercised begun
- Non-compliant patient (e.g. young children) may be treated with immobilisation for up to 6 weeks

Wrist (FCR,FCU)

Immobilise in POP (wrist 25° flexion, fingers free) for 4 weeks

At 4 weeks	Refer to hand therapy for graded exercises
At 8 weeks	Return to full function

Thumb (FPL & APL)

Refer immediately following surgery

The therapist will replace the post-op POP back slab with a dorsal splint (wrist 20-30° flexion, thumb CMCJ 40° flexion, MCPJ 10° flexion, IPJ 0° and in slight opposition, with fingers free to start EAM exercises

Regime similar to finger flexors

MEDIAN & ULNAR NERVE REPAIRS

If tendon involved, splint and treat as tendon repair

Refer immediately following surgery

The therapist will replace the post-op POP back slab with a dorsal splint (wrist 20° flexion, fingers free)

0-4 weeks	Splint continuously
4-6 weeks	Remove splint for exercises only
6-8 weeks	Wear splint at night only
After 6 weeks	Median nerve – make thumb opposition splint if helpful for function Ulnar nerve – make ant-claw splint if necessary

RADIAL NERVE REPAIRS

If tendon involved, splint and treat as tendon repair

Refer immediately following surgery

The therapist will replace the post-op POP with a volar resting splint (wrist 30° extension, MCPJs 50° flexion, IPJs 0°, thumb abducted)

0-2 weeks	Splint continuously
After 2 weeks	Maintain AROM and PROM in wrist, fingers & thumb Provide either a wrist extension splint or a static outrigger, depending on functional requirements of patient

DUPUYTREN'S RELEASE

On referral please state: Type of surgery
 Joint angles before surgery (if known)
 Joint angles achieved at surgery

Refer immediately following surgery

The therapist will replace the post-op POP volar slab with a hand-based volar splint holding the operated fingers in comfortable extension

0-stitch removal	Wear splint continuously, removing for exercises
After stitch removal	Wear splint at night and gradually increase exercise regime
N.b. Dermofaciectomy	Wear splint continuously for a week, or until graft is stable before beginning exercises

TRAPIZIECTOMY

Refer immediately following surgery so that we can provide patient with a therapy appointment to coincide with removal of POP

0-4 weeks	Immobilised in post-op POP
After 4 weeks	Provide small thermoplastic thumb post for light functional activity Provide night splint, if necessary Start graded exercises
4-8 weeks	Gradually reduce of day splint for light functional activities
After 8 weeks	Begin driving, depending on pain levels
After 10 weeks	Return to heavy activities

MCPJ ARTHROPLASTY

Refer immediately following surgery so that we can provide patient with a therapy appointment to replace post-op POP with a splint in the first week

Within first week	Provide patient with 2 volar splints Splint 1 - Wrist 30° ext, MPJs 60-70° flexion, IPJs extended Splint 2 - Wrist 30° ext, MPJs 0°, IPJs extended The splints are alternated every 24 hours
1-4 weeks	Splints removed for active exercises only
4-8 weeks	Splints worn for protection/at night only
8-12 weeks	Begin strengthening exercises Splint worn at night only
After 10 weeks	Begin heavy activities

FOUR CORNER FUSION with SCAPHOIDECTOMY

0-2 weeks	Remain in post-op POP (wrist 25° ext with thumb CMCJ opposed & abducted, thumb MPJ slightly flexed, IPJ free)
2-6 weeks	POP replaced with wrist splint Commencement of exercises dependent on result of X-ray

PROXIMAL ROW CARPECTOMY

0-2 weeks	Remain in post-op POP (wrist 25° ext, fingers free)
2 weeks	Begin exercises

CARPAL TUNNEL DECOMPRESSION/TRIGGER FINGER

Refer only if problems with scar/movement/signs of CRPS

TENDON TRANSFERS/TENDON RUPTURES

Treat as tendon repair

OPPONENSPLASTY

Bunnell transfer (donor FDS of ring or middle finger)
Burkhalter transfer (donor EI)

Refer immediately following surgery so that we can provide patient with a therapy appointment to replace post-op POP with splint within the first week

0-3 weeks	Splint continuously. Dorsal splint wrist 20-30° flexion, fingers free, thumb abducted with slight opposition to index finger, ulnar border on thumb portion of splint to prevent thumb adduction, thumb free to flex and abduct, IPJ 5-10° Start EAM
3-6 weeks	Remove splint for exercises
6 weeks	Discard splint in day Begin light activities
8 weeks	Discard splint at night
10 weeks	Return to driving and moderate exercise
12 weeks	Return to sport and heavy manual activities

TENDON TRANSFERS following RADIAL NERVE PALSY

Brands transfer (PT to ECRB, FCR to EDC and EDM, PL to EPL)

Refer immediately following surgery so that we can provide patient with a therapy appointment to replace post-op POP with splint at 2 weeks

0-2 weeks	Remain in post-op POP
2-3 weeks	Replace POP with splint (elbow +/- 60° flexion, forearm pronated, wrist 30° extension, fingers MPJ, PIPJ, DIPJ neutral, thumb CMCJ, MPJ, IPJ extended)
3-6 weeks	Dynamic extension splint for fingers and thumb during day Continue with night splint Begin active wrist and elbow exercises
6-8 weeks	Start strengthening exercises Night splint only

TENDON TRANSFERS following ULNAR NERVE PALSY

Zancolli procedure (dynamic slings of FDS)

Refer immediately following surgery so that we can provide patient with a therapy appointment to replace post-op POP with a splint in the first week

0-6 weeks	Replace POP with dorsal splint (wrist neutral, MCPJs at 45° flexion, IPJs free to flex Gradually increase exercises
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TERMINALISATION

Light dressing only and start EAM exercises

SCARS

Refer keloid, hypertrophic, adhered and hypersensitive scars early
The patient will be advised on scar massage, silicone dressings, pressure garments, Ultrasound, as appropriate

FRACTURES

Unstable #s	ORIF K-wire	Begin EAM exercises immediately Refer for splint for 3 first 3 weeks, removing to begin EAM exercises
Potentially unstable #s	Immobilise in splint according to request of referring doctor	
Stable #s	0-2 weeks 2-3 weeks 6-8 weeks 12 weeks	Splint continuously Refer to hand therapy if reduced movement Continue with splint at night and protection Return to most sports/manual work Return to contact sports

Positoning of splints

Joint above and below # immobilised

Distal phalanx #	DIPJ 0° extension
Middle phalanx #	PIPJ and DIPJ 0° extension
Proximal phalanx #	MCPJ 40-60° flexion, IPJs free
Metacarpal # neck	
Metacarpal # shaft	
Metacarpal # base	
Proximal phalanx # thumb	CMCJ abducted and slightly opposed, MPJ 5-10° flexion, IPJ free
Metacarpal # thumb	Wrist 25-30° extension, CMCJ abducted and slightly opposed, MPJ 5-10° flexion, IPJ 0°
Scaphoid #	Immobilise in POP for first 6 weeks If stable # replace POP at 2 weeks with splint (wrist comfortable extension, thumb CMCJ opposed/abducted, MCPJ slightly flexed, IPJ free) Remove splint for active exercises only, continuing to use splint up to 6 weeks
Bennet's #	Immobilise in short arm cast for 6 weeks