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Ulnar Nerve Release with Transposition

Phase 1: Protection / Early Healing (0–2 weeks)

Goals

- Protect the surgical site
- Minimize swelling and pain
- Prevent elbow stiffness
- Protect the transposed nerve from traction

Immobilization

- Posterior splint or bulky dressing
- Elbow typically **70–90° flexion**
- Wrist neutral

Activity

- Elevation of the arm
- Avoid prolonged elbow flexion beyond splint position

Exercises

- Hand and finger active ROM
- Wrist flexion/extension
- Gentle forearm pronation/supination (if permitted)
- Shoulder pendulums
- Scapular retraction

Precautions

- No lifting
- Avoid leaning on the elbow
- Avoid aggressive elbow flexion

Clinical focus

- Monitor symptoms of nerve irritation (paresthesia in ring/small finger)
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Phase 2: Early Motion (2–6 weeks)

Goals

- Restore elbow range of motion
- Prevent perineural scarring
- Begin gentle nerve mobility

Brace

- Often discontinued in 7 to 10 days if incision healing well

ROM

- Gradual progression to **full elbow ROM**

Exercises

- Active and active-assisted elbow flexion/extension
- Forearm pronation/supination
- Wrist and hand strengthening (light)
- Gentle **ulnar nerve gliding exercises**

Example nerve glide:

1. Shoulder abducted
2. Elbow flexed
3. Wrist extended
4. Slowly extend elbow

Precautions

- Avoid prolonged elbow flexion ($>90^\circ$) early
 - Avoid repetitive gripping or heavy use
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Phase 3: Strengthening (6–10 weeks)

Goals

- Restore strength of forearm and intrinsic hand muscles
- Improve nerve mobility and endurance

Exercises

- Light resistance wrist strengthening
- Forearm pronation/supination with resistance
- Grip strengthening
- Intrinsic hand muscle exercises (lumbricals/interossei)
- Continue nerve glides

Functional training

- Light activities of daily living
 - Ergonomic education
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Phase 4: Advanced Strengthening / Functional Return (10–12+ weeks)

Goals

- Return to full activity
- Normalize upper extremity function

Exercises

- Progressive resistance training
- Closed-chain exercises (wall push-ups → modified push-ups)
- Task-specific training

Return to activities

- Desk work: **1–2 weeks**
 - Light lifting: **4–6 weeks**
 - Heavy lifting/manual labor: **8–12 weeks**
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Expected Nerve Recovery Timeline

Recovery depends on **preoperative nerve damage**.

Function	Expected timeline
Pain improvement	2–6 weeks
Sensory recovery	3–6 months
Intrinsic hand strength recovery	6–12 months

Key Precautions

Avoid early compression or traction on the nerve:

- Leaning on elbows
- Repetitive elbow flexion
- Heavy gripping early
- Sustained elbow flexion (phone use, sleeping position)