

# Ulnar Shortening Darrach

This protocol is intended to provide the clinician with a guideline for the postoperative rehabilitation course of a patient who has undergone ***Darrach surgery***. General time frames are given for reference to the average, but individual patients will progress at different rates depending on their age, comorbidities, pre-surgical range of motion, strength, health/functional status, rehabilitation compliance, learning barriers and complications. Specific time frames, restrictions and precautions are given to protect healing tissues and surgical reconstruction.

Incision along distal ulna through the extensor retinaculum. Distal ulna removed, just proximal to sigmoid notch of radius. The wrist capsule is then reconstructed.

Very important to review operative note, because sometimes additional procedures are performed at the same time:

- Pronator quadratus transfer
- FCU or ECU tenodesis

Best to send the surgeon an in-basket if you have questions about how the additional procedures affects orthosis position or exercise progression.

Dorsal translation with impingement of the ulna on the radius is one complication that sometimes occurs.

Either an off-the-shelf wrist widget or custom widget-

## Postoperative Guidelines

### Surgical Indication

Indicated for chronic:

- Compression of the DRUJ or ulnocarpal joint
- Arthritis: ulnocarpal or distal radioulnar
- Subluxation/dislocation of ulna

### Return to Work

The timeline for returning to work can vary depending on the type of work performed, various accommodations that may be available within your work environment, and any postoperative complications. Your surgeon will discuss the timeline for returning to work after consideration of these factors.

Important to explain to patients that after the Darrach procedure the weight bearing capacity is limited. When it is safe to begin lifting, encourage full forearm supination. The interosseous membrane and ligaments assist in stabilizing the ulna when the forearm is fully supinated.

If patient is having difficulties with active forearm rotation, best to have the patient start working toward forearm supination while the elbow is fully flexed. This position promotes proximal / dorsal translation of the radius for increased forearm rotation. Conversely,

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Phase I (7-14 days after surgery)

<p>Rehabilitation appointments</p>	<ul style="list-style-type: none"> <li>• Physician appointment at 10-14 days post op</li> <li>• One Rehabilitation appointment immediately following physician 10-14 days post op appt.</li> </ul>
<p>Rehabilitation goals and priorities</p>	<ul style="list-style-type: none"> <li>• Instruct on post-operative precautions</li> <li>• Protect in custom orthosis</li> <li>• Wound healing</li> <li>• One-handed Activities of daily living (ADLs)</li> </ul>
<p>Suggested therapeutic exercises</p>	<ul style="list-style-type: none"> <li>• Gentle AROM to shoulder, wrist, digits and thumb</li> <li>• Start gentle AROM at 2 weeks post op</li> <li>• Tendon gliding for fingers</li> <li>• Edema management</li> <li>• Scar mobilization once incisions fully healed</li> </ul>
<p>Precautions</p>	<ul style="list-style-type: none"> <li>• No forearm ROM</li> <li>• No lifting/pushing/pulling</li> </ul>
<p>Orthoses</p>	<ul style="list-style-type: none"> <li>• Custom short arm wrist orthosis positioning wrist and forearm in neutral, allowing full elbow flexion/extension</li> </ul>

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### Phase II (3-4 weeks post-operative)

Rehabilitation appointments	<ul style="list-style-type: none"> <li>Once a week</li> </ul>
Rehabilitation goals and priorities	<ul style="list-style-type: none"> <li>Protect in custom orthosis</li> </ul>
Suggested therapeutic exercises	<ul style="list-style-type: none"> <li>Use of heat prior to exercises</li> <li>Gentle short arc AROM for wrist, limiting to mid-range (less than 45 degrees of flexion or extension until week 5), <b><u>while forearm in full supination</u></b></li> <li>3-4 times per day, 25 slow repetitions</li> <li>Continue scar and edema management</li> </ul>
Precautions	<ul style="list-style-type: none"> <li>No forearm ROM</li> <li>No lifting/pushing/pulling</li> </ul>
Orthosis	<ul style="list-style-type: none"> <li>Custom short arm wrist cock up</li> <li>Orthosis off for hygiene, but no use of hand without orthosis in place</li> </ul>

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### Phase III (6 weeks post-operative)

Rehabilitation appointments	<ul style="list-style-type: none"> <li>Depending on pain and ROM, frequency varies from twice per week to twice per month</li> </ul>
Rehabilitation goals and priorities	<ul style="list-style-type: none"> <li>Encourage light functional use of hand in orthosis</li> </ul>
Suggested therapeutic exercises	<ul style="list-style-type: none"> <li>Add gentle forearm rotation, initially from full supination to neutral. 3-4 times per day, 25 slow repetitions</li> <li>Progress to AAROM for wrist flexion/extension, held at end range for 30 seconds</li> <li>Continue scar management</li> <li>Important to remember this surgery is performed to eliminate pain. Avoid aggressive stretching; patient needs to stay within <u>pain-free</u> range of motion.</li> </ul>
Precautions	<ul style="list-style-type: none"> <li>No lifting/pushing/pulling</li> </ul>
Orthosis	<ul style="list-style-type: none"> <li>Off-the-shelf wrist-hand orthosis (eg: Titan) or custom</li> <li>Orthosis off for hygiene and ROM</li> <li>Consider wrist widget or Modabber to support during forearm ROM</li> </ul>

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### Phase IV (8-12 weeks post-operative)

Rehabilitation appointments	<ul style="list-style-type: none"> <li>Twice per month to upgrade HEP</li> </ul>
Rehabilitation goals and priorities	<ul style="list-style-type: none"> <li>Functional, pain-free AROM for forearm and wrist</li> <li>Gradual increase in strength</li> </ul>
Suggested therapeutic exercises	<ul style="list-style-type: none"> <li>8 weeks: Passive forearm rotation, stabilizing ulna proximal to wrist and rotating/translating radius, 30 second holds</li> <li>Hand strengthening with <u>forearm in supination</u>: hand exerciser with rubber bands or resistive putty</li> <li>10 weeks: Light weights for elbow and wrist, incrementally increased</li> <li>Only isometrics in neutral position for forearm strengthening (no torque)</li> </ul>
Precautions	<ul style="list-style-type: none"> <li>No sports until 12 weeks</li> <li>No resistance during forearm rotation except isometrics in neutral</li> </ul>
Orthosis	<ul style="list-style-type: none"> <li>8 weeks: Gradually starting weaning from wrist orthosis during the day, starting with light activity. Continue at night.</li> <li>12 weeks: Discontinue orthosis at night.</li> </ul>

### References

1 Cannon, N. M. (2020). *Diagnosis and treatment manual for physicians & therapists: Upper extremity treatment guidelines*. Hand Rehabilitation Center of Indiana.

2 Takeisnik, J. and Ruby, L.K. (1998). Arthritis deformity: Resection arthroplasty and fusion. In: Cooney, W.P., Lindscheid. R.L., Dobyns, J.H. (eds.), *The Wrist: Diagnosis and Operative Treatment (792-800)*. S. Louis: Mosby

*Rehabilitation and the UW Health Orthopedic Surgeons.*

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