Flexor Pollicis Longus Repair

This protocol is intended to provide the clinician with a guideline for the postoperative rehabilitation course of a patient who has undergone ***flexor pollicis longus (FPL) repair.*** 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.

Flexor Pollicis Longus Repair

Phase I (3-5 days -4 weeks)

	Modified Duran	Early Active Motion
Rehabilitation goals and priorities	• Remove post op dressings and fabricate orthosis. Traditionally remove dressings at 10-14 days but can be seen earlier. • Wound management • Edema management	• **Very important: ELEVATE and IMMOBILIZE for 3-5 days before starting motion to decrease work of flexion.** • Remove post op dressings and fabricate orthosis. • Wound management • Edema management: If needed, apply light compression (example: coban) for edematous thumb. Remove prior to any active motion
Suggested therapeutic exercises	• Passive IP flexion and active IP extension to the orthosis with the MP stabilized in neutral position • Passive composite MP/IP flexion and active extension to the orthosis • Tenodesis/Synergistic Wrist Movement: Active wrist flexion/extension with synergistic thumb motion	• Passive composite flexion of IP and MP • Active extension to the limit of dorsal blocking orthosis • FIRST week: active flexion at MP and IP to oppose the index and middle fingers • SECOND week: oppose the ring finger • THIRD week: oppose the small finger • FOURTH week: oppose base of small finger • Tenodesis/Synergistic Wrist Movement: Active wrist flexion/extension with synergistic thumb motion
Precautions	• No lifting pushing or pulling more than 2 pounds with involved upper extremity • No functional use of the thumb • No weightbearing of involved upper extremity	• No lifting pushing or pulling more than 2 pounds with involved upper extremity • No functional use of the thumb • No weightbearing of involved upper extremity

Orthosis management	• Custom WHFO dorsal blocking orthosis fabrication: wrist in 10 degrees extension and 10 degrees ulnar deviation (to minimize reduce tension of FPL at distal carpal canal), CMC in 30 degrees palmar abduction / 10 degrees flexion, MP in slight flexion, IP in neutral • Wear all the time. Can remove safely at sink to wash the hand • Minimize risk for IP contractures by modifying orthoses as needed	• Custom WHFO dorsal blocking orthosis fabrication: wrist in 30 degrees extension, resting position of thumb neutral abduction • Wear all the time except for bathing • Minimize risk for IP contractures by modifying orthoses as needed
Progression criteria	• Initiate active AROM of the thumb at 4 weeks. If edema is significant, scar adherence is present, and/or PROM is limited, initiated protective IPJ AROM flexion.	• If observed active IPJ flexion is progressing well, continue with timeline. If progressing slowly, progress exercises. Use clinical judgment.

Flexor Pollicis Longus Repair

Phase II (4-6 weeks)	Modified Duran	Early Active Motion
Rehabilitation goals and priorities	• Activities of daily living per restrictions • Scar management • Edema management • Full PROM of thumb • 50-75% of full AROM of the thumb	• Activities of daily living per restrictions • Begin using hand for specific light ADL tasks while seated. • Scar management • Edema management • Full PROM of thumb • 50-75% of full AROM of the thumb
Suggested therapeutic exercises	• Pain-free AROM of thumb • IPJ blocking • Wrist AROM	• Progress one step each visit: • Active MP and IP flexion in varying wrist flexion and extension • Blocking for isolated IPJ flexionPerform light therapeutic activities to increase IPJ flexion
Precautions	• No lifting pushing or pulling more than 2 pounds with involved upper extremity • No weightbearing of involved upper extremity	• No lifting pushing or pulling more than 2 pounds with involved upper extremity • No weightbearing of involved upper extremity
Orthosis management	• Wear all the time except bathing and exercises. • At 6 weeks, cut down orthosis to hand based and initiate light activities with the orthosis not in place	• Wear orthosis all the time except for bathing and exercises. Perform light activities with hand as a therapeutic activity • Cut down to hand based

Flexor Pollicis Longus Repair

Phase III (6-8 weeks)	Modified Duran	Early Active Motion
Rehabilitation goals and priorities	• Activities of daily living per restrictions • Begin using hand for specific light ADL tasks while seated. • Scar management • Edema management • Obtain close to full AROM of IPJ flexion	• Activities of daily living per restrictions • Begin using hand for specific light ADL tasks while seated. • Scar management • Edema management • Obtain close to full AROM of IPJ flexion
Suggested therapeutic exercises	• Start passive stretching into extension if needed	• Start passive stretching into extension if needed
Precautions	• No resistive or toque activity allowed • No lifting pushing or pulling more than 5 pounds with involved upper extremity • No weightbearing of involved upper extremity	• No resistive or toque activity allowed • No lifting pushing or pulling more than 5 pounds with involved upper extremity • No weightbearing of involved upper extremity
Orthosis management	• Wean from orthosis	• Wean from orthosis
Progression criteria	• Per pain tolerance	• Per pain tolerance

Flexor Pollicis Longus Repair

Phase IV (8 -12 weeks)	Modified Duran	Early Active Motion
Rehabilitation goals and priorities	• Return to all activities: first daily activities and then progress to heavy activities and leisure	• Return to all activities: first daily activities and then progress to heavy activities and leisure
Suggested therapeutic exercises	• Progressive strengthening	• Progressive strengthening
Precautions	• No restrictions at 12 weeks	• No restrictions at 10 weeks
Orthosis management	• Discontinue	• Discontinue
Progression criteria	• Per pain and per MD guidance	• Per pain and per MD guidance

Additional Notes

- **Linburg-Comstock anomaly = intertendinous connection between FPL and FDP of IF at carpal tunnel or distal forearm. Present in 1/3 population.**
- **Test by passively restricting fingers while actively flexing thumb with wrist in extension: positive if pain at wrist.**
- **If surgeon unable to divide the intertendinous connection, DBS should also include IF in 25 degrees of MP flexion and IPs in extension.**