

## Zone III: Central Slip Repair

This protocol is intended to provide the clinician with a guideline for the postoperative rehabilitation course of a patient who has sustained a **central slip with or without lateral band injury / Zone III extensor tendon injury**. 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.

Terminology: **SAM** refers to Short Arc of Motion

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### Phase I (day 2-5 days postop – 2 weeks)

Rehabilitation appointments	<ul style="list-style-type: none"> <li>Weekly per therapist discretion</li> </ul>
Rehabilitation goals and priorities	<ul style="list-style-type: none"> <li>Protection of repair-full PIP extension (and DIP if lateral bands involved)</li> <li>Activities of daily living within restrictions</li> <li>Edema management</li> <li>Wound/scar management</li> </ul>
Orthosis management	<ul style="list-style-type: none"> <li><b>Conservative</b> = Volar gutter: PIP in full extension DIP free</li> <li><b>Conservative central slip and lateral band involvement</b> = Volar gutter with PIP and DIP in full extension</li> <li>SAM central slip only = Volar gutter: PIP in full extension DIP free               <ul style="list-style-type: none"> <li>PLUS volar exercise splint with wrist in 30 degrees flexion, PIP and DIP in 20° flexion block.</li> </ul> </li> <li>SAM central slip and lateral band repair = Volar gutter with PIP and DIP in full extension –               <ul style="list-style-type: none"> <li>PLUS volar exercise splint with wrist in 30 degrees flexion, PIP flexion block and DIP in extension.</li> </ul> </li> </ul>
Suggested therapeutic exercises	<ul style="list-style-type: none"> <li><b>Conservative:</b> blocked DIP AROM X 10 reps of flexion every hour.</li> <li><b>SAM central slip/ slip and lateral bands;</b> while holding template in place, perform 20 repetitions each hour of flexion to touch template splint and extension to neutral using “minimal active tension.”</li> </ul>
Precautions	<ul style="list-style-type: none"> <li>Wound precautions</li> <li>Orthosis 24/7-remove for hand hygiene only (and exercises if using SAM protocol).</li> <li>No lifting, pushing, or pulling more than 2 pounds with involved upper extremity</li> <li>No weightbearing of involved upper extremity</li> </ul>

## Zone III: Central Slip Repair

### Phase II (2 – 4 weeks)

Rehabilitation appointments	<ul style="list-style-type: none"> <li>Weekly per therapist's discretion</li> </ul>
Rehabilitation goals and priorities	<ul style="list-style-type: none"> <li>Protection of repair</li> <li>Excursion of the lateral bands</li> <li>Activities of daily living per restrictions</li> <li>Edema management</li> <li>Scar management</li> </ul>
Orthosis/ exercise	<ul style="list-style-type: none"> <li><b><u>Conservative</u></b> : Full extension <ul style="list-style-type: none"> <li>may transition to cast once edema subsides.</li> <li>A/PROM to all joints except for splinted PIP</li> <li>Monitor every other week for full PIP extension as edema decreases</li> </ul> </li> <li><b><u>SAM central slip only</u></b> : Volar gutter: PIP in full extension DIP free – <ul style="list-style-type: none"> <li>Progress exercise template of the PIP/ DIP by 10° flexion weekly</li> <li>If extension lag develops, hold on exercises for one week, then reassess</li> </ul> </li> <li><b><u>SAM central slip and lateral band repair</u></b>: Volar gutter with PIP and DIP in full extension <ul style="list-style-type: none"> <li>Progress volar template splint of the PIP/ DIP by 10° flexion weekly</li> <li>If extension lag develops, hold on exercises for one week</li> </ul> </li> </ul>
Precautions	<ul style="list-style-type: none"> <li>Monitor extension lag</li> <li>Orthosis 24/7-remove for hand hygiene only (and exercises if using SAM protocol).</li> <li>No lifting, pushing, or pulling more than 2 pounds with involved upper extremity</li> <li>No weightbearing of involved upper extremity</li> </ul>
Progression criteria	<ul style="list-style-type: none"> <li>Progress if extension lag is not present</li> <li>Hold exercises if extension lag develops</li> </ul>

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### Phase III (4 – 5 weeks)

Rehabilitation appointments	<ul style="list-style-type: none"> <li>Weekly per therapist discretion</li> </ul>
Rehabilitation goals and priorities	<ul style="list-style-type: none"> <li>Protection of repair</li> <li>Activities of daily living per restrictions</li> <li>Edema and scar management as needed</li> <li>Progress ROM without extension lag</li> </ul>
Orthotic and exercises	<ul style="list-style-type: none"> <li><b><u>Conservative:</u></b> <ul style="list-style-type: none"> <li>Begin to wean from day splinting during sedentary activities/ light ADL tasks for short time periods</li> <li>Continue to splint at night and during high-risk ADL</li> <li>Begin gentle AROM for the MP/PIP/ DIP</li> <li>Continue extension splint at night</li> <li>If &gt; 10° extensor lag develops, resume static splinting in full PIP extension</li> </ul> </li> <li><b><u>SAM central slip only:</u></b> <ul style="list-style-type: none"> <li>Begin to wean from day splinting during sedentary activities/ light ADL tasks for short time periods</li> <li>Continue to splint at night and during high-risk ADL</li> <li>Begin gentle AROM for the MP/PIP/ DIP</li> <li>Continue extension splint at night</li> <li>If &gt; 10° extensor lag develops, consider spring extension splint during the day.</li> <li>At 5 weeks, if no extension lag, initiate composite flexion</li> </ul> </li> <li><b><u>SAM central slip and lateral band repair:</u></b> <ul style="list-style-type: none"> <li>Same as SAM central slip</li> </ul> </li> </ul>
Precautions	<ul style="list-style-type: none"> <li>No forceful gripping</li> <li>No lifting, pushing, or pulling more than 2 pounds with involved upper extremity</li> <li>No weightbearing of involved upper extremity</li> </ul>
Progression criteria	<ul style="list-style-type: none"> <li>Progress if no extensor lag present</li> </ul>

## Zone III: Central Slip Repair

### Phase IV (6 – 8 weeks)

Rehabilitation appointments	<ul style="list-style-type: none"> <li>Weekly per therapist's discretion</li> </ul>
Rehabilitation goals and priorities	<ul style="list-style-type: none"> <li>Full AROM</li> <li>Functional ADL</li> </ul>
Orthotic and therapeutic exercises	<ul style="list-style-type: none"> <li><b><u>All protocols:</u></b> <ul style="list-style-type: none"> <li>At 6 weeks night extension splint for additional 2 weeks then discontinue if no extension lag is present</li> <li>At 8 weeks, if persistent stiffness or weakness persists, PROM may begin if no extension lag is present.</li> </ul> </li> </ul>
Precautions	<ul style="list-style-type: none"> <li>Observe for lag</li> </ul>

### ADDITIONAL NOTES

- A balanced exercise and splinting program is essential for optimal outcome.
- Splinting must maintain 0 ° of extension at the PIP
- Strengthening may be initiated at 10 weeks if needed: DO NOT assess grip strength
- Resistant cases can require attention and supervision for 6 – 9 months after injury. Tissue maturation with realization of the full potential function of the finger may not be achieved for a full year.
- Those who smoke and/ or have diabetes or other medical conditions have slow healing which may need extended splinting/ casting time to achieve a satisfactory outcome.