EXTENSOR TENDON REPAIRS
(ZONES III AND IV)

1. **1 Week post-op**

-The PIP joint and DIP joint are placed in a **volar static extension splint** placing both joints in full extension. The finger is wrapped with "Coban" for edema management and the splint is secured with plastic tape. The wrist and MCP joints are allowed to move freely in flexion and extension thus producing gliding of the saggital bands and minimal tension to the EDC.

-On day two, two additional volar splints are fabricated for exercise.

Exercise splint A blocks flexion of the PIP joint in a 30-degree angle and the DIP joint in a 20-25 degree angle. This splint is utilized every hour for exercise with the wrist positioned in 30 degrees of flexion, the MCP joints positioned in full extension and the involved finger flexing only to the limits of the volar exercise splint. Support the digit's MCP joint in extension with the uninvolved hand. Twenty repetitions are performed slowly and actively through the 30-degree range of PIP joint flexion and extension and 20-25- degree range of DIP flexion and extension. **(central slip and lateral band involvement)**.

Exercise splint B positions the PIP joint in full extension and allows the DIP joint full range in flexion **(lateral bands are not involved)**. The wrist is again positioned in 30 degrees of flexion with the MCP joint support in extension by the uninvolved hand. Twenty repetitions are performed slowly and actively every hour through the limits of the exercise splint.

-Following these active exercises, the involved finger or fingers are wrapped with "Coban" for edema management and repositioned in the static volar extension splint.
-**The patient is to wear the static extension splint when not exercising and also at night.**

2. **2 Weeks post-op**

-If no extensor lag has occurred, the volar splint for exercise is to be adjusted allowing for 40-degrees of flexion at the PIPJ. If an extension lag has occurred, do not adjust the splint at this time and focus upon extension splinting and active extension in the original **Exercise splint A** . The extension block may have to adjusted to -10 to-20 degrees of flexion to

improve extension lag. Follow positioning of the wrist in flexion and the MCP joint in extension when performing exercises. Continue static extension splinting between sessions and at night. Continue edema management with "Coban" wrapping and edema massage.

-Following suture removal, apply scar mold and wrap with "Coban" for pressure. Instruct the patient in scar massage over healed incision and to any hardened or puckered areas of scar tissue. The finger should remain in an extended position during application of pressure.

3. **3 Weeks post-op**

-Adjust PIP joint flexion angle of exercise splint to 50-degrees of flexion. If an extension lag is present, adjust angle of splint minimally and focus efforts of exercise upon extension. Continue wrist and MCP joint position while exercising.
-Continue wearing static extension splint between exercise sessions and at night.
-Continue scar and edema management. Add mini-vibrator massage over scar if the scar is adherent.

4. **3 ½ Weeks post-op**

-Adjust PIP joint flexion angle of exercise splint to 60-70-degrees of flexion. If an extension lag is present, modestly adjust flexion angle and continue focus of extension during exercise.
-Continue static extension splint between exercise and during the night.
-Continue scar and edema management.
-If the PIP joint is stiff in flexion, intermittently splint PIP joint in gentle flexion for short periods. Static extension splinting for the finger should continue.

5. **4 Weeks post-op**

-Initiate gentle composite flexion exercises of the finger and slow sustained extension exercises. Have patient perform lifting the finger from the table in extension and holding for a count of ten. Continue 20-rep. sessions.
-Continue static extension splinting between exercise sessions and at night.
-Continue gentle flexion-assist splinting of the finger if the PIP joint persists in limited flexion

5. **5 Weeks post-op cont.**

-Have patient resume gentle ADL such as eating, brushing teeth and shaving.
-Continue scar and edema management.

6. **6 Weeks post-op**

-Initiate gentle strengthening with light putty or light nerf ball. If an extension lag persists due to scarring, initiate ultra-sound over the area.
-Continue static extension splinting between exercise periods and for night wear.
-Progress ADL's.
-Continue dynamic flexion assist splinting if needed.
-Utilize composite flexion, intrinsic flexion and EDC exercises.
-Continue scar and edema management until scar is supple and less vascular in appearance. If scar is adherent, continue ultrasound.

7. **<u>7-8 Weeks post-op</u>**

-Continue program as out-lined above gradually diminishing wear of extension and flexion splints as extension and flexion stabilizes.
-Increase intensity of strengthening gradually progressing to a home program.
-Gradually increase intensity of ADL's allowing for a 5-pound weight limit. Progress activity level to 10 pounds by ten weeks.
-Continue scar mold wear and massage if necessary.